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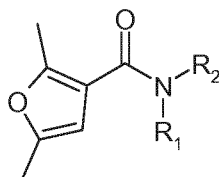(54) **Title:** FUNGICIDAL N-BICYCLOALKYL AND N-TRICYCLOALKYL (THIO)CARBOXAMIDE DERIVATIVES

(57) **Abstract:** The present invention relates to fungicidal N-bicycloalkyl and N-tricycloalkyl carboxamide derivatives and their thiocarbonyl derivatives, their process of preparation and intermediate compounds for their preparation, their use as fungicides, particularly in the form of fungicidal compositions and methods for the control of phytopathogenic fungi of plants using these compounds or their compositions.

FUNGICIDAL N-BICYCLOALKYL AND N-TRICYCLOALKYL (THIO)CARBOXAMIDE DERIVATIVES
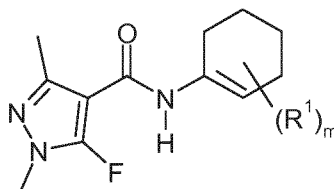
DESCRIPTION

The present invention relates to fungicidal N-bicycloalkyl and N-tricycloalkyl carboxamide derivatives and

5   their thiocarbonyl derivatives, their process of preparation and intermediate compounds for their preparation, their use as fungicides, particularly in the form of fungicidal compositions and methods for the control of phytopathogenic fungi of plants using these compounds or their compositions.

In international patent application DE201 9535 certain fungicidal N-polycycloalkyl carboxamide derivatives

10   are generically embraced in a broad disclosure of numerous compounds of the following formula:

wherein R_1 can represent a hydrogen atom or a C_1-C_4-alkyl group and $R_\sim$ can represent a substituted or non-substituted monocycloalkyl group or polycycloalkyl group containing 6 to 10 carbon atoms. However,

15   this document does not disclose compounds wherein the dimethylfurane moiety can be replaced by an other unsaturated or partially saturated, 5-membered heterocyclyl group such as a pyrazolyl group. Furthermore, there is no disclosure in this document of any compound wherein R_1 can be an alkoxy or a cycloalkyl group.

In international patent application DE1 9629826 certain fungicidal N-bicycloalkyl carboxamide derivatives

20   are generically embraced in a broad disclosure of numerous compounds of the following formula:

wherein m can represent an integer from 0 to 3 and R^1 can represent alkyl or two vicinal R^1 groups together can represent an alkylene chain with 3 or 4 carbon atoms. However, this document does not

25   disclose compounds wherein the 5-fluoro-1 ,3-dimethyl-1 H-pyrazol-4-yl moiety can be substituted by other groups such as (poly)halogenoalkyl group, an alkoxy group or an alkyl group other than methyl. Furthermore, there is no disclosure in this document of any compound wherein the amide moiety can be substituted by an alkyl, an alkoxy or cycloalkyl group.

In international patent applications WO201 0 134637 and JP201 0270037 certain fungicidal N-bicycloalkyl

30   carboxamide derivatives are generically embraced in a broad disclosure of numerous compounds of the following formula:
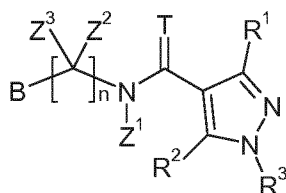
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$$H_2N-\underset{N}{\overset{S}{\bigvee}}\overset{O}{\underset{R^1}{\bigvee}}\overset{O}{\underset{N}{\bigvee}}\overset{Cy^1}{\underset{R^2}{\bigvee}}$$
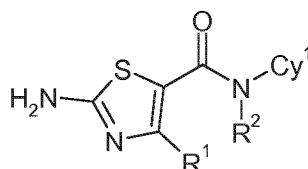
wherein R^1 can represent a hydrogen atom, a halogen atom, an alkyl group or the like, R^2 can represent a hydrogen or a C_1-C_3-**alkyl** group and Cy^1 can represent a C_7-C_{10}-bicycloalkyl group. However, this document does not disclose compounds wherein the aminothiazole moiety can be replaced by an other unsaturated or partially saturated, **5**-membered heterocyclyl group such as a pyrazolyl group. Furthermore, there is no disclosure in this document of any compound wherein R^2 can be an alkoxy or a cycloalkyl group .

It is always of high interest in the field of agrochemicals to use pesticidal compounds more active than the compounds already known by the man ordinary skilled in the art whereby reduced amounts of compound can be used whilst retaining equivalent efficacy.

Furthermore, the provision of new pesticidal compounds with a higher efficacy strongly reduces the risk of appearance of resistant strains in the fungi to be treated.

We have now found a new family of compounds which show enhanced fungicidal activity over the general known family of such compounds.

Accordingly, the present invention provides a N-bicycloalkyl or N-tricycloalkyl (thio)carboxamide derivative of formula (I)

$$B-[\,Y\,]_n-\underset{Z^1}{\overset{Z^3}{\underset{|}{\bigvee}}}\overset{Z^2}{\underset{N}{\overset{T}{\bigvee}}}\overset{R^1}{\underset{R^2}{\overset{N}{\bigvee}}}\overset{R^1}{\underset{R^3}{\bigvee}}$$

(I)

wherein

- T represents O or S ;

- n represents **0** or 1 ;

- B represents

$$\underset{Z^6}{\overset{[\,Q^1\,]_t}{\underset{[\,Q^2\,]_u}{\bigvee}}}$$

$$B^1 \quad\quad or \quad\quad B^2$$

where the bond marked by * is attached to the $(CZ^2Z^3)_n$-N amide moiety ;

- m represents 0 or 1 ;

- p represents 0, 1, 2 or 3 ; providing that m + p is equal to 1 to 3 ;

- t represents 1 or 2 ;

- u represents 1, 2, 3 or 4 ;

- Q^1 represents a direct bond, $CZ'Z^8$, O, S, SO, SO_2, NZ^{11}, -C(=V)-, -C(=NZ^{12})-, a non-substituted C_1-C_6-alkylidene or a substituted C_1-C_6-alkylidene substituted by up to 10 atoms or groups that can be the same or different and that can be selected in the list consisting of halogen atoms, cyano, C_1-C_6-alkyl, C_1-C_6-halogenoalkyl comprising up to 9 halogen atoms that can be the same or different, C_1-C_6-alkoxy, O-C_6-halogenoalkoxy comprising up to 9 halogen atoms that can be the same or different, C_1-C_6-alkoxycarbonyl, C_1-C_6-halogenoalkoxycarbonyl comprising up to 9 halogen atoms that can be the same or different, C_1-C_6-alkylaminocarbonyl and di-C_1-C_6-alkylaminocarbonyl ; providing that

  - when Q^1 is not a direct bond then t + u is equal to 2 to 4 ; or

  - when Q^1 is a direct bond then u is equal to 3 or 4 ; or

  - when t is equal to 2 then $[Q^1]_2$ is not a peroxide group ;

- Q^2 represents CZ^9Z^{10} or -CH=CH- ;

- V represents O or S ;

- Z^1 represents a hydrogen atom ; a formyl group: a substituted or non-substituted C_1-C_6-alkyl ; a substituted or non-substituted C_1-C_6-alkoxy; a non-substituted C_3-C_7-cycloalkyl or a C_3-C_7-cycloalkyl substituted by up to 10 atoms or groups that can be the same or different and that can be selected in the list consisting of halogen atoms, cyano. C_1-C_6-alkyl, C_1-C_6-halogenoalkyl comprising up to 9 halogen atoms that can be the same or different, C_1-C_6-alkoxy, C_1-C_6-halogenoalkoxy comprising up to 9 halogen atoms that can be the same or different, C_1-C_6-alkoxycarbonyl, C_1-C_6-halogenoalkoxycarbonyl comprising up to 9 halogen atoms that can be the same or different, C_1-C_6-alkylaminocarbonyl and di-C_1-C_6-alkylaminocarbonyl ; provided that- when Z^1 represents a hydrogen atom, n represents 0, T represents O and B represents a optionally mono alkyl-substituted, saturated or partially unsaturated, decahydronaphthalenyl group, octahydro-1 H-inden-4-yl group or octahydro-1 H-inden-5-yl group then R^1 and R^3 are not simultaneously a methyl group when R^2 is a fluorine atom.

- Z^2 and Z^3 independently represent a a hydrogen atom ; a halogen atom ; cyano ; substituted or non-substituted C_1-C_6-alkyl ; C_1-C_6-halogenoalkyl having 1 to 5 halogen atoms ; substituted or non-substituted C_1-C_6-alkoxy: substituted or non-substituted C_1-C_6-alkylsulfanyl; or substituted or non-substituted C_1-C_6-alkoxycarbonyl ; or Z^2 and Z^3 are a C_2-C_5-alkylene group that can be substituted by up to four C_1-C_6-alkyl groups ;

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- Z^4, Z^5, Z^6, Z^7, Z^8, Z^9 or Z^{10} independently represent a hydrogen atom ; a halogen atom ; cyano ; substituted or non-substituted C_{1-C6} -alkyl ; C_{1-C6} -halogenoalkyl having 1 to 5 halogen atoms ; substituted or non-substituted C_{1-C6} -alkoxy ; substituted or non-substituted C_{1}-C_{8}-alkylsulfanyl ; substituted or non-substituted C_{1-C6} -alkoxycarbonyl ; or benzyl group ;

- Z^{11} represents a hydrogen atom ; a substituted or non-substituted C_{1-C6} -alkyl ; a C_{1-C6}-halogenoalkyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{2-C6}-alkenyl ; C_{2-C6} -halogenoalkenyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{2-C6} -alkynyl ; C_{2-C6} -halogenoalkynyl comphsing up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{3-C7} -cycloalkyl ; C_{3-C7}-halogeno-cycloalkyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{3-C7}-cycloalkyl-C_{1-C6}-alkyl ; formyl ; substituted or non-substituted C_{1-C6} -alkylcarbonyl ; C_{1-C6}-halogenoalkylcarbonyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{1-C6}-alkoxycarbonyl ; C_{1-C6} -halogenoalkoxycarbonyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{1-C6}-alkylsulfonyl ; C_{1-C6}-halogenoalkylsulfonyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted benzyl ; or substituted or non-substituted phenylsulfonyl;

- Z^{12} represents a hydrogen atom, a substituted or non-substituted C_{1-C6} -alkyl ; C_{1-C6}-halogenoalkyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{1-C6} -alkoxy ; C_{1-C6} -halogenoaikoxy comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{3-C7}-cycloalkyl ; C_{3-C7}-halogeno-cycloalkyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted C_{3-C7}-cycloalkoxy ; C_{3-C7}-halogenocycloalkoxy comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted benzyl ; substituted or non-substituted phenyl ; substituted or non-substituted benzyloxy ; or substituted or non-substituted phenoxy ;

