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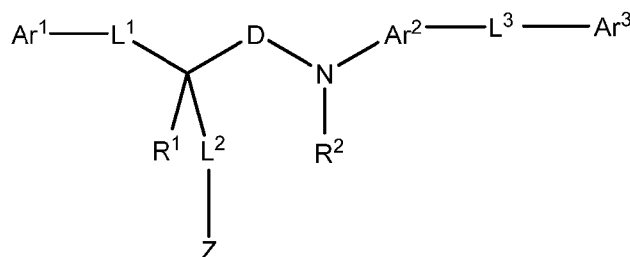
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(54) Title: COMPOUNDS, PHARMACEUTICAL COMPOSITION AND METHODS FOR USE IN TREATING METABOLIC DISORDERS



(57) Abstract: The present invention is directed to novel compounds of formula (I) and their use in treating metabolic diseases.

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## COMPOUNDS, PHARMACEUTICAL COMPOSITION AND METHODS FOR USE IN TREATING METABOLIC DISORDERS

5 The present invention relates to novel compounds including their pharmaceutically acceptable salts and solvates, which are agonists or partial agonists of G-protein coupled receptor 43 (GPR43) and are useful as therapeutic compounds, particularly in the treatment and/or prevention of Type 2 diabetes mellitus and conditions that are often associated with this disease including, lipid disorders such as dyslipidemia, hypertension, obesity, atherosclerosis and its sequelae.

10

### [BACKGROUND OF THE INVENTION]

15 Under normal conditions, Free Fatty Acids (FFAs) are implicated in numerous physiological processes by serving as fuel in various metabolic pathways and/or acting as signaling molecules in different tissues such as the heart, liver, skeletal muscle, adipocytes and the pancreas (Newsholme et al., *Biochem. J.*, 80 pp 655-662, 1961; Prentki et al., *Endocrine Reviews*, PubMed print ahead, 2008). Among FFAs, the short-chain fatty acids (SCFAs, carbon length C<sub>2</sub>-C<sub>6</sub>) are generated during anaerobic bacterial fermentation of fiber in the gut (Sellin et al., *News. Physiol. Sci.*, 14, pp 58-64, 1999). Long-chain fatty acids (LCFAs, carbon length C<sub>14</sub>-C<sub>24</sub>) are products of dietary intake from adipose tissues and liver (McArthur et al., *J. Lipid. Res.*, 40, pp 1371-1383, 1999).

25 Obesity is an increasing, worldwide public health problem associated with devastating pathologies such as type 2 diabetes (T2D) and dyslipidemia (Wild et al., *Diabetes Care* 27, pp 1047-1053, 2004). Dyslipidemia is characterized by high levels of triglycerides and/or LDL (bad cholesterol) or low levels of HDL (good cholesterol). Dyslipidemia is a key independent risk factor for cardiovascular diseases. It has long been suggested that FFAs are implicated in the regulation and/or genesis of these diseases (Fraze et al., *J. Clin. Endocrinol. Metab.*, 61, pp 807-811, 1985). It is well established that regular intake of dietary fiber has several beneficial metabolic effects such as lowering of plasma cholesterol and triglyceride levels (Anderson et al., *J. Am. Coll. Nutr.*, 23, pp 5 –

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17, 2004). Specifically, dietary fiber has been shown to increase endogenous levels of SCFAs, leading to the suppression of cholesterol synthesis and improvement in glucose tolerance in rat (Berggren et al., *Br. J. Nutr.*, 76, pp 287-294, 1996), as well as the reduction of hyperglycemia in a diabetic mice model  
5 (Sakakibara et al., *Biochem. Biophys. Res. Com.*, 344, pp 597-604, 2006).

Drug therapies are available to address both T2D and dyslipidemia. Specifically, statins, fibrates and nicotinic acid or combinations thereof are often considered as a first line therapy in dyslipidemia whereas metformin, sulphonylureas and thiazolidinediones are three, widely-used classes of oral anti-  
10 diabetic drugs (Tenenbaum et al., *Cardiovascular Diabetology*, 5, pp20-23, 2006). Although these therapies are widespread in their use, the common appearance of adverse effects or lack of efficacy after long-term use causes concern. Moreover, the growing patient population suffering from T2D, dyslipidemia and associated metabolic diseases creates a demand for new entrants into this therapeutic market.

15 GPR43 (also named FFA2R) belongs to a subfamily of G-Protein-Coupled Receptors (GPCRs), including GPR40 and GPR41 that have been identified as receptor for FFAs (Le Poul et al., *J. Biol Chem.* 278, 25481-489, 2003; Covington et al., *Biochemical Society transaction* 34, 770-773, 2006). The 3 family members share 30 to 40% sequences identity with specificity toward  
20 different fatty acids carbon chain lengths, with SCFAs (short chain fatty acids: six carbons molecules or shorter) activating GPR41 and GPR43 and medium and long chain fatty acids (MCFA, LCFA) activating GPR40 (Rayasam et al., *Expert Opinion on therapeutic targets*, 11 661-671, 2007 ). C2 acetate and C3 propionate are the most potent activators of GPR43. GPR43 is mainly coupled with Gq-  
25 proteins, with some evidence for its possible coupling with Gi/o pathways as well.

GPR43 is strongly expressed in adipocytes. Also there is evidence suggesting that GPR43 is overexpressed in pancreatic  $\beta$ -cells in prediabetic states as shown in WO2006/036688A2. Recent papers confirmed the GPR43 expression in pancreatic islets (Ahrén, *Nature Reviews*, 8 pp396-385; 2009; Regard et al., *J;*  
30 *Clin. Invest.*, 117 pp4034-4043, 2007). In adipocyte cells, GPR43 is induced during the differentiation process and increased during the high fat feeding in rodents, suggesting that GPR43 may affect adipocyte functions (Hong et al., *Endocrinology*, 146 pp5092-5099, 2005). Indeed, it has been reported that acetate

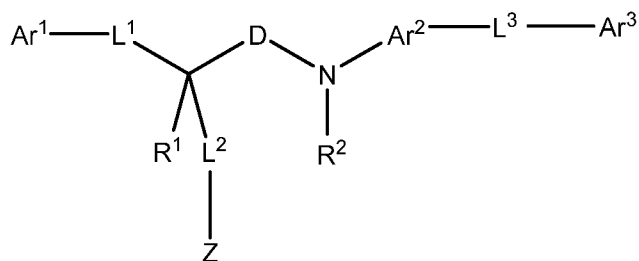
and propionate may stimulate adipogenesis via GPR43. In addition siRNA results hinted that acetate and propionate may inhibit lipolysis in adipocytes via GPR43 activation (Hong et al., *Endocrinology*, 146 pp5092-5099, 2005). It is interesting to note that the effect of acetate on reducing plasma free fatty acids level has been documented in humans (Suokas et al., *Alcoholism, clinical and experimental research*, 12 pp52-58, 1988; Laurent et al., *European journal of clinical nutrition*, 49 pp484-491, 1995). In addition, it has been shown that (i) adipocytes treated with GPR43 endogenous SCFA ligands exhibit a reduction in lipolytic activity and such inhibition of lipolysis is the result of GPR43 activation and (ii) GPR43 activation by acetate results in the reduction of plasma free fatty acids level *in vivo* (Ge et al., *Endocrinology*, 149 pp4519-26, 2008). Recently two GPR43 positive allosteric modulator molecules have been shown able to inhibit the lipolysis in adipocytes similarly to that of GPR43 endogenous SCFA ligands (Lee et al., *Mol Pharmacol*, 74(6) pp1599-1609, 2008). Such results suggest a potential role of GPR43 in regulating plasma lipid profiles and aspects of metabolic syndrome.

On this basis, new agonists or partial agonists of GPR43 may be of therapeutic value for T2D mellitus and conditions that are associated with this disease including, lipid disorders such as dyslipidemia, hypertension, obesity, atherosclerosis and its sequelae.

#### [SUMMARY OF THE INVENTION]

The invention encompasses compounds of general Formula I, their pharmaceutically acceptable salts and solvates as well as methods of use of such compounds or compositions comprising such compounds as modulators of GPR43 activity.

In a general aspect, the invention provides compounds of general formula I:



(I),

wherein

**Ar<sup>1</sup>** is a 5- to 6-membered aryl or heteroaryl group, 3- to 8-membered cycloalkyl group, a 3- to 8-membered heterocycloalkyl group, or a linear or branched C<sub>3</sub>-C<sub>6</sub> alkyl group, each of the aryl, heteroaryl, cycloalkyl, heterocycloalkyl, or alkyl groups being optionally substituted by one or more groups selected from halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyoxy, aryloxy, amino, alkoxyalkoxy, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, cycloalkyloxycarbonyl, heterocyclioxycarbonyl, aryloxycarbonyl, heteroaryloxycarbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroaryl-sulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroaryl-sulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group, or two substituents form a cycloalkyl or heterocycloalkyl moiety together with the cycloalkyl or heterocycloalkyl group they are attached to, or fused to the aryl, heteroaryl, cycloalkyl or heterocycloalkyl group may be one or more cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, each of said substituents being optionally

substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl;

- 5 **L<sup>1</sup>** is a single bond, C<sub>1</sub>-C<sub>2</sub> alkylene, C<sub>1</sub>-C<sub>2</sub> alkenylene, each optionally being substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> haloalkyl; or **L<sup>1</sup>** is -N(R<sup>N</sup>)-, wherein R<sup>N</sup> is H or C<sub>1</sub>-C<sub>2</sub> alkyl; or **L<sup>1</sup>** and **R<sup>1</sup>** together are =CH-;

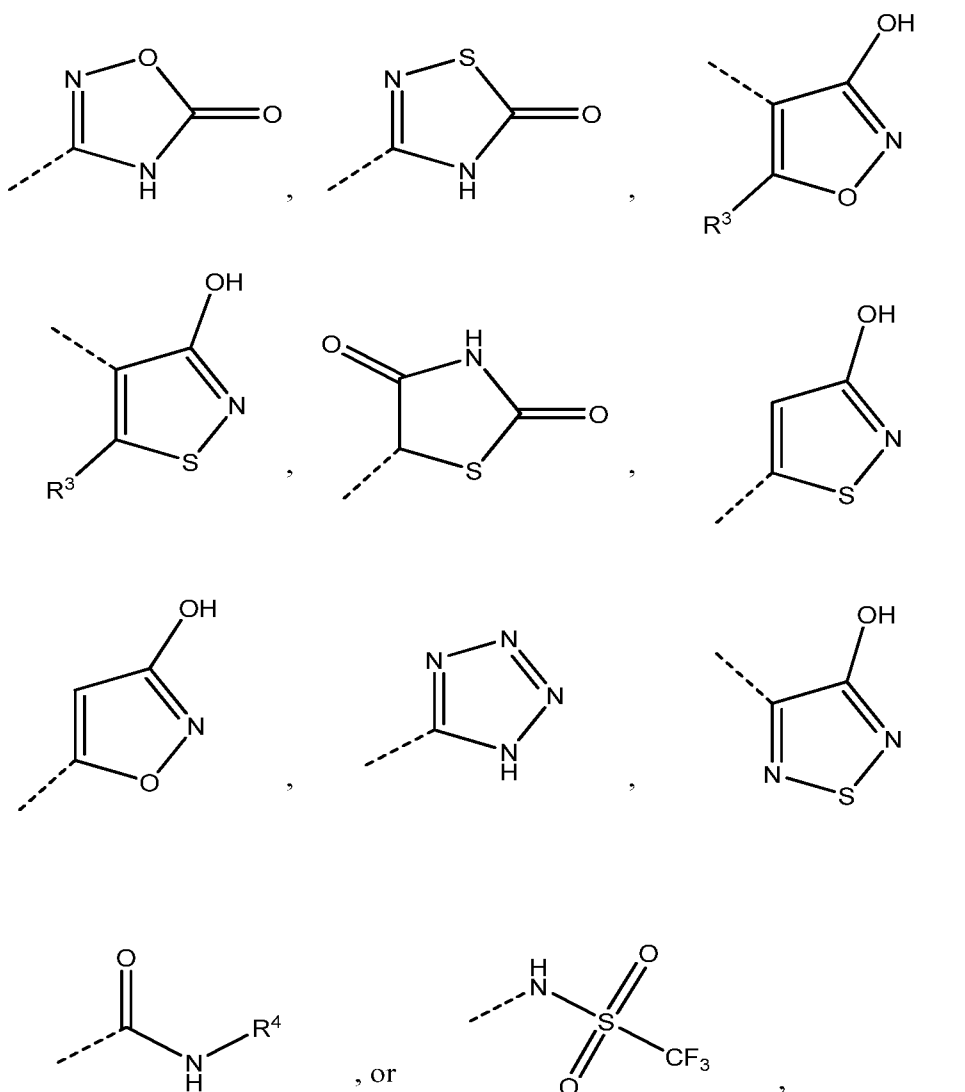
- 10 **R<sup>1</sup>** is H, halo, allyl, or a C<sub>1</sub>-C<sub>4</sub> alkyl group, which may optionally be substituted by one or more groups selected from halo or C<sub>1</sub>-C<sub>4</sub> alkyl;

**L<sup>2</sup>** is a C<sub>1</sub>-C<sub>3</sub> alkylene, C<sub>2</sub>-C<sub>4</sub> alkenylene, C<sub>3</sub>-C<sub>6</sub> cycloalkylene, each of which being optionally substituted by one or more groups selected from halo, alkyl, alkoxy, or haloalkyl; or **L<sup>2</sup>** is -O-CH<sub>2</sub>-; or

**R<sup>1</sup>** and **L<sup>2</sup>** together are =CH-, under the condition that -**L<sup>1</sup>**-**Ar<sup>1</sup>** is H; or

- 15 **R<sup>1</sup>** and **L<sup>2</sup>** together are a 5- to 6-membered saturated or unsaturated carbocyclic or heterocyclic group, preferably a cyclohexenyl group, under the condition that -**L<sup>1</sup>**-**Ar<sup>1</sup>** is H;

**Z** is selected from the group consisting of -COOR,



wherein **R** is H or linear or branched alkyl, aryl, acyloxyalkyl, dioxolene, **R**<sup>3</sup> is H, methyl or ethyl, and **R**<sup>4</sup> is hydroxyl -SO<sub>2</sub>CH<sub>3</sub>, -SO<sub>2</sub>cyclopropyl or -SO<sub>2</sub>CF<sub>3</sub>;

**D** is CO or SO<sub>2</sub>;

- 5 **R**<sup>2</sup> is H, linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkylalkyl, aryl, arylalkyl, heteroarylalkyl, alkoxyalkyl, aminocarbonylalkyl, or aralkyloxyalkyl; each of the alkyl, hydroxyalkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroarylalkyl, alkoxyalkyl, aminocarbonylalkyl, and aralkyloxyalkyl groups being optionally substituted by
- 10 one or more substituents selected from halo, cyano, alkyl, hydroxyalkyl,

haloalkyl, alkenyl, alkynyl, heteroalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, alkylcarbonyloxy, alkylcarbonylamino, haloalkylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, 5 alkylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, sulfamoyl, alkylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group;

$\text{Ar}^2$  is a 5- or 6-membered heterocyclic group or a 5- or 6-membered heteroaryl 10 group, optionally substituted by one or more substituents selected from halo, cyano, alkyl, hydroxyalkyl, haloalkyl, alkenyl, alkynyl, heteroalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, alkylcarbonyloxy, alkylcarbonylamino, haloalkylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, 15 hydroxycarbamoyl, alkylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, sulfamoyl, alkylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group;

20  $\text{L}^3$  is a single bond,  $\text{C}_1\text{-C}_3$  alkylene,  $\text{C}_1\text{-C}_3$  cycloalkylene  $\text{C}_1\text{-C}_3$  alkenylene or carbonylamino;

$\text{Ar}^3$  is an aryl, heteroaryl, or  $\text{C}_1\text{-C}_4$  alkyl group, each of which being optionally 25 substituted by one or more groups selected from halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, cycloalkyloxy-carbonyl, heterocyclyloxy-carbonyl, aryloxy-carbonyl, heteroaryloxy-carbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, 30 arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl,



heteroarylcarbonyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, cycloalkylaminocarbonyl, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclisulfonyl, arylsulfonyl, heteroarylsulfonyl sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclisulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group, or two substituents form a cycloalkyl or heterocycloalkyl moiety together with the cycloalkyl or heterocycloalkyl group they are attached to, or fused to the aryl, heteroaryl, cycloalkyl or heterocycloalkyl group may be one or more cycloalkyl, aryl, heterocyclisulfonyl or heteroaryl moiety, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkoxyalkyl, alkoxyalkoxy, cycloalkylalkoxy, amino, alkylamino, alkylaminoalkoxy, cycloalkylamino, aralkylamino, alkylaminoalkyl, alkylaminocarbonyl, alkylcarbonyl, cycloalkylcarbonylamino, alkylheterocyclisulfonyl, alkylheteroaryl, alkylsulfonyl, alkylsulfonylamino, aralkyl, aralkyloxy, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclisulfonyl, heterocyclisulfonyloxy, hydroxyl, oxo, or sulfonyl, or  $L^3-Ar^3$  form an aryl, preferably phenyl, or heteroaryl group fused to  $Ar^2$ , wherein each of said aryl or heteroaryl groups fused to  $Ar^2$  are optionally substituted by one or more halo, preferably chloro and fluoro;

with the following provisos:

$Ar^2-L^3-Ar^3$  is not 4-(4-butylphenyl)thiazol-2-yl, 4-(4-ethylphenyl)thiazol-2-yl, 4-(para-tolyl)thiazol-2-yl, 4-phenylthiazol-2-yl, 4-(4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)phenyl)thiazol-2-yl, 4-(4-isopropylphenyl)thiazol-2-yl, 4-(4-isobutylphenyl)thiazol-2-yl, 4-(4-(tert-butyl)phenyl)thiazol-2-yl, 4-(4-butylphenyl)-5-methylthiazol-2-yl, 4-(4-ethylphenyl)-5-methylthiazol-2-yl, 5-methyl-4-(para-tolyl)thiazol-2-yl, 5-methyl-4-phenylthiazol-2-yl, 5-methyl-4-(4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)phenyl)-5-methylthiazol-2-yl, 4-(4-isopropylphenyl)-5-methylthiazol-2-yl, 4-(4-isobutylphenyl)-5-methylthiazol-2-yl, 4-(4-(tert-butyl)phenyl)-5-methylthiazol-2-yl, 4-(4-butyl-3-methylphenyl)thiazol-2-yl, 4-(4-ethyl-3-methylphenyl)thiazol-2-yl, 4-(3,4-dimethylphenyl)thiazol-2-yl, 4-(meta-tolyl)thiazol-2-yl, 4-(3-methyl-4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)-3-methylphenyl)thiazol-2-yl, 4-(4-isopropyl-3-methylphenyl)thiazol-2-yl,

4-(4-isobutyl-3-methylphenyl)thiazol-2-yl, 4-(4-(tert-butyl)-3-methylphenyl)thiazol-2-yl, 4-(4-butyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-ethyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(3,4-dimethylphenyl)-5-methylthiazol-2-yl, 5-methyl-4-(meta-tolyl)thiazol-2-yl, 5-methyl-4-(3-methyl-4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-isopropyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-isobutyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-(tert-butyl)-3-methylphenyl)-5-methylthiazol-2-yl;

$\text{Ar}^3$  is not (7H-pyrrolo[2,3-d]pyrimidin)-4yl;

10  $\text{Ar}^2$  is not 5-cyano-thiazolyl;

the compound of formula I is none of.

2-[[[4-(4-butylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexane carboxylic acid,

6-[[[(4,5-dimethyl-2-thiazolyl) amino] carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[5-(cyclopentylmethyl)-1, 3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

3-cyclohexene-1-carboxylic acid, 6-[[[(5-acetyl-4-methyl-2-thiazolyl)amino]carbonyl]-

2-[[[4-(4-methoxyphenyl)-5-methyl-2-thiazolyl] amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-(3,4-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[5-methyl-4-(4-propylphenyl)-2 thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[4-(2,4-dichlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[4-(2,5-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[5-(2-chlorophenyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-

carboxylic acid

2-[[[5-[(4-chlorophenoxy)methyl]-1,3,4-thiadiazol-2-yl]amino]carbonyl]-  
cyclohexanecarboxylic acid,

2-[[[5-methyl-4-(4-propylphenyl)-2-thiazolyl]amino]carbonyl]-  
cyclohexanecarboxylic acid,

2-[[[5-methyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-[4-(1,1-dimethylethyl)phenyl]-5-methyl-2-thiazolyl]amino]carbonyl]-3-  
cyclohexene-1-carboxylic acid,

6-[[[5-ethyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]- 3-cyclohexene-1-carboxylic  
acid-1-methylethyl ester

2-[[[5-methyl-4-phenyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[5-methyl-4-[4-(2-methylpropyl)phenyl]-2-thiazolyl]amino]carbonyl]-  
cyclohexanecarboxylic acid,

6-[[[5-cyclopropyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3—cyclohexene-1-  
carboxylic acid,

2-[[[5-(cyclopentylmethyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-  
cyclohexanecarboxylic acid,

2-[[[4-(4-chlorophenyl)-5-ethyl-2-thiazolyl]amino]carbonyl]-  
cyclohexanecarboxylic acid,

2-[[[4-(3-methoxyphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-  
cyclohexanecarboxylic acid,

6-[[[5-methyl-4-(4-methylphenyl)-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-  
carboxylic acid,

2-[[[5-cyclopropyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic  
acid,

6-[[[4-(4-chlorophenyl)-5-ethyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-  
carboxylic acid,

6-[[[4-(2,5-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-  
1-carboxylic acid,

6-[[[5-phenyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic  
acid,

2-[[[5-(4-methoxyphenyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[(6-carboxy-3-cyclohexen-1-yl)carbonyl]amino]-4-phenyl-5-thiazolecarboxylic acid-5-ethyl ester,  
2-[[[(4,5-dimethyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[(5-cyclopropyl-1,3,4-oxadiazol-2-yl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[5-methyl-4-[4-(2-methylpropyl)phenyl]-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[(5-ethyl-4-phenyl-2-thiazolyl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[4-(2,4-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[4-(3-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[5-(1-ethylphenyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[4-(3,4-dimethylpentyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[5-(2-thienyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[(4,5-diphenyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[4-(4-ethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[(2-carboxycyclohexyl)carbonyl]amino]-4-methyl-5-thiazolecarboxylic acid-5-methyl ester,  
2-[[[(2-carboxycyclohexyl)carbonyl]amino]-4-methyl-5-thiazolecarboxylic acid-5-ethyl ester,  
2-[[[(5-ethyl-4-phenyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[(5-methyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-3-cyclohexene-1-carboxylic

acid,

2-[[[(5-cyclopropyl-1,3,4-oxadiazol-2-yl)amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[4-(4-fluorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[(2-carboxycyclohexyl)carbonyl]amino]-4-methyl-5-thiazoleacetic acid-5-ethyl ester,

2-[[[4-(2,4-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-(3-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[(5-cyclohexyl-1,3,4-thiadiazol-2-yl)carbonyl]cyclohexanecarboxylic acid

2-[[[5-methyl-4-(4-methylphenyl)-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[5-(2-thienyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[4,5-diphenyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[4-(4-ethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[5-dimethylamino]carbonyl]-4-methyl-2-thiazolyl]amino] carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[(5-ethyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[(2-carboxycyclohexyl)carbonyl]amino]-4-phenyl-5-thiazolecarboxylic acid-5-ethyl ester,

6-[[[(5-ethyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[4-ethyl-5-methyl-2-thiazolyl]amino] carbonyl]-cyclohexanecarboxylic acid,

2-[[[5-methyl-4-[4-(1-methylethyl)phenyl]-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[(5-acetyl-4-methyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-(2,4-dichlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[4-(4-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[5-(cyclohexyl-1,3,4-thiadiazol-2-yl)]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[4-(4-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[4-(4-fluorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[6-(6-carboxy-3-cyclohexen-1-yl)carbonyl-4-methyl-5-thiazolecarboxylic acid-5-methyl ester],  
2-[[[4[4-(1,1-dimethylethyl)phenyl]-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[5[(dimethylethylamino)carbonyl]-4-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[5-(5-methyl-4-phenyl-2-thiazolyl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[5-(5-methyl-1,3,4-thiadiazol-2-yl)]amino]carbonyl]-cyclohexanecarboxylic acid,  
and  
6-[[[5-(2-thienyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid.

In another aspect, the present invention provides a pharmaceutical composition comprising at least one compound according to the invention or a pharmaceutically acceptable salt or solvate thereof.

The invention also relates to the use of the above compounds or their pharmaceutically acceptable salts and solvates as modulators of GPR43, preferably as agonists or partial agonists of GPR43.

The invention further provides methods of treatment and/or prevention of type II diabetes, obesity, dyslipidemia such as mixed or diabetic

dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, hyperlipidemia, hypertriglyceridemia, hypoglycemia, hyperglycemia, glucose intolerance, insulin resistance, hyperinsulinemia hypertension, hyperlipoproteinemia, metabolic syndrome, syndrome X, thrombotic disorders, cardiovascular disease, atherosclerosis and its sequelae including angina, claudication, heart attack, stroke and others, kidney diseases, ketoacidosis, nephropathy, diabetic neuropathy, diabetic retinopathy, nonalcoholic fatty liver diseases such as steatosis or nonalcoholic steatohepatitis (NASH) comprising the administration of a therapeutically effective amount of a compound or pharmaceutically acceptable salt or solvate of formula (I), to a patient in need thereof. Preferably the patient is a warm-blooded animal, more preferably a human.

The invention also provides the use of a compound of formula (I) or a pharmaceutically acceptable salt or solvate thereof as a medicament. Preferably, the medicament is used for the treatment and/or prevention of type II diabetes, obesity, dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, hyperlipidemia, hypertriglyceridemia, hypoglycemia, hyperglycemia, glucose intolerance, insulin resistance, hyperinsulinemia hypertension, hyperlipoproteinemia, , metabolic syndrome, syndrome X, thrombotic disorders, cardiovascular disease, atherosclerosis and its sequelae including angina, claudication, heart attack, stroke and others, kidney diseases, ketoacidosis, nephropathy, diabetic neuropathy, diabetic retinopathy, nonalcoholic fatty liver diseases such as steatosis or nonalcoholic steatohepatitis (NASH).

In a preferred embodiment the disease is type II diabetes, a lipid disorder such as dyslipidemia, hypertension, obesity, or atherosclerosis and its sequelae.

#### **[DETAILED DESCRIPTION OF THE INVENTION]**

As noted above, the invention relates to compounds of formula I, as well as their pharmaceutically acceptable salts and solvates.

Preferred compounds of formula I and pharmaceutically acceptable salts and solvates thereof are those wherein

**D** is CO; and/or

**Z** is –COOR, wherein **R** is defined as above in respect to formula I, preferably **Z** is COOH; and/or

**R**<sup>1</sup> is hydrogen, halogen, or a group selected from C<sub>1-4</sub> alkyl optionally substituted by one or more substituents selected from halogen, allyl or alkyl; preferably **R**<sup>1</sup> is selected from hydrogen, fluoro, methyl, or ethyl, the methyl or ethyl group being optionally substituted with one or more substituents selected from fluoro or alkyl, more preferably **R**<sup>1</sup> is hydrogen, fluoro or methyl, and most preferably **R**<sup>1</sup> is hydrogen, and **L**<sup>2</sup> is as defined above in respect to formula I, preferably **L**<sup>2</sup> is cyclopropylene, ethenylene, n-propylene, –CH<sub>2</sub>C(R'R'')-, or –C(R'R'')-, wherein R' and R'' are independently selected from H, halogen, methyl, and ethyl, more preferably **L**<sup>2</sup> is cyclopropylene, ethenylene, methylene, –CHMe-, –CHF-; even more preferably **L**<sup>2</sup> is methylene, or **R**<sup>1</sup> and **L**<sup>2</sup> together are =CH-; and/or

**R**<sup>2</sup> is H, linear or branched C<sub>1-4</sub> alkyl, C<sub>1-4</sub> hydroxyalkyl, allyl, propargyl, cyclopropyl, cyclopentyl, cyclopentylmethyl, cyclopropylmethyl, 1,1,1-trifluoroethyl, –C<sub>2</sub>H<sub>4</sub>CO<sub>2</sub>CH<sub>3</sub>, –CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, or –CH<sub>2</sub>CONH<sub>2</sub>, benzyl, benzyloxyethyl, methoxyethyl, preferably **R**<sup>2</sup> is H, methyl, ethyl, allyl, cyclopropyl, hydroxyethyl, –C<sub>2</sub>H<sub>4</sub>CO<sub>2</sub>CH<sub>3</sub>, –CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, –CH<sub>2</sub>CONH<sub>2</sub>, more preferably **R**<sup>2</sup> is methyl or cyclopropyl; and/or

**Ar**<sup>1</sup> is a 5- to 6-membered aryl or heteroaryl group, or a 5- to 6-membered cycloalkyl or heterocycloalkyl group, each of which may optionally be substituted by one or more groups selected from halogen, trifluoromethyl, cyano, methoxy, trifluoromethoxy, and methoxyethoxy, and **L**<sup>1</sup> is a single bond, C<sub>1-2</sub> alkylene, or C<sub>2</sub> alkenylene, each optionally being substituted by one or more substituents selected from halo, C<sub>1-2</sub> alkyl, C<sub>1-2</sub> haloalkyl, preferably **L**<sup>1</sup> is a single bond, C<sub>1-2</sub> alkylene, optionally substituted by C<sub>1-2</sub> alkyl, preferably **Ar**<sup>1</sup> is phenyl or cyclohexyl and **L**<sup>1</sup> is methylene, optionally substituted by methyl; or **Ar**<sup>1</sup> is a



linear or branched C<sub>3</sub>-C<sub>6</sub> alkyl group, optionally substituted by one or more groups selected from halogen, trifluoromethyl, cyano, and methoxy, and L<sup>1</sup> is a single bond, C<sub>1</sub>-C<sub>2</sub> alkylene, or C<sub>2</sub> alkenylene, preferably C<sub>1</sub>-C<sub>2</sub> alkylene or C<sub>2</sub> alkenylene, and even more preferably C<sub>1</sub>-C<sub>2</sub> alkylene, (Z)-ethenylene, or (E)-ethenylene, each optionally being substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> haloalkyl, preferably L<sup>1</sup> is a single bond or C<sub>1</sub>-C<sub>2</sub> alkylene, optionally substituted by C<sub>1</sub>-C<sub>2</sub> alkyl or one or more fluoro, more preferably L<sup>1</sup> is CH<sub>2</sub>; preferably Ar<sup>1</sup> is isopropyl, butyl, isobutyl, cyclopentyl, cyclohexyl, tetrahydrofuranyl, tetrahydropyranyl, phenyl, furanyl, thiophenyl, thiazolyl or pyridyl, and L<sup>1</sup> is CH<sub>2</sub>, more preferably Ar<sup>1</sup> is cyclopentyl, tetrahydrofuranyl, tetrahydropyranyl, phenyl or furanyl and L<sup>1</sup> is CH<sub>2</sub>; and/or

Ar<sup>2</sup> is selected from the group consisting of thiazolylene, 1,2,4-thiadiazolylene, pyridinylene, pyrimidinylene, pyrazinylene, pyridazinylene, triazinylene, oxazolylene, 1,2,4-oxadiazolylene, pyrazolylene, each of which being optionally substituted by one or more substituents selected from halo, cyano, hydroxyl, linear or branched C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, preferably F, Cl, CH<sub>3</sub>, or CF<sub>3</sub>, preferably Ar<sup>2</sup> is thiazolylene, 1,2,4-thiadiazolylene, pyridinylene, more preferably Ar<sup>2</sup> is thiazolylene linked to the nitrogen of N-R<sup>2</sup> at position 2 and to L<sup>3</sup> of L<sup>3</sup>-Ar<sup>3</sup> at position 4, 1,2,4-thiadiazolylene linked to the nitrogen of N-R<sup>2</sup> at position 5 and to L<sup>3</sup> of L<sup>3</sup>-Ar<sup>3</sup> at position 3, pyridinylene linked to the nitrogen of N-R<sup>2</sup> at position 2 and to L<sup>3</sup> of L<sup>3</sup>-Ar<sup>3</sup> at position 5; and/or

Ar<sup>3</sup> is an aryl or heteroaryl group, optionally substituted by one or more substituents selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, cyano, 5 or 6 membered heteroaryl such as pyridinyl, pyrazinyl, and pyridazinyl, phenyl, methylcarbonylamino, -NH-SO<sub>2</sub>CF<sub>3</sub>, methylenedioxy and L<sup>3</sup> is a single bond or C<sub>1</sub>-C<sub>2</sub> alkylene; Ar<sup>3</sup> is a C<sub>1</sub>-C<sub>4</sub> alkyl group and L<sup>3</sup> is a single bond; or -L<sup>3</sup>-Ar<sup>3</sup> is a phenyl group fused to Ar<sup>2</sup>; preferably Ar<sup>3</sup> is an aryl, preferably phenyl, or heteroaryl group, preferably thiophenyl, more preferably thiophen-2-yl, furanyl, more preferably furan-2-yl, each of said aryl or heteroaryl being optionally substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, cyclopropyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, cyano, ethoxycarbonyl, methylenedioxy, 5 or 6 membered aryl, preferably phenyl, 5 or

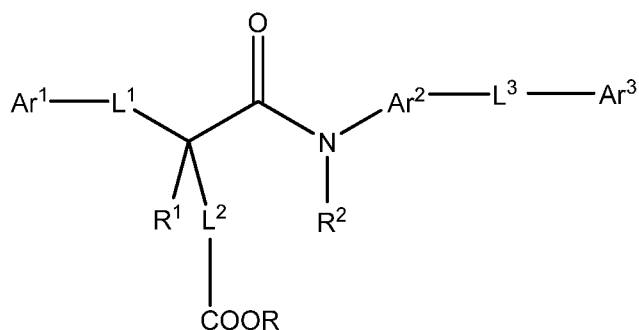
6 membered heteroaryl, preferably furanyl, thiophenyl, pyridinyl, pyrimidinyl, pyrazinyl, and pyridazinyl, more preferably furan-3-yl, thiophen-3-yl, pyridinyl, still more preferably pyridin-3-yl, each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl being optionally fused to one or more 5 or 6 membered  
5 cycloalkyl, aryl, heterocyclyl or heteroaryl moiety thus forming a fused ring system, and the latter fused ring system being optionally substituted by one or more further substituents selected from halo, hydroxyl, oxo, alkyl, and/or each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally substituted by one or more substituents selected from cyano, halo, hydroxyl, alkyl,  
10 cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, alkylaminoalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino,  
15 cycloalkylcarbonylamino, alkylsulfonyl, haloalkylsulfonyl, alkylsulfonylamino, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino, arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further  
20 substituents selected from halo, preferably chloro or fluoro, oxo or alkyl, preferably methyl; more preferably  $Ar^3$  is phenyl, thiophenyl, preferably thiophen-2-yl, furanyl, preferably furan-2-yl, each of said phenyl, thiophenyl, furanyl, being optionally substituted by one or more substituents selected from halo,  $C_1$ - $C_4$  alkyl, cyclopropyl,  $C_1$ - $C_4$  haloalkyl,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  haloalkoxy,  
25 cyano, ethoxycarbonyl, methylenedioxy, phenyl, pyridin-3-yl, each of said phenyl or pyridin-3-yl being optionally fused to one or more 5 or 6 membered heterocyclyl, phenyl, or heteroaryl moiety, preferably oxopyrrolidinyl, imidazoliny, piperidinyl, morpholinyl, pyrrolyl, imidazolyl, or pyridinyl, more preferably 2-oxopyrrolidinyl 2-oxoimidazoliny, 2-oxopiperidinyl or pyrrolyl, thus  
30 forming a fused ring system, and the latter fused ring system being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo, alkyl, preferably methyl, and/or each of said phenyl or pyridin-3-yl groups being optionally substituted by one or more substituents selected from halo, alkyl, heterocyclyl, heteroaryl, haloalkyl, alkoxy, haloalkoxy,  
35 alkoxyalkyl, alkoxyalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy,

aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, aralkylamino, alkylaminocarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, each of said heterocyclyl, heteroaryl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyoxy, aralkyloxy, cycloalkylamino, aralkylamino, cycloalkylcarbonylamino being  
 5 optionally substituted by one or more further substituents selected from fluoro, chloro, oxo or methyl.

Other preferred compounds of formula I are those wherein  $R^1$  and  $L^2$  together are a 5- to 6-membered saturated or unsaturated carbocyclic or heterocyclic group, preferably a cyclohexenyl group, under the condition that  $-L^1-Ar^1$  is H; and  $Ar^2$ ,  
 10  $Ar^3$ ,  $R^2$ , and  $L^3$  are as defined above.

Still other preferred compounds of formula I are those wherein  $D$  is  $SO_2$  and  $Ar^1$ ,  $Ar^2$ ,  $Ar^3$ ,  $R^1$ ,  $R^2$ ,  $L^1$ ,  $L^2$ ,  $L^3$ , and  $Z$  are as defined above in respect to formula I.

In one embodiment, preferred compounds of Formula I are those of  
 15 formula Ia:



**Ia**

and pharmaceutically acceptable salts, and solvates thereof, wherein

$R$  is H or linear or branched  $C_1-C_4$  alkyl; and

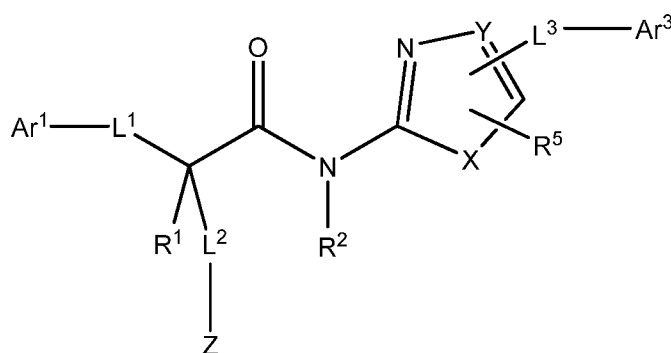
20  $Ar^1$ ,  $Ar^2$ ,  $Ar^3$ ,  $R^1$ ,  $R^2$ ,  $L^1$ ,  $L^2$  and  $L^3$  are as defined above in respect to formula I.

Preferred compounds of formula Ia are those wherein

$R^1$  is hydrogen and  $L^2$  is ethenylene, ethylene, n-propylene,  $-\text{CH}(\text{Me})-$ ,  $-\text{CH}_2-$ ,  $-\text{CHF}-$ ,  $-\text{CF}_2-$ , or cyclopropylene; or  $R^1$  and  $L^2$  together are  $=\text{CH}-$ ; and

$\text{Ar}^1$ ,  $\text{Ar}^2$ ,  $\text{Ar}^3$ ,  $R^2$ ,  $L^1$  and  $L^3$  are as defined above in respect to formula I.

In another embodiment, preferred compounds of Formula I are those of formula Ib:



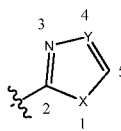
**Ib**

and pharmaceutically acceptable salts, and solvates thereof, wherein

$X$  is S or O, preferably  $X$  is S;

$Y$  is CH or N, preferably  $Y$  is CH;

$L^3$  is attached to the heterocyclic group either in position 4 or 5, preferably in position 4; and



if  $Y$  is CH,  $R^5$  is H, halo, cyano, hydroxyl, linear or branched  $C_1-C_3$  alkyl,  $C_1-C_3$  hydroxyalkyl,  $C_1-C_3$  haloalkyl, preferably H, methyl, F, Cl, or  $\text{CF}_3$ , more preferably H or F and  $R^5$  is attached to the heterocyclic group either in position 4, if  $L^3$  is attached in position 5, or in position 5, if  $L^3$  is attached in position 4; preferably  $R^5$  is attached in position 5;

if **Y** is N, **R**<sup>5</sup> is absent and **L**<sup>3</sup> is attached in position 5; and

**Ar**<sup>1</sup> and **L**<sup>1</sup> are as defined above in respect to formula I, preferably **Ar**<sup>1</sup> is a 5- to 6-membered aryl, preferably phenyl, or heteroaryl group, preferably furanyl, thiophenyl, oxazolyl, isoxazolyl, or thiazolyl optionally substituted by one or more groups selected from halogen, trifluoromethyl, cyano, methoxy trifluoromethoxy, and methoxyethoxy, and **L**<sup>1</sup> is a single bond, C<sub>1</sub>-C<sub>2</sub> alkylene, or C<sub>2</sub> alkenylene, each optionally being substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> haloalkyl, preferably **L**<sup>1</sup> is a single bond, or C<sub>1</sub>-C<sub>2</sub> alkylene, optionally substituted by C<sub>1</sub>-C<sub>2</sub> alkyl, more preferably **L**<sup>1</sup> is -CH<sub>2</sub>; or **Ar**<sup>1</sup> is a linear or branched C<sub>3</sub>-C<sub>6</sub> alkyl group, preferably isopropyl, butyl, isobutyl, optionally substituted by one or more groups selected from halogen, trifluoromethyl, cyano, and methoxy, and **L**<sup>1</sup> is a single bond; or **Ar**<sup>1</sup> is cycloalkyl, preferably cyclopropyl, cyclopentyl, cyclohexyl, bicyclo[2.2.1]heptan-2-yl, more preferably cyclopentyl, or heterocycloalkyl, preferably tetrahydrofuranyl or tetrahydropyranyl and **L**<sup>1</sup> is C<sub>1</sub>-C<sub>2</sub> alkylene or C<sub>2</sub> alkenylene, preferably C<sub>1</sub>-C<sub>2</sub> alkylene or C<sub>2</sub> alkenylene, and even more preferably -CH<sub>2</sub>-, (Z)-ethenylene, or (E)-ethenylene, each optionally being substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>2</sub> alkyl, C<sub>1</sub>-C<sub>2</sub> haloalkyl, preferably **L**<sup>1</sup> is a single bond or C<sub>1</sub>-C<sub>2</sub> alkylene, optionally substituted by C<sub>1</sub>-C<sub>2</sub> alkyl, even more preferably **L**<sup>1</sup> is methylene;

**Ar**<sup>3</sup> is as defined above in respect to formula I, preferably **Ar**<sup>3</sup> is an aryl or heteroaryl group, optionally substituted by one or more substituents selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, cyano, 5 or 6 membered heteroaryl such as pyridinyl, phenyl, methylcarbonylamino, -NH-SO<sub>2</sub>CF<sub>3</sub>, and **L**<sup>3</sup> is a single bond or C<sub>1</sub>-C<sub>2</sub> alkylene; or **Ar**<sup>3</sup> is a C<sub>1</sub>-C<sub>4</sub> alkyl group and **L**<sup>3</sup> is a single bond, more preferably **Ar**<sup>3</sup> is an aryl, preferably phenyl, or heteroaryl group, preferably thiophenyl, more preferably thiophen-2-yl, furanyl, more preferably furan-2-yl, each of said aryl or heteroaryl being optionally substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, cyclopropyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, cyano, ethoxycarbonyl, methylenedioxy, 5 or 6 membered aryl, preferably phenyl, 5 or 6 membered heteroaryl, preferably

furanyl, thiophenyl, pyridinyl, pyrimidinyl, pyrazinyl, and pyridazinyl, more preferably furan-3-yl, thiophen-3-yl, pyridinyl, still more preferably pyridinyl, each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl being optionally fused to one or more 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety thus forming a fused ring system, and the latter fused ring system being optionally substituted by one or more further substituents selected from halo, hydroxyl, oxo, alkyl, and/or each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally substituted by one or more substituents selected from cyano, halo, hydroxyl, alkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, alkylaminoalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, alkylsulfonyl, haloalkylsulfonyl, alkylsulfonylamino, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino, arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo or alkyl, preferably methyl; still more preferably  $Ar^3$  is phenyl, thiophenyl, preferably thiophen-2-yl, furanyl, preferably furan-2-yl, each of said phenyl, thiophenyl, furanyl, being optionally substituted by one or more substituents selected from halo,  $C_1$ - $C_4$  alkyl, cyclopropyl,  $C_1$ - $C_4$  haloalkyl,  $C_1$ - $C_4$  alkoxy,  $C_1$ - $C_4$  haloalkoxy, cyano, ethoxycarbonyl, methylenedioxy, phenyl, pyridin-3-yl, each of said phenyl or pyridin-3-yl being optionally fused to one or more 5 or 6 membered heterocyclyl, phenyl, or heteroaryl moiety, preferably oxopyrrolidinyl, imidazolyl, piperidinyl, morpholinyl, pyrrolyl, imidazolyl, or pyridyl, more preferably 2-oxopyrrolidinyl 2-oxoimidazolyl, 2-oxopiperidinyl or pyrrolyl, thus forming a fused ring system, and the latter fused ring system being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo, alkyl, preferably methyl, and/or each of said phenyl or pyridin-3-yl groups being optionally substituted by one or more substituents selected from halo, alkyl, heterocyclyl, heteroaryl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino,

aralkylamino, alkylaminocarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, each of said heterocyclyl, heteroaryl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aralkyloxy, cycloalkylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from fluoro, chloro, oxo or methyl;

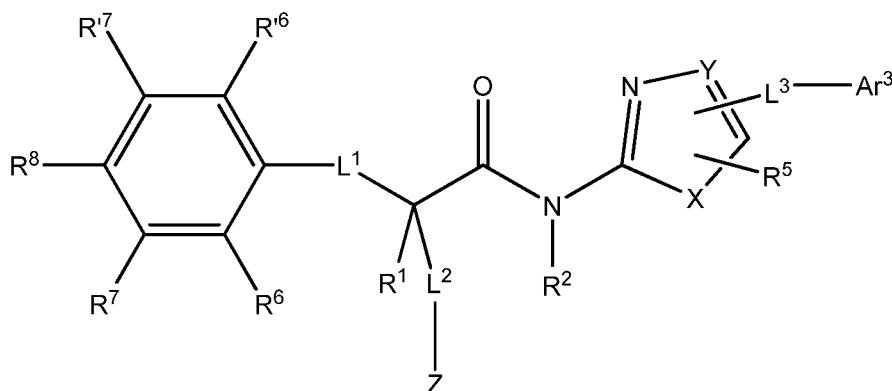
$R^1$  is as defined above in respect to formula I, preferably  $R^1$  is hydrogen, halogen, allyl, or a group selected from  $C_{1-4}$  alkyl optionally substituted by one or more substituents selected from halogen or alkyl; more preferably  $R^1$  is selected from hydrogen, fluoro, or methyl or ethyl, the methyl or ethyl group being optionally substituted with one or more substituents selected from fluoro or alkyl, even more preferably  $R^1$  is hydrogen, fluoro or methyl, and most preferably  $R^1$  is hydrogen, and  $L^2$  is as defined above in respect to formula I, preferably  $L^2$  is cyclopropylene, ethenylene, n-propylene,  $-C(R'R'')$ -, wherein  $R'$  and  $R''$  are independently selected from H, halogen, methyl, and ethyl, more preferably  $L^2$  is cyclopropylene, ethenylene, methylene,  $-CHMe-$ ,  $-CHF-$ , even more preferably  $L^2$  is methylene; or  $R^1$  and  $L^2$  together are  $=CH-$ ;

$Z$  is as defined above in respect to formula I, preferably  $Z$  is  $-COOR$ , wherein  $R$  is defined as above in respect to formula I, more preferably  $Z$  is  $COOH$ ; and

$R^2$  is as defined above in respect to formula I, preferably  $R^2$  is H, linear or branched  $C_1-C_4$  alkyl,  $C_1-C_2$  hydroxyalkyl, allyl, propargyl, cyclopropyl, cyclopentyl, cyclopentylmethyl, cyclopropylmethyl, benzyl, benzyloxyethyl, methoxyethyl, 1,1,1-trifluoroethyl,  $-C_2H_4CO_2CH_3$ ,  $-CH_2CO_2CH_3$ , or  $-CH_2CONH_2$ , more preferably  $R^2$  is H, methyl, ethyl, allyl, cyclopropyl, hydroxyethyl,  $-C_2H_4CO_2CH_3$ ,  $-CH_2CO_2CH_3$ , or  $-CH_2CONH_2$ , more preferably  $R^2$  is methyl or cyclopropyl.

Preferred compounds of formula Ib are those wherein  $Z$  is  $-COOR$ , preferably  $COOH$ , and  $R$ ,  $Ar^1$ ,  $Ar^2$ ,  $Ar^3$ ,  $R^1$ ,  $R^2$ ,  $L^1$ ,  $L^2$  and  $L^3$  are as defined above in respect to formula I.

Particularly preferred compounds of formula Ib are those of formula Ib-1



### Ib-1

- 5 wherein  $L^1$ ,  $L^2$ ,  $L^3$ ,  $Ar^3$ ,  $X$ ,  $Y$ ,  $Z$ ,  $R^1$ ,  $R^2$ , and  $R^5$  are as defined above in respect to formula Ib, preferably  $L^1$  is methylene, optionally substituted by  $C_1$ - $C_2$  alkyl or halo, preferably by methyl or fluoro, even more preferably  $L^1$  is methylene; and

$R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  and  $R^8$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy carbonyl, cycloalkyloxycarbonyl, heterocyclyloxycarbonyl, aryloxycarbonyl, heteroaryloxycarbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or  $R^6$  and  $R^7$  or  $R^7$  and  $R^8$  or  $R'^6$  and  $R'^7$  or  $R'^7$  and  $R^8$



together form an alkylenedioxy group or a haloalkylenedioxy group, or  $R^6$  and  $R^7$  or  $R^7$  and  $R^8$  or  $R'^6$  and  $R'^7$  or  $R'^7$  and  $R^8$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety fused to the phenyl group they are attached to, each of said substituents being optionally substituted by one or more further

5 substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  and  $R^8$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl,

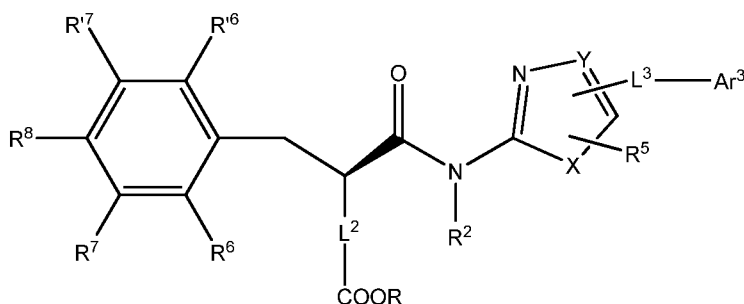
10 cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl,

15 carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, more preferably  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  and  $R^8$  are independently selected from H, hydroxyl, halo, alkyl, haloalkyl, alkoxy, alkoxyalkyl preferably methoxyethyl, haloalkoxy preferably –

20  $OCF_3$ , alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H, halo,  $CF_3$ , C1-C2 alkyl, C1-C2 alkoxy, and cyano, still more preferably from H, F, Cl,  $CF_3$ , methyl, methoxy, and cyano, still more preferably  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  are H and  $R^8$  is selected from H, Cl, methyl, hydroxyl and methoxy, and most preferably  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  are H and  $R^8$  is selected from H, Cl, methyl, and

25 methoxy.

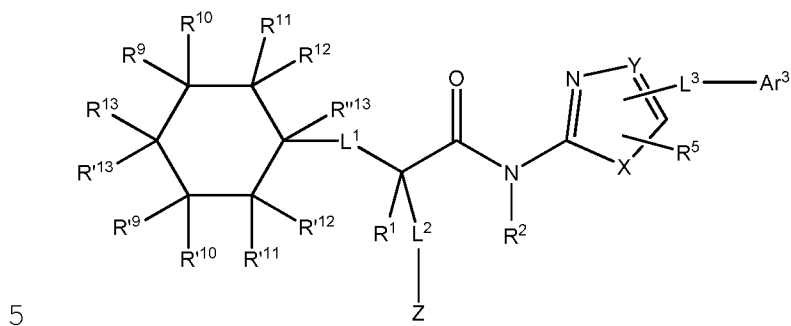
Preferred compounds of formula Ib-1 are those of formula Ib-1a



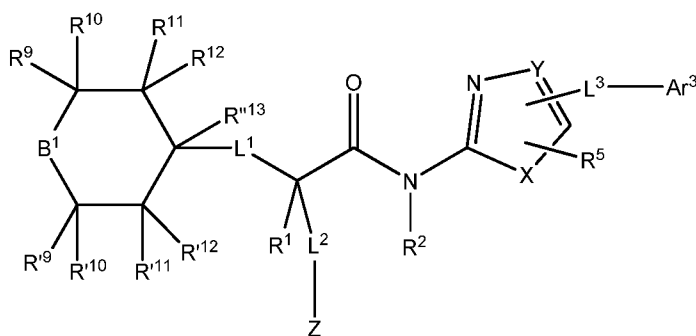
**Ib-1a**

wherein  $L^2$ ,  $L^3$ ,  $Ar^3$ ,  $X$ ,  $Y$ ,  $R^2$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  and  $R^8$  are as defined above in respect to formula Ib-1.

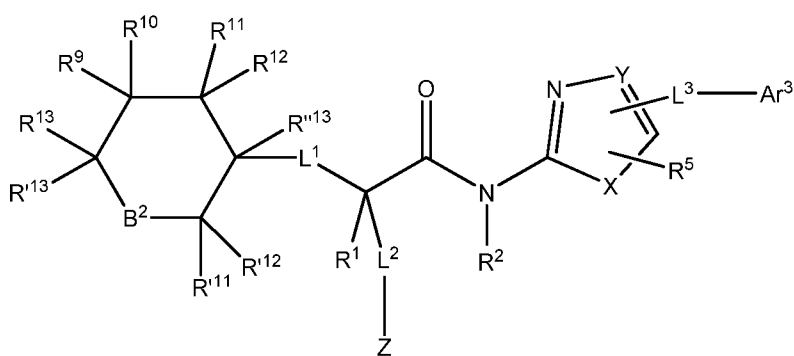
Other preferred compounds of formula Ib are selected from the group consisting of formulae Ib-2a, Ib-2b, Ib-2c, Ib-2d, Ib-2e and Ib-2f:



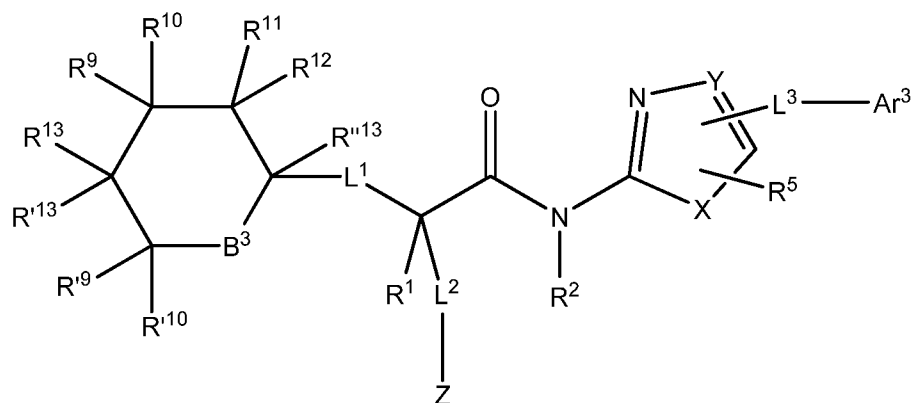
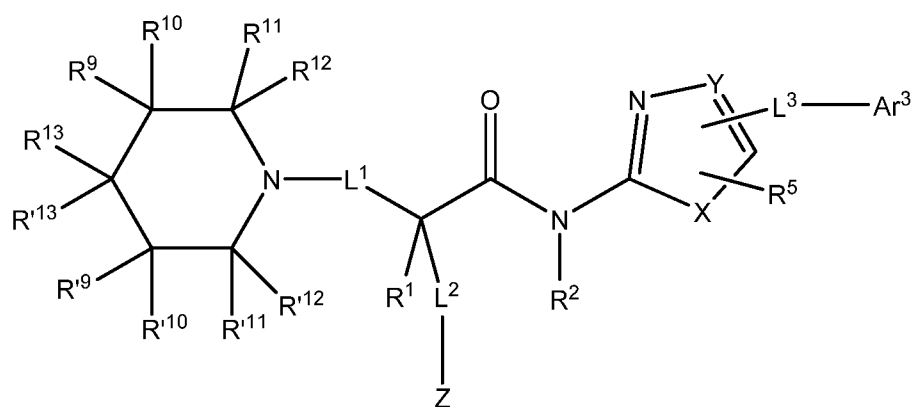
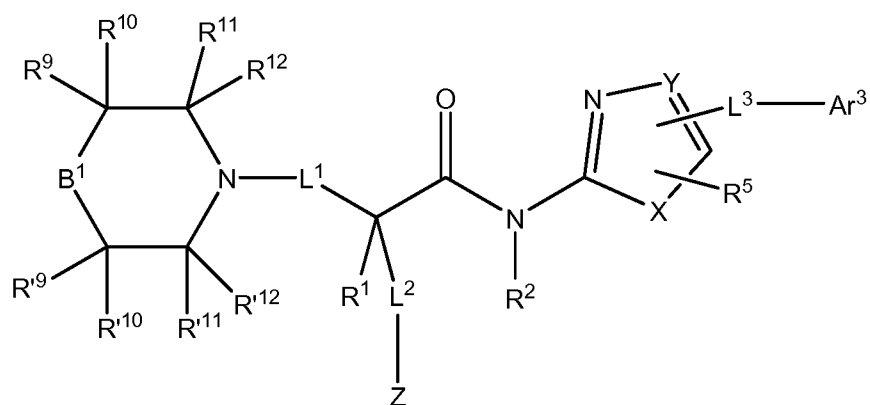
### Ib-2a



### Ib-2b



10 **Ib-2c**

**Ib-2d****Ib-2e**

5

**Ib-2f**

wherein  $L^1$ ,  $L^2$ ,  $L^3$ ,  $Ar^3$ ,  $X$ ,  $Y$ ,  $Z$ ,  $R^1$ ,  $R^2$  and  $R^5$  are as defined above in respect to

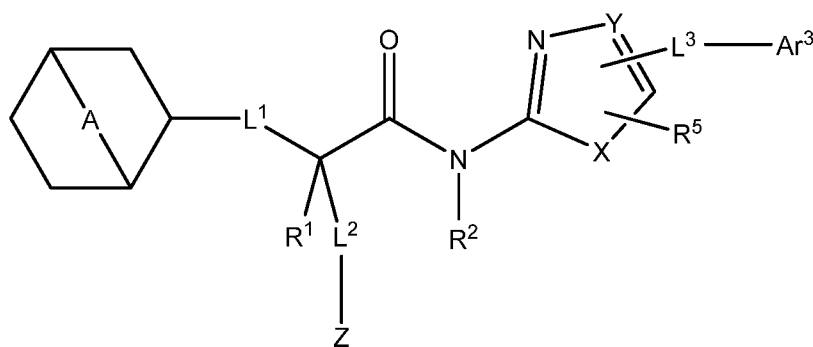
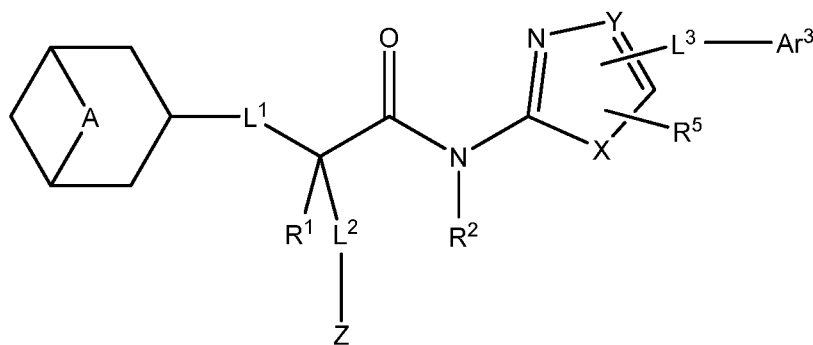
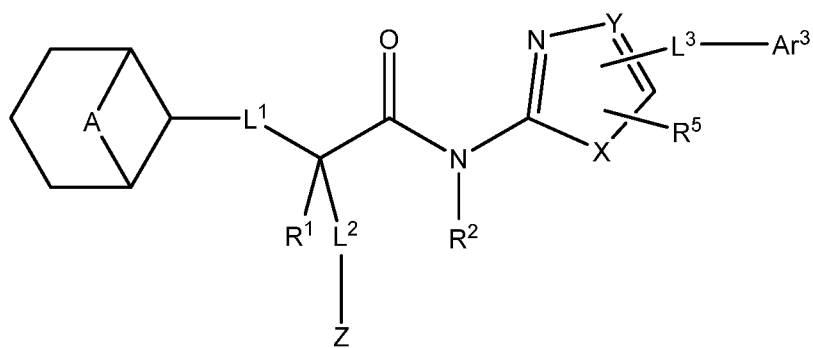
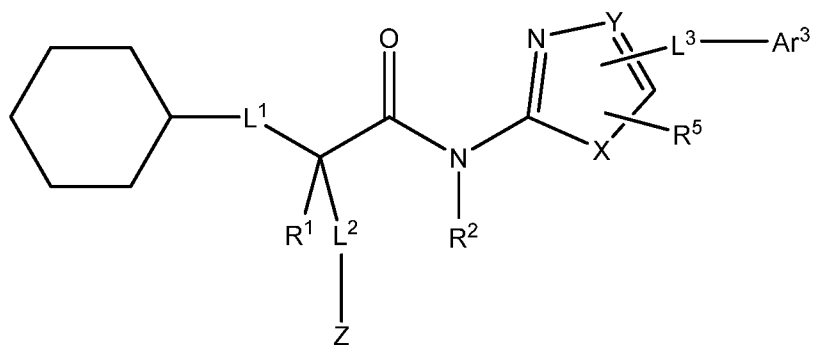
formula Ib, preferably  $L^1$  is methylene;

$B^1$ ,  $B^2$  and  $B^3$  are independently  $CF_2$ , O,  $NR^a$ , CO, or  $SO_2$ , wherein  $R^a$  is H or alkyl, preferably linear or branched  $C_1-C_4$  alkyl;  $C_1-C_4$  alkylcarbonyl,  $C_1-C_4$  alkylsulfonyl,  $C_1-C_4$  alkylaminocarbonyl,  $C_3-C_6$  cycloalkyl;  $C_3-C_6$  cycloalkylcarbonyl,  $C_3-C_6$  cycloalkylsulfonyl,  $C_3-C_6$  cycloalkylaminocarbonyl, aryl, arylcarbonyl, arylsulfonyl or arylaminocarbonyl, heteroaryl, heteroarylcarbonyl, heteroarylsulfonyl or heteroarylamino carbonyl; preferably  $B^1$ ,  $B^2$  and  $B^3$  are O and

$R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  and  $R''^{13}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclioxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy carbonyl, cycloalkyloxycarbonyl, heterocyclioxycarbonyl, aryloxycarbonyl, heteroaryloxycarbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or one of  $R^9$  or  $R^{10}$  and one of  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  or  $R''^{13}$ , or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  or  $R''^{13}$ , or one of  $R^{13}$  or  $R'^{13}$  and one of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ , or  $R''^{13}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or one of  $R^9$  or  $R^{10}$  and one of  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  or  $R''^{13}$ , or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  or  $R''^{13}$ , or one of  $R^{13}$  or  $R'^{13}$  and one of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ , or  $R''^{13}$

$R^{10}$ ,  $R^{11}$ ,  $R^{12}$ , or  $R^{13}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  and  $R''^{13}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocycliloxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, or one of  $R^9$  or  $R^{10}$  and one of  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  or  $R''^{13}$ , or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  or  $R''^{13}$ , or one of  $R^{13}$  or  $R'^{13}$  and one of  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ , or  $R''^{13}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, more preferably  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  and  $R''^{13}$  are independently selected from H, hydroxyl, C<sub>1</sub>-C<sub>3</sub>-alkyl, halo, haloalkyl, alkoxy, haloalkoxy, alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H, C<sub>1</sub>-C<sub>3</sub>-alkyl, halo, CF<sub>3</sub>, C<sub>1</sub>-C<sub>2</sub> alkoxy, and cyano, and still more preferably from H, F, Cl, methyl, CF<sub>3</sub>, methoxy, and cyano, and most preferably H or methyl.

Particularly preferred compounds of formula Ib-2a are

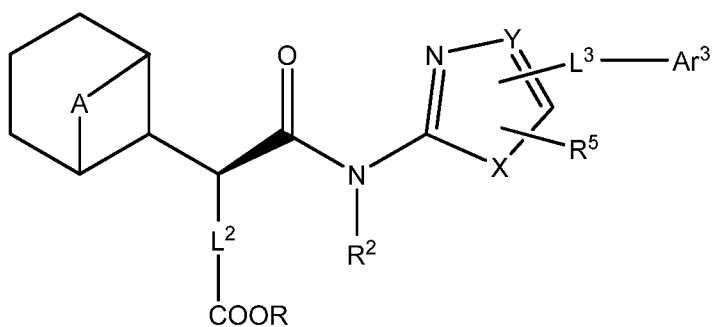
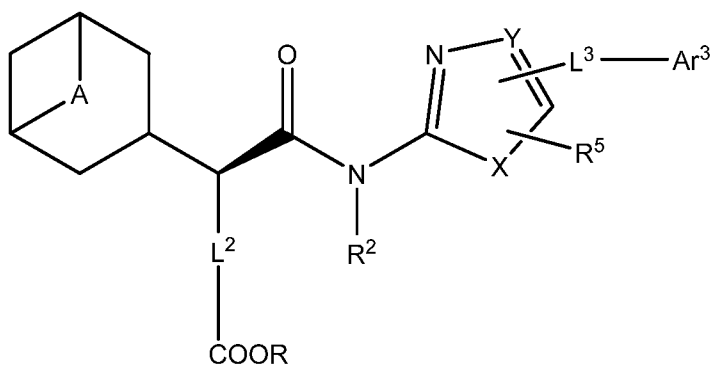
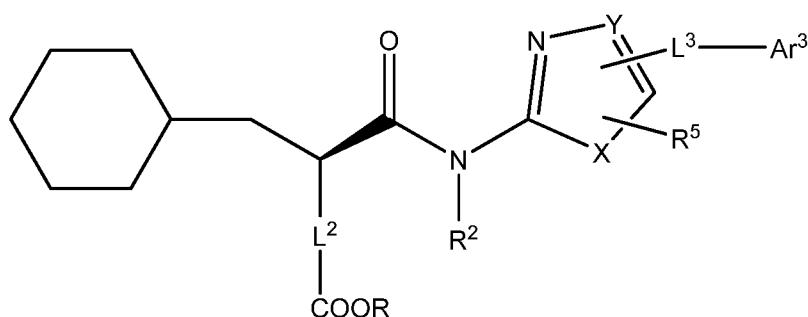


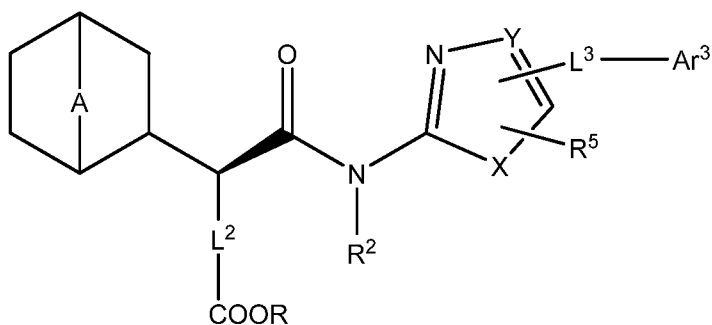
5 wherein A is  $-(CH_2)_n-O-$ ,  $-(CH_2)_n-NR^a-$ ,  $-(CH_2)_n-SO_2-$ , or  $-(CH_2)_m-$ , wherein n is

equal to 0 or 1,  $m$  is equal to 1 or 2, and  $R^a$  is as defined above in respect to formula Ib-2b, preferably  $R^a$  is H or alkyl, preferably linear or branched  $C_1$ - $C_4$  alkyl;  $C_1$ - $C_4$  alkylcarbonyl,  $C_1$ - $C_4$  alkylsulfonyl, more preferably linear or branched  $C_1$ - $C_4$  alkyl; and

- 5  $L^1$ ,  $L^2$ ,  $L^3$ ,  $Ar^3$ ,  $X$ ,  $Y$ ,  $Z$ ,  $R^1$ ,  $R^2$  and  $R^5$  are as defined above in respect to formula Ib-2a.