- R^1, R^2 and R^3 independently represents a hydrogen atom ; halogen atom ; nitro ; cyano ; hydroxy ; amino ; sulfanyl ; pentafluoro-Λ^6-sulfanyl ; substituted or non-substituted (C_{1-C6}-alkoxyimino)-C_{1-C6}-alkyl ; substituted or non-substituted (benzyloxyimino)-C_{1-C6} -alkyl ; substituted or non-substituted C_{1-C6} -alkyl ; C_{1-C6} -halogenoalkyl having 1 to 9 halogen atoms ; substituted or non-substituted C_{2-C8}-alkenyl ; C_{2-C6} -halogenoalkenyl having 1 to 9 halogen atoms ; substituted or non-substituted C_{2-C6} -alkynyl ; C_{2-C6} -halogenoalkynyl having 1 to 9 halogen atoms ; substituted or non-substituted C_{1-C6} -alkoxy ; C_{1-C6}-halogenoalkoxy having 1 to 9 halogen atoms ; substituted or non-substituted C_{1-C6} -alkylsulfanyl ; C_{1-C6} -halogenoalkylsulfanyl having 1 to 9 halogen atoms ; substituted or non-substituted C_{1-C6} -alkylsulfinyl ; C_{1-C6}-halogenoalkylsulfinyl having 1 to 9 halogen atoms ; substituted or non-substituted C_{1-C6}-alkylsulfonyl ; C_{1-C6} -halogenoalkylsulfonyl having 1 to 9 halogen atoms ; substituted or non-substituted C_{1-C6} -alkylamino ; substituted or non-substituted di-C_{1-C6}-alkylamino ; substituted or non-substituted C_{2-C6} -alkenyloxy ; substituted or non-substituted C_{3-C6} -alkynyloxy ; substituted or non-substituted C_{3-C7} -cycloalkyl ; C_{3-C7}-halogenocycloalkyl having 1 to 9 halogen atoms ; substituted or non-substituted tri(C_{1-C6})alkylsilyl ; substituted or non-substituted C_{1-C6}-

alkylcarbonyl ; C_1-C_6 -halogenoalkylcarbonyl having 1 to 9 halogen atoms ; substituted or non-substituted C_1-C_8-alkoxycarbonyl ; C_1-C_6 -halogenoalkoxycarbonyl having 1 to 9 halogen atoms ; substituted or non-substituted C_1-C_6 -alkylcarbamoyl ; substituted or non-substituted di-C_1-C_6-alkylcarbamoyl ; phenoxy ; phenylsulfanyl ; phenylamino ; benzyloxy ; benzylsulfanyl ; or benzylamino ;

as well as its salts, N-oxides, metal complexes, metalloid complexes and optically active isomers

For the compounds according to the invention, the following generic terms are generally used with the following meanings:

- halogen means fluorine, bromine, chlorine or iodine.

  carboxy means -$C(=O)OH$;

  carbonyl means -C(=O)- ;

  carbamoyl means -$C(=O)NH2$;

  N-hydroxycarbamoyl means -C(=O)NHOH ;

  SO represents a sulfoxide group ;

  SO_2 represents a sulfone group ;

- methylene means the diradical -CHΣ ;

- an alkyl group, an alkenyl group and an alkynyl group as well as moieties containing these terms, can be linear or branched;

- heteroatom means sulfur, nitrogen or oxygen.

- in the case of an amino group or the amino moiety of any other amino-comprising group, substituted by two substituent that can be the same or different, the two substituent together with the nitrogen atom to which they are linked can form a heterocyclyl group, preferably a 5- to 7-membered heterocyclyl group, that can be substituted or that can include other hetero atoms, for example a morpholino group or piperidinyl group.

- unless indicated otherwise, a group or a substituent that is substituted according to the invention can be substituted by one or more of the following groups or atoms: a halogen atom, a nitro group, a hydroxy group, a cyano group, an amino group, a sulfanyl group, a pentafluoro-λ^6-sulfanyl group, a formyl group, a formyloxy group, a formylamino group, a carbamoyl group, a N-hydroxycarbamoyl group, a carbamate group, a (hydroxyimino)-C_1-C_6 -alkyl group, a C_1-C_6 -alkyl, a tri(C_1-C_8-alkyl)silyl-C_1-C_8-alkyl, C_1-C_6 -cycloalkyi, tri(C_1-C_8-alkyl)silyl-C_1-C_8-cycloalkyl, a C_1-C_8-halogenoalkyl having 1 to 5 halogen atoms, a C_1-C_6 -halogenocycloalkyl having 1 to 5 halogen atoms, a C_2-C_8-alkenyl, a C_2-C_6 -alkynyl, a C_2-C_6 -alkenyloxy, a C_2-C_6 -alkynyloxy, a C_1-C_8-alkylamino, a di-C_1-C_6 -alkylamino, a C_1-C_6 -alkoxy, a C_1-C_6 -halogenoalkoxy having 1 to 5 halogen atoms, a C_1-C_6 -alkylsulfanyl, a C_1-C_6 -halogenoalkylsulfanyl having 1 to 5 halogen atoms, a C_2-C_8-alkenyloxy, a C_2-C_6 -halogenoalkenyloxy having 1 to 5 halogen atoms, a C_3-C_6 -alkynyloxy, a C_3-C_6-halogenoalkynyloxy having 1 to 5 halogen atoms, a C_1-C_6 -alkylcarbonyl, a C_1-C_6-halogenoalkylcarbonyl having 1 to 5 halogen atoms, a C_1-C_8-alkylcarbamoyl, a di-C_1-C_6-alkylcarbamoyl, a N-C_1-C_6-alkyloxycarbamoyl, a C_1-C_6 -alkoxycarbamoyl, a N-C_1-C_6-alkyl-C_1-C_6-alkoxycarbamoyl, a C_1-C_6 -alkoxycarbonyl, a C_1-C_6 -halogenoalkoxycarbonyl having 1 to 5 halogen atoms, a C_1-C_6 -alkylcarbonyloxy, a C_1-C_6 -halogenoalkylcarbonyloxy having 1 to 5 halogen atoms, a C_1-C_6 -alkylcarbonylamino, a C_1-C_6 -halogenoalkylcarbonylamino having 1 to 5 halogen atoms, a

C_1-C_8 -alkylaminocarbonyloxy, a di-C_1-C_8-alkylaminocarbonyloxy, a C_1-C_8-alkyloxycarbonyloxy, a C_1-C_8-alkylsulfinyl, a C_1-C_8 -halogenoalkylsulfinyl having 1 to 5 halogen atoms, a C_1-C_8-alkylsulfonyl, a C_1-C_8 -halogenoalkylsulfonyl having 1 to 5 halogen atoms, a C_1-C_8-alkylaminosulfamoyl, a di-C_1-C_8-alkylaminosulfamoyl, a (C_1-C_6-alkoxyiminoJ-d -C_8-alkyl, a (C_1-C_8-alkenyloxyimino)-C_1 -C_6 -alkyl, a (C_1-C_6-alkynyloxyiminoJ-C_1-C_8 -alkyl, a 2-oxopyrrolidin-1 -yl, (benzyloxyimino)-C_1 -C_6 -alkyl, C_1-C_8 -alkoxyalkyl, C_1-C_8 -halogenoalkoxyalkyl having 1 to 5 halogen atoms, benzyloxy, benzylsulfanyl, benzylamino. phenoxy, phenylsulfanyl, or phenylamino.

Any of the compounds of the present invention can exist in one or more optical or chiral isomer forms depending on the number of asymmetric centres in the compound. The invention thus relates equally to all the optical isomers and to their racemic or scalemic mixtures (the term "scalemic" denotes a mixture of enantiomers in different proportions) and to the mixtures of all the possible stereoisomers, in all proportions. The diastereoisomers and/or the optical isomers can be separated according to the methods which are known per se by the man ordinary skilled in the art.

Any of the compounds of the present invention can also exist in one or more geometric isomer forms depending on the number of double bonds in the compound. The invention thus relates equally to all geometric isomers and to all possible mixtures, in all proportions. The geometric isomers can be separated according to general methods, which are known per se by the man ordinary skilled in the art.

Any of the compounds of the present invention can also exist in one or more geometric isomer forms depending on the relative position (syn/anti or cis/trans or endo/exo) of the substituents of ring B. The invention thus relates equally to all syn/anti (or cis/trans or endo/exo) isomers and to all possible syn/anti (or cis/trans or endo/exo) mixtures, in all proportions. The syn/anti (or cis/trans or endo/exo) isomers can be separated according to general methods, which are known per se by the man ordinary skilled in the art.

Preferred compounds according to the invention are compounds of formula (I) wherein R^1 represents a substituted or non-substituted C_1-C_8 -alkyl, C_1-C_8 -halogenoalkyl comprising up to 9 halogen atoms that can be the same or different, substituted or non-substituted C_1-C_5-alkoxy ; R^2 represents a hydrogen atom, or a halogen atom ; and R^3 represents a substituted or non-substituted C_1-C_8 -alkyl.

More preferred compounds according to the invention are compounds of formula (I) wherein R^1 represents C_1-C_8 -alkyl, C_1-C_8 -halogenoalkyl comprising up to 3 halogen atoms that can be the same or different ; R^2 represents a hydrogen atom, a chlorine atom, or a fluorine atom ; and R^3 represents a methyl.

Even more preferred compounds according to the invention are compounds of formula (I) wherein R^1 represents difluoromethyl ; R^2 represents a chlorine atom, or a fluorine atom ; and R^3 represents a methyl.

Other preferred compounds according to the invention are compounds of formula (I) wherein T represents O.

Other preferred compounds according to the invention are compounds of formula **(I)** wherein n represents O or 1.

Other preferred compounds according to the invention are compounds of formula **(I)** wherein **B** represents B^1.

Other more preferred compounds according to the invention are compounds of formula **(I)** wherein **B** represents **B' ;** Q^1 represents a direct bond ; u is equal to 3 or 4 ; and m + p is equal to 2 or 3.

Other even more preferred compounds according to the invention are compounds of formula **(I)** wherein **B** represents a substituted or non-substituted decahydronaphthalenyl group, a substituted or non-substituted octahydro-1 H-indenyl group, or a substituted or non-substituted octahydropentalenyl group.

Other more preferred compounds according to the invention are compounds of formula **(I)** wherein **B** represents **B**^{1} **;** Q^1 represents a methylene group, or an oxygen atom ; t is equal to 1 ; and u is equal to 1 or 2.

Other even more preferred compounds according to the invention are compounds of formula **(I)** wherein **B** represents a substituted or non-substituted bicyclo[2.2.1]heptyl group, a substituted or non-substituted bicyclo[2.2.1]hept-2-enyl group, a substituted or non-substituted 7-oxabicyclo[2.2.1]heptyl group, a substituted or non-substituted 7-oxabicyclo[2.2.1]hept-2-enyl group, a substituted or non-substituted bicyclo[2.2.2]octyl group, or a substituted or non-substituted bicyclo[3.1 .1]heptyl group.

Other preferred compounds according to the invention are compounds of formula **(I)** wherein **B** represents B^2 (adamantanyl).

Other preferred compounds according to the invention are compounds of formula **(I)** wherein Q^1 represents a direct bond, an oxygen atom, a substituted or non-substituted methylene group, or a substituted or non-substituted Ci-Cs-alkylidene group.

Other more preferred compounds according to the invention are compounds of formula **(I)** wherein Q^1 represents a direct bond, an oxygen atom, a methylene group, or a substituted Ci-Cs-alkylidene group.

Other even more preferred compounds according to the invention are compounds of formula **(I)** wherein Q^1 represents a direct bond, an oxygen atom, a methylene group, a dichloromethylidene group, or a **Ci-Cs**-alkylidene group.

Other preferred compounds according to the invention are compounds of formula **(I)** wherein Q^2 represents a methylene group, or a **-CH=CH-** group.

Other preferred compounds according to the invention are compounds of formula **(I)** wherein V represents O.