Even more preferred compounds of formula Ib-2a are selected from



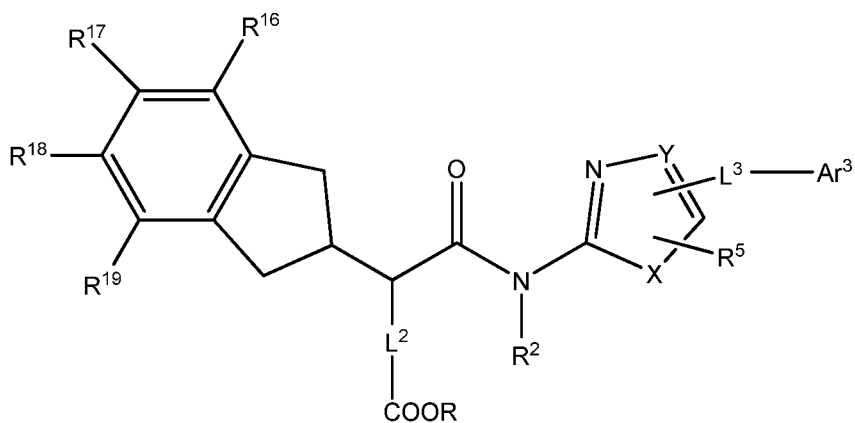


wherein **A** is  $-(\text{CH}_2)_n\text{-O-}$ ,  $-(\text{CH}_2)_n\text{-NR}^a$ ,  $-(\text{CH}_2)_n\text{-SO}_2\text{-}$ , or  $-(\text{CH}_2)_m\text{-}$ , wherein  $n$  is equal to 0 or 1,  $m$  is equal to 1 or 2, and  $\text{R}^a$  is as defined above in respect to formula Ib-2b, preferably  $\text{R}^a$  is H or alkyl, preferably linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl; C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, more preferably linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl; and

**L**<sup>2</sup>, **L**<sup>3</sup>, **Ar**<sup>3</sup>, **X**, **Y**, **R**, **R**<sup>1</sup>, **R**<sup>2</sup> and **R**<sup>5</sup> are as defined above in respect to formula Ib-2a.

Further preferred compounds of formula Ib are those of formula Ib-

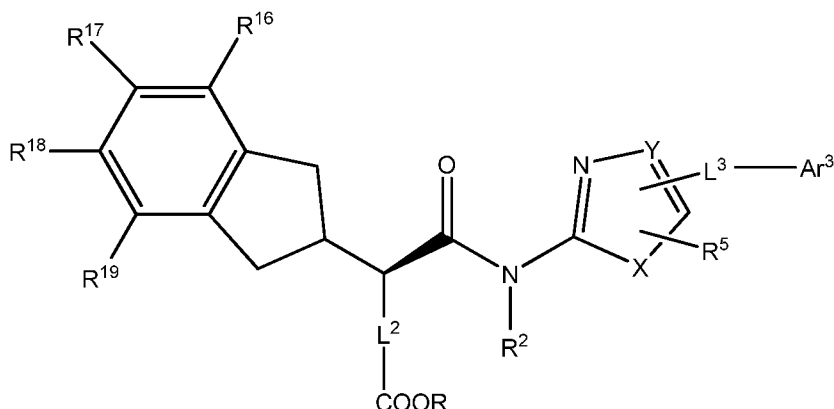
10 3



**Ib-3,**

preferably



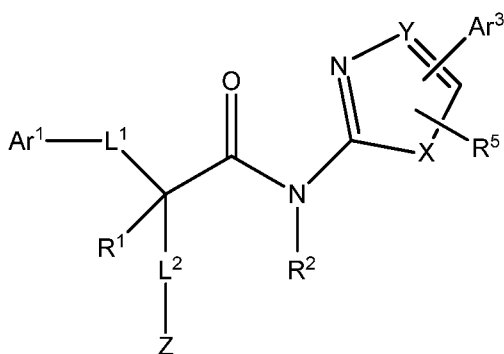
**Ib-3a,**

wherein  $L^2$ ,  $L^3$ ,  $Ar^3$ ,  $X$ ,  $Y$ ,  $R$ ,  $R^1$ ,  $R^2$  and  $R^5$  are as defined above in respect to formula Ib; and

- 5  $R^{16}$ ,  $R^{17}$ ,  $R^{18}$  and  $R^{19}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, cycloalkyloxycarbonyl, heterocyclyloxycarbonyl, aryloxycarbonyl, heteroaryloxycarbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, 15 alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, 20 alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or  $R^{16}$  and  $R^{17}$  or  $R^{17}$  and  $R^{18}$  or  $R^{18}$  and  $R^{19}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or  $R^{16}$  and  $R^{17}$  or  $R^{17}$  and  $R^{18}$  or  $R^{18}$  and  $R^{19}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety fused to the phenyl

group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably **R<sup>16</sup>**, **R<sup>17</sup>**, **R<sup>18</sup>** and **R<sup>19</sup>** are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, preferably methoxyethyl, haloalkoxy, preferably trifluoromethoxy, cycloalkyloxy, heterocycliloxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, more preferably **R<sup>16</sup>**, **R<sup>17</sup>**, **R<sup>18</sup>** and **R<sup>19</sup>** are independently selected from H, hydroxyl, halo, haloalkyl, alkoxy, haloalkoxy, preferably trifluoromethoxy, alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H, halo, CF<sub>3</sub>, methyl, C<sub>1</sub>-C<sub>2</sub> alkoxy, and cyano, and most preferably from H, F, Cl, CF<sub>3</sub>, methyl, methoxy, and cyano.

Further preferred compounds of formula Ib are those of formula Ib-4



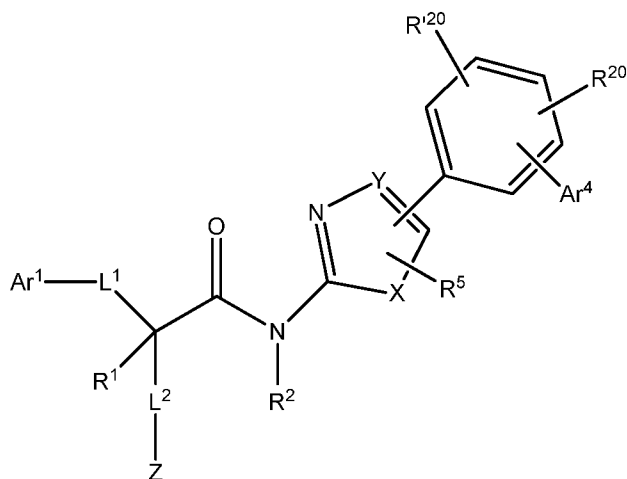
**Ib-4,**

wherein

**Ar<sup>1</sup>**, **Ar<sup>3</sup>**, **L<sup>1</sup>**, **L<sup>2</sup>**, **R<sup>1</sup>**, **R<sup>2</sup>**, **R<sup>5</sup>**, **X**, **Y** and **Z** are as defined above in respect to

formula Ib.

Preferred compounds of formula Ib-4 are those of formula Ib-4a



#### Ib-4a

5 wherein

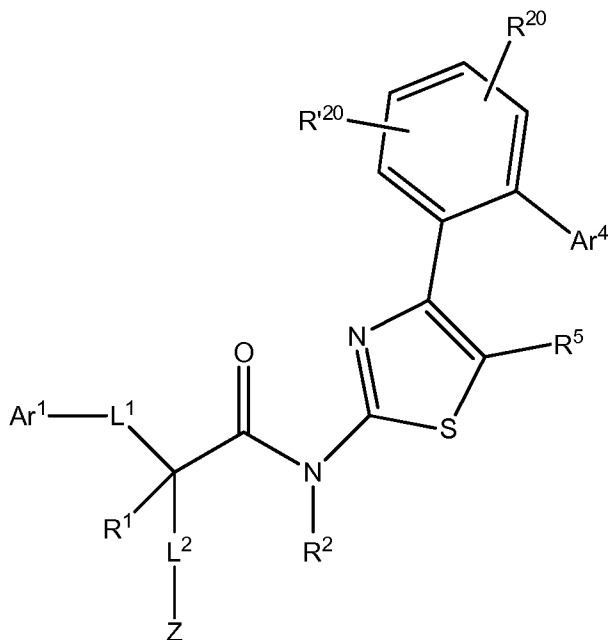
$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ ,  $\text{X}$ ,  $\text{Y}$  and  $\text{Z}$  are as defined above in respect to formula Ib-4,

10  $\text{R}^{20}$  and  $\text{R}'^{20}$  are independently selected from halo (preferably  $-\text{F}$  and  $-\text{Cl}$ ), cyano,  $\text{C}_1\text{-C}_3$  alkyl, cyclopropyl, haloalkyl, alkoxy, haloalkoxy, alkoxy carbonylamino, or the two substituents form an alkylenedioxy group or a haloalkylenedioxy group, preferably  $\text{R}^{20}$  and  $\text{R}'^{20}$  are halo preferably fluoro or chloro, haloalkyl, preferably  $-\text{CF}_3$  or  $-\text{CHF}_2$ , alkoxy preferably methoxy, haloalkoxy preferably  $-\text{OCF}_3$  or  $-\text{OCHF}_2$ ;

15  $\text{Ar}^4$  is 5 or 6 membered aryl, preferably phenyl, 5 or 6 membered heteroaryl, preferably furanyl, thiophenyl, pyridinyl, pyrimidinyl, pyrazinyl, and pyridazinyl, more preferably furan-3-yl, thiophen-3-yl, pyridinyl, still more preferably pyridin-3-yl, each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally fused to one or more 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, thus forming a fused ring system, and the latter  
20 fused ring system being optionally substituted by one or more further substituents

selected from halo, hydroxyl, oxo, alkyl, and/or each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally substituted by one or more substituents selected from halo, cyano, hydroxyl, alkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, alkylaminoalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, alkylsulfonyl, haloalkylsulfonyl, alkylsulfonylamino, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino, arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo or alkyl, preferably methyl; preferably  $Ar^4$  is phenyl or pyridin-3-yl, each of said phenyl or pyridin-3-yl being optionally fused to one or more 5 or 6 membered heterocyclyl, phenyl, or 5 or 6 membered heteroaryl moiety, preferably oxopyrrolidinyl, imidazolyl, piperidinyl, morpholinyl, pyrrolyl, imidazolyl, or pyridyl more preferably 2-oxopyrrolidinyl, 2-oxoimidazolyl, 2-oxopiperidinyl, or pyrrolyl, thus forming a fused ring system, and the latter fused ring system being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo, alkyl, preferably methyl, and/or each of said phenyl or pyridin-3-yl groups being optionally substituted by one or more substituents selected from halo, alkyl, heterocyclyl, heteroaryl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, aralkylamino, alkylaminocarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, each of said heterocyclyl, heteroaryl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aralkyloxy, cycloalkylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from fluoro, chloro, oxo or methyl.

Preferred compounds of formula Ib-4a are those of formula Ib-4b

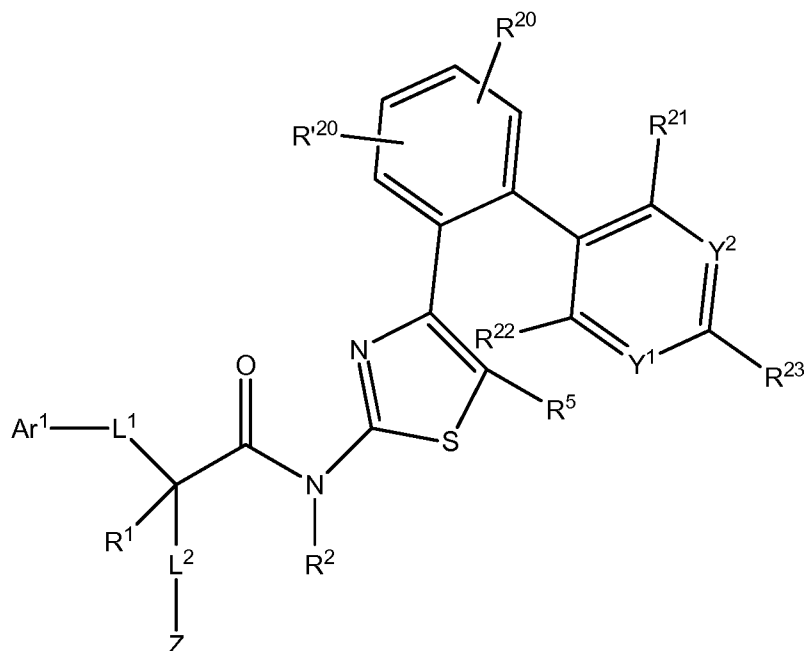


#### Ib-4b

wherein

- 5  $\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib, and  $\text{Ar}^4$ ,  $\text{R}^{20}$  and  $\text{R}'^{20}$ , are as defined above in respect to formula Ib-4a.

Preferred compounds of formula Ib-4b are those of formula Ib-4c

**Ib-4c**

wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib;

5  $\text{R}^{20}$  and  $\text{R}^{20}$ , are as defined above in respect to formula Ib-4a;

$\text{R}^{21}$  and  $\text{R}^{22}$  are independently selected from H, halo, preferably fluoro or chloro, alkoxy, preferably methoxy, preferably  $\text{R}^{21}$  and  $\text{R}^{22}$  are H;

10  $\text{R}^{23}$  is selected from halo, cyano, hydroxyl, alkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, alkylaminoalkoxy, preferably dimethylaminoethoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, alkylsulfonyl, preferably  $\text{C}_1\text{-C}_3$  alkylsulfonyl, more  
 15 preferably methylsulfonyl, haloalkylsulfonyl, alkylsulfonylamino preferably N-methyl(methylsulfonyl)amino, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino,

arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted  
 by one or more further substituents selected from halo, preferably chloro or  
 fluoro, oxo or alkyl, preferably methyl preferably  $R^{23}$  is selected from halo,  
 preferably chloro or fluoro, alkyl, preferably linear or branched  $C_1-C_5$  alkyl, more  
 5 preferably methyl or isopropyl, 5 or 6-membered heterocyclyl, preferably  
 pyrrolidin-1-yl, 2-oxopyrrolidin-1-yl, 1-methyl-2-oxoimidazolin-3-yl, 1-  
 methylpiperazin-4-yl, morpholin-4-yl, heteroaryl, preferably 1,3,4-triazol-1-yl,  
 haloalkyl,  $C_1-C_3$  alkoxy, preferably methoxy, haloalkoxy, alkoxyalkyl, preferably  
 methoxymethyl, alkoxyalkoxy, preferably methoxyethoxy, cycloalkyloxy,  
 10 cycloalkylalkyloxy, preferably cyclopropylmethyloxy, heterocyclyloxy,  
 preferably (tetrahydropyran-4-yl)oxy, aralkyloxy, preferably benzyloxy,  $C_1-C_3$   
 alkylamino, preferably dimethylamino, alkylaminoalkyl, cycloalkylamino,  
 preferably N-methylcyclohexylamino, aralkylamino, preferably N-  
 methylbenzylamino,  $C_1-C_6$  alkylaminocarbonyl preferably  
 15 dimethylaminocarbonyl,  $C_1-C_6$  alkylcarbonylamino, preferably  
 methylcarbonylamino, cycloalkylcarbonylamino, each of said 5 or 6-membered  
 heterocyclyl, heteroaryl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy,  
 aralkyloxy, cycloalkylamino, aralkylamino, cycloalkylcarbonylamino being  
 optionally substituted by one or more further substituents selected from fluoro,  
 20 chloro, oxo or methyl, even more preferably  $R^{23}$  is selected from chloro, fluoro,  
 isopropyl, 5 or 6-membered heterocyclyl preferably pyrrolidin-1-yl, 2-  
 oxopyrrolidin-1-yl, morpholin-4-yl, 1-methyl-2-oxoimidazolin-3-yl,  $C_1-C_3$  alkoxy  
 preferably methoxy, alkyloxyalkoxy, preferably methoxyethoxy, aralkyloxy,  
 preferably benzyloxy,  $C_1-C_3$  alkylamino preferably dimethylamino, each of said 5  
 25 or 6-membered heterocyclyl, aralkyloxy being optionally substituted by one or  
 more further substituents selected from fluoro, chloro, oxo, or methyl;

$Y^1$  is N or  $C-R^{24}$  where  $R^{24}$  is H, halo, alkoxy, alkyl, heterocyclyl, preferably  
 pyrrolidinyl, imidazolyl, piperidinyl, morpholinyl, more preferably 2-  
 oxopyrrolidin-1-yl, 2-oxoimidazolin-1-yl, 2-oxopiperidin-1-yl, or morpholin-4-yl,  
 30 each of said substituents being optionally substituted by one or more further  
 substituents selected from halo, preferably chloro or fluoro, oxo, alkyl, preferably  
 methyl, preferably  $R^{24}$  is H, halo, methoxy, more preferably H, chloro or fluoro,  
 or

$Y^1$  is  $C-R^{24}$  and  $R^{24}$  and  $R^{23}$  together form a 5 or 6 membered cycloalkyl, aryl,

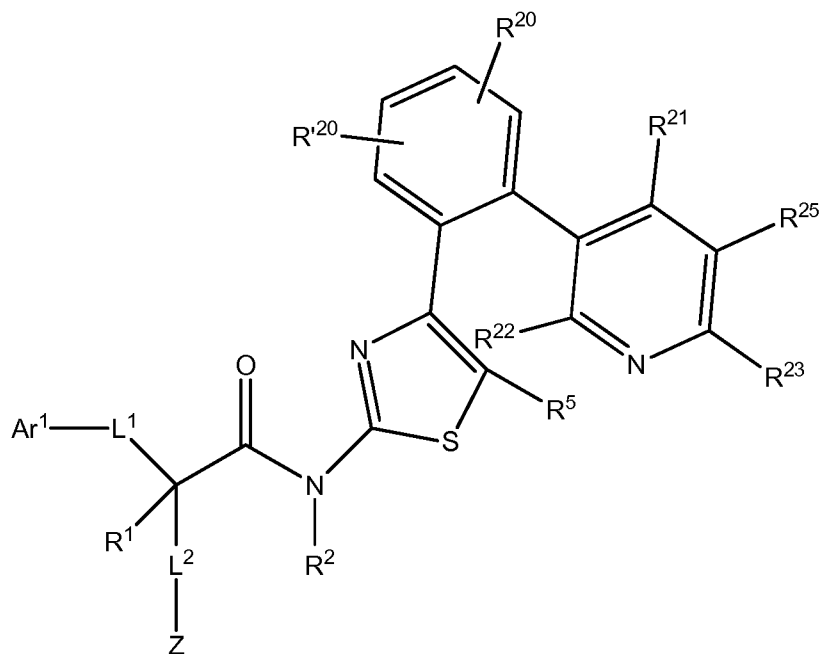
heterocyclyl or heteroaryl moiety, preferably 2-oxopyrrolidinyl, morpholinyl, 2-oxopiperidinyl, furanyl, pyrrolyl, imidazolyl, thus forming a fused ring system, the latter fused ring system being optionally substituted by one or more group selected from oxo, alkyl or halo; and

- 5  $Y^2$  is N or C- $R^{25}$  where  $R^{25}$  is H, halo, alkoxy, alkyl, heterocyclyl, preferably pyrrolidinyl, imidazolyl, piperidinyl or morpholinyl, more preferably 2-oxopyrrolidin-1-yl, 2-oxoimidazolin-1-yl, 2-oxopiperidin-1-yl or morpholin-4-yl, each of said substituents being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo, alkyl, preferably  
10 methyl, preferably  $R^{25}$  is H, halo, methoxy, more preferably H, chloro or fluoro, or

- $Y^2$  is C- $R^{25}$  and  $R^{25}$  and  $R^{23}$  together form a 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, preferably 2-oxopyrrolidinyl, morpholinyl, 2-oxopiperidinyl, furanyl, pyrrolyl, imidazolyl, furanyl, thus forming a fused ring  
15 system, the latter fused ring system being optionally substituted by one or more group selected from oxo, alkyl or halo, under the condition that  $R^{24}$  and  $R^{23}$  together do not form a 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety.

Preferred compounds of formula Ib-4c are those of formula Ib-4d



**Ib-4d,**

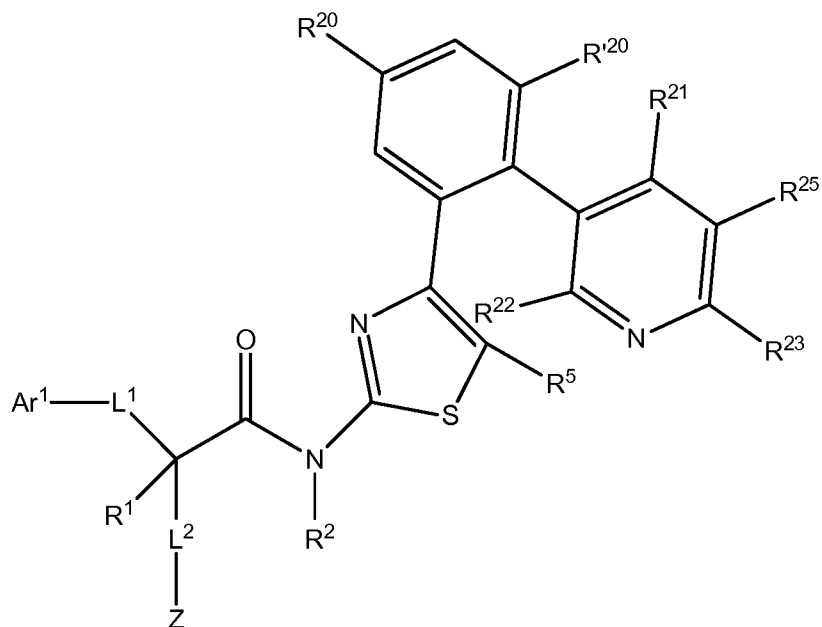
wherein,

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib;

5  $\text{R}^{20}$  and  $\text{R}'^{20}$ , are as defined above in respect to formula Ib-4a; and

$\text{R}^{21}$ ,  $\text{R}^{22}$ ,  $\text{R}^{23}$  and  $\text{R}^{25}$  are as defined above in respect to formula Ib-4c.

Preferred compounds of formula Ib-4d are those of formula Ib-4e

**Ib-4e,**

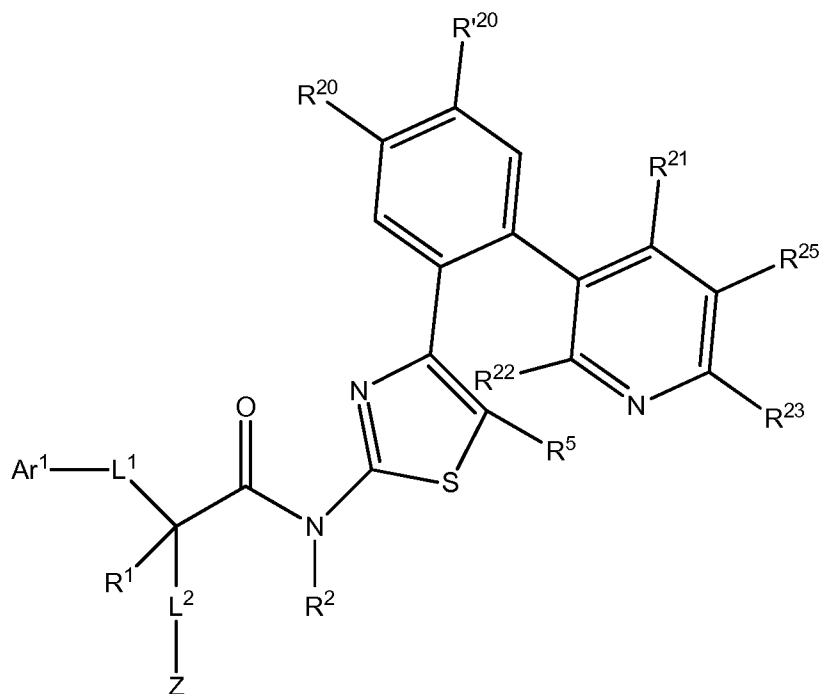
wherein,

**Ar<sup>1</sup>**, **L<sup>1</sup>**, **L<sup>2</sup>**, **R<sup>1</sup>**, **R<sup>2</sup>**, **R<sup>5</sup>**, and **Z** are as defined above in respect to formula Ib;

5 **R<sup>20</sup>** and **R<sup>20'</sup>**, are as defined above in respect to formula Ib-4a; and

**R<sup>21</sup>**, **R<sup>22</sup>**, **R<sup>23</sup>** and **R<sup>25</sup>** are as defined above in respect to formula Ib-4c.

Other preferred compounds of formula Ib-4d are those of Ib-4f

**Ib-4f,**

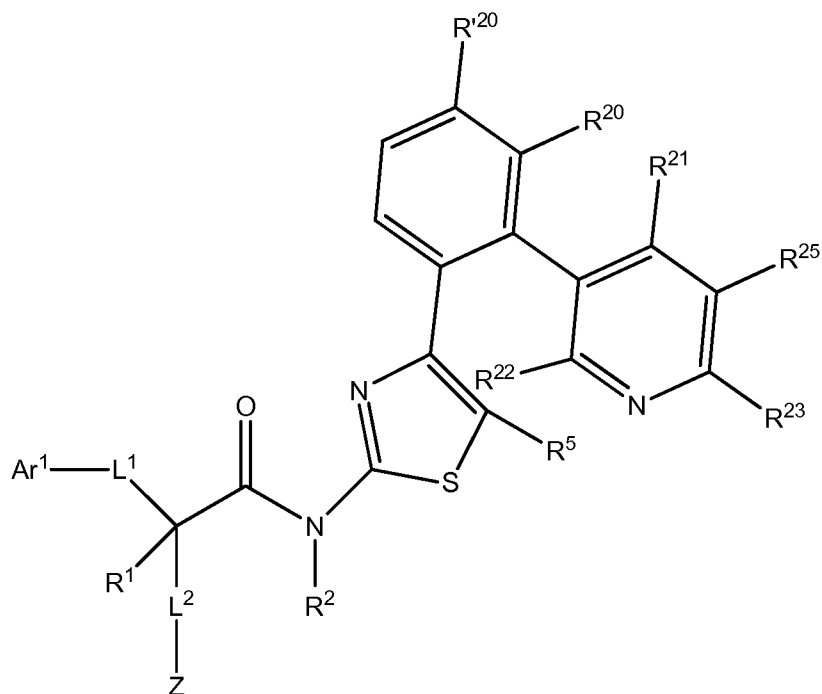
wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib;

5  $\text{R}^{20}$  and  $\text{R}'^{20}$ , are as defined above in respect to formula Ib-4a; and

$\text{R}^{21}$ ,  $\text{R}^{22}$ ,  $\text{R}^{23}$  and  $\text{R}^{25}$  are as defined above in respect to formula Ib-4c.

Still other preferred compounds of formula Ib-4d are those of formula Ib-4g

**Ib-4g,**

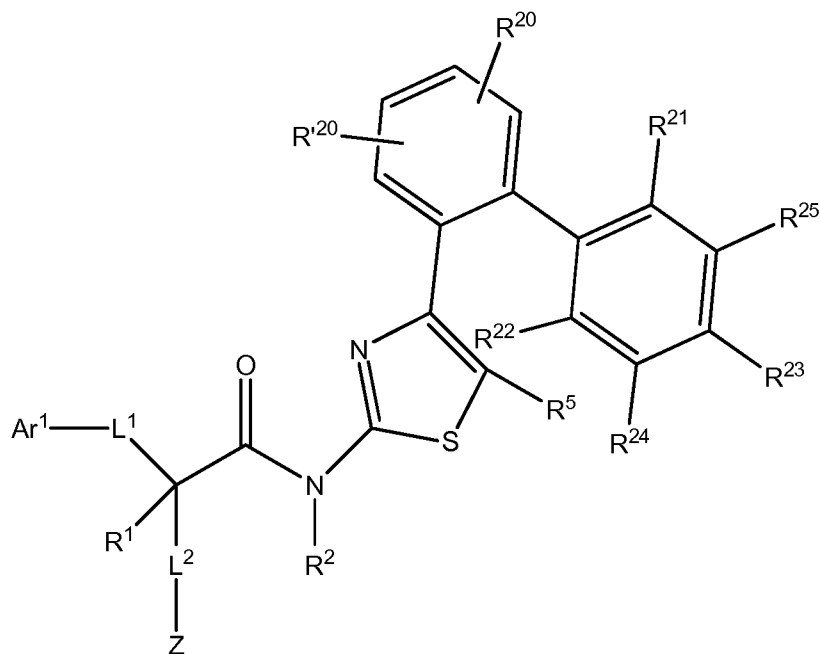
wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib;

5  $\text{R}^{20}$  and  $\text{R}^{20}$ , are as defined above in respect to formula Ib-4a; and

$\text{R}^{21}$ ,  $\text{R}^{22}$ ,  $\text{R}^{23}$  and  $\text{R}^{25}$  are as defined above in respect to formula Ib-4c.

Other preferred compounds of formula Ib-4c are those of formula Ib-4d'



**Ib-4d'**,

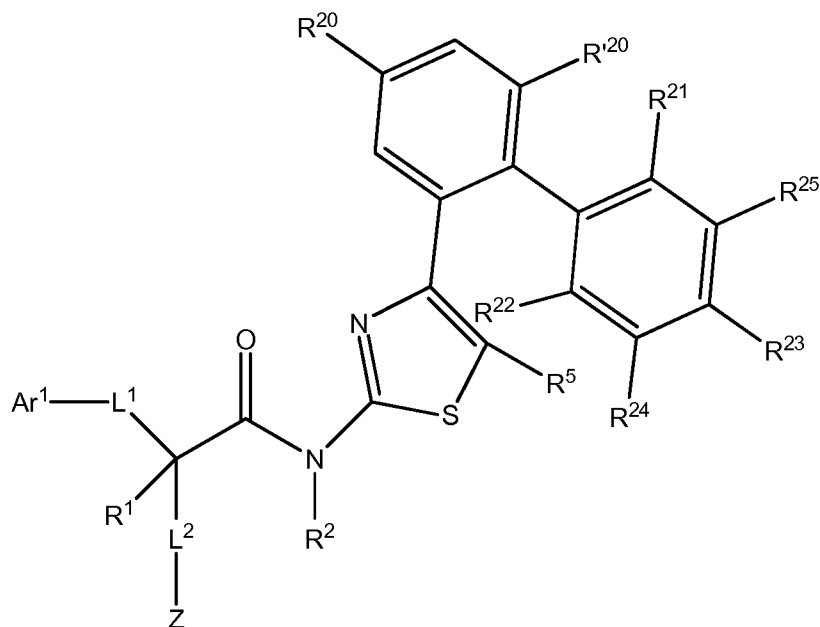
wherein

**Ar<sup>1</sup>**, **L<sup>1</sup>**, **L<sup>2</sup>**, **R<sup>1</sup>**, **R<sup>2</sup>**, **R<sup>5</sup>**, and **Z** are as defined above in respect to formula Ib;

5 **R<sup>20</sup>** and **R<sup>'20</sup>**, are as defined above in respect to formula Ib-4a; and

**R<sup>21</sup>**, **R<sup>22</sup>**, **R<sup>23</sup>** and **R<sup>25</sup>** are as defined above in respect to formula Ib-4c.

Preferred compounds of formula Ib-4d' are those of formula Ib-4e'

**Ib-4e'**

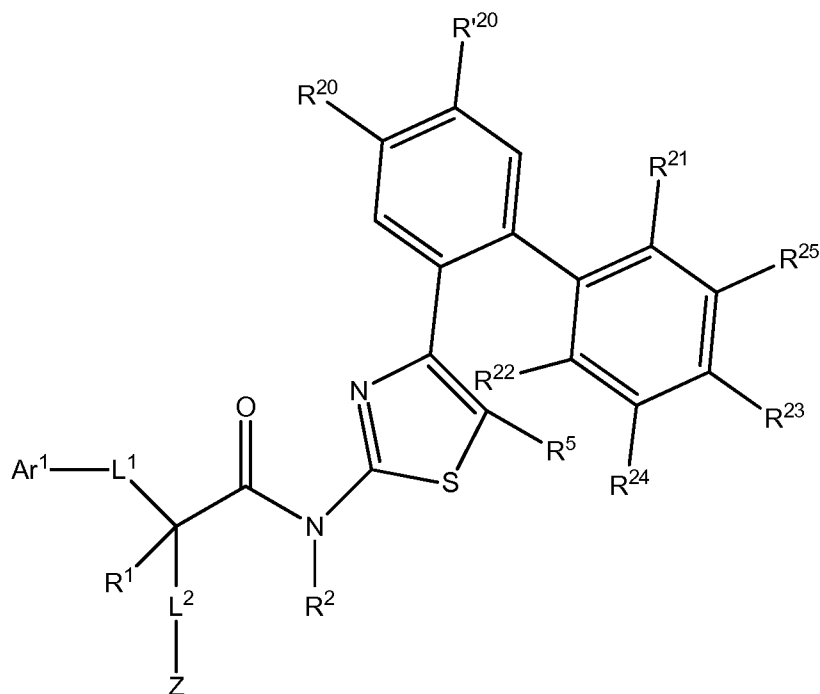
wherein

**Ar<sup>1</sup>**, **L<sup>1</sup>**, **L<sup>2</sup>**, **R<sup>1</sup>**, **R<sup>2</sup>**, **R<sup>5</sup>**, and **Z** are as defined above in respect to formula Ib;

5 **R<sup>20</sup>** and **R<sup>20'</sup>**, are as defined above in respect to formula Ib-4a; and

**R<sup>21</sup>**, **R<sup>22</sup>**, **R<sup>23</sup>** and **R<sup>25</sup>** are as defined above in respect to formula Ib-4c.

Other preferred compounds of formula Ib-4d' are those of formula Ib-4f'

**Ib-4f'**

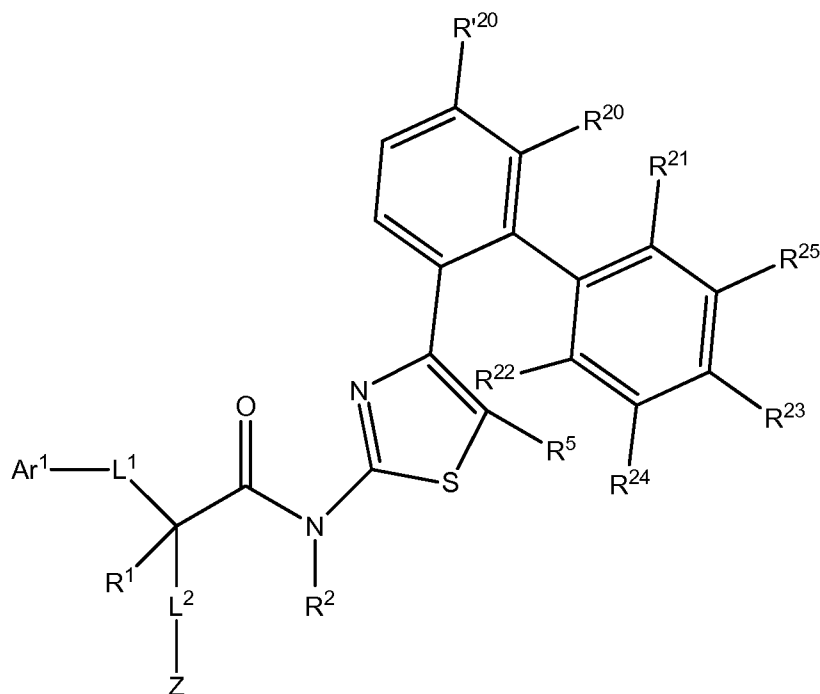
wherein

Ar<sup>1</sup>, L<sup>1</sup>, L<sup>2</sup>, R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup>, and Z are as defined above in respect to formula Ib;

5 R<sup>20</sup> and R<sup>'20</sup>, are as defined above in respect to formula Ib-4a; and

R<sup>21</sup>, R<sup>22</sup>, R<sup>23</sup> and R<sup>25</sup> are as defined above in respect to formula Ib-4c.

Still other preferred compounds of formula Ib-4d' are those of formula Ib-4g'

**Ib-4g'**

wherein,

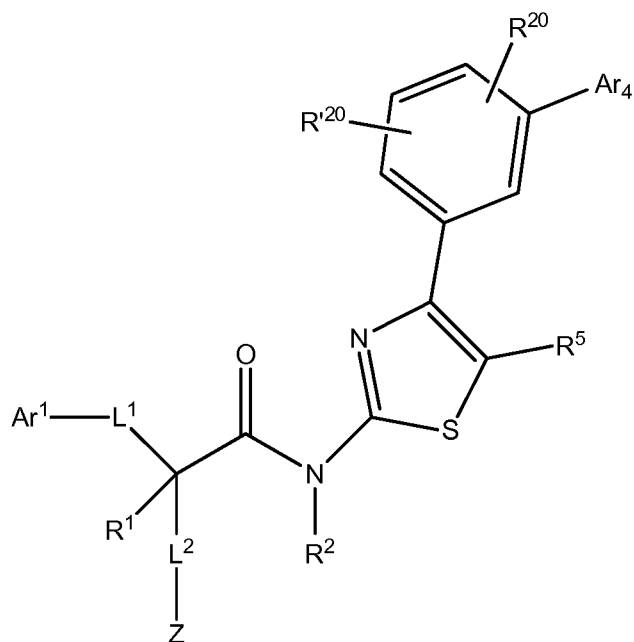
$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib;

5  $\text{R}^{20}$  and  $\text{R}'^{20}$ , are as defined above in respect to formula Ib-4a;

$\text{R}^{21}$ ,  $\text{R}^{22}$ ,  $\text{R}^{23}$  and  $\text{R}^{25}$  are as defined above in respect to formula Ib-4c.

In another embodiment of the invention, preferred compounds of formula Ib-4a are those of formula Ib-4h,



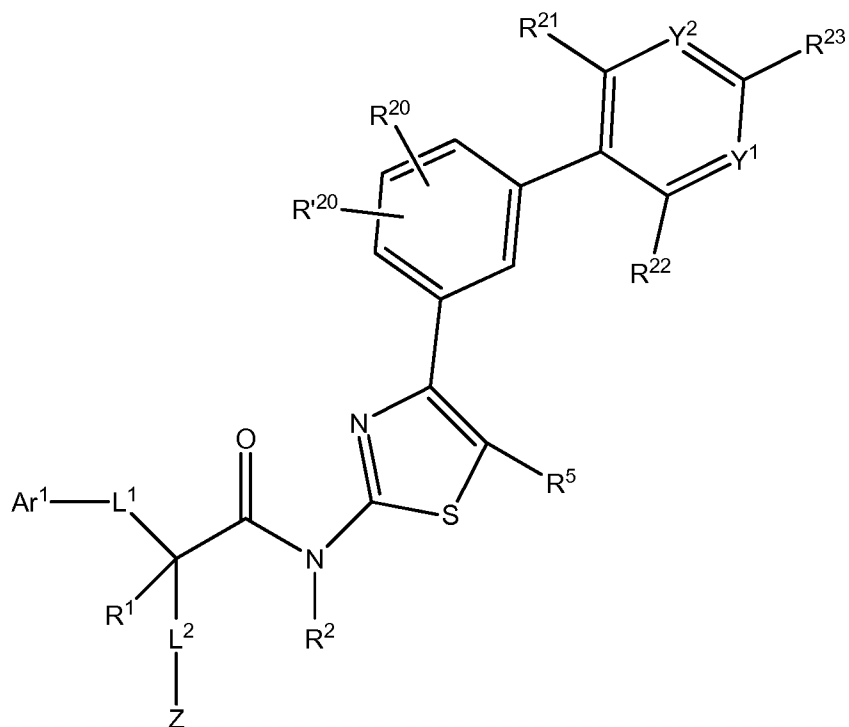
**Ib-4h,**

wherein

Ar<sup>1</sup>, L<sup>1</sup>, L<sup>2</sup>, R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup>, and Z are as defined above in respect to formula Ib; and

- 5 Ar<sup>4</sup>, R<sup>20</sup> and R<sup>'20</sup>, are as defined above in respect to formula Ib-4a.

Preferred compounds of formula Ib-4h are those of formula Ib-4i

**Ib-4i,**

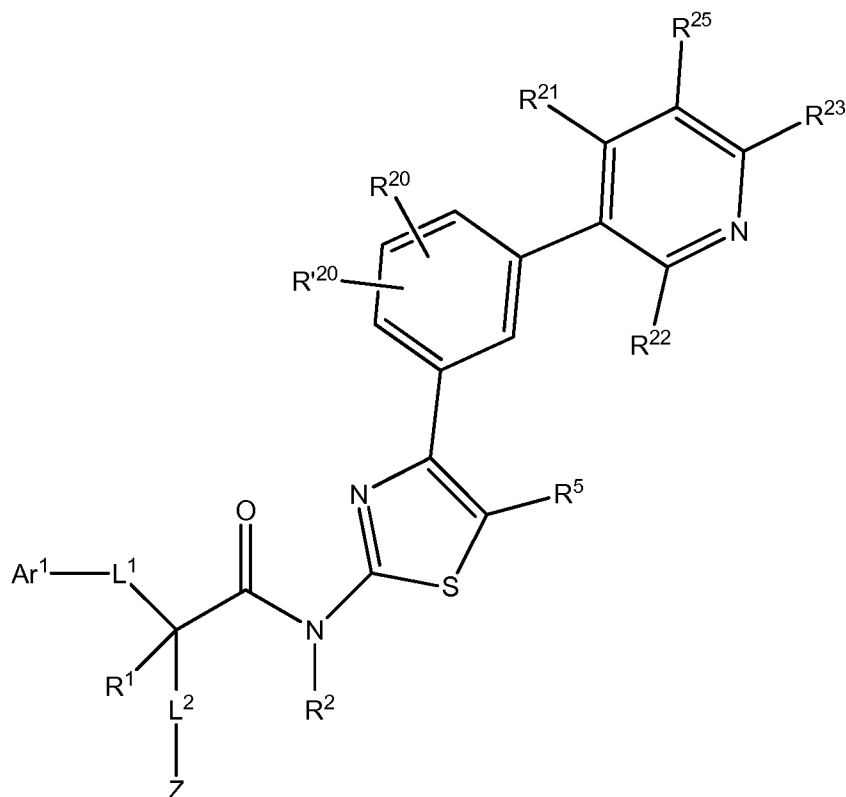
wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib;

5  $\text{R}^{20}$  and  $\text{R}'^{20}$ , are as defined above in respect to formula Ib-4a; and

$\text{R}^{21}$ ,  $\text{R}^{22}$ ,  $\text{R}^{23}$ ,  $\text{Y}^1$  and  $\text{Y}^2$  are as defined above in respect to formula Ib-4c.

Preferred compounds of formula Ib-4i are those of formula Ib-4j

**Ib-4j,**

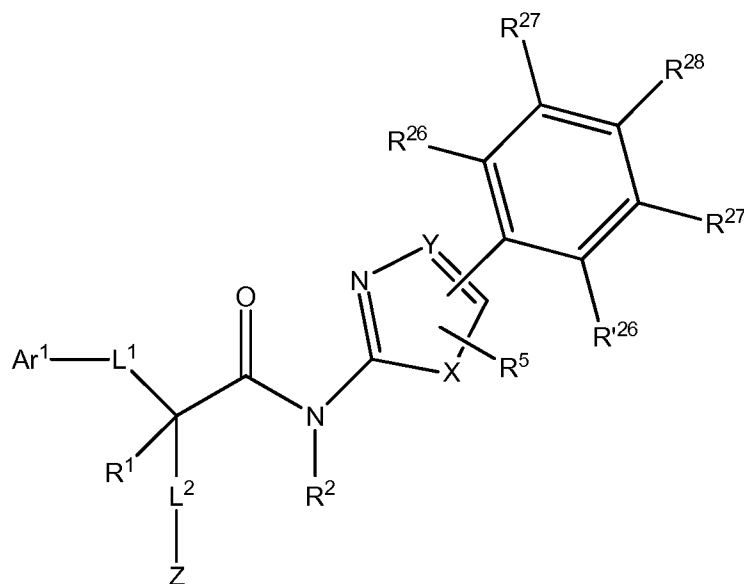
wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined above in respect to formula Ib;

5  $\text{R}^{20}$  and  $\text{R}^{20}$ , are as defined above in respect to formula Ib-4a; and

$\text{R}^{21}$ ,  $\text{R}^{22}$ ,  $\text{R}^{23}$  and  $\text{R}^{25}$  are as defined above in respect to formula Ib-4c.

Other preferred compounds of formula Ib-4 are those of formula Ib-4k,



Ib-4k

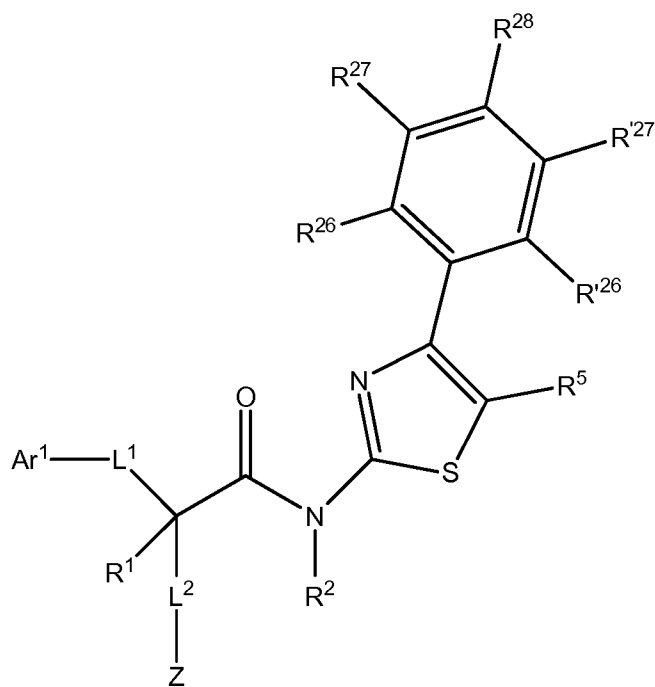
wherein

Ar<sup>1</sup>, L<sup>1</sup>, L<sup>2</sup>, R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup>, X, Y, and Z are as defined above in respect to formula Ib;

- 5 R<sup>26</sup>, R<sup>26</sup>, R<sup>27</sup>, R<sup>27</sup>, R<sup>28</sup> are independently selected from H, halo, cyano, alkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, alkylamino, carboxy, alkoxy carbonyl, =alkyl carbonylamino, haloalkyl carbonylamino, cycloalkyl carbonylamino, acylamino, carbamoyl, alkoxy carbamoyl, cycloalkyl carbamoyl, alkyl carbamoylamino, 10 cycloalkyl aminocarbamoyl, alkylsulfonyl, haloalkylsulfonyl, sulfamoyl, alkylsulfamoyl, alkylsulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group, preferably R<sup>26</sup>, R<sup>26</sup>, R<sup>27</sup>, R<sup>27</sup>, R<sup>28</sup> are independently selected from H, halo, preferably chloro or fluoro, more preferably chloro, cyano, alkyl, preferably methyl, haloalkyl, preferably – 15 CF<sub>3</sub> or –CHF<sub>2</sub>, cycloalkyl, preferably cyclopropyl, alkoxy, preferably methoxy or isopropoxy, haloalkoxy, preferably –OCF<sub>3</sub> or –OCHF<sub>2</sub>, alkoxy carbamoyl, or two substituents form a methylenedioxy group, more preferably R<sup>26</sup>, R<sup>26</sup>, R<sup>27</sup>, R<sup>27</sup>, R<sup>28</sup> are independently selected from H, halo, preferably chloro or fluoro,

more preferably chloro, haloalkyl, preferably  $-\text{CF}_3$  or  $-\text{CHF}_2$ , alkoxy, preferably methoxy.

Preferred compounds of formula Ib-4k are those of formula Ib-4l



5

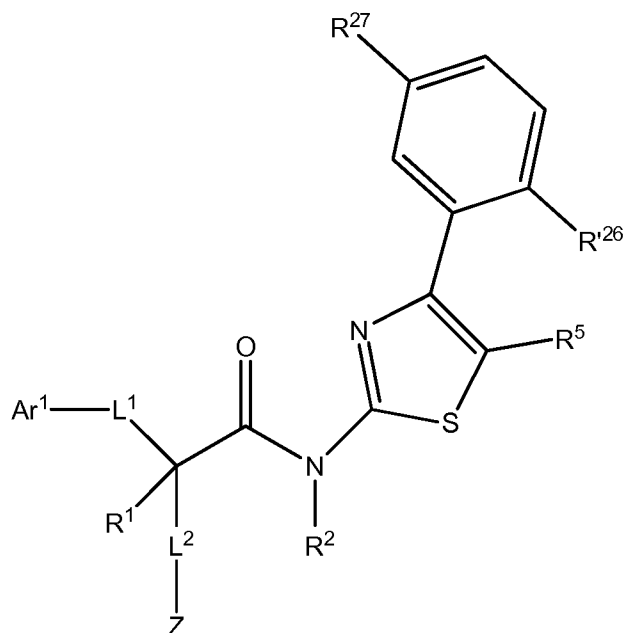
**Ib-4l**

wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$  and  $\text{Z}$  are as defined above in respect to formula Ib; and

$\text{R}^{26}$ ,  $\text{R}^{26}$ ,  $\text{R}^{27}$ ,  $\text{R}^{27}$  and  $\text{R}^{28}$  are as defined above in respect to formula Ib-4k.

Preferred compounds of formula Ib-4l are those of formula Ib-4m

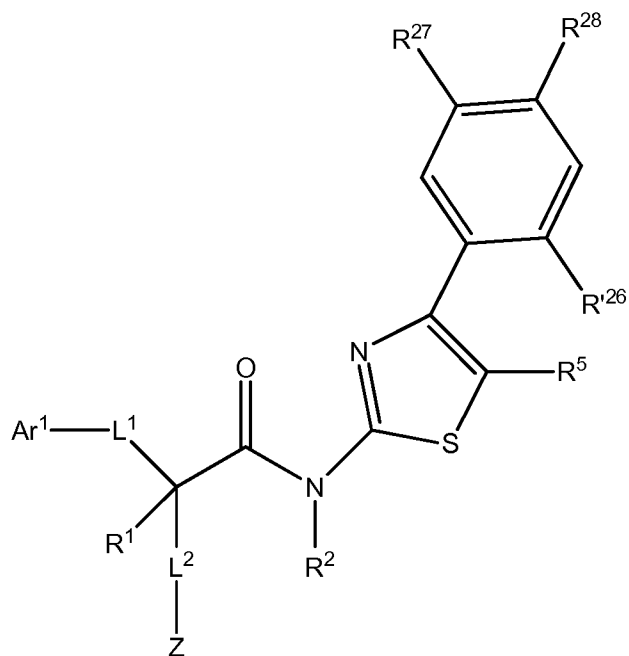
**Ib-4m**

wherein,

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$  and  $\text{Z}$  are as defined above in respect to formula Ib; and

- 5  $\text{R}^{26}$  and  $\text{R}^{27}$  are as defined above in respect to formula Ib-4k, preferably  $\text{R}^{26}$  and  $\text{R}^{27}$  are independently selected from H, halo, haloalkyl, haloalkoxy, preferably chloro, fluoro  $\text{CF}_3$ ,  $\text{CHF}_2$ ,  $\text{OCF}_3$  or  $\text{OCHF}_2$ , preferably  $\text{R}^{26}$  is chloro and  $\text{R}^{27}$  is selected from H, halo,  $\text{CF}_3$ ,  $\text{CHF}_2$ ,  $\text{OCF}_3$  or  $\text{OCHF}_2$ , preferably chloro and fluoro.

Other preferred compounds of formula Ib-4l are those of formula Ib-4n,

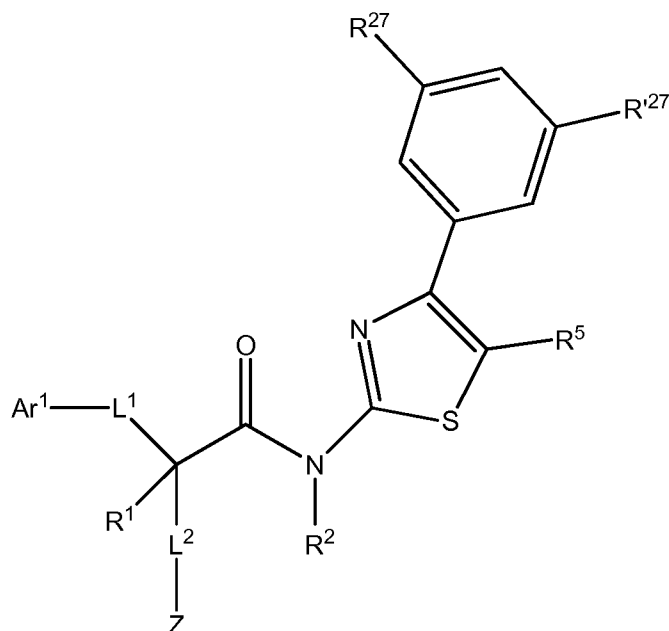
**Ib-4n**

wherein,

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$  and  $\text{Z}$  are as defined above in respect to formula Ib; and

- 5  $\text{R}^{26}$ ,  $\text{R}^{27}$  and  $\text{R}^{28}$  are as defined above in respect to formula Ib-4k, preferably  $\text{R}^{26}$ ,  $\text{R}^{27}$  and  $\text{R}^{28}$  are independently selected from H, halo, haloalkyl, haloalkoxy, preferably chloro, fluoro,  $\text{CF}_3$ , or  $\text{CHF}_2$ , preferably  $\text{OCF}_3$  or  $\text{OCHF}_2$ .

Other preferred compounds of formula Ib-4l are those of formula Ib-4o

**Ib-4o**

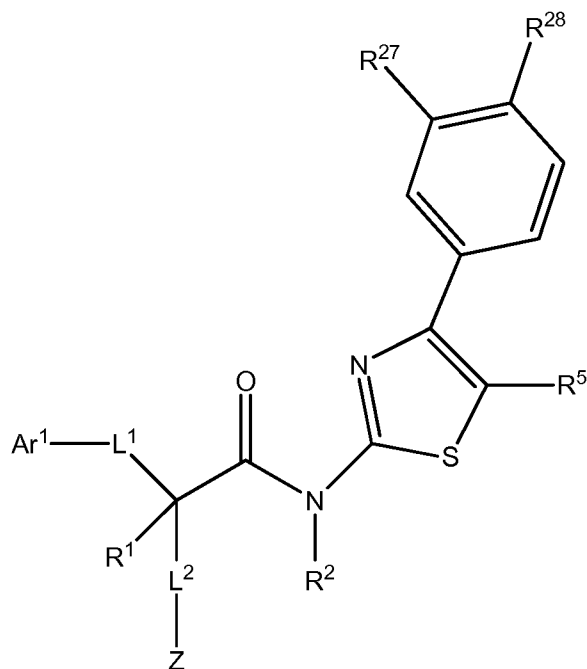
wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$  and  $\text{Z}$  are as defined above in respect to formula Ib; and

- 5  $\text{R}^{27}$  and  $\text{R}'^{27}$  are as defined above in respect to formula Ib-4k, preferably  $\text{R}^{27}$  and  $\text{R}'^{27}$  are independently selected from H, halo, haloalkyl, haloalkoxy, preferably chloro, fluoro,  $\text{CF}_3$ ,  $\text{CHF}_2\text{OCF}_3$  or  $\text{OCHF}_2$ .

Other preferred compounds of formula Ib-4l are those of formula Ib-4p



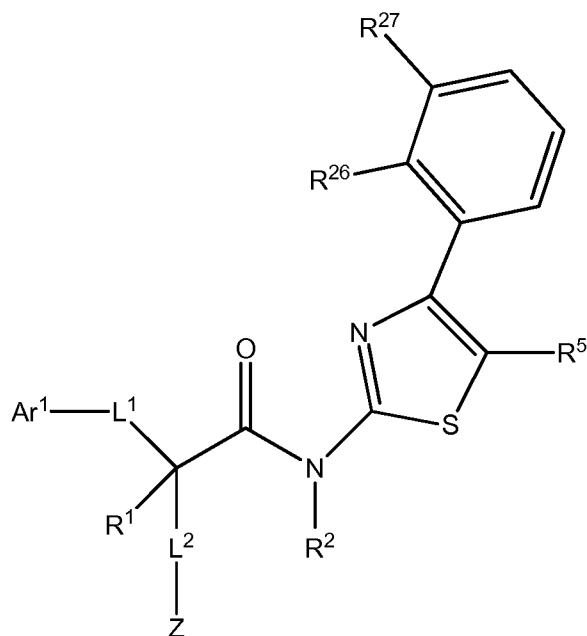
**Ib-4p**

wherein,

Ar<sup>1</sup>, L<sup>1</sup>, L<sup>2</sup>, R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup> and Z are as defined above in respect to formula Ib; and

- 5 R<sup>27</sup> and R<sup>28</sup> are as defined above in respect to formula Ib-4k, preferably R<sup>27</sup> and R<sup>28</sup> are independently selected from H, halo, haloalkyl, alkoxy, haloalkoxy, preferably chloro, fluoro, CF<sub>3</sub>, CHF<sub>2</sub>, methoxy, OCF<sub>3</sub> or OCHF<sub>2</sub>.

Still other preferred compounds of formula Ib-4l are those of formula Ib-4q

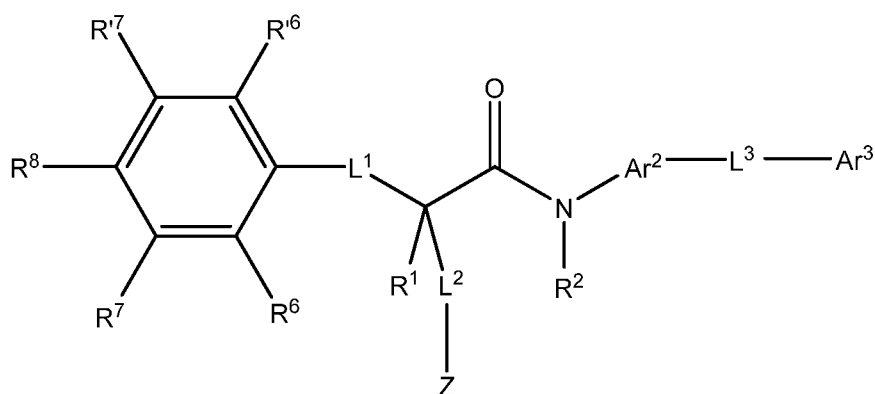
**Ib-4q**

wherein,

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$  and  $\text{Z}$  are as defined above in respect to formula Ib; and

- 5  $\text{R}^{26}$  and  $\text{R}^{27}$  are as defined above in respect to formula Ib-4k, preferably  $\text{R}^{26}$  and  $\text{R}^{27}$  are independently selected from H, halo, haloalkyl, alkoxy, haloalkoxy, preferably chloro, fluoro,  $\text{CF}_3$ , or  $\text{CHF}_2$ , methoxy,  $\text{OCF}_3$  or  $\text{OCHF}_2$ .

In yet another embodiment, preferred compounds of formula I are those of formula Ic



10

**Ic**

and pharmaceutically acceptable salts, and solvates thereof, wherein

wherein  $Ar^2$ ,  $Ar^3$ ,  $R^1$ ,  $R^2$ ,  $L^1$ ,  $L^2$ ,  $L^3$  and  $Z$  are as defined above in respect to formula I; and

$R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  and  $R^8$  are independently selected from H, halo, cyano, alkyl,  
5 hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl,  
heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl,  
hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkyloxy, heterocyclyloxy,  
aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl,  
cycloalkyloxy-carbonyl, heterocyclyloxy-carbonyl, aryloxy-carbonyl,  
10 heteroaryloxy-carbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy,  
heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy,  
alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino,  
heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino,  
alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl,  
15 alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl,  
carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl,  
cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl  
sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroaryl-sulfamoyl,  
alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino,  
20 arylsulfonylamino, heteroaryl-sulfonylamino, haloalkylsulfonylamino, or  $R^6$  and  
 $R^7$  or  $R^7$  and  $R^8$  or  $R'^6$  and  $R'^7$  or  $R'^7$  and  $R^8$  together form an alkylenedioxy  
group or a haloalkylenedioxy group, or  $R^6$  and  $R^7$  or  $R^7$  and  $R^8$  or  $R'^6$  and  $R'^7$  or  
 $R'^7$  and  $R^8$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety  
fused to the phenyl group they are attached to, each of said substituents being  
25 optionally substituted by one or more further substituents selected from halo,  
alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl,  
aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl,  
heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably  $R^6$ ,  $R^7$ ,  
 $R'^6$ ,  $R'^7$  and  $R^8$  are independently selected from H, halo, cyano, alkyl,  
30 hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl,  
heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl,  
haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, carboxy,  
alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino,

acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclisulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, more preferably  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  and  $R^8$  are independently selected from H, hydroxyl, halo, alkyl, haloalkyl, alkoxy, alkoxyalkyl preferably methoxyethyl, haloalkoxy, preferably  $-OCF_3$ , alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H, halo, C1-C2 alkyl,  $CF_3$ , C1-C2 alkoxy, and cyano, still more preferably from H, F, Cl,  $CF_3$ , methyl, methoxy, and cyano, even more preferably  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  are H and  $R^8$  is selected from H, Cl, methyl, hydroxyl, and methoxy, and most preferably  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  are H and  $R^8$  is selected from H, Cl, methyl, and methoxy.

Preferred compounds of formula Ic are those wherein

$Z$  is  $-COOH$ ;

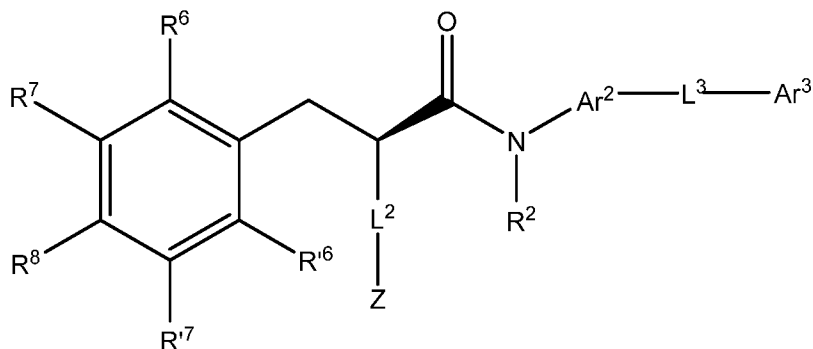
$R^1$  is H;

$L^2$  is cyclopropylene, ethenylene, methylene,  $-CHMe-$ ,  $-CHF-$ ;

$L^1$  is as defined above in respect to formula I, preferably methylene, ethylene, or a single bond; and

$Ar^2$ ,  $Ar^3$ ,  $R^2$ ,  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$ ,  $R^8$  and  $L^3$  are as defined above in respect to formula I.

Particularly preferred compounds of formula Ic are those of formula Ic-1

**Ic-1**

and pharmaceutically acceptable salts, and solvates thereof, wherein

$Ar^2$ ,  $Ar^3$ ,  $R^2$ ,  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$ ,  $R^8$ ,  $L^2$ ,  $L^3$ , and  $Z$  are as defined above in respect to  
5 formula Ic.

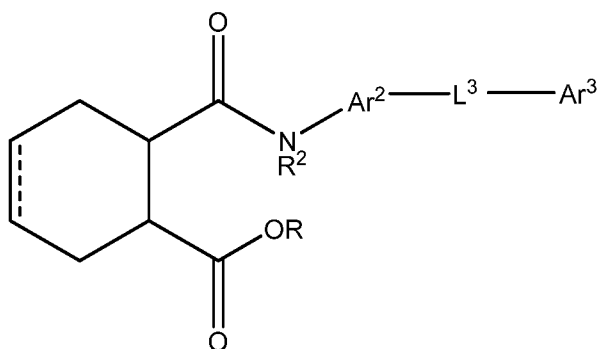
Preferred compounds of formula Ic-1 are those wherein

$Z$  is  $-COOH$ ;

$L^2$  is cyclopropylene, ethenylene, methylene,  $-CHMe-$ ,  $-CHF-$ ; and

$Ar^2$ ,  $Ar^3$ ,  $R^2$ ,  $R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$ ,  $R^8$ , and  $L^3$  are as defined above in respect to  
10 formula Ic.

In yet another embodiment, preferred compounds of formula I are those of formula Id

**Id**

and pharmaceutically acceptable salts, esters, esters, amides, phosphates, and solvates thereof, wherein

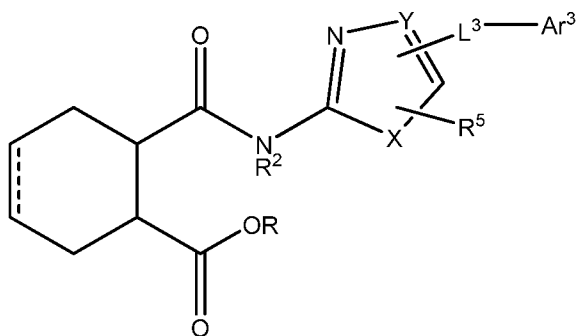
the dotted line is present or absent; and

$\text{Ar}^2$ ,  $\text{Ar}^3$ ,  $\text{R}$ ,  $\text{R}^2$  and  $\text{L}^3$  are as defined above in respect to formula I.

5

In one variant of the compounds of formula Id the dotted line is present.

Preferred compounds of formula Id are those of formula Id-1



10 **Id-1**

wherein

the dotted line is present or absent, preferably the dotted line is present;

$\text{X}$  is S or O;

$\text{Y}$  is CH or N;

15  $\text{L}^3$  is attached to the heterocyclic group either in position 4 or 5, preferably in position 4;

If  $\text{Y}$  is CH,  $\text{R}^5$  is halo, cyano, hydroxyl, linear or branched  $\text{C}_1\text{-C}_3$  alkyl,  $\text{C}_1\text{-C}_3$

hydroxyalkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, preferably F, Cl, or CF<sub>3</sub> and R<sup>5</sup> is attached to the heterocyclic group either in position 4, if L<sup>3</sup> is attached in position 5, or in position 5, if L<sup>3</sup> is attached in position 4; preferably R<sup>5</sup> is attached in position 5;

If Y is N, R<sup>5</sup> is absent and L<sup>3</sup> is attached in position 5; and

- 5 Ar<sup>3</sup> is as defined above in respect to formula I, preferably Ar<sup>3</sup> is an aryl or heteroaryl group, optionally substituted by one or more substituents selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, cyano, 5 or 6 membered heteroaryl such as pyridinyl, phenyl, methylcarbonylamino, -NH-SO<sub>2</sub>CF<sub>3</sub>, and L<sup>3</sup> is a single bond or C<sub>1</sub>-C<sub>2</sub> alkylene; or Ar<sup>3</sup> is a C<sub>1</sub>-C<sub>4</sub> alkyl group and L<sup>3</sup> is a single bond, more preferably Ar<sup>3</sup> is an aryl, preferably phenyl, or heteroaryl group, preferably thiophenyl, more preferably thiophen-2-yl, furanyl, more preferably furan-2-yl, each of said aryl or heteroaryl being optionally substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, cyclopropyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, cyano, ethoxycarbonyl, methylenedioxy, 5 or 6 membered aryl, preferably phenyl, 5 or 6 membered heteroaryl, preferably furanyl, thiophenyl, pyridinyl, pyrimidinyl, pyrazinyl, and pyridazinyl, more preferably furan-3-yl, thiophen-3-yl, pyridinyl, still more preferably pyridin-3-yl each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl being optionally fused to one or more 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, thus forming a fused ring system, and the latter fused ring being optionally substituted by one or more further substituents selected from halo, hydroxyl, oxo, alkyl, and/or each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally substituted by one or more substituents selected from halo, cyano, hydroxyl, alkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, alkylaminoalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, alkylsulfonyl, haloalkylsulfonyl, alkylsulfonylamino, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino, arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted

by one or more further substituents selected from halo, preferably chloro or fluoro, oxo or alkyl, preferably methyl; still more preferably  $\text{Ar}^3$  is phenyl, thiophenyl, furanyl, preferably phenyl, thiophen-2-yl, furan-2-yl, each of said phenyl, thiophenyl, furanyl, being optionally substituted by one or more substituents selected from halo,  $\text{C}_1\text{-C}_4$  alkyl, cyclopropyl,  $\text{C}_1\text{-C}_4$  haloalkyl,  $\text{C}_1\text{-C}_4$  alkoxy,  $\text{C}_1\text{-C}_4$  haloalkoxy, cyano, ethoxycarbonyl, methylenedioxy, phenyl, pyridin-3-yl, each of said phenyl or pyridin-3-yl being optionally fused to one or more 5 or 6 membered heterocyclyl, phenyl, or 5 or 6 membered heteroaryl moiety, preferably oxopyrrolidinyl, imidazolyl, piperidinyl, morpholinyl, pyrrolyl, imidazolyl, or pyridyl, more preferably 2-oxopyrrolidinyl, 2-oxoimidazolyl, 2-oxopiperidinyl or pyrrolyl, thus forming a fused ring system, and the latter fused ring being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo, alkyl, preferably methyl, and/or each of said phenyl or pyridin-3-yl groups being optionally substituted by one or more substituents selected from halo, alkyl, heterocyclyl, heteroaryl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, cycloalkoxy, cycloalkylalkoxy, heterocycloxy, aralkoxy, alkylamino, alkylaminoalkyl, cycloalkylamino, aralkylamino, alkylaminocarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, each of said heterocyclyl, heteroaryl, cycloalkoxy, cycloalkylalkoxy, heterocycloxy, aralkoxy, cycloalkylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from fluoro, chloro, oxo or methyl;

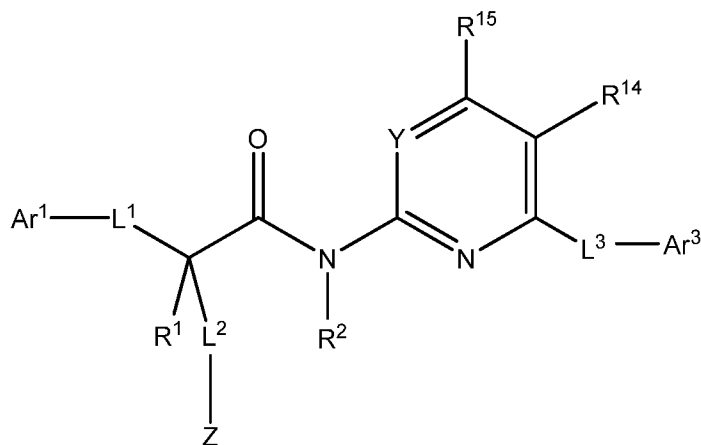
**R** is as defined above in respect to formula I; and

$\text{R}^2$  is as defined above in respect to formula I, preferably  $\text{R}^2$  is H, linear or branched  $\text{C}_1\text{-C}_4$  alkyl,  $\text{C}_1\text{-C}_2$  hydroxyalkyl, allyl, propargyl, cyclopropyl, cyclopentyl, cyclopentylmethyl, cyclopropylmethyl, benzyl, benzyloxyethyl, methoxyethyl, 1,1,1-trifluoroethyl,  $-\text{C}_2\text{H}_4\text{CO}_2\text{CH}_3$ ,  $-\text{CH}_2\text{CO}_2\text{CH}_3$ , or  $-\text{CH}_2\text{CONH}_2$ , more preferably  $\text{R}^2$  is H, methyl, ethyl, allyl, cyclopropyl, hydroxyethyl,  $-\text{C}_2\text{H}_4\text{CO}_2\text{CH}_3$ ,  $-\text{CH}_2\text{CO}_2\text{CH}_3$ , or  $-\text{CH}_2\text{CONH}_2$ , more preferably  $\text{R}^2$  is methyl or cyclopropyl.

In still another embodiment, preferred compounds of Formula I are



those of formula Ie:



**Ie**

wherein

- 5 **Y** is CH or N; and

**R<sup>14</sup>** and **R<sup>15</sup>** are independently H, halo, cyano, hydroxyl, linear or branched C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, preferably H, F, Cl, or CF<sub>3</sub>, more preferably H;

- Ar<sup>1</sup>** and **L<sup>1</sup>** are as defined above in respect to formula I, preferably as defined in respect to formula Ib, more preferably **Ar<sup>1</sup>** is a 5- to 6-membered aryl or heteroaryl group, optionally substituted by one or more groups selected from halogen, trifluoromethyl, cyano, and methoxy, and **L<sup>1</sup>** is a methylene group, C<sub>1</sub>-C<sub>2</sub> alkylene, or C<sub>2</sub> alkenylene; or **Ar<sup>1</sup>** is a linear or branched C<sub>3</sub>-C<sub>6</sub> alkyl group, optionally substituted by one or more groups selected from halogen, trifluoromethyl, cyano, and methoxy, and **L<sup>1</sup>** is a methylene group;

**Ar<sup>3</sup>** is as defined above in respect to formula I, preferably **Ar<sup>3</sup>** is an aryl or heteroaryl group, optionally substituted by one or more substituents selected from halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, cyano, 5 or 6 membered heteroaryl such as pyridinyl, phenyl, methylcarbonylamino, -NH-SO<sub>2</sub>CF<sub>3</sub>, and **L<sup>3</sup>**

is a single bond or C<sub>1</sub>-C<sub>2</sub> alkylene; or Ar<sup>3</sup> is a C<sub>1</sub>-C<sub>4</sub> alkyl group and L<sup>3</sup> is a single bond, more preferably Ar<sup>3</sup> is an aryl, preferably phenyl, or heteroaryl group, preferably thiophenyl, more preferably thiophen-2-yl, furanyl, more preferably furan-2-yl, each of said aryl or heteroaryl being optionally substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, cyclopropyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, cyano, ethoxycarbonyl, methylenedioxy, 5 or 6 membered aryl, preferably phenyl, 5 or 6 membered heteroaryl, preferably furanyl, thiophenyl, pyridinyl, pyrimidinyl, pyrazinyl, and pyridazinyl, more preferably furan-3-yl, thiophen-3-yl, pyridinyl, still more preferably pyridin-3-yl each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl being optionally fused to one or more 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, thus forming a fused ring system, and the latter fused ring being optionally substituted by one or more further substituents selected from halo, hydroxyl, oxo, alkyl, and/or each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally substituted by one or more substituents selected from halo, cyano, hydroxyl, alkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, alkylaminoalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, alkylsulfonyl, haloalkylsulfonyl, alkylsulfonylamino, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino, arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo or alkyl, preferably methyl; still more preferably Ar<sup>3</sup> is phenyl, thiophenyl, furanyl, preferably phenyl, thiophen-2-yl, furan-2-yl, each of said phenyl, thiophenyl, furanyl, being optionally substituted by one or more substituents selected from halo, C<sub>1</sub>-C<sub>4</sub> alkyl, cyclopropyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, cyano, ethoxycarbonyl, methylenedioxy, phenyl, pyridin-3-yl, each of said phenyl or pyridin-3-yl being optionally fused to one or more 5 or 6 membered heterocyclyl, phenyl, or 5 or 6 membered heteroaryl moiety, preferably oxopyrrolidinyl, imidazolyl, piperidinyl, morpholinyl, pyrrolyl, imidazolyl, or pyridyl, more preferably 2-oxopyrrolidinyl, 2-

oxoimidazoliny 2-oxopiperidinyl, or pyrrolyl, thus forming a fused ring system, and the latter fused ring being optionally substituted by one or more further substituents selected from halo, preferably chloro or fluoro, oxo, alkyl, preferably methyl, and/or each of said phenyl or pyridin-3-yl groups being optionally substituted by one or more substituents selected from halo, alkyl, heterocyclyl, heteroaryl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, aralkylamino, alkylaminocarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, each of said heterocyclyl, heteroaryl, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aralkyloxy, cycloalkylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from fluoro, chloro, oxo or methyl;

$R^1$  is as defined above in respect to formula I, preferably  $R^1$  is hydrogen, halogen, or a group selected from  $C_{1-4}$  alkyl optionally substituted by one or more substituents selected from halogen or alkyl; more preferably  $R^1$  is selected from hydrogen, fluoro, or methyl or ethyl, the methyl or ethyl group being optionally substituted with one or more substituents selected from fluoro or alkyl, even more preferably  $R^1$  is hydrogen, fluoro or methyl, and most preferably  $R^1$  is hydrogen, and  $L^2$  is as defined above in respect to formula I, preferably  $L^2$  is cyclopropylene, ethenylene, n-propylene, or  $-C(R'R'')$ , wherein  $R'$  and  $R''$  are independently selected from H, halogen, methyl, and ethyl, more preferably  $L^2$  is cyclopropylene, ethenylene, methylene,  $-CHMe-$ ,  $-CHF-$ , even more preferably  $L^2$  is methylene; or  $R^1$  and  $L^2$  together are  $=CH-$  under the condition that  $L^1-Ar^1$  is H.;

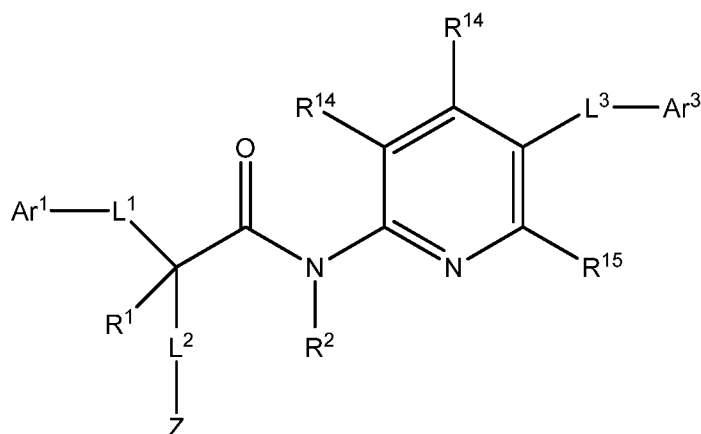
$Z$  is as defined above in respect to formula I, preferably  $Z$  is  $-COOR$ , wherein  $R$  is defined as above in respect to formula I; preferably  $Z$  is  $COOH$  and

$R^2$  is as defined above in respect to formula I, preferably  $R^2$  is H, linear or branched  $C_1-C_4$  alkyl,  $C_1-C_2$  hydroxyalkyl, allyl, propargyl, cyclopropyl, cyclopentyl, cyclopentylmethyl, cyclopropylmethyl, benzyl, benzyloxyethyl, methoxyethyl, 1,1,1-trifluoroethyl,  $-C_2H_4CO_2CH_3$ ,  $-CH_2CO_2CH_3$ , or  $-CH_2CONH_2$ ,

more preferably  $R^2$  is H, methyl, ethyl, allyl, cyclopropyl, hydroxyethyl,  $-C_2H_4CO_2CH_3$ ,  $-CH_2CO_2CH_3$ , or  $-CH_2CONH_2$ , most preferably  $R^2$  is methyl or cyclopropyl.

Preferred compounds of formula Ie are those wherein  $Z$  is  $-COOR$  and  $R$ ,  $Ar^1$ ,  $Ar^2$ ,  $Ar^3$ ,  $R^1$ ,  $R^2$ ,  $L^1$ ,  $L^2$  and  $L^3$  are as defined above in respect to formula I, preferably  $L^1$  is a methylene group and  $Ar^1$  is phenyl.

In still another embodiment, preferred compounds of Formula I are those of formula If



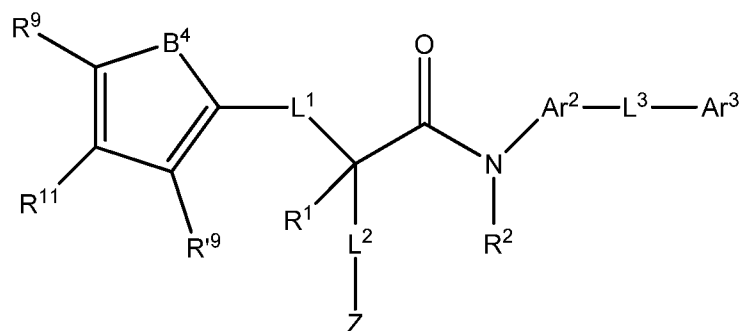
10 **If,**

wherein

$Ar^1$ ,  $Ar^3$ ,  $L^1$ ,  $L^2$ ,  $L^3$ ,  $R^1$ ,  $R^2$ ,  $R^{14}$ ,  $R^{15}$ ,  $Y$  and  $Z$  are as defined above in respect to formula Ie.

In still another embodiment, preferred compounds of Formula I are those of formula Ig:

15

**Ig**

wherein

**B<sup>4</sup>** is O or S or N-R<sup>b</sup> where **R<sup>b</sup>** is H or alkyl, preferably linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl; C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylaminocarbonyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl; preferably O or S, more preferably O,

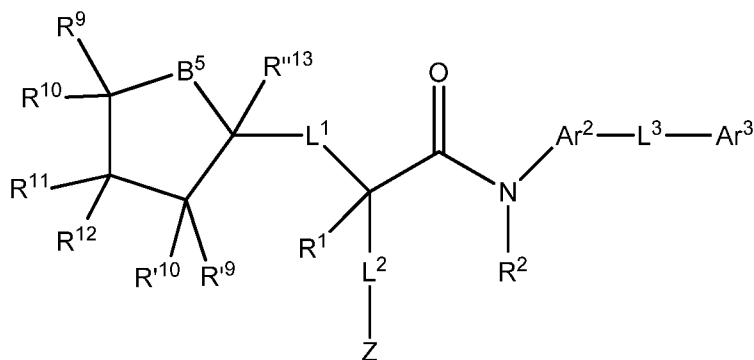
**R<sup>9</sup>**, **R<sup>9'</sup>**, and **R<sup>11</sup>** are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy carbonyl, cycloalkyloxy carbonyl, heterocyclyloxy carbonyl, aryloxy carbonyl, heteroaryloxy carbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or one of R<sup>9</sup> or R<sup>9'</sup> and R<sup>11</sup> together form an

alkylenedioxy group or a haloalkylenedioxy group, or one of  $R^9$  or  $R'^9$  and  $R^{11}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, 5 alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably  $R^9$ ,  $R'^9$ , and  $R^{11}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, 10 heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocycliloxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, 15 haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, or one of  $R^9$  or  $R'^9$  and  $R^{11}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, 20 alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, more preferably  $R^9$ ,  $R'^9$ , and  $R^{11}$  are independently selected from H, hydroxyl,  $C_1$ - $C_3$ -alkyl, halo, preferably chloro or fluoro, haloalkyl, alkoxy, alkoxyalkyl preferably 25 methoxyethyl, haloalkoxy, preferably  $-OCF_3$ , alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H,  $C_1$ - $C_3$ -alkyl, halo,  $CF_3$ ,  $C_1$ - $C_2$  alkoxy, and cyano, and still more preferably from H, F, Cl, methyl,  $CF_3$ , methoxy, and cyano, and most preferably H, F or methyl; and

$Ar^2$ ,  $Ar^3$ ,  $L^1$ ,  $L^2$ ,  $L^3$ ,  $R^1$ ,  $R^2$ , and  $Z$  are as defined above in respect to formula I.

30 In still another embodiment, preferred compounds of Formula I are

those of formula Ih:



### Ih

5 wherein

$B^5$  is  $CH_2$  or O preferably O;

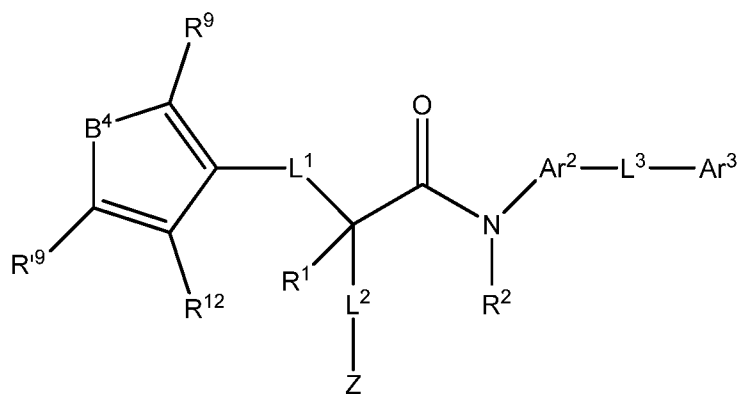
$R^9$ ,  $R^{10}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R'^{13}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkoxy, heterocycloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, cycloalkoxy-carbonyl, heterocycloxy-carbonyl, aryloxy-carbonyl, heteroaryloxy-carbonyl, alkyl-carbonyloxy, cycloalkyl-carbonyloxy, heterocyclyl-carbonyloxy, aryl-carbonyloxy, heteroaryl-carbonyloxy, arylalkyloxy, alkyl-carbonylamino, haloalkyl-carbonylamino, cycloalkyl-carbonylamino, heterocyclyl-carbonylamino, aryl-carbonylamino, heteroaryl-carbonylamino, alkyl-carbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkyl-carbamoyl, aryl-carbamoyl, heteroaryl-carbamoyl, carbamoylalkyl, carbamoylamino, alkyl-carbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino,

haloalkylsulfonylamino, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or  $R^{13}$  and one of  $R'^9$  or  $R'^{10}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or  $R^{13}$  and one of  $R'^9$  or  $R'^{10}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R'^9$ ,  $R'^{10}$ , and  $R''^{13}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or  $R^{13}$  and one of  $R'^9$  or  $R'^{10}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or  $R^{13}$  and one of  $R'^9$  or  $R'^{10}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, more preferably  $R^9$ ,  $R^{10}$ ,  $R^{11}$ ,  $R^{12}$ ,  $R^{13}$ ,  $R'^9$ ,  $R'^{10}$ ,  $R'^{11}$ ,  $R'^{12}$ ,  $R'^{13}$  and  $R''^{13}$  are independently selected from H, hydroxyl,  $C_1$ - $C_3$ -alkyl, halo, preferably chloro or fluoro, haloalkyl, alkoxy, alkoxyalkyl preferably methoxyethyl, haloalkoxy, preferably  $-OCF_3$ , alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H,  $C_1$ - $C_3$ -alkyl, halo,  $CF_3$ ,  $C_1$ - $C_2$  alkoxy, preferably methoxy, and cyano, and still more preferably from H, F, Cl, methyl,  $CF_3$ , methoxy, and cyano, and most preferably H or methyl; and

$Ar^2$ ,  $Ar^3$ ,  $L^1$ ,  $L^2$ ,  $L^3$ ,  $R^1$ ,  $R^2$ , and  $Z$  are as defined above in respect to formula I.



In still another embodiment, preferred compounds of Formula I are those of formula Ii



## Ii

5 wherein

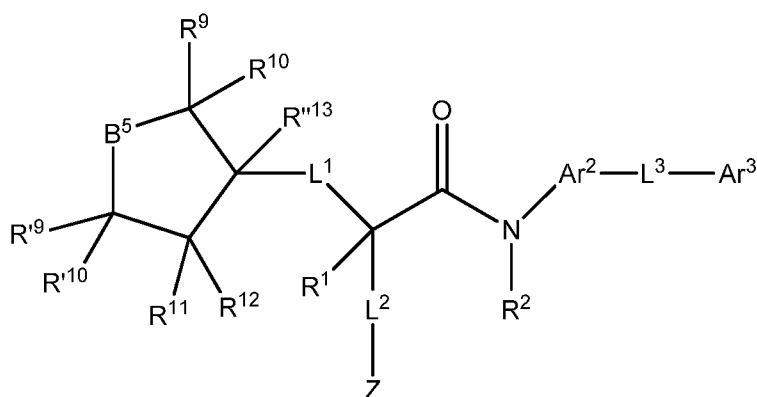
**B<sup>4</sup>** is as defined above in respect to formula Ig,

**R<sup>9</sup>**, **R<sup>9'</sup>** and **R<sup>12</sup>** are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkyloxy, heterocyclyoxy, 10 aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy carbonyl, cycloalkyloxycarbonyl, heterocyclyloxycarbonyl, aryloxycarbonyl, heteroaryloxycarbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, 15 alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, 20 cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl,

alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclisulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or  $R^9$  and  $R^{12}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or  $R^9$  and  $R^{12}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together  
5 with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably  $R^9$ ,  $R'^9$ ,  
10 and  $R^{12}$ , are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, haloalkoxy, cycloalkyloxy, heterocyclioxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino,  
15 acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclisulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, or  
20  $R^9$  and  $R^{12}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or  $R^9$  and  $R^{12}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl,  
25 heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, more preferably  $R^9$ ,  $R'^9$ , and  $R^{12}$ , are independently selected from H, hydroxyl,  $C_1$ - $C_3$ -alkyl, halo, preferably chloro or fluoro, haloalkyl, alkoxy, alkoxyalkyl preferably methoxyethyl, haloalkoxy, preferably  $-OCF_3$ , alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H,  $C_1$ - $C_3$ -alkyl, halo,  $CF_3$ ,  $C_1$ - $C_2$  alkoxy,  
30 preferably methoxy, and cyano, and still more preferably from H, F, Cl, methyl,  $CF_3$ , methoxy, and cyano, and most preferably H or methyl; and

$\text{Ar}^2$ ,  $\text{Ar}^3$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{L}^3$ ,  $\text{R}^1$ ,  $\text{R}^2$ , and  $\text{Z}$  are as defined above in respect to formula I.

In still another embodiment, preferred compounds of Formula I are those of formula Ij:



5 **Ij**

wherein

$\text{B}^5$  is as defined above in respect to formula Ih,

$\text{R}^9$ ,  $\text{R}'^9$ ,  $\text{R}^{10}$ ,  $\text{R}'^{10}$ ,  $\text{R}^{11}$ ,  $\text{R}^{12}$  and  $\text{R}''^{13}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkoxy, heterocycloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, cycloalkoxy-carbonyl, heterocycloxy-carbonyl, aryloxy-carbonyl, heteroaryloxy-carbonyl, alkyl-carbonyloxy, cycloalkyl-carbonyloxy, heterocyclyl-carbonyloxy, aryl-carbonyloxy, heteroaryl-carbonyloxy, arylalkyloxy, alkyl-carbonylamino, haloalkyl-carbonylamino, cycloalkyl-carbonylamino, heterocyclyl-carbonylamino, aryl-carbonylamino, heteroaryl-carbonylamino, alkyl-carbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkyl-carbamoyl, aryl-carbamoyl, heteroaryl-carbamoyl, carbamoylalkyl, carbamoylamino, alkyl-carbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl,

heteroarylsulfamoyl, alkylsulfonfylamino, cycloalkylsulfonfylamino, heterocyclylsulfonfylamino, arylsulfonfylamino, heteroarylsulfonfylamino, haloalkylsulfonfylamino, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or one of  $R'^9$  or  $R'^{10}$  and  $R''^{13}$  together form an alkylenedioxy group or a

5 haloalkylenedioxy group, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or one of  $R'^9$  or  $R'^{10}$  and  $R''^{13}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl,

10 alkylsulfonfyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonfyl, preferably  $R^9$ ,  $R'^9$ ,  $R^{10}$ ,  $R'^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R''^{13}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, heteroaryl,

15 heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclioxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonfyl, haloalkylsulfonfyl,

20 cycloalkylsulfonfyl, heterocyclylsulfonfyl, arylsulfonfyl, heteroarylsulfonfyl, alkylsulfonfylamino, cycloalkylsulfonfylamino, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or one of  $R'^9$  or  $R'^{10}$  and  $R''^{13}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or one of  $R^{11}$  or  $R^{12}$  and one of  $R^9$ ,  $R^{10}$ ,  $R'^9$  or  $R'^{10}$ , or one of  $R'^9$  or  $R'^{10}$  and  $R''^{13}$  together form a cycloalkyl, aryl,

25 heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonfyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl,

30 heterocyclyl, hydroxyl, oxo, or sulfonfyl, more preferably  $R^9$ ,  $R'^9$ ,  $R^{10}$ ,  $R'^{10}$ ,  $R^{11}$ ,  $R^{12}$  and  $R''^{13}$  are independently selected from H, hydroxyl,  $C_1$ - $C_3$ -alkyl, halo, preferably chloro or fluoro, haloalkyl, alkoxy, alkoxyalkyl preferably methoxyethyl, haloalkoxy, preferably  $-OCF_3$ , alkylsulfonfyl, haloalkylsulfonfyl and cyano, even more preferably from H,  $C_1$ - $C_3$ -alkyl, halo,  $CF_3$ ,  $C_1$ - $C_2$  alkoxy,

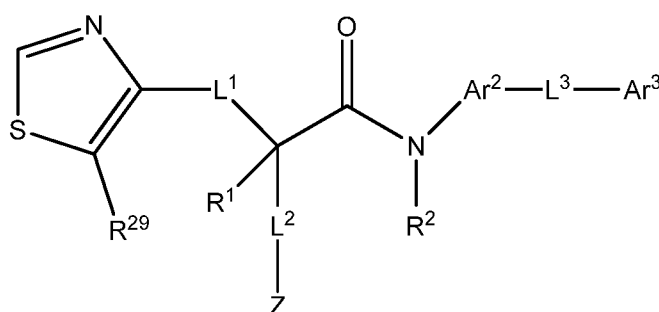
35 preferably methoxy, and cyano, and still more preferably from H, F, Cl, methyl,

CF<sub>3</sub>, methoxy, and cyano, and most preferably H or methyl; and

Ar<sup>2</sup>, Ar<sup>3</sup>, L<sup>1</sup>, L<sup>2</sup>, L<sup>3</sup>, R<sup>1</sup>, R<sup>2</sup>, and Z are as defined above in respect to formula I.

In still another embodiment, preferred compounds of Formula I are those of formula Ik:

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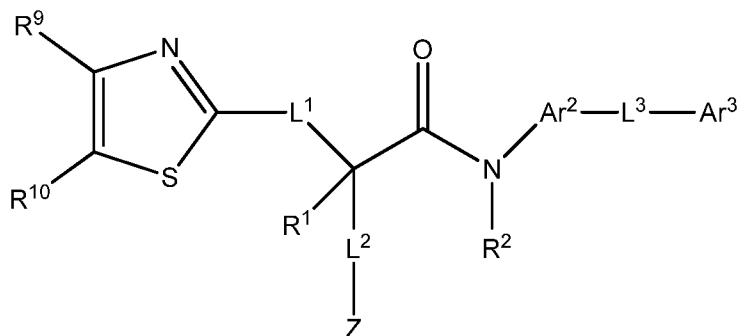
**Ik**

wherein

R<sup>29</sup> is H, halo, alkyl, haloalkyl preferably -CF<sub>3</sub> or -CF<sub>2</sub>H, alkoxy, haloalkoxy preferably -OCF<sub>3</sub> or -OCF<sub>2</sub>H, cyano, preferably R<sup>29</sup> is H, F, -CF<sub>3</sub>, alkyl preferably methyl, more preferably R<sup>29</sup> is H, F or methyl; and

Ar<sup>2</sup>, Ar<sup>3</sup>, L<sup>1</sup>, L<sup>2</sup>, L<sup>3</sup>, R<sup>1</sup>, R<sup>2</sup>, and Z are as defined above in respect to formula I.

In still another embodiment, preferred compounds of Formula I are those of formula II:



## II,

wherein

- R<sup>9</sup>** and **R<sup>10</sup>** are independently selected from H, halo, cyano, alkyl, hydroxyalkyl,  
 5 haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl,  
 heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy,  
 alkoxyalkyl, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino,  
 alkylamino, aminoalkyl, carboxy, alkoxy carbonyl, cycloalkyloxy carbonyl,  
 heterocyclyloxy carbonyl, aryloxy carbonyl, heteroaryloxy carbonyl,  
 10 alkyl carbonyloxy, cycloalkyl carbonyloxy, heterocyclyl carbonyloxy,  
 aryl carbonyloxy, heteroaryl carbonyloxy, arylalkyloxy, alkyl carbonylamino,  
 haloalkyl carbonylamino, cycloalkyl carbonylamino, heterocyclyl carbonylamino,  
 aryl carbonylamino, heteroaryl carbonylamino, alkyl carbonylaminoalkyl,  
 acylamino, carbamoyl, hydroxycarbamoyl, alkyl carbamoyl, aryl carbamoyl,  
 15 heteroaryl carbamoyl, carbamoylalkyl, carbamoylamino, alkyl carbamoylamino,  
 alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl,  
 arylsulfonyl, heteroarylsulfonyl sulfamoyl, alkylsulfamoyl, arylsulfamoyl,  
 heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino,  
 heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino,  
 20 haloalkylsulfonylamino, or **R<sup>9</sup>** and **R<sup>10</sup>** together form an alkylenedioxy group or a  
 haloalkylenedioxy group, or **R<sup>9</sup>** and **R<sup>10</sup>** together form a cycloalkyl, aryl,  
 heterocyclyl or heteroaryl moiety together with the cyclic group they are attached  
 to, each of said substituents being optionally substituted by one or more further  
 substituents selected from halo, alkoxy, alkyl, alkylamino, alkyl carbonyl,  
 25 alkyl heteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano,  
 haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroaryl carbonyl,

heterocyclyl, hydroxyl, oxo, or sulfonyl, preferably  $R^9$  and  $R^{10}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkoxy, heterocycloxy, aryloxy, carboxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, alkylsulfonylamino, cycloalkylsulfonylamino, or  $R^9$  and  $R^{10}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or one of  $R^9$  and  $R^{10}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl, more preferably  $R^9$  and  $R^{10}$  are independently selected from H, hydroxyl,  $C_1$ - $C_3$ -alkyl, halo, preferably chloro or fluoro, haloalkyl, alkoxy, alkoxyalkyl preferably methoxyethyl, haloalkoxy, preferably  $-OCF_3$ , alkylsulfonyl, haloalkylsulfonyl and cyano, even more preferably from H,  $C_1$ - $C_3$ -alkyl, halo,  $CF_3$ ,  $C_1$ - $C_2$  alkoxy, preferably methoxy, and cyano, and still more preferably from H, F, Cl, methyl,  $CF_3$ , methoxy, and cyano, and most preferably H or methyl; and

$Ar^2$ ,  $Ar^3$ ,  $L^1$ ,  $L^2$ ,  $L^3$ ,  $R^1$ ,  $R^2$ , and  $Z$  are as defined above in respect to formula I.

Particularly preferred compounds of the invention are those listed in Table 1 hereafter:

Table 1:

| Compound number | Compound name  | (M+H) <sup>+</sup> |
|-----------------|--|--------------------|
| 1               | 6-((4-(2-chlorophenyl)thiazol-2-yl)carbamoyl)cyclohex-3-enecarboxylic acid | 363.83             |

|           |   |               |
|-----------|---|---------------|
| <b>2</b>  | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>401.88</b> |
| <b>3</b>  | (R)-3-benzyl-4-((4-(2,4-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>436.3</b>  |
| <b>4</b>  | (R)-3-benzyl-4-((4-(2-fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>385.4</b>  |
| <b>5</b>  | (R)-3-benzyl-4-((4-(3,4-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>436.3</b>  |
| <b>8</b>  | (R)-3-benzyl-4-((4-(4-cyanophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid              | <b>392.4</b>  |
| <b>9</b>  | (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxo-3-phenylbutanoic acid             | <b>387.9</b>  |
| <b>10</b> | (Z)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobut-2-enoic acid                   | <b>309.7</b>  |
| <b>11</b> | (R)-3-benzyl-4-oxo-4-((3-phenyl-1,2,4-thiadiazol-5-yl)amino)butanoic acid             | <b>368.4</b>  |
| <b>12</b> | (R)-3-benzyl-4-((4-(3-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>401.9</b>  |
| <b>13</b> | (R)-3-benzyl-4-oxo-4-((4-(3-(trifluoromethyl)phenyl)thiazol-2-yl)amino)butanoic acid  | <b>435.4</b>  |
| <b>14</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid     | <b>415.9</b>  |
| <b>15</b> | (R)-3-benzyl-4-((5-(2-chlorophenyl)pyridin-2-yl)amino)-4-oxobutanoic acid             | <b>395.9</b>  |
| <b>16</b> | (R)-3-((4-(2-chlorophenyl)thiazol-2-yl)carbamoyl)heptanoic acid                       | <b>367.9</b>  |
| <b>17</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(4-fluorobenzyl)-4-oxobutanoic acid   | <b>419.9</b>  |
| <b>18</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(cyclohexylmethyl)-4-oxobutanoic acid | <b>407.9</b>  |
| <b>19</b> | (R)-3-((4-(2-chlorophenyl)thiazol-2-yl)carbamoyl)-5-methylhexanoic acid               | <b>367.9</b>  |



|           |   |              |
|-----------|---|--------------|
| <b>20</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid              | <b>419.9</b> |
| <b>21</b> | (R)-3-benzyl-4-((5-chloro-4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid      | <b>450.4</b> |
| <b>22</b> | (R)-4-(allyl(4-(2-chlorophenyl)thiazol-2-yl)amino)-3-benzyl-4-oxobutanoic acid                  | <b>441.9</b> |
| <b>23</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-methoxy-2-oxoethyl)amino)-4-oxobutanoic acid | <b>473.9</b> |
| <b>24</b> | (R)-methyl-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoate                    | <b>415.9</b> |
| <b>26</b> | (R)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-5-phenylpentanoic acid                          | <b>415.9</b> |
| <b>27</b> | (S)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-5-phenylpentanoic acid                          | <b>415.9</b> |
| <b>28</b> | (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-(4-(trifluoromethyl)benzyl)butanoic acid    | <b>469.9</b> |
| <b>29</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxo-3-(3-(trifluoromethyl)benzyl)butanoic acid  | <b>469.9</b> |
| <b>30</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(2-cyanobenzyl)-4-oxobutanoic acid              | <b>426.9</b> |
| <b>31</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(3-cyanobenzyl)-4-oxobutanoic acid              | <b>426.9</b> |
| <b>32</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(4-cyanobenzyl)-4-oxobutanoic acid              | <b>426.9</b> |
| <b>33</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid            | <b>431.9</b> |
| <b>34</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(3-methoxybenzyl)-4-oxobutanoic acid            | <b>431.9</b> |
| <b>35</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(2-methoxybenzyl)-4-oxobutanoic acid            | <b>431.9</b> |
| <b>36</b> | (R)-3-benzyl-4-((4-(2-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                      | <b>397.5</b> |
| <b>37</b> | (R)-3-benzyl-4-oxo-4-(4-(2,4,6-trichlorophenyl)thiazol-2-ylamino)butanoic acid                  | <b>470.8</b> |

|           |   |              |
|-----------|---|--------------|
| <b>38</b> | (R)-4-benzyl-5-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-5-oxopentanoic acid              | <b>429.9</b> |
| <b>39</b> | (S)-4-benzyl-5-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-5-oxopentanoic acid              | <b>429.9</b> |
| <b>40</b> | (R)-methyl 4-benzyl-5-(4-(2-chlorophenyl)thiazol-2-ylamino)-5-oxopentanoate                     | <b>429.9</b> |
| <b>41</b> | (S)-methyl 4-benzyl-5-(4-(2-chlorophenyl)thiazol-2-ylamino)-5-oxopentanoate                     | <b>429.9</b> |
| <b>42</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropylmethyl)amino)-4-oxobutanoic acid    | <b>456.0</b> |
| <b>43</b> | (R)-3-benzyl-4-(benzyl(4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                 | <b>492.0</b> |
| <b>44</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2,2,2-trifluoroethyl)amino)-4-oxobutanoic acid | <b>483.9</b> |
| <b>45</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid    | <b>445.9</b> |
| <b>46</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(3-methoxybenzyl)-4-oxobutanoic acid    | <b>445.9</b> |
| <b>47</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2-methoxybenzyl)-4-oxobutanoic acid    | <b>445.9</b> |
| <b>48</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-cyanobenzyl)-4-oxobutanoic acid      | <b>440.9</b> |
| <b>49</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(3-cyanobenzyl)-4-oxobutanoic acid      | <b>440.9</b> |
| <b>50</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2-cyanobenzyl)-4-oxobutanoic acid      | <b>440.9</b> |

|           |  |              |
|-----------|--|--------------|
| <b>51</b> | (R)-3-(4-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                     | <b>450.4</b> |
| <b>52</b> | (R)-3-(3-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                     | <b>450.4</b> |
| <b>53</b> | (R)-3-(2-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                     | <b>450.4</b> |
| <b>54</b> | (3S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(2,3-dihydro-1H-inden-1-yl)-4-oxobutanoic acid         | <b>441.9</b> |
| <b>55</b> | (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(2,3-dihydro-1H-inden-2-yl)-4-oxobutanoic acid          | <b>441.9</b> |
| <b>56</b> | (R)-4-(benzo[d]thiazol-2-yl(methylamino)-3-benzyl-4-oxobutanoic acid   | <b>355.4</b> |
| <b>57</b> | (R)-4-(benzo[d]oxazol-2-yl(methylamino)-3-benzyl-4-oxobutanoic acid  | <b>339.4</b> |
| <b>58</b> | (R)-2-((1H-tetrazol-5-yl)methyl)-N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methyl-3-phenylpropanamide               | <b>439.9</b> |
| <b>59</b> | (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methyl-3-(5-oxo-4,5-dihydro-1,2,4-oxadiazol-3-yl)propanamide | <b>455.9</b> |
| <b>60</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid                      | <b>433.9</b> |
| <b>61</b> | (S)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-cyclohexyl-4-oxobutanoic acid                                    | <b>393.9</b> |
| <b>62</b> | (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-cyclohexyl-4-oxobutanoic acid                           | <b>407.9</b> |
| <b>63</b> | (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-phenylbutanoic acid                               | <b>401.9</b> |

|           |   |              |
|-----------|---|--------------|
| <b>64</b> | (3R)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-4-phenylpentanoic acid                               | <b>415.9</b> |
| <b>65</b> | (R)-2-((1H-tetrazol-5-yl)methyl)-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-phenylpropanamide               | <b>425.9</b> |
| <b>66</b> | (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(5-oxo-4,5-dihydro-1,2,4-oxadiazol-3-yl)propanamide | <b>441.9</b> |
| <b>68</b> | (3R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-2-methyl-4-oxobutanoic acid                     | <b>415.9</b> |
| <b>69</b> | (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(3-hydroxyisoxazol-5-yl)propanamide                 | <b>440.9</b> |
| <b>70</b> | (R)-3-benzyl-4-(4-(2-chlorophenyl)pyrimidin-2-ylamino)-4-oxobutanoic acid                             | <b>396.8</b> |
| <b>71</b> | (R)-3-benzyl-4-(6-(2-chlorophenyl)pyridin-2-ylamino)-4-oxobutanoic acid                               | <b>395.9</b> |
| <b>72</b> | (E)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-4-phenylbut-3-enoic acid                              | <b>399.9</b> |
| <b>74</b> | (Z)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-phenylbut-2-enoic acid                   | <b>399.9</b> |
| <b>75</b> | (R)-3-(N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methylsulfamoyl)-4-phenylbutanoic acid                    | <b>452.0</b> |
| <b>76</b> | (S)-3-(N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methylsulfamoyl)-4-phenylbutanoic acid                    | <b>452.0</b> |
| <b>79</b> | (R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-fluoro-4-oxobutanoic acid                      | <b>419.9</b> |
| <b>80</b> | (R)-3-benzyl-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)hex-5-enoic acid                              | <b>441.9</b> |
| <b>81</b> | (E)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylbut-3-enoic acid                    | <b>413.9</b> |
| <b>82</b> | (3S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid                     | <b>429.9</b> |
| <b>83</b> | (R)-3-benzyl-4-((3-(2-chlorophenyl)-1,2,4-thiadiazol-5-yl)(methylamino)-4-oxobutanoic acid            | <b>416.9</b> |

|            |   |              |
|------------|---|--------------|
| <b>84</b>  | (R)-3-benzyl-4-((3-(2-chlorophenyl)-1,2,4-oxadiazol-5-yl)(methyl)amino)-4-oxobutanoic acid                | <b>400.8</b> |
| <b>85</b>  | (R)-3-benzyl-4-((1-(2-chlorophenyl)-1H-pyrazol-3-yl)(methyl)amino)-4-oxobutanoic acid                     | <b>398.9</b> |
| <b>86</b>  | (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(3-hydroxyisoxazol-5-yl)-N-methylpropanamide            | <b>454.9</b> |
| <b>89</b>  | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclohexylmethyl)-4-oxobutanoic acid             | <b>422</b>   |
| <b>90</b>  | (R)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-5-methylhexanoic acid                           | <b>381.9</b> |
| <b>91</b>  | (R)-3-benzyl-4-((4-(2-cyanophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                          | <b>406.5</b> |
| <b>92</b>  | (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-phenylbutanoic acid                                   | <b>387.9</b> |
| <b>93</b>  | (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(3-fluorobenzyl)-4-oxobutanoic acid                         | <b>419.9</b> |
| <b>94</b>  | (S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-methylpentanoic acid                          | <b>367.9</b> |
| <b>95</b>  | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>423.9</b> |
| <b>96</b>  | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(ethyl)amino)-4-oxobutanoic acid                          | <b>429.9</b> |
| <b>97</b>  | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                    | <b>441.9</b> |
| <b>98</b>  | cis-6-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)cyclohex-3-enecarboxylic acid                              | <b>363.8</b> |
| <b>99</b>  | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid                  | <b>445.9</b> |
| <b>100</b> | cis-6-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)cyclohex-3-enecarboxylic acid                    | <b>377.9</b> |
| <b>101</b> | cis-2-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)cyclohexanecarboxylic acid                       | <b>379.9</b> |

|            |   |              |
|------------|---|--------------|
| <b>102</b> | (R)-3-benzyl-4-(4-(2,5-dimethylthiophen-3-yl)thiazol-2-ylamino)-4-oxobutanoic acid                        | <b>401.5</b> |
| <b>103</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(cyclohexylmethyl)-4-oxobutanoic acid                  | <b>422.0</b> |
| <b>105</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                 | <b>407.9</b> |
| <b>106</b> | (3S,4R)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid                      | <b>429.9</b> |
| <b>107</b> | (R)-3-benzyl-4-(methyl(4-(2-(thiophen-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                  | <b>463.6</b> |
| <b>108</b> | (R)-3-benzyl-4-((4-(2-(6-chloropyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid          | <b>493.0</b> |
| <b>109</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-(phenylamino)butanoic acid                   | <b>416.9</b> |
| <b>110</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(4-methylbenzyl)-4-oxobutanoic acid                    | <b>429.9</b> |
| <b>111</b> | (R)-4-((4-([1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-3-benzyl-4-oxobutanoic acid                    | <b>457.6</b> |
| <b>112</b> | (R)-3-benzyl-4-(4-(2,5-dichlorothiophen-3-yl)thiazol-2-ylamino)-4-oxobutanoic acid                        | <b>442.4</b> |
| <b>113</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(cyclopropylmethyl)-4-oxobutanoic acid                 | <b>379.9</b> |
| <b>114</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-(thiazol-4-ylmethyl)butanoic acid                | <b>422.9</b> |
| <b>115</b> | (R)-3-benzyl-4-((4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid | <b>501.6</b> |
| <b>116</b> | (R)-3-benzyl-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid         | <b>488.6</b> |

|            |   |              |
|------------|---|--------------|
| <b>117</b> | (R)-3-benzyl-4-((4-(2-(2-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid       | <b>488.6</b> |
| <b>118</b> | (R)-3-benzyl-4-((4-(2-((ethoxycarbonyl)amino)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid       | <b>468.5</b> |
| <b>119</b> | (R)-3-benzyl-4-((4-(2-(6-fluoropyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid        | <b>476.5</b> |
| <b>120</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-methylpyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>472.6</b> |
| <b>121</b> | (R)-4-((2-amino-2-oxoethyl)(4-(2-chlorophenyl)thiazol-2-yl)amino)-3-benzyl-4-oxobutanoic acid           | <b>458.9</b> |
| <b>122</b> | (R)-3-benzyl-4-oxo-4-((4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)butanoic acid                   | <b>451.4</b> |
| <b>123</b> | (R)-3-benzyl-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                           | <b>436.3</b> |
| <b>124</b> | (R)-3-benzyl-4-((4-(3-chloro-4-fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                      | <b>419.9</b> |
| <b>125</b> | (R)-3-benzyl-4-((4-(3-chloro-4-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                     | <b>431.9</b> |
| <b>126</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(3-methoxy-3-oxopropyl)amino)-4-oxobutanoic acid        | <b>488.0</b> |
| <b>127</b> | 3-(bicyclo[2.2.1]heptan-2-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid | <b>434.0</b> |

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| <b>128</b> | (R)-3-benzyl-4-((4-(2-(6-ethoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                | <b>502.6</b> |
| <b>129</b> | (R)-3-benzyl-4-((4-(4'-methoxy-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                               | <b>487.6</b> |
| <b>130</b> | (R)-3-benzyl-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid  | <b>450.4</b> |
| <b>131</b> | (R)-1-(5-(2-(2-(2-benzyl-3-carboxy-N-methylpropanamido)thiazol-4-yl)phenyl)pyridin-2-yl)pyrrolidin-1-ium 2,2,2-trifluoroacetate | <b>641.7</b> |
| <b>132</b> | (R)-4-(2'-(2-(2-benzyl-3-carboxy-N-methylpropanamido)thiazol-4-yl)-[1,1'-biphenyl]-4-yl)morpholin-4-ium 2,2,2-trifluoroacetate  | <b>656.7</b> |
| <b>133</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>543.6</b> |
| <b>134</b> | (R)-3-benzyl-4-((4-(3'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                | <b>492.0</b> |
| <b>135</b> | (R)-3-benzyl-4-((4-(2-(furan-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid  | <b>447.5</b> |
| <b>136</b> | (R)-3-benzyl-4-((4-(2-(6-(2-methoxyethoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                     | <b>532.6</b> |
| <b>138</b> | (R)-3-benzyl-4-((4-(4'-isopropyl-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                             | <b>499.6</b> |
| <b>139</b> | (R)-3-(cyclopentylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                  | <b>480.6</b> |



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| <b>140</b> | (R)-3-benzyl-4-((4-(2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid               | <b>506.6</b> |
| <b>141</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>558.7</b> |
| <b>142</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                 | <b>476.4</b> |
| <b>143</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                                 | <b>405.9</b> |
| <b>144</b> | (R)-3-benzyl-4-((4-(2-cyclopropylphenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                    | <b>421.5</b> |
| <b>145</b> | (R)-3-benzyl-4-((4-(4'-(dimethylamino)-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                | <b>500.6</b> |
| <b>146</b> | (R)-3-benzyl-4-((4-(3'-fluoro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                         | <b>475.5</b> |
| <b>147</b> | (R)-3-benzyl-4-((4-(3',5'-difluoro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                    | <b>493.5</b> |
| <b>148</b> | (R)-3-benzyl-4-((4-(2-chloro-6-fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                       | <b>419.9</b> |
| <b>149</b> | (R)-3-benzyl-4-((4-(4'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                         | <b>492.0</b> |
| <b>150</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>541.6</b> |

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| <b>151</b> | (R)-3-benzyl-4-((4-(4-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                    | <b>523.0</b> |
| <b>152</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                    | <b>523.0</b> |
| <b>153</b> | (R)-3-benzyl-4-((4-(3-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                    | <b>506.6</b> |
| <b>154</b> | (3R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydrofuran-2-yl)methyl)butanoic acid                     | <b>409.9</b> |
| <b>155</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-hydroxyethyl)amino)-4-oxobutanoic acid                                      | <b>445.9</b> |
| <b>156</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(3-hydroxypropyl)amino)-4-oxobutanoic acid                                     | <b>460.0</b> |
| <b>157</b> | (R)-3-benzyl-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                    | <b>523.0</b> |
| <b>158</b> | (R)-3-benzyl-4-((4-(2-(6-(benzyloxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                         | <b>564.7</b> |
| <b>159</b> | (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                             | <b>442.4</b> |
| <b>160</b> | (R)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>496.6</b> |

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| <b>161</b> | (R)-3-benzyl-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                | <b>483.9</b> |
| <b>162</b> | (R)-3-benzyl-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                           | <b>433.9</b> |
| <b>163</b> | (R)-3-benzyl-4-((4-(3,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>450.4</b> |
| <b>164</b> | (R)-3-benzyl-4-((4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                         | <b>447.5</b> |
| <b>165</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                       | <b>407.9</b> |
| <b>166</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>468.4</b> |
| <b>167</b> | (R)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>484.4</b> |
| <b>168</b> | (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>458.4</b> |
| <b>169</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid   | <b>506.6</b> |
| <b>170</b> | (R)-3-benzyl-4-((2-hydroxyethyl)(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid           | <b>518.6</b> |

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| <b>171</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                  | <b>535.7</b> |
| <b>172</b> | (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(2-hydroxyethyl)amino)-4-oxobutanoic acid                        | <b>472.4</b> |
| <b>173</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                     | <b>423.9</b> |
| <b>174</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(trifluoromethyl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                             | <b>483.9</b> |
| <b>175</b> | (R)-3-benzyl-4-(methyl(4-(2,3,5-trichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>484.8</b> |
| <b>176</b> | (R)-3-benzyl-4-((4-(4-chloro-[1,1'-biphenyl]-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                  | <b>492.0</b> |
| <b>177</b> | (R)-3-benzyl-4-((4-(2-chloro-5-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                       | <b>523.0</b> |
| <b>178</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>514.6</b> |
| <b>179</b> | (R)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>522.6</b> |
| <b>180</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                          | <b>569.7</b> |

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| <b>181</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>561.7</b> |
| <b>182</b> | (R)-3-benzyl-4-(methyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid     | <b>529.6</b> |
| <b>183</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid    | <b>559.7</b> |
| <b>184</b> | (R)-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>577.7</b> |
| <b>185</b> | (R)-3-benzyl-4-(methyl(4-(2-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>465.5</b> |
| <b>186</b> | (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                         | <b>452.0</b> |
| <b>187</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>533.7</b> |
| <b>188</b> | (R)-3-benzyl-4-(cyclopropyl(4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                      | <b>473.5</b> |
| <b>189</b> | (R)-3-benzyl-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                                      | <b>459.9</b> |
| <b>190</b> | (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>468.0</b> |

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| <b>191</b> | (R)-3-benzyl-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid   | <b>509.9</b> |
| <b>192</b> | (R)-3-benzyl-4-((4-(2-(difluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid   | <b>447.5</b> |
| <b>193</b> | (R)-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid             | <b>518.0</b> |
| <b>194</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>547.7</b> |
| <b>195</b> | (3R,4S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid   | <b>429.9</b> |
| <b>196</b> | (R)-2-(2-benzyl-3-carboxypropanamido)-5-(2-chlorophenyl)pyridine 1-oxide   | <b>411.9</b> |
| <b>197</b> | (R)-3-benzyl-4-((5-(2-chlorophenyl)pyrazin-2-yl)amino)-4-oxobutanoic acid  | <b>396.8</b> |
| <b>198</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(morpholinomethyl)-4-oxobutanoic acid  | <b>424.9</b> |
| <b>199</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-methoxyethyl)amino)-4-oxobutanoic acid  | <b>460.0</b> |
| <b>200</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylamino)-4-oxobutanoic acid  | <b>408.9</b> |
| <b>201</b> | (R)-3-benzyl-4-((2-(benzyloxy)ethyl)(4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>536.1</b> |

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| <b>202</b> | (R)-3-benzyl-4-((4-(5-methylfuran-2-yl)thiazol-2-yl)amino)-4-oxobutanoic acid                          | <b>371.4</b> |
| <b>203</b> | (R)-3-benzyl-4-oxo-4-((3-(3-(trifluoromethyl)phenyl)-1H-pyrazol-5-yl)amino)butanoic acid               | <b>418.4</b> |
| <b>204</b> | (R)-3-benzyl-4-((4-(5-chloro-2-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                    | <b>431.9</b> |
| <b>205</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-hydroxybenzyl)-4-oxobutanoic acid               | <b>431.9</b> |
| <b>206</b> | (R)-3-benzyl-4-((4-(4'-cyano-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid       | <b>482.6</b> |
| <b>207</b> | (3R)-3-benzyl-4-((3-carbamoyl-4-(2,4-dichlorophenyl)-5-methylthiophen-2-yl)amino)-4-oxobutanoic acid   | <b>492.4</b> |
| <b>208</b> | (R)-3-benzyl-4-((4-(3'-methoxy-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid     | <b>487.6</b> |
| <b>209</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((2-methylthiazol-4-yl)methyl)-4-oxobutanoic acid  | <b>436.9</b> |
| <b>210</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((5-methylisoxazol-3-yl)methyl)-4-oxobutanoic acid | <b>420.9</b> |
| <b>211</b> | (R)-3-benzyl-4-((4-(2'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid      | <b>492.0</b> |
| <b>212</b> | (R)-3-benzyl-4-((4-(2-(2-methoxypyrimidin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid   | <b>489.6</b> |
| <b>213</b> | (R)-3-benzyl-4-((4-(2,5-difluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                          | <b>403.4</b> |

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| <b>214</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(oxazol-4-ylmethyl)-4-oxobutanoic acid  | <b>406.9</b> |
| <b>215</b> | (3R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydrofuran-3-yl)methyl)butanoic acid                              | <b>409.9</b> |
| <b>216</b> | (R)-3-benzyl-4-(methyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid     | <b>541.6</b> |
| <b>217</b> | (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                      | <b>511.6</b> |
| <b>218</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>519.7</b> |
| <b>219</b> | (R)-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid          | <b>541.1</b> |
| <b>220</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>524.6</b> |
| <b>221</b> | (R)-3-benzyl-4-((4-(2-chloro-5-(difluoromethoxy)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                   | <b>481.9</b> |
| <b>222</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                    | <b>557.5</b> |
| <b>223</b> | (R)-4-((4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid | <b>575.5</b> |



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| <b>224</b> | (R)-4-((4-(5-chloro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid | <b>559.1</b> |
| <b>225</b> | (S)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>401.9</b> |
| <b>227</b> | (R)-3-benzyl-4-((4-benzylthiazol-2-yl)amino)-4-oxobutanoic acid  | <b>381.5</b> |
| <b>229</b> | (R)-3-benzyl-4-oxo-4-((5-phenyl-4H-1,2,4-triazol-3-yl)amino)butanoic acid  | <b>351.4</b> |
| <b>230</b> | 3-([1,1'-biphenyl]-4-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                    | <b>492.0</b> |
| <b>231</b> | (R)-3-benzyl-4-((4-(1-methyl-1H-pyrazol-4-yl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>371.4</b> |
| <b>232</b> | (R)-3-benzyl-4-((4-(4-methyl-1,2,5-oxadiazol-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid   | <b>373.4</b> |
| <b>233</b> | (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-1H-pyrazol-4-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                    | <b>461.5</b> |
| <b>234</b> | (3R)-3-benzyl-4-((4-(2-(3,5-dimethylisoxazol-4-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>476.6</b> |
| <b>235</b> | (R)-3-benzyl-4-((4-((2-chlorophenyl)carbamoyl)thiazol-2-yl)amino)-4-oxobutanoic acid   | <b>444.9</b> |
| <b>236</b> | (R)-3-benzyl-4-((6-(2-chlorophenyl)pyridazin-3-yl)amino)-4-oxobutanoic acid  | <b>396.8</b> |
| <b>237</b> | (R)-3-benzyl-4-(methyl(4-(2-(2-oxopyrrolidin-1-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>464.5</b> |

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| <b>238</b> | (S)-2-((1-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-1-oxo-3-phenylpropan-2-yl)oxy)acetic acid                           | <b>431.9</b> |
| <b>239</b> | (R)-3-benzyl-4-((1-methyl-5-phenyl-1H-imidazol-2-yl)amino)-4-oxobutanoic acid   | <b>364.4</b> |
| <b>240</b> | (R)-3-benzyl-4-((4-(2-(1-(2-methoxyethyl)-6-oxo-1,6-dihydropyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid | <b>532.6</b> |
| <b>241</b> | (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-6-oxo-1,6-dihydropyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>488.6</b> |
| <b>242</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((2,5-dimethyloxazol-4-yl)methyl)-4-oxobutanoic acid                      | <b>434.9</b> |
| <b>243</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((1-methyl-1H-pyrazol-5-yl)methyl)-4-oxobutanoic acid                     | <b>419.9</b> |
| <b>244</b> | (R)-3-benzyl-4-((4-(2-(6-hydroxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                            | <b>474.5</b> |
| <b>245</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)((S)-2-hydroxypropyl)amino)-4-oxobutanoic acid                                | <b>460.0</b> |
| <b>246</b> | (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)((R)-2-hydroxypropyl)amino)-4-oxobutanoic acid                                | <b>460.0</b> |
| <b>247</b> | (R)-3-(cyclohexylmethyl)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>520.7</b> |

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| <b>248</b> | (R)-3-benzyl-4-((4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                   | <b>506.6</b> |
| <b>250</b> | (R)-3-benzyl-4-((4-(4,5-difluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid               | <b>524.6</b> |
| <b>251</b> | (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                             | <b>440.3</b> |
| <b>252</b> | (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                        | <b>423.9</b> |
| <b>253</b> | (R)-3-(furan-2-ylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                | <b>478.5</b> |
| <b>254</b> | (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(thiophen-2-ylmethyl)butanoic acid                              | <b>421.9</b> |
| <b>255</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid | <b>541.1</b> |
| <b>256</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>567.7</b> |
| <b>257</b> | (R)-3-benzyl-4-((4-(2,3-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid   | <b>450.4</b> |
| <b>258</b> | (R)-3-benzyl-4-(methyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                   | <b>465.5</b> |

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| <b>259</b> | (R)-4-(cyclopropyl(4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>481.5</b> |
| <b>260</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                                | <b>405.9</b> |
| <b>261</b> | (R)-4-(methyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>473.5</b> |
| <b>262</b> | (R)-3-benzyl-4-(cyclopropyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>491.5</b> |
| <b>263</b> | (R)-4-(cyclopropyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>499.5</b> |
| <b>264</b> | (R)-3-benzyl-4-((4-(2-(6-isopropoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                       | <b>516.6</b> |
| <b>265</b> | (R)-3-benzyl-4-((4-(2-(6-(cyclopropylmethoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid              | <b>528.6</b> |
| <b>266</b> | (R)-3-benzyl-4-((4-(2-(6-(methoxymethyl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                   | <b>502.6</b> |
| <b>267</b> | (R)-3-benzyl-4-((4-(2-(6-((dimethylamino)methyl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid           | <b>515.6</b> |
| <b>268</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-(N-methylcyclopropanecarboxamido)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid   | <b>555.7</b> |

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| <b>269</b> | (R)-3-benzyl-4-((4-(2-(6-(dimethylcarbamoyl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>529.6</b> |
| <b>270</b> | (R)-4-((4-(2-(6-(4H-1,2,4-triazol-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-benzyl-4-oxobutanoic acid                  | <b>525.6</b> |
| <b>271</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-(3-methyl-2-oxoimidazolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>556.6</b> |
| <b>272</b> | (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>527.6</b> |
| <b>273</b> | (R)-3-benzyl-4-(methyl(4-(2-(3-methyl-3H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>512.6</b> |
| <b>274</b> | (R)-3-benzyl-4-((4-(2-(6-(benzyl(methyl)amino)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                    | <b>577.7</b> |
| <b>275</b> | (R)-3-benzyl-4-((4-(2-(6-(cyclohexyl(methyl)amino)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                | <b>569.7</b> |
| <b>276</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-(4-methylpiperazin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>556.7</b> |
| <b>277</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid       | <b>541.1</b> |

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| <b>278</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(3-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>524.6</b> |
| <b>279</b> | (R)-3-benzyl-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)-3-fluorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid        | <b>541.0</b> |
| <b>280</b> | (R)-3-benzyl-4-((4-(3-fluoro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid        | <b>524.6</b> |
| <b>281</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid        | <b>541.0</b> |
| <b>282</b> | (R)-3-benzyl-4-((4-(3,5-difluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid             | <b>524.6</b> |
| <b>283</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(((S)-tetrahydrofuran-2-yl)methyl)butanoic acid               | <b>409.9</b> |
| <b>284</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(((R)-tetrahydrofuran-2-yl)methyl)butanoic acid               | <b>409.9</b> |
| <b>285</b> | (R)-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid           | <b>473.9</b> |
| <b>286</b> | (R)-4-((4-(2-chloro-5-(trifluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid          | <b>489.9</b> |

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| <b>287</b> | (R)-4-((4-(2-chloro-5-(difluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                   | <b>471.9</b> |
| <b>288</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                                  | <b>431.9</b> |
| <b>289</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid             | <b>513.0</b> |
| <b>290</b> | (R)-4-((4-(2-chloro-5-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid             | <b>513.0</b> |
| <b>291</b> | (R)-3-(furan-2-ylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid  | <b>546.5</b> |
| <b>292</b> | (R)-3-(furan-2-ylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)-5-(trifluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid | <b>562.5</b> |
| <b>293</b> | (R)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid  | <b>544.5</b> |
| <b>294</b> | (R)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                                | <b>466.4</b> |

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| <b>295</b> | (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid             | <b>449.9</b> |
| <b>296</b> | (R)-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid  | <b>499.9</b> |
| <b>297</b> | (R)-4-((4-(2-chloro-5-(trifluoromethoxy)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid | <b>515.9</b> |
| <b>298</b> | (R)-4-((4-(2-chloro-5-(difluoromethoxy)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid  | <b>497.9</b> |
| <b>299</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((5-methylfuran-2-yl)methyl)-4-oxobutanoic acid                     | <b>419.9</b> |
| <b>300</b> | 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((4,5-dimethylfuran-2-yl)methyl)-4-oxobutanoic acid                 | <b>433.9</b> |
| <b>301</b> | 3-(benzofuran-2-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                          | <b>455.9</b> |
| <b>302</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(pyridin-2-ylmethyl)butanoic acid                         | <b>416.9</b> |
| <b>303</b> | (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(pyrimidin-2-ylmethyl)butanoic acid                       | <b>417.9</b> |



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| <b>304</b> | (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-2-yl)methyl)butanoic acid                     | <b>458.4</b> |
| <b>305</b> | (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-3-yl)methyl)butanoic acid                     | <b>458.4</b> |
| <b>306</b> | (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-3-(((2R,3R)-2-methyltetrahydro-2H-pyran-3-yl)methyl)-4-oxobutanoic acid      | <b>472.4</b> |
| <b>307</b> | (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-3-(((2R)-2-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid        | <b>472.4</b> |
| <b>308</b> | (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-3-(((2R,6S)-2,6-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid | <b>486.4</b> |
| <b>309</b> | (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-3-(((3S)-3-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid        | <b>472.4</b> |
| <b>310</b> | (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-3-(((3R,5S)-3,5-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid | <b>486.4</b> |
| <b>311</b> | (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(4-hydroxy-1,2,5-thiadiazol-3-yl)-N-methylpropanamide                                | <b>472.0</b> |
| <b>312</b> | (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(3-hydroxy-5-methylisoxazol-4-yl)-N-methylpropanamide                                | <b>469.0</b> |

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| <b>313</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid           | <b>624.2</b> |
| <b>314</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>642.2</b> |
| <b>315</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                         | <b>557.1</b> |
| <b>316</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                | <b>575.1</b> |
| <b>317</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>610.1</b> |
| <b>318</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>628.1</b> |
| <b>319</b> | (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>655.7</b> |

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| <b>320</b> | (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>673.7</b> |
| <b>321</b> | (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                         | <b>588.6</b> |
| <b>322</b> | (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                | <b>606.6</b> |
| <b>323</b> | (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>641.7</b> |
| <b>324</b> | (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>659.7</b> |
| <b>325</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                               | <b>589.7</b> |
| <b>326</b> | (R)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                      | <b>607.7</b> |
| <b>327</b> | (R)-4-(cyclopropyl(5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                                    | <b>540.6</b> |

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| <b>328</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                   | <b>575.7</b> |
| <b>329</b> | (R)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>593.7</b> |
| <b>330</b> | (R)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid           | <b>607.7</b> |
| <b>331</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>625.7</b> |
| <b>332</b> | (R)-4-(cyclopropyl(4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                         | <b>540.6</b> |
| <b>333</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                | <b>558.6</b> |
| <b>334</b> | (R)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>593.7</b> |
| <b>335</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>611.7</b> |

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| <b>336</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                   | <b>608.2</b> |
| <b>337</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid          | <b>626.2</b> |
| <b>338</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                        | <b>559.1</b> |
| <b>339</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                  | <b>594.1</b> |
| <b>340</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid         | <b>612.1</b> |
| <b>341</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>639.7</b> |
| <b>342</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid | <b>657.7</b> |
| <b>343</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                        | <b>572.6</b> |

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| <b>344</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid                | <b>590.6</b> |
| <b>345</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>625.7</b> |
| <b>346</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid | <b>643.7</b> |
| <b>347</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                               | <b>573.7</b> |
| <b>348</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                      | <b>591.7</b> |
| <b>349</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                    | <b>524.6</b> |
| <b>350</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                     | <b>577.7</b> |
| <b>351</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                      | <b>591.7</b> |
| <b>352</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>609.7</b> |

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| <b>353</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                         | <b>524.6</b> |
| <b>354</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>542.6</b> |
| <b>355</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>577.7</b> |
| <b>356</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>595.7</b> |
| <b>357</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                      | <b>616.1</b> |
| <b>358</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid             | <b>634.1</b> |
| <b>359</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                                    | <b>549.1</b> |
| <b>360</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                           | <b>567.0</b> |
| <b>361</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                     | <b>602.1</b> |
| <b>362</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid            | <b>620.1</b> |

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| <b>363</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid           | <b>647.7</b> |
| <b>364</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid  | <b>665.7</b> |
| <b>365</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                         | <b>580.6</b> |
| <b>366</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid                | <b>598.6</b> |
| <b>367</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>633.7</b> |
| <b>368</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid | <b>651.7</b> |
| <b>369</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                               | <b>581.7</b> |
| <b>370</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                      | <b>599.7</b> |
| <b>371</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                    | <b>532.6</b> |
| <b>372</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                     | <b>585.7</b> |



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| <b>373</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                   | <b>599.7</b> |
| <b>374</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                          | <b>617.7</b> |
| <b>375</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid   | <b>532.6</b> |
| <b>376</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>550.6</b> |
| <b>377</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                  | <b>585.7</b> |
| <b>378</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                         | <b>603.7</b> |
| <b>379</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>598.1</b> |
| <b>380</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>616.1</b> |
| <b>381</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                        | <b>531.0</b> |

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| <b>382</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                          | <b>549.0</b> |
| <b>383</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                    | <b>584.1</b> |
| <b>384</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid           | <b>602.1</b> |
| <b>385</b> | (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>629.7</b> |
| <b>386</b> | (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>647.7</b> |
| <b>387</b> | (R)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                        | <b>562.6</b> |
| <b>388</b> | (R)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid               | <b>580.6</b> |

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| <b>389</b> | (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>615.7</b> |
| <b>390</b> | (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>633.7</b> |
| <b>391</b> | (R)-4-(methyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                                 | <b>563.7</b> |
| <b>392</b> | (R)-4-((5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                      | <b>581.7</b> |
| <b>393</b> | (R)-4-((5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                                    | <b>514.6</b> |
| <b>394</b> | (R)-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                                | <b>549.7</b> |
| <b>395</b> | (R)-4-((5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                     | <b>567.6</b> |
| <b>396</b> | (R)-4-((4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                      | <b>581.7</b> |

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| <b>397</b> | (R)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>599.7</b> |
| <b>398</b> | (R)-4-((4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                         | <b>514.6</b> |
| <b>399</b> | (R)-4-((5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                | <b>532.6</b> |
| <b>400</b> | (R)-4-((4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>567.6</b> |
| <b>401</b> | (R)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>585.6</b> |
| <b>402</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                          | <b>582.1</b> |
| <b>403</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                 | <b>600.1</b> |
| <b>404</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid  | <b>515.0</b> |

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| <b>405</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                          | <b>533.0</b> |
| <b>406</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                    | <b>568.1</b> |
| <b>407</b> | (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid           | <b>586.1</b> |
| <b>408</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid          | <b>613.7</b> |
| <b>409</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid | <b>631.7</b> |
| <b>410</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                        | <b>546.6</b> |
| <b>411</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid               | <b>564.6</b> |

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| <b>412</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid          | <b>599.7</b> |
| <b>413</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid | <b>617.7</b> |
| <b>414</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                 | <b>547.7</b> |
| <b>415</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>565.7</b> |
| <b>416</b> | (R)-3-(cyclopentylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid   | <b>480.6</b> |
| <b>417</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                    | <b>498.6</b> |
| <b>418</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                     | <b>551.6</b> |
| <b>419</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>565.7</b> |