Other preferred compounds of formula (I) according to the invention are those wherein Z^1 represents a hydrogen atom.

Other preferred compounds of formula (I) according to the invention are those wherein Z^1 represents a substituted or non-substituted **Ci-Ce**-alkyl, particularly a non-substituted C_1-Ce-alkyl, more particularly a methyl.

Other preferred compounds of formula (I) according to the invention are those wherein Z^1 represents a substituted or non-substituted **Ci-Ce**-alkoxy, particularly a methoxy.

Other preferred compounds of formula (I) according to the invention are those wherein **Z^1** represents a substituted or non-substituted cyclopropyl.

Other more preferred compounds of formula (I) according to the invention are those wherein **Z^1** represents a cyclopropyl.

Other preferred compounds of formula (I) according to the invention are those wherein **Z^2** and **Z^3** independently represent a hydrogen atom or a substituted or non-substituted **Ci-Cs**-alkyl; Particularly a hydrogen atom or a methyl.

Other more preferred compounds of formula (I) according to the invention are those wherein **Z^2** represents a hydrogen atom and **Z^3** represents a hydrogen atom or a methyl.

Other preferred compounds according to the invention are compounds of formula (I) wherein **Z^4, Z^5,** Z^6, Z^7, **Z^8, Z^9** or **Z^{10}** independently represent a hydrogen atom, or a substituted or non-substituted **Ci-Ce**-alkyl. Particularly a hydrogen atom or a non-substituted **Ci-Ce**-alkyl. More particularly a hydrogen atom or a non-substituted C_1-Ci-alkyl.

Other more preferred compounds according to the invention are compounds of formula (I) wherein **Z^4, Z^5,** Z^6, **Z^7**, Z^8, **Z^9** or **Z^{10}** independently represents a hydrogen atom, or a methyl.

Other preferred compounds of formula (I) according to the invention are those wherein Z^{11} represents **Ci-Ce**-alkyl, substituted or non-substituted benzyl, or a Boc protecting group.

Other more preferred compounds of formula (I) according to the invention are those wherein **Z^{11}** represents methyl, ethyl, benzyl, or a Boc protecting group.

Other preferred compounds of formula (I) according to the invention are those wherein **Z^{12}** represents **Ci-Ce**-alkyl, **Ci-Ce**-alkoxy, substituted or non-substituted benzyl, substituted or non-substituted benzyloxy.

Other more preferred compounds of formula (I) according to the invention are those wherein **Z^{12}** represents methyl, methoxy, ethyl, ethoxy, benzyl, or benzyloxy.

The above mentioned preferences with regard to the substituents of the compounds according to the invention can be combined in various manners. These combinations of preferred features thus provide sub-classes of compounds according to the invention. Examples of such sub-classes of preferred compounds according to the invention are:

5   - preferred features of R^1 with preferred features of R^2, R^3, T, B, n, V, Z^1 to Z^{12}, Q^1 and Q^2;
    - preferred features of R^2 with preferred features of R^1, R^3, T, B, n, V, Z^1 to Z^{12}, Q^1 and Q^2;
    - preferred features of R^3 with preferred features of R^1, R^2, T. B. n, V, Z^1 to Z^{12}, Q^1 and Q^2;
    - preferred features of T with preferred features of R^1, R^2, R^3, B. n, V, Z^1 to Z^{12}, Q^1 and Q^2;
    - preferred features of B with preferred features of R^1, R^2, R^3, T, n, V, Z^1 to Z^{12}, Q^1 and Q^2;
10 - preferred features of n with preferred features of R^1, R^2, R^3, T, B. V, Z^1 to Z^{12}, Q^1 and Q^2;
    - preferred features of V with preferred features of R^1, R^2, R^3, T, B, n, Z^1 to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^1 with preferred features of R^1, R^2, R^3, T. B. n, V, Z^2 to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^2 with preferred features of R^1, R^2, R^3, T. B. n, V, Z^1, Z^3 to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^3 with preferred features of R^1, R^2, R^3, T, B, n, V, Z^1 to Z^2, Z^4 to Z'^2, Q^1 and Q^2;
15 - preferred features of Z^4 with preferred features of R^1, R^2, R^3, T. B. n, V, Z^1 to Z^3, Z^5 to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^5 with preferred features of R^1, R^2, R^3, T. B, n, V, Z^1 to Z^4, Z^6 to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^6 with preferred features of R^1, R^2, R^3, T, B, n, V, Z^1 to Z^5, Z^7 to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^7 with preferred features of R^1, R^2, R^3, T. B, n, V, Z^1 to Z^6, Z^8 to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^8 with preferred features of R^1, R^2, R^3, T, B, n, V, Z^1 to Z^7, Z^9 to Z^{12}, Q^1 and Q^2;
20 - preferred features of Z^9 with preferred features of R^1, R^2, R^3, T, B, n, V, Z^1 to Z^8, Z^{10} to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^{10} with preferred features of R^1, R^2, R^3. T. B. n, V, Z^1 to Z^9, Z^{11} to Z^{12}, Q^1 and Q^2;
    - preferred features of Z^{11} with preferred features of R^1, R^2. R^3, T. B. n, V, Z^1 to Z^{10}, Z^{12}, Q^1 and Q^2;
    - preferred features of Z^{12} with preferred features of R^1, R^2, R^3. T, B, n, V, Z^1 to Z^{11}, Q' and Q^2;
    - preferred features of Q^1 with preferred features of R^1, R^2, R^3, T. B. n, V, Z^1 to Z^{12} and Q^2;
25 - preferred features of Q^2 with preferred features of R^1, R^2, R^3. T. B, n, V, Z^1 to Z^{12} and Q^1;
   In these combinations of preferred features of the substituents of the compounds according to the invention, the said preferred features can also be selected among the more preferred features of each of R^1, R^2. R^3, T, B, n, V, Z^1 to Z^{12}, Q^1 and Q^2 so as to form most preferred subclasses of compounds according to the invention.

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The present invention also relates to a process for the preparation of the compound of formula (I).
Thus, according to a further aspect of the present invention there is provided a process P1 for the preparation of a compound of formula (I) as herein-defined and wherein T represents O and that
35 comprises reaction of an amine of formula (II) or one of its salts:

(II)
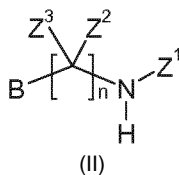
wherein Z^1, Z^2, Z^3, n and B are as herein-defined: with a carboxylic acid derivative of formula (III):

$$
\text{(III)}
$$
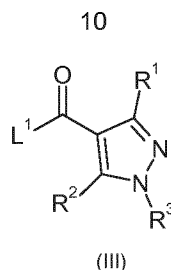
wherein R^1, R2, R3 is as herein-defined and L^1 represents a leaving group selected in the list consisting of a halogen atom, a hydroxyl group, -OR^a, -OC(=0)R ^{a}, R^a being a substituted or non-substituted C_1-C_6-alkyl, a substituted or non-substituted **Ci-Ce**-haloalkyl, a benzyl, 4-methoxybenzyl or pentafluorophenyl group, or a group of formula 0-C(=0)-(1 -R^3-3-R^1-5-R^2-pyrazol-4-yl) ; in the presence of a catalyst and in the presence of a condensing agent in case **L1** represents a hydroxy! group, and in the presence of an acid binder in case **L1** represents a halogen atom.

N-substituted amine derivatives of formula (II) are known or can be prepared by known processes such as reductive amination of aldehydes or ketones (Bioorganics and Medicinal Chemistry Letters (2006), *16,* 201 4), or reduction of imines (Tetrahedron (2005), *61,* 11689), or nucleophilic substitution of a halogen, mesylate or tosylate (Journal of Medicinal Chemistry (2002), *45,* 3887).

Carboxylic acid derivatives of formula (III) can be prepared by known processes.

In case **L1** represents a hydroxy group, the process according to the present invention is conducted in the presence of condensing agent. Suitable condensing agent may be selected in the non limited list consisting of acid halide former, such as phosgene, phosphorous tribromide. phosphorous trichloride, phosphorous pentachloride. phosphorous trichloride oxide or thionyl chloride; anhydride former, such as ethyl chloroformate. methyl chloroformate. isopropyl chloroformate. isobutyl chloroformate or methanesulfonyl chloride; carbodiimides, such as N,N'-dicyclohexylcarbodiimide (DCC) or other customary condensing agents, such as phosphorous pentoxide, polyphosphoric acid, N,N'-carbonyl-diimidazole, 2-ethoxy-N-ethoxycarbonyl-1 ,2-dihydroquinoline **(EEDQ),** triphenylphosphine/tetrachloro-methane, 4-(4.6-dimethoxy[1 .3.5]-triazin-2-yl)-4-methylmorpholinium chloride hydrate. bromo-tripyrrolidinophosphoniumhexafluorophosphate or propanephosphonic anhydride **(T3P).**

The process according to the present invention is conducted in the presence of a catalyst. Suitable catalyst may be selected in the list consisting of N,N-dimethylpyridin-4-amine, 1-hydroxy-benzotriazole or N,N-dimethylformamide.

In case L^1 represents a halogen atom, the process according to the present invention is conducted in the presence of an acid binder. Suitable acid binders for carrying out process **P1** according to the invention are in each case all inorganic and organic bases that are customary for such reactions. Preference is given to using alkaline earth metal, alkali metal hydride, alkali metal hydroxides or alkali metal alkoxides, such as sodium hydroxide, sodium hydride, calcium hydroxide, potassium hydroxide, potassium tert-butoxide or other ammonium hydroxide, alkali metal carbonates, such as cesium carbonate, sodium carbonate, potassium carbonate, potassium bicarbonate, sodium bicarbonate, alkali metal or alkaline earth metal acetates, such as sodium acetate, potassium acetate, calcium acetate and also tertiary amines, such as trimethylamine, triethylamine, diisopropylethylamine, tributylamine, N,N-dimethylaniline,

pyridine, N-methylpiperidine, N,N-dimethylpyridin-4-amine, diazabicyclooctane (DABCO), diazabicyclo-nonene (DBN) or diazabicycioundecene (DBU).

It is also possible to work in the absence of an additional condensing agent or to employ an excess of the amine component, so that it simultaneously acts as acid binder agent.

According to a further aspect according to the invention, there is provided a process P2 for the preparation of a compound of formula (I) wherein T represents S, starting from a compound of formula (I) wherein T represents O and illustrated according to the following reaction scheme :

(I)   (I)
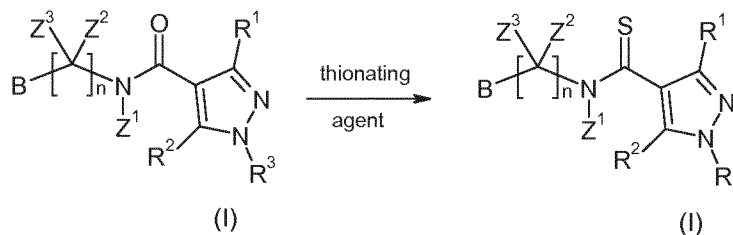
Process P2

wherein R^1, R2, R3, Z^1, Z2, Z3, n and B are as herein-defined, in the optionally presence of a catalytic or stoichiometric or excess amount, quantity of a base such as an inorganic and organic base. Preference is given to using alkali metal carbonates, such as sodium carbonate, potassium carbonate, potassium bicarbonate, sodium bicarbonate ; heterocyclic aromatic bases, such as pyridine, picoline, lutidine, collidine ; and also tertiary amines, such as trimethylamine, triethylamine, tributylamine, N,N-dimethylaniline, N,N-dimethylpyridin-4-amine or N-methyl-piperidine.

Process P2 according to the invention is performed in the presence of a thionating agent.

Starting amide derivatives of formula (I) can be prepared according to process P1.

Suitable thionating agents for carrying out process P2 according to the invention can be sulfur (S), sulfhydric acid (H_2S), sodium sulfide (Na_2S), sodium hydrosulfide (NaHS), boron trisulfide (B_2S_3), bis(diethylaluminium) sulfide (($AlEt_2)_2S$), ammonium sulfide (($NH_4)_2S$), phosphorous pentasulfide (P_2S_5), Lawesson's reagent (2.4-bis(4-methoxyphenyl)-1.2,3,4-dithiadiphosphetane 2.4-disulfide) or a polymer-supported thionating reagent such as described in Journal of the Chemical Society, Perkin 1 (2001), 358.

Work-up is carried out by customary methods. Generally, the reaction mixture is treated with water and the organic phase is separated off and, after drying, concentrated under reduced pressure. If appropriate, the remaining residue can, be freed by customary methods, such as chromatography, recrystallization or distillation, from any impurities that may still be present.

The compound according to the present invention can be prepared according to the general processes of preparation described above. It will nevertheless be understood that, on the basis of his general

knowledge and of available publications, the skilled worker will be able to adapt this method according to the specifics of each of the compounds, which it is desired to synthesize.

Still in a further aspect, the present invention relates to compounds of formula (II) useful as intermediate compounds or materials for the process of preparation according to the invention.The present invention thus provides compounds of formula (Iis) :

(IIa)
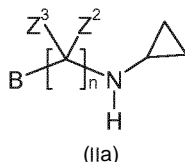
wherein B, n, Z^2 and Z^3 are as herein-defined with the exclusion of :

- N-(bicyclo[2.2.1]hept-2-ylmethyl)cyclopropanamine   and its hydrochloride salt

- N-[(2-methylbicyclo[2.2.1]hept-2-yl)methyl]cyclopropanamine

- N-[(2-propylbicyclo[2.2. 1]hept-2-yl)methyl]cyclopropanamine

- N-[(2-butylbicyclo[2.2.1]hept-2-yl)methyl]cyclopropanamine

- N-[(2-isobutylbicyclo[2.2.1]hept-2-yl)methyl]cyclopropanamine

- N-{[2-(3-methylbutyl)bicyclo[2.2.1]hept-2-yl]methyl}cyclopropanamine

- N-{[2-(2-methylbutyl)bicyclo[2.2.1]hept-2-yl]methyl}cyclopropanamine

- N-{[2-(2-isopropoxyethyl)bicyclo[2.2.1]hept-2-ylJmethyl}cyclopropanamine

- N-{[2-(2-butoxyethyl)bicyclo[2.2.1]hept-2-yl]methyl}cyclopropanamine

- N-cyclopropylbicyclo[2.2.1]heptan-2-amine

- N-cyclopropyl-1 .3,3-trimethylbicyclo[2.2.1]heptan-2-amine

- N-cyclopropyl-1 .7.7-trimethylbicyclo[2.2.1]heptan-2-amine

- 3-[(cyclopropylamino)methyl]-1 ,7,7-trimethylbicyclo[2.2.1]heptan-2-one and its hydrochloride salt

- N-cyclopropyl-8-methyl-8-azabicyclo[3.2.1]octan-3-amine

- 3-(cyclopropylamino)-8-methyl-8-azabicyclo[3.2.1]octane-3-carbonitrile

- methyl 3-(cyclopropylamino)-8-methyl-8-azabicyclo[3.2.1]octane-3-carboxylate

- ethyl 3-(cyclopropylamino)-8-methyl-8-azabicyclo[3.2.1]octane-3-carboxylate

- N-cyclopropyldecahydronaphthalen-2-amine

- N-(adamantan-1 -ylmethyl)cyclopropanamine

- N-[1 -(adamantan-1 -yl)ethyl]cyclopropanamine

- N-cyclopropyladamantan-2-amine

- 2-(cyclopropylamino)adamantane-2-carbonitrile.

In a further aspect, the present invention also relates to a fungicide composition comprising an effective and non-phytotoxic amount of an active compound of formula (I).

The expression "effective and non-phytotoxic amount" means an amount of composition according to the invention that is sufficient to control or destroy the fungi present or liable to appear on the cropsand that does not entail any appreciable symptom of phytotoxicity for the said crops. Such an amount can vary within a wide range depending on the fungus to be controlled, the type of crop, the climatic conditions and

the compounds included in the fungicide composition according to the invention. This amount can be determined by systematic field trials that are within the capabilities of a person skilled in the art.

Thus, according to the invention, there is provided a fungicide composition comprising, as an active ingredient, an effective amount of a compound of formula (I) as herein defined and an agriculturally acceptable support, carrier or filler.

According to the invention, the term "support" denotes a natural or synthetic, organic or inorganic compound with that the active compound of formula (I) is combined or associated to make it easier to apply, notably to the parts of the plant. This support is thus generally inert and should be agriculturally acceptable. The support can be a solid or a liquid. Examples of suitable supports include clays, natural or synthetic silicates, silica, resins, waxes, solid fertilisers, water, alcohols, in particular butanol, organic solvents, mineral and plant oils and derivatives thereof. Mixtures of such supports can also be used.

The composition according to the invention can also comprise additional components. In particular, the composition can further comprise a surfactant. The surfactant can be an emulsifier, a dispersing agent or a wetting agent of ionic or non-ionic type or a mixture of such surfactants. Mention can be made, for example, of polyacrylic acid salts, lignosulfonic acid salts, phenolsulfonic or naphthalenesulfonic acid salts, polycondensates of ethylene oxide with fatty alcohols or with fatty acids or with fatty amines, substituted phenols (in particular alkylphenols or arylphenols), salts of sulfosuccinic acid esters, taurine derivatives (in particular alkyl taurates), phosphoric esters of polyoxyethylated alcohols or phenols, fatty acid esters of polyolsand derivatives of the above compounds containing sulfate, sulfonate and phosphate functions. The presence of at least one surfactant is generally essential when the active compound and/or the inert support are water-insoluble and when the vector agent for the application is water. Preferably, surfactant content can be comprised from 5% to 40% by weight of the composition.

Optionally, additional components can also be included, e.g. protective colloids, adhesives, thickeners, thixotropic agents, penetration agents, stabilisers, sequestering agents. More generally, the active compounds can be combined with any solid or liquid additive, that complies with the usual formulation techniques.

In general, the composition according to the invention can contain from 0.05 to 99% by weight of active compound, preferably 10 to 70% by weight.

Compositions according to the invention can be used in various forms such as aerosol dispenser, capsule suspension, cold fogging concentrate, dustable powder, emulsifiable concentrate, emulsion oil in water, emulsion water in oil, encapsulated granule, fine granule, flowable concentrate for seed treatment, gas (under pressure).gas generating product, granule, hot fogging concentrate, macrogranule, microgranule, oil dispersible powder, oil miscibie flowable concentrate, oil miscibie liquid, paste, plant rodlet, powder for dry seed treatment, seed coated with a pesticide, soluble concentrate, soluble powder, solution for seed treatment, suspension concentrate (flowable concentrate), ultra low volume (ULV) liquid, ultra low volume (ULV) suspension, water dispersible granules or tablets, water dispersible powder for slurry treatment,

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water soluble granules or tablets, water soluble powder for seed treatment and wettable powder. These compositions include not only compositions that are ready to be applied to the plant or seed to be treated by means of a suitable device, such as a spraying or dusting device, but also concentrated commercial compositions that must be diluted before application to the crop.

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The compounds according to the invention can also be mixed with one or more insecticide, fungicide, bactericide, attractant, acaricide or pheromone active substance or other compounds with biological activity. The mixtures thus obtained have normally a broadened spectrum of activity.

10   The compounds of formula (I) and the fungicide composition according to the invention can be used to curatively or preventively control the phytopathogenic fungi of plants or crops.

Thus, according to a further aspect of the invention, there is provided a method for curatively or preventively controlling the phytopathogenic fungi of plants or crops characterised in that a compound of formula (I) or a fungicide composition according to the invention is applied to the seed, the plant or to the

15   fruit of the plant or to the soil wherein the plant is growing or wherein it is desired to grow.

The method of treatment according to the invention can also be useful to treat propagation material such as tubers or rhizomes, but also seeds, seedlings or seedlings pricking out and plants or plants pricking out. This method of treatment can also be useful to treat roots. The method of treatment according to the invention can also be useful to treat the overground parts of the plant such as trunks, stems or stalks,

20   leaves, flowers and fruit of the concerned plant.

According to the invention all plants and plant parts can be treated. By plants is meant all plants and plant populations such as desirable and undesirable wild plants, cultivars and plant varieties (whether or not protectable by plant variety or plant breeder's rights). Cultivars and plant varieties can be plants

25   obtained by conventional propagation and breeding methods which can be assisted or supplemented by one or more biotechnological methods such as by use of double haploids, protoplast fusion, random and directed mutagenesis, molecular or genetic markers or by bioengineering and genetic engineering methods. By plant parts is meant all above ground and below ground parts and organs of plants such as shoot, leaf, blossom and root, whereby for example leaves, needles, stems, branches, blossoms, fruiting

30   bodies, fruits and seed as well as roots, corms and rhizomes are listed. Crops and vegetative and generative propagating material, for example cuttings, corms, rhizomes, runners and seeds also belong to plant parts.

Among the plants that can be protected by the method according to the invention, mention may be made of major field crops like corn, soybean, cotton, *Brassica* oilseeds such as *Brassica napus* (e.g. canola), *Brassica*

35   *rapa, B.juncea* (e.g. mustard) and *Brassica carinata,* rice, wheat, sugarbeet, sugarcane, oats, rye, barley, millet, triticale, flax, vine and various fruits and vegetables of various botanical taxa such as *Rosaceae sp.* (for instance pip fruit such as apples and pears, but also stone fruit such as apricots, cherries, almonds and peaches, berry fruits such as strawberries), *Ribesioidae sp., Jugiandaceae sp., Betuiaceae sp., Anacardiaceae sp., Fagaceae sp., Moraceae sp., Oieaceae sp., Actinidaceae sp., Lauraceae sp., Musaceae*

40   *sp.* (for instance banana trees and plantings), *Rubiaceae sp.* (for instance coffee), *Theaceae sp., Sterculiceae sp., Rutaceae sp.* (for instance lemons, oranges and grapefruit) ; *Soianaceae sp.* (for instance tomatoes, potatoes, peppers, eggplant), *Liliaceae sp.,* Compositiae *sp.* (for instance lettuce, artichoke and chicory -

including root chicory, endive or common chicory), *Umbeiiiferae sp.* (for instance carrot, parsley, celery and celeriac), *Cucurbitaceae sp.* (for instance cucumber - including pickling cucumber, squash, watermelon, gourds and melons), *Alliaceae* sp. (for instance onions and leek), Cruciferae *sp.* (for instance white cabbage, red cabbage, broccoli, cauliflower, brussel sprouts, pak choi, kohlrabi, radish, horseradish, cress, Chinese cabbage), Leguminosae *sp.* (for instance peanuts, peas and beans beans - such as climbing beans and broad beans). *Chenopodiaceae sp.* (for instance mangold, spinach beet, spinach, beetroots), *Malvaceae* (for instance okra), *Asparagaceae* (for instance asparagus); horticultural and forest crops; ornamental plants; as well as genetically modified homologues of these crops.