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| <b>420</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid  | <b>583.7</b> |
| <b>421</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                         | <b>498.6</b> |
| <b>422</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                | <b>516.6</b> |
| <b>423</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid          | <b>551.6</b> |
| <b>424</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid | <b>569.6</b> |
| <b>425</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                        | <b>590.1</b> |
| <b>426</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid               | <b>608.1</b> |
| <b>427</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid                             | <b>541.0</b> |
| <b>428</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                       | <b>576.1</b> |

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| <b>429</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid            | <b>594.1</b> |
| <b>430</b> | (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid           | <b>621.7</b> |
| <b>431</b> | (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid  | <b>639.7</b> |
| <b>432</b> | (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                         | <b>554.6</b> |
| <b>433</b> | (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                | <b>572.6</b> |
| <b>434</b> | (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid          | <b>607.6</b> |
| <b>435</b> | (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid | <b>625.6</b> |
| <b>436</b> | (R)-3-benzyl-4-(methyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                 | <b>555.7</b> |
| <b>437</b> | (R)-3-benzyl-4-((5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>573.7</b> |



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| <b>438</b> | (R)-3-benzyl-4-((5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid  | <b>506.6</b> |
| <b>439</b> | (R)-3-benzyl-4-((5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                     | <b>559.6</b> |
| <b>440</b> | (R)-3-benzyl-4-((4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                      | <b>573.7</b> |
| <b>441</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                             | <b>591.6</b> |
| <b>442</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(6-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid  | <b>524.6</b> |
| <b>443</b> | (R)-3-benzyl-4-((4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                     | <b>559.6</b> |
| <b>444</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                            | <b>577.6</b> |
| <b>445</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid     | <b>551.6</b> |
| <b>446</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>577.7</b> |

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| <b>447</b> | (R)-4-((4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>567.6</b> |
| <b>448</b> | (R)-4-(cyclopropyl(4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>593.7</b> |
| <b>449</b> | (R)-3-benzyl-4-((4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>559.6</b> |
| <b>450</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>585.7</b> |
| <b>451</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                  | <b>537.6</b> |
| <b>452</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid               | <b>563.7</b> |
| <b>453</b> | (R)-4-((4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid   | <b>553.6</b> |

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| <b>454</b> | (R)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>579.7</b> |
| <b>455</b> | (R)-3-benzyl-4-((4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>545.6</b> |
| <b>456</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>571.6</b> |
| <b>457</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>539.6</b> |
| <b>458</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>565.7</b> |
| <b>459</b> | (R)-4-((4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid       | <b>555.6</b> |
| <b>460</b> | (R)-4-(cyclopropyl(4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>581.7</b> |

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| <b>461</b> | (R)-3-benzyl-4-((4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                 | <b>547.6</b> |
| <b>462</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid              | <b>573.7</b> |
| <b>463</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                   | <b>521.6</b> |
| <b>464</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>547.7</b> |
| <b>465</b> | (R)-4-((4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>537.6</b> |
| <b>466</b> | (R)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>563.7</b> |
| <b>467</b> | (R)-3-benzyl-4-((4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>529.6</b> |
| <b>468</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>555.6</b> |

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| <b>469</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                   | <b>581.7</b> |
| <b>470</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>607.7</b> |
| <b>471</b> | (R)-4-((4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>597.7</b> |
| <b>472</b> | (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>623.7</b> |
| <b>473</b> | (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>589.6</b> |
| <b>474</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>615.7</b> |
| <b>475</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                  | <b>567.6</b> |

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| <b>476</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>593.7</b> |
| <b>477</b> | (R)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>583.6</b> |
| <b>478</b> | (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>609.7</b> |
| <b>479</b> | (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>575.6</b> |
| <b>480</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>601.7</b> |
| <b>481</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>569.7</b> |
| <b>482</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>595.7</b> |

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| <b>483</b> | (R)-4-((4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid     | <b>585.7</b> |
| <b>484</b> | (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>611.7</b> |
| <b>485</b> | (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                 | <b>577.6</b> |
| <b>486</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>603.7</b> |
| <b>487</b> | (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                   | <b>551.6</b> |
| <b>488</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                               | <b>577.7</b> |
| <b>489</b> | (R)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                    | <b>567.6</b> |

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| <b>490</b> | (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid           | <b>593.7</b> |
| <b>491</b> | (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid  | <b>559.6</b> |
| <b>492</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                       | <b>585.7</b> |
| <b>493</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                     | <b>568.1</b> |
| <b>494</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>594.1</b> |
| <b>495</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>584.1</b> |
| <b>496</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>610.1</b> |



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| <b>497</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                   | <b>576.1</b> |
| <b>498</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxobutanoic acid                              | <b>602.1</b> |
| <b>499</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                     | <b>554.1</b> |
| <b>500</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>580.1</b> |
| <b>501</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>570.1</b> |
| <b>502</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>596.1</b> |
| <b>503</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                  | <b>562.1</b> |

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| <b>504</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                          | <b>588.1</b> |
| <b>505</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                     | <b>556.1</b> |
| <b>506</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>582.1</b> |
| <b>507</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>572.1</b> |
| <b>508</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>598.1</b> |
| <b>509</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                  | <b>564.1</b> |
| <b>510</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                             | <b>590.1</b> |

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| <b>511</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                     | <b>538.1</b> |
| <b>512</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>564.1</b> |
| <b>513</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>554.1</b> |
| <b>514</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>580.1</b> |
| <b>515</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                  | <b>546.1</b> |
| <b>516</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxobutanoic acid                             | <b>572.1</b> |
| <b>517</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid              | <b>533.7</b> |
| <b>518</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>559.7</b> |

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| <b>519</b> | (R)-4-(methyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid       | <b>549.7</b> |
| <b>520</b> | (R)-4-(cyclopropyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>575.7</b> |
| <b>521</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                              | <b>567.7</b> |
| <b>522</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                     | <b>519.6</b> |
| <b>523</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>545.7</b> |
| <b>524</b> | (R)-4-(methyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>535.6</b> |
| <b>525</b> | (R)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>561.7</b> |
| <b>526</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>553.6</b> |

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| <b>527</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                     | <b>521.6</b> |
| <b>528</b> | (R)-4-(methyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>537.6</b> |
| <b>529</b> | (R)-4-(cyclopropyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>563.7</b> |
| <b>530</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>555.7</b> |
| <b>531</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                    | <b>503.6</b> |
| <b>532</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                               | <b>529.7</b> |
| <b>533</b> | (R)-4-(methyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                     | <b>519.6</b> |
| <b>534</b> | (R)-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                | <b>545.7</b> |
| <b>535</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>537.6</b> |

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| <b>536</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                   | <b>569.6</b> |
| <b>537</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>595.7</b> |
| <b>538</b> | (R)-4-((5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>585.6</b> |
| <b>539</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>611.7</b> |
| <b>540</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>577.6</b> |
| <b>541</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>603.7</b> |
| <b>542</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                  | <b>555.6</b> |

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| <b>543</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>581.6</b> |
| <b>544</b> | (R)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>571.6</b> |
| <b>545</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>597.6</b> |
| <b>546</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>563.6</b> |
| <b>547</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>589.6</b> |
| <b>548</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>557.6</b> |
| <b>549</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>583.7</b> |

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| <b>550</b> | (R)-4-((5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid     | <b>573.6</b> |
| <b>551</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>599.7</b> |
| <b>552</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                 | <b>565.6</b> |
| <b>553</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>591.6</b> |
| <b>554</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                   | <b>539.6</b> |
| <b>555</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                               | <b>565.6</b> |
| <b>556</b> | (R)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                    | <b>555.6</b> |
| <b>557</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                | <b>581.6</b> |



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| <b>558</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid  | <b>547.6</b> |
| <b>559</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid   | <b>573.6</b> |
| <b>560</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                   | <b>599.7</b> |
| <b>561</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>625.7</b> |
| <b>562</b> | (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>615.7</b> |
| <b>563</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>641.7</b> |
| <b>564</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>607.6</b> |
| <b>565</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>633.7</b> |

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| <b>566</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                   | <b>585.6</b> |
| <b>567</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>611.7</b> |
| <b>568</b> | (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>601.6</b> |
| <b>569</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>627.7</b> |
| <b>570</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>593.6</b> |
| <b>571</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>619.7</b> |
| <b>572</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>587.7</b> |

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| <b>573</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>613.7</b> |
| <b>574</b> | (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>603.6</b> |
| <b>575</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>629.7</b> |
| <b>576</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>595.6</b> |
| <b>577</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>621.7</b> |
| <b>578</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                  | <b>569.6</b> |
| <b>579</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                               | <b>595.7</b> |

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| <b>580</b> | (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid         | <b>585.6</b> |
| <b>581</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>611.7</b> |
| <b>582</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                     | <b>577.6</b> |
| <b>583</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                  | <b>603.7</b> |
| <b>584</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>586.1</b> |
| <b>585</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid           | <b>612.1</b> |
| <b>586</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>602.1</b> |

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| <b>587</b> | (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid  | <b>628.1</b> |
| <b>588</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                   | <b>594.1</b> |
| <b>589</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                              | <b>620.1</b> |
| <b>590</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                     | <b>572.1</b> |
| <b>591</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>598.1</b> |
| <b>592</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>588.1</b> |
| <b>593</b> | (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>614.1</b> |

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| <b>594</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                               | <b>580.0</b> |
| <b>595</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                          | <b>606.1</b> |
| <b>596</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                     | <b>574.1</b> |
| <b>597</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>600.1</b> |
| <b>598</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>590.1</b> |
| <b>599</b> | (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>616.1</b> |
| <b>600</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                  | <b>582.1</b> |

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| <b>601</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid              | <b>608.1</b> |
| <b>602</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                     | <b>556.1</b> |
| <b>603</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                | <b>582.1</b> |
| <b>604</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid      | <b>572.1</b> |
| <b>605</b> | (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>598.1</b> |
| <b>606</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                  | <b>564.0</b> |
| <b>607</b> | (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid                             | <b>590.1</b> |

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| <b>608</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                    | <b>551.6</b> |
| <b>609</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>577.7</b> |
| <b>610</b> | (R)-4-((5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid     | <b>567.6</b> |
| <b>611</b> | (R)-4-(cyclopropyl(5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>593.7</b> |
| <b>612</b> | (R)-3-benzyl-4-((5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                                 | <b>559.6</b> |
| <b>613</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>585.7</b> |
| <b>614</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid                   | <b>537.6</b> |



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| <b>615</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>563.7</b> |
| <b>616</b> | (R)-4-((5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>553.6</b> |
| <b>617</b> | (R)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>579.7</b> |
| <b>618</b> | (R)-3-benzyl-4-((5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>545.6</b> |
| <b>619</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>571.6</b> |
| <b>620</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                      | <b>539.6</b> |
| <b>621</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>565.7</b> |

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| <b>622</b> | (R)-4-((5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>555.6</b> |
| <b>623</b> | (R)-4-(cyclopropyl(5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>581.7</b> |
| <b>624</b> | (R)-3-benzyl-4-((5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>547.6</b> |
| <b>625</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>573.7</b> |
| <b>626</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                  | <b>521.6</b> |
| <b>627</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                               | <b>547.7</b> |
| <b>628</b> | (R)-4-((5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid                   | <b>537.6</b> |

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| <b>629</b> | (R)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>563.7</b> |
| <b>630</b> | (R)-3-benzyl-4-((5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>529.6</b> |
| <b>631</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>555.6</b> |
| <b>632</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[3,2-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                         | <b>529.7</b> |
| <b>633</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid       | <b>546.7</b> |
| <b>634</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-1,2,3,4-tetrahydropyrido[3,2-d]pyrimidin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid   | <b>560.7</b> |
| <b>635</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[3,2-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid       | <b>545.7</b> |
| <b>636</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methyl-5-oxo-5,6,7,8-tetrahydro-1,6-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid        | <b>559.7</b> |

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| <b>637</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1,3-dimethyl-2-oxo-1,2,3,4-tetrahydropyrido[3,2-d]pyrimidin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>574.7</b> |
| <b>638</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(7-methyl-8-oxo-5,6,7,8-tetrahydro-1,7-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>559.7</b> |
| <b>639</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methyl-5-oxo-6,7-dihydro-5H-pyrrolo[3,4-b]pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>545.7</b> |
| <b>640</b> | (R)-4-((4-(2-(5-chloro-6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid                  | <b>594.1</b> |
| <b>641</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(3-methyl-3H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                           | <b>530.7</b> |
| <b>642</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2,3-dihydro-1H-pyrido[2,3-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>547.7</b> |
| <b>643</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(3-methyl-2-oxo-2,3-dihydro-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>546.7</b> |
| <b>644</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(7-methyl-6-oxo-5,6,7,8-tetrahydro-1,7-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>559.7</b> |
| <b>645</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methyl-7-oxo-6,7-dihydro-5H-pyrrolo[3,4-b]pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid         | <b>545.7</b> |

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| <b>646</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1,3-dimethyl-2-oxo-2,3-dihydro-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid              | <b>560.7</b> |
| <b>647</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                    | <b>530.7</b> |
| <b>648</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(5-fluoro-6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>577.7</b> |
| <b>649</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-1,2,3,4-tetrahydro-1,5-naphthyridin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>559.7</b> |
| <b>650</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(3-methyl-2-oxo-1,2,3,4-tetrahydropyrido[3,2-d]pyrimidin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid              | <b>560.7</b> |
| <b>651</b> | (R)-4-(cyclopropyl(5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>597.7</b> |
| <b>652</b> | (R)-4-(cyclopropyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid          | <b>579.7</b> |
| <b>653</b> | (R)-4-((5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>571.6</b> |

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| <b>654</b> | (R)-4-(methyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>553.6</b> |
| <b>655</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>581.7</b> |
| <b>656</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid           | <b>563.7</b> |
| <b>657</b> | (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid     | <b>555.6</b> |
| <b>658</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid                | <b>537.6</b> |
| <b>659</b> | (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid               | <b>589.6</b> |
| <b>660</b> | (R)-3-benzyl-4-(cyclopropyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid                        | <b>571.7</b> |
| <b>661</b> | (R)-3-benzyl-4-((5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                  | <b>563.6</b> |
| <b>662</b> | (R)-3-benzyl-4-(methyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>545.6</b> |
| <b>663</b> | (R)-3-benzyl-4-(methyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid                                | <b>542.6</b> |

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| <b>664</b> | (R)-3-benzyl-4-(cyclopropyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid                               | <b>568.7</b> |
| <b>665</b> | (R)-3-(cyclopentylmethyl)-4-(methyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid                       | <b>534.6</b> |
| <b>666</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid                  | <b>560.7</b> |
| <b>667</b> | (R)-4-(methyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid        | <b>550.6</b> |
| <b>668</b> | (R)-4-(cyclopropyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid   | <b>576.7</b> |
| <b>669</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid | <b>595.7</b> |
| <b>670</b> | (3R)-3-(cyclopentylmethyl)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid    | <b>569.7</b> |
| <b>671</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid           | <b>577.7</b> |
| <b>672</b> | (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid              | <b>551.7</b> |

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| <b>673</b> | (3R)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid | <b>611.7</b> |
| <b>674</b> | (3R)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid    | <b>585.7</b> |
| <b>675</b> | (R)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid           | <b>593.7</b> |
| <b>676</b> | (R)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid              | <b>567.7</b> |
| <b>677</b> | (3R)-3-benzyl-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>603.7</b> |
| <b>678</b> | (3R)-3-benzyl-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid                                | <b>577.6</b> |
| <b>679</b> | (R)-3-benzyl-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid                                       | <b>585.7</b> |
| <b>680</b> | (R)-3-benzyl-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid  | <b>559.6</b> |



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| <b>681</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-6-oxopiperidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>587.7</b> |
| <b>682</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxopiperidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>587.7</b> |
| <b>683</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyl-2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>574.7</b> |
| <b>684</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(N-methylacetamido)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                         | <b>547.7</b> |
| <b>685</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1,3-dimethyl-2-oxohexahydropyrimidin-5-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>602.8</b> |
| <b>686</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(5-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                     | <b>559.7</b> |
| <b>687</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>574.7</b> |
| <b>688</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(pyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                           | <b>545.7</b> |
| <b>689</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                   | <b>560.7</b> |

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| <b>690</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-5-oxopyrrolidin-2-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>573.7</b> |
| <b>691</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(4-methyl-3-oxopiperazin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid               | <b>588.7</b> |
| <b>692</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(4-methyl-2,5-dioxopiperazin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid           | <b>602.7</b> |
| <b>693</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(dimethylcarbamoyl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                          | <b>547.7</b> |
| <b>694</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyl-2-oxohexahydropyrimidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid     | <b>588.7</b> |
| <b>695</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(isopropoxy)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                 | <b>534.7</b> |
| <b>696</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-6-oxopiperidin-2-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid              | <b>587.7</b> |
| <b>697</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-5-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>573.7</b> |
| <b>698</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyl-2-oxotetrahydropyrimidin-1(2H)-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>588.7</b> |

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| <b>699</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxotetrahydropyrimidin-1(2H)-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid          | <b>574.7</b> |
| <b>700</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1,3-dimethyl-2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid       | <b>588.7</b> |
| <b>701</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1,3-dimethyl-2-oxohexahydropyrimidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>602.8</b> |
| <b>702</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxohexahydropyrimidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid     | <b>588.7</b> |
| <b>703</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(N-methylcyclopropanecarboxamido)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>573.7</b> |
| <b>704</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid             | <b>573.7</b> |
| <b>705</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(cyclopropylmethoxy)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                         | <b>546.7</b> |
| <b>706</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                      | <b>559.7</b> |
| <b>707</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxopiperidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid              | <b>587.7</b> |

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| <b>708</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(methoxymethyl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                             | <b>520.7</b> |
| <b>709</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxohexahydropyrimidin-5-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid    | <b>588.7</b> |
| <b>710</b> | (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(5-oxopyrrolidin-2-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                     | <b>559.7</b> |
| <b>711</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)-5-(trifluoromethyl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid  | <b>627.7</b> |
| <b>712</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid    | <b>607.7</b> |
| <b>713</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)-5-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid | <b>643.7</b> |
| <b>714</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(pyridin-2-ylmethyl)butanoic acid                     | <b>568.7</b> |
| <b>715</b> | (R)-2-(2-(carboxymethyl)-3-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-oxopropyl)pyridine 1-oxide             | <b>584.7</b> |
| <b>716</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((R)-tetrahydro-2H-pyran-2-yl)methyl)butanoic acid   | <b>575.7</b> |

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| <b>717</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(pyrimidin-2-ylmethyl)butanoic acid                                  | <b>569.6</b> |
| <b>718</b> | (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(thiophen-2-ylmethyl)butanoic acid                                   | <b>573.7</b> |
| <b>719</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((S)-tetrahydrofuran-2-yl)methyl)butanoic acid                      | <b>561.7</b> |
| <b>720</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((S)-tetrahydro-2H-pyran-3-yl)methyl)butanoic acid                  | <b>575.7</b> |
| <b>721</b> | (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((2S)-2-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid        | <b>589.7</b> |
| <b>722</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((R)-tetrahydro-2H-pyran-3-yl)methyl)butanoic acid                  | <b>575.7</b> |
| <b>723</b> | (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((3R,5S)-3,5-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid | <b>603.7</b> |
| <b>724</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((2R,3R)-2-methyltetrahydro-2H-pyran-3-yl)methyl)-4-oxobutanoic acid      | <b>589.7</b> |

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| <b>725</b> | (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((3S)-3-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid        | <b>589.7</b> |
| <b>726</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((S)-tetrahydro-2H-pyran-2-yl)methyl)butanoic acid                  | <b>575.7</b> |
| <b>727</b> | (R)-3-(benzofuran-2-ylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                                 | <b>607.7</b> |
| <b>728</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((R)-tetrahydrofuran-2-yl)methyl)butanoic acid                      | <b>561.7</b> |
| <b>729</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((5-methylfuran-2-yl)methyl)-4-oxobutanoic acid                            | <b>571.7</b> |
| <b>730</b> | (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-3-yl)methyl)butanoic acid                     | <b>575.7</b> |
| <b>731</b> | (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((2R,6S)-2,6-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid | <b>603.7</b> |
| <b>732</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid                                      | <b>557.6</b> |
| <b>733</b> | (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-2-yl)methyl)butanoic acid                     | <b>575.7</b> |

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| <b>734</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                          | <b>506.6</b> |
| <b>735</b> | (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid               | <b>541.1</b> |
| <b>736</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(oxetan-3-ylmethyl)-4-oxobutanoic acid           | <b>547.6</b> |
| <b>737</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(oxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                    | <b>532.7</b> |
| <b>738</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(oxetan-3-ylmethyl)-4-oxobutanoic acid           | <b>547.6</b> |
| <b>739</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyloxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>546.7</b> |
| <b>740</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(oxetan-3-ylmethyl)-4-oxobutanoic acid           | <b>547.6</b> |
| <b>741</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-fluorooxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>550.7</b> |
| <b>742</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-methyloxetan-3-yl)methyl)-4-oxobutanoic acid | <b>561.7</b> |
| <b>743</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(oxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                    | <b>532.7</b> |

|            |   |              |
|------------|---|--------------|
| <b>744</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-methyloxetan-3-yl)methyl)-4-oxobutanoic acid | <b>561.7</b> |
| <b>745</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyloxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>546.7</b> |
| <b>746</b> | (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-methyloxetan-3-yl)methyl)-4-oxobutanoic acid | <b>561.7</b> |
| <b>747</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-fluorooxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>550.7</b> |
| <b>748</b> | (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-fluorooxetan-3-yl)methyl)-4-oxobutanoic acid | <b>565.6</b> |
| <b>749</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(oxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid                    | <b>532.7</b> |
| <b>750</b> | (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-fluorooxetan-3-yl)methyl)-4-oxobutanoic acid | <b>565.6</b> |
| <b>751</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyloxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>546.7</b> |
| <b>752</b> | (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-fluorooxetan-3-yl)methyl)-4-oxobutanoic acid | <b>565.6</b> |
| <b>753</b> | (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-fluorooxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid            | <b>550.7</b> |



The compounds of formula I can be prepared by different ways with reactions known by the person skilled in the art. Reaction schemes as described in the example section illustrate by way of example different possible approaches.

5                   The invention further provides the use of the compounds of the invention or pharmaceutically acceptable salts, or solvates thereof as agonists or partial agonists of G-protein coupled receptor 43 (GPR43).

                  Accordingly, in a particularly preferred embodiment, the invention relates to the use of compounds of formula I and subformulae in particular those  
10 of table 1 above, or pharmaceutically acceptable salts and solvates thereof, as GPR43 agonists or partial agonists.

#### [APPLICATIONS]

                  The compounds of the invention are therefore useful in the  
15 prevention or in the prevention and/or treatment of type II diabetes, obesity, dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, hyperlipidemia, hypertriglyceridemia, hypoglycemia, hyperglycemia, glucose intolerance, insulin resistance, hyperinsulinemia hypertension, hyperlipoproteinemia, , metabolic syndrome,  
20 syndrome X, thrombotic disorders, cardiovascular disease, atherosclerosis and its sequelae including angina, claudication, heart attack, stroke and others, kidney diseases, ketoacidosis, nephropathy, diabetic neuropathy, diabetic retinopathy, nonalcoholic fatty liver diseases such as steatosis or nonalcoholic steatohepatitis (NASH).

25                   Preferred diseases are type II diabetes, lipid disorders such as dyslipidemia, hypertension, obesity, atherosclerosis and its sequelae.

                  In a particular preferred embodiment the diseases are type II

diabetes and a lipid disorder such as dyslipidemia.

The invention also provides for a method for delaying in patient the onset of type II diabetes, obesity, dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, 5 hyperlipidemia, hypertriglyceridemia, hypoglycemia, hyperglycemia, glucose intolerance, insulin resistance, hyperinsulinemia hypertension, hyperlipoproteinemia, , metabolic syndrome, syndrome X, thrombotic disorders, cardiovascular disease, atherosclerosis and its sequelae including angina, claudication, heart attack, stroke and others, kidney diseases, ketoacidosis, 10 nephropathy, diabetic neuropathy, diabetic retinopathy, nonalcoholic fatty liver diseases such as steatosis or nonalcoholic steatohepatitis (NASH) comprising the administration of a pharmaceutically effective amount of a compound of formula (I) or pharmaceutically acceptable salt thereof to a patient in need thereof.

Preferably, the patient is a warm-blooded animal, more preferably a 15 human.

The invention further provides the use of a compound of formula (I) or a pharmaceutically acceptable salt or solvates thereof for the manufacture of a medicament for use in treating a patient and/or preventing a patient from developing a disease selected from the group consisting of type II diabetes, 20 obesity, dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, hyperlipidemia, hypertriglyceridemia, hypoglycemia, hyperglycemia, glucose intolerance, insulin resistance, hyperinsulinemia hypertension, hyperlipoproteinemia, , metabolic syndrome, syndrome X, thrombotic disorders, 25 cardiovascular disease, atherosclerosis and its sequelae including angina, claudication, heart attack, stroke and others, kidney diseases, ketoacidosis, nephropathy, diabetic neuropathy, diabetic retinopathy, nonalcoholic fatty liver diseases such as steatosis or nonalcoholic steatohepatitis (NASH).

Preferably, the patient is a warm-blooded animal, more preferably a human.

According to a further feature of the present invention there is provided a method for modulating GPR43 receptor activity, in a patient, preferably a warm blooded animal, and even more preferably a human, in need of such treatment, which comprises administering to said animal an effective amount of compound of the present invention, or a pharmaceutically acceptable salt or solvate thereof.

According to one embodiment, the compounds of the invention, their pharmaceutical acceptable salts or solvates may be administered as part of a combination therapy. Thus, are included within the scope of the present invention embodiments comprising coadministration of, and compositions and medicaments which contain, in addition to a compound of the present invention, a pharmaceutically acceptable salt or solvate thereof as active ingredient, additional therapeutic agents and/or active ingredients. Such multiple drug regimens, often referred to as combination therapy, may be used in the treatment and/or prevention of any of the diseases or conditions mediated by or associated with GPR43 receptor modulation, particularly type II diabetes, obesity, dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, hyperlipidemia, hypertriglyceridemia, hypoglycemia, hyperglycemia, glucose intolerance, insulin resistance, hyperinsulinemia hypertension, hyperlipoproteinemia, , metabolic syndrome, syndrome X, thrombotic disorders, cardiovascular disease, atherosclerosis and its sequelae including angina, claudication, heart attack, stroke and others, kidney diseases, ketoacidosis, nephropathy, diabetic neuropathy, diabetic retinopathy, nonalcoholic fatty liver diseases such as steatosis or nonalcoholic steatohepatitis (NASH). The use of such combinations of therapeutic agents is especially pertinent with respect to the treatment of the above-mentioned list of diseases within a patient in need of treatment or one at risk of becoming such a patient.

In addition to the requirement of therapeutic efficacy, which may necessitate the use of active agents in addition to the GPR43 agonist or partial agonist compounds of Formula I or their pharmaceutical acceptable salts or solvates thereof, there may be additional rationales which compel or highly recommend the use of combinations of drugs involving active ingredients which represent adjunct therapy, i.e., which complement and supplement the function performed by the GPR43 receptor agonist or partial agonist compounds of the present invention. Suitable supplementary therapeutic agents used for the purpose of auxiliary treatment include drugs which, instead of directly treating or preventing a disease or condition mediated by or associated with GPR43 receptor modulation, treat diseases or conditions which directly result from or indirectly accompany the basic or underlying GPR43 receptor modulated disease or condition.

Thus, the methods of treatment and pharmaceutical compositions of the present invention may employ the compounds of Formula I or their pharmaceutical acceptable salts or solvates thereof in the form of monotherapy, but said methods and compositions may also be used in the form of multiple therapy in which one or more compounds of Formula I or their pharmaceutically acceptable salts or solvates are coadministered in combination with one or more other therapeutic agents such as those described in detail further herein.

Examples of other active ingredients that may be administered in combination with a compound of Formula I or a pharmaceutically acceptable salt or solvate thereof, and either administered separately or in the same pharmaceutical composition, include but are not limited to:

- (a) PPAR $\gamma$  agonists and partial agonists, including both glitazones and non-glitazones (e.g. troglitazone, pioglitazone, englitazone, MCC-555, rosiglitazone, balaglitazone, netoglitazone, T-131, LY-300512 and LY-818;
- (b) Biguanides such as metformin and phenformin;

- (c) Protein tyrosine phosphatase-1B (PTP-1B) inhibitors,
- (d) Dipeptidyl peptidase IV (DP-IV) inhibitor, such as MK-0431 and LAF-237;
- (e) Insulin or insulin mimetics;
- 5 (f) Sulfonylureas such as tolbutamide and glipizide or related materials;
- (g)  $\alpha$ -glucosidase inhibitors (such as acarbose);
- (h) agents which improve a patient's lipid profile such as (i) HMG-CoA reductase inhibitors (lovastatin, simvastatin, rosuvastatin, pravastatin, fluvastatin, atorvastatin, rivastatin, itavastatin, ZD-4522 and other statins),  
10 (ii) bile acid sequestrants (cholestyramine, colestipol and dialkylaminoalkyl derivatives of a cross-linked dextran), (iii) nicotinic alcohol, nicotinic acid or a salt thereof, (iv) PPAR $\alpha$  agonists such as fenofibric acid derivatives (gemfibrozil, clofibrate, fenofibrate and bezafibrate), (v) cholesterol absorption inhibitors such as for example  
15 ezetimibe, (vi) acyl CoA:cholesterol acyltransferase (ACAT)inhibitors such as avasimibe, (vii) CETP inhibitors such as torcetrapib and (viii) phenolic anti-oxidants such as probucol;
- (i) PPAR $\alpha/\gamma$  dual agonists such as muraglitazar, tesaglitazar, farglitazar and JT-501;
- 20 (j) PPAR $\delta$  agonists such those disclosed in WO97/28149;
- (k) Antiobesity compounds such as fenfluramine, dextenfluramine, phentramine, subitramine, orlistat, neuropeptide Y5 inhibitors, MC4R agonists, cannabinoid receptor 1 antagonists/inverse agonists and  $\beta$ 3 adrenergic receptor agonists;
- 25 (l) Ileal bile acid transporter inhibitors;
- (m) Agents intended for use in inflammatory conditions such as aspirin, non-steroidal, anti-inflammatory drugs, glucocorticoids, azulfidine and cyclooxygenase 2 selective inhibitors;
- (n) Glucagon receptor antagonists;
- 30 (o) GLP-1;
- (p) GIP-1;

- (q) GLP-1 analogs, such as exendins, for example exenitide, and
- (r) Hydroxysterol dehydrogenase-1 (HSD-1) inhibitors.

The above combinations include combinations of a compound of the present invention or a pharmaceutically acceptable salt or solvate not only  
5 with one other active compound but also with two or more active compounds. Non limiting examples include combinations of compounds having Formula I with two or more active compounds selected from biguanides, sulfonylureas, HMG-CoA reductase inhibitors, other PPAR agonists, PTP-1B inhibitors, DP-IV inhibitors and anti-obesity compounds.

10 In the above-described embodiment combinations of the present invention, the compound of Formula I, a pharmaceutically acceptable salt or solvate thereof and other therapeutic active agents may be administered in terms of dosage forms either separately or in conjunction with each other, and in terms of their time of administration, either serially or simultaneously. Thus, the  
15 administration of one component agent may be prior to, concurrent with, or subsequent to the administration of the other component agent(s).

The invention also provides pharmaceutical compositions comprising a compound of formula I or a pharmaceutically acceptable salt or solvate thereof and at least one pharmaceutically acceptable carrier, diluent,  
20 excipient and/or adjuvant. As indicated above, the invention also covers pharmaceutical compositions which contain, in addition to a compound of the present invention, a pharmaceutically acceptable salt or solvate thereof as active ingredient, additional therapeutic agents and/or active ingredients.

Another object of this invention is a medicament comprising at  
25 least one compound of the invention, or a pharmaceutically acceptable salt or solvate thereof, as active ingredient.

The invention also provides the use of a compound of formula I or a pharmaceutically acceptable salt or solvate thereof for the manufacture of a

medicament. Preferably, the medicament is used for the treatment and/or prevention of type II diabetes, obesity, dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, hyperlipidemia, hypertriglyceridemia, hypoglycemia, hyperglycemia, glucose  
5 intolerance, insulin resistance, hyperinsulinemia hypertension, hyperlipoproteinemia, , metabolic syndrome, syndrome X, thrombotic disorders, cardiovascular disease, atherosclerosis and its sequelae including angina, claudication, heart attack, stroke and others, kidney diseases, ketoacidosis, nephropathy, diabetic neuropathy, diabetic retinopathy, nonalcoholic fatty liver  
10 diseases such as steatosis or nonalcoholic steatohepatitis (NASH).

Preferred diseases are type II diabetes, lipid disorders such as dyslipidemia, hypertension, obesity, atherosclerosis and its sequelae.

In a particular preferred embodiment the disease are type II diabetes and a lipid disorder such as dyslipidemia.

15 According to a further feature of the present invention there is provided the use of a compound of formula I or a pharmaceutically acceptable salt or solvate thereof for the manufacture of a medicament for modulating GPR43 receptor activity, in a patient, in need of such treatment, which comprises administering to said patient an effective amount of compound of the present  
20 invention, or a pharmaceutically acceptable salt or solvate thereof.

Preferably, the patient is a warm-blooded animal, more preferably a human.

As set forth above, the compounds of the invention, their pharmaceutically acceptable salts or solvates may be used in monotherapy or in  
25 combination therapy. Thus, according to one embodiment, the invention provides the use of a compound of the invention for the manufacture of a medicament for at least one of the purposes described above, wherein said medicament is administered to a patient in need thereof, preferably a warm-blooded animal, and

even more preferably a human, in combination with at least one additional therapeutic agent and/or active ingredient. The benefits and advantages of such a multiple drug regimen, possible administration regimens as well as suitable additional therapeutic agents and/or active ingredients are those described above.

5                   Generally, for pharmaceutical use, the compounds of the inventions may be formulated as a pharmaceutical preparation comprising at least one compound of the invention and at least one pharmaceutically acceptable carrier, diluent, excipient and/or adjuvant, and optionally one or more further pharmaceutically active compounds.

10                   By means of non-limiting examples, such a formulation may be in a form suitable for oral administration, for parenteral administration (such as by intravenous, intramuscular or subcutaneous injection or intravenous infusion), for topical administration (including ocular), for administration by inhalation, by a skin patch, by an implant, by a suppository, etc. Such suitable administration  
15 forms – which may be solid, semi-solid or liquid, depending on the manner of administration – as well as methods and carriers, diluents and excipients for use in the preparation thereof, will be clear to the skilled person; reference is made to the latest edition of Remington's Pharmaceutical Sciences.

                  Some preferred, but non-limiting examples of such preparations  
20 include tablets, pills, powders, lozenges, sachets, cachets, elixirs, suspensions, emulsions, solutions, syrups, aerosols, ointments, cremes, lotions, soft and hard gelatin capsules, suppositories, drops, sterile injectable solutions and sterile packaged powders (which are usually reconstituted prior to use) for administration as a bolus and/or for continuous administration, which may be formulated with  
25 carriers, excipients, and diluents that are suitable per se for such formulations, such as lactose, dextrose, sucrose, sorbitol, mannitol, starches, gum acacia, calcium phosphate, alginates, tragacanth, gelatin, calcium silicate, microcrystalline cellulose, polyvinylpyrrolidone, polyethylene glycol, cellulose, (sterile) water, methylcellulose, methyl- and propylhydroxybenzoates, talc,



magnesium stearate, edible oils, vegetable oils and mineral oils or suitable mixtures thereof. The formulations can optionally contain other substances that are commonly used in pharmaceutical formulations, such as lubricating agents, wetting agents, emulsifying and suspending agents, dispersing agents, 5 desintegrants, bulking agents, fillers, preserving agents, sweetening agents, flavoring agents, flow regulators, release agents, etc.. The compositions may also be formulated so as to provide rapid, sustained or delayed release of the active compound(s) contained therein.

The pharmaceutical preparations of the invention are preferably in 10 a unit dosage form, and may be suitably packaged, for example in a box, blister, vial, bottle, sachet, ampoule or in any other suitable single-dose or multi-dose holder or container (which may be properly labeled); optionally with one or more leaflets containing product information and/or instructions for use. Generally, such unit dosages will contain between 0,05 and 1000 mg, and usually between 1 15 and 500 mg, of the at least one compound of the invention, e.g. about 10, 25, 50, 100, 200, 300 or 400 mg per unit dosage.

Usually, depending on the condition to be prevented or treated and the route of administration, the active compound of the invention will usually be administered between 0.01 to 100 mg per kilogram, more often between 0.1 and 20 50 mg, such as between 1 and 25 mg, for example about 0.5, 1, 5, 10, 15, 20 or 25 mg, per kilogram body weight day of the patient per day, which may be administered as a single daily dose, divided over one or more daily doses, or essentially continuously, e.g. using a drip infusion.

## 25 [DEFINITIONS]

The definitions and explanations below are for the terms as used throughout the entire application, including both the specification and the claims.

When describing the compounds of the invention, the terms used are to be construed in accordance with the following definitions, unless indicated otherwise.

Where groups may be substituted, such groups may be substituted  
5 with one or more substituents, and preferably with one, two or three substituents. Substituents may be selected from but not limited to, for example, the group comprising halogen, hydroxyl, oxo, nitro, amido, carboxy, amino, cyano haloalkoxy, and haloalkyl.

As used herein the terms such as “alkyl, aryl, or cycloalkyl, each  
10 being optionally substituted with...” or “alkyl, aryl, or cycloalkyl, optionally substituted with...” encompasses “alkyl optionally substituted with...”, “aryl optionally substituted with...” and “cycloalkyl optionally substituted with...”.

The term “halo” or “halogen” means fluoro, chloro, bromo, or iodo. Preferred halo groups are fluoro and chloro.

15 The term "alkyl" by itself or as part of another substituent refers to a hydrocarbyl radical of Formula  $C_nH_{2n+1}$  wherein n is a number greater than or equal to 1. Generally, alkyl groups of this invention comprise from 1 to 6 carbon atoms, preferably from 1 to 4 carbon atoms, more preferably from 1 to 3 carbon atoms, still more preferably 1 to 2 carbon atoms. Alkyl groups may be linear or  
20 branched and may be substituted as indicated herein.

Suitable alkyl groups include methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, s-butyl and t-butyl, pentyl and its isomers (e.g. n-pentyl, iso-pentyl), and hexyl and its isomers (e.g. n-hexyl, iso-hexyl). Preferred alkyl groups include methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, s-butyl and t-butyl.

25 When the suffix "ene" (“alkylene”) is used in conjunction with an alkyl group, this is intended to mean the alkyl group as defined herein having two single bonds as points of attachment to other groups. The term “alkylene” includes

methylene, ethylene, methylenemethylene, propylene, ethylethylene, and 1,2-dimethylethylene.

The term "alkenyl" as used herein refers to an unsaturated hydrocarbyl group, which may be linear or branched, comprising one or more carbon-carbon double bonds. Suitable alkenyl groups comprise between 2 and 6  
5 carbon atoms, preferably between 2 and 4 carbon atoms, still more preferably between 2 and 3 carbon atoms. Examples of alkenyl groups are ethenyl, 2-propenyl, 2-butenyl, 3-butenyl, 2-pentenyl and its isomers, 2-hexenyl and its isomers, 2,4-pentadienyl and the like.

10 The term "alkynyl" as used herein refers to a class of monovalent unsaturated hydrocarbyl groups, wherein the unsaturation arises from the presence of one or more carbon-carbon triple bonds. Alkynyl groups typically, and preferably, have the same number of carbon atoms as described above in relation to alkenyl groups. Non limiting examples of alkynyl groups are ethynyl, 2-  
15 propynyl, 2-butylnyl, 3-butylnyl, 2-pentylnyl and its isomers, 2-hexynyl and its isomers-and the like. The terms "alkenylene" and "alkynylene" respectively mean an alkenyl group or an alkynyl group as defined above having two single bonds as points of attachment to other groups.

The term "haloalkyl" alone or in combination, refers to an alkyl  
20 radical having the meaning as defined above wherein one or more hydrogens are replaced with a halogen as defined above. Non-limiting examples of such haloalkyl radicals include chloromethyl, 1-bromoethyl, fluoromethyl, difluoromethyl, trifluoromethyl, 1,1,1-trifluoroethyl and the like.

The term "cycloalkyl" as used herein is a cyclic alkyl group, that is  
25 to say, a monovalent, saturated, or unsaturated hydrocarbyl group having 1 or 2 cyclic structures. Cycloalkyl includes monocyclic or bicyclic hydrocarbyl groups. Cycloalkyl groups may comprise 3 or more carbon atoms in the ring and generally, according to this invention comprise from 3 to 10, more preferably

from 3 to 8 carbon atoms still more preferably from 3 to 6 carbon atoms. Examples of cycloalkyl groups include but are not limited to cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, with cyclopropyl being particularly preferred.

When the suffix "ene" is used in conjunction with a cyclic group, this is intended to mean the cyclic group as defined herein having two single bonds as points of attachment to other groups.

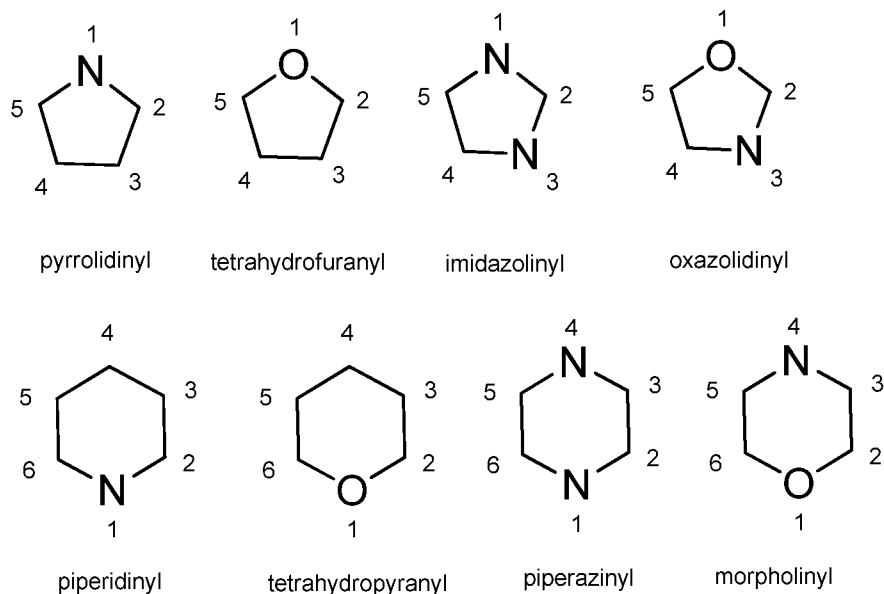
Therefore, "cycloalkylene" herein refers to a saturated homocyclic hydrocarbyl biradical of Formula  $C_nH_{2n-2}$ . Suitable cycloalkylene groups are  $C_{3-6}$  cycloalkylene group, preferably a  $C_{3-5}$  cycloalkylene (i.e. 1,3-cyclopropylene, 1,1-cyclopropylene, 1,1-cyclobutylene, 1,2-cyclobutylene, 1,3-cyclopentylene, or 1,1-cyclopentylene), more preferably a  $C_{3-4}$  cycloalkylene (i.e. 1,3-cyclopropylene, 1,1-cyclopropylene, 1,1-cyclobutylene, 1,2-cyclobutylene).

Where at least one carbon atom in a cycloalkyl group is replaced with a heteroatom, the resultant ring is referred to herein as "heterocycloalkyl" or "heterocyclyl".

The terms "heterocyclyl", "heterocycloalkyl" or "heterocyclo" as used herein by itself or as part of another group refer to non-aromatic, fully saturated or partially unsaturated cyclic groups (for example, 3 to 7 member monocyclic, 7 to 11 member bicyclic, or containing a total of 3 to 10 ring atoms) which have at least one heteroatom in at least one carbon atom-containing ring. Each ring of the heterocyclic group containing a heteroatom may have 1, 2, 3 or 4 heteroatoms selected from nitrogen, oxygen and/or sulfur atoms, where the nitrogen and sulfur heteroatoms may optionally be oxidized and the nitrogen heteroatoms may optionally be quaternized. Any of the carbon atoms of the heterocyclic group may be substituted by oxo (for example piperidone, pyrrolidinone). The heterocyclic group may be attached at any heteroatom or carbon atom of the ring or ring system, where valence allows. The rings of multi-ring heterocycles may be fused, bridged and/or joined through one or more spiro

atoms. Non limiting exemplary heterocyclic groups include oxetanyl, piperidinyl, azetidiny, 2-imidazoliny, pyrazolidiny, imidazolidiny, isoxazoliny, oxazolidiny, isoxazolidiny, thiazolidiny, isothiazolidiny, piperidinyl, 3H-indolyl, indoliny, isoindoliny, 2-oxopiperazinyl, piperazinyl, homopiperazinyl, 5 2-pyrazoliny, 3-pyrazoliny, tetrahydro-2H-pyranyl, 2H-pyranyl, 4H-pyranyl, 3,4-dihydro-2H-pyranyl, 3-dioxolanyl, 1,4-dioxanyl, 2,5-dioximidazolidiny, 2-oxopiperidinyl, 2-oxopyrrolodiny, indoliny, tetrahydropyranyl, tetrahydrofuranly, tetrahydroquinoliny, tetrahydroisoquinolin-1-yl, tetrahydroisoquinolin-2-yl, tetrahydroisoquinolin-3-yl, tetrahydroisoquinolin-4-yl, 10 thiomorpholin-4-yl, thiomorpholin-4-ylsulfoxide, thiomorpholin-4-ylsulfone, 1,3-dioxolanyl, 1,4-oxathianyl, 1H-pyrroliziny, tetrahydro-1,1-dioxothiophenyl, N-formylpiperazinyl, and morpholin-4-yl.

The ring atoms of heterocyclyl and heterocyclylene moieties are numbered based on scheme below



15

The term "aryl" as used herein refers to a polyunsaturated, aromatic hydrocarbyl group having a single ring (i.e. phenyl) or multiple aromatic rings fused together (e.g. naphthyl) or linked covalently, typically containing 5 to 12

atoms; preferably 6 to 10, wherein at least one ring is aromatic. The aromatic ring may optionally include one to two additional rings (either cycloalkyl, heterocyclyl or heteroaryl) fused thereto. Aryl is also intended to include the partially hydrogenated derivatives of the carbocyclic systems enumerated herein. Non-limiting examples of aryl comprise phenyl, biphenyl, biphenylenyl, 5- or 6-tetralinyl, naphthalen-1- or -2-yl, 4-, 5-, 6 or 7-indenyl, 1- 2-, 3-, 4- or 5-acenaphtylenyl, 3-, 4- or 5-acenaphtenyl, 1- or 2-pentalenyl, 4- or 5-indanyl, 5-, 6-, 7- or 8-tetrahydronaphthyl, 1,2,3,4-tetrahydronaphthyl, 1,4-dihydronaphthyl, 1-, 2-, 3-, 4- or 5-pyrenyl.

10                   The term "arylene" as used herein is intended to include divalent carbocyclic aromatic ring systems such as phenylene, biphenylene, naphthylene, indenylene, pentalenylene, azulenylene and the like. Arylene is also intended to include the partially hydrogenated derivatives of the carbocyclic systems enumerated above. Non-limiting examples of such partially hydrogenated  
15 derivatives are 1,2,3,4-tetrahydronaphthylene, 1,4-dihydronaphthylene and the like.

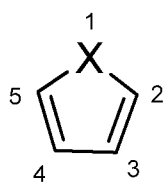
Where at least one carbon atom in an aryl group is replaced with a heteroatom, the resultant ring is referred to herein as a heteroaryl ring.

20                   The term "heteroaryl" as used herein by itself or as part of another group refers but is not limited to 5 to 12 carbon-atom aromatic rings or ring systems containing 1 to 2 rings which are fused together or linked covalently, typically containing 5 to 6 atoms; at least one of which is aromatic, in which one or more carbon atoms in one or more of these rings is replaced by oxygen, nitrogen and/or sulfur atoms where the nitrogen and sulfur heteroatoms may  
25 optionally be oxidized and the nitrogen heteroatoms may optionally be quaternized. Such rings may be fused to an aryl, cycloalkyl, heteroaryl or heterocyclyl ring. Non-limiting examples of such heteroaryl, include: furanyl, thiophenyl, pyrazolyl, imidazolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, triazolyl, oxadiazolyl, thiadiazolyl, tetrazolyl, oxatriazolyl, thiatriazolyl, pyridinyl,

pyrimidyl, pyrazinyl, pyridazinyl, oxazinyl, dioxinyl, thiazinyl, triazinyl, imidazo[2,1-b][1,3]thiazolyl, thieno[3,2-b]furanyl, thieno[3,2-b]thiophenyl, thieno[2,3-d][1,3]thiazolyl, thieno[2,3-d]imidazolyl, tetrazolo[1,5-a]pyridinyl, indolyl, indoliziny, isoindolyl, benzofuranyl, isobenzofuranyl, benzothiophenyl, isobenzothiophenyl, indazolyl, benzimidazolyl, 1,3-benzoxazolyl, 1,2-benzisoxazolyl, 2,1-benzisoxazolyl, 1,3-benzothiazolyl, 1,2-benzoisothiazolyl, 2,1-benzoisothiazolyl, benzotriazolyl, 1,2,3-benzoxadiazolyl, 2,1,3-benzoxadiazolyl, 1,2,3-benzothiadiazolyl, 2,1,3-benzothiadiazolyl, thienopyridinyl, purinyl, imidazo[1,2-a]pyridinyl, 6-oxo-pyridazin-1(6H)-yl, 2-oxopyridin-1(2H)-yl, 6-oxo-pyridazin-1(6H)-yl, 2-oxopyridin-1(2H)-yl, 1,3-benzodioxolyl, quinolinyl, isoquinolinyl, cinnolinyl, quinazolinyl, quinoxalinyl.

The term "heteroarylene" as used herein means divalent carbocyclic aromatic ring systems including pyridinylene and the like.

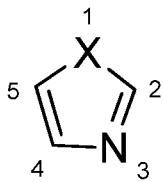
The ring atoms of heteroaryl or heteroarylene moieties are numbered on scheme below:



X is selected from:  
N, O or S

Examples:

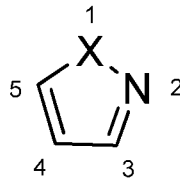
pyrrolyl  
furanyl  
thiophenyl



X is selected from:  
N, O or S

Examples:

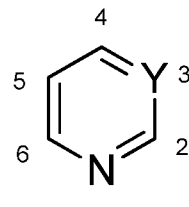
imidazolyl  
oxazolyl  
thiazolyl



X is selected from:  
N, O or S

Examples:

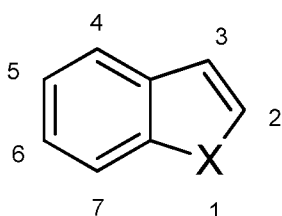
pyrazolyl  
isooxazolyl  
isothiazolyl



Y is selected from:  
C, N

Examples:

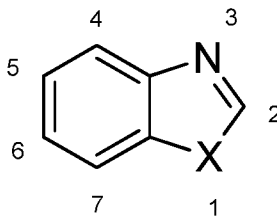
pyridyl  
pyrimidinyl



X is selected from:  
N, O or S

Examples:

indolyl  
benzofuranyl  
benzothiophenyl

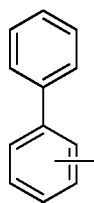


X is selected from:  
N, O or S

Examples:

benzimidazolyl  
benzoxazolyl  
benzothiazolyl

The term “biaryl” as used herein designates two aryl moieties as defined herein linked via a single bond. Non-limiting examples of such biaryl moieties include biphenyl.

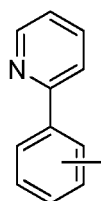


biphenyl

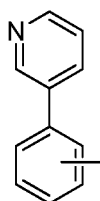
The term “heterobiaryl” as used herein designates two heteroaryl moieties as defined herein or a heteroaryl moiety and an aryl moiety as defined



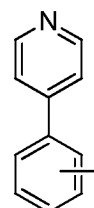
herein linked via a single bond. Non-limiting examples of such heterobiaryl moieties include pyridinylphenyl which is meant to include (2-pyridinyl)phenyl, (3-pyridinyl)phenyl and (4-pyridinyl)phenyl, bipyridinyl.



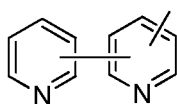
(2-pyridinyl)phenyl



(3-pyridinyl)phenyl



(4-pyridinyl)phenyl






bipyridinyl

5                   The term “alkylamino” as used herein means an amino group substituted with one or two alkyl groups. This includes monoalkylamino and dialkylamino groups.

10                   The compounds of Formula I and subformulae thereof contain at least one asymmetric center and thus may exist as different stereoisomeric forms. Accordingly, the present invention includes all possible stereoisomers and includes not only racemic compounds but the individual enantiomers and their non racemic mixtures as well. When a compound is desired as a single enantiomer, such may be obtained by stereospecific synthesis, by resolution of the final product or any convenient intermediate, or by chiral chromatographic methods as each are known in the art. Resolution of the final product, an  
15                   intermediate, or a starting material may be effected by any suitable method known in the art. See, for example, Stereochemistry of Organic Compounds by E. L. Eliel, S. H. Wilen, and L. N. Mander (Wiley- Interscience, 1994), incorporated by reference with regard to stereochemistry.

20                   The bonds from an asymmetric carbon in compounds of the present

invention may be depicted herein using a solid line ( — ), a zigzag line (  ), a solid wedge (  ), or a dotted wedge (  ). The use of a solid line to depict bonds from an asymmetric carbon atom is meant to indicate that all possible stereoisomers are meant to be included, unless it is clear from the context that a specific stereoisomer is intended. The use of either a solid or dotted wedge to depict bonds from an asymmetric carbon atom is meant to indicate that only the stereoisomer shown is meant to be included.

The compounds of the invention may also contain more than one asymmetric carbon atom. In those compounds, the use of a solid line to depict bonds from asymmetric carbon atoms is meant to indicate that all possible stereoisomers are meant to be included, unless it is clear from the context that a specific stereoisomer is intended.

The compounds of the invention may be in the form of pharmaceutically acceptable salts. Pharmaceutically acceptable salts of the compounds of formula I include the acid addition and base salts thereof. Suitable acid addition salts are formed from acids which form non-toxic salts. Examples include the acetate, adipate, aspartate, benzoate, besylate, bicarbonate/carbonate, bisulphate/sulphate, borate, camsylate, citrate, cyclamate, edisylate, esylate, formate, fumarate, gluceptate, gluconate, glucuronate, hexafluorophosphate, hibenzate, hydrochloride/chloride, hydrobromide/bromide, hydroiodide/iodide, isethionate, lactate, malate, maleate, malonate, mesylate, methylsulphate, naphthylate, 2-napsylate, nicotinate, nitrate, orotate, oxalate, palmitate, pamoate, phosphate/hydrogen phosphate/dihydrogen phosphate, pyroglutamate, saccharate, stearate, succinate, tannate, tartrate, tosylate, trifluoroacetate and xinofoate salts. Suitable base salts are formed from bases which form non-toxic salts. Examples include the aluminium, arginine, benzathine, calcium, choline, diethylamine, diolamine, glycine, lysine, magnesium, meglumine, olamine, potassium, sodium, tromethamine, 2-(diethylamino)ethanol, ethanolamine, morpholine, 4-(2-hydroxyethyl)morpholine and zinc salts. Hemisalts of acids and bases may also be formed, for example, hemisulphate and hemicalcium salts. Preferred,

pharmaceutically acceptable salts include hydrochloride/chloride, hydrobromide/bromide, bisulphate/sulphate, nitrate, citrate, and acetate.

When the compounds of the invention contain an acidic group as well as a basic group the compounds of the invention may also form internal salts, and such compounds are within the scope of the invention. When the compounds of the invention contain a hydrogen-donating heteroatom (e.g. NH), the invention also covers salts and/or isomers formed by transfer of said hydrogen atom to a basic group or atom within the molecule.

Pharmaceutically acceptable salts of compounds of Formula I may be prepared by one or more of these methods:

- (i) by reacting the compound of Formula I with the desired acid;
- (ii) by reacting the compound of Formula I with the desired base;
- (iii) by removing an acid- or base-labile protecting group from a suitable precursor of the compound of Formula I or by ring-opening a suitable cyclic precursor, for example, a lactone or lactam, using the desired acid; or
- (iv) by converting one salt of the compound of Formula I to another by reaction with an appropriate acid or by means of a suitable ion exchange column.

All these reactions are typically carried out in solution. The salt, may precipitate from solution and be collected by filtration or may be recovered by evaporation of the solvent. The degree of ionization in the salt may vary from completely ionized to almost non-ionized.

The term "solvate" is used herein to describe a molecular complex comprising the compound of the invention and one or more pharmaceutically acceptable solvent molecules, for example, ethanol. The term 'hydrate' is

employed when said solvent is water.

All references to compounds of formula I include references to salts, solvates, multi- component complexes and liquid crystals thereof.

The compounds of the invention include compounds of formula I  
5 as hereinbefore defined, including all polymorphs and crystal habits thereof, prodrugs and isomers thereof (including optical, geometric and tautomeric isomers) and isotopically- labeled compounds of formula I.

In addition, although generally, with respect to the salts of the compounds of the invention, pharmaceutically acceptable salts are preferred, it  
10 should be noted that the invention in its broadest sense also included non-pharmaceutically acceptable salts, which may for example be used in the isolation and/or purification of the compounds of the invention. For example, salts formed with optically active acids or bases may be used to form diastereoisomeric salts that can facilitate the separation of optically active isomers of the compounds of  
15 Formula I above.

The invention also generally covers all pharmaceutically acceptable predrugs and prodrugs of the compounds of Formula I.

The term "prodrug" as used herein means the pharmacologically acceptable derivatives of compounds of formula I such as esters whose in vivo  
20 biotransformation product is the active drug. Prodrugs are characterized by increased bio-availability and are readily metabolized into the active compounds in vivo. Suitable prodrugs for the purpose of the invention include carboxylic esters, in particular alkyl esters, aryl esters, acyloxyalkyl esters, and dioxolene carboxylic esters; ascorbic acid esters as well as compounds of formula I in which  
25 Z is a substituent selected from the table 2 below.

Table 2

| Z  | Q  |
|--|--|
| -C(O)SQ                                    | Alkyl or aryl  |
| -C(O)NQ <sup>1</sup> Q <sup>2</sup>        | H, alkyl, aryl, OH or NH <sub>2</sub>                          |
| -C(O)OCHQ <sup>1</sup> O(O)CQ <sup>2</sup> | Q <sup>1</sup> = H or phenyl<br>Q <sup>2</sup> = alkyl or aryl |
| -C(O)OCHQCl                                | H or aryl  |
| -C(OO) <sub>3</sub>                        | Alkyl  |
| -C(O)OC(O)OQ                               | Alkyl or aryl  |
| -C(O)CH <sub>2</sub> Q                     | SMe, SOMe, SO <sub>2</sub> Me                                  |

The term “predrug”, as used herein, means any compound that will be modified to form a drug species, wherein the modification may take place either inside or outside of the body, and either before or after the predrug reaches the area of the body where administration of the drug is indicated.

The term "patient" refers to a warm-blooded animal, more preferably a human, who/which is awaiting or receiving medical care or is or will be the object of a medical procedure.

The term “human” refers to subject of both genders and at any stage of development (i.e. neonate, infant, juvenile, adolescent, adult).

The terms “treat”, “treating” and “treatment, as used herein, are meant to include alleviating or abrogating a condition or disease and/or its attendant symptoms.

The terms “prevent”, “preventing” and “prevention”, as used herein, refer to a method of delaying or precluding the onset of a condition or disease and/or its attendant symptoms, barring a patient from acquiring a condition or disease, or reducing a patient’s risk of acquiring a condition or

disease.

The term "therapeutically effective amount" (or more simply an "effective amount") as used herein means the amount of active agent or active ingredient (e. g. GPR43 agonist or partial agonist) which is sufficient to achieve the desired therapeutic or prophylactic effect in the individual to which it is administered.

The term "administration", or a variant thereof (e.g., "administering"), means providing the active agent or active ingredient (e. g. a GPR43 agonist or partial agonist), alone or as part of a pharmaceutically acceptable composition, to the patient in whom/which the condition, symptom, or disease is to be treated or prevented.

By "pharmaceutically acceptable" is meant that the ingredients of a pharmaceutical composition are compatible with each other and not deleterious to the patient thereof.

The term "agonist" as used herein means a ligand that activates an intracellular response when it binds to a receptor. An agonist according to the invention may promote internalization of a cell surface receptor such that the cell surface concentration of a receptor is decreased or remove.

The term "partial agonist" as used herein means an agonist which is unable to induce maximal activation of a receptor, regardless of the amount of compound applied on the receptor.

The term "pharmaceutical vehicle" as used herein means a carrier or inert medium used as solvent or diluent in which the pharmaceutically active agent is formulated and/or administered. Non-limiting examples of pharmaceutical vehicles include creams, gels, lotions, solutions, and liposomes.

The term "lipid disorder" as used herein means any plasma lipid disorder including but not limited to dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low HDL cholesterol, high LDL cholesterol, hyperlipidemia and hypertriglyceridemia.

5                   The present invention will be better understood with reference to the following examples. These examples are intended to be representative of specific embodiments of the invention, and are not intended as limiting the scope of the invention.

#### CHEMISTRY EXAMPLES

10                  All temperatures are expressed in °C and all reactions were carried out at room temperature (RT) unless otherwise stated.

                  Analytical thin layer chromatography (TLC) was used to monitor reactions, establish flash chromatography conditions and verify purity of intermediates or final products. TLC plates used were Merck TLC aluminium  
15                  sheet silica gel 60 F<sub>254</sub> purchased from VWR International. TLC plates were revealed using ultraviolet irradiation (wavelength=254nm) at room temperature or bromocresol green spray reagent at 0.1% in propan-2-ol purchased from VWR  
International upon heating at 160°C or KMnO<sub>4</sub> revelator upon heating at 160°C. The KMnO<sub>4</sub> revelator was prepared by dissolving 3g of potassium permanganate,  
20                  20g of sodium carbonate, 0.5g of sodium hydroxide in 100mL of distilled water.

                  HPLC-MS spectra were obtained on Agilent LCMS using Electrospray ionization (ESI). The Agilent instrument includes an Autosampler 1200, a binary pump 1100, a 5 wave length detector 1100 and a 6100 Single Quad. The column used was an XBridge C18, 4.6 x 50 mm, 3.5 µm.

25                  Eluent was a mixture of solution A (0.1% TFA in H<sub>2</sub>O) and solution B (0.1% TFA in ACN). Gradient was applied at a flow rate of 2 mL min<sup>-1</sup> as follows: gradient A: held the initial conditions of 5% solution B for 1 min, increased linearly to

95% solution B in 4 min, held at 95% during 1 min, returned to initial conditions in 0.5 min and maintained for 1 min; gradient B: held the initial conditions of 5% solution B for 1 min, increased linearly to 60% in 10 min, increased linearly to 95% in 0.5 min, held at 95% during 3 min, returned to initial conditions in 0.5 min  
5 and maintained for 1 min.

Determination of ee was performed on an Agilent 1100 (binary pump and 5 wavelengths detector) with manual or automatic (Autosampler 1100) injection. Columns used were CHIRALPAK IA CHIRALPAK IB or CHIRALPAK IC in  
10 isocratic mode. Mixtures of eluents were selected depending on the separation obtained of enantiomers or diastereoisomers. Usual mixtures were:

- Hexane and Ethanol (0.1% TFA)
- Hexane and Propanol (0.1% TFA)
- Hexane and Ethyl acetate (0.1% TFA)
- 15 - Hexane and Dichloromethane (0.1% TFA)
- Hexane and tert-butyl methyl ether (0.1% TFA)

Selected specific methods A, B and C are reported below. Method A: compound was characterized on a CHIRALPAK IA column (isocratic mode) using a mixture of hexane and dichloromethane (65/35) acidified by 0.4% of TFA at a flow rate of  
20 1.2 mL/min, and confirmed on a CHIRALPAK IC column (isocratic mode) using a mixture of heptane and Ethyl acetate (75/25) acidified by 0.1% of TFA at 1ml/min. Method B: compound was characterized on a CHIRALPAK IC column (isocratic mode) using a mixture of heptane and ethyl acetate (70/30) acidified by 0.1% of TFA at a flow rate of 1ml/min. Method C: compound was characterized  
25 on a CHIRALPAK IC column (isocratic mode) using a mixture of heptane and ethanol (95/5) acidified by 0.1% of TFA at a flow rate of 1.5ml/min.

Preparative HPLC purifications were carried out on Fractionlynx instrument, from Waters. This instrument consists of a Fraction Collector, a 2767  
30 Sample Manager, a pump control a module II, a 515 HPLC Pump, a 2525 Binary Gradient Module, a Switching Valve, a 2996 Photodiode Array Detector and a



Micromass ZQ. The column used was a Waters Sunfire C18 Eluent was a mixture of solution A (0.1% TFA in H<sub>2</sub>O) and solution B (0.1% TFA in ACN). The gradient was adapted depending on impurities present in samples, to allow sufficient separation between impurities and target compound.

5

Chiral preparative HPLC purification were performed on an Agilent 1100 instrument (binary pump and 5 wavelengths detector) with manual injection using a CHIRALPAK IA or a CHIRALPAK IB column in isocratic mode. Mixtures of eluents were selected depending on the separation of enantiomers or diastereoisomers obtained with the analytical method. Usual mixtures were the same as those used for the determination of ee.

10

<sup>1</sup>H and <sup>13</sup>C NMR spectra were recorded on a Bruker ARX 300MHz. Chemical shifts are expressed in parts per million, (ppm, δ units). Coupling constants are expressed in Hertz units (Hz). Splitting patterns describe apparent multiplicities and are described as s (singlet), d (doublet), t (triplet), q (quintet), m (multiplet), or br (broad).

15

Solvents, reagents and starting materials were purchased from well known chemical suppliers such as for example Sigma Aldrich, Acros Organics, Fluorochem, Eurisotop, VWR International, Sopachem and Polymer labs and the following abbreviations are used:

20

ACN: Acetonitrile,

DCM: Dichloromethane,

DMF: N,N-dimethylformamide,

25

EtOAc: Ethyl acetate,

EtOH: Ethanol,

MeOH: Methanol,

RT: Room temperature,

DIEA: N,N-diisopropylethylamine,

30

HATU: O-(7-azabenzotriazol-1-yl)-N,N,N',N'-tetramethyluronium

- hexafluorophosphate ,  
Y: Yield,  
g: Grams,  
mg: Milligrams,  
5 L: Liters,  
mL: Milliliters,  
 $\mu$ L: Microliters,  
mol: Moles,  
mmol: Millimoles,  
10 h: Hours,  
min: Minutes,  
TLC: Thin layer chromatography,  
MW: Molecular weight,  
eq: Equivalent,  
15  $\mu$ W: Microwave,  
THF: Tetrahydrofuran,  
TFA: Trifluoroacetic acid,  
Ac: Acetyl,  
NaHMDS: Sodium hexamethyldisilazane,  
20 DCA: Dicyclohexylamine,  
TCA: Trichloroacetimidate,  
CDI: Carbonyl diimidazole,  
ee: Enantiomeric excess,  
DPP: Diphenylphosphino,  
25 BINAP: 1,1'-Binaphtyl,  
tBu: tert-Butyl  
P: UV purity at 254nm determined by HPLC-MS,  
SPE: Solid phase extraction,  
Rt: Retention time,  
30 TMSCl: Chlorotrimethylsilane,  
BuLi: Butyllithium,

MCPBA: 3-Chloroperbenzoic acid,

MOM: Methoxymethyl,

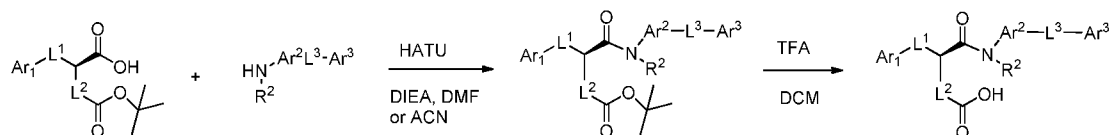
NCS: N-chlorosuccinimide,

NBS: N-bromosuccinimide.