The method of treatment according to the invention can be used in the treatment of genetically modified organisms (GMOs). e.g. plants or seeds. Genetically modified plants (or transgenic plants) are plants of which a heterologous gene has been stably integrated into genome. The expression "heterologous gene" essentially means a gene which is provided or assembled outside the plant and when introduced in the nuclear, chloroplastic or mitochondrial genome gives the transformed plant new or improved agronomic or other properties by expressing a protein or polypeptide of interest or by down regulating or silencing other gene(s) which are present in the plant (using for example, antisense technology, cosuppression technology, RNA interference - RNAi - technology or microRNA - miRNA - technology). A heterologous gene that is located in the genome is also called a transgene. A transgene that is defined by its particular location in the plant genome is called a transformation or transgenic event.

Depending on the plant species or plant cultivars, their location and growth conditions (soils, climate, vegetation period, diet), the treatment according to the invention may also result in superadditive ("synergistic") effects. Thus, for example, reduced application rates and/or a widening of the activity spectrum and/or an increase in the activity of the active compounds and compositions which can be used according to the invention, better plant growth, increased tolerance to high or low temperatures, increased tolerance to drought or to water or soil salt content, increased flowering performance, easier harvesting, accelerated maturation, higher harvest yields, bigger fruits, larger plant height, greener leaf color, earlier flowering, higher quality and/or a higher nutritional value of the harvested products, higher sugar concentration within the fruits, better storage stability and/or processability of the harvested products are possible, which exceed the effects which were actually to be expected.

At certain application rates, the active compound combinations according to the invention may also have a strengthening effect in plants. Accordingly, they are also suitable for mobilizing the defense system of the plant against attack by unwanted microorganisms. This may. if appropriate, be one of the reasons of the enhanced activity of the combinations according to the invention, for example against fungi. Plant-strengthening (resistance-inducing) substances are to be understood as meaning, in the present context, those substances or combinations of substances which are capable of stimulating the defense system of plants in such a way that, when subsequently inoculated with unwanted microorganisms, the treated plants display a substantial degree of resistance to these microorganisms. In the present case, unwanted microorganisms are to be understood as meaning phytopathogenic fungi, bacteria and viruses. Thus, the substances according to the invention can be employed for protecting plants against attack by the abovementioned pathogens within a certain period of time after the treatment. The period of time within which

protection is effected generally extends from 1 to 10 days, preferably 1 to 7 days, after the treatment of the plants with the active compounds.

Plants and plant cultivars which are preferably to be treated according to the invention include all plants which have genetic material which impart particularly advantageous, useful traits to these plants (whether obtained by breeding and/or biotechnological means).

Plants and plant cultivars which are also preferably to be treated according to the invention are resistant against one or more biotic stresses, i.e. said plants show a better defense against animal and microbial pests, such as against nematodes, insects, mites, phytopathogenic fungi, bacteria, viruses and/or viroids. Examples of nematode resistant plants are described in e.g. US Patent Application Nos 11/765,491, 11/765.494, 10/926.819, 10/782,020, 12/032.479, 10/783,417, 10/782,096, 11/657,964, 12/192,904, 11/396,808, 12/166,253, 12/166.239, 12/166,124, 12/166,209, 11/762,886, 12/364,335, 11/763.947, 12/252.453, 12/209,354, 12/491,396, 12/497.221, 12/644,632, 12/646.004, 12/701,058, 12/718,059, 12/721,595, 12/638.591 and in WO11/002992, WO11/014749, WO11/103247, WO11/103248.

Plants and plant cultivars which may also be treated according to the invention are those plants which are resistant to one or more abiotic stresses. Abiotic stress conditions may include, for example, drought, cold temperature exposure, heat exposure, osmotic stress, flooding, increased soil salinity, increased mineral exposure, ozone exposure, high light exposure, limited availability of nitrogen nutrients, limited availability of phosphorus nutrients, shade avoidance.

Plants and plant cultivars which may also be treated according to the invention, are those plants characterized by enhanced yield characteristics. Increased yield in said plants can be the result of, for example, improved plant physiology, growth and development, such as water use efficiency, water retention efficiency, improved nitrogen use, enhanced carbon assimilation, improved photosynthesis, increased germination efficiency and accelerated maturation. Yield can furthermore be affected by improved plant architecture (under stress and non-stress conditions), including but not limited to, early flowering, flowering control for hybrid seed production, seedling vigor, plant size, internode number and distance, root growth, seed size, fruit size, pod size, pod or ear number, seed number per pod or ear, seed mass, enhanced seed filling, reduced seed dispersal, reduced pod dehiscence and lodging resistance. Further yield traits include seed composition, such as carbohydrate content, protein content, oil content and composition, nutritional value, reduction in anti-nutritional compounds, improved processability and better storage stability.

Plants that may be treated according to the invention are hybrid plants that already express the characteristic of heterosis or hybrid vigor which results in generally higher yield, vigor, health and resistance towards biotic and abiotic stresses). Such plants are typically made by crossing an inbred male-sterile parent line (the female parent) with another inbred male-fertile parent line (the male parent). Hybrid seed is typically harvested from the male sterile plants and sold to growers. Male sterile plants can sometimes (e.g. in corn) be produced by detasseling, i.e. the mechanical removal of the male reproductive organs (or males flowers) but, more typically, male sterility is the result of genetic determinants in the plant genome. In that case, and especially when seed is the desired product to be harvested from the hybrid plants it is typically useful to ensure that male fertility in the hybrid plants is fully restored. This can be accomplished by ensuring that the male parents have appropriate fertility restorer

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genes which are capable of restoring the male fertility in hybrid plants that contain the genetic determinants responsible for male-sterility. Genetic determinants for male sterility may be located in the cytoplasm. Examples of cytoplasmic male sterility (CMS) were for instance described in Brassica species (WO 92/05251, WO 95/09910, WO 98/27806. WO 05/002324, WO 06/021972 and US 6.229,072).

5   However, genetic determinants for male sterility can also be located in the nuclear genome. Male sterile plants can also be obtained by plant biotechnology methods such as genetic engineering. A particularly useful means of obtaining male-sterile plants is described in WO 89/10396 in which, for example, a ribonuclease such as barnase is selectively expressed in the tapetum cells in the stamens. Fertility can then be restored by expression in the tapetum cells of a ribonuclease inhibitor such as barstar (e.g. WO

10   91/02069).

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may be treated according to the invention are herbicide-tolerant plants, i.e. plants made tolerant to one or more given herbicides. Such plants can be obtained either by genetic transformation, or by selection of

15   plants containing a mutation imparting such herbicide tolerance.
Herbicide-resistant plants are for example glyphosate-tolerant plants, i.e. plants made tolerant to the herbicide glyphosate or salts thereof. Plants can be made tolerant to glyphosate through different means. For example, glyphosate-tolerant plants can be obtained by transforming the plant with a gene encoding the enzyme 5-enolpyruvylshikimate-3-phosphate synthase (EPSPS). Examples of such EPSPS genes

20   are the AroA gene (mutant CT7) of the bacterium Salmonella typhimurium (Comai et al., 1983, Science 221, 370-371), the CP4 gene of the bacterium Agrobacterium sp. (Barry et al., 1992, Curr. Topics Plant Physiol. 7. 139-145). the genes encoding a Petunia EPSPS (Shah et al.. 1986. Science 233. 478-481), a Tomato EPSPS (Gasser et al., 1988. J. Biol. Chem. 263, 4280-4289), or an Eleusine EPSPS (WO 01/66704). It can also be a mutated EPSPS as described in for example EP 0837944. WO 00/66746,

25   WO 00/66747, WO02/26995, W011/000498. Glyphosate-tolerant plants can also be obtained by expressing a gene that encodes a glyphosate oxido-reductase enzyme as described in U.S. Patent Nos. 5.776,760 and 5,463. 175. Glyphosate-tolerant plants can also be obtained by expressing a gene that encodes a glyphosate acetyl transferase enzyme as described in for example WO 02/36782, WO 03/092360, WO 05/012515 and WO 07/024782. Glyphosate-tolerant plants can also be obtained by

30   selecting plants containing naturally-occurring mutations of the above-mentioned genes, as described in for example WO 01/024615 or WO 03/013226. Plants expressing EPSPS genes that confer glyphosate tolerance are described in e.g. US Patent Application Nos 11/517,991, 10/739.610, 12/139.408, 12/352,532, 11/312,866, 11/315.678. 12/421,292, 11/400.598, 11/651,752, 11/681.285. 11/605,824, 12/468,205, 11/760,570, 11/762,526, 11/769,327, 11/769,255, 11/943801 or 12/362,774. Plants

35   comprising other genes that confer glyphosate tolerance, such as decarboxylase genes, are described in e.g. US patent applications 11/588.811, 11/185,342, 12/364.724, 11/185,560 or 12/423,926.

Other herbicide resistant plants are for example plants that are made tolerant to herbicides inhibiting the enzyme glutamine synthase, such as bialaphos, phosphinothricin or glufosinate. Such plants can be

40   obtained by expressing an enzyme detoxifying the herbicide or a mutant glutamine synthase enzyme that is resistant to inhibition, e.g. described in US Patent Application No 11/760,602. One such efficient detoxifying enzyme is an enzyme encoding a phosphinothricin acetyltransferase (such as the bar or pat

protein from Streptomyces species). Plants expressing an exogenous phosphinothricin acetyltransferase are for example described in U.S. Patent Nos. 5.561 .236; 5.648.477; 5.646.024; 5,273.894; 5,637,489; 5.276,268; 5.739.082; 5.908,81 0 and 7,112,665.

Further herbicide-tolerant plants are also plants that are made tolerant to the herbicides inhibiting the
5　enzyme hydroxyphenylpyruvatedioxygenase (HPPD). HPPD is an enzyme that catalyze the reaction in which para-hydroxyphenylpyruvate (HPP) is transformed into homogentisate. Plants tolerant to HPPD-inhibitors can be transformed with a gene encoding a naturally-occurring resistant HPPD enzyme, or a gene encoding a mutated or chimeric HPPD enzyme as described in WO 96/38567, WO 99/24585, WO 99/24586, WO 2009/1 44079, WO 2002/046387, or US 6,768,044, W01 1/076877, W01 1/076882,
10　W01 1/076885, W01 1/076889, W01 1/076892. Tolerance to HPPD-inhibitors can also be obtained by transforming plants with genes encoding certain enzymes enabling the formation of homogentisate despite the inhibition of the native HPPD enzyme by the HPPD-inhibitor. Such plants and genes are described in WO 99/34008 and WO 02/36787. Tolerance of plants to HPPD inhibitors can also be improved by transforming plants with a gene encoding an enzyme having prephenate deshydrogenase
15　(PDH) activity in addition to a gene encoding an HPPD-tolerant enzyme, as described in WO 2004/024928. Further, plants can be made more tolerant to HPPD-inhibitor herbicides by adding into their genome a gene encoding an enzyme capable of metabolizing or degrading HPPD inhibitors, such as the CYP450 enzymes shown in WO 2007/1 03567 and WO 2008/1 50473.

Still further herbicide resistant plants are plants that are made tolerant to acetolactate synthase (ALS)
20　inhibitors. Known ALS-inhibitors include, for example, sulfonylurea, imidazolinone, triazolopyrimidines, pryimidinyoxy(thio)benzoates, and/or sulfonylaminocarbonyltriazolinone herbicides. Different mutations in the ALS enzyme (also known as acetohydroxyacid synthase, AHAS) are known to confer tolerance to different herbicides and groups of herbicides, as described for example in Tranel and Wright (2002, Weed Science 50:700-71 2), but also, in U.S. Patent No. 5.605,01 1, 5,378,824, 5.14 1,870, and 5,01 3,659. The
25　production of sulfonylurea-tolerant plants and imidazolinone-tolerant plants is described in U.S. Patent Nos. 5,605,01 1: 5,01 3,659; 5.14 1.870; 5.767.361 ; 5,731 ,180; 5.304.732; 4.761 .373; 5,331 ,107; 5,928,937; and 5.378,824; and international publication WO 96/33270. Other imidazolinone-tolerant plants are also described in for example WO 2004/04001 2, WO 2004/1 06529, WO 2005/020673, WO 2005/093093, WO 2006/007373, WO 2006/01 5376, WO 2006/024351 , and WO 2006/060634. Further
30　sulfonylurea- and imidazolinone-tolerant plants are also described in for example WO 07/024782, W0 11/076345, WO201 2058223 and US Patent Application No 6 1/288958.

Other plants tolerant to imidazolinone and/or sulfonylurea can be obtained by induced mutagenesis, selection in cell cultures in the presence of the herbicide or mutation breeding as described for example for soybeans in U.S. Patent 5.084,082, for rice in WO 97/41 2 18, for sugar beet in U.S. Patent 5.773,702
35　and WO 99/057965, for lettuce in U.S. Patent 5,198,599, or for sunflower in WO 0 1/065922.

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are insect-resistant transgenic plants, i.e. plants made resistant to attack by certain target insects. Such plants can be obtained by genetic transformation, or by
40　selection of plants containing a mutation imparting such insect resistance.

An "insect-resistant transgenic plant", as used herein, includes any plant containing at least one transgene comprising a coding sequence encoding:

1) an insecticidal crystal protein from Bacillus thuringiensis or an insecticidal portion thereof, such as the insecticidal crystal proteins listed by Crickmore et al. (1998, Microbiology and Molecular Biology Reviews, 62: 807-813), updated by Crickmore et al. (2005) at the Bacillus thuringiensis toxin nomenclature, online at:

http://www.lifesci.sussex.ac.uk/Home/Neil_Crickmore/Bt/), or insecticidal portions thereof, e.g., proteins of the Cry protein classes Cry1 Ab, Cry1 Ac, Cry1 B, Cry1 C, Cry1 D, Cry1 F, Cry2Ab, Cry3Aa, or Cry3Bb or insecticidal portions thereof (e.g. EP 1999141 and WO 2007/107302), or such proteins encoded by synthetic genes as e.g. described in and US Patent Application No 12/249,016 ; or

2) a crystal protein from Bacillus thuringiensis or a portion thereof which is insecticidal in the presence of a second other crystal protein from Bacillus thuringiensis or a portion thereof, such as the binary toxin made up of the Cry34 and Cry35 crystal proteins (Moellenbeck et al. 2001, Nat. Biotechnol. 19: 668-72: Schnepf et al. 2006, Applied Environm. Microbiol. 71, 1765-1774) or the binary toxin made up of the Cry1 A or Cry1 F proteins and the Cry2Aa or Cry2Ab or Cry2Ae proteins (US Patent Appl. No. 12/214,022 and EP 08010791.5): or

3) a hybrid insecticidal protein comprising parts of different insecticidal crystal proteins from Bacillus thuringiensis, such as a hybrid of the proteins of 1) above or a hybrid of the proteins of 2) above, e.g., the Cry1 A.105 protein produced by corn event MON89034 (WO 2007/027777): or

4) a protein of any one of 1) to 3) above wherein some, particularly 1 to 10, amino acids have been replaced by another amino acid to obtain a higher insecticidal activity to a target insect species, and/or to expand the range of target insect species affected, and/or because of changes introduced into the encoding DNA during cloning or transformation, such as the Cry3Bb1 protein in corn events MON863 or MON88017, or the Cry3A protein in corn event MIR604; or

5) an insecticidal secreted protein from Bacillus thuringiensis or Bacillus cereus, or an insecticidal portion thereof, such as the vegetative insecticidal (VIP) proteins listed at:

http://www.lifesci.sussex.ac.uk/home/NeiLCrickmore/Bt/vip.html, e.g., proteins from the VIP3Aa protein class: or

6) a secreted protein from Bacillus thuringiensis or Bacillus cereus which is insecticidal in the presence of a second secreted protein from Bacillus thuringiensis or B. cereus, such as the binary toxin made up of the VIP1 A and VIP2A proteins (WO 94/21795): or

7) a hybrid insecticidal protein comprising parts from different secreted proteins from Bacillus thuringiensis or Bacillus cereus, such as a hybrid of the proteins in 1) above or a hybrid of the proteins in 2) above: or

8) a protein of any one of 5) to 7) above wherein some, particularly 1 to 10, amino acids have been replaced by another amino acid to obtain a higher insecticidal activity to a target insect species, and/or to expand the range of target insect species affected, and/or because of changes introduced into the encoding DNA during cloning or transformation (while still encoding an insecticidal protein), such as the VIP3Aa protein in cotton event COT102; or

9) a secreted protein from Bacillus thuringiensis or Bacillus cereus which is insecticidal in the presence of a crystal protein from Bacillus thuringiensis, such as the binary toxin made up of VIP3 and Cry1 A or Cry1 F (US Patent Appl. No. 61/126083 and 61/195019), or the binary toxin

made up of the VIP3 protein and the Cry2Aa or Cry2Ab or Cry2Ae proteins (US Patent Appl. No. 12/214.022 and EP 08010791.5).

10) a protein of 9) above wherein some, particularly 1 to 10, amino acids have been replaced by another amino acid to obtain a higher insecticidal activity to a target insect species, and/or to expand the range of target insect species affected, and/or because of changes introduced into the encoding DNA during cloning or transformation (while still encoding an insecticidal protein)

Of course, an insect-resistant transgenic plant, as used herein, also includes any plant comprising a combination of genes encoding the proteins of any one of the above classes 1 to 10. In one embodiment, an insect-resistant plant contains more than one transgene encoding a protein of any one of the above classes 1 to 10, to expand the range of target insect species affected when using different proteins directed at different target insect species, or to delay insect resistance development to the plants by using different proteins insecticidal to the same target insect species but having a different mode of action, such as binding to different receptor binding sites in the insect.

An "insect-resistant transgenic plant", as used herein, further includes any plant containing at least one transgene comprising a sequence producing upon expression a double-stranded RNA which upon ingestion by a plant insect pest inhibits the growth of this insect pest, as described e.g. in WO 2007/080126, WO 2006/129204, WO 2007/074405, WO 2007/080127 and WO 2007/035650.

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are tolerant to abiotic stresses. Such plants can be obtained by genetic transformation, or by selection of plants containing a mutation imparting such stress resistance. Particularly useful stress tolerance plants include:

1) plants which contain a transgene capable of reducing the expression and/or the activity of poly(ADP-ribose) polymerase (PARP) gene in the plant cells or plants as described in WO 00/04173, WO/2006/045633, EP 04077984.5, or EP 06009836.5.

2) plants which contain a stress tolerance enhancing transgene capable of reducing the expression and/or the activity of the PARG encoding genes of the plants or plants cells, as described e.g. in WO 2004/090140.

3) plants which contain a stress tolerance enhancing transgene coding for a plant-functional enzyme of the nicotineamide adenine dinucleotide salvage synthesis pathway including nicotinamidase, nicotinate phosphoribosyltransferase, nicotinic acid mononucleotide adenyl transferase, nicotinamide adenine dinucleotide synthetase or nicotine amide phosphorybosyltransferase as described e.g. in EP 04077624.7, WO 2006/133827, PCT/EP07/002433, EP 1999263, or WO 2007/107326.

Plants or plant cultivars (obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention show altered quantity, quality and/or storage-stability of the harvested product and/or altered properties of specific ingredients of the harvested product such as :

1) transgenic plants which synthesize a modified starch, which in its physical-chemical characteristics, in particular the amylose content or the amylose/amylopectin ratio, the degree of

branching, the average chain length, the side chain distribution, the viscosity behaviour, the gelling strength, the starch grain size and/or the starch grain morphology, is changed in comparison with the synthesised starch in wild type plant cells or plants, so that this is better suited for special applications. Said transgenic plants synthesizing a modified starch are disclosed, for example, in EP 0571427, WO 95/04826, EP 071 9338, WO 96/1 5248, WO 96/1 9581, WO 96/27674, WO 97/1 1188, WO 97/26362, WO 97/32985, WO 97/42328, WO 97/44472, WO 97/45545, WO 98/2721 2, WO 98/40503, W099/58688, WO 99/58690, WO 99/58654, WO 00/081 84, WO 00/081 85, WO 00/081 75, WO 00/28052, WO 00/77229, WO 0 1/12782, WO 0 1/12826, WO 02/1 0 1059, WO 03/071 860, WO 2004/056999, WO 2005/030942, WO 2005/030941, WO 2005/095632, WO 2005/09561 7, WO 2005/09561 9, WO 2005/09561 8, WO 2005/1 23927, WO 2006/01 831 9, WO 2006/1 031 07, WO 2006/1 08702, WO 2007/009823, WO 00/22140, WO 2006/063862, WO 2006/072603, WO 02/034923, EP 060901 34.5, EP 06090228.5, EP 06090227.7, EP 07090007.1, EP 07090009.7, WO 0 1/14569, WO 02/7941 0, WO 03/33540, WO 2004/078983, WO 0 1/19975, WO 95/26407, WO 96/34968, WO 98/201 45, WO 99/1 2950, WO 99/66050, WO 99/53072, US 6,734,341, WO 00/1 1192, WO 98/22604, WO 98/32326, WO 0 1/98509, WO 0 1/98509, WO 2005/002359, US 5,824.790, US 6,01 3,861, WO 94/04693, WO 94/09144, WO 94/1 1520, WO 95/35026, WO 97/20936, WO 10/01 2796, WO 10/003701

2) transgenic plants which synthesize non starch carbohydrate polymers or which synthesize non starch carbohydrate polymers with altered properties in comparison to wild type plants without genetic modification. Examples are plants producing polyfructose, especially of the inulin and levan-type, as disclosed in EP 0663956, WO 96/01 904, WO 96/21 023, WO 98/39460, and WO 99/24593, plants producing alpha-1 .4-glucans as disclosed in WO 95/31 553, US 2002031 826, US 6,284.479, US 5,71 2,107, WO 97/47806, WO 97/47807, WO 97/47808 and WO 00/1 4249, plants producing alpha-1 ,6 branched alpha-1 ,4-glucans, as disclosed in WO 00/73422, plants producing alternan, as disclosed in e.g. WO 00/47727, WO 00/73422, EP 06077301 .7, US 5,908,975 and EP 072821 3,

3) transgenic plants which produce hyaluronan, as for example disclosed in WO 2006/032538, WO 2007/03931 4, WO 2007/03931 5, WO 2007/03931 6, JP 2006304779, and WO 2005/01 2529.