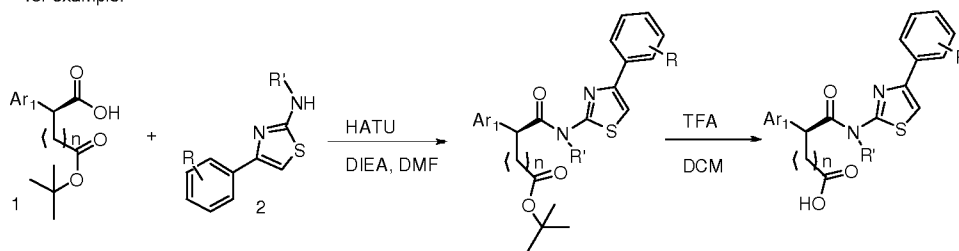
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### General synthetic scheme

Most compounds of the invention are synthesized according to Scheme 1.



for example:



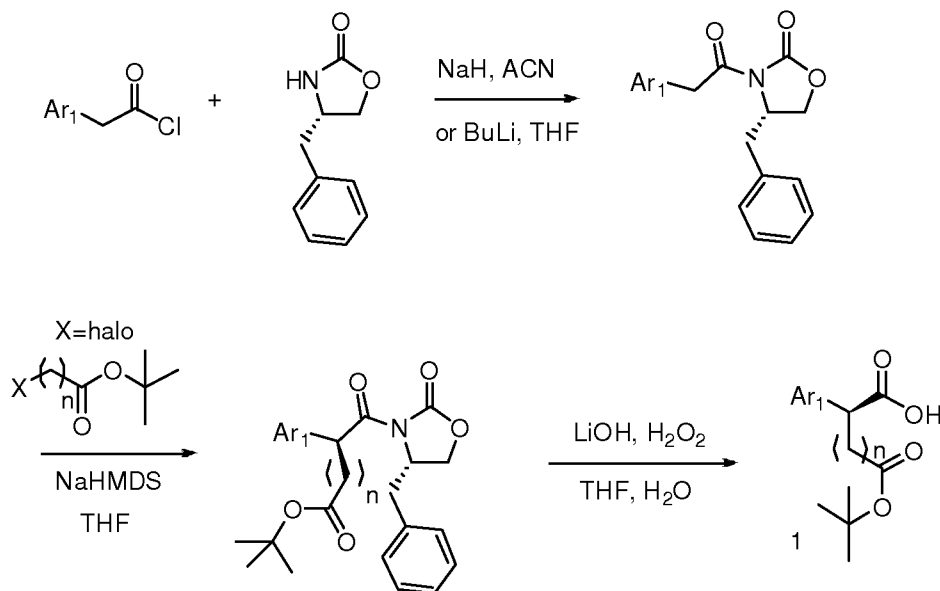
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**Scheme 1**: General synthetic route for most of the compounds in the present invention

### Synthesis of intermediates 1

15

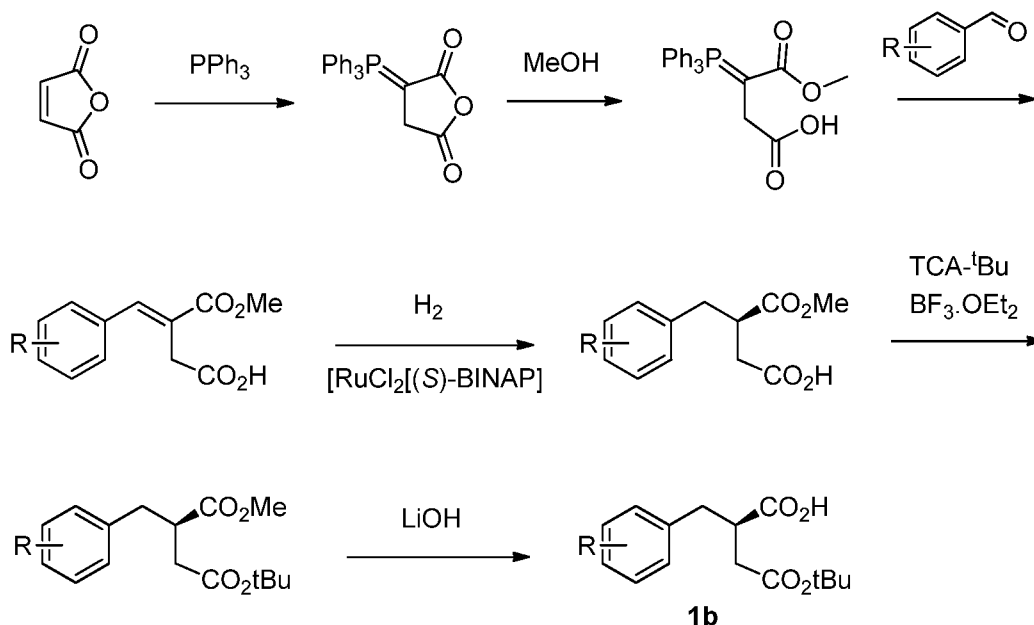
Chiral syntheses of intermediates **1** were carried out using Evans' chiral auxiliary approach (Evans et al. *J. Org. Chem.* **1999**, *64*, 6411-6417; Tararov et al. *J. Chem. Soc. Perkin Trans. 1*, **1997**, 3101-3106) (Scheme 2).



**Scheme 2:** General scheme for the preparation of intermediates **1** using Evans' chiral auxiliary approach

This methodology was also used for the synthesis of (*R*)-cycloalkylalkylsuccinic acid, (*R*)-heterocyclalkylsuccinic acid, (*R*)-arylalkylsuccinic acid and (*R*)-heteroarylalkylsuccinic acid monoester intermediates **1**.

As depicted on Scheme 3, (*R*)-benzylsuccinic acid monoester intermediates **1** can also be made starting from maleic anhydride followed by the application of Wittig reaction, asymmetric hydrogenation (Wallace et al. *Org. Proc. Res. & Dev.* **2004**, 8, 738-743), tBu ester protection and selective saponification of the methyl ester (Atkinson et al. *J. Org. Chem.* **1999**, 64, 3467).

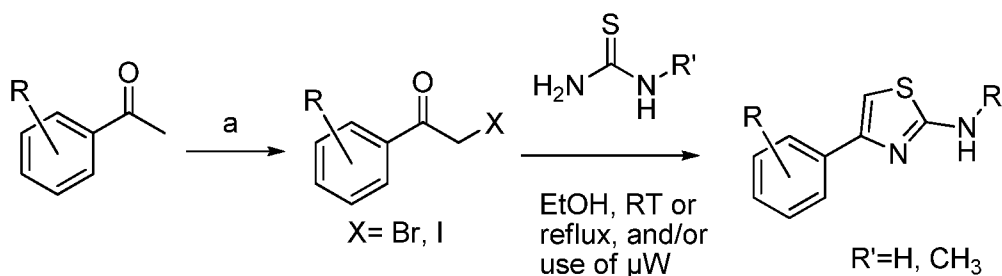


**Scheme 3:** Synthesis of (R)-benzyl-succinic acid monoester intermediates **1** using Wittig approach

This methodology was also used for the synthesis of (R)-cycloalkylalkylsuccinic acid, (R)-heterocyclalkylsuccinic acid, (R)-arylalkylsuccinic acid and (R)-heteroarylalkylsuccinic acid monoester intermediates **1**.

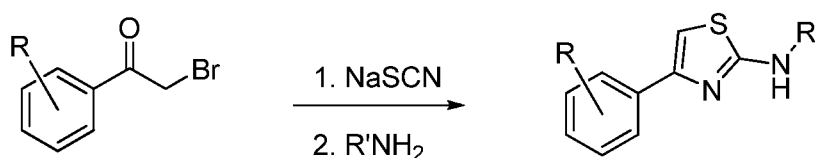
#### Synthesis of intermediates 2

4-aryl-2-amino-thiazoles can be made using Hantzsch-type synthetic methodology as shown in Scheme 4. Thus, halogenation of substituted acetophenones (Larock, R. C. *Comprehensive Org Transf* 2<sup>nd</sup> Ed., Wiley, **1999**, pp 709-719; White et al. *J. Med. Chem.* **1996**, *39*, 4382-95) and subsequent condensation with thiourea (Swain et al. *J. Med. Chem.* **1991**, *34*, 140-151; Bartoli et al. *J. Med. Chem.* **1998**, *41*, 1855-68) will furnish 4-aryl-2-amino-thiazoles.



**Scheme 4:** General scheme for the preparation of 4-aryl-2-amino-thiazoles using Hantzsch-type synthetic approach

Alternatively, synthesis of N-substituted-4-aryl-2-amino-thiazoles can be achieved through the method described by Rudolph (Rudolph, J. *Tetrahedron* **2000**, *56*, 3161)



**Scheme 5:** General scheme for the preparation of N-substituted-4-aryl-2-amino-thiazoles using Rudolph's synthetic approach

10

### Synthetic Schemes for the Preparation of the Carboxylic Acid Bioisosteres

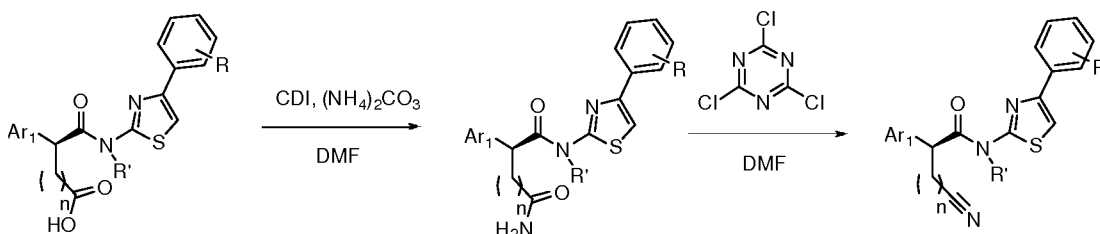
Synthetic routes for the preparation of selected bioisosteres of the carboxylic acid moiety are given hereunder. Isosterism is a concept defined by I. Langmuir in *J. Am. Chem. Soc.* **1919**, *41*, 1549 and developed by H.L. Friedman in *Symposium on Chemical-Biological correlations*, National Council Publication, Washington, DC (**1951**). As used herein the term "bioisosteres" refers to "groups or molecules which have chemical and physical similarities producing similar biological effects" (as defined in *Chem. Soc. Rev.* **1979**, *8*, 563). Suitable well-known bioisosteric replacements of carboxylic acid groups and synthetic routes are reported in *The Practice of Medicinal Chemistry*, 2<sup>nd</sup> edition, by C.G. Wermuth. It is obvious to the person skilled in the art to synthesize carboxylic acid isosteres, selected useful references are Drysdale et al. *J. Med. Chem.* **1992**,

20

35, 2573-2581, Liljebris et al. *J. Med. Chem.* **2002**, 45, 1785-1798.

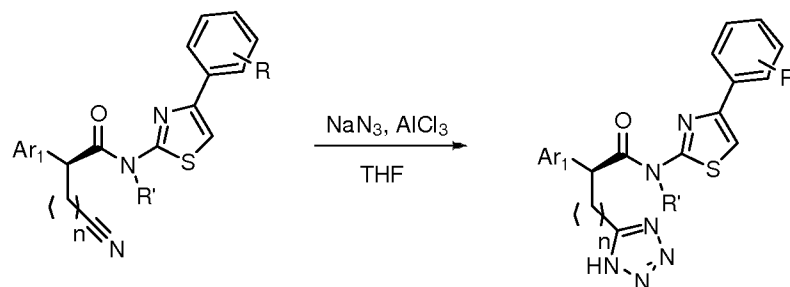
### Synthesis of tetrazole and hydroxy-oxadiazole isosteres

The tetrazole and hydroxy-oxadiazole isosteres can be synthesized using a  
 5 common nitrile intermediate (see Scheme below). (Arienti et al. *J. Med. Chem.*  
**2005**, 48, 6, 1882; Rodriguez et al. *Tetrahedron* **1997**, 38, 24, 4221; Claremon et  
 al. *Tet. Lett.* **1988**, 28, 2155).



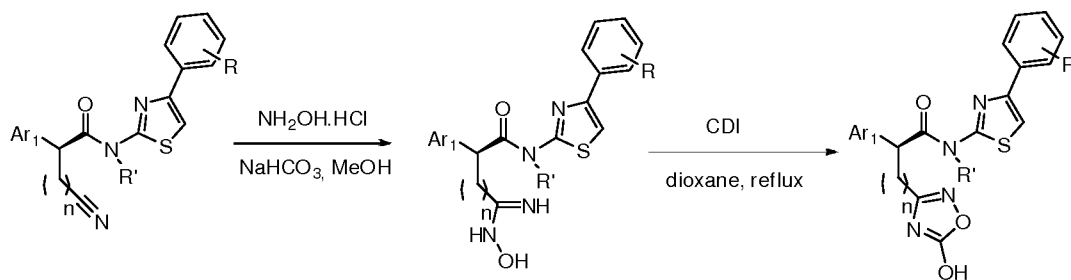
10

Treatment of the aforesaid nitrile intermediate with sodium azide can be  
 used to afford the tetrazole isostere (see Scheme below). (Matthews et al. *J.*  
*Comb. Chem.* **2000**, 2, 19-23)



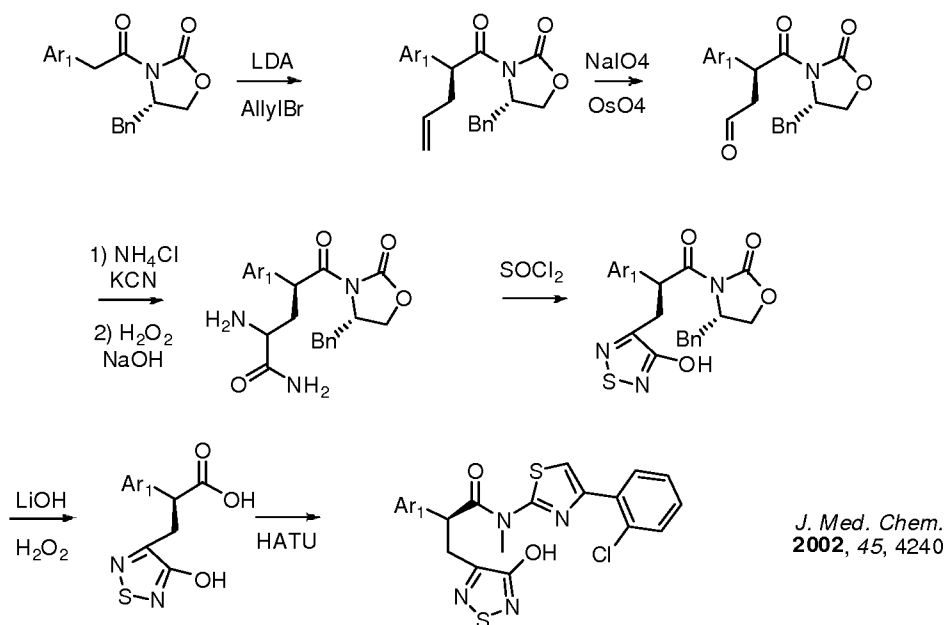
15

Treatment of the aforesaid nitrile intermediate with hydroxylamine,  
 followed by dehydrative cyclization can be used to yield the hydroxy-oxadiazole  
 isostere (see Scheme below) (Peretto et al. *J. Med. Chem.* 2005, 48, 5705-5720).

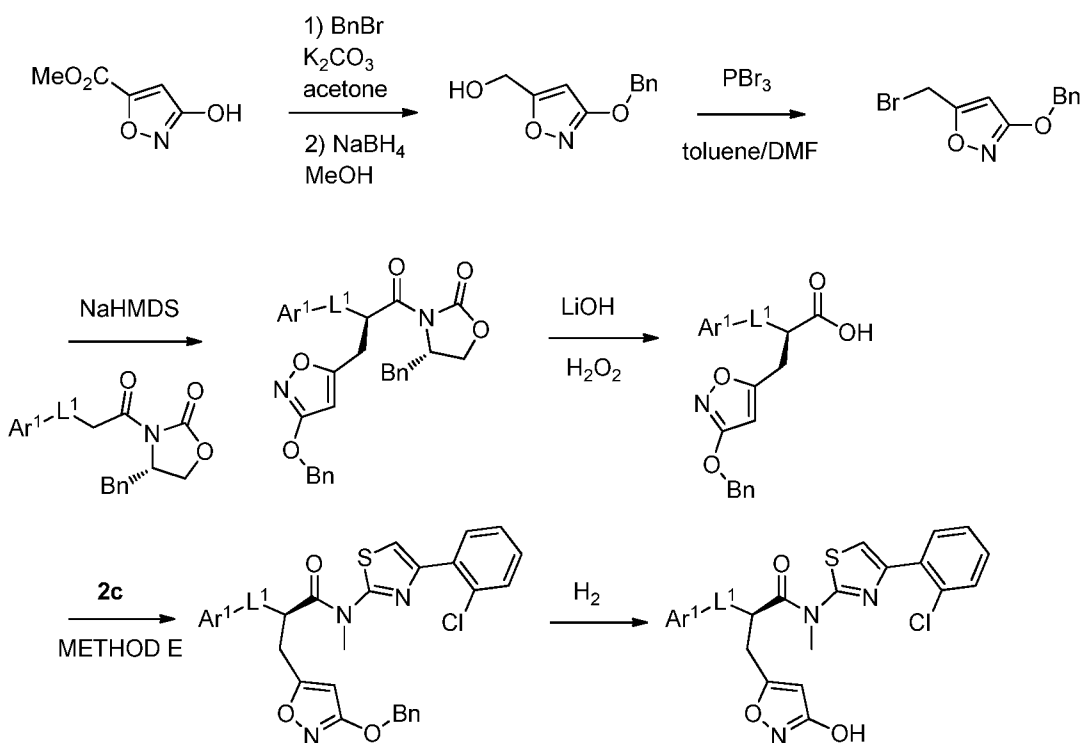


In addition, synthetic approaches to the preparation of other well-recognized carboxylic acid isosteres are outlined below.

5 A suggested synthetic approach for the preparation of hydroxy-thiadiazole isosteres

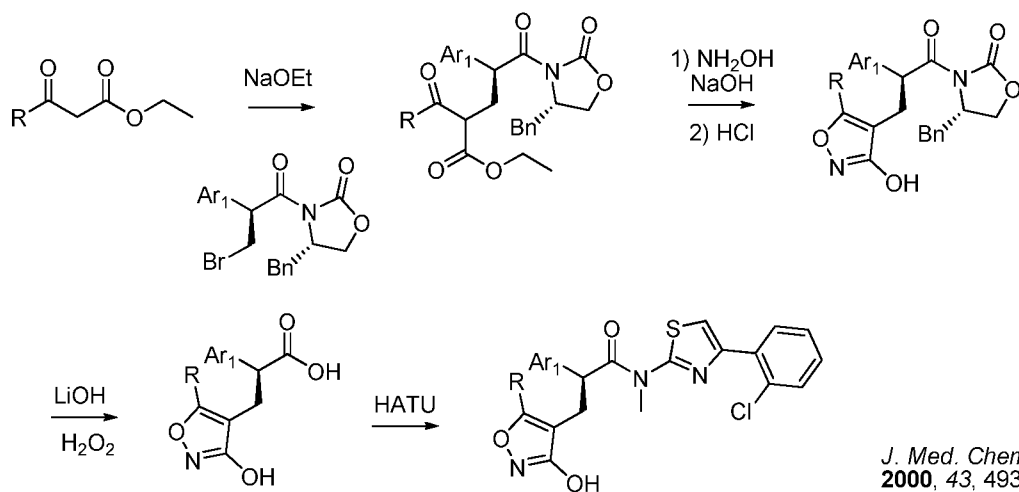




Synthesis of hydroxy-isoxazole isosteres

*Eur. J. Org. Chem.*  
1998, 473

5 An alternative suggested synthetic approach for the preparation of hydroxy-isoxazole isosteres

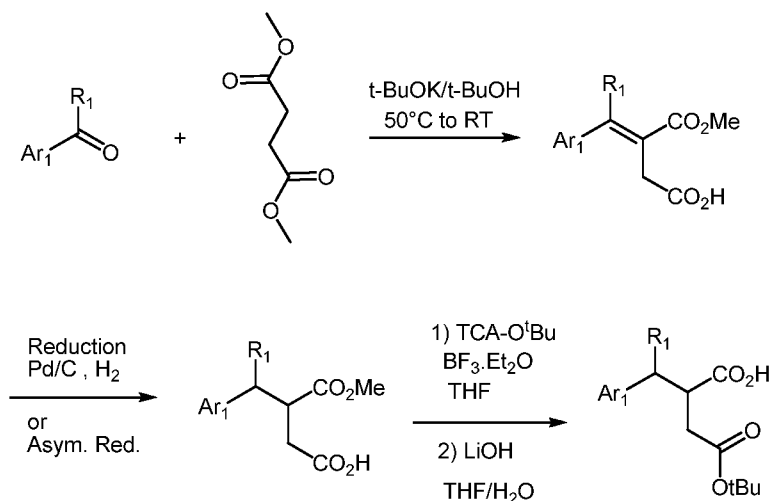


*J. Med. Chem.*  
2000, 43, 4930

**Additional synthetic schemes**

An alternative approach towards synthesis of intermediates **1** (see Scheme 2) can be envisioned through Stobbe condensation as depicted in Scheme 6.

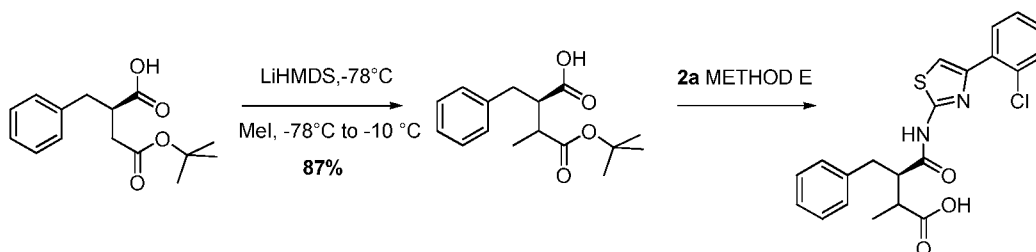
5



**Scheme 6:** A suggested synthetic approach for the preparation of benzylsuccinic acid monoester intermediates through Stobbe condensation

10

**Synthesis of compound n°68 (Scheme 7):**

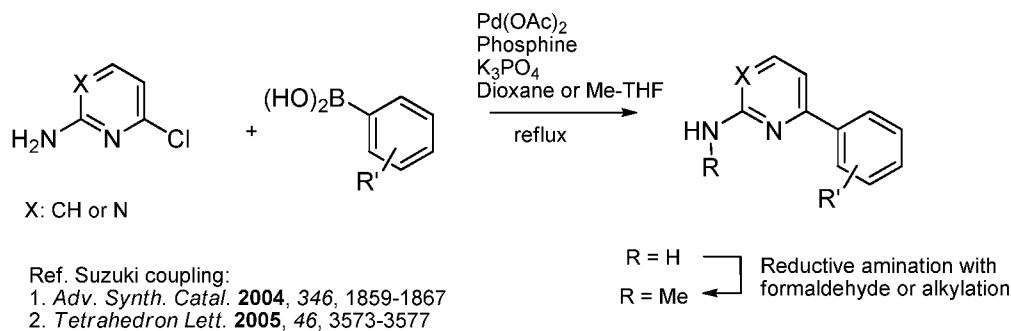


**Scheme 7:** Synthesis of compound 68

15

As shown in Scheme 7, upon treatment of (R)-benzylsuccinic acid t-butyl ester with excess LiHMDS in the presence of MeI, the desired monomethylated intermediate was isolated as an epimeric mixture, which was used in turn to furnish the final target structure (as epimeric mixture), as per the general procedure outlined on Scheme 1.

20

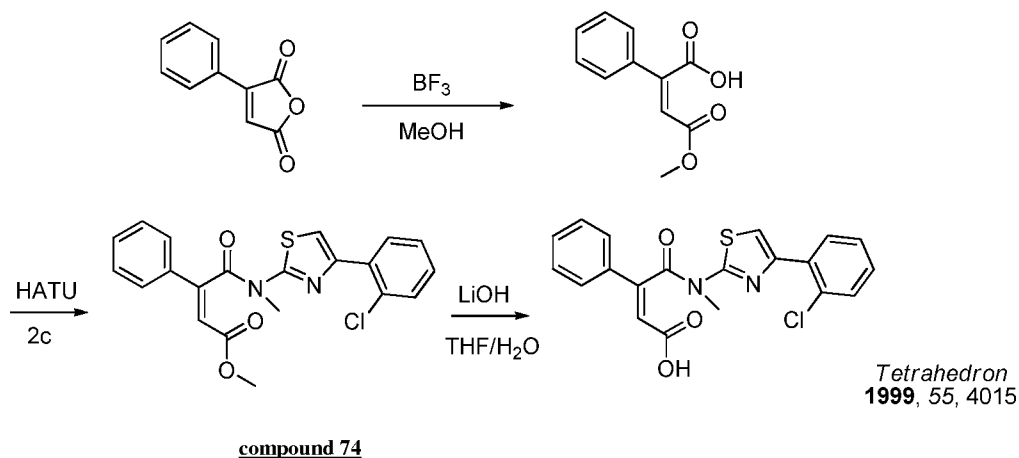
Synthesis of aryl-pyridine and aryl-pyrimidines intermediates 2 (Scheme 8):

5

**Scheme 8:** synthesis of aryl-pyridines and pyrimidines

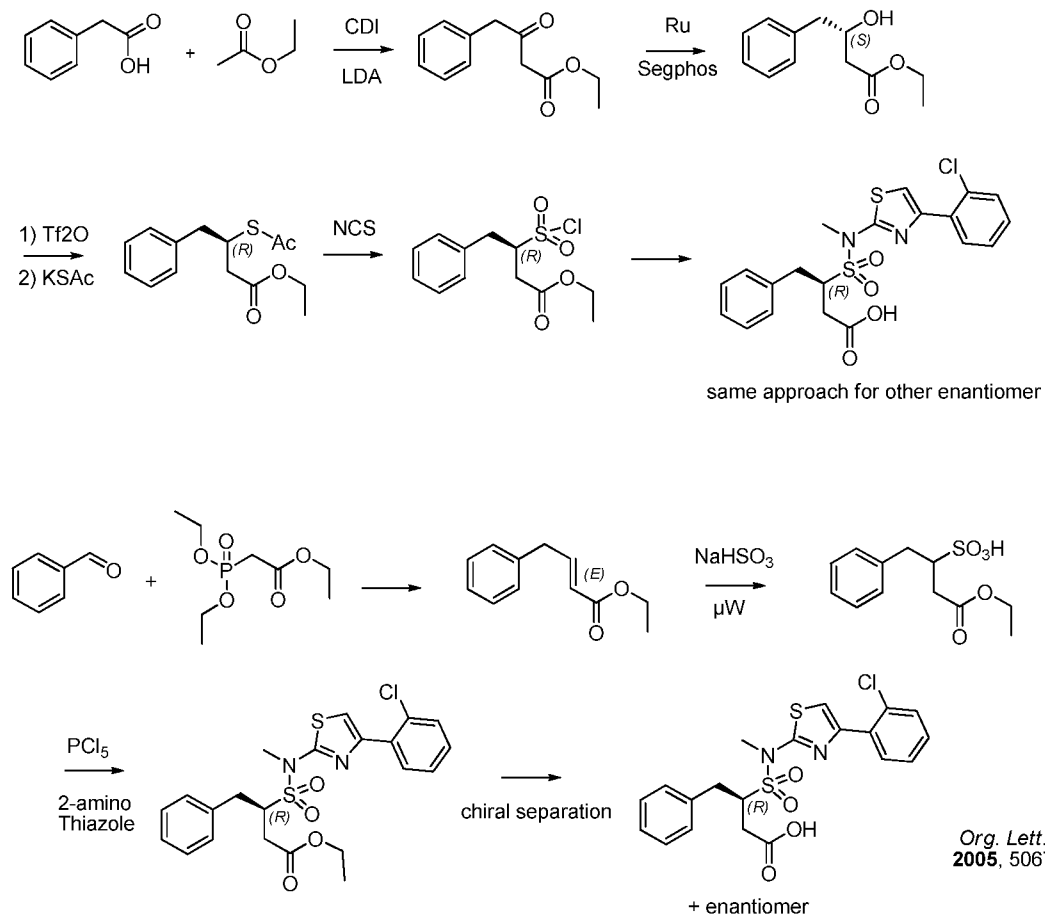
Suzuki coupling between pyridinyl or pyrimidinyl chloride and phenylboronic acid reagents allowed synthesizing the aryl-pyridine and aryl-pyrimidines intermediates 2.

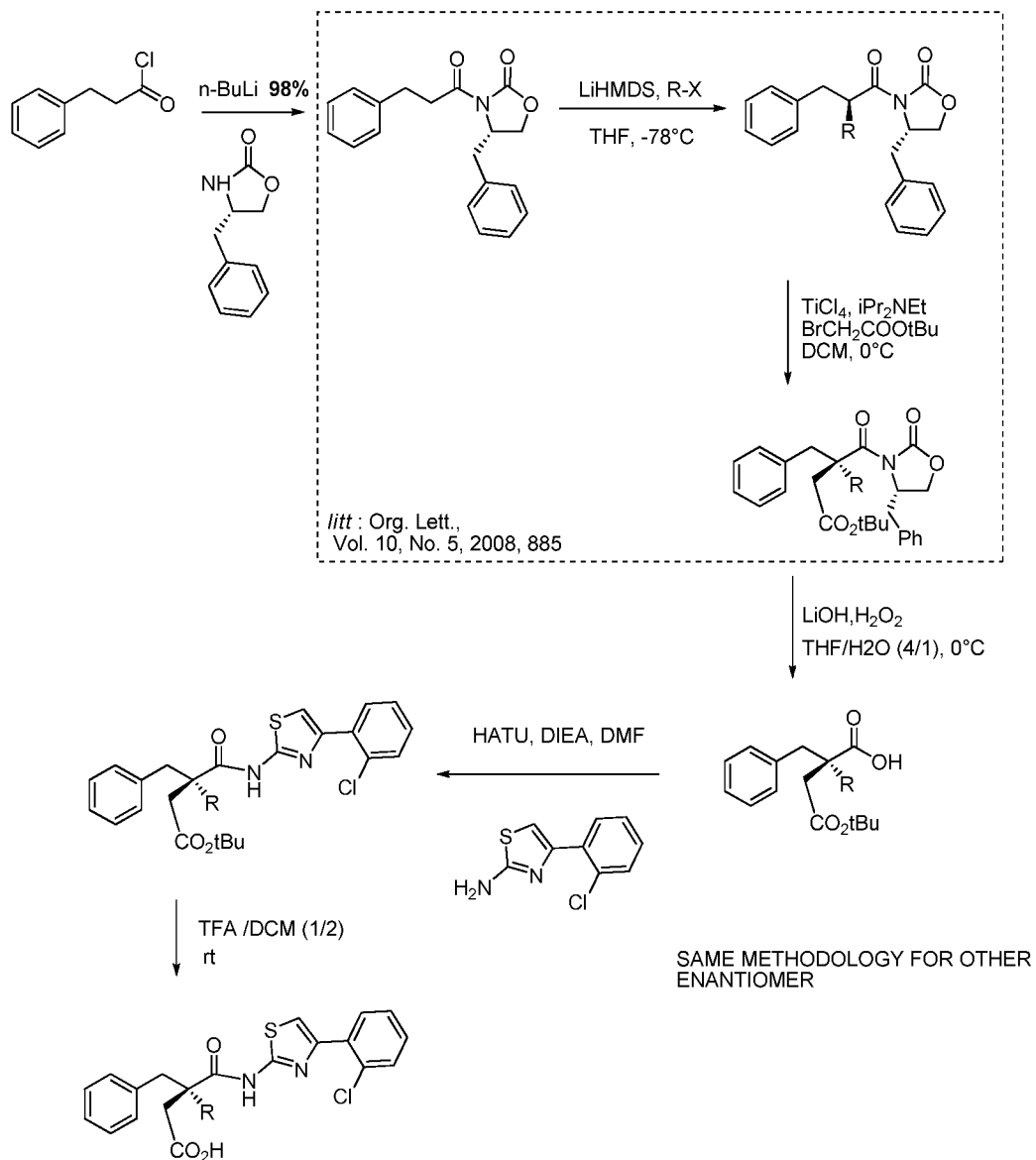
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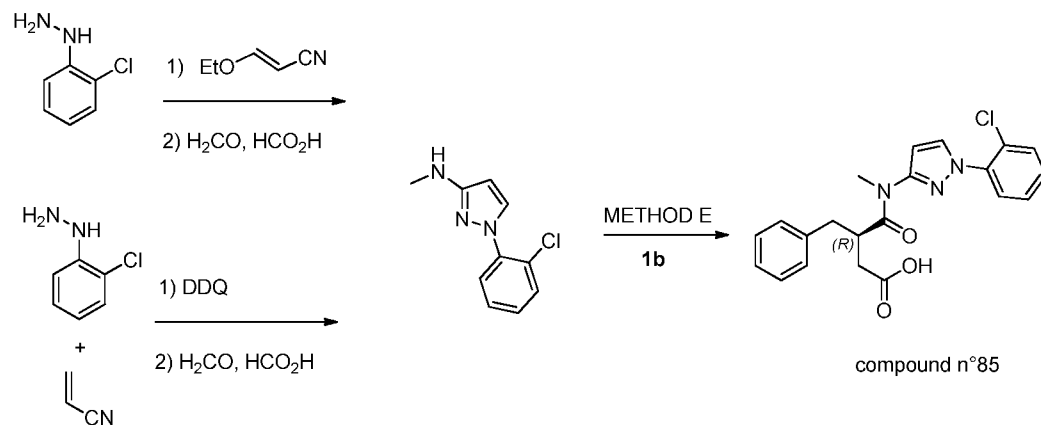
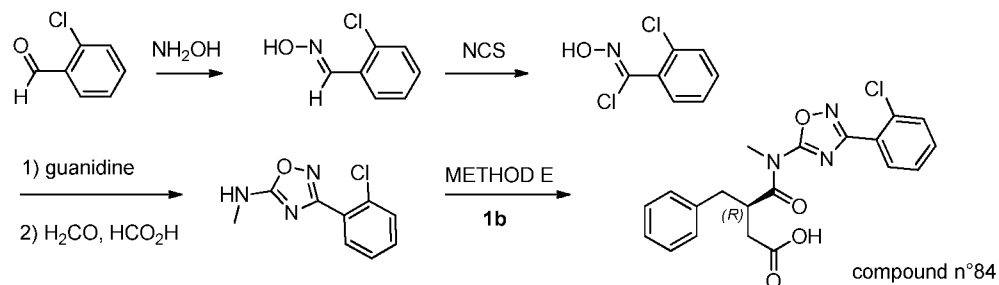
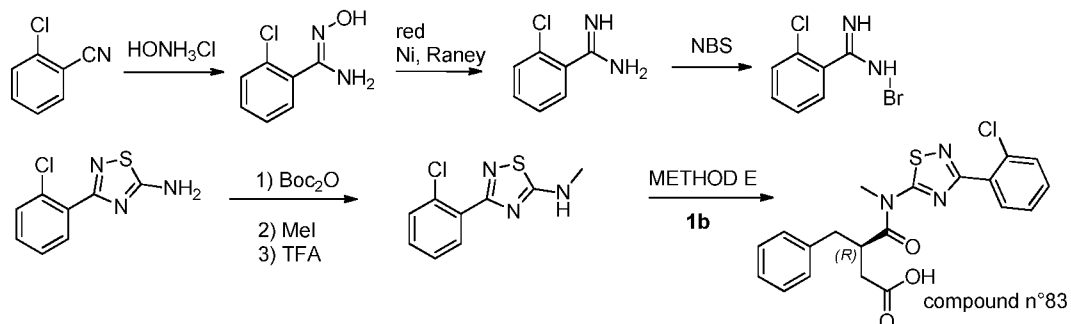
A suggested synthesis of compound n°74 (Scheme 9):

15

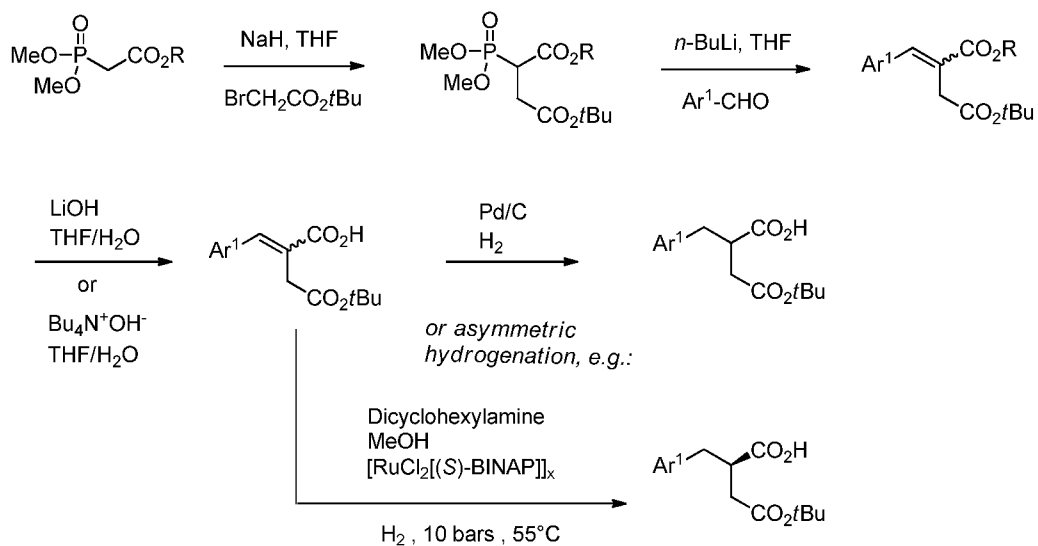
**Scheme 9:** A suggested synthesis of compound n°74

Suggested syntheses of compounds n°75 and n°76 (Scheme 10):**Scheme 10:** Suggested syntheses of compounds n°75 and n°76

Suggested syntheses of compounds n°79 and n°80 (Scheme 11):5 **Scheme 11:** Suggested syntheses of compounds n°79 and n°80

Suggested syntheses of compounds n°83 to n°85 (Scheme 12):

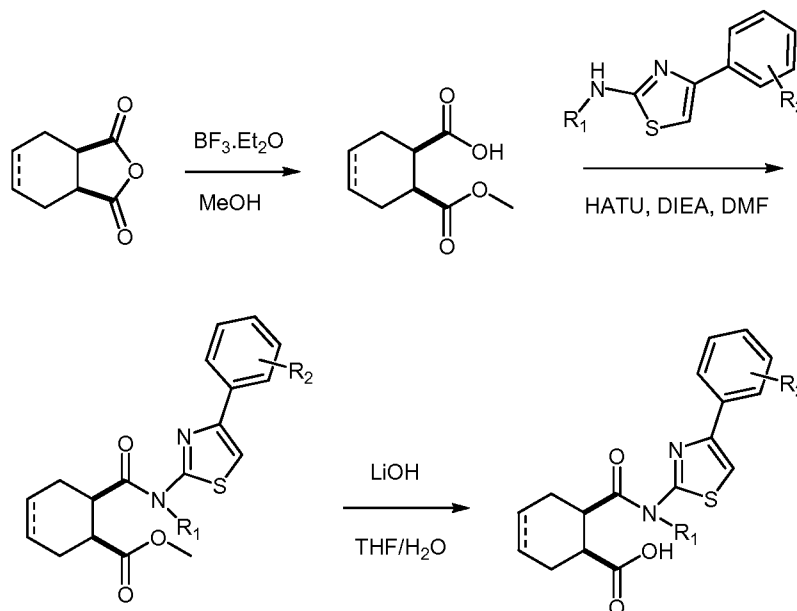
Synthesis of intermediates 1 using Horner-Wadsworth Emmons approach (HWE)  
**(Scheme 13):**



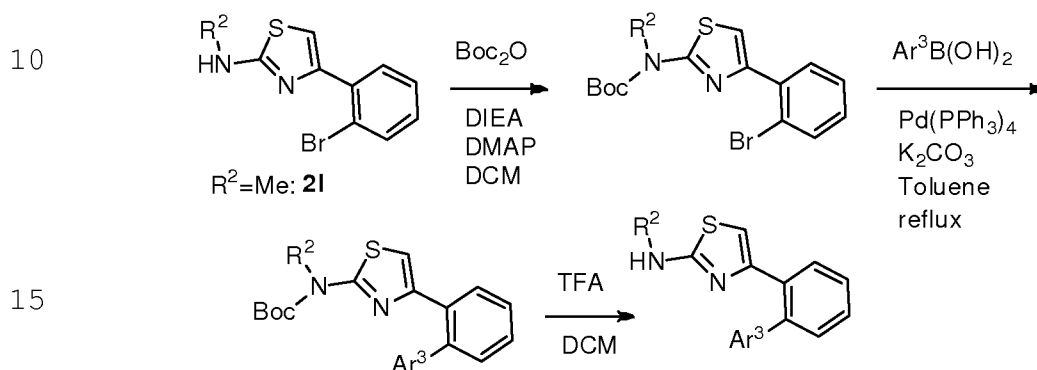
*Org. Proc. Res. Dev.* **2004**, *8*, 738-743

- 5 **Scheme 13:** Synthesis of intermediates 1 using Horner-Wadsworth Emmons approach (HWE)

The HWE methodology as depicted in Scheme 13 is the preferred methodology of the invention for the synthesis of intermediates 1.

Synthesis of compounds 98, 100 and 101 (Scheme 14):**Scheme 14:** Synthesis of compounds 98, 100 and 101

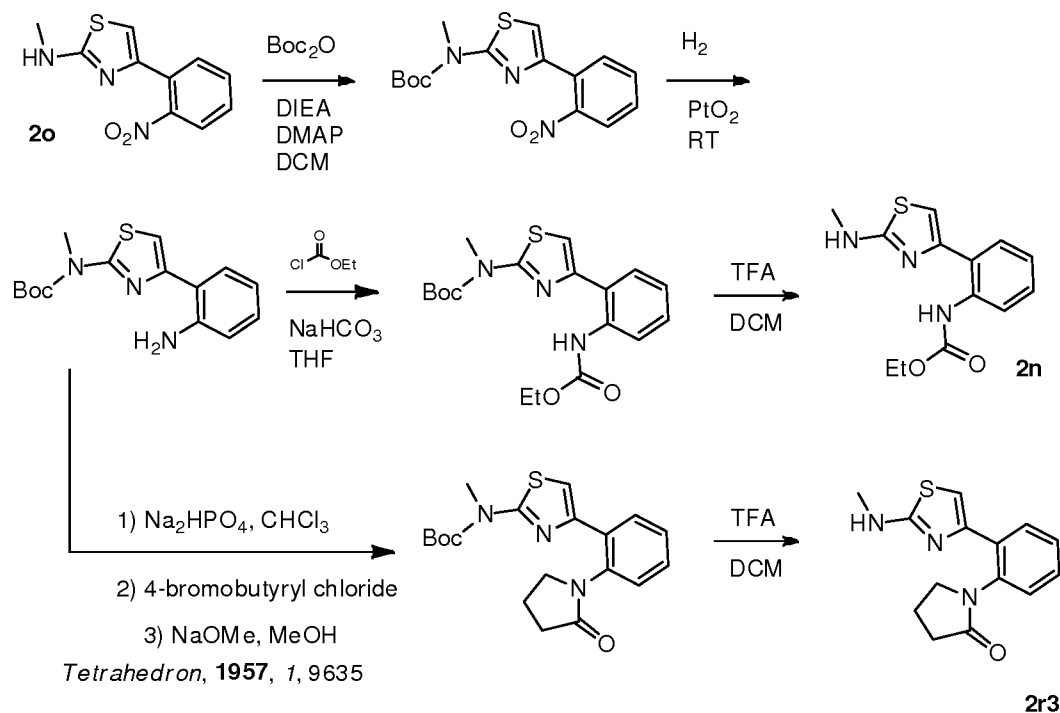
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General scheme for the preparation of biaryl- or heterobiaryl-thiazole amine intermediates using Suzuki approach (Scheme 15):

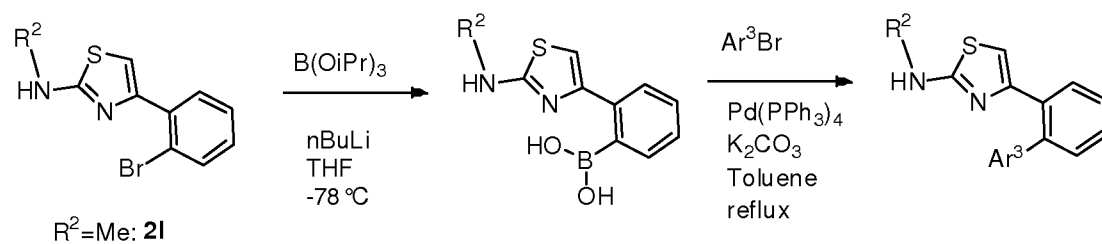
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**Scheme 15:** General scheme for the preparation of biaryl- or heterobiaryl-thiazole amine intermediates using Suzuki approach



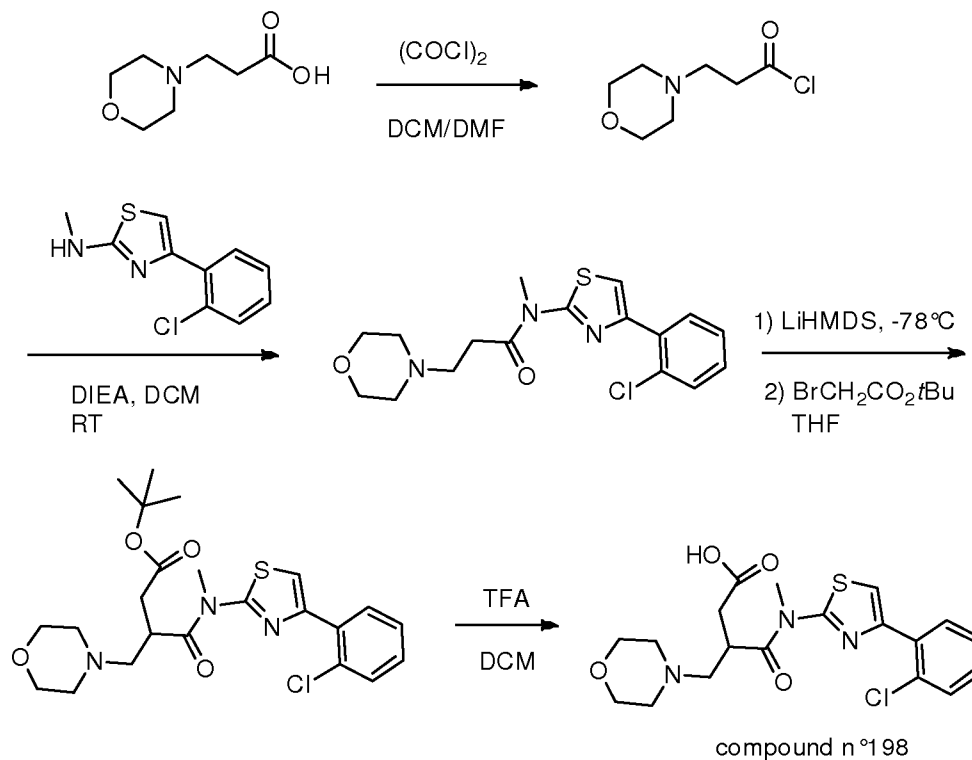
**Synthesis of intermediates 2n and 2r3 (Scheme 16):****Scheme 16: Synthesis of intermediates 2n and 2r3**

5

**Alternative general scheme for the preparation of biaryl- or heterobiaryl-thiazole amine intermediates using Suzuki approach (Scheme 17):**

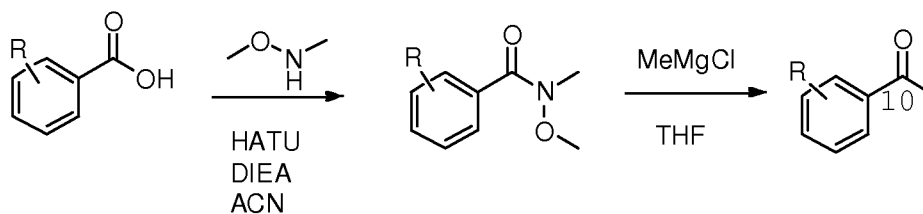
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**Scheme 17: Alternative general scheme for the preparation of biaryl- or heterobiaryl-thiazole amine intermediates using Suzuki approach**

Synthesis of compound n°198 (Scheme 18):Scheme 18: Synthesis of compound n°198

5

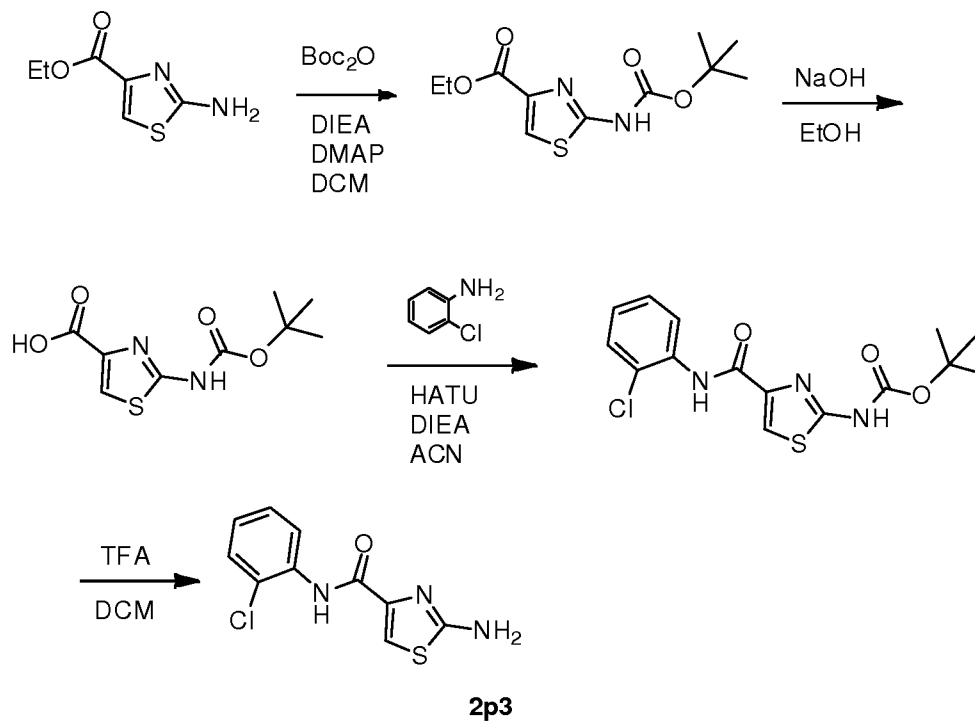
General synthetic scheme for the preparation of substituted acetophenone reagents through Weinreb amide approach (Scheme 20):



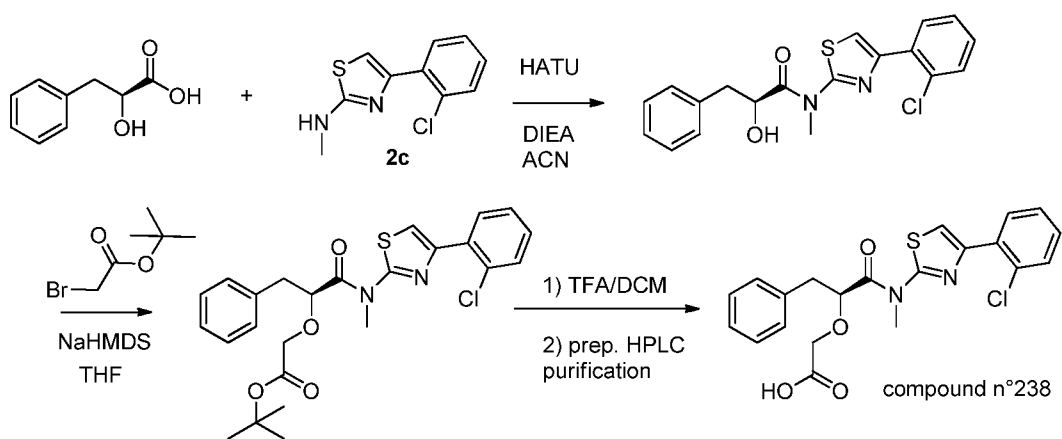
Scheme 20: General synthetic scheme for the preparation of substituted acetophenone reagents through Weinreb amide approach

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202

**Synthesis of intermediate 2p3 (Scheme 21):****Scheme 21: Synthesis of intermediate 2p3**

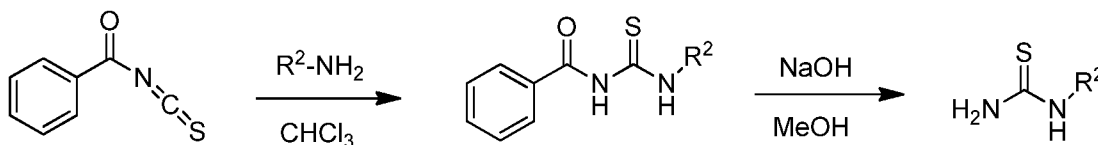
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**Synthesis of compound n°238 (Scheme 22):**

10

**Scheme 22: Synthesis of compound n°238**

General synthetic scheme for the preparation of substituted thiourea reagents  
**(Scheme 23):**



5

**Scheme 23:** General synthetic scheme for the preparation of substituted thiourea reagents

10

**General method A:** synthesis of intermediate **1a** (S)-4-*tert*-butoxy-4-oxo-2-phenylbutanoic acid

Step 1: synthesis of (S)-4-benzyl-3-(2-phenylacetyl)oxazolidin-2-one

15

(S)-4-benzyloxazolidin-2-one (0.011 mol) was dissolved in THF (50 mL). A 1.6 M solution of *n*-BuLi (0.0124 mol) was added dropwise at  $-78\text{ }^{\circ}\text{C}$ . A solution of 2-phenylacetyl chloride (0.011 mol) in THF (20 mL) was added dropwise to the obtained dark solution at the same temperature. The reaction mixture was stirred for 1 h at  $-78\text{ }^{\circ}\text{C}$ . Then a saturated solution of  $\text{NH}_4\text{Cl}$  (2 mL) and a solution of  $\text{NaHCO}_3$  (4 mL) were added dropwise, and the reaction mixture was warmed to RT. The organic layer was separated, and the aqueous one was extracted with diethyl ether ( $3 \times 25\text{ mL}$ ). The combined extracts were washed with water, brine, dried over  $\text{Na}_2\text{SO}_4$ , and evaporated. The residue was purified by chromatography (silica gel, hexane/ether, 2/1) to yield title compound. Y: 2.1 g (64.7%).

25

Step 2: synthesis of (S)-*tert*-butyl 4-((S)-4-benzyl-2-oxooxazolidin-3-yl)-4-oxo-3-phenylbutanoate

30

A 1M solution of NaHMDS (7.8 mmol) in THF was added to a solution of (S)-4-benzyl-3-(2-phenylacetyl)oxazolidin-2-one (7.1 mmol) in THF at

–78 °C in a flow of argon. After keeping for 1.5 h at the same temperature *tert*-butyl bromoacetate (21.3 mmol) was added. The reaction mixture was stirred for 2 h at –78 °C and warmed to RT. A saturated solution of NH<sub>4</sub>Cl (15 mL) and ethyl acetate (12 mL) were added. The organic layer was separated, and the aqueous one was extracted with ethyl acetate (3 × 30 mL). The combined extracts were washed with brine, dried over Na<sub>2</sub>SO<sub>4</sub>, and evaporated to give title compound. Y: 1.64 g (57%).

Step 3: synthesis of intermediate **1a** (S)-4-*tert*-butoxy-4-oxo-2-phenylbutanoic acid

(S)-*Tert*-butyl 4-((S)-4-benzyl-2-oxooxazolidin-3-yl)-4-oxo-3-phenylbutanoate (4 mmol) was dissolved in THF, and a 35% solution of H<sub>2</sub>O<sub>2</sub> in water (16 mmol) was added dropwise at 0 °C. Then a solution of LiOH (8 mmol) in H<sub>2</sub>O (19 mL) was added. The reaction mixture was stirred for 1.5 h at 0 °C (TLC: CCl<sub>4</sub>/ethyl acetate= 7/3) indicated reaction was complete. A solution of Na<sub>2</sub>SO<sub>3</sub> (15 mL) and NaHCO<sub>3</sub> (15 mL) were added at 0 °C. The reaction mixture was evaporated in a rotary evaporator by one half. Water (50 mL) was added to the residue, and the mixture was extracted with CH<sub>2</sub>Cl<sub>2</sub> (3 × 45 mL). The aqueous layer was acidified with 6M HCl to pH=2 at 0 °C. The product was extracted with ethyl acetate (3 × 50 mL). Combined extracts were washed with brine, dried over Na<sub>2</sub>SO<sub>4</sub>, and evaporated. The residue was recrystallized from hexane to give title compound. Y: 0.75 g (75%).

The following intermediates were synthesized or may be synthesized using general method B adapting the oxazolidinone chirality and starting materials to targeted intermediate:

intermediate **1e**: (R)-4-*tert*-butoxy-4-oxo-2-phenethylbutanoic acid,  
intermediate **1f**: (S)-4-*tert*-butoxy-4-oxo-2-phenethylbutanoic acid,  
intermediate **1o**: (R)-2-benzyl-5-methoxy-5-oxopentanoic acid; step 2 being replaced by a Michael addition on methyl acrylate using Ti(OiPr)<sub>2</sub>Cl<sub>2</sub> and DIEA in DCM at 0 °C as described in WO1996/33176,

intermediate **1p**: (S)-2-benzyl-5-methoxy-5-oxopentanoic acid; step 2 being replaced by a Michael addition on methyl acrylate using Ti(OiPr)<sub>2</sub>Cl<sub>2</sub> and DIEA in DCM at 0°C as described in WO1996/33176,

5 intermediate **1t**: (2S)-4-*tert*-butoxy-2-(2,3-dihydro-1H-inden-1-yl)-4-oxobutanoic acid,

intermediate **1u**: (S)-4-*tert*-butoxy-2-(2,3-dihydro-1H-inden-2-yl)-4-oxobutanoic acid,

intermediate **1v**: (S)-4-*tert*-butoxy-2-cyclohexyl-4-oxobutanoic acid

10 intermediate **1w**: (R)-4-*tert*-butoxy-2-(cyclohexylmethyl)-4-oxobutanoic acid,

intermediate **1x**: (R)-4-*tert*-butoxy-4-oxo-2-phenylbutanoic acid,

intermediate **1z**: (S)-4-*tert*-butoxy-4-oxo-2-((R)-1-phenylethyl)butanoic acid,

15 intermediate **1e1**: (2R)-4-(*tert*-butoxy)-4-oxo-2-((tetrahydrofuran-2-yl)methyl)butanoic acid,

intermediate **1f1**: (R)-4-(*tert*-butoxy)-2-(cyclopentylmethyl)-4-oxobutanoic acid,

intermediate **1g1**: (R)-4-(*tert*-butoxy)-4-oxo-2-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid ,

20 intermediate **1h1**: (R)-4-(*tert*-butoxy)-4-oxo-2-((S)-1-phenylethyl)butanoic acid

intermediate **1o1**: (2R)-4-(*tert*-butoxy)-4-oxo-2-((tetrahydrofuran-3-yl)methyl)butanoic acid

25 intermediate **1t1**: (R)-4-(*tert*-butoxy)-2-(furan-2-ylmethyl)-4-oxobutanoic acid

intermediate **1u1**: (S)-4-(*tert*-butoxy)-4-oxo-2-(thiophen-2-ylmethyl)butanoic acid.

**General method B**: synthesis of intermediate **1b** (R)-2-benzyl-4-*tert*-butoxy-4-oxobutanoic acid

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Step 1: synthesis of 3-(triphenylphosphoranylidene)dihydrofuran-2,5-dione

A solution of maleic anhydride (105 g, 1.07 mol) was added dropwise to a solution of triphenylphosphine (270 g, 1.03 mol) in acetone (1.2 L). The reaction mixture was stirred overnight at room temperature, cooled to 5°C, and filtered. The product was washed with acetone (2 × 100 mL), diethyl ether (100 mL), and dried under vacuum to give title compound. Y: 360 g (97%),  $r_t=3.21$  min (gradient A),  $(M+H)^+ = 379$ .

Step 2: synthesis of 4-methoxy-4-oxo-3-(triphenylphosphoranylidene)butanoic acid

A solution of 3-(triphenylphosphoranylidene)dihydrofuran-2,5-dione (110 g, 0.305 mol) in methanol (600 mL) was stirred overnight at room temperature and evaporated. The residue was recrystallized from ethyl acetate (500 mL) to give title compound. Y: 98 g (81%)  $r_t=3.32$  min (gradient A),  $(M+H)^+ = 393$ .

Step 3: synthesis of (3E)-3-(methoxycarbonyl)-4-phenylbut-3-enoic acid  
4-methoxy-4-oxo-3-(triphenylphosphoranylidene)butanoic acid (50 g, 0.127 mol) was suspended in benzene (100 mL). A solution of benzaldehyde (14.8 g, 0.14 mol) in a mixture of dichloromethane (30 mL) and benzene (7.5 mL) was added dropwise. The reaction mixture was stirred at RT for 20 h, diluted with diethyl ether (200 mL), and extracted with a solution of potassium bicarbonate (0.23 mol) in water (300 mL). The organic layer was discarded and the aqueous one was washed with a mixture of benzene (200 mL) and ether (100 mL). The aqueous solution was acidified with HCl (30 mL) under cooling and extracted with an ethyl acetate/benzene mixture, 1:2 (2 × 400 mL). The organic layer was washed with water (50 mL) and brine (50 mL), dried over sodium sulfate, and evaporated. The obtained crude product (28 g) was purified by column chromatography (silica gel,  $CCl_4$ /ethyl acetate, 1:0 → 9:1) to give title compound. Y: 18.9 g (67.5%)  $r_t=3.49$  min (gradient A),  $(M+H)^+ = 221$ .

Step 4: synthesis of (3*R*)-3-benzyl-4-methoxy-4-oxobutanoic acid

A mixture of (3*E*)-3-(methoxycarbonyl)-4-phenylbut-3-enoic acid (10.75 g, 48.8 mmol), dicyclohexylamine (18.62 g, 102.6 mmol), water (10 mL), and dichloro ((*S*)-(-)-2,2-bis(diphenylphosphino)-1,1-binaphthyl)ruthenium(I) (40 mg) in methanol (90 mL) was hydrogenated in a Parr apparatus at 60 °C and 60 psi for 30 h. The resulting mixture was evaporated in a rotary evaporator by ½. Acetonitrile (90 mL) was added to the residue, and the mixture was evaporated again by ½. This operation was repeated once more, and the solution was left at RT overnight. The formed precipitate was filtered off and washed with cold acetonitrile. The product (9 g) was dissolved in water (150 mL) and acidified with concentrated HCl to pH=3 under cooling. The product was extracted with an ethyl acetate/benzene 1:2 mixture (300 mL). The organic layer was washed with water, brine, dried over Na<sub>2</sub>SO<sub>4</sub>, and evaporated to give title compound. Y: 6.35 g (58.6%) P>95%, rt= 3.54 min (gradient A), (M+H)<sup>+</sup> =222, ee: 96% (method C).

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Step 5: synthesis of (R)-4-*tert*-butyl 1-methyl 2-benzylsuccinate

*Tert*-butyl-2,2,2-trichloroacetimidate (9 mmol, 1.61 mL) and boron trifluoride diethyl etherate (0.675 mmol, 85 µL) was added to a solution of (3*R*)-3-Benzyl-4-methoxy-4-oxobutanoic acid (4.5 mmol, 1 g) in anhydrous THF (10 mL) at RT. The mixture stirred at RT under nitrogen for 3h. TLC (cyclohexane/AcOEt=1/1) indicated reaction was complete. Reaction mixture was diluted with sat. aq. NaHCO<sub>3</sub> (10 mL) and extracted with AcOEt (2x20 mL). Combined organic layers were washed with brine, dried over MgSO<sub>4</sub>, evaporated. Crude was purified by flash chromatography (cyclohexane/AcOEt=9/1) to give title compound as a very light yellow oil. Y: 1.25 g (62%), P>90% rt=4.65 mn (gradient A), (M+H)<sup>+</sup> =222 (-*t*Bu) by <sup>1</sup>H NMR.

25

Step 6: synthesis of intermediate **1b** (R)-2-benzyl-4-*tert*-butoxy-4-oxobutanoic acid

To a solution of (R)-4-*tert*-butyl 1-methyl 2-benzylsuccinate (308 mg, 1.11 mmol) in THF (3mL) was added a solution of lithium hydroxide (107 mg, 4.44

30



mmol) in water (3 mL). The mixture was stirred at RT overnight. TLC (cyclohexane/AcOEt=7/3) indicated reaction was complete. Reaction mixture was acidified to pH=1 with 2M HCl and extracted with DCM (2x20 mL). Combined organic layers were passed through a phase separator and evaporated. Crude was purified by flash chromatography (cyclohexane/AcOEt= 9/1->7/3) (loading as solution in starting eluent) to yield title compound as a colorless oil. Y: 274mg (94%), P>95%, rt=4.17 mn (gradient A), (M+H)<sup>+</sup> =209 (-tBu).

The following intermediates were or may be synthesized using general method B:

intermediate **1c**: (R)-4-*tert*-butoxy-2-(4-fluorobenzyl)-4-oxobutanoic acid,  
intermediate **1d**: (R)-4-*tert*-butoxy-2-(cyclohexylmethyl)-4-oxobutanoic acid,  
intermediate **1g**: (R)-4-*tert*-butoxy-4-oxo-2-(4-(trifluoromethyl)benzyl)butanoic acid,  
intermediate **1h**: (R)-4-*tert*-butoxy-4-oxo-2-(3-(trifluoromethyl)benzyl)butanoic acid,  
intermediate **1i**: (R)-4-*tert*-butoxy-2-(2-cyanobenzyl)-4-oxobutanoic acid  
intermediate **1j**: (R)-4-*tert*-butoxy-2-(3-cyanobenzyl)-4-oxobutanoic acid,  
intermediate **1k**: (R)-4-*tert*-butoxy-2-(4-cyanobenzyl)-4-oxobutanoic acid,  
intermediate **1l**: (R)-4-*tert*-butoxy-2-(4-methoxybenzyl)-4-oxobutanoic acid,  
intermediate **1m**: (R)-4-*tert*-butoxy-2-(3-methoxybenzyl)-4-oxobutanoic acid,  
intermediate **1n**: (R)-4-*tert*-butoxy-2-(2-methoxybenzyl)-4-oxobutanoic acid,  
intermediate **1q**: (R)-4-*tert*-butoxy-2-(4-chlorobenzyl)-4-oxobutanoic acid,  
intermediate **1r**: (R)-4-*tert*-butoxy-2-(3-chlorobenzyl)-4-oxobutanoic acid,  
intermediate **1s**: (R)-4-*tert*-butoxy-2-(2-chlorobenzyl)-4-oxobutanoic acid,  
intermediate **1y**: (R)-4-*tert*-butoxy-2-(3-fluorobenzyl)-4-oxobutanoic acid.

**General method C:** synthesis of intermediate **2a** 4-(2-chlorophenyl)thiazol-2-amine

Thiourea (2.1 g, 27.45 mmol) was added to a solution 2-bromo-1-(2-chlorophenyl)ethanone (7 g, 27.45 mmol) in ethanol (10 mL) and reaction mixture was stirred at RT for 18h. The solvent was evaporated and refluxed for 5 minutes in DCM. Suspension was filtered to yield 7.84 g of 4-(2-chlorophenyl)thiazol-2-amine hydrobromide as a white powder. This powder was stirred in a mixture of aq. sat. Na<sub>2</sub>CO<sub>3</sub> and AcOEt. Phases are separated and organic layer dried over MgSO<sub>4</sub>, concentrated in vacuo to yield title compound as a yellow oil which solidifies spontaneously. Y: 5.37 g (93%), P=100%, rt=2.84 mn (gradient A), (M+H)<sup>+</sup> = 211.

The following intermediates were or may be synthesized from the appropriate bromoketone (for which synthesis is described in **Scheme 20**) and thiourea (for which synthesis is described in **Scheme 23**) using general method C:

- intermediate **2c**: 4-(2-chlorophenyl)-N-methylthiazol-2-amine, using N-methylthiourea instead of thiourea,
- intermediate **2f**: 4-(2,4,6-trichlorophenyl)thiazol-2-amine,
- intermediate **2g**: N-benzyl-4-(2-chlorophenyl)thiazol-2-amine,
- intermediate **2i**: 2-(2-(methylamino)thiazol-4-yl)benzotrile
- intermediate **2j**: 4-(2-chlorophenyl)-N-ethylthiazol-2-amine,
- intermediate **2l**: 4-(2-bromophenyl)-N-methylthiazol-2-amine,
- intermediate **2o**: N-methyl-4-(2-nitrophenyl)thiazol-2-amine,
- intermediate **2s**: 4-(3-(trifluoromethoxy)phenyl)thiazol-2-amine
- intermediate **2w**: N-cyclopropyl-4-(2,5-dichlorophenyl)thiazol-2-amine,
- intermediate **2a1**: 4-(2,5-dichlorophenyl)-N-methylthiazol-2-amine,
- intermediate **2y1**: 4-(2-chloro-5-(trifluoromethyl)phenyl)-N-methylthiazol-2-amine,
- intermediate **2z1**: 4-(2-chloro-5-fluorophenyl)-N-methylthiazol-2-amine
- intermediate **2a2**: 4-(3,5-dichlorophenyl)-N-methylthiazol-2-amine,
- intermediate **2b2**: 4-(3-(difluoromethoxy)phenyl)-N-methylthiazol-2-

- amine,  
intermediate **2e2**: 4-(5-chloro-2-(trifluoromethyl)phenyl)-N-methylthiazol-2-amine,  
intermediate **2f2**: N-methyl-4-(2,3,5-trichlorophenyl)thiazol-2-amine,  
5 intermediate **2i2**: N-methyl-4-(2-(trifluoromethoxy)phenyl)thiazol-2-amine,  
intermediate **2m2**: 4-(2-chloro-5-fluorophenyl)-N-cyclopropylthiazol-2-amine,  
intermediate **2n2**: N-cyclopropyl-4-(3-(difluoromethoxy)phenyl)thiazol-2-amine,  
10 intermediate **2o2**: 4-(2-chloro-5-(trifluoromethyl)phenyl)-N-cyclopropylthiazol-2-amine,  
intermediate **2d3**: N-(2-(benzyloxy)ethyl)-4-(2,5-dichlorophenyl)thiazol-2-amine,  
intermediate **2e3**: 4-(2-chloro-5-(difluoromethyl)phenyl)-N-methylthiazol-2-amine,  
15 intermediate **2j3**: (4-(2-chloro-5-(difluoromethoxy)phenyl)-N-methylthiazol-2-amine),  
intermediate **2v3**: (S)-1-((4-(2-chlorophenyl)thiazol-2-yl)amino)propan-2-ol,  
20 intermediate **2w3**: (R)-1-((4-(2-chlorophenyl)thiazol-2-yl)amino)propan-2-ol,  
intermediate **2z3**: 4-(2,3-dichlorophenyl)-N-methylthiazol-2-amine,  
intermediate **2a4**: N-methyl-4-(3-(trifluoromethoxy)phenyl)thiazol-2-amine,  
25 intermediate **2b4**: N-cyclopropyl-4-(3-(trifluoromethoxy)phenyl)thiazol-2-amine  
intermediate **2c4**: (4-(2-(difluoromethoxy)phenyl)-N-methylthiazol-2-amine).
- 30 **General method D**: synthesis of intermediate **2b** 4-(2-chlorophenyl)-N-(cyclopropylmethyl)thiazol-2-amine

2-bromo-1-(2-chlorophenyl)ethanone (0.5 mmol, 116 mg) and dry sodium thiocyanate (0.55 mmol, 45 mg) were stirred in 1 mL ethanol for 3 h at 50°C. A solution of cyclopropane methyl amine (0.55 mmol, 39 mg) in 0.5 mL of ethanol was added at once and the reaction mixture was stirred for 12 h. The ethanol was distilled off, and ethyl acetate and water were added. The aqueous phase was extracted twice with ethyl acetate, the combined organic phases were dried over Na<sub>2</sub>SO<sub>4</sub>, and the solvent was removed *in vacuo*. Crude was purified by flash chromatography (cyclohexane/DCM=6/4) to give title compound as a dark yellow oil. Y: 40 mg (30%), P=100%, rt=3.5 mn (gradient A), (M+H)<sup>+</sup>=264.8.

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The following intermediates were or may be synthesized from the appropriate bromoketone (for which synthesis is described in **Scheme 20**) and amine reagents using general method D:

intermediate **2d**: N-allyl-4-(2-chlorophenyl)thiazol-2-amine,  
intermediate **2e**: methyl 2-(4-(2-chlorophenyl)thiazol-2-ylamino)acetate,  
intermediate **2h**: 4-(2-chlorophenyl)-N-(2,2,2-trifluoroethyl)thiazol-2-amine,  
intermediate **2k**: 4-(2-chlorophenyl)-N-cyclopropylthiazol-2-amine,  
intermediate **2r**: 2-((4-(2-chlorophenyl)thiazol-2-yl)amino)acetamide,  
intermediate **2x**: methyl 3-((4-(2-chlorophenyl)thiazol-2-yl)amino)propanoate,  
intermediate **2u1**: N-(2-(benzyloxy)ethyl)-4-(2-chlorophenyl)thiazol-2-amine,  
intermediate **2v1**: N-(3-(benzyloxy)propyl)-4-(2-chlorophenyl)thiazol-2-amine,  
intermediate **2s2**: 4-(2-chlorophenyl)-N-(2-methoxyethyl)thiazol-2-amine,  
intermediate **2t2**: N-(2-(benzyloxy)ethyl)-4-(2-chlorophenyl)thiazol-2-amine.

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**General method E:** synthesis of Example 1: compound n°2: (R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxobutanoic acid

Step 1: synthesis of (R)-*tert*-butyl 3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxobutanoate

To a solution of (R)-2-benzyl-4-*tert*-butoxy-4-oxobutanoic acid **1b** (1.21 mmol, 320 mg) in anhydrous DMF (5mL) was added HATU (1.33mmol, 505mg). After 5 min was added 4-(2-chlorophenyl)thiazol-2-amine **2a** (1.33 mmol, 279 mg) and DIEA (1.815 mmol, 300  $\mu$ L). Reaction mixture was stirred at RT for 4 days. TLC (cyclohexane/AcOEt=8/2) indicated reaction was complete. Reaction mixture (rm) was diluted with AcOEt (20mL) and washed with sat. aq. NaHCO<sub>3</sub> (10mL) and water (3x10 mL). The organic phase was dried over MgSO<sub>4</sub> and evaporated. Crude was purified by flash chromatography (cyclohexane/AcOEt=9/1) (loading onto silica) to yield title compound as a yellow gum. Y: 370 mg (67%), P>95%, rt=5.24 mn (gradient A), (M+H)<sup>+</sup>=457.1. ACN was also used instead of DMF.

Step 2: synthesis of Example 1: compound n°2: (R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxobutanoic acid

To a solution of (R)-*tert*-butyl 3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxobutanoate (0.7 mmol, 320 mg) in DCM (8 mL) was added TFA (2 mL). Rm was stirred at RT overnight. TLC (cyclohexane/AcOEt=7/3) indicated reaction was complete. Reaction mixture was evaporated and residue purified using a Biotage PEAX SPE cartridge. The oil obtained was triturated in diethyl ether/pentane=2/8 to yield title compound as a colorless solid. Y: 280 mg (99%), P>99% rt=9.32 mn (gradient B), (M+H)<sup>+</sup>=401.1, ee=96% (method B), <sup>1</sup>HNMR (CDCl<sub>3</sub>):  $\delta$ =12.2 (br s, 1H), 7.39-7.33 (m, 9H), 7.14 (s, 1H), 3.36 (q, 1H), 3.14 (m, 1H), 2.89-2.77 (m, 2H), 2.57 (dd, 1H).

Examples 2 to 18 were synthesized using general method E and intermediates described above or commercially available.

Example 2: compound n°9: (S)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-phenylbutanoic acid was synthesized using intermediates **1a** and **2a**. P=99%, (M+H)<sup>+</sup> =387, ee=98% (method A), <sup>1</sup>HNMR (DMSO-d<sub>6</sub>): δ=7.78 (d, J=2.8Hz, 1H), 7.5 (m, 2H), 7.4-7.1 (m, 9H), 4.3 (q, 1H), 3.18 (dd, J=17Hz, J=27Hz, 1H), 2.66 (dd, J=4.8Hz, J=22Hz, 1H).

Example 3: compound n°3: (R)-3-benzyl-4-(4-(2,4-dichlorophenyl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 4-(2,4-dichlorophenyl)thiazol-2-amine.

Example 4: compound n°4: (R)-3-benzyl-4-(4-(2-fluorophenyl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 4-(2-fluorophenyl)thiazol-2-amine.

Example 5: compound n°5: (R)-3-benzyl-4-(4-(3,4-dichlorophenyl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 4-(3,4-dichlorophenyl)thiazol-2-amine.

Example 8: compound n°8: (R)-3-benzyl-4-(4-(4-cyanophenyl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 4-(2-aminothiazol-4-yl)benzotrile.

Example 9: compound n°12: (R)-3-benzyl-4-(4-(3-chlorophenyl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 4-(3-chlorophenyl)thiazol-2-amine.

Example 10: compound n°13: (R)-3-benzyl-4-oxo-4-(4-(3-(trifluoromethyl)phenyl)thiazol-2-ylamino)butanoic acid was synthesized using intermediate **1b** and 4-(3-(trifluoromethyl)phenyl)thiazol-2-amine.

Example 11: compound n°14: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized using intermediates **1b** and **2c**. Y: 142 mg (80%), P>99% rt=10.5 mn (gradient B), (M+H)<sup>+</sup> =414.8, ee=96% (method B), <sup>1</sup>HNMR (CDCl<sub>3</sub>): δ= 7.92 (d, 1H), 7.54 (s, 1H), 7.45 (d, 1H), 7.34-7.13 (m, 7H), 3.62 (s, 3H), 3.47 (m, 1H), 3.15-3.01 (m, 2H), 2.61-2.54 (m, 1H), 2.53-2.51 (dd, 1H).

Example 12: compound n°17: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(4-fluorobenzyl)-4-oxobutanoic acid was synthesized using intermediates **1c** and **2a**.

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Example 13: compound n°18: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(cyclohexylmethyl)-4-oxobutanoic acid was synthesized using intermediates **1d** and **2a**. Y: 15 mg (30%), P>90% rt=10.76 mn (gradient B), (M+H)<sup>+</sup>=401.1, ee=96% (method B), <sup>1</sup>HNMR (CDCl<sub>3</sub>): δ= 12.26 (br s, 1H), 7.35-7.45 (m, 2H), 7.15-7.30 (m, 4H), 3.15-3.25 (m, 1H), 2.7 (dd, 1H), 2.5 (dd, 1H), 1.45-1.8 (m, 6H), 1.1-1.4 (m, 5H), 0.8-1.0 (m, 2H).

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Example 14: compound n°22: (R)-4-(allyl(4-(2-chlorophenyl)thiazol-2-yl)amino)-3-benzyl-4-oxobutanoic acid was synthesized using intermediates **1b** and **2d**.

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Example 15: compound n°23: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-methoxy-2-oxoethyl)amino)-4-oxobutanoic acid was synthesized using intermediate **1b** and **2e**.

Example 16: compound n°11: (R)-3-benzyl-4-oxo-4-(3-phenyl-1,2,4-thiadiazol-5-ylamino)butanoic acid was synthesized using intermediate **1b** and 3-phenyl-1,2,4-thiadiazol-5-amine.

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Example 17: compound n°20: (R)-3-benzyl-4-(4-(2-chlorophenyl)-5-fluorothiazol-2-ylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 4-(2-chlorophenyl)-5-fluorothiazol-2-amine which was prepared in one

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step from intermediate **2a** as described in *Chem. Res. Toxicol.* 2007, 1954-1965.

Example 18: compound n°21: (R)-3-benzyl-4-((5-chloro-4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 5-chloro-4-(2-chlorophenyl)-N-methylthiazol-2-amine which was prepared by reacting intermediate **2c** with N-chlorosuccinimide and triethylamine in chloroform.

Example 19: compound n°15: (R)-3-benzyl-4-(5-(2-chlorophenyl)pyridin-2-ylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 5-iodopyridin-2-amine. Amide coupling such as in general method E, subsequent Suzuki coupling with 2-chlorophenylboronic acid using PdCl<sub>2</sub>(PPh<sub>3</sub>)<sub>4</sub> catalyst and K<sub>2</sub>CO<sub>3</sub> in dioxane/H<sub>2</sub>O followed by *t*Bu deprotection as described in general method E provided title compound.

Example 20: compound n°10: (Z)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxobut-2-enoic acid was synthesized using intermediate **2a** and (Z)-4-methoxy-4-oxobut-2-enoic acid. Amide coupling such as in general method E followed by saponification such as in step 6 of general method B provided title compound.

Example 21: compound n°16: (R)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)heptanoic acid was synthesized using intermediate **2a** and (R)-2-(2-*tert*-butoxy-2-oxoethyl)hexanoic acid. (R)-2-(2-*tert*-butoxy-2-oxoethyl)hexanoic acid was prepared from (R)-3-(methoxycarbonyl)heptanoic acid as done in steps 5 and 6 of general method B.

Example 22: compound n°19: (R)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-5-methylhexanoic acid was synthesized using intermediate **2a** and (R)-2-(2-*tert*-butoxy-2-oxoethyl)-4-methylpentanoic acid. (R)-2-(2-*tert*-butoxy-2-oxoethyl)-4-methylpentanoic acid was prepared from (R)-3-(methoxycarbonyl)-5-methylhexanoic acid as done in steps 5 and 6 of general method B.



Example 23: compound n°1: 6-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)cyclohex-3-enecarboxylic acid was synthesized using intermediate **2a** and 6-(methoxycarbonyl)cyclohex-3-enecarboxylic acid. Amide coupling such as in general method E followed by saponification such as in step 6 of general method B provided title compound.

Example 24: compound n°24: (R)-methyl 3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxobutanoate may be synthesized by treating compound n°2 with TMSCl in MeOH.

Example 26: compound n°26: (R)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-5-phenylpentanoic acid may be synthesized from intermediates **1e** and **2a** using general method E.

Example 27: compound n°27: (S)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-5-phenylpentanoic acid may be synthesized from intermediates **1f** and **2a** using general method E.

Example 28: compound n°28: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-(4-(trifluoromethyl)benzyl)butanoic acid was synthesized from intermediates **1g** and **2a** using general method E.

Example 29: compound n°29: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-(3-(trifluoromethyl)benzyl)butanoic acid was synthesized from intermediates **1h** and **2a** using general method E.

Example 30: compound n°30: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(2-cyanobenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1i** and **2a** using general method E.

Example 31: compound n°31: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(3-cyanobenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1j** and **2a** using general method E.

Example 32: compound n°32: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(4-cyanobenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1k** and **2a** using general method E.

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Example 33: compound n°33: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(4-methoxybenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1l** and **2a** using general method E.

10 Example 34: compound n°34: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(3-methoxybenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1m** and **2a** using general method E.

15 Example 35: compound n°35: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(2-methoxybenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1n** and **2a** using general method E.

20 Example 36: compound n°36: (R)-3-benzyl-4-(4-(2-methoxyphenyl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and 4-(2-methoxyphenyl)thiazol-2-amine using general method E.

Example 37: compound n°37: ((R)-3-benzyl-4-oxo-4-(4-(2,4,6-trichlorophenyl)thiazol-2-ylamino)butanoic acid may be synthesized from intermediates **1b** and **2f** using general method E.

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Example 38: compound n°38: (R)-4-benzyl-5-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-5-oxopentanoic acid may be synthesized from intermediates **1o** and **2c** using general method E, replacing the TFA *t*Bu ester deprotection by a methyl ester saponification using LiOH in THF/H<sub>2</sub>O.

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Example 39: compound n°39: (S)-4-benzyl-5-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-5-oxopentanoic acid was synthesized from intermediates **1p** and **2c** using general method E, replacing the TFA *t*Bu ester deprotection by a methyl ester saponification using LiOH in THF/H<sub>2</sub>O.

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Example 40: compound n°40: (R)-methyl 4-benzyl-5-(4-(2-chlorophenyl)thiazol-2-ylamino)-5-oxopentanoate may be synthesized from intermediates **1o** and **2a** using general method E.

5 Example 41: compound n°41: (S)-methyl 4-benzyl-5-(4-(2-chlorophenyl)thiazol-2-ylamino)-5-oxopentanoate may be synthesized from intermediates **1p** and **2a** using general method E.

Example 42: compound n°42: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropylmethyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2b** using general method E.

Example 43: compound n°43: (R)-3-benzyl-4-(benzyl(4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2g** using general method E.

Example 44: compound n°44: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2,2,2-trifluoroethyl)amino)-4-oxobutanoic acid may be synthesized from intermediates **1b** and **2h** using general method E.

20 Example 45: compound n°45: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid was synthesized from 4-(*tert*-butoxy)-2-(4-methoxybenzyl)-4-oxobutanoic acid and intermediate **2c** using general method E and chiral preparative HPLC purification. 4-(*tert*-butoxy)-2-(4-methoxybenzyl)-4-oxobutanoic acid was synthesized from commercially available 4-methoxybenzaldehyde using the HWE methodology (**Scheme 13**).

Example 46: compound n°46: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(3-methoxybenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1m** and **2c** using general method E.

Example 47: compound n°47: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2-methoxybenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1n** and **2c** using general method E.

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Example 48: compound n°48: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-cyanobenzyl)-4-oxobutanoic acid was synthesized from 4-(*tert*-butoxy)-2-(4-cyanobenzyl)-4-oxobutanoic acid and intermediate **2c** using general method E and chiral preparative HPLC purification. 4-(*tert*-butoxy)-2-(4-cyanobenzyl)-4-oxobutanoic acid was synthesized from commercially available 4-cyanobenzaldehyde using the HWE methodology (**Scheme 13**).

Example 49: compound n°49: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(3-cyanobenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1j** and **2c** using general method E.

Example 50: compound n°50: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2-cyanobenzyl)-4-oxobutanoic acid may be synthesized from intermediates **1i** and **2c** using general method E.

Example 51: compound n°51: (R)-3-(4-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from 4-(*tert*-butoxy)-2-(4-chlorobenzyl)-4-oxobutanoic acid and intermediate **2c** using general method E and chiral preparative HPLC purification. 4-(*tert*-butoxy)-2-(4-chlorobenzyl)-4-oxobutanoic acid was synthesized from commercially available 4-chlorobenzaldehyde using the HWE methodology (**Scheme 13**).

Example 52: compound n°52: (R)-3-(3-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid may be synthesized from intermediates **1r** and **2c** using general method E.

Example 53: compound n°53: (R)-3-(2-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid may be synthesized from intermediates **1s** and **2c** using general method E.

Example 54: compound n°54: (3S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2,3-dihydro-1H-inden-1-yl)-4-oxobutanoic acid may be synthesized from intermediates **1t** and **2c** using general method E. **1t** may be synthesized using Stobbe's condensation (**Scheme 6**).

Example 55: compound n°55: (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(2,3-dihydro-1H-inden-2-yl)-4-oxobutanoic acid may be synthesized from intermediates **1u** and **2c** using general method E. **1u** may be synthesized using Stobbe's condensation (**Scheme 6**).

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Example 56: compound n°56: (R)-4-(benzo[d]thiazol-2-yl(methylamino)-3-benzyl-4-oxobutanoic acid may be synthesized from intermediate **1b** and N-methylbenzo[d]thiazol-2-amine using general method E. N-methylbenzo[d]thiazol-2-amine may be prepared by Eischweiler-Clarke methylation of benzo[d]thiazol-2-amine.

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Example 57: compound n°57: (R)-4-(benzo[d]oxazol-2-yl(methylamino)-3-benzyl-4-oxobutanoic acid may be synthesized from intermediate **1b** and N-methylbenzo[d]oxazol-2-amine using general method E. N-methylbenzo[d]oxazol-2-amine may be prepared by Eischweiler-Clarke methylation of benzo[d]oxazol-2-amine.

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Example 58: compound n°58: (R)-2-((1H-tetrazol-5-yl)methyl)-N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methyl-3-phenylpropanamide may be synthesized from compound n°14 using methodologies described in the isosteres synthetic schemes section.

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Example 59: compound n°59: (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methyl-3-(5-oxo-4,5-dihydro-1,2,4-oxadiazol-3-yl)propanamide may be synthesized from compound n°14 using methodologies described in the isosteres synthetic schemes section.

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Example 60: compound n°60: (R)-3-benzyl-4-((4-(2-chlorophenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized using intermediate **1b** and 4-(2-chlorophenyl)-5-fluoro-N-methylthiazol-2-amine which was prepared in one step from intermediate **2c** as described in *Chem. Res. Toxicol.* 2007, 1954-1965.

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Example 61: compound n°61: (S)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-cyclohexyl-4-oxobutanoic acid may be synthesized from intermediates **1v** and **2a**

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using general method E.

Example 62: compound n°62: (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-cyclohexyl-4-oxobutanoic acid was synthesized from (S)-4-  
5 (tert-butoxy)-2-cyclohexyl-4-oxobutanoic acid and intermediate **2c** using general method E. (S)-4-(tert-butoxy)-2-cyclohexyl-4-oxobutanoic acid was synthesized from commercially available (S)-3-cyclohexyl-4-methoxy-4-oxobutanoic acid as described in steps 5 and 6 of general method B.

10 Example 63: compound n°63: (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-phenylbutanoic acid may be synthesized from intermediates **1a** and **2c** using general method E.

Example 64: compound n°64: (3R)-3-(4-(2-chlorophenyl)thiazol-2-yl)carbamoyl-  
15 4-phenylpentanoic acid may be synthesized from intermediate **2a** and (2R)-4-tert-butoxy-4-oxo-2-(1-phenylethyl)butanoic acid using general method E. (2R)-4-tert-butoxy-4-oxo-2-(1-phenylethyl)butanoic acid may be obtained by Stobbe condensation (**Scheme 6**).

20 Example 65: compound n°65: (R)-2-((1H-tetrazol-5-yl)methyl)-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-phenylpropanamide was synthesized from compound n°2 using methodologies described in the isosteres synthetic schemes section.

25 Example 66: compound n°66: (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(5-oxo-4,5-dihydro-1,2,4-oxadiazol-3-yl)propanamide was synthesized from compound n°2 using methodologies described in the isosteres synthetic schemes section.

30 Example 68: compound n°68: (3R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-2-methyl-4-oxobutanoic acid was synthesized as described in **Scheme 7**.

Example 69: compound n°69: (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-  
35 (3-hydroxyisoxazol-5-yl)propanamide may be synthesized using methodologies described in the isosteres synthetic schemes section.

Example 70: compound n°70: (R)-3-benzyl-4-(4-(2-chlorophenyl)pyrimidin-2-ylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and 4-(2-chlorophenyl)pyrimidin-2-amine using general method E. 4-(2-chlorophenyl)pyrimidin-2-amine was synthesized as described in **Scheme 8**.

Example 71: compound n°71: (R)-3-benzyl-4-(6-(2-chlorophenyl)pyridin-2-ylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and 6-(2-chlorophenyl)pyridin-2-amine using general method E. 6-(2-chlorophenyl)pyridin-2-amine was synthesized as described in **Scheme 8**.

Example 72: compound n°72: (E)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-4-phenylbut-3-enoic acid may be synthesized from (E)-2-benzylidene-4-tert-butoxy-4-oxobutanoic acid and intermediate **2a** using general method E. (E)-2-benzylidene-4-tert-butoxy-4-oxobutanoic acid was synthesized from maleic anhydride following steps 1, 2, 3, 5 and 6 of general method B.

Example 74: compound n°74: (Z)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-phenylbut-2-enoic acid may be synthesized as described in **Scheme 9**.

Example 75: compound n°75: (R)-3-(N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methylsulfamoyl)-4-phenylbutanoic acid may be synthesized as described in **Scheme 10**.

Example 76: compound n°76: (S)-3-(N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methylsulfamoyl)-4-phenylbutanoic acid may be synthesized as described in **Scheme 10**.

Example 79: compound n°79: (R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-fluoro-4-oxobutanoic acid may be synthesized as described in **Scheme 11**.

Example 80: compound n°80: (R)-3-benzyl-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)hex-5-enoic acid may be synthesized as described in **Scheme 11**.

Example 81: compound n°81: (E)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylbut-3-enoic acid was synthesized from (E)-2-benzylidene-4-tert-butoxy-4-oxobutanoic acid and intermediate **2c** using general method E. (E)-2-benzylidene-4-tert-butoxy-4-oxobutanoic acid was synthesized from maleic anhydride following steps 1, 2, 3, 5 and 6 of general method B.

Example 82: compound n°82: (3S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid may be synthesized from intermediate **2c** and (2R)-4-tert-butoxy-4-oxo-2-(1-phenylethyl)butanoic acid using general method E. (2R)-4-tert-butoxy-4-oxo-2-(1-phenylethyl)butanoic acid may be obtained by Stobbe condensation (**Scheme 6**).

Example 83: compound n°83: (R)-3-benzyl-4-((3-(2-chlorophenyl)-1,2,4-thiadiazol-5-yl)(methyl)amino)-4-oxobutanoic acid was synthesized as described in **Scheme 12**.

Example 84: compound n°84: (R)-3-benzyl-4-((3-(2-chlorophenyl)-1,2,4-oxadiazol-5-yl)(methyl)amino)-4-oxobutanoic acid may be synthesized as described in **Scheme 12**.

Example 85: compound n°85: (R)-3-benzyl-4-((1-(2-chlorophenyl)-1H-pyrazol-3-yl)(methyl)amino)-4-oxobutanoic acid may be synthesized as described in **Scheme 12**.

Example 86: compound n°86: (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(3-hydroxyisoxazol-5-yl)-N-methylpropanamide was synthesized using methodologies described in the isosteres synthetic schemes section.

Example 89: compound n°89: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclohexylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1w** and **2c** using general method E. Intermediate **1w** was synthesized by hydrogenation of intermediate **1b** using PtO<sub>2</sub> in MeOH.

Example 90: compound n°90: (R)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-5-methylhexanoic acid was synthesized from intermediate



**2c** and (R)-2-(2-*tert*-butoxy-2-oxoethyl)-4-methylpentanoic acid using general method E. (R)-2-(2-*tert*-butoxy-2-oxoethyl)-4-methylpentanoic acid was synthesized from (R)-3-(methoxycarbonyl)-5-methylhexanoic acid using methodology described in steps 5 and 6 of general method B.

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Example 91: compound n°91: (R)-3-benzyl-4-((4-(2-cyanophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2i** using general method E.

10 Example 92: compound n°92: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-phenylbutanoic. Phenylacetic acid was converted to its *t*Bu ester using *t*Bu-TCA. Treatment of this *t*Bu ester with LiHMDS followed by the addition of *t*-butyl bromoacetate provided 1-*tert*-butyl 4-methyl 2-phenylsuccinate. *t*Bu deprotection with TFA yielded 4-methoxy-4-oxo-2-phenylbutanoic acid. HATU  
15 coupling of this acid with intermediate **2a** and subsequent methyl ester saponification using LiOH yielded 4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-phenylbutanoic. Chiral preparative HPLC purification of this racemic mixture allowed isolating compound n°92.

20 Example 93: compound n°93: (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(3-fluorobenzyl)-4-oxobutanoic acid was synthesized from intermediates **1y** and **2a** using general method E and preparative HPLC purification.

Example 94: compound n°94: (S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-methylpentanoic acid was synthesized from (S)-4-*tert*-  
25 *butoxy*-2-isopropyl-4-oxobutanoic acid and intermediate **2c** using general method E. (S)-4-*tert*-*butoxy*-2-isopropyl-4-oxobutanoic acid was synthesized from commercially available (S)-3-(methoxycarbonyl)-4-methylpentanoic acid using reactions described in steps 5 and 6 of general method B.

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Example 95: compound n°95: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from (R)-4-*tert*-*butoxy*-4-oxo-2-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid and  
35 intermediate **2c** using general method E. (R)-4-*tert*-*butoxy*-4-oxo-2-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from commercially

available tetrahydro-2H-pyran-4-carbaldehyde using the HWE methodology (**Scheme 13**).

**Example 96:** compound n°96: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(ethyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2j** using general method E.

**Example 97:** compound n°97: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2k** using general method E.

**Example 98:** compound n°98: cis-6-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)cyclohex-3-enecarboxylic acid was synthesized from cis-3a,4,7,7a-tetrahydroisobenzofuran-1,3-dione and intermediate **2a** as described in **Scheme 14**.

**Example 99:** compound n°99: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid was synthesized from 4-*tert*-butoxy-2-(4-methoxybenzyl)-4-oxobutanoic acid and intermediate **2c** using general method E. 4-*tert*-butoxy-2-(4-methoxybenzyl)-4-oxobutanoic acid was synthesized from 4-methoxybenzaldehyde using the HWE methodology (**Scheme 13**).

**Example 100:** compound n°100: cis-6-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)cyclohex-3-enecarboxylic acid was synthesized from cis-3a,4,7,7a-tetrahydroisobenzofuran-1,3-dione and intermediate **2c** as described in **Scheme 14**.

**Example 101:** compound n°101: cis-2-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)cyclohexanecarboxylic acid was synthesized from cis-hexahydroisobenzofuran-1,3-dione and intermediate **2c** as described in **Scheme 14**.

**Example 102:** compound n°102: (R)-3-benzyl-4-(4-(2,5-dimethylthiophen-3-yl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and commercially available 4-(2,5-dimethylthiophen-3-yl)thiazol-2-amine using

general method E.

Example 103: compound n°103: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclohexylmethyl)-4-oxobutanoic acid was synthesized  
5 from 4-*tert*-butoxy-2-(cyclohexylmethyl)-4-oxobutanoic acid and intermediate **2c**  
using general method E. 4-*tert*-butoxy-2-(cyclohexylmethyl)-4-oxobutanoic acid  
was synthesized by hydrogenation of (E)-4-*tert*-butyl 1-methyl 2-  
benzylidenesuccinate using PtO<sub>2</sub> in MeOH.

10 Example 105: compound n°105: 4-((4-(2-chlorophenyl)thiazol-2-  
yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid was synthesized  
from 4-*tert*-butoxy-2-(cyclopentylmethyl)-4-oxobutanoic acid and intermediate **2c**  
using general method E. 4-*tert*-butoxy-2-(cyclopentylmethyl)-4-oxobutanoic acid  
was synthesized from commercially available cyclopentanecarbaldehyde using the  
15 HWE methodology (**Scheme 13**).

Example 106: compound n°106: (3S,4R)-3-((4-(2-chlorophenyl)thiazol-2-  
yl)(methyl)carbamoyl)-4-phenylpentanoic acid from intermediates **1z** and **2c**  
using general method E.

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Example 107: compound n°107: (R)-3-benzyl-4-(methyl(4-(2-(thiophen-3-  
yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from  
intermediate **1b** and N-methyl-4-(2-(thiophen-3-yl)phenyl)thiazol-2-amine using  
general method E. N-methyl-4-(2-(thiophen-3-yl)phenyl)thiazol-2-amine was  
25 synthesized from commercially available thiophen-3-ylboronic acid using the  
methodology shown in **Scheme 15**.

Example 108: compound n°108: (R)-3-benzyl-4-((4-(2-(6-chloropyridin-3-  
yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from  
30 intermediate **1b** and 4-(2-(6-chloropyridin-3-yl)phenyl)-N-methylthiazol-2-amine  
using general method E. 4-(2-(6-chloropyridin-3-yl)phenyl)-N-methylthiazol-2-  
amine was synthesized from commercially available 6-chloropyridin-3-ylboronic  
acid using the methodology shown in **Scheme 15**.

35 Example 109: compound n°109: (R)-4-((4-(2-chlorophenyl)thiazol-2-

yl)(methylamino)-4-oxo-3-(phenylamino)butanoic acid was synthesized from (R)-4-*tert*-butoxy-4-oxo-2-(phenylamino)butanoic acid and intermediate **2c** using general method E. (R)-4-*tert*-butoxy-4-oxo-2-(phenylamino)butanoic acid was synthesized from commercially available (R)-2-amino-4-*tert*-butoxy-4-oxobutanoic acid and iodobenzene using CuI catalyzed coupling as described in *J. Am. Chem. Soc.* **1998**, 120, 12459.

Example 110: compound n°110: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(4-methylbenzyl)-4-oxobutanoic acid was synthesized from 4-*tert*-butoxy-2-(4-methylbenzyl)-4-oxobutanoic acid and intermediate **2c** using general method E. 4-*tert*-butoxy-2-(4-methylbenzyl)-4-oxobutanoic acid was synthesized from 4-methylbenzaldehyde using the HWE methodology (**Scheme 13**).

Example 111: compound n°111: (R)-4-((4-([1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-3-benzyl-4-oxobutanoic acid was synthesized from intermediate **1b** and 4-([1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine using general method E. 4-([1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine was synthesized from commercially available phenylboronic acid using the methodology shown in **Scheme 15**.

Example 112: compound n°112: (R)-3-benzyl-4-(4-(2,5-dichlorothiophen-3-yl)thiazol-2-ylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and commercially available 4-(2,5-dichlorothiophen-3-yl)thiazol-2-amine using general method E.

Example 113: compound n°113: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(cyclopropylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1a1** (4-(*tert*-butoxy)-2-(cyclopropylmethyl)-4-oxobutanoic acid) and **2c** using general method E. **1a1** was synthesized from cyclopropanecarbaldehyde using the HWE methodology (**Scheme 13**).

Example 114: compound n°114: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-(thiazol-4-ylmethyl)butanoic acid was synthesized from intermediates **1b1** (4-(*tert*-butoxy)-4-oxo-2-(thiazol-4-ylmethyl)butanoic

acid) and **2c** using general method E. **1b1** was synthesized from thiazole-4-carbaldehyde using the HWE methodology (**Scheme 13**).

Example 115: compound n°115: (R)-3-benzyl-4-((4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and 4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)-N-methylthiazol-2-amine using general method E. 4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)-N-methylthiazol-2-amine was synthesized from (6-(dimethylamino)pyridin-3-yl)boronic acid and **2l** using the methodology shown in **Scheme 15**.

Example 116: compound n°116: (R)-3-benzyl-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and intermediate **2m** (4-(2-(6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2m** was synthesized from (6-methoxypyridin-3-yl)boronic acid and **2l** using the methodology shown in **Scheme 15**.

Example 117: compound n°117: (R)-3-benzyl-4-((4-(2-(2-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediate **1b** and (4-(2-(2-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. (4-(2-(2-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) was synthesized from (2-methoxypyridin-3-yl)boronic acid and **2l** using the methodology shown in **Scheme 15**.

Example 118: compound n°118: (R)-3-benzyl-4-((4-(2-((ethoxycarbonyl)amino)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2n** (ethyl (2-(2-(methylamino)thiazol-4-yl)phenyl)carbamate) using general method E. Intermediate **2n** was synthesized using the methodology described in **Scheme 16**.

Example 119: compound n°119: (R)-3-benzyl-4-((4-(2-(6-fluoropyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2p** (4-(2-(6-fluoropyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate

**2p** was synthesized from (6-fluoropyridin-3-yl)boronic acid and **2l** using the methodology described in **Scheme 15**.

5 Example 120: compound n°120: (R)-3-benzyl-4-(methyl(4-(2-(6-methylpyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2q** (N-methyl-4-(2-(6-methylpyridin-3-yl)phenyl)thiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2q** was synthesized from (6-methylpyridin-3-yl)boronic acid and **2l** using the methodology described in **Scheme 15**.

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Example 121: compound n°121: (R)-4-((2-amino-2-oxoethyl)(4-(2-chlorophenyl)thiazol-2-yl)amino)-3-benzyl-4-oxobutanoic acid was synthesized from intermediates **1b** and **2r** using general method E.

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Example 122: compound n°122: (R)-3-benzyl-4-oxo-4-((4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)butanoic acid was synthesized from intermediates **1b** and commercially available **2s** (4-(3-(trifluoromethoxy)phenyl)thiazol-2-amine) using general method E.

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Example 123: compound n°123: (R)-3-benzyl-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2t** (4-(2,5-dichlorophenyl)thiazol-2-amine) using general method E.

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Example 124: compound n°124: (R)-3-benzyl-4-((4-(3-chloro-4-fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2u** (4-(3-chloro-4-fluorophenyl)thiazol-2-amine) using general method E.

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Example 125: compound n°125: (R)-3-benzyl-4-((4-(3-chloro-4-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2v** (4-(3-chloro-4-methoxyphenyl)thiazol-2-amine) using general method E.

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Example 126: compound n°126: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-

yl)(3-methoxy-3-oxopropyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2x** using general method E.

Example 127: compound n°127: 3-(bicyclo[2.2.1]heptan-2-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1c1** (2-(bicyclo[2.2.1]heptan-2-ylmethyl)-4-(tert-butoxy)-4-oxobutanoic acid) and **2c** using general method E. **1c1** was synthesized from bicyclo[2.2.1]heptane-2-carbaldehyde using the HWE methodology (**Scheme 13**).

Example 128: compound n°128: (R)-3-benzyl-4-((4-(2-(6-ethoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2y** (4-(2-(6-ethoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2y** was synthesized from (6-ethoxypyridin-3-yl)boronic acid and **2l** using the methodology described in **Scheme 15**.

Example 129: compound n°129: (R)-3-benzyl-4-((4-(4'-methoxy-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2z** (4-(4'-methoxy-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2z** was synthesized from (4-methoxyphenyl)boronic acid and **2l** using the methodology described in **Scheme 15**.

Example 130: compound n°130: (R)-3-benzyl-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2a1** using general method E.

Example 131: compound n°131: (R)-1-(5-(2-(2-(2-benzyl-3-carboxy-N-methylpropanamido)thiazol-4-yl)phenyl)pyridin-2-yl)pyrrolidin-1-ium 2,2,2-trifluoroacetate was synthesized from intermediates **1b** and **2b1** (N-methyl-4-(2-(6-(pyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-amine) using general method E. Intermediate **2b1** was synthesized from 2-(pyrrolidin-1-yl)-5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)pyridine and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

Example 132: compound n°132: (R)-4-(2'-(2-(2-benzyl-3-carboxy-N-methylpropanamido)thiazol-4-yl)-[1,1'-biphenyl]-4-yl)morpholin-4-ium 2,2,2-trifluoroacetate was synthesized from intermediates **1b** and **2c1** (N-methyl-4-(4'-morpholino-[1,1'-biphenyl]-2-yl)thiazol-2-amine) using general method E. Intermediate **2c1** was synthesized from 4-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)morpholine and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

Example 133: compound n°133: (R)-3-benzyl-4-(methyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2d1** (N-methyl-4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-amine) using general method E. Intermediate **2d1** was synthesized from 4-(5-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)pyridin-2-yl)morpholine and **2l** using the methodology described in **Scheme 15**.

Example 134: compound n°134: (R)-3-benzyl-4-((4-(3'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2e1** (4-(3'-chloro-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2e1** was synthesized from (3-chlorophenyl)boronic acid and **2l** using the methodology described in **Scheme 15**.

Example 135: compound n°135: (R)-3-benzyl-4-((4-(2-(furan-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2f1** (4-(2-(furan-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2f1** was synthesized from furan-3-ylboronic acid and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

Example 136: compound n°136: (R)-3-benzyl-4-((4-(2-(6-(2-methoxyethoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2g1** (4-(2-(6-(2-methoxyethoxy)pyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2g1** was synthesized from 5-bromo-2-(2-methoxyethoxy)pyridine and **2l** using the methodology described in **Scheme 17**.



Example 138: compound n°138: (R)-3-benzyl-4-((4-(4'-isopropyl-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2h1** (4-(4'-isopropyl-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate  
5 **2h1** was synthesized from (4-isopropylphenyl)boronic acid and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

Example 139: compound n°139: (R)-3-(cyclopentylmethyl)-4-((4-(2-(6-methoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was  
10 synthesized from (R)-4-*tert*-butoxy-2-(cyclopentylmethyl)-4-oxobutanoic acid (ee=50%) and intermediate **2m** using general method E and chiral preparative HPLC purification. (R)-4-*tert*-butoxy-2-(cyclopentylmethyl)-4-oxobutanoic acid (ee=50%) was synthesized from commercially available cyclopentanecarbaldehyde using the HWE methodology as described in **Scheme**  
15 **13**.

Example 140: compound n°140: (R)-3-benzyl-4-((4-(2-(5-fluoro-6-methoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was  
20 synthesized from intermediates **1b** and **2i1** (4-(2-(5-fluoro-6-methoxy)pyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2i1** was synthesized from 5-bromo-3-fluoro-2-methoxypyridine using the methodology described in **Scheme 17**.

Example 141: compound n°141: (R)-3-benzyl-4-(methyl(4-(2-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was  
25 synthesized from intermediates **1b** and **2j1** (N-methyl-4-(2-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)phenyl)thiazol-2-amine) using general method E. Intermediate **2j1** was synthesized from 5-bromo-2-((tetrahydro-2H-pyran-4-yl)oxy)pyridine and **2l** using the methodology described in **Scheme 17**.

Example 142: compound n°142: (R)-3-benzyl-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid from intermediates **1b** and  
30 **2w** using general method E.

Example 143: compound n°143: 4-((4-(2-chlorophenyl)thiazol-2-

yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1d1** (4-(*tert*-butoxy)-2-(furan-2-ylmethyl)-4-oxobutanoic acid) and **2c** using general method E. **1d1** was synthesized from furan-2-carbaldehyde using the HWE methodology described **Scheme 13**.

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Example 144: compound n°144: (R)-3-benzyl-4-((4-(2-cyclopropylphenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2k1** (4-(2-cyclopropylphenyl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2k1** was synthesized from cyclopropylboronic acid and **2l** using the methodology described in **Scheme 15**.

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Example 145: compound n°145: (R)-3-benzyl-4-((4-(4'-(dimethylamino)-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2i1** (4-(4'-(dimethylamino)-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E. Intermediate **2i1** was synthesized from N,N-dimethyl-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)aniline using the methodology described in **Scheme 15**.

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Example 146: compound n°146: (R)-3-benzyl-4-((4-(3'-fluoro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2m1** (4-(3'-fluoro-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2m1** was synthesized from (3-fluorophenyl)boronic acid and 4-(2-bromophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**.

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Example 147: compound n°147: (R)-3-benzyl-4-((4-(3',5'-difluoro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2n1** (4-(3',5'-difluoro-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E. Intermediate **2n1** was synthesized from (3,5-difluorophenyl)boronic acid and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

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Example 148: compound n°148: (R)-3-benzyl-4-((4-(2-chloro-6-

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fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2o1** (4-(2-chloro-6-fluorophenyl)thiazol-2-amine) using general method E.

5 Example 149: compound n°149: (R)-3-benzyl-4-((4-(4'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2p1** (4-(4'-chloro-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2p1** was synthesized from (4-chlorophenyl)boronic acid and **2l** by Suzuki  
10 coupling with the conditions described in **Scheme 15**.

Example 150: compound n°150: (R)-3-benzyl-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2q1** (1-(5-(2-(2-(methylamino)thiazol-4-yl)phenyl)pyridin-2-yl)pyrrolidin-2-one) using general method E. Intermediate  
15 **2q1** was synthesized from 1-(5-bromopyridin-2-yl)pyrrolidin-2-one and **2l** using the methodology described in **Scheme 17**.

Example 151: compound n°151: (R)-3-benzyl-4-((4-(4-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2r1** (4-(4-chloro-2-(6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2r1**  
20 was synthesized from (6-methoxypyridin-3-yl)boronic acid and 4-(2-bromo-4-chlorophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromo-4-chlorophenyl)-N-methylthiazol-2-amine  
25 was synthesized using general method C.

Example 152: compound n°152: (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2s1** (4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2s1**  
30 was synthesized from (6-methoxypyridin-3-yl)boronic acid and 4-(2-bromo-5-chlorophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromo-5-chlorophenyl)-N-methylthiazol-2-amine  
35 was synthesized using general method C.

Example 153: compound n°153: (R)-3-benzyl-4-((4-(3-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2t1** (4-(3-fluoro-2-(6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E and preparative  
5 HPLC purification. Intermediate **2t1** was synthesized from (6-methoxypyridin-3-yl)boronic acid and 4-(2-bromo-3-fluorophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromo-3-fluorophenyl)-N-methylthiazol-2-amine was synthesized using general method C.

10 Example 154: compound n°154: (3R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydrofuran-2-yl)methyl)butanoic acid was synthesized from intermediates **1e1** and **2c** using general method E.

15 Example 155: compound n°155: (3R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydrofuran-2-yl)methyl)butanoic acid was synthesized from intermediates **1b** and **2u1** using general method E followed by debenzilation with FeCl<sub>3</sub> in DCM.

20 Example 156: compound n°156: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(3-hydroxypropyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2v1** using general method E followed by debenzilation with FeCl<sub>3</sub> in DCM.

25 Example 157: compound n°157: (R)-3-benzyl-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2w1** (4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2w1** was synthesized from 5-bromo-3-chloro-2-methoxypyridine and **2l** using the methodology described in **Scheme 17**.

30 Example 158: compound n°158: (R)-3-benzyl-4-((4-(2-(6-(benzyloxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2x1** (4-(2-(6-(benzyloxy)pyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E and preparative HPLC  
35 purification. Intermediate **2x1** was synthesized from (6-benzyloxypyridin-3-

yl)boronic acid and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

**Example 159:** compound n°159: (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2a1** using general method E.

**Example 160:** compound n°160: (R)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2c** using general method E.

**Example 161:** compound n°161: (R)-3-benzyl-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2y1** using general method E.

**Example 162:** compound n°162: (R)-3-benzyl-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2z1** using general method E.

**Example 163:** compound n°163: (R)-3-benzyl-4-((4-(3,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2a2** using general method E.

**Example 164:** compound n°164: (R)-3-benzyl-4-((4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2b2** using general method E.

**Example 165:** compound n°165: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2c** using general method E.

**Example 166:** compound n°166: (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2w** using general method E.

Example 167: compound n°167: (R)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2w** using general method E.

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Example 168: compound n°168: (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2a1** using general method E.

10 Example 169: compound n°169: (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methoxy-pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2c2** (N-cyclopropyl-4-(2-(6-methoxy-pyridin-3-yl)phenyl)thiazol-2-amine) using general method E. Intermediate **2c2** was synthesized from (6-methoxy-pyridin-3-yl)boronic acid and  
15 4-(2-bromo-4-chlorophenyl)-N-cyclopropylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromo-4-chlorophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

20 Example 170: compound n°170: (R)-3-benzyl-4-((2-hydroxyethyl)(4-(2-(6-methoxy-pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2d2** (N-(2-(benzyloxy)ethyl)-4-(2-(6-methoxy-pyridin-3-yl)phenyl)thiazol-2-amine) using general method E followed by debenylation with FeCl<sub>3</sub> in DCM. Intermediate **2d2** was synthesized from (6-methoxy-pyridin-3-yl)boronic acid and N-(2-(benzyloxy)ethyl)-4-(2-  
25 bromophenyl)thiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. N-(2-(benzyloxy)ethyl)-4-(2-bromophenyl)thiazol-2-amine was synthesized using general method C.

30 Example 171: compound n°171: (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2d1** using general method E.

35 Example 172: compound n°172: (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(2-hydroxyethyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2d3** using general method E followed by

debenzylation with FeCl<sub>3</sub> in DCM.

Example 173: compound n°173: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2c** using general method E.

Example 174: compound n°174: (R)-3-benzyl-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2e2** using general method E.

Example 175: compound n°175: (R)-3-benzyl-4-(methyl(4-(2,3,5-trichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2f2** using general method E.

Example 176: compound n°176: (R)-3-benzyl-4-((4-(4-chloro-[1,1'-biphenyl]-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2g2** (4-(4-chloro-[1,1'-biphenyl]-3-yl)-N-methylthiazol-2-amine) using general method E. Intermediate **2g2** was synthesized from phenylboronic acid and 4-(5-bromo-2-chlorophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(5-bromo-2-chlorophenyl)-N-methylthiazol-2-amine was synthesized using general method C.

Example 177: compound n°177: (R)-3-benzyl-4-((4-(2-chloro-5-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2h2** (4-(2-chloro-5-(6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2h2** was synthesized from (6-methoxypyridin-3-yl)boronic acid and 4-(5-bromo-2-chlorophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(5-bromo-2-chlorophenyl)-N-methylthiazol-2-amine was synthesized using general method C.

Example 178: compound n°178: (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2c2** using general method E.

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Example 179: compound n°179: (R)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2c2** using general method E.

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Example 180: compound n°180: (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2i2** (N-cyclopropyl-4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-amine) using general method E. Intermediate **2i2** was synthesized from 4-(4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)phenyl)morpholine and 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

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Example 181: compound n°181: (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2i2** using general method E.

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Example 182: compound n°182: (R)-3-benzyl-4-(methyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2j2** (N-methyl-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2j2** was synthesized from commercially available 7-bromo-4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazine and **2l** using the methodology described in **Scheme 17**.

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Example 183: compound n°183: (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2k2** (1-(5-(2-(cyclopropylamino)thiazol-4-yl)phenyl)pyridin-2-yl)pyrrolidin-2-one) using general method E. Intermediate **2k2** was synthesized from 1-(5-bromopyridin-2-yl)pyrrolidin-2-one and 4-(2-bromo-4-chlorophenyl)-N-cyclopropylthiazol-2-amine using the methodology described in **Scheme 17**. 1-(5-bromopyridin-2-

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yl)pyrrolidin-2-one was synthesized by reacting 5-bromopyridin-2-amine with Na<sub>2</sub>HPO<sub>4</sub> in CHCl<sub>3</sub>, 4-bromobutyryl chloride and NaOMe in MeOH as described in *Tetrahedron* **1957**, *1*, 9635. 4-(2-bromo-4-chlorophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

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Example 184: compound n°184: (R)-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2i2** using general method E.

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Example 185: compound n°185: (R)-3-benzyl-4-(methyl(4-(2-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2i2** using general method E.

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Example 186: compound n°186: (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2m2** using general method E and preparative HPLC purification.

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Example 187: compound n°187: (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2q1** using general method E.

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Example 188: compound n°188: (R)-3-benzyl-4-(cyclopropyl(4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2n2** using general method E and preparative HPLC purification.

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Example 189: compound n°189: (R)-3-benzyl-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2m2** using general method E and preparative HPLC purification.

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Example 190: compound n°190: (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

was synthesized from intermediates **1g1** and **2m2** using general method E and preparative HPLC purification.

Example 191: compound n°191: (R)-3-benzyl-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2o2** using general method E and preparative HPLC purification.

Example 192: compound n°192: (R)-3-benzyl-4-((4-(2-(difluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2c4** using general method E

Example 193: compound n°193: (R)-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2o2** using general method E.

Example 194: compound n°194: (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2p2** (N-cyclopropyl-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-amine) using general method E. Intermediate **2p2** was synthesized from commercially available 7-bromo-4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazine and **2l** using the methodology described in **Scheme 17**. 4-(2-bromo-4-chlorophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

Example 195: compound n°195: (3R,4S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid was synthesized from intermediates **1h1** and **2c** using general method E.

Example 196: compound n°196: (R)-2-(2-benzyl-3-carboxypropanamido)-5-(2-chlorophenyl)pyridine 1-oxide was synthesized from intermediates **1b** and **2q2** (2-amino-5-(2-chlorophenyl)pyridine) using general method E followed by oxidation with MCPBA. **2q2** was made from commercially available 5-bromopyridin-2-

amine and (2-chlorophenyl)boronic acid using Suzuki coupling.

Example 197: compound n°197: (R)-3-benzyl-4-((5-(2-chlorophenyl)pyrazin-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2r2** (5-(2-chlorophenyl)pyrazin-2-amine) using general method E. **2r2** was made from commercially available 5-bromopyrazin-2-amine and (2-chlorophenyl)boronic acid using Suzuki coupling.

Example 198: compound n°198: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(morpholinomethyl)-4-oxobutanoic acid was synthesized as described in **Scheme 18**.

Example 199: compound n°199: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-methoxyethyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2s2** using general method E.

Example 200: compound n°200: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylamino)-4-oxobutanoic acid was synthesized from intermediates **1j1** ((R)-4-(*tert*-butoxy)-2-(cyclopentylamino)-4-oxobutanoic acid) and **2c** using general method E. **1j1** was made from (R)-2-amino-4-(*tert*-butoxy)-4-oxobutanoic acid and cyclopentanone by reductive amination using sodium cyanoborohydride in methanol.

Example 201: compound n°201: (R)-3-benzyl-4-((2-(benzyloxy)ethyl)(4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2u1** using general method E.

Example 202: compound n°202: (R)-3-benzyl-4-((4-(5-methylfuran-2-yl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2u2** (4-(5-methylfuran-2-yl)thiazol-2-amine) using general method E.

Example 203: compound n°203: (R)-3-benzyl-4-oxo-4-((3-(3-(trifluoromethyl)phenyl)-1H-pyrazol-5-yl)amino)butanoic acid was synthesized from intermediates **1b** and commercially available **2v2** (3-(3-

(trifluoromethyl)phenyl)-1H-pyrazol-5-amine) using general method E.

Example 204: compound n°204: (R)-3-benzyl-4-((4-(5-chloro-2-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2w2** (4-(5-chloro-2-methoxyphenyl)thiazol-2-amine) using general method E.

Example 205: compound n°205: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-hydroxybenzyl)-4-oxobutanoic acid was synthesized from intermediates **1k1** (4-(*tert*-butoxy)-2-(4-(methoxymethoxy)benzyl)-4-oxobutanoic acid) and **2c** using general method E, the MOM group was deprotected with TFA in DCM. **1k1** was synthesized from 4-(methoxymethoxy)benzaldehyde using the HWE methodology (**Scheme 13**).

Example 206: compound n°206: (R)-3-benzyl-4-((4-(4'-cyano-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2x2** (2'-(2-(methylamino)thiazol-4-yl)-[1,1'-biphenyl]-4-carbonitrile) using general method E. Intermediate **2x2** was synthesized from (4-cyanophenyl)boronic acid and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

Example 207: compound n°207: (3R)-3-benzyl-4-((3-carbamoyl-4-(2,4-dichlorophenyl)-5-methylthiophen-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2y2** (2-amino-4-(2,4-dichlorophenyl)-5-methylthiophene-3-carbonitrile) using general method E.

Example 208: compound n°208: (R)-3-benzyl-4-((4-(3'-methoxy-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2z2** (4-(3'-methoxy-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E. Intermediate **2z2** was synthesized from (3-methoxyphenyl)boronic acid and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

Example 209: compound n°209: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((2-methylthiazol-4-yl)methyl)-4-oxobutanoic acid was

synthesized from intermediates **111** (4-(*tert*-butoxy)-2-((2-methylthiazol-4-yl)methyl)-4-oxobutanoic acid) and **2c** using general method E. **111** was synthesized from 2-methylthiazole-5-carbaldehyde using the HWE methodology (**Scheme 13**).

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Example 210: compound n°210: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((5-methylisoxazol-3-yl)methyl)-4-oxobutanoic acid was synthesized from intermediates **1m1** (4-(*tert*-butoxy)-2-((5-methylisoxazol-3-yl)methyl)-4-oxobutanoic acid) and **2c** using general method E. **1m1** was synthesized from 5-methylisoxazole-3-carbaldehyde using the HWE methodology (**Scheme 13**).

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Example 211: compound n°211: (R)-3-benzyl-4-((4-(2'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2a3** (4-(2'-chloro-[1,1'-biphenyl]-2-yl)-N-methylthiazol-2-amine) using general method E and preparative HPLC purification. Intermediate **2a3** was synthesized from (2-chlorophenyl)boronic acid and **2l** by Suzuki coupling with the conditions described in **Scheme 15**.

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Example 212: compound n°212: (R)-3-benzyl-4-((4-(2-(2-methoxypyrimidin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2b3** (4-(2-(2-methoxypyrimidin-5-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2b3** was synthesized from 5-bromo-2-methoxypyrimidine and **2l** using the methodology described in **Scheme 17**.

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Example 213: compound n°213: (R)-3-benzyl-4-((4-(2,5-difluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available **2c3** (4-(2,5-difluorophenyl)thiazol-2-amine) using general method E.

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Example 214: compound n°214: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(oxazol-4-ylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1n1** (4-(*tert*-butoxy)-2-(oxazol-4-ylmethyl)-4-oxobutanoic acid) and **2c** using general method E. **1n1** was synthesized from oxazole-4-

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carbaldehyde using the HWE methodology (**Scheme 13**).

**Example 215:** compound n°215: (3R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydrofuran-3-yl)methyl)butanoic acid was synthesized from intermediates **1o1** and **2c** using general method E.

**Example 216:** compound n°216: (R)-3-benzyl-4-(methyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2e3** (1-methyl-6-(2-(2-(methylamino)thiazol-4-yl)phenyl)-3,4-dihydro-1,8-naphthyridin-2(1H)-one) using general method E.

Intermediate **2e3** was synthesized from 6-bromo-1-methyl-3,4-dihydro-1,8-naphthyridin-2(1H)-one (which was obtained by treatment of 6-bromo-3,4-dihydro-1,8-naphthyridin-2(1H)-one with NaH in DMF and MeI) and **2l** using the methodology described in **Scheme 17**. Intermediate **1b** was synthesized using the HWE methodology (**Scheme 13**):

38.125 mmol of (E)-2-benzylidene-4-(tert-butoxy)-4-oxobutanoic acid, 75 mL of methanol and 38.125 mmol of DCA were successively introduced into a Schlenk tube under Ar. The solution was degassed using three argon/vacuum cycles, and subsequently transferred into the reaction vessel under inert atmosphere. To this degassed solution was added, under argon flow, 0.121 mmol of the RuCl<sub>2</sub>-[(S)-BINAP] catalyst. The reaction vessel was then transferred into a Parr autoclave, under Ar flow. The Parr vessel was purged 3 times with H<sub>2</sub> with a pressure up to 20 sbars; the pressure was then adjusted to 10 bars. The Parr autoclave was put into an oil bath at 55°C. The reaction mixture was stirred at this temperature for 3 days. The reaction mixture was allowed to cool to RT and the hydrogen pressure was released carefully and the Parr vessel opened. The crude reaction mixture was concentrated to dryness using rotary evaporator to afford 16.74 g of a colored solid. An aliquot of the solid was diluted with water and acidified with HCl 6N to pH 1; then, the solution was extracted with EtOAc. The organic layer was dried over magnesium sulfate, concentrated using rotary evaporator to yield the desired intermediate (ee= 82.6%, determined by chiral HPLC).

Solid (16.74 g) was recrystallized from an ACN/water mixture. Recrystallized product was diluted with water and acidified with 6N HCl to pH 1, the solution was extracted with EtOAc. The organic layer was dried over magnesium sulfate, concentrated at rotavap to yield the desired intermediate **1b** (ee= 96.6%,  
5 determined by chiral HPLC).

Example 217: compound n°217: (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2f3** (N-methyl-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-amine) using general method E.  
10 Intermediate **2f3** was synthesized from 5-bromo-1-methyl-1H-pyrrolo[2,3-b]pyridine (which was obtained by treatment of 5-bromo-1H-pyrrolo[2,3-b]pyridine with NaH in DMF and MeI) and **2l** using the methodology described in **Scheme 17**.

15 Example 218: compound n°218: (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2g3** (N-cyclopropyl-4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)thiazol-2-amine) using general method E and preparative HPLC purification. **2g3** was synthesized from 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine and 6-(dimethylamino)pyridin-3-ylboronic acid by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

25 Example 219: compound n°219: (R)-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2h3** (4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)-N-cyclopropylthiazol-2-amine) using general method E. **2g3** was synthesized from 5-bromo-3-chloro-2-methoxypyridine and 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine using the methodology described  
30 in **Scheme 17**. 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

Example 220: compound n°220: (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2i3** (N-cyclopropyl-4-(2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-amine) using general method E. **2i3** was synthesized from 5-bromo-3-fluoro-2-methoxypyridine and 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine using the methodology described in **Scheme 17**. 4-(2-bromophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

10 Example 221: compound n°221: (R)-3-benzyl-4-((4-(2-chloro-5-(difluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2j3** using general method E.

Example 222: compound n°222: (R)-3-benzyl-4-((4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2k3** (4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. **2k3** was synthesized from 5-bromo-3-chloro-2-methoxypyridine and 4-(2-bromo-5-chlorophenyl)-N-methylthiazol-2-amine using the methodology described in **Scheme 17**. 4-(2-bromo-5-chlorophenyl)-N-methylthiazol-2-amine was synthesized using general method C.

Example 223: compound n°223: (R)-4-((4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2l3** (4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)-N-cyclopropylthiazol-2-amine) using general method E. **2l3** was synthesized from 5-bromo-3-chloro-2-methoxypyridine and 4-(2-bromo-5-chlorophenyl)-N-cyclopropylthiazol-2-amine using the methodology described in **Scheme 17**. 4-(2-bromo-5-chlorophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.



Example 224: compound n°224: (R)-4-((4-(5-chloro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1f1** and **2m3** (4-(5-chloro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)-N-cyclopropylthiazol-2-amine) using general method E. **2m3** was synthesized from 5-bromo-3-fluoro-2-methoxypyridine and 4-(2-bromo-5-chlorophenyl)-N-cyclopropylthiazol-2-amine using the methodology described in **Scheme 17**. 4-(2-bromo-5-chlorophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general method C.

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Example 225: compound n°225: (S)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1p1** ((S)-2-benzyl-4-(*tert*-butoxy)-4-oxobutanoic acid) and **2a** using general method E. **1p1** was synthesized from (S)-3-benzyl-4-methoxy-4-oxobutanoic acid using the chemistry described in steps 5 and 6 of general method B.

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Example 227: compound n°227: (R)-3-benzyl-4-((4-benzylthiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available 4-benzylthiazol-2-amine using general method E.

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Example 229: compound n°229: (R)-3-benzyl-4-oxo-4-((5-phenyl-4H-1,2,4-triazol-3-yl)amino)butanoic acid was synthesized from intermediates **1b** and commercially available 5-phenyl-4H-1,2,4-triazol-3-amine using general method E.

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Example 230: compound n°230: 3-([1,1'-biphenyl]-4-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1q1** (2-([1,1'-biphenyl]-4-ylmethyl)-4-(*tert*-butoxy)-4-oxobutanoic acid) and **2c** using general method E. **1q1** was synthesized from [1,1'-biphenyl]-4-carbaldehyde using the HWE methodology described in **Scheme 13**.

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Example 231: compound n°231: (R)-3-benzyl-4-((4-(1-methyl-1H-pyrazol-4-yl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available 4-(1-methyl-1H-pyrazol-4-yl)thiazol-2-amine using general method E.

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Example 232: compound n°232: ((R)-3-benzyl-4-((4-(4-methyl-1,2,5-oxadiazol-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available 4-(4-methyl-1,2,5-oxadiazol-3-yl)thiazol-2-amine using general method E.

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Example 233: compound n°233: (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-1H-pyrazol-4-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2n3** (N-methyl-4-(2-(1-methyl-1H-pyrazol-4-yl)phenyl)thiazol-2-amine) using general method E. **2n3** was synthesized from commercially available 1-methyl-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)-1H-pyrazole and **2l** using the methodology described in **Scheme 15**.

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Example 234: compound n°234: (3R)-3-benzyl-4-((4-(2-(3,5-dimethylisoxazol-4-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2o3** (4-(2-(3,5-dimethylisoxazol-4-yl)phenyl)-N-methylthiazol-2-amine) using general method E. **2o3** was synthesized from commercially available 3,5-dimethyl-4-(4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl)isoxazole and **2l** using the methodology described in **Scheme 15**.

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Example 235: compound n°235: (R)-3-benzyl-4-((4-((2-chlorophenyl)carbonyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2p3** using general method E and preparative HPLC purification. **2p3** was synthesized as described in **Scheme 21**.

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Example 236: compound n°236: (R)-3-benzyl-4-((6-(2-chlorophenyl)pyridazin-3-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2q3** (6-

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(2-chlorophenyl)pyridazin-3-amine) using general method E. **2q3** was synthesized from 6-bromopyridazin-3-amine and 2-chlorophenylboronic acid by Suzuki coupling with the conditions described in **Scheme 8**.

5 Example 237: compound n°237: (R)-3-benzyl-4-(methyl(4-(2-(2-oxopyrrolidin-1-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2r3** (1-(2-(2-(methylamino)thiazol-4-yl)phenyl)pyrrolidin-2-one) using general method E. **2r3** was synthesized as described in **Scheme 16**.

10 Example 238: compound n°238: (S)-2-((1-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-1-oxo-3-phenylpropan-2-yl)oxy)acetic acid was synthesized as described in **Scheme 22**.

Example 239: compound n°239: (R)-3-benzyl-4-((1-methyl-5-phenyl-1H-imidazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and commercially available 1-methyl-5-phenyl-1H-imidazol-2-amine using general method E.

Example 240: compound n°240: (R)-3-benzyl-4-((4-(2-(1-(2-methoxyethyl)-6-oxo-1,6-dihydropyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2s3** (1-(2-methoxyethyl)-5-(2-(2-(methylamino)thiazol-4-yl)phenyl)pyridin-2(1H)-one) using general method E. **2s3** was synthesized from 5-bromo-1-(2-methoxyethyl)pyridin-2(1H)-one and **2l** using the methodology described in **Scheme 17**.

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Example 241: compound n°241: (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-6-oxo-1,6-dihydropyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2t3** (1-methyl-5-(2-(2-(methylamino)thiazol-4-yl)phenyl)pyridin-2(1H)-one) using general method E. **2t3** was synthesized from 5-bromo-1-methylpyridin-2(1H)-one and **2l** using the methodology described in **Scheme 17**.

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Example 242: compound n°242: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((2,5-dimethyloxazol-4-yl)methyl)-4-oxobutanoic acid was synthesized from intermediates **1r1** (*tert*-butyl 4-amino-3-((2,5-dimethyloxazol-4-yl)methyl)-4-oxobutanoate) and **2c** using general method E. **1r1** was synthesized from 2,5-dimethyloxazole-4-carbaldehyde using the HWE methodology described in **Scheme 13**.

Example 243: compound n°243: 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((1-methyl-1H-pyrazol-5-yl)methyl)-4-oxobutanoic acid was synthesized from intermediates **1s1** (4-(*tert*-butoxy)-2-((1-methyl-1H-pyrazol-5-yl)methyl)-4-oxobutanoic acid) and **2c** using general method E. **1s1** was synthesized from 1-methyl-1H-pyrazole-5-carbaldehyde using the HWE methodology described in **Scheme 13**.

Example 244: compound n°244: (R)-3-benzyl-4-((4-(2-(6-hydroxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized by debenzylation of compound n°158 with FeCl<sub>3</sub> in DCM and preparative HPLC purification.

Example 245: compound n°245: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)((S)-2-hydroxypropyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2v3** using general method E and preparative HPLC purification.

Example 246: compound n°246: (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)((R)-2-hydroxypropyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2w3** using general method E and preparative HPLC purification.

Example 247: compound n°247: (R)-3-(cyclohexylmethyl)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was

synthesized from intermediates **1w** and **2c2** using general method E and preparative HPLC purification.

Example 248: compound n°248: (R)-3-benzyl-4-((4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2u3** (4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2u3** was synthesized from (6-methoxypyridin-3-yl)boronic acid and 4-(2-bromo-5-fluorophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromo-5-fluorophenyl)-N-methylthiazol-2-amine was synthesized using general method C.

Example 250: compound n°250: (R)-3-benzyl-4-((4-(4,5-difluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2x3** (4-(4,5-difluoro-2-(6-methoxypyridin-3-yl)phenyl)-N-methylthiazol-2-amine) using general method E. Intermediate **2x3** was synthesized from (6-methoxypyridin-3-yl)boronic acid and 4-(2-bromo-4,5-difluorophenyl)-N-methylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromo-4,5-difluorophenyl)-N-methylthiazol-2-amine was synthesized using general method C.

Example 251: compound n°251: (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1t1** and **2a1** using general method E.

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Example 252: compound n°252: (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1t1** and **2z1** using general method E.