4) transgenic plants or hybrid plants, such as onions with characteristics such as 'high soluble solids content', 'low pungency' (LP) and/or 'long storage' (LS), as described in US Patent Appl. No. 12/020,360 and 6 1/054.026.

5) Transgenic plants displaying an increase yield as for example disclosed in W01 1/095528

Plants or plant cultivars (that can be obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are plants, such as cotton plants, with altered fiber characteristics. Such plants can be obtained by genetic transformation, or by selection of plants contain a mutation imparting such altered fiber characteristics and include:

  a) Plants, such as cotton plants, containing an altered form of cellulose synthase genes as described in WO 98/00549

  b) Plants, such as cotton plants, containing an altered form of rsw2 or rsw3 homologous nucleic acids as described in WO 2004/05321 9

   c) Plants, such as cotton plants, with increased expression of sucrose phosphate synthase as described in WO 01/17333

   d) Plants, such as cotton plants, with increased expression of sucrose synthase as described in WO 02/45485

   e) Plants, such as cotton plants, wherein the timing of the plasmodesmatal gating at the basis of the fiber cell is altered, e.g. through downregulation of fiber-selective β-1,3-glucanase as described in WO 2005/017157. or as described in EP 08075514.3 or US Patent Appl. No. 61/128,938

   f) Plants, such as cotton plants, having fibers with altered reactivity, e.g. through the expression of N-acetylglucosaminetransferase gene including nodC and chitin synthase genes as described in WO 2006/136351 WO11/089021, WO2012074868

Plants or plant cultivars (that can be obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are plants, such as oilseed rape or related Brassica plants, with altered oil profile characteristics. Such plants can be obtained by genetic transformation, or by selection of plants contain a mutation imparting such altered oil profile characteristics and include:

   a) Plants, such as oilseed rape plants, producing oil having a high oleic acid content as described e.g. in US 5,969.169, US 5,840,946 or US 6,323,392 or US 6.063,947

   b) Plants such as oilseed rape plants, producing oil having a low linolenic acid content as described in US 6,270,828, US 6,169,190, US 5.965,755. or WO11/060946.

   c) Plant such as oilseed rape plants, producing oil having a low level of saturated fatty acids as described e.g. in US Patent No. 5.434.283 or US Patent Application No 12/668303

   d) Plants such as oilseed rape plants, producing oil having an aleter glucosinolate content as described in WO2012075426.

Plants or plant cultivars (that can be obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are plants, such as oilseed rape or related Brassica plants, with altered seed shattering characteristics. Such plants can be obtained by genetic transformation, or by selection of plants contain a mutation imparting such altered seed shattering characteristics and include plants such as oilseed rape plants with delayed or reduced seed shattering as described in US Patent Appl. No. 61/135,230, WO09/068313, WO10/006732 and WO2012090499.

Plants or plant cultivars (that can be obtained by plant biotechnology methods such as genetic engineering) which may also be treated according to the invention are plants, such as Tobacco plants, with altered post-translational protein modification patterns, for example as described in WO 10/121818 and WO 10/145846

Particularly useful transgenic plants which may be treated according to the invention are plants containing transformation events, or combination of transformation events, that are the subject of petitions for non-regulated status, in the United States of America, to the Animal and Plant Health Inspection Service (APHIS) of the United States Department of Agriculture (USDA) whether such petitions are granted or are

still pending. At any time this information is readily available from APHIS (4700 River Road

Riverdale. MD 20737, USA), for instance on its internet site (URL

http://www.aphis.usda.gov/brs/not_reg.html).   On the filing date of this application the petitions for

nonregulated status that were pending with APHIS or granted by APHIS were those which contains the

5   following information:

       -    Petition : the identification number of the petition. Technical descriptions of the transformation

            events can be found in the individual petition documents which are obtainable from APHIS,

            for example on the APHIS website, by reference to this petition number. These descriptions

10   are herein incorporated by reference.

       -    Extension of Petition : reference to a previous petition for which an extension is requested.

       -    Institution : the name of the entity submitting the petition.

       -    Regulated article : the plant species concerned.

       -    Transgenic phenotype : the trait conferred to the plants by the transformation event.

15   -   Transformation event or line : the name of the event or events (sometimes also designated

            as lines or lines) for which nonregulated status is requested.

       -    APHIS documents : various documents published by APHIS in relation to the Petition and

            which can be requested with APHIS.

20   Additional particularly useful plants containing single transformation events or combinations of

       transformation events are listed for example in the databases from various national or regional regulatory

       agencies (see for example http://gmoinfo.jrc.it/gmp__browse.aspx and http://www.agbios.com/dbase.php).

       Particularly useful transgenic plants which may be treated according to the invention are plants containing

25   transformation events, or a combination of transformation events, and that are listed for example in the

       databases for various national or regional regulatory agencies including Event 1143-1 4A (cotton, insect

       control, not deposited, described in WO2006/1 28569): Event 1143-51 B (cotton, insect control, not

       deposited, described in WO2006/1 28570): Event 1445 (cotton, herbicide tolerance, not deposited,

       described in US2002 120964 or WO2002/034946): Event 17053 (rice, herbicide tolerance, deposited as

30   PTA-9843, described in WO201 0/1 17737): Event 1731 4 (rice, herbicide tolerance, deposited as PTA-

       9844, described in WO201 0/1 17735): Event 281 -24-236 (cotton, insect control - herbicide tolerance,

       deposited as PTA-6233, described in WO2005/1 03266 or US200521 6969): Event 3006-21 0-23 (cotton,

       insect control - herbicide tolerance, deposited as PTA-6233, described in US20071 43876 or

       WO2005/1 03266): Event 3272 (corn, quality trait, deposited as PTA-9972, described in WO2006098952

35   or US2006230473): Event 4041 6 (corn, insect control - herbicide tolerance, deposited as ATCC PTA-

       11508, described in WO201 1/075593): Event 43A47 (corn, insect control - herbicide tolerance, deposited

       as ATCC PTA-1 1509, described in WO201 1/075595): Event 5307 (corn, insect control, deposited as

       ATCC PTA-9561 , described in WO201 0/077781 6): Event ASR-368 (bent grass, herbicide tolerance,

       deposited as ATCC PTA-481 6, described in US20061 62007 or WO2004053062): Event B 16 (corn,

40   herbicide tolerance, not deposited, described in US20031 26634): Event BPS-CV1 27-9 (soybean,

       herbicide tolerance, deposited as NCIMB No. 4 1603, described in WO20 10/080829): Event CE43-67B

       (cotton, insect control, deposited as DSM ACC2724, described in US20092 17423 or WO2006/1 28573):

Event CE44-69D (cotton, insect control, not deposited, described in US201 00024077); Event CE44-69D (cotton, insect control, not deposited, described in WO2006/1 28571): Event CE46-02A (cotton, insect control, not deposited, described in WO2006/1 28572): Event COT1 02 (cotton, insect control, not deposited, described in US20061 301 75 or WO2004039986): Event COT202 (cotton, insect control, not deposited, described in US2007067868 or WO2005054479): Event COT203 (cotton, insect control, not deposited, described in WO2005/054480); Event DAS40278 (corn, herbicide tolerance, deposited as ATCC PTA-1 0244, described in WO201 1/022469): Event DAS-591 22-7 (corn, insect control - herbicide tolerance, deposited as ATCC PTA 11384 , described in US20060701 39): Event DAS-591 32 (corn, insect control - herbicide tolerance, not deposited, described in WO2009/1 001 88): Event DAS6841 6 (soybean, herbicide tolerance, deposited as ATCC PTA- 10442, described in WO201 1/066384 or WO201 1/066360): Event DP-098 140-6 (corn, herbicide tolerance, deposited as ATCC PTA-8296, described in US20091 37395 or WO2008/1 1201 9): Event DP-305423-1 (soybean, quality trait, not deposited, described in US200831 2082 or WO2008/054747): Event DP-321 38-1 (corn, hybridization system, deposited as ATCC PTA-91 58, described in US2009021 0970 or WO2009/1 03049): Event DP-356043-5 (soybean, herbicide tolerance, deposited as ATCC PTA-8287, described in US201 001 84079 or WO2008/002872): Event EE-1 (brinjal, insect control, not deposited, described in WO2007/091 277); Event FI1 17 (corn, herbicide tolerance, deposited as ATCC 209031 , described in US2006059581 or W01 998/0441 40); Event GA21 (corn, herbicide tolerance, deposited as ATCC 209033, described in US200508671 9 or W01 998/044140); Event GG25 (corn, herbicide tolerance, deposited as ATCC 209032, described in US20051 88434 or W01 998/0441 40); Event GHB1 19 (cotton, insect control - herbicide tolerance, deposited as ATCC PTA-8398, described in WO2008/1 5 1780): Event GHB61 4 (cotton, herbicide tolerance, deposited as ATCC PTA-6878, described in US201 0050282 or WO2007/01 7 186); Event GJ1 1 (corn, herbicide tolerance, deposited as ATCC 209030, described in US20051 88434 or W0 1998/044 140); Event GM RZ1 3 (sugar beet, virus resistance , deposited as NCIMB-41 601 , described in WO201 0/07621 2); Event H7-1 (sugar beet, herbicide tolerance, deposited as NCIMB 4 1158 or NCIMB 4 1159, described in US20041 72669 or WO2004/074492); Event JOPLIN1 (wheat, disease tolerance, not deposited, described in US2008064032); Event LL27 (soybean, herbicide tolerance, deposited as NCIMB41 658, described in WO2006/1 08674 or US200832061 6); Event LL55 (soybean, herbicide tolerance, deposited as NCIMB 4 1660, described in WO2006/1 08675 or US20081 961 27); Event LLcotton25 (cotton, herbicide tolerance, deposited as ATCC PTA-3343, described in WO20030 13224 or US2003097687); Event LLRICE06 (rice, herbicide tolerance, deposited as ATCC-23352, described in US6468747 or WO2000/026345); Event LLRICE601 (rice, herbicide tolerance, deposited as ATCC PTA-2600, described in US20082289060 or WO2000/026356); Event LY038 (corn, quality trait, deposited as ATCC PTA-5623, described in US2007028322 or WO2005061 720); Event MIR1 62 (corn, insect control, deposited as PTA-81 66, described in US2009300784 or WO2007/1 42840); Event MIR604 (corn, insect control, not deposited, described in US20081 67456 or WO20051 03301); Event MON15985 (cotton, insect control, deposited as ATCC PTA-251 6, described in US2004-25031 7 or WO2002/1 001 63); Event MON81 0 (corn, insect control, not deposited, described in US20021 02582); Event MON863 (corn, insect control, deposited as ATCC PTA-2605, described in WO2004/01 1601 or US2006095986); Event MON87427 (corn, pollination control, deposited as ATCC PTA-7899, described in WO201 1/062904); Event MON87460 (corn, stress tolerance, deposited as ATCC PTA-891 0, described in WO2009/1 11263 or US201 10 138504); Event MON87701