Example 253: compound n°253: (R)-3-(furan-2-ylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid was

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synthesized from intermediates **1t1** and **2m** using general method E.

Example 254: compound n°254: (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(thiophen-2-ylmethyl)butanoic acid was synthesized  
5 from intermediates **1u1** and **2c** using general method E.

Example 255: compound n°255: (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2y3** (4-(5-chloro-2-(6-  
10 methoxypyridin-3-yl)phenyl)-N-cyclopropylthiazol-2-amine) using general method E. Intermediate **2y3** was synthesized from (6-methoxypyridin-3-yl)boronic acid and 4-(2-bromo-5-chlorophenyl)-N-cyclopropylthiazol-2-amine by Suzuki coupling with the conditions described in **Scheme 15**. 4-(2-bromo-5-chlorophenyl)-N-cyclopropylthiazol-2-amine was synthesized using general  
15 method C.

Example 256: compound n°256: (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2k2** using general method E.  
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Example 257: compound n°257: (R)-3-benzyl-4-((4-(2,3-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2z3** using general method E.

25 Example 258: compound n°258: (R)-3-benzyl-4-(methyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2a4** using general method E.

Example 259: compound n°259: (R)-4-(cyclopropyl(4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2n2** using  
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general method E.

Example 260: compound n°260: (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid was synthesized from intermediates **1t1** and **2c** using general method E.

Example 261: compound n°261: (R)-4-(methyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2a4** using general method E.

Example 262: compound n°262: (R)-3-benzyl-4-(cyclopropyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid was synthesized from intermediates **1b** and **2b4** using general method E.

Example 263: compound n°263: (R)-4-(cyclopropyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid was synthesized from intermediates **1g1** and **2b4** using general method E.

## BIOLOGY EXAMPLES

### BRIEF DESCRIPTION OF THE DRAWINGS

**Figure 1** represents the effect of compound 9 on glucose-uptake measured in 3T3-L1 adipocyte cells in response to 10nM of insulin.

**Figure 2** represents the effect of compound 9 on glucose-uptake measured in adipocytes isolated from High-fat diet fed mice

**Figure 3** represents the effect of compound 9 on isoprenaline-induced lipolysis in adipocytes from high-fat diet fed mice.

**Figure 4** represents the inhibition of *in-vivo* lipolysis following the injection of compound 2 in mice.

**Figure 5** represents the inhibition of *in-vivo* lipolysis following the injection of compound 9 in mice.

**Figure 6** represents the effect of compound 89 on isoprenaline-induced lipolysis in adipocytes isolated from normal rats.

5 **Figure 7** represents the effect of compounds 14, 89, 126, 139, 142, 155, 169 and 183 on isoprenaline-induced lipolysis in adipocytes isolated from normal rats.

**Figure 8** represents the inhibition of *in-vivo* lipolysis following the injection of compound 14, 169 or 183 in mice.

10 **Figure 9** represents the effect of compound 169 on the GLP-1 release from NCI-H716 cells.

**Membrane binding assay: GTP $\gamma$ S binding assay.**

The following assay can be used for determination of GPR43 activation. When a GPCR is in its active state, either as a result of ligand binding or constitutive activation, the receptor couples to a G protein and stimulates the release of GDP and subsequent binding of GTP to the G protein. The alpha subunit of the G protein-receptor complex acts as a GTPase and slowly hydrolyses the GTP to GDP, at which point the receptor normally is deactivated. Activated receptors continue to exchange GDP for GTP. The non-hydrolysable GTP analog, [<sup>35</sup>S]GTP $\gamma$ S, was used to demonstrate enhance binding of [<sup>35</sup>S]GTP $\gamma$ S to membranes expressing receptors. The assay uses the ability of GPCR to stimulate [<sup>35</sup>S]GTP $\gamma$ S binding to membranes expressing the relevant receptors. The assay can, therefore, be used in the direct identification method to screen candidate compounds to endogenous or not endogenous GPCR.

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25 Preparation of membrane extracts:

Membrane extracts were prepared from cells expressing the human GPR43 receptor (hGPR43) as follows: the medium was aspirated and the cells were scraped from the plates in Ca<sup>++</sup> and Mg<sup>++</sup>-free Phosphate-buffered saline (PBS). The cells were then centrifuged for 3 min at 1500 g and the pellets were resuspended in buffer A (15 mM Tris-HCl pH 7.5, 2 mM MgCl<sub>2</sub>, 0.3 mM EDTA, 1 mM EGTA) and homogenized in a glass homogenizer. The crude membrane fraction was collected by two consecutive centrifugation steps at 40.000 x g for 25 min separated by a washing step in buffer A. The final pellet was resuspended in 500  $\mu$ l of buffer B (75 mM Tris-HCl pH 7.5, 12.5 mM MgCl<sub>2</sub>, 0.3 mM EDTA,

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1mM EGTA, 250 mM sucrose) and flash frozen in liquid nitrogen. Protein content was assayed by the Folin method.

GTP $\gamma$ S assay (SPA method):

5 The assay was performed in the presence of SCFA, and was used to determine the activity of the compounds of the invention.

The [ $^{35}$ S]GTP $\gamma$ S assay was incubated in 20 mM HEPES pH7.4, 100 mM NaCl, 10  $\mu$ g/ml saponin, 30 mM of MgCl<sub>2</sub>, 10  $\mu$ M of GDP, 5  $\mu$ g membrane-expressing hGPR43, 250 $\mu$ g of wheatgerm agglutinin beads (Amersham, ref: RPNQ001), a  
 10 range concentration of compounds (from 30  $\mu$ M to 1 nM) in a final volume of 100  $\mu$ l for 30 min at room temperature. The SCFA propionate was used at 1 mM final concentration as positive control. The plates were then centrifuged for 10 minutes at 2000 rpm, incubated for 2 hours at room temperature and counted for 1 min in a scintillation counter (TopCount, PerkinElmer). The results of the tested  
 15 compounds are reported as the concentration of the compound required to reach 50% (EC<sub>50</sub>) of the maximum level of the activation induced by these compounds.

When tested in the assay described above and by way of illustration the compounds in Table 3 activate GPR43 receptor with an EC<sub>50</sub> ranging from 13 nM  
 20 to 2910 nM.

Table 3: Compounds EC<sub>50</sub> values in GTP $\gamma$ <sup>35</sup>S assay.

| Compound n° | EC <sub>50</sub> (nM) |
|-------------|-----------------------|
| 1           | 109                   |
| 2           | 273                   |
| 3           | 653                   |
| 4           | 759                   |
| 5           | 292                   |
| 8           | 563                   |
| 9           | 60                    |
| 10          | 405                   |
| 11          | 680                   |
| 12          | 424                   |
| 13          | 875                   |

|     |     |
|-----|-----|
| 14  | 109 |
| 15  | 426 |
| 16  | 389 |
| 17  | 643 |
| 18  | 104 |
| 19  | 322 |
| 20  | 96  |
| 21  | 260 |
| 22  | 365 |
| 23  | 327 |
| 83  | 98  |
| 89  | 37  |
| 90  | 88  |
| 91  | 354 |
| 92  | 249 |
| 93  | 493 |
| 60  | 95  |
| 94  | 200 |
| 95  | 628 |
| 96  | 249 |
| 97  | 32  |
| 98  | 113 |
| 99  | 567 |
| 100 | 142 |
| 101 | 67  |
| 102 | 442 |
| 103 | 137 |
| 105 | 76  |
| 106 | 216 |
| 107 | 361 |
| 108 | 305 |
| 109 | 457 |
| 110 | 452 |
| 111 | 393 |

|     |     |
|-----|-----|
| 112 | 538 |
| 113 | 226 |
| 114 | 539 |
| 115 | 72  |
| 116 | 175 |
| 119 | 421 |
| 121 | 766 |
| 123 | 134 |
| 126 | 183 |
| 129 | 858 |
| 131 | 96  |
| 132 | 276 |
| 133 | 241 |
| 135 | 796 |
| 139 | 38  |
| 141 | 996 |
| 142 | 14  |
| 143 | 77  |
| 144 | 897 |
| 149 | 225 |
| 150 | 353 |
| 154 | 832 |
| 155 | 94  |
| 156 | 867 |
| 158 | 49  |
| 160 | 244 |
| 164 | 161 |
| 165 | 30  |
| 166 | 13  |
| 168 | 43  |
| 169 | 19  |
| 171 | 50  |
| 172 | 355 |
| 175 | 57  |

|     |      |
|-----|------|
| 177 | 127  |
| 178 | 30   |
| 182 | 92   |
| 183 | 57   |
| 191 | 37   |
| 194 | 30   |
| 195 | 2169 |
| 196 | 1832 |
| 197 | 1910 |
| 199 | 1383 |
| 201 | 1362 |
| 202 | 1509 |
| 203 | 1783 |
| 206 | 2317 |
| 207 | 2910 |
| 209 | 2466 |
| 210 | 2678 |
| 216 | 341  |
| 217 | 126  |
| 218 | 32   |
| 220 | 27   |
| 222 | 102  |
| 223 | 87   |
| 224 | 27   |
| 246 | 628  |

**Cell based assay: Calcium flux. The Aequorin-based assay**

The following assay can be used for determination of GPR43 activation. The aequorin assay uses the responsiveness of mitochondrial apoaequorin to intracellular calcium release induced by the activation of GPCRs (Stables et al., 1997, Anal. Biochem. 252:115-126; Detheux et al., 2000, J. Exp. Med., 192 1501-1508). Briefly, GPCR-expressing clones are transfected to coexpress mitochondrial apoaequorin and G $\alpha$ 16. Cells expressing GPR43 receptor are incubated with 5  $\mu$ M Coelenterazine H (Molecular Probes) for 4 hours at room temperature, washed in DMEM-F12 culture medium and resuspended at a

concentration of  $0.5 \times 10^6$  cells/ml (the amount can be changed for optimization). Cells are then mixed with test compounds and light emission by the aequorin is recorded with a luminometer for 30 sec. Results are expressed as Relative Light Units (RLU). Controls include assays using cells not expressing GPR43 (mock transfected), in order to exclude possible non-specific effects of the candidate compound.

Aequorin activity or intracellular calcium levels are “changed” if light intensity increases or decreases by 10% or more in a sample of cells, expressing a GPR43 and treated with a compound of the invention, relative to a sample of cells expressing the GPR43 but not treated with the compound of the invention or relative to a sample of cells not expressing the GPR43 (mock-transfected cells) but treated with the compound of the invention.

**15 Cell based assay: Intracellular Inositol-Phosphate accumulation assay. (Gq-associated receptor)**

The following assay can be used for determination of GPR43 activation. On day 1, GPR43-expressing cells in mid-log phase are detached with PBS-EDTA, centrifuged at  $2000 \times g$  for 2 min and resuspended in medium without antibiotics. After counting, cells are resuspended at  $4 \times 10^5$  cells/ml (the amount can be changed for optimization) in medium without antibiotics, distributed in a 96 well plate (100 $\mu$ l/well) and the plate is incubated overnight at 37°C with 5% CO<sub>2</sub>. On day 2, the medium is removed and the compounds of the invention, at increasing concentrations, are added (24 $\mu$ l/well) and the plate is incubated for 30 min. at 37°C in a humidified atmosphere of 95% air with 5% CO<sub>2</sub>. The IP1 concentrations are then estimated using the IP1-HTRF assay kit (Cisbio international, France) following the manufacturer recommendations.

**Cell based assay: cAMP accumulation assay (G<sub>i/o</sub> associated receptor)**

30 The following assay can be used for determination of GPR43 activation. Cells expressing GPR43 in mid-log phase and grown in media without antibiotics are detached with PBS-EDTA, centrifuged and resuspended in media without antibiotics. Cells are counted and resuspended in assay buffer at  $4.2 \times 10^5$  cells/ml. 96 well plates are filled with 12  $\mu$ l of cells ( $5 \times 10^3$  cells/well), 6  $\mu$ l of compound

of the invention at increasing concentrations and 6  $\mu$ l of Forskolin (final concentration of 10  $\mu$ M). The plate is then incubated for 30 min. at room temperature. After addition of the lysis buffer, cAMP concentrations are estimated, according to the manufacturer specification, with the HTRF kit from  
5 Cis-Bio International.

#### **In vitro assays to assess compound activity in 3T3-L1 cell line**

3T3-L1 adipocytes cell line has been described as cellular model to assess compounds mimicking insulin-mediated effect such as inhibition of lipolysis and activation of glucose uptake.

10

##### Lipolysis.

3T3-L1 cells (ATCC) are cultured in Dulbecco's modified eagle's medium (DMEM) containing 10% (v/v) bovine serum (fresh regular medium) in 24 well plate. On day 0 (2 days after 3T3-L1 preadipocytes reached confluence), cells are  
15 induced to differentiate by insulin (10 $\mu$ g/ml), IBMX (0.5 mM) and dexamethasone (1  $\mu$ M). On day 3 and every other 3<sup>rd</sup> day thereafter, fresh regular medium is substituted until day 14.

On day 14, the medium is removed and cells are washed twice with 1 ml of a wash buffer (Hank's balanced salt solution). The wash solution is removed and  
20 the SCFA or the compounds of the invention, or a combination of both, are added at the desired concentration in Hank's buffer supplemented with 2% BSA-FAF and incubated for 10 minutes à 37°C. Then, isoproterenol (100 nM) is added to induce lipolysis and incubate for 30 minutes at 37°C. The supernatants are collected in a glycerol-free container. 25 $\mu$ l (the amount can be changed for  
25 optimization) of cell-free supernatants are dispensed in 96-well microtiter plate, 25  $\mu$ l of free glycerol assay reagent (Chemicon, the amount can be changed for optimization) is added in each well and the assay plate is incubated for 15 minutes at room temperature. The absorbance is recorded with a spectrophotometer at 540 or 560 nm. Using the supernatants, the free fatty acids amount can be assessed  
30 using the NEFA assay kit (Wako) according the manufacturer's recommendations.

##### Glucose Uptake.

3T3-L1 cells are differentiated as described previously with or without of 30  $\mu$ M

of compound of the invention (the concentration can be changed for optimization) during the 14 days of differentiation. The day of the experiment, the cells are washed twice with a KREBS-Ringer bicarbonate (pH 7.3) supplemented with 2 mM sodium pyruvate and starved for 30 minutes in the same buffer at 37°C in an atmosphere containing 5% CO<sub>2</sub> and 95% O<sub>2</sub>. Various amount of SCFA, compounds of the invention or combination of both are then added with or without 10 nM of insulin (the amount can be changed for optimization) for 30 minutes at 37°C in an atmosphere containing 5% CO<sub>2</sub> and 95% O<sub>2</sub>. Then, D-(<sup>3</sup>H)-2 deoxyglucose (0.2 µCi/well) and D-2-deoxyglucose (0.1mM) is added for 30 minutes. To stop the reaction, the cells are immersed in ice-cold saline buffer, washed for 30 min, and then dissolved in NaOH 1M at 55°C for 60 minutes. NaOH is neutralized with HCl 1M. The 3H labeled radioactivity of an aliquot of the extract is counted in the presence of a scintillation buffer.

When tested in the glucose-uptake assay described above and by way of illustration the compound n° 9 significantly increases the glucose-uptake in response to 10nM of insulin (Figure 1).

It is important to note that in the above-mentioned assay the positive allosteric modulators (PAMs) disclosed in Lee et al., (Mol. Pharmacol. 74(6) pp 1599-1609, 2008) do not increase the glucose uptake. This lack of effect on glucose uptake could be explained by the weak affinity (~1µM) of the PAMs disclosed by Lee et al.

#### **In vitro assays to assess compound activity in NCI-H716 cell line**

Human intestinal cell line NCI-H716 has been described as cellular model to assess compounds mimicking nutrient-mediated effect such as glucagon-like peptide-1 (GLP-1) secretion.

##### GLP-1 release.

NCI-H716 cells (ATCC, Manassas) are cultured in Dulbecco's modified eagle's medium (DMEM) containing 10% (v/v) bovine serum, 2 mM L-glutamine, 100 IU/ml penicillin and 100 µg/ml streptomycin in 75 ml flask. Cell adhesion and endocrine differentiation is initiated by growing cells in 96-well plate coated with matrigel in High Glucose DMEM containing 10% (v/v) bovine serum, 2 mM L-glutamine, 100 IU/ml penicillin and 100 µg/ml streptomycin for 2 days.

On day 2, the medium is removed and cells are washed once with a pre-warmed

wash buffer (Phosphate Buffered salt solution). The wash solution is removed and the SCFA or the compounds of the invention, or a combination of both, are added at the desired concentration in High Glucose DMEM containing 0.1% (v/v) bovine serum and incubated for 2 hours at 37°C. The supernatants are collected in  
5 a container. Using the cell-free supernatants, the GLP-1 amount is assessed using a GLP-1 specific ELISA assay kit according the manufacturer's recommendations (ALPCON).

When tested in the GLP-1 release assay described above and by way of illustration the compound n° 169 significantly increases the GLP-1 secretion from  
10 NCI-H716 cells (Figure 9).

#### **Ex vivo assays to assess compound activity in adipocytes from normal and High-fat diet fed mice**

Mice C56Black6 male were housed in Makrolon type IV group housing cages (56  
15 x 35 x 20 cm<sup>3</sup>) throughout the experimental phase. Animals' cages litters were changed once a week. They were housed in groups of 10 animals at 12 light dark (at 8h30 pm lights off), 22 +/- 2 °C and 50 +/- 5 % relative humidity. Animals were acclimated one week. During the whole phase, standard diet or diet high in energy from fat (Research Diets, New Brunswick, NJ) and tap water were  
20 provided *ad libitum*. The animals were 16 weeks old at the time of the study.

For keeping only mice that have responded to the high fat diet, fasted glycemia was measured in these mice just before performing the ex-vivo study.

#### Glucose uptake assay in isolated adipocytes.

25 Animals were killed by cervical dislocation and epididymal fat pads were removed and digested in collagenase buffer at 37°C/120rpm for approximately 50 minutes. The digest was filtered through gauze to recover the adipocytes, which were washed and resuspended in Krebs-Ringer Hepes (KRH) buffer containing 1% BSA, 200nM adenosine and 2mM glucose.

30 Isolated adipocytes were washed in glucose-free KRH-buffer and resuspended to 30%. Adipocytes were then incubated at 37°C/80 rpm with either compound of the invention (30µM, 10µM and 1µM) in the presence or absence of insulin (10nM) for 30 min. 2-deoxyglucose and 2-deoxy-D-[1-<sup>3</sup>H]-glucose (<sup>3</sup>H-2-DOG) were added and incubation continued for 10 min. The reactions were then stopped



by addition of cytochalasin b followed by centrifugation through dinonylphthalate to recover the adipocytes. The uptake of  $^3\text{H}$ -2-DOG- was measured by scintillation. Each data point was investigated in triplicates in two independent experiments.

- 5 When tested in the assay described above and by way of illustration the compound n° 9 significantly increase the glucose uptake in adipocytes isolated from High-fat diet fed mice (Figure 2).

Lipolysis assay in isolated adipocytes.

- 10 Isolated adipocytes were diluted to 5% in KRH-buffer and were pre-treated with compound of the invention (30 $\mu\text{M}$ , 10 $\mu\text{M}$  and 1 $\mu\text{M}$ ) for 30 min at 37°C/120rpm. After the pre-treatment, Isoprenaline (1 $\mu\text{M}$ ) was added to the adipocytes followed by 30 min incubation at 37 °C/150 rpm. The reactions were put on ice and the buffer was assayed spectrophotometrically for the production of NADH<sup>+</sup> from  
15 glycerol breakdown in reactions catalyzed by glycerol kinase and glycerol-3-phosphate dehydrogenase and/or Non Esterified Fatty Acid (NEFA). Each data point was investigated in triplicates in two independent experiments.

- According to the method described above and by way of illustration the compound n° 9 dose-dependently inhibits isoprenaline-induced lipolysis in  
20 adipocytes from high-fat diet fed mice (Figure 3).

Compounds n° 14, 89, 126, 139, 142, 155, 169 and 183 inhibit isoprenaline-induced lipolysis in adipocytes isolated from normal rats according to the method described above (Figures 6 and 7).

- It is important to note that in the above-mentioned assay the positive allosteric  
25 modulators (PAMs) disclosed in Lee et al., (Mol. Pharmacol. 74(6) pp 1599-1609, 2008) do not display an anti-lipolytic effect on rat adipocytes. This lack of effect could be explained by the weak affinity (~1 $\mu\text{M}$ ) of the PAMs disclosed by Lee et al.

### **In vivo assay to assess compound activity in rodent diabetes model**

#### Genetic rodent models:

Rodent models of T2D associated with obesity and insulin resistance have been developed. Genetic models such as db/db and ob/ob in mice and fa/fa in Zucker rats have been developed for understanding the pathophysiology of disease and testing candidate therapeutic compounds as compound of the invention. The homozygous animals, C57 Black/6-db/db mice developed by Jackson Laboratory are obese, hyperglycemic, hyperinsulinemic and insulin resistant (J Clin Invest, 1990, 85:962-967), whereas heterozygotes are lean and normoglycemic. In the db/db model, mice progressively develop insulinopenia with age, a feature commonly observed in late stages of human T2D when sugar levels are insufficiently controlled. Since this model resembles that of human T2D, the compounds are tested for activities including, but not limited to, lowering of plasma glucose and triglycerides. Zucker (fa/fa) rats are severely obese, hyperinsulinemic, and insulin resistant, and the fa/fa mutation may be the rat equivalent of the murine db mutation.

Genetically altered obese diabetic mice (db/db) (male, 7-9 weeks old) are housed under standard laboratory conditions at 22°C and 50% relative humidity, and maintained on a diet of Purina rodent chow and water *ad libitum*. Prior to treatment, blood is collected from the tail vein of each animal and blood glucose concentrations are determined using one touch basic glucose monitor system (Lifescan). Mice that have plasma glucose levels between 250 to 500 mg/dl are used. Each treatment group consists of several mice that are distributed so that the mean of glucose levels are equivalent in each group at the start of the study. Db/db mice are dosed by micro-osmotic pumps, inserted using isoflurane anesthesia, to provide compounds of the invention, saline, or an irrelevant compound to the mice intravenously (i.v). Blood is sampled from the tail vein at intervals thereafter and analyzed for blood glucose concentrations. Significant differences between groups (comparing compounds of the invention to saline-treated) are evaluated using Student t-test.

The high-fat diet fed mouse:

This model was originally introduced by Surwit et al. in 1988. The model has shown to be accompanied by insulin resistance, as determined by intravenous glucose tolerance tests, and of insufficient islet compensation to the insulin  
5 resistance. The model has, accordingly, been used in studies on pathophysiology of impaired glucose tolerance (IGT) and type 2 diabetes and for development of new treatments.

C57BL/6J mice are maintained in a temperature-controlled room (22°C) on a 12-h  
10 light-dark cycle. One week after arrival, mice are divided into two groups and are fed either a high-fat diet or received continuous feeding of a normal diet for up to 12 months. On caloric basis, the high-fat diet consist of 58% fat from lard, 25.6% carbohydrate, and 16.4% protein (total 23.4 kJ/g), whereas the normal diet contains 11.4% fat, 62.8% carbohydrate, and 25.8% protein (total 12.6 kJ/g). Food  
15 intake and body weight are measured once a week, and blood samples are taken at indicated time points from the intraorbital retrobulbar plexus from nonfasted anesthetized mice.

For intravenous glucose tolerance tests (IVGTTs), 4-h fasted mice are  
20 anesthetized with 7.2 mg/kg fluanison/fenlanyl and 15.3 mg/kg midazolam. Thereafter a blood sample is taken from the retrobulbar, intraorbital, capillary plexus, after which D-glucose (1 g/kg) is injected intravenously in a tail vein (volume load 10 l/ g). Additional blood samples are taken at 1, 5, 10, 20, 50, and 75 min after injection. Following immediate centrifugation at 4C, plasma is  
25 separated and stored at -20C until analysis. For oral glucose tolerance tests (OGTTs), 16-h fasted anesthetized mice are given 150 mg glucose by gavage through a gastric tube (outer diameter 1.2 mm), which is inserted in the stomach. Blood samples are taken at 0, 15, 30, 60, 90, and 120 min after glucose administration and handled as above.

30 Administration of the compounds: Five-week-old mice are fed a high-fat or a normal diet for 8 weeks. After 4 weeks, the mice are additionally given the compound of the invention in their drinking water (0.3 mg/ml, the amount can be changed for optimization. Control groups are given tap water without compound.  
35 After another 4 weeks, the mice are subjected to an OGTT as described above.

Insulin and glucose measurements: Insulin is determined enzymatically using an ELISA assay kit (Linco Research, St. Charles, MO). Plasma glucose is determined by the glucose oxidase method.

5 **In vivo assay to assess compound anti-obesity activity in rodent model**

Mouse acute food intake and weight change:

Male C57BL/6N wild-type mice are weighed and vehicle or compounds of the invention are administered by oral gavage to male mice approximately 30 min  
10 prior to the onset of the dark phase of the light cycle. Mice are fed *ad libitum* in the dark phase following dosing. A preweighed aliquot of a highly palatable medium high fat diet is provided in the food hopper of the cage 5 min prior to the onset of the dark phase of the light cycle and weighed 2 and 18h after the onset of the dark phase of the light cycle.

15

Acute studies in Diet-induced obesity (DIO) rats:

For acute experiments, male Sprague-Dawley DIO rats from Charles River Laboratories are raised from 4 weeks of age on a diet moderately high fat (32% kcal) and high in sucrose (25% kcal). Animals are used at 12 weeks of age and are  
20 maintained on a 12/12h light dark cycle. The rats are randomized into groups (n=6/group) for compounds of the invention and vehicle dosing. Rats are weighed 17h after dosing to determine effects on overnight body weight gain. Compounds of the invention are administered orally or s.c. at amount desired 1h before the start of the dark cycle. Powdered food is provided in food cups which are weighed  
25 continuously at 5 min intervals over 18h and the data are recorded using a computerized system.

Chronic studies in Diet-induced obesity rats:

For the 14-day chronic experiment, male Sprague-Dawley DIO rats are obtained  
30 as described above. Animals are used at 15 weeks of age and are maintained on a 12/12 hour light-dark cycle. Rats are conditioned to dosing for 4 days prior to baseline measurements, using an oral gavage or a s.c. route of vehicle. Thereafter, animals are dosed daily with vehicle or compound by oral gavage or s.c.. Compound of the invention or vehicle is administered 1h before the dark cycle for  
35 14 days. Body composition is measured by dual energy X-ray densitometry

(DEXAscan) 5 days prior to the study and at the end of the 14-day study. Daily endpoints included body weight and food intake.

### **In vivo assay to assess compound anti-lipolytic activity in rodent model**

5

Male C57BL/6N wild-type are housed one per cage in a room maintained on a 12h light/dark cycle under constant temperature (22-25°C) with *ad libitum* access to food and water. The anti-lipolytic effects of the compounds of the invention are studied in awake mice. Animals are fasted overnight before experimental use. On the day of the experiment, animals are put in metabolic cages and left undisturbed to acclimate to the environment for 1-2h. blood samples are taken at indicated time points from the intraorbital retrobulbar plexus. A 1% sodium citrate saline solution is used to flush the lines. A pre-treatment blood sample is obtained from each animal to determine baseline values for free fatty acids (FFA) and triglycerides (TG). Compounds of the invention are given via oral gavage, sc injection, iv injection or ip injection for each different series of experiments. Blood samples are collected into pre-cooled tubes pre-coated with heparin (200µl blood, Li-heparin, Sarstedt) for determination triglycerides and glycerol and in tri-potassium EDTA added sodium fluoride (200 µl blood, K<sub>3</sub>-EDTA, 1.6 mg/mL + 1% NaF, Sarstedt) for determination of plasma free fatty acids. The tubes are placed on wet ice pending processing. Blood samples will be centrifuged at 4000 x g, at 4°C, 15 min the resulting plasma will be transferred into non-coated tubes and stored at -80°C until analyses. The plasma is thawed at 4°C for determinations of FFA and TG using commercial kits (Wako Chemicals).

25

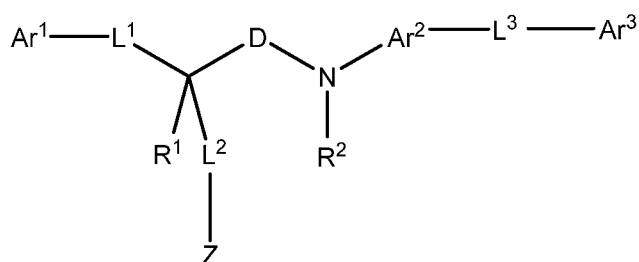
According to the method described above and by way of illustration the compounds n° 2 and 9 administered by ip injection, inhibit, 15 minutes following the injection, in vivo FFA baseline at the concentration of 15mg/kg from normal diet fed mice in comparison to the vehicle (Figures 4 and 5). The compounds n° 14, 169 and 183 orally administered, inhibit, 15 minutes following the dosing, in vivo FFA baseline at the concentration of 50mg/kg from normal diet fed mice in comparison to the vehicle (Figure 8).

30

While embodiments of the invention have been illustrated and described, it is not intended that these embodiments illustrate and describe all possible forms of the invention. Rather, the words used in the specification are words of description rather than limitation and it is understood that various changes may be made  
5 without departing from the spirit and scope of the invention.

CLAIMS

1. A compound of formula I:



(I),

- 5 **Ar<sup>1</sup>** is a 5- to 6-membered aryl or heteroaryl group, 3- to 8-membered cycloalkyl group, a 3- to 8-membered heterocycloalkyl group, or a linear or branched C<sub>3</sub>-C<sub>6</sub> alkyl group, each of the aryl, heteroaryl, cycloalkyl, heterocycloalkyl, or alkyl groups being optionally substituted by one or more groups selected from halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, 10 alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkoxyalkoxy, alkylamino, aminoalkyl, carboxy, alkoxyacarbonyl, cycloalkyloxycarbonyl, heterocyclyloxycarbonyl, aryloxycarbonyl, heteroaryloxycarbonyl, 15 alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, 20 carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or two 25 substituents form an alkylenedioxy group or a haloalkylenedioxy group, or two substituents form a cycloalkyl or heterocycloalkyl moiety together with the cycloalkyl or heterocycloalkyl group they are attached to, or fused to the aryl,

heteroaryl, cycloalkyl or heterocycloalkyl group may be one or more cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, 5 aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl;

$L^1$  is a single bond,  $C_1-C_2$  alkylene,  $C_1-C_2$  alkenylene, each optionally being substituted by one or more substituents selected from halo,  $C_1-C_2$  alkyl,  $C_1-C_2$  haloalkyl; or  $L^1$  is  $-N(R^N)-$ , wherein  $R^N$  is H or  $C_1-C_2$  alkyl; or  $L^1$  and  $R^1$  together 10 are  $=CH-$ ;

$R^1$  is H, halo, allyl, or a  $C_1-C_4$  alkyl group, which may optionally be substituted by one or more groups selected from halo or  $C_1-C_4$  alkyl;

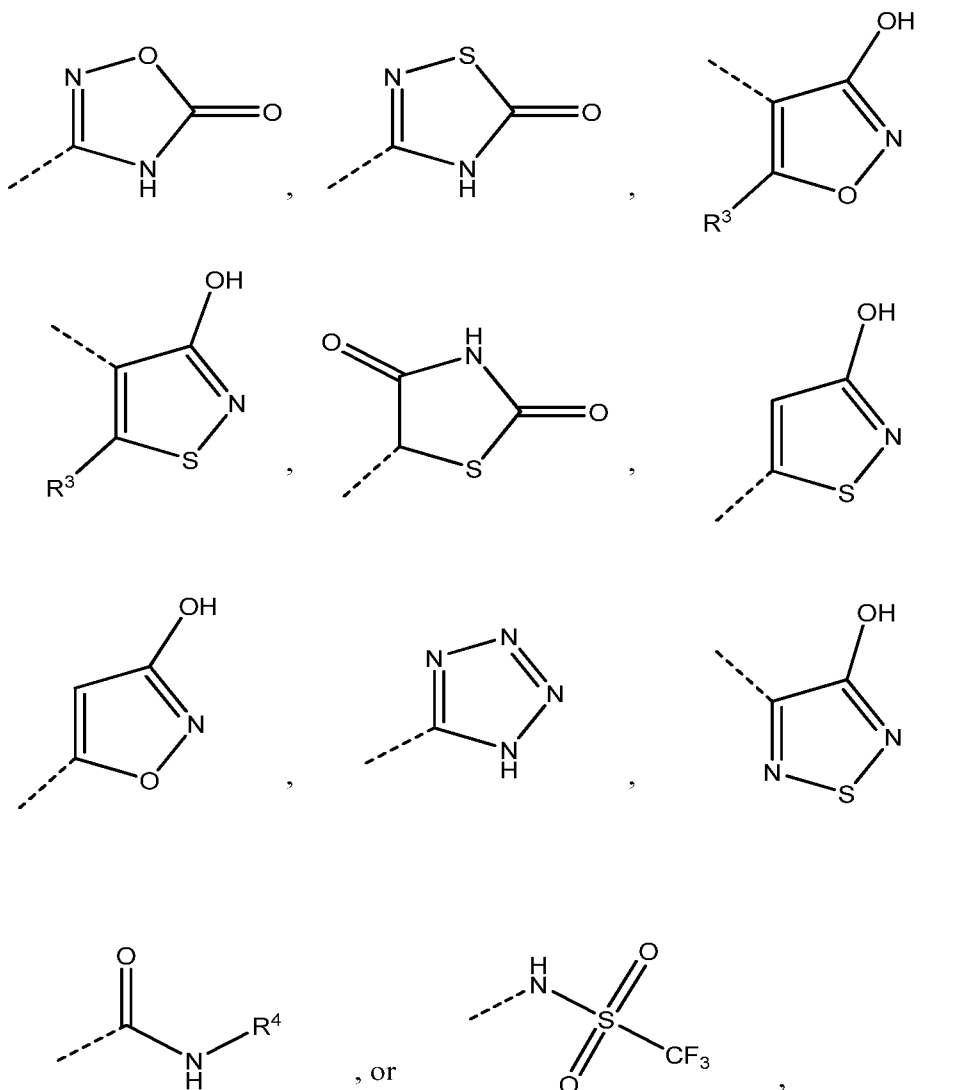
$L^2$  is a  $C_1-C_3$  alkylene,  $C_2-C_4$  alkenylene,  $C_3-C_6$  cycloalkylene, each of which being optionally substituted by one or more groups selected from halo, alkyl, 15 alkoxy, or haloalkyl; or  $L^2$  is  $-O-CH_2-$

$R^1$  and  $L^2$  together are  $=CH-$ , under the condition that  $-L^1-Ar^1$  is H; or

$R^1$  and  $L^2$  together are a 5- to 6-membered saturated or unsaturated carbocyclic or heterocyclic group, preferably a cyclohexenyl group, under the condition that  $-L^1-Ar^1$  is H;

20  $Z$  is selected from the group consisting of  $-COOR$ ,





wherein **R** is H or linear or branched alkyl, aryl, acyloxyalkyl, dioxolene, **R**<sup>3</sup> is H, methyl or ethyl, and **R**<sup>4</sup> is hydroxyl  $-\text{SO}_2\text{CH}_3$ ,  $-\text{SO}_2\text{cyclopropyl}$  or  $-\text{SO}_2\text{CF}_3$ ;

**D** is CO or SO<sub>2</sub>;

- 5 **R**<sup>2</sup> is H, linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>2</sub>-C<sub>4</sub> alkenyl, C<sub>2</sub>-C<sub>4</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl, C<sub>3</sub>-C<sub>6</sub> cycloalkylalkyl, aryl, arylalkyl, heteroarylalkyl, alkoxyalkyl, aminocarbonylalkyl, or aralkyloxyalkyl; each of the alkyl, hydroxyalkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heteroarylalkyl, alkoxyalkyl, aminocarbonylalkyl, and aralkyloxyalkyl groups being optionally substituted by
- 10 one or more substituents selected from halo, cyano, alkyl, hydroxyalkyl,

haloalkyl, alkenyl, alkynyl, heteroalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, alkylcarbonyloxy, alkylcarbonylamino, haloalkylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, 5 alkylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, sulfamoyl, alkylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group,

$\text{Ar}^2$  is a 5- or 6-membered heterocyclic group or a 5- or 6-membered heteroaryl 10 group, optionally substituted by one or more substituents selected from halo, cyano, alkyl, hydroxyalkyl, haloalkyl, alkenyl, alkynyl, heteroalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, alkylcarbonyloxy, alkylcarbonylamino, haloalkylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, 15 hydroxycarbamoyl, alkylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, sulfamoyl, alkylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group,

20  $\text{L}^3$  is a single bond,  $\text{C}_1\text{-C}_3$  alkylene,  $\text{C}_1\text{-C}_3$  cycloalkylene  $\text{C}_1\text{-C}_3$  alkenylene or carbonylamino;

$\text{Ar}^3$  is an aryl, heteroaryl, or  $\text{C}_1\text{-C}_4$  alkyl group, each of which being optionally substituted by one or more groups selected from halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, 25 heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, cycloalkyloxy-carbonyl, heterocyclyloxy-carbonyl, aryloxy-carbonyl, heteroaryloxy-carbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, 30 arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl,

heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, cycloalkylaminocarbamoyl, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclisulfonyl, arylsulfonyl, heteroarylsulfonyl sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclisulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or two substituents form an alkylenedioxy group or a haloalkylenedioxy group, or two substituents form a cycloalkyl or heterocycloalkyl moiety together with the cycloalkyl or heterocycloalkyl group they are attached to, or fused to the aryl, heteroaryl, cycloalkyl or heterocycloalkyl group may be one or more cycloalkyl, aryl, heterocyclisulfonyl or heteroaryl moiety, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkoxyalkyl, alkoxyalkoxy, cycloalkylalkoxy, amino, alkylamino, alkylaminoalkoxy, cycloalkylamino, aralkylamino, alkylaminoalkyl, alkylaminocarbonyl, alkylcarbonyl, cycloalkylcarbonylamino, alkylheterocyclisulfonyl, alkylheteroaryl, alkylsulfonyl, alkylsulfonylamino, aralkyl, aralkyloxy, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclisulfonyl, heterocyclisulfonyloxy, hydroxyl, oxo, or sulfonyl, or  $L^3-Ar^3$  form an aryl, preferably phenyl, or heteroaryl group fused to  $Ar^2$ , wherein each of said aryl or heteroaryl groups fused to  $Ar^2$  are optionally substituted by one or more halo, preferably chloro and fluoro;

with the following provisos:

$Ar^2-L^3-Ar^3$  is not 4-(4-butylphenyl)thiazol-2-yl, 4-(4-ethylphenyl)thiazol-2-yl, 4-(para-tolyl)thiazol-2-yl, 4-phenylthiazol-2-yl, 4-(4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)phenyl)thiazol-2-yl, 4-(4-isopropylphenyl)thiazol-2-yl, 4-(4-isobutylphenyl)thiazol-2-yl, 4-(4-(tert-butyl)phenyl)thiazol-2-yl, 4-(4-butylphenyl)-5-methylthiazol-2-yl, 4-(4-ethylphenyl)-5-methylthiazol-2-yl, 5-methyl-4-(para-tolyl)thiazol-2-yl, 5-methyl-4-phenylthiazol-2-yl, 5-methyl-4-(4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)phenyl)-5-methylthiazol-2-yl, 4-(4-isopropylphenyl)-5-methylthiazol-2-yl, 4-(4-isobutylphenyl)-5-methylthiazol-2-yl, 4-(4-(tert-butyl)phenyl)-5-methylthiazol-2-yl, 4-(4-butyl-3-methylphenyl)thiazol-2-yl, 4-(4-ethyl-3-methylphenyl)thiazol-2-yl, 4-(3,4-dimethylphenyl)thiazol-2-yl, 4-(meta-tolyl)thiazol-2-yl, 4-(3-methyl-4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)-3-methylphenyl)thiazol-2-yl, 4-(4-isopropyl-3-methylphenyl)thiazol-2-yl,

4-(4-isobutyl-3-methylphenyl)thiazol-2-yl, 4-(4-(tert-butyl)-3-methylphenyl)thiazol-2-yl, 4-(4-butyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-ethyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(3,4-dimethylphenyl)-5-methylthiazol-2-yl, 5-methyl-4-(meta-tolyl)thiazol-2-yl, 5-methyl-4-(3-methyl-4-propylphenyl)thiazol-2-yl, 4-(4-(sec-butyl)-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-isopropyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-isobutyl-3-methylphenyl)-5-methylthiazol-2-yl, 4-(4-(tert-butyl)-3-methylphenyl)-5-methylthiazol-2-yl;

$\text{Ar}^3$  is not (7H-pyrrolo[2,3-d]pyrimidin)-4yl;

10  $\text{Ar}^2$  is not 5-cyano-thiazolyl;

the compound of formula I is none of.

2-[[[4-(4-butylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexane carboxylic acid,

6-[[[(4,5-dimethyl-2-thiazolyl) amino] carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[5-(cyclopentylmethyl)-1, 3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[5-acetyl-4-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[4-(4-methoxyphenyl)-5-methyl-2-thiazolyl] amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-(3,4-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[5-methyl-4-(4-propylphenyl)-2 thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[4-(2,4-dichlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[4-(2,5-dimethylphenyl)-5-methyl-2- thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[5-(2-chlorophenyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-

carboxylic acid,

2-[[[5-[(4-chlorophenoxy)methyl]-1,3,4-thiadiazol-2-yl]amino]carbonyl]-

cyclohexanecarboxylic acid,

2-[[[5-methyl-4-(4-propylphenyl)-2-thiazolyl]amino]carbonyl]-

cyclohexanecarboxylic acid,

2-[[[5-methyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-[4-(1,1-dimethylethyl)phenyl]-5-methyl-2-thiazolyl]amino]carbonyl]-3-

cyclohexene-1-carboxylic acid,

6-[[[5-ethyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid-1-methylethyl ester

2-[[[5-methyl-4-phenyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[5-methyl-4-[4-(2-methylpropyl)phenyl]-2-thiazolyl]amino]carbonyl]-

cyclohexanecarboxylic acid,

6-[[[5-cyclopropyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[5-(cyclopentylmethyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-

cyclohexanecarboxylic acid,

2-[[[4-(4-chlorophenyl)-5-ethyl-2-thiazolyl]amino]carbonyl]-

cyclohexanecarboxylic acid,

2-[[[4-(3-methoxyphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-

cyclohexanecarboxylic acid,

6-[[[5-methyl-4-(4-methylphenyl)-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[5-cyclopropyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-(4-chlorophenyl)-5-ethyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[4-(2,5-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[5-phenyl-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[5-(4-methoxyphenyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[(6-carboxy-3-cyclohexen-1-yl)carbonyl]amino]-4-phenyl-5-thiazolecarboxylic acid-5-ethyl ester,  
2-[[[(4,5-dimethyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[(5-cyclopropyl-1,3,4-oxadiazol-2-yl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[5-methyl-4-[4-(2-methylpropyl)phenyl]-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[(5-ethyl-4-phenyl-2-thiazolyl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[4-(2,4-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[4-(3-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[5-(1-ethylphenyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[4-(3,4-dimethylpentyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[5-(2-thienyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[(4,5-diphenyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[4-(4-ethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[(2-carboxycyclohexyl)carbonyl]amino]-4-methyl-5-thiazolecarboxylic acid-5-methyl ester,  
2-[[[(2-carboxycyclohexyl)carbonyl]amino]-4-methyl-5-thiazolecarboxylic acid-5-ethyl ester,  
2-[[[(5-ethyl-4-phenyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[(5-methyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[5-(cyclopropyl-1,3,4-oxadiazol-2-yl)amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[4-(4-fluorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[2-(2-carboxycyclohexyl)carbonyl]amino]-4-methyl-5-thiazoleacetic acid-5-ethyl ester,

2-[[[4-(2,4-dimethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[4-(3-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[5-(5-cyclohexyl-1,3,4-thiadiazol-2-yl)carbonyl]cyclohexanecarboxylic acid,

2-[[[5-methyl-4-(4-methylphenyl)-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[5-(2-thienyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[4,5-diphenyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[4-(4-ethylphenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

6-[[[5-(dimethylamino)carbonyl]-4-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[5-(5-ethyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[2-(2-carboxycyclohexyl)carbonyl]amino]-4-phenyl-5-thiazolecarboxylic acid-5-ethyl ester,

6-[[[5-(5-ethyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

2-[[[4-(4-ethyl-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[5-methyl-4-[4-(1-methylethyl)phenyl]-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,

2-[[[5-(5-acetyl-4-methyl-2-thiazolyl)amino]carbonyl]-cyclohexanecarboxylic acid,

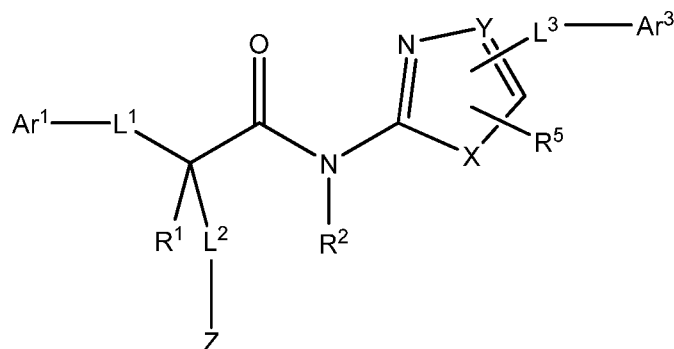
6-[[[4-(2,4-dichlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,

6-[[[4-(4-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
6-[[[5-(5-cyclohexyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[4-(4-chlorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[4-(4-fluorophenyl)-5-methyl-2-thiazolyl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[6-(6-carboxy-3-cyclohexen-1-yl)carbonyl-4-methyl-5-thiazolecarboxylic acid-5-methyl ester],  
2-[[[4-(1,1-dimethylethyl)phenyl]-5-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
2-[[[5[(dimethylethylamino)carbonyl]-4-methyl-2-thiazolyl]amino]carbonyl]-cyclohexanecarboxylic acid,  
6-[[[5-(5-methyl-4-phenyl-2-thiazolyl)amino]carbonyl]-3-cyclohexene-1-carboxylic acid,  
2-[[[5-(5-methyl-1,3,4-thiadiazol-2-yl)amino]carbonyl]-cyclohexanecarboxylic acid,  
and  
6-[[[5-(2-thienyl)-1,3,4-thiadiazol-2-yl]amino]carbonyl]-3-cyclohexene-1-carboxylic acid;

and pharmaceutically acceptable salts, and solvates thereof.



2. The compound according to claim 1 having the formula Ib:

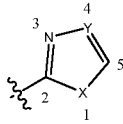


**Ib**

wherein **Z**, **Ar**<sup>1</sup>, **Ar**<sup>3</sup>, **L**<sup>1</sup>, **L**<sup>2</sup>, **L**<sup>3</sup>, and **R**<sup>2</sup> and as defined in claim 1;

5 **X** is S or O;

**Y** is CH or N;

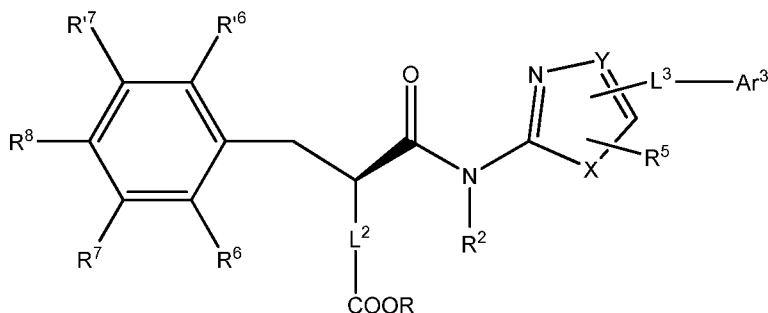
**L**<sup>3</sup> is attached to the heterocyclic group  either in position 4 or 5, preferably in position 4; and

10 if **Y** is CH, **R**<sup>5</sup> is H, halo, cyano, hydroxyl, linear or branched C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, preferably methyl and F, Cl, or CF<sub>3</sub> and **R**<sup>5</sup> is attached to the heterocyclic group either in position 4, if **L**<sup>3</sup> is attached in position 5, or in position 5, if **L**<sup>3</sup> is attached in position 4; preferably **R**<sup>5</sup> is attached in position 5;

if **Y** is N, **R**<sup>5</sup> is absent and **L**<sup>3</sup> is attached in position 5;

15 and pharmaceutically acceptable salts, and solvates thereof.

3. The compound according to claim 2 having the formula Ib-1a:



### Ib-1a

wherein X, Y, Ar<sup>3</sup>, L<sup>2</sup>, L<sup>3</sup>, R<sup>2</sup> and R<sup>5</sup> and as defined in claim 1;

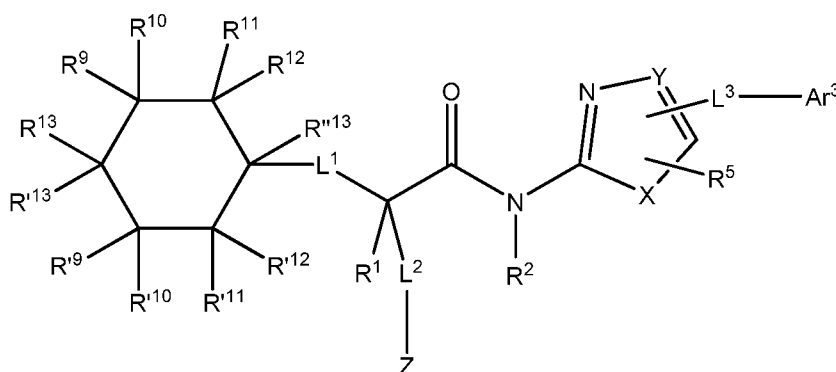
5 **R** is H or linear or branched alkyl, aryl, acyloxyalkyl, dioxolene;

**R<sup>6</sup>, R<sup>7</sup>, R<sup>6'</sup>, R<sup>7'</sup>** and **R<sup>8</sup>** are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, heterocyclyloxy, aryloxy, amino, 10 alkylamino, aminoalkyl, carboxy, alkoxy carbonyl, cycloalkyloxy carbonyl, heterocyclyloxy carbonyl, aryloxy carbonyl, heteroaryloxy carbonyl, alkyl carbonyloxy, cycloalkyl carbonyloxy, heterocyclyl carbonyloxy, aryl carbonyloxy, heteroaryl carbonyloxy, arylalkyloxy, alkyl carbonylamino, haloalkyl carbonylamino, cycloalkyl carbonylamino, heterocyclyl carbonylamino 15 aryl carbonylamino, heteroaryl carbonylamino, alkyl carbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkyl carbamoyl, aryl carbamoyl, heteroaryl carbamoyl, carbamoylalkyl, carbamoylamino, alkyl carbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, 20 heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or R<sup>6</sup> and R<sup>7</sup> or R<sup>7</sup> and R<sup>8</sup> or R<sup>6'</sup> and R<sup>7'</sup> or R<sup>7'</sup> and R<sup>8</sup>

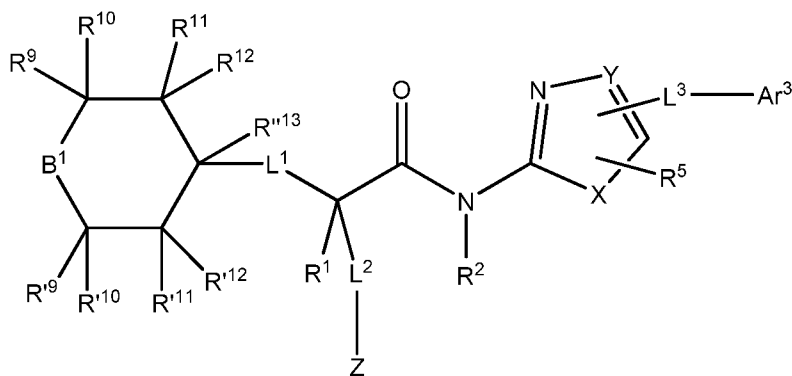
together form an alkylenedioxy group or a haloalkylenedioxy group, or R<sup>6</sup> and R<sup>7</sup> or R<sup>7</sup> and R<sup>8</sup> or R<sup>'6</sup> and R<sup>'7</sup> or R<sup>'7</sup> and R<sup>8</sup> together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety fused to the phenyl group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkyheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl;

and pharmaceutically acceptable salts, and solvates thereof.

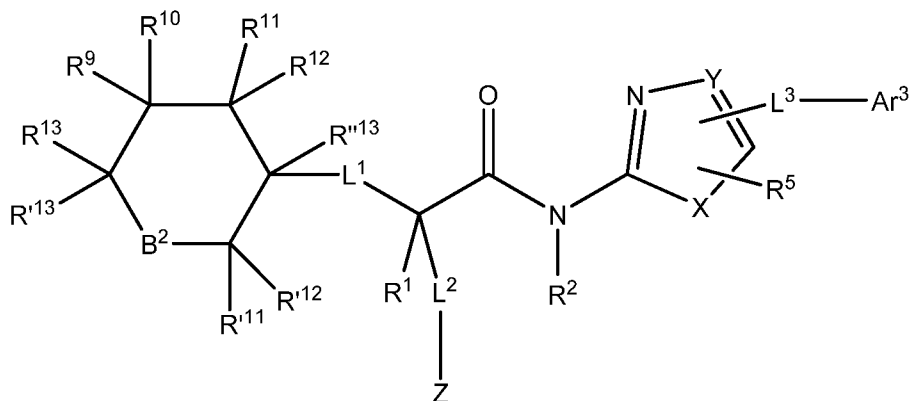
10 4. The compound according to claim 2 selected from the group consisting of formulae Ib-2a, Ib-2b, Ib-2c, Ib-2d, Ib-2e and Ib-2f:



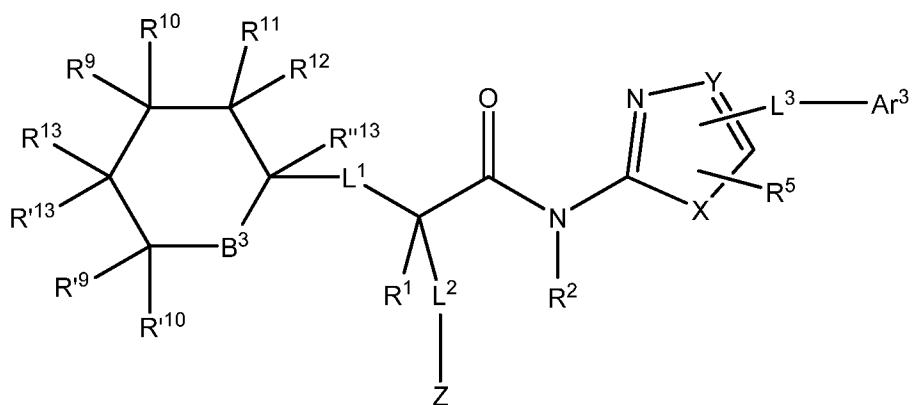
**Ib-2a**



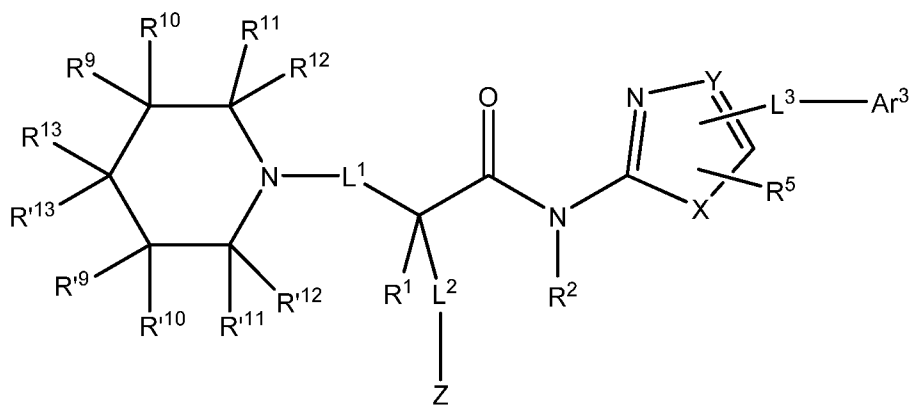
15 **Ib-2b**



**Ib-2c**

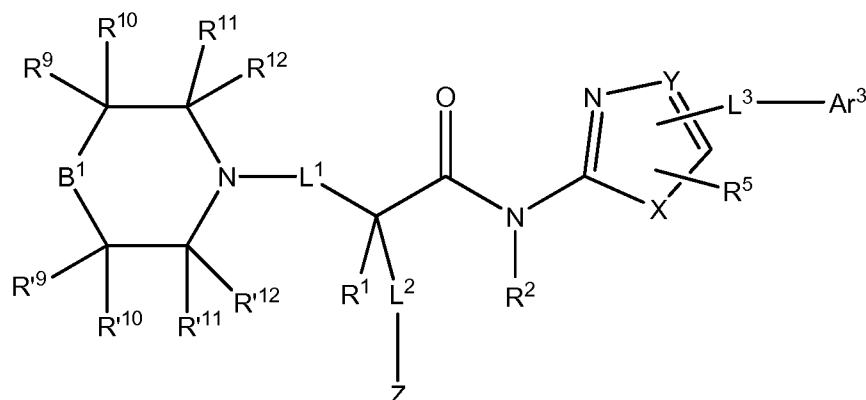


**Ib-2d**



5

**Ib-2e**

**Ib-2f**

wherein X, Y, Z, Ar<sup>3</sup>, L<sup>2</sup>, L<sup>3</sup>, R<sup>1</sup>, R<sup>2</sup>, and R<sup>5</sup> are as defined in claim 2;

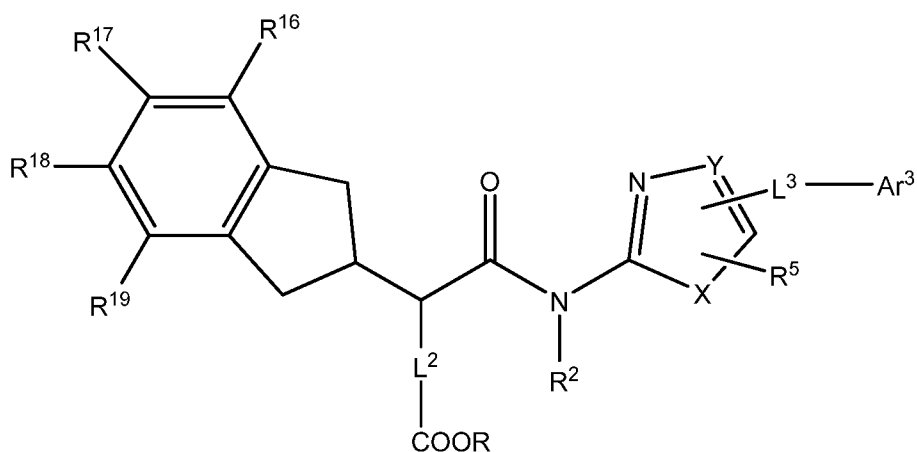
B<sup>1</sup>, B<sup>2</sup> and B<sup>3</sup> are independently CF<sub>2</sub>, O, NR<sup>a</sup>, CO, or SO<sub>2</sub>, wherein R<sup>a</sup> is H or  
 5 alkyl, preferably linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl; C<sub>1</sub>-C<sub>4</sub> alkylcarbonyl, C<sub>1</sub>-C<sub>4</sub>  
 alkylsulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylaminocarbonyl, aryl, arylcarbonyl, arylsulfonyl or  
 arylaminocarbonyl; and

R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> and R<sup>13</sup> are independently  
 10 selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl,  
 cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl,  
 aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, haloalkoxy,  
 cycloalkyloxy, heterocyclyloxy, aryloxy, amino, alkylamino, aminoalkyl,  
 carboxy, alkoxy carbonyl, cycloalkyloxycarbonyl, heterocyclyloxycarbonyl,  
 aryloxycarbonyl, heteroaryloxycarbonyl, alkylcarbonyloxy,  
 15 cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy,  
 heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino,  
 haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino  
 arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl,  
 acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl,  
 20 heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino,  
 alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl,  
 arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl,

heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclysulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or one of R<sup>9</sup> or R<sup>10</sup> and one of R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> or R<sup>13</sup>, or one of R<sup>11</sup> or R<sup>12</sup> and one of R<sup>9</sup>, R<sup>10</sup>, R<sup>13</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> or R<sup>13</sup>, or one of R<sup>13</sup> or R<sup>13</sup> and one of R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, or R<sup>13</sup> together form an alkylendioxy group or a haloalkylendioxy group, or one of R<sup>9</sup> or R<sup>10</sup> and one of R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> or R<sup>13</sup>, or one of R<sup>11</sup> or R<sup>12</sup> and one of R<sup>9</sup>, R<sup>10</sup>, R<sup>13</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>13</sup> or R<sup>13</sup>, or one of R<sup>13</sup> or R<sup>13</sup> and one of R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, R<sup>9</sup>, R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup>, or R<sup>13</sup> together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety together with the cyclic group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl;

and pharmaceutically acceptable salts, and solvates thereof.

5. The compound according to claim 2 having the formula Ib-3:



20 **Ib-3,**

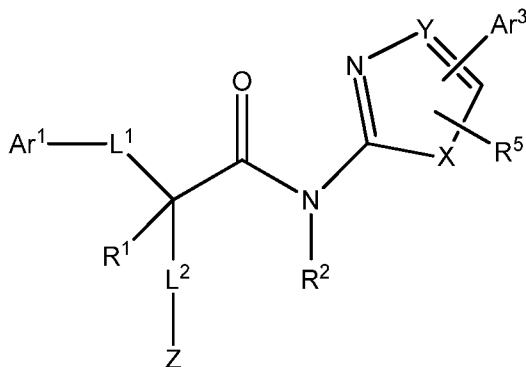
wherein  $L^2$ ,  $L^3$ ,  $Ar^3$ ,  $X$ ,  $Y$ ,  $R$ ,  $R^1$ ,  $R^2$  and  $R^5$  are as defined in claim 2;

$R$  is H or linear or branched alkyl, aryl, acyloxyalkyl, dioxolene; and

$R^{16}$ ,  $R^{17}$ ,  $R^{18}$  and  $R^{19}$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkyloxy, heterocyclyoxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxycarbonyl, cycloalkyloxycarbonyl, heterocyclyloxycarbonyl, aryloxycarbonyl, heteroaryloxycarbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino, arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or  $R^{16}$  and  $R^{17}$  or  $R^{17}$  and  $R^{18}$  or  $R^{18}$  and  $R^{19}$  together form an alkylenedioxy group or a haloalkylenedioxy group, or  $R^{16}$  and  $R^{17}$  or  $R^{17}$  and  $R^{18}$  or  $R^{18}$  and  $R^{19}$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety fused to the phenyl group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl;

and pharmaceutically acceptable salts, and solvates thereof.

6. The compound according to claim 2 having the formula Ib-4:



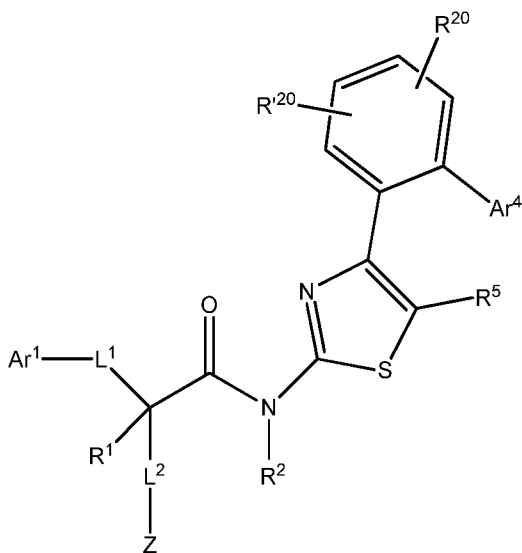
**Ib-4,**

wherein

5 **Ar<sup>1</sup>, Ar<sup>3</sup>, L<sup>1</sup>, L<sup>2</sup>, R<sup>1</sup>, R<sup>2</sup>, R<sup>5</sup>, X, Y** and **Z** are as defined in claim 2;

and pharmaceutically acceptable salts, and solvates thereof.

7. The compound according to claim 6 having the formula Ib-4a:



10 **Ib-4b**



wherein

**Ar<sup>1</sup>**, **L<sup>1</sup>**, **L<sup>2</sup>**, **R<sup>1</sup>**, **R<sup>2</sup>**, **R<sup>5</sup>**, and **Z** are as defined in claim 2;

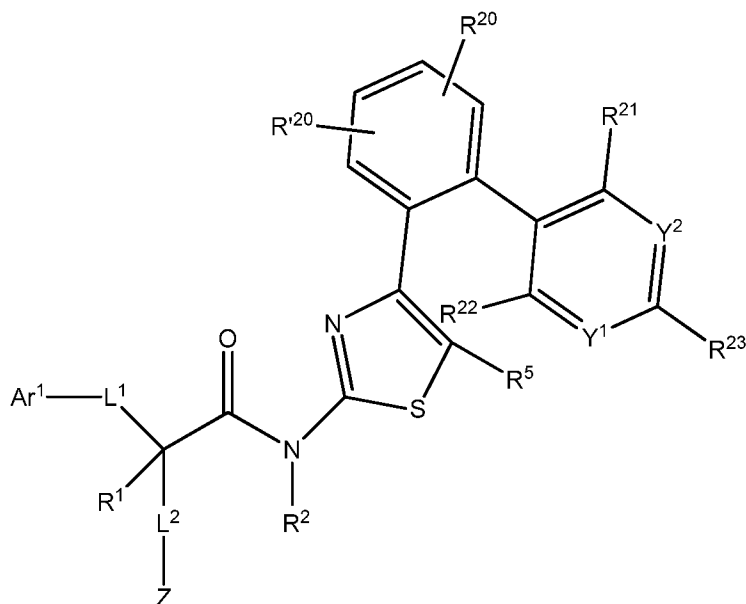
**R<sup>20</sup>** and **R'<sup>20</sup>** are independently selected from halo, cyano, C<sub>1</sub>-C<sub>3</sub> alkyl, cyclopropyl, haloalkyl, alkoxy, haloalkoxy, alkoxy-carbonylamino, or the two  
5 substituents form an alkylenedioxy group or a haloalkylenedioxy group;

**Ar<sup>4</sup>** is 5 or 6 membered aryl, 5 or 6 membered heteroaryl, each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally fused to one or more 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, thus forming a fused ring system, and the latter fused ring system being optionally  
10 substituted by one or more further substituents selected from halo, hydroxyl, oxo, alkyl, and/or each of said 5 or 6 membered aryl or 5 or 6 membered heteroaryl groups being optionally substituted by one or more substituents selected from halo, cyano, hydroxyl, alkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy,  
15 alkylaminoalkoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, alkylsulfonyl, haloalkylsulfonyl, alkylsulfonylamino, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl,  
20 cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino, arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from halo, oxo or alkyl;

and pharmaceutically acceptable salts, and solvates thereof.

25

8. The compound according to claim 6 having the formula Ib-4c:

**Ib-4c**

wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined in claim 2,

5  $\text{R}^{20}$  and  $\text{R}^{20}$ , are as defined in claim 7,

$\text{R}^{21}$  and  $\text{R}^{22}$  are independently selected from H, halo, alkoxy;

$\text{R}^{23}$  is selected from halo, cyano, hydroxyl, alkyl, cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, haloalkyl, alkoxy, haloalkoxy, alkoxyalkyl, alkoxyalkoxy, alkylaminoalkoxy, preferably dimethylaminoethoxy, cycloalkyloxy, cycloalkylalkyloxy, heterocyclyloxy, aryloxy, aralkyloxy, 10 alkylamino, alkylaminoalkyl, cycloalkylamino, arylamino, aralkylamino, alkylaminocarbonyl, heteroarylcarbonyl, alkylcarbonylamino, cycloalkylcarbonylamino, alkylsulfonyl, each of said cycloalkyl, heterocyclyl, aryl, heteroaryl, aralkyl, heteroarylalkyl, cycloalkyloxy, cycloalkylalkyloxy, 15 heterocyclyloxy, aryloxy, aralkyloxy, heteroarylcarbonyl, cycloalkylamino, arylamino, aralkylamino, cycloalkylcarbonylamino being optionally substituted by one or more further substituents selected from halo, oxo or alkyl;

$\text{Y}^1$  is N or C- $\text{R}^{24}$  where  $\text{R}^{24}$  is H, halo, alkoxy, alkyl, heterocyclyl, or

$Y^1$  is C- $R^{24}$  and  $R^{24}$  and  $R^{23}$  together form a 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, thus forming a fused ring system, the latter fused ring system being optionally substituted by one or more group selected from oxo, alkyl or halo; and

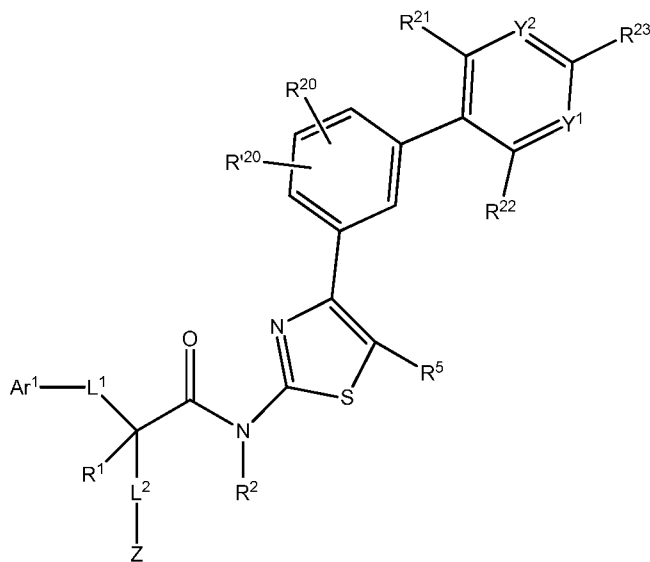
5  $Y^2$  is N or C- $R^{25}$  where  $R^{25}$  is H, halo, alkoxy, alkyl, heterocyclyl, or

$Y^2$  is C- $R^{25}$  and  $R^{25}$  and  $R^{23}$  together form a 5 or 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety, thus forming a fused ring system, the latter fused ring system being optionally substituted by one or more group selected from oxo, alkyl or halo, under the condition that  $R^{24}$  and  $R^{23}$  together do not form a 5 or

10 6 membered cycloalkyl, aryl, heterocyclyl or heteroaryl moiety;

and pharmaceutically acceptable salts, and solvates thereof.

9. The compound according to claim 2 having the formula Ib-4i:



15 **Ib-4i,**

wherein

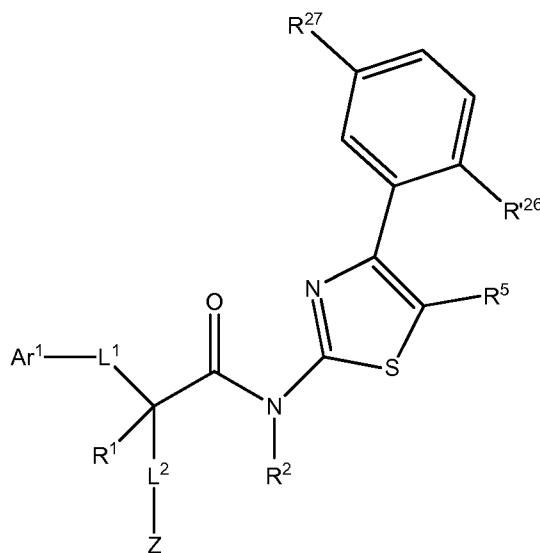
$Ar^1$ ,  $L^1$ ,  $L^2$ ,  $R^1$ ,  $R^2$ ,  $R^5$ , and  $Z$  are as defined in respect claim 2;

$\text{Ar}^4$ ,  $\text{R}^{20}$  and  $\text{R}'^{20}$ , are as defined in claim 7; and

$\text{R}^{21}$ ,  $\text{R}^{22}$ ,  $\text{R}^{23}$ ,  $\text{Y}^1$  and  $\text{Y}^2$  are as defined in claim 8;

and pharmaceutically acceptable salts, and solvates thereof.

10. The compound according to claim 2 having the formula Ib-4m:



5

Ib-4m

wherein

$\text{Ar}^1$ ,  $\text{L}^1$ ,  $\text{L}^2$ ,  $\text{R}^1$ ,  $\text{R}^2$ ,  $\text{R}^5$ , and  $\text{Z}$  are as defined in respect claim 2; and

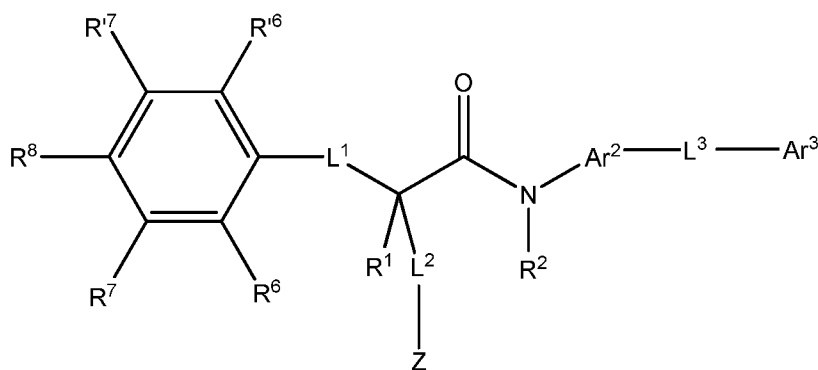
$\text{R}^{26}$  and  $\text{R}^{27}$  are independently selected from H, halo, cyano, alkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, hydroxyl, alkoxy, haloalkoxy, cycloalkyloxy, alkylamino, carboxy, alkoxy carbonyl, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, acylamino, carbamoyl, alkoxy carbamoyl, cycloalkylcarbamoyl, alkylcarbamoylamino, cycloalkylaminocarbamoyl, alkylsulfonyl, haloalkylsulfonyl, sulfamoyl, alkylsulfamoyl, alkylsulfonylamino, haloalkylsulfonylamino, or the two substituents form an alkylenedioxy group or a haloalkylenedioxy group; and

10

15

pharmaceutically acceptable salts, and solvates thereof.

11. The compound according to claim 1 having the formula Ic:



**Ic**

5 wherein  $Ar^2$ ,  $Ar^3$ ,  $R^1$ ,  $R^2$ ,  $L^1$ ,  $L^2$ ,  $L^3$  and  $Z$  are as defined in claim 1;

$R^6$ ,  $R^7$ ,  $R'^6$ ,  $R'^7$  and  $R^8$  are independently selected from H, halo, cyano, alkyl, hydroxyalkyl, haloalkyl, cycloalkyl, cycloalkylalkyl, alkenyl, alkynyl, heteroalkyl, heterocyclyl, heterocyclylalkyl, aryl, aralkyl, heteroaryl, heteroarylalkyl, hydroxyl, alkoxy, alkoxyalkyl, haloalkoxy, cycloalkoxy, heterocyclyoxy, aryloxy, amino, alkylamino, aminoalkyl, carboxy, alkoxy-carbonyl, cycloalkoxy-carbonyl, heterocyclyoxy-carbonyl, aryloxy-carbonyl, heteroaryloxy-carbonyl, alkylcarbonyloxy, cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, arylcarbonyloxy, heteroarylcarbonyloxy, arylalkyloxy, alkylcarbonylamino, haloalkylcarbonylamino, cycloalkylcarbonylamino, heterocyclylcarbonylamino, arylcarbonylamino, heteroarylcarbonylamino, alkylcarbonylaminoalkyl, acylamino, carbamoyl, hydroxycarbamoyl, alkylcarbamoyl, arylcarbamoyl, heteroarylcarbamoyl, carbamoylalkyl, carbamoylamino, alkylcarbamoylamino, alkylsulfonyl, haloalkylsulfonyl, cycloalkylsulfonyl, heterocyclylsulfonyl, arylsulfonyl, heteroarylsulfonyl, sulfamoyl, alkylsulfamoyl, arylsulfamoyl, heteroarylsulfamoyl, alkylsulfonylamino, cycloalkylsulfonylamino, heterocyclylsulfonylamino,

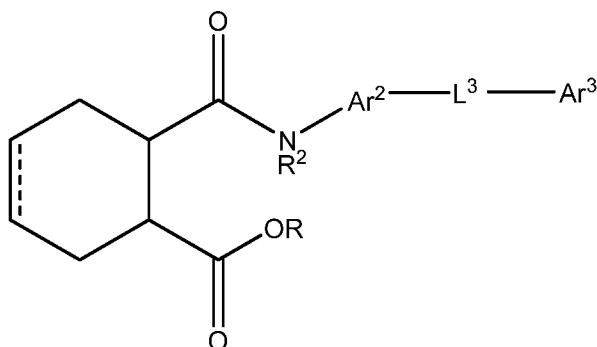
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- arylsulfonylamino, heteroarylsulfonylamino, haloalkylsulfonylamino, or  $R^6$  and  $R^7$  or  $R^7$  and  $R^8$  or  $R^6$  and  $R^7$  or  $R^7$  and  $R^8$  together form an alkylenedioxy group or a haloalkylenedioxy group, or  $R^6$  and  $R^7$  or  $R^7$  and  $R^8$  or  $R^6$  and  $R^7$  or  $R^7$  and  $R^8$  together form a cycloalkyl, aryl, heterocyclyl or heteroaryl moiety fused to the phenyl group they are attached to, each of said substituents being optionally substituted by one or more further substituents selected from halo, alkoxy, alkyl, alkylamino, alkylcarbonyl, alkylheteroaryl, alkylsulfonyl, aralkyl, aryl, arylamino, aryloxy, cyano, haloalkoxy, haloalkyl, heteroaryl, heteroarylalkyl, heteroarylcarbonyl, heterocyclyl, hydroxyl, oxo, or sulfonyl; and
- 10 pharmaceutically acceptable salts, and solvates thereof.

12. The compound according to claim 1 having the formula Id:

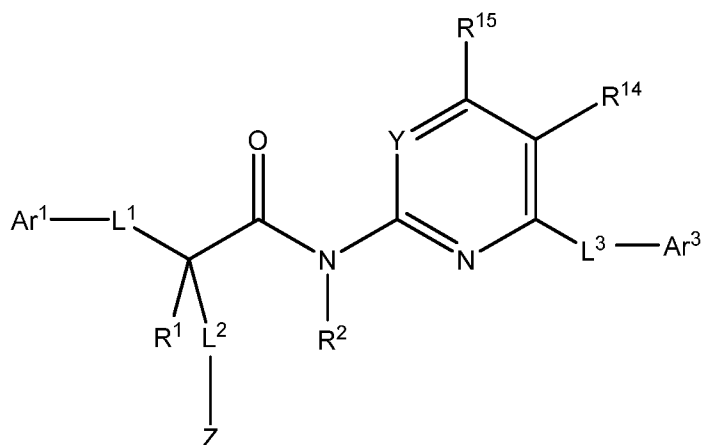


**Id**

wherein the dotted line is present or absent;

- 15  $Ar^2$ ,  $Ar^3$ ,  $R$ ,  $R^2$  and  $L^3$  are as defined in claim 1; and
- pharmaceutically acceptable salts, and solvates thereof.

13. The compound according to claim 1 having the formula Ie:



**1e**

wherein

**Y** is CH or N;

- 5 **R<sup>14</sup>** and **R<sup>15</sup>** are independently H, halo, cyano, hydroxyl, linear or branched C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> hydroxyalkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl; and

**Ar<sup>1</sup>**, **Ar<sup>3</sup>**, **L<sup>1</sup>**, **R<sup>1</sup>**, **R<sup>2</sup>**, and **Z** are as defined in claim 1;

and pharmaceutically acceptable salts, and solvates thereof.

- 10 14. The compound according to claim 1 selected from the group consisting of:

- 1 6-((4-(2-chlorophenyl)thiazol-2-yl)carbamoyl)cyclohex-3-enecarboxylic acid
- 2 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 3 (R)-3-benzyl-4-((4-(2,4-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 4 (R)-3-benzyl-4-((4-(2-fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 5 (R)-3-benzyl-4-((4-(3,4-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 8 (R)-3-benzyl-4-((4-(4-cyanophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 9 (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxo-3-phenylbutanoic acid
- 10 (Z)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobut-2-enoic acid
- 11 (R)-3-benzyl-4-oxo-4-((3-phenyl-1,2,4-thiadiazol-5-yl)amino)butanoic acid
- 12 (R)-3-benzyl-4-((4-(3-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 13 (R)-3-benzyl-4-oxo-4-((4-(3-(trifluoromethyl)phenyl)thiazol-2-yl)amino)butanoic acid
- 14 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 15 (R)-3-benzyl-4-((5-(2-chlorophenyl)pyridin-2-yl)amino)-4-oxobutanoic acid
- 16 (R)-3-((4-(2-chlorophenyl)thiazol-2-yl)carbamoyl)heptanoic acid
- 17 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(4-fluorobenzyl)-4-oxobutanoic acid
- 18 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(cyclohexylmethyl)-4-oxobutanoic acid
- 19 (R)-3-((4-(2-chlorophenyl)thiazol-2-yl)carbamoyl)-5-methylhexanoic acid
- 20 (R)-3-benzyl-4-((4-(2-chlorophenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 21 (R)-3-benzyl-4-((5-chloro-4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 22 (R)-4-(allyl(4-(2-chlorophenyl)thiazol-2-yl)amino)-3-benzyl-4-oxobutanoic acid
- 23 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-methoxy-2-oxoethyl)amino)-4-oxobutanoic acid



- 24 (R)-methyl-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoate
- 26 (R)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-5-phenylpentanoic acid
- 27 (S)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-5-phenylpentanoic acid
- 28 (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-(4-(trifluoromethyl)benzyl)butanoic acid
- 29 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxo-3-(3-(trifluoromethyl)benzyl)butanoic acid
- 30 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(2-cyanobenzyl)-4-oxobutanoic acid
- 31 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(3-cyanobenzyl)-4-oxobutanoic acid
- 32 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(4-cyanobenzyl)-4-oxobutanoic acid
- 33 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid
- 34 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(3-methoxybenzyl)-4-oxobutanoic acid
- 35 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-3-(2-methoxybenzyl)-4-oxobutanoic acid
- 36 (R)-3-benzyl-4-((4-(2-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 37 (R)-3-benzyl-4-oxo-4-(4-(2,4,6-trichlorophenyl)thiazol-2-ylamino)butanoic acid
- 38 (R)-4-benzyl-5-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-5-oxopentanoic acid
- 39 (S)-4-benzyl-5-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-5-oxopentanoic acid
- 40 (R)-methyl 4-benzyl-5-(4-(2-chlorophenyl)thiazol-2-ylamino)-5-oxopentanoate
- 41 (S)-methyl 4-benzyl-5-(4-(2-chlorophenyl)thiazol-2-ylamino)-5-oxopentanoate

- 42 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropylmethyl)amino)-4-oxobutanoic acid
- 43 (R)-3-benzyl-4-(benzyl(4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 44 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2,2,2-trifluoroethyl)amino)-4-oxobutanoic acid
- 45 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid
- 46 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(3-methoxybenzyl)-4-oxobutanoic acid
- 47 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2-methoxybenzyl)-4-oxobutanoic acid
- 48 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-cyanobenzyl)-4-oxobutanoic acid
- 49 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(3-cyanobenzyl)-4-oxobutanoic acid
- 50 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2-cyanobenzyl)-4-oxobutanoic acid
- 51 (R)-3-(4-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 52 (R)-3-(3-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 53 (R)-3-(2-chlorobenzyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 54 (3S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2,3-dihydro-1H-inden-1-yl)-4-oxobutanoic acid
- 55 (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(2,3-dihydro-1H-inden-2-yl)-4-oxobutanoic acid
- 56 (R)-4-(benzo[d]thiazol-2-yl(methyl)amino)-3-benzyl-4-oxobutanoic acid
- 57 (R)-4-(benzo[d]oxazol-2-yl(methyl)amino)-3-benzyl-4-oxobutanoic acid
- 58 (R)-2-((1H-tetrazol-5-yl)methyl)-N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methyl-3-phenylpropanamide

- 59 (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methyl-3-(5-oxo-4,5-dihydro-1,2,4-oxadiazol-3-yl)propanamide
- 60 (R)-3-benzyl-4-((4-(2-chlorophenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 61 (S)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-cyclohexyl-4-oxobutanoic acid
- 62 (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-cyclohexyl-4-oxobutanoic acid
- 63 (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-phenylbutanoic acid
- 64 (3R)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-4-phenylpentanoic acid
- 65 (R)-2-((1H-tetrazol-5-yl)methyl)-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-phenylpropanamide
- 66 (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(5-oxo-4,5-dihydro-1,2,4-oxadiazol-3-yl)propanamide
- 68 (3R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-2-methyl-4-oxobutanoic acid
- 69 (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(3-hydroxyisoxazol-5-yl)propanamide
- 70 (R)-3-benzyl-4-(4-(2-chlorophenyl)pyrimidin-2-ylamino)-4-oxobutanoic acid
- 71 (R)-3-benzyl-4-(6-(2-chlorophenyl)pyridin-2-ylamino)-4-oxobutanoic acid
- 72 (E)-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)-4-phenylbut-3-enoic acid
- 74 (Z)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-phenylbut-2-enoic acid
- 75 (R)-3-(N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methylsulfamoyl)-4-phenylbutanoic acid
- 76 (S)-3-(N-(4-(2-chlorophenyl)thiazol-2-yl)-N-methylsulfamoyl)-4-phenylbutanoic acid
- 79 (R)-3-benzyl-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-fluoro-4-oxobutanoic acid

- 80 (R)-3-benzyl-3-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)hex-5-enoic acid
- 81 (E)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylbut-3-enoic acid
- 82 (3S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid
- 83 (R)-3-benzyl-4-((3-(2-chlorophenyl)-1,2,4-thiadiazol-5-yl)(methyl)amino)-4-oxobutanoic acid
- 84 (R)-3-benzyl-4-((3-(2-chlorophenyl)-1,2,4-oxadiazol-5-yl)(methyl)amino)-4-oxobutanoic acid
- 85 (R)-3-benzyl-4-((1-(2-chlorophenyl)-1H-pyrazol-3-yl)(methyl)amino)-4-oxobutanoic acid
- 86 (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(3-hydroxyisoxazol-5-yl)-N-methylpropanamide
- 89 (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclohexylmethyl)-4-oxobutanoic acid
- 90 (R)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-5-methylhexanoic acid
- 91 (R)-3-benzyl-4-((4-(2-cyanophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 92 (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-4-oxo-3-phenylbutanoic acid
- 93 (R)-4-(4-(2-chlorophenyl)thiazol-2-ylamino)-3-(3-fluorobenzyl)-4-oxobutanoic acid
- 94 (S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-methylpentanoic acid
- 95 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 96 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(ethyl)amino)-4-oxobutanoic acid
- 97 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 98 cis-6-(4-(2-chlorophenyl)thiazol-2-ylcarbamoyl)cyclohex-3-enecarboxylic acid

- 99** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-methoxybenzyl)-4-oxobutanoic acid
- 100** cis-6-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)cyclohex-3-enecarboxylic acid
- 101** cis-2-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)cyclohexanecarboxylic acid
- 102** (R)-3-benzyl-4-(4-(2,5-dimethylthiophen-3-yl)thiazol-2-ylamino)-4-oxobutanoic acid
- 103** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclohexylmethyl)-4-oxobutanoic acid
- 105** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 106** (3S,4R)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid
- 107** (R)-3-benzyl-4-(methyl(4-(2-(thiophen-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 108** (R)-3-benzyl-4-((4-(2-(6-chloropyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 109** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(phenylamino)butanoic acid
- 110** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(4-methylbenzyl)-4-oxobutanoic acid
- 111** (R)-4-((4-([1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-3-benzyl-4-oxobutanoic acid
- 112** (R)-3-benzyl-4-(4-(2,5-dichlorothiophen-3-yl)thiazol-2-ylamino)-4-oxobutanoic acid
- 113** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopropylmethyl)-4-oxobutanoic acid
- 114** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(thiazol-4-ylmethyl)butanoic acid
- 115** (R)-3-benzyl-4-((4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 116** (R)-3-benzyl-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 117** (R)-3-benzyl-4-((4-(2-(2-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 118** (R)-3-benzyl-4-((4-(2-((ethoxycarbonyl)amino)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 119** (R)-3-benzyl-4-((4-(2-(6-fluoropyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 120** (R)-3-benzyl-4-(methyl(4-(2-(6-methylpyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 121** (R)-4-((2-amino-2-oxoethyl)(4-(2-chlorophenyl)thiazol-2-yl)amino)-3-benzyl-4-oxobutanoic acid
- 122** (R)-3-benzyl-4-oxo-4-((4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)butanoic acid
- 123** (R)-3-benzyl-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 124** (R)-3-benzyl-4-((4-(3-chloro-4-fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 125** (R)-3-benzyl-4-((4-(3-chloro-4-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 126** (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(3-methoxy-3-oxopropyl)amino)-4-oxobutanoic acid
- 127** 3-(bicyclo[2.2.1]heptan-2-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 128** (R)-3-benzyl-4-((4-(2-(6-ethoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 129** (R)-3-benzyl-4-((4-(4'-methoxy-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 130** (R)-3-benzyl-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid

- 131** (R)-1-(5-(2-(2-(2-benzyl-3-carboxy-N-methylpropanamido)thiazol-4-yl)phenyl)pyridin-2-yl)pyrrolidin-1-ium 2,2,2-trifluoroacetate
- 132** (R)-4-(2'-(2-(2-benzyl-3-carboxy-N-methylpropanamido)thiazol-4-yl)-[1,1'-biphenyl]-4-yl)morpholin-4-ium 2,2,2-trifluoroacetate
- 133** (R)-3-benzyl-4-(methyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 134** (R)-3-benzyl-4-((4-(3'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 135** (R)-3-benzyl-4-((4-(2-(furan-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 136** (R)-3-benzyl-4-((4-(2-(6-(2-methoxyethoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 138** (R)-3-benzyl-4-((4-(4'-isopropyl-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 139** (R)-3-(cyclopentylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 140** (R)-3-benzyl-4-((4-(2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 141** (R)-3-benzyl-4-(methyl(4-(2-(6-((tetrahydro-2H-pyran-4-yl)oxy)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 142** (R)-3-benzyl-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 143** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 144** (R)-3-benzyl-4-((4-(2-cyclopropylphenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 145** (R)-3-benzyl-4-((4-(4'-(dimethylamino)-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 146** (R)-3-benzyl-4-((4-(3'-fluoro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 147 (R)-3-benzyl-4-((4-(3',5'-difluoro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 148 (R)-3-benzyl-4-((4-(2-chloro-6-fluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 149 (R)-3-benzyl-4-((4-(4'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 150 (R)-3-benzyl-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 151 (R)-3-benzyl-4-((4-(4-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 152 (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 153 (R)-3-benzyl-4-((4-(3-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 154 (3R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydrofuran-2-yl)methyl)butanoic acid
- 155 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-hydroxyethyl)amino)-4-oxobutanoic acid
- 156 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(3-hydroxypropyl)amino)-4-oxobutanoic acid
- 157 (R)-3-benzyl-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 158 (R)-3-benzyl-4-((4-(2-(6-(benzyloxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 159 (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 160 (R)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 161 (R)-3-benzyl-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid



- 162** (R)-3-benzyl-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 163** (R)-3-benzyl-4-((4-(3,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 164** (R)-3-benzyl-4-((4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 165** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 166** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 167** (R)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 168** (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 169** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 170** (R)-3-benzyl-4-((2-hydroxyethyl)(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 171** (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 172** (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(2-hydroxyethyl)amino)-4-oxobutanoic acid
- 173** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 174** (R)-3-benzyl-4-((4-(5-chloro-2-(trifluoromethyl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 175** (R)-3-benzyl-4-(methyl(4-(2,3,5-trichlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 176** (R)-3-benzyl-4-((4-(4-chloro-[1,1'-biphenyl]-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 177 (R)-3-benzyl-4-((4-(2-chloro-5-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 178 (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 179 (R)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 180 (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 181 (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 182 (R)-3-benzyl-4-(methyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 183 (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 184 (R)-4-(cyclopropyl(4-(2-(6-morpholinopyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 185 (R)-3-benzyl-4-(methyl(4-(2-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 186 (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 187 (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 188 (R)-3-benzyl-4-(cyclopropyl(4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 189 (R)-3-benzyl-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 190 (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 191 (R)-3-benzyl-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid

- 192** (R)-3-benzyl-4-((4-(2-(difluoromethoxy)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 193** (R)-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 194** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 195** (3R,4S)-3-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)carbamoyl)-4-phenylpentanoic acid
- 196** (R)-2-(2-benzyl-3-carboxypropanamido)-5-(2-chlorophenyl)pyridine 1-oxide
- 197** (R)-3-benzyl-4-((5-(2-chlorophenyl)pyrazin-2-yl)amino)-4-oxobutanoic acid
- 198** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(morpholinomethyl)-4-oxobutanoic acid
- 199** (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)(2-methoxyethyl)amino)-4-oxobutanoic acid
- 200** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylamino)-4-oxobutanoic acid
- 201** (R)-3-benzyl-4-((2-(benzyloxy)ethyl)(4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 202** (R)-3-benzyl-4-((4-(5-methylfuran-2-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 203** (R)-3-benzyl-4-oxo-4-((3-(3-(trifluoromethyl)phenyl)-1H-pyrazol-5-yl)amino)butanoic acid
- 204** (R)-3-benzyl-4-((4-(5-chloro-2-methoxyphenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 205** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(4-hydroxybenzyl)-4-oxobutanoic acid

- 206** (R)-3-benzyl-4-((4-(4'-cyano-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 207** (3R)-3-benzyl-4-((3-carbamoyl-4-(2,4-dichlorophenyl)-5-methylthiophen-2-yl)amino)-4-oxobutanoic acid
- 208** (R)-3-benzyl-4-((4-(3'-methoxy-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 209** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-((2-methylthiazol-4-yl)methyl)-4-oxobutanoic acid
- 210** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-((5-methylisoxazol-3-yl)methyl)-4-oxobutanoic acid
- 211** (R)-3-benzyl-4-((4-(2'-chloro-[1,1'-biphenyl]-2-yl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 212** (R)-3-benzyl-4-((4-(2-(2-methoxypyrimidin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 213** (R)-3-benzyl-4-((4-(2,5-difluorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 214** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(oxazol-4-ylmethyl)-4-oxobutanoic acid
- 215** (3R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydrofuran-3-yl)methyl)butanoic acid
- 216** (R)-3-benzyl-4-(methyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 217** (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 218** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(dimethylamino)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 219** (R)-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 220** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 221** (R)-3-benzyl-4-((4-(2-chloro-5-(difluoromethoxy)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 222** (R)-3-benzyl-4-((4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 223** (R)-4-((4-(5-chloro-2-(5-chloro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 224** (R)-4-((4-(5-chloro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 225** (S)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 227** (R)-3-benzyl-4-((4-benzylthiazol-2-yl)amino)-4-oxobutanoic acid
- 229** (R)-3-benzyl-4-oxo-4-((5-phenyl-4H-1,2,4-triazol-3-yl)amino)butanoic acid
- 230** 3-([1,1'-biphenyl]-4-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 231** (R)-3-benzyl-4-((4-(1-methyl-1H-pyrazol-4-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 232** (R)-3-benzyl-4-((4-(4-methyl-1,2,5-oxadiazol-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 233** (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-1H-pyrazol-4-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 234** (3R)-3-benzyl-4-((4-(2-(3,5-dimethylisoxazol-4-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 235** (R)-3-benzyl-4-((4-((2-chlorophenyl)carbamoyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 236** (R)-3-benzyl-4-((6-(2-chlorophenyl)pyridazin-3-yl)amino)-4-oxobutanoic acid
- 237** (R)-3-benzyl-4-(methyl(4-(2-(2-oxopyrrolidin-1-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 238 (S)-2-((1-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-1-oxo-3-phenylpropan-2-yl)oxy)acetic acid
- 239 (R)-3-benzyl-4-((1-methyl-5-phenyl-1H-imidazol-2-yl)amino)-4-oxobutanoic acid
- 240 (R)-3-benzyl-4-((4-(2-(1-(2-methoxyethyl)-6-oxo-1,6-dihydropyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 241 (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-6-oxo-1,6-dihydropyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 242 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((2,5-dimethyloxazol-4-yl)methyl)-4-oxobutanoic acid
- 243 4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-3-((1-methyl-1H-pyrazol-5-yl)methyl)-4-oxobutanoic acid
- 244 (R)-3-benzyl-4-((4-(2-(6-hydroxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 245 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)((S)-2-hydroxypropyl)amino)-4-oxobutanoic acid
- 246 (R)-3-benzyl-4-((4-(2-chlorophenyl)thiazol-2-yl)((R)-2-hydroxypropyl)amino)-4-oxobutanoic acid
- 247 (R)-3-(cyclohexylmethyl)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 248 (R)-3-benzyl-4-((4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 250 (R)-3-benzyl-4-((4-(4,5-difluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 251 (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 252 (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(methyl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 253 (R)-3-(furan-2-ylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 254** (S)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-(thiophen-2-ylmethyl)butanoic acid
- 255** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 256** (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 257** (R)-3-benzyl-4-((4-(2,3-dichlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 258** (R)-3-benzyl-4-(methyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 259** (R)-4-(cyclopropyl(4-(3-(difluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 260** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 261** (R)-4-(methyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 262** (R)-3-benzyl-4-(cyclopropyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 263** (R)-4-(cyclopropyl(4-(3-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 264** (R)-3-benzyl-4-((4-(2-(6-isopropoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 265** (R)-3-benzyl-4-((4-(2-(6-(cyclopropylmethoxy)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 266** (R)-3-benzyl-4-((4-(2-(6-(methoxymethyl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 267** (R)-3-benzyl-4-((4-(2-(6-((dimethylamino)methyl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 268** (R)-3-benzyl-4-(methyl(4-(2-(6-(N-methylcyclopropanecarboxamido)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 269** (R)-3-benzyl-4-((4-(2-(6-(dimethylcarbamoyl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 270** (R)-4-((4-(2-(6-(4H-1,2,4-triazol-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-benzyl-4-oxobutanoic acid
- 271** (R)-3-benzyl-4-(methyl(4-(2-(6-(3-methyl-2-oxoimidazolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 272** (R)-3-benzyl-4-(methyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 273** (R)-3-benzyl-4-(methyl(4-(2-(3-methyl-3H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 274** (R)-3-benzyl-4-((4-(2-(6-(benzyl(methyl)amino)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 275** (R)-3-benzyl-4-((4-(2-(6-(cyclohexyl(methyl)amino)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 276** (R)-3-benzyl-4-(methyl(4-(2-(6-(4-methylpiperazin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 277** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 278** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(3-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 279** (R)-3-benzyl-4-((4-(2-(5-chloro-6-methoxypyridin-3-yl)-3-fluorophenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 280** (R)-3-benzyl-4-((4-(3-fluoro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 281** (R)-3-benzyl-4-((4-(5-chloro-2-(5-fluoro-6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 282** (R)-3-benzyl-4-((4-(3,5-difluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 283** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-(((S)-tetrahydrofuran-2-yl)methyl)butanoic acid



- 284** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-(((R)-tetrahydrofuran-2-yl)methyl)butanoic acid
- 285** (R)-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 286** (R)-4-((4-(2-chloro-5-(trifluoromethoxy)phenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 287** (R)-4-((4-(2-chloro-5-(difluoromethoxy)phenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 288** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(cyclopropylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 289** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 290** (R)-4-((4-(2-chloro-5-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 291** (R)-3-(furan-2-ylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)-5-(trifluoromethyl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 292** (R)-3-(furan-2-ylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)-5-(trifluoromethoxy)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 293** (R)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 294** (R)-4-(cyclopropyl(4-(2,5-dichlorophenyl)thiazol-2-yl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 295** (R)-4-((4-(2-chloro-5-fluorophenyl)thiazol-2-yl)(cyclopropylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 296** (R)-4-((4-(2-chloro-5-(trifluoromethyl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 297** (R)-4-((4-(2-chloro-5-(trifluoromethoxy)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid

- 298** (R)-4-((4-(2-chloro-5-(difluoromethoxy)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 299** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-((5-methylfuran-2-yl)methyl)-4-oxobutanoic acid
- 300** 4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-3-((4,5-dimethylfuran-2-yl)methyl)-4-oxobutanoic acid
- 301** 3-(benzofuran-2-ylmethyl)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 302** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-(pyridin-2-ylmethyl)butanoic acid
- 303** (R)-4-((4-(2-chlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-(pyrimidin-2-ylmethyl)butanoic acid
- 304** (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-2-yl)methyl)butanoic acid
- 305** (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-3-yl)methyl)butanoic acid
- 306** (R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-3-(((2R,3R)-2-methyltetrahydro-2H-pyran-3-yl)methyl)-4-oxobutanoic acid
- 307** (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-3-(((2R)-2-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 308** (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-3-(((2R,6S)-2,6-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 309** (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-3-(((3S)-3-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 310** (3R)-4-((4-(2,5-dichlorophenyl)thiazol-2-yl)(methylamino)-3-(((3R,5S)-3,5-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 311** (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(4-hydroxy-1,2,5-thiadiazol-3-yl)-N-methylpropanamide

- 312** (R)-2-benzyl-N-(4-(2-chlorophenyl)thiazol-2-yl)-3-(3-hydroxy-5-methylisoxazol-4-yl)-N-methylpropanamide
- 313** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 314** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 315** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 316** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 317** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 318** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 319** (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 320** (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 321** (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 322** (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 323** (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 324** (R)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 325** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 326** (R)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 327** (R)-4-(cyclopropyl(5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 328** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 329** (R)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 330** (R)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 331** (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 332** (R)-4-(cyclopropyl(4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 333** (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 334** (R)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 335** (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 336** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 337** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 338** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 339** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 340** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 341** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 342** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 343** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 344** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 345** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 346** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 347** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 348** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 349** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 350** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 351** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 352** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 353** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 354** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 355** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 356** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 357** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 358** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 359** (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 360** (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 361** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 362** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 363** (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 364** (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid

- 365** (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 366** (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 367** (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 368** (R)-3-benzyl-4-(cyclopropyl(4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 369** (R)-3-benzyl-4-(cyclopropyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 370** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 371** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 372** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 373** (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 374** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 375** (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 376** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 377** (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid



- 378** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 379** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 380** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 381** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 382** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 383** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 384** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 385** (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 386** (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 387** (R)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 388** (R)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 389** (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 390** (R)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 391** (R)-4-(methyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 392** (R)-4-((5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 393** (R)-4-((5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 394** (R)-4-(methyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 395** (R)-4-((5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 396** (R)-4-((4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 397** (R)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 398** (R)-4-((4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 399** (R)-4-((5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 400** (R)-4-((4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 401** (R)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 402** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 403** (R)-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 404** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 405** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 406** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 407** (R)-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid

- 408** (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 409** (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 410** (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 411** (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 412** (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 413** (R)-3-(cyclopentylmethyl)-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 414** (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 415** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 416** (R)-3-(cyclopentylmethyl)-4-((4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 417** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 418** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid

- 419** (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 420** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 421** (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 422** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 423** (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 424** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 425** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 426** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 427** (R)-3-benzyl-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 428** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 429** (R)-3-benzyl-4-((4-(5-chloro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 430** (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 431** (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 432** (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 433** (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-methoxypyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 434** (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 435** (R)-3-benzyl-4-((4-(5-(difluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 436** (R)-3-benzyl-4-(methyl(4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 437** (R)-3-benzyl-4-((5-fluoro-4-(2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 438** (R)-3-benzyl-4-((5-fluoro-4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 439** (R)-3-benzyl-4-((5-fluoro-4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 440** (R)-3-benzyl-4-((4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 441** (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopiperidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 442** (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 443** (R)-3-benzyl-4-((4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid

- 444** (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 445** (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 446** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 447** (R)-4-((4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 448** (R)-4-(cyclopropyl(4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 449** (R)-3-benzyl-4-((4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 450** (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 451** (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 452** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 453** (R)-4-((4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 454** (R)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 455** (R)-3-benzyl-4-((4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 456** (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 457** (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 458** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 459** (R)-4-((4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 460** (R)-4-(cyclopropyl(4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 461** (R)-3-benzyl-4-((4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 462** (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 463** (R)-3-(cyclopentylmethyl)-4-((4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid



- 464** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 465** (R)-4-((4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 466** (R)-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 467** (R)-3-benzyl-4-((4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 468** (R)-3-benzyl-4-(cyclopropyl(4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 469** (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 470** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 471** (R)-4-((4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 472** (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 473** (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 474** (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 475** (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 476** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 477** (R)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 478** (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 479** (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 480** (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 481** (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 482** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 483** (R)-4-((4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 484** (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 485** (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 486** (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 487** (R)-3-(cyclopentylmethyl)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 488** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 489** (R)-4-((4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 490** (R)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 491** (R)-3-benzyl-4-((4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 492** (R)-3-benzyl-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 493** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 494** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid

- 495** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 496** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 497** (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 498** (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 499** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 500** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 501** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 502** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 503** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 504** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid

- 505** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 506** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 507** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 508** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 509** (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 510** (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxobutanoic acid
- 511** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 512** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 513** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 514** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 515** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 516** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(cyclopropylamino)-4-oxobutanoic acid
- 517** (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 518** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 519** (R)-4-(methyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 520** (R)-4-(cyclopropyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 521** (R)-3-benzyl-4-(cyclopropyl(4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 522** (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 523** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 524** (R)-4-(methyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 525** (R)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 526** (R)-3-benzyl-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 527** (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 528** (R)-4-(methyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 529** (R)-4-(cyclopropyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 530** (R)-3-benzyl-4-(cyclopropyl(4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 531** (R)-3-(cyclopentylmethyl)-4-(methyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 532** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 533** (R)-4-(methyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 534** (R)-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 535** (R)-3-benzyl-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 536** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 537** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 538** (R)-4-((5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 539** (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 540** (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 541** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 542** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 543** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 544** (R)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 545** (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 546** (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid



- 547** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 548** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 549** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 550** (R)-4-((5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 551** (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 552** (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 553** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 554** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 555** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 556** (R)-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 557** (R)-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 558** (R)-3-benzyl-4-((5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 559** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-fluoro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 560** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 561** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 562** (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 563** (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 564** (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 565** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 566** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 567** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 568** (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 569** (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 570** (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 571** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 572** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 573** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 574** (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 575** (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 576** (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 577** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 578** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 579** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 580** (R)-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 581** (R)-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 582** (R)-3-benzyl-4-((5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 583** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-(fluoromethoxy)-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 584** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 585** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 586** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 587** (R)-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 588** (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 589** (R)-3-benzyl-4-((4-(5-chloro-2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropylamino)-4-oxobutanoic acid
- 590** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 591** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 592** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 593** (R)-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropylamino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 594** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-4-oxobutanoic acid
- 595** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropylamino)-4-oxobutanoic acid
- 596** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(methylamino)-3-(cyclopentylmethyl)-4-oxobutanoic acid

- 597** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 598** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 599** (R)-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 600** (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 601** (R)-3-benzyl-4-((4-(5-chloro-2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 602** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 603** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 604** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 605** (R)-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 606** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 607** (R)-3-benzyl-4-((4-(5-chloro-2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)-5-fluorothiazol-2-yl)(cyclopropyl)amino)-4-oxobutanoic acid
- 608** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 609** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 610** (R)-4-((5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 611** (R)-4-(cyclopropyl(5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 612** (R)-3-benzyl-4-((5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 613** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(8-methyl-7-oxo-5,6,7,8-tetrahydro-1,8-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 614** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 615** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 616** (R)-4-((5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 617** (R)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 618** (R)-3-benzyl-4-((5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 619** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 620** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 621** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 622** (R)-4-((5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 623** (R)-4-(cyclopropyl(5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 624** (R)-3-benzyl-4-((5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 625** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(4-methyl-3,4-dihydro-2H-pyrido[3,2-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 626** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid



- 627** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 628** (R)-4-((5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 629** (R)-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 630** (R)-3-benzyl-4-((5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 631** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(2-(1-methyl-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 632** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-1H-pyrrolo[3,2-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 633** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 634** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-1,2,3,4-tetrahydropyrido[3,2-d]pyrimidin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 635** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-2,3-dihydro-1H-pyrrolo[3,2-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 636** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methyl-5-oxo-5,6,7,8-tetrahydro-1,6-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 637** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1,3-dimethyl-2-oxo-1,2,3,4-tetrahydropyrido[3,2-d]pyrimidin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 638** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(7-methyl-8-oxo-5,6,7,8-tetrahydro-1,7-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 639** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methyl-5-oxo-6,7-dihydro-5H-pyrrolo[3,4-b]pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 640** (R)-4-((4-(2-(5-chloro-6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 641** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(3-methyl-3H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 642** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2,3-dihydro-1H-pyrido[2,3-b][1,4]oxazin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 643** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(3-methyl-2-oxo-2,3-dihydro-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 644** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(7-methyl-6-oxo-5,6,7,8-tetrahydro-1,7-naphthyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 645** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methyl-7-oxo-6,7-dihydro-5H-pyrrolo[3,4-b]pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 646** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1,3-dimethyl-2-oxo-2,3-dihydro-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 647** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-1H-imidazo[4,5-b]pyridin-6-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 648** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(5-fluoro-6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 649** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(1-methyl-2-oxo-1,2,3,4-tetrahydro-1,5-naphthyridin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 650** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(3-methyl-2-oxo-1,2,3,4-tetrahydropyrido[3,2-d]pyrimidin-7-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 651** (R)-4-(cyclopropyl(5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 652** (R)-4-(cyclopropyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 653** (R)-4-((5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 654** (R)-4-(methyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 655** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 656** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 657** (R)-3-(cyclopentylmethyl)-4-((5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 658** (R)-3-(cyclopentylmethyl)-4-(methyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 659** (R)-3-benzyl-4-(cyclopropyl(5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 660** (R)-3-benzyl-4-(cyclopropyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 661** (R)-3-benzyl-4-((5-fluoro-4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 662** (R)-3-benzyl-4-(methyl(4-(5-methyl-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 663** (R)-3-benzyl-4-(methyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid
- 664** (R)-3-benzyl-4-(cyclopropyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid
- 665** (R)-3-(cyclopentylmethyl)-4-(methyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid
- 666** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxobutanoic acid
- 667** (R)-4-(methyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 668** (R)-4-(cyclopropyl(3-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)-1,2,4-thiadiazol-5-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid

- 669** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 670** (3R)-3-(cyclopentylmethyl)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 671** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 672** (R)-3-(cyclopentylmethyl)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 673** (3R)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 674** (3R)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 675** (R)-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 676** (R)-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxo-3-((tetrahydro-2H-pyran-4-yl)methyl)butanoic acid
- 677** (3R)-3-benzyl-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)amino)-4-oxobutanoic acid
- 678** (3R)-3-benzyl-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)-5-fluorothiazol-2-yl)(methyl)amino)-4-oxobutanoic acid

- 679** (R)-3-benzyl-4-(cyclopropyl(4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 680** (R)-3-benzyl-4-((4-(2,5-dimethyl-4-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)furan-3-yl)thiazol-2-yl)(methyl)amino)-4-oxobutanoic acid
- 681** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-6-oxopiperidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 682** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxopiperidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 683** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyl-2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 684** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(N-methylacetamido)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 685** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1,3-dimethyl-2-oxohexahydropyrimidin-5-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 686** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(5-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 687** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 688** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(pyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 689** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 690** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-5-oxopyrrolidin-2-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 691** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(4-methyl-3-oxopiperazin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 692** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(4-methyl-2,5-dioxopiperazin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 693** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(dimethylcarbamoyl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 694** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyl-2-oxohexahydropyrimidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 695** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-isopropoxy-pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 696** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-6-oxopiperidin-2-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 697** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-5-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 698** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyl-2-oxotetrahydropyrimidin-1(2H)-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 699** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxotetrahydropyrimidin-1(2H)-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

- 700** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1,3-dimethyl-2-oxoimidazolidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 701** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1,3-dimethyl-2-oxohexahydropyrimidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 702** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxohexahydropyrimidin-4-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 703** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(N-methylcyclopropanecarboxamido)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 704** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 705** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(cyclopropylmethoxy)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 706** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 707** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxopiperidin-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 708** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(methoxymethyl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 709** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(1-methyl-2-oxohexahydropyrimidin-5-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 710** (3R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(5-oxopyrrolidin-2-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid



- 711** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)-5-(trifluoromethyl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 712** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(5-(fluoromethoxy)-2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 713** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)-5-(trifluoromethoxy)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 714** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(pyridin-2-ylmethyl)butanoic acid
- 715** (R)-2-(2-(carboxymethyl)-3-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-oxopropyl)pyridine 1-oxide
- 716** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((R)-tetrahydro-2H-pyran-2-yl)methyl)butanoic acid
- 717** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(pyrimidin-2-ylmethyl)butanoic acid
- 718** (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(thiophen-2-ylmethyl)butanoic acid
- 719** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((S)-tetrahydrofuran-2-yl)methyl)butanoic acid
- 720** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((S)-tetrahydro-2H-pyran-3-yl)methyl)butanoic acid

- 721** (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((2S)-2-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 722** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((R)-tetrahydro-2H-pyran-3-yl)methyl)butanoic acid
- 723** (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((3R,5S)-3,5-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 724** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((2R,3R)-2-methyltetrahydro-2H-pyran-3-yl)methyl)-4-oxobutanoic acid
- 725** (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((3S)-3-methyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 726** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((S)-tetrahydro-2H-pyran-2-yl)methyl)butanoic acid
- 727** (R)-3-(benzofuran-2-ylmethyl)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 728** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-(((R)-tetrahydrofuran-2-yl)methyl)butanoic acid
- 729** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((5-methylfuran-2-yl)methyl)-4-oxobutanoic acid
- 730** (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-3-yl)methyl)butanoic acid

- 731** (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(((2R,6S)-2,6-dimethyltetrahydro-2H-pyran-4-yl)methyl)-4-oxobutanoic acid
- 732** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(furan-2-ylmethyl)-4-oxobutanoic acid
- 733** (3R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxo-3-((tetrahydro-2H-pyran-2-yl)methyl)butanoic acid
- 734** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 735** (R)-4-((4-(5-chloro-2-(6-methoxypyridin-3-yl)phenyl)thiazol-2-yl)(cyclopropyl)amino)-3-(cyclopentylmethyl)-4-oxobutanoic acid
- 736** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(oxetan-3-ylmethyl)-4-oxobutanoic acid
- 737** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(oxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 738** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(oxetan-3-ylmethyl)-4-oxobutanoic acid
- 739** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyloxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 740** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-(oxetan-3-ylmethyl)-4-oxobutanoic acid
- 741** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-fluorooxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 742** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-methyloxetan-3-yl)methyl)-4-oxobutanoic acid

- 743** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(oxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 744** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-methyloxetan-3-yl)methyl)-4-oxobutanoic acid
- 745** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyloxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 746** (R)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-methyloxetan-3-yl)methyl)-4-oxobutanoic acid
- 747** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-fluorooxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 748** (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-fluorooxetan-3-yl)methyl)-4-oxobutanoic acid
- 749** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(oxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 750** (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-fluorooxetan-3-yl)methyl)-4-oxobutanoic acid
- 751** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-methyloxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid
- 752** (S)-4-(cyclopropyl(4-(2-(6-(2-oxopyrrolidin-1-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-3-((3-fluorooxetan-3-yl)methyl)-4-oxobutanoic acid
- 753** (R)-3-(cyclopentylmethyl)-4-(cyclopropyl(4-(2-(6-(3-fluorooxetan-3-yl)pyridin-3-yl)phenyl)thiazol-2-yl)amino)-4-oxobutanoic acid

15. A pharmaceutical composition comprising a compound according to any of Claims **1** to **14** or a pharmaceutically acceptable salt or solvate thereof and at least one pharmaceutically acceptable carrier, diluent, excipient

and/or adjuvant.

16. Medicament comprising a compound according to any of Claims **1** to **14**.

17. Use of a compound according to any of Claims **1** to **14** or a  
5 pharmaceutically acceptable salt or solvate thereof for the manufacture of a  
medicament for the treatment and/or prevention of type II diabetes, obesity,  
dyslipidemia such as mixed or diabetic dyslipidemia, hypercholesterolemia, low  
HDL cholesterol, high LDL cholesterol, hyperlipidemia, hypertriglyceridemia,  
hypoglycemia, hyperglycemia, glucose intolerance, insulin resistance,  
10 hyperinsulinemia hypertension, hyperlipoproteinemia, , metabolic syndrome,  
syndrome X, thrombotic disorders, cardiovascular disease, atherosclerosis and its  
sequelae including angina, claudication, heart attack, stroke and others, kidney  
diseases, ketoacidosis, nephropathy, diabetic neuropathy, diabetic retinopathy,  
nonalcoholic fatty liver diseases such as steatosis or nonalcoholic steatohepatitis  
15 (NASH).

18. Use of a compound according to any of Claims **1** to **14** or a  
pharmaceutically acceptable salt or solvate thereof as a modulator of GPR43  
receptor activity.

19. Use according to Claim **18**, wherein the compound is an  
20 agonist or partial agonist of GPR43 receptor activity.

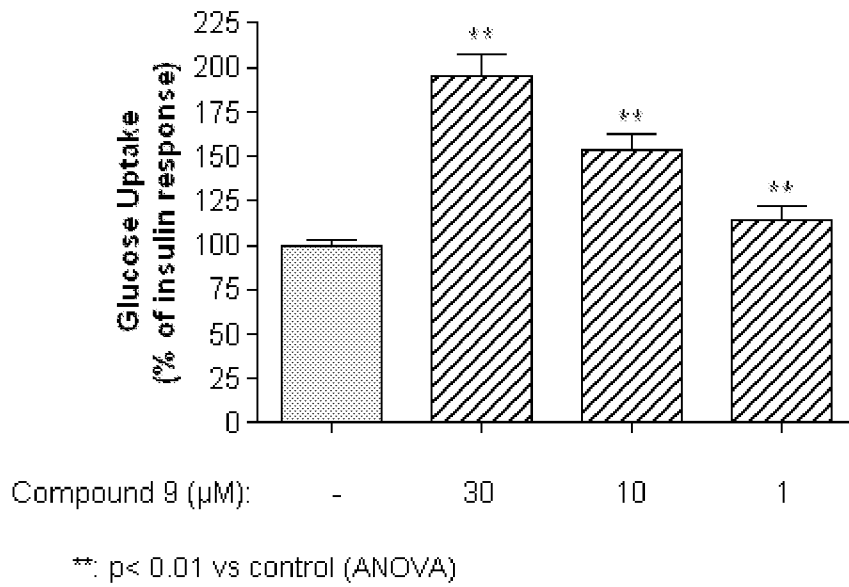


Figure 1

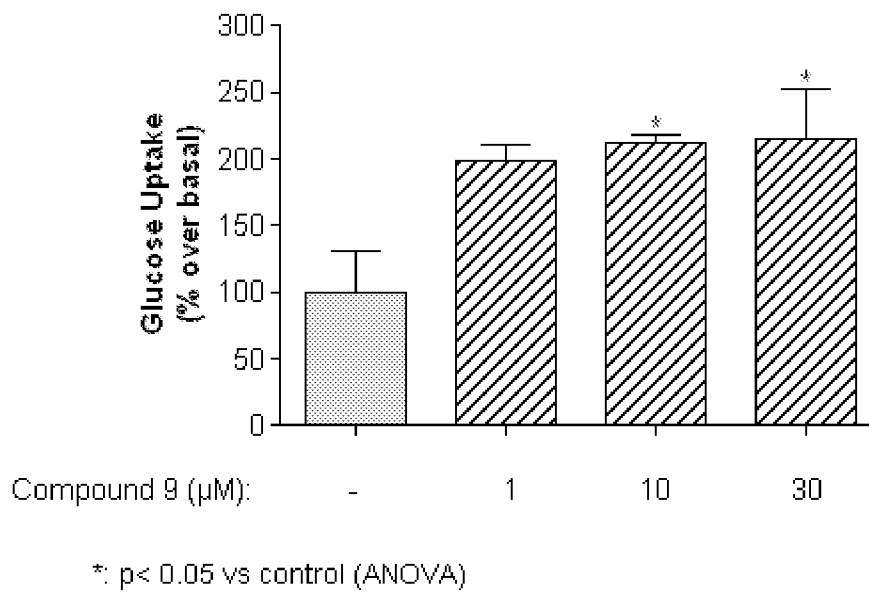


Figure 2

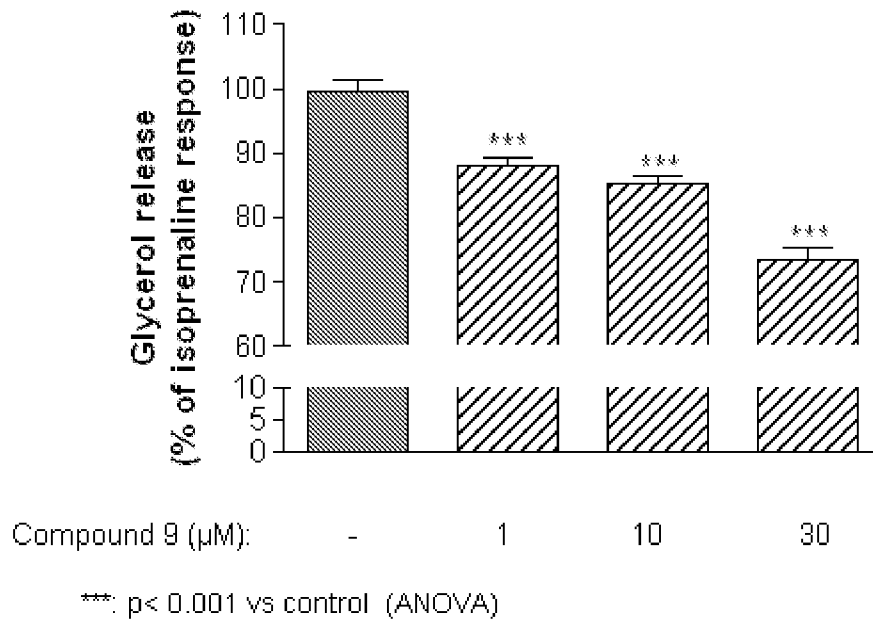
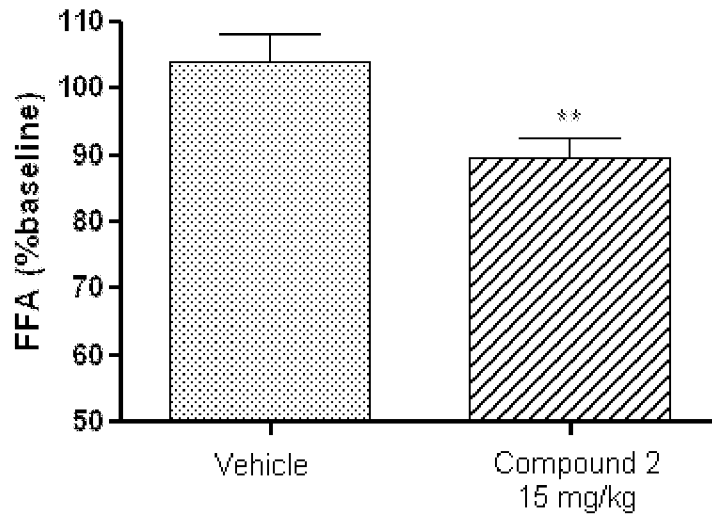
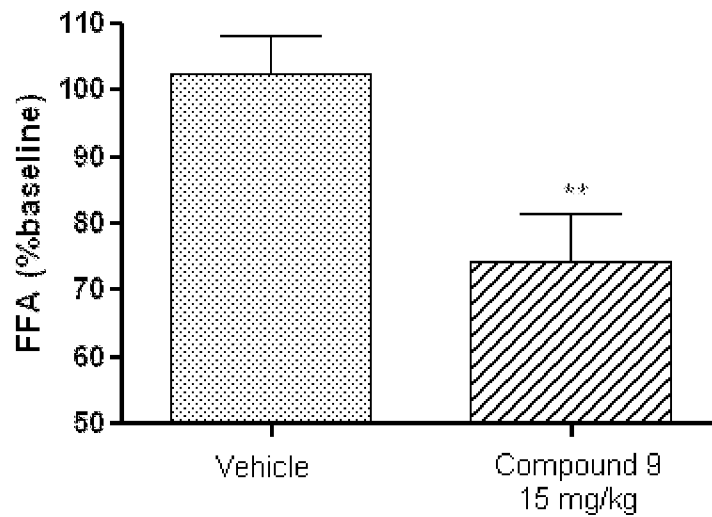


Figure 3



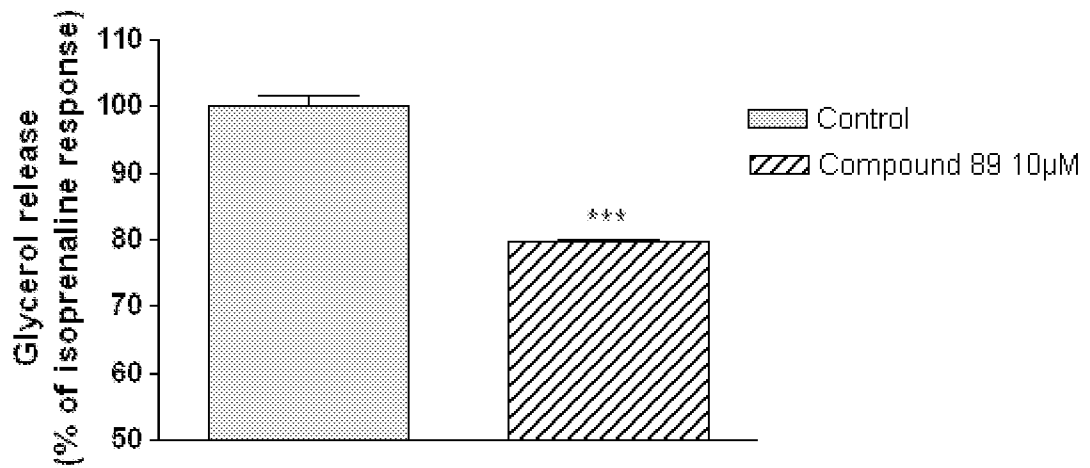
Statistics: One-way ANOVA followed by Dunnett post-hoc  
 \*\*p < 0.01 for treatment vs vehicle. N= 10 mice/group

Figure 4



Statistics: One-way ANOVA followed by Dunnett post-hoc  
 \*\* $p < 0.01$  for treatment vs vehicle.  $N = 5$  mice/group

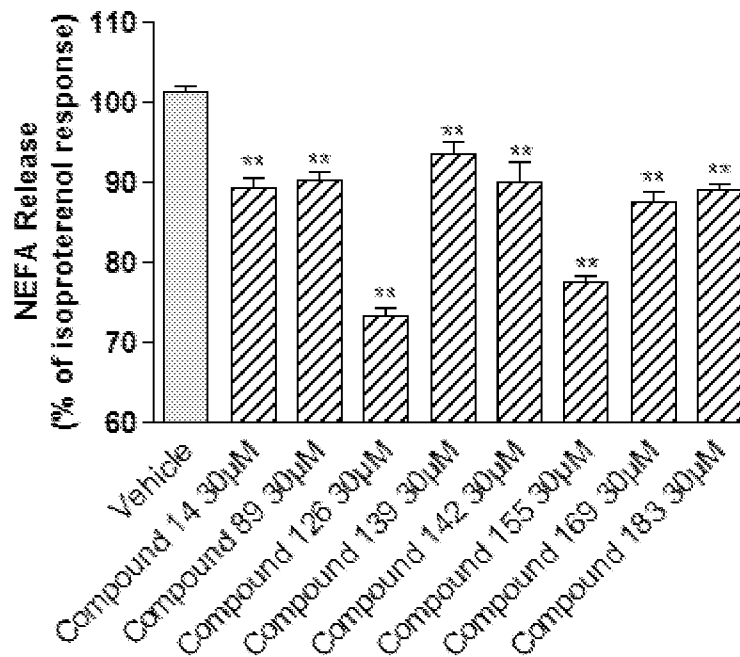
Figure 5



\*\*\*  $p < 0.001$  for treatment vs control  
 (Student  $t$  test).

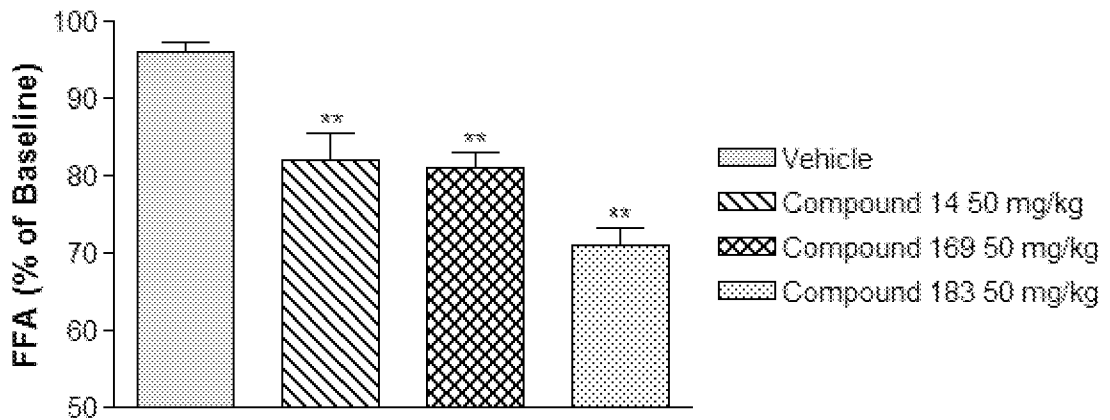
Figure 6





\*\*  $p < 0.01$  treatment vs control.  
 One-way ANOVA and Dunnett's post-hoc

Figure 7



\*\*  $p < 0.01$  vehicle vs treatment  
 One-way ANOVA and Dunnett's post-hoc

Figure 8

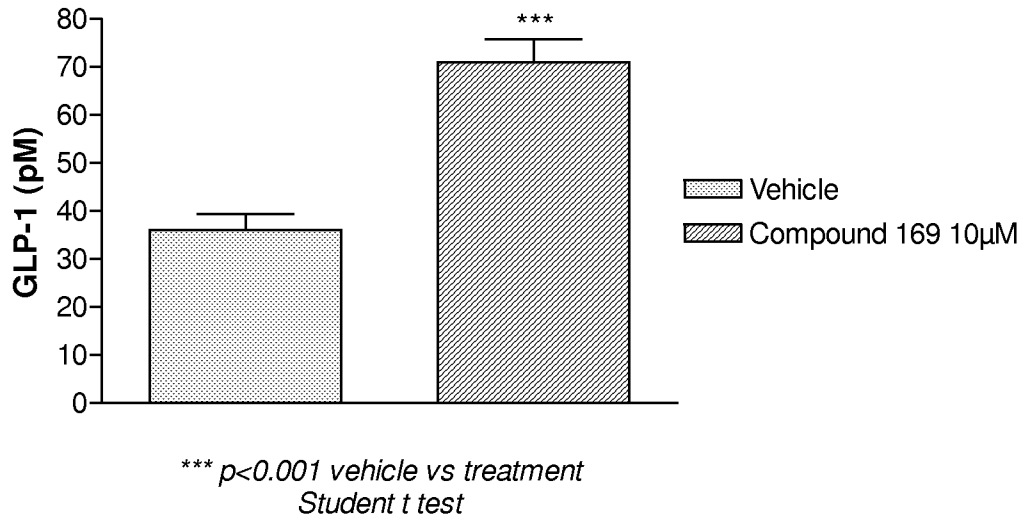


Figure 9

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/EP2009/066536

**A. CLASSIFICATION OF SUBJECT MATTER**

INV. C07D213/75 C07D231/40 C07D239/42 C07D239/69 C07D263/48  
 C07D263/58 C07D271/06 C07D277/46 C07D277/82 C07D285/08  
 C07D417/12 A61K31/426 A61K31/44 A61P3/10

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data, BEILSTEIN Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| A         | WO 2006/078942 A (HARVARD COLLEGE [US]; WAGNER GERHARD [US]; CHOREV MICHAEL [US]; MOERKE) 27 July 2006 (2006-07-27) compounds o and p -page 91; page 29, line 8 - page 34, line 15; claims; figures   | 1-3, 6-11, 14-19      |
| X         | KANNO H ET AL: "Synthesis and evaluation of 2-(biphenylmethyl)glutaric acid amide derivatives as neutral endopeptidase inhibitors" BIOORGANIC & MEDICINAL CHEMISTRY LETTERS, PERGAMON, ELSEVIER SCIENCE, GB, vol. 6, no. 13, 9 July 1996 (1996-07-09), pages 1487-1490, XP004175738 ISSN: 0960-894X | 1,3,6-11              |
| A         | table 1   | 14-19                 |

Further documents are listed in the continuation of Box C.

See patent family annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

26 April 2010

Date of mailing of the international search report

04/05/2010

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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2009/066536

| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |   |                            |
|--|---|----------------------------|
| Category*  | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.      |
| X  | DATABASE CHEMCATS [Online]<br>CHEMICAL ABSTRACTS SERVICE, COLUMBUS,<br>OHIO, US; AKG-3483-0211(ON);<br>18 July 2008 (2008-07-18),<br>XP002528050<br>retrieved from STN<br>Database accession no. 2056955583   | 1-3,6-11                   |
| A  | abstract<br>& "AKOS SCREENING LIBRARY"<br>18 July 2008 (2008-07-18), AKOS-CONSULTING<br>AND SOLUTIONS GMBH, AUSTR. 26, STEINEN,<br>D-78585, GERMANY   | 14-19                      |
| Y  | -----<br>DATABASE CAPLUS, [Online]<br>1 January 2008 (2008-01-01),<br>LEE TAEWEON ET AL: "Identification and<br>functional characterization of allosteric<br>agonists for the G protein-coupled<br>receptor FFA2"<br>XP002528051<br>retrieved from CAPLUS<br>Database accession no. 2008:1457592<br>abstract<br>compounds with rn: 1103523-24-5 and<br>1103523-25-6<br>& MOLECULAR PHARMACOLOGY,<br>vol. 74, no. 6,<br>25 September 2008 (2008-09-25), pages<br>1599-1609,<br>ISSN: 0026-895X | 1-3,<br>6-11,<br>14-19     |
| Y  | -----<br>WO 2007/131620 A1 (SANOFI AVENTIS [FR];<br>DEFOSSA ELISABETH [DE]; GOERLITZER JOCHEN<br>[DE]; K) 22 November 2007 (2007-11-22)<br>claims; examples   | 1-3,<br>6-11,<br>14-19     |
| Y  | -----<br>WO 2004/072066 A1 (OSI PHARM INC [US];<br>FYFE MATTHEW COLIN THOR [GB]; GARDNER LISA<br>SARAH []) 26 August 2004 (2004-08-26)<br>claims; examples 19,22-24, 30, 34   | 1-3,<br>6-11,<br>14-19     |
| Y  | -----<br>WO 2005/103021 A1 (PROSIDION LTD [GB];<br>FYFE MATTHEW [GB])<br>3 November 2005 (2005-11-03)<br>claims; examples 3,6,9,12,15   | 1-3,6,7,<br>9-11,<br>14-19 |
| A  |   | 8                          |
| A  | -----<br>WO 2004/002480 A1 (NOVO NORDISK AS [DK])<br>8 January 2004 (2004-01-08)<br>page 189, line 5 - page 192, line 23;<br>claims; examples 6,13, 20,255, 286, 307,<br>318, , 329, 363, 380, 397,   | 1,2,8,<br>14-19            |

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2009/066536

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:  
  
3, 8
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 3(completely); 1, 2, 6-11, 14-19(partially)

Compounds of formula Ib-1a and their uses as anti-diabetes agents.

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2. claims: 4(completely); 1, 2, 14-19(partially)

Compounds of formulae Ib-2a-2f and their uses as anti-diabetes agents.

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3. claims: 5(completely); 1, 2, 14-19(partially)

Compounds of formula Ib-3 and their uses as anti-diabetes agents.

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4. claims: 7(completely); 1, 2, 14-19(partially)

Compounds of formula Ib-4b and their uses as anti-diabetes agents.

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5. claims: 8(completely); 1, 2, 14-19(partially)

Compounds of formula Ib-4c and their uses as anti-diabetes agents.

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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2009/066536

| Patent document cited in search report |            | Publication date | Patent family member(s) | Publication date |
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