(soybean, insect control, deposited as ATCC PTA-8194. described in US2009130071 or WO2009/064652); Event MON87705 (soybean, quality trait - herbicide tolerance, deposited as ATCC PTA-9241, described in US20100080887 or WO2010/037016); Event MON87708 (soybean, herbicide tolerance, deposited as ATCC PTA9670, described in WO2011/034704); Event MON87754 (soybean, quality trait, deposited as ATCC PTA-9385, described in WO2010/024976); Event MON87769 (soybean, quality trait, deposited as ATCC PTA-8911, described in US201100671 41 or WO2009/102873); Event MON88017 (corn, insect control - herbicide tolerance, deposited as ATCC PTA-5582, described in US2008028482 or WO2005/059103); Event MON88913 (cotton, herbicide tolerance, deposited as ATCC PTA-4854, described in WO2004/072235 or US2006059590); Event MON89034 (corn, insect control, deposited as ATCC PTA-7455, described in WO2007/140256 or US2008260932); Event MON89788 (soybean, herbicide tolerance, deposited as ATCC PTA-6708, described in US2006282915 or WO2006/130436); Event MS11 (oilseed rape, pollination control - herbicide tolerance, deposited as ATCC PTA-850 or PTA-2485, described in WO2001/031042); Event MS8, (oilseed rape, pollination control - herbicide tolerance, deposited as ATCC PTA-730, described in WO2001/041558 or US2003188347); Event NK603 (corn, herbicide tolerance, deposited as ATCC PTA-2478, described in US2007-292854); Event PE-7 (rice, insect control, not deposited, described in WO2008/114282); Event RF3, (oilseed rape, pollination control - herbicide tolerance, deposited as ATCC PTA-730, described in WO2001/041558 or US2003188347); Event RT73 (oilseed rape, herbicide tolerance, not deposited, described in WO2002/036831 or US2008070260); Event T227-1 (sugar beet, herbicide tolerance, not deposited, described in WO2002/44407 or US2009265817); Event T25 (corn, herbicide tolerance, not deposited, described in US2001029014 or WO2001/051654); Event T304-40 (cotton, insect control - herbicide tolerance, deposited as ATCC PTA-8171, described in US2010077501 or WO2008/122406); Event T342-142 (cotton, insect control, not deposited, described in WO2006/128568); Event TC1507 (corn, insect control - herbicide tolerance, not deposited, described in US2005039226 or WO2004/099447); Event VIP1034 (corn, insect control - herbicide tolerance, deposited as ATCC PTA-3925., described in WO2003/052073), Event 32316 (corn. insect control-herbicide tolerance. deposited as PTA-11507. described in WO2011/153186A1), Event 4114 (corn, insect control-herbicide tolerance.deposited as PTA-11506, described in WO2011/084621), event EE-GM3 / FG72 (soybean, herbicide tolerance, ATCC Accession N° PTA-11041 , WO2011/063413A2), event DAS-68416-4 (soybean, herbicide tolerance, ATCC Accession N° PTA-10442, WO2011/066360A1), event DAS-68416-4 (soybean, herbicide tolerance, ATCC Accession N° PTA-10442, WO2011/066384A1), event DP-040416-8 (corn, insect control, ATCC Accession N° PTA-11508, WO2011/075593A1), event DP-043A47-3 (corn, insect control, ATCC Accession N° PTA-11509, WO2011/075595A1), event DP-004114-3 (corn, insect control, ATCC Accession N° PTA-11506, WO2011/084621A1), event DP-032316-8 (corn, insect control, ATCC Accession N° PTA-11507, WO2011/084632A1), event MON-88302-9 (oilseed rape, herbicide tolerance, ATCC Accession N° PTA-10955, WO2011/153186A1), event DAS-21606-3 (soybean, herbicide tolerance, ATCC Accession No. PTA-11028, WO2012/033794A2), event MON-87712-4 (soybean, quality trait, ATCC Accession N°. PTA-10296. WO2012/051199A2), event DAS-44406-6 (soybean, stacked herbicide tolerance, ATCC Accession N". PTA-11336. WO2012/075426A1), event DAS-14536-7 (soybean, stacked herbicide tolerance, ATCC Accession N°. PTA-11335, WO2012/075429A1), event SYN-000H2-5 (soybean, herbicide tolerance, ATCC Accession N°. PTA-11226, WO2012/082548 A2), event DP-061061-7 (oilseed rape, herbicide tolerance, no deposit N°

available. WO201 2071 039 A 1). event DP-073496-4 (oilseed rape, herbicide tolerance, no deposit N°

available, US201 2 13 1692), event 8264.44.06.1 (soybean, stacked herbicide tolerance, Accession N°

PTA-1 1336, WO201 2075426A2), event 8291 .45.36.2 (soybean, stacked herbicide tolerance, Accession

N°. PTA-1 1335, WO201 2075429A2).

5

Among the diseases of plants or crops that can be controlled by the method according to the invention,
mention can be made of :

Powdery mildew diseases such as :

10   Blumeria diseases, caused for example by *Blumeria graminis* ;

             Podosphaera diseases, caused for example by *Podosphaera leucothca* ;

             Sphaerotheca diseases, caused for example by *Sphaerotheca fuliginea* ;

             Uncinula diseases, caused for example by *Uncinula necator* ;

Rust diseases such as :

15   Gymnosporangium diseases, caused for example by *Gymnosporangium sabinae* ;

             Hemileia diseases, caused for example by *Hemiieia vastatrix* ;

             Phakopsora diseases, caused for example by *Phakopsora pachyrhizi* or *Phakopsora
                meibomiae* ;

             Puccinia diseases, caused for example by *Puccinia recondite, Puccinia graminis* or
20   *Puccinia striiformis;*

             Uromyces diseases, caused for example by *Uromyces appendiculatus* ;

Oomycete diseases such as :

             Albugo diseases caused for example by *Albugo Candida;*

             Bremia diseases, caused for example by *Bremia lactucae* ;

25   Peronospora diseases, caused for example by *Peronospora pisi* or *P. brassicae* ;

             Phytophthora diseases, caused for example by *Phytophthora infestans* ;

             Plasmopara diseases, caused for example by *Plasmopara viticola* ;

             Pseudoperonospora diseases, caused for example by *Pseudoperonospora humuli* or

Pseudoperonospora cubensis ;

30   Pythium diseases, caused for example by *Pythium ultimum* ;

Leafspot, leaf blotch and leaf blight diseases such as :

             Alternaria diseases, caused for example by *Alternaria solani* ;

             Cercospora diseases, caused for example by *Cercospora beticola* ;

             Cladiosporum diseases, caused for example by *Cladiospohum cucumerinum* ;

35   Cochliobolus diseases, caused for example by *Cochliobolus sativus* (Conidiaform:
                Drechslera, Syn: Helminthosporium) or *Cochliobolus miyabeanus* ;

             Colletotrichum diseases, caused for example by *Colletothchum lindemuthanium* ;

             Cycloconium diseases, caused for example by *Cycloconium oleaginum* ;

             Diaporthe diseases, caused for example by *Diaporthe citri* ;

40   Elsinoe diseases, caused for example by *Elsinoe fawcettii* ;

             Gloeosporium diseases, caused for example by *Gloeospohum laeticoior* ;

             Glomerella diseases, caused for example by *Glomerella cingulata* ;

Guignardia diseases, caused for example by *Guignardia bidweiii* ;

Leptosphaeria diseases, caused for example by *Leptosphaeria maculans* ; *Leptosphaeria nodorum* ;

Magnaporthe diseases, caused for example by *Magnaporthe grisea* ;

Mycosphaerella diseases, caused for example by *Mycosphaerella graminicola* ; Mycosphaerella arachidicola ; *Mycosphaerella fijiensis* ;

Phaeosphaeria diseases, caused for example by *Phaeosphaeha nodorum* ;

Pyrenophora diseases, caused for example by *Pyrenophora teres,* or *Pyrenophora tritici repentis;*

Ramularia diseases, caused for example by *Ramularia collo-cygni* , or *Ramularia areola;*

Rhynchosporium diseases, caused for example by *Rhynchospohum secalis* ;

Septoria diseases, caused for example by *Septoria apii* or *Septoria lycopercisi* ;

Typhula diseases, caused for example by *Typhula incarnata* ;

Venturia diseases, caused for example by *Ventuha inaequalis* ;

Root, Sheath and stem diseases such as :

Corticium diseases, caused for example by *Corticium graminearum* ;

Fusarium diseases, caused for example by *Fusahum oxysporum* ;

Gaeumannomyces diseases, caused for example by *Gaeumannomyces graminis* ;

Rhizoctonia diseases, caused for example by *Rhizoctonia solani* ;

Sarocladium diseases caused for example by *Sarocladium oryzae;*

Sclerotium diseases caused for example by *Sclerotium oryzae;*

Tapesia diseases, caused for example by *Tapesia acuformis* ;

Thielaviopsis diseases, caused for example by *Thielaviopsis basicola* ;

Ear and panicle diseases such as :

Alternaria diseases, caused for example by *Altemaria spp.* ;

Aspergillus diseases, caused for example by *Aspergillus flavus* ;

Cladosporium diseases, caused for example by *Cladospohum spp.* ;

Claviceps diseases, caused for example by *Claviceps purpurea* ;

Fusarium diseases, caused for example by *Fusahum culmorum* ;

Gibberella diseases, caused for example by *Gibberella zeae* ;

Monographella diseases, caused for example by *Monographella nivalis* ;

Smut and bunt diseases such as :

Sphacelotheca diseases, caused for example by *Sphacelotheca reiliana* ;

Tilletia diseases, caused for example by *Tilletia caries* ;

Urocystis diseases, caused for example by *Urocystis occulta* ;

Ustilago diseases, caused for example by *Ustilago nuda* ;

Fruit rot and mould diseases such as :

Aspergillus diseases, caused for example by *Aspergillus flavus* ;

Botrytis diseases, caused for example by *Botrytis cinerea* ;

Penicillium diseases, caused for example by *Penicillium expansum* ;

Rhizopus diseases caused by example by *Rhizopus stolonifer*

Sclerotinia diseases, caused for example by *Sclerotinia sclerotiorum* ;

Verticilium diseases, caused for example by *Verticilium alboatrum* ;

Seed and soilborne decay, mould, wilt, rot and damping-off diseases :

Alternaria diseases, caused for example by *Aiternaria brassicicola*

Aphanomyces diseases, caused for example by *Aphanomyces euteiches*

Ascochyta diseases, caused for example by *Ascochyta lentis*

Aspergillus diseases, caused for example by *Aspergillus flavus*

Cladosporium diseases, caused for example by *Cladosporium herbarum*

Cochliobolus diseases, caused for example by *Cochliobolus sativus*

(Conidiaform: *Drechslera, Bipolaris Syn: Helminthosporium);*

Colletotrichum diseases, caused for example by *Colletotrichum coccodes;*

Fusarium diseases, caused for example by *Fusahum culmorum;*

Gibberella diseases, caused for example by *Gibberella zeae;*

Macrophomina diseases, caused for example by *Macrophomina* phaseoiina

Monographella diseases, caused for example by *Monographella nivalis:*

Penicillium diseases, caused for example by *Penicillium expansum*

Phoma diseases, caused for example by *Phoma lingam*

Phomopsis diseases, caused for example by *Phomopsis sojae;*

Phytophthora diseases, caused for example by Phytophthora cactorum;

Pyrenophora diseases, caused for example by *Pyrenophora graminea*

Pyricularia diseases, caused for example by *Pyricularia oryzae;*

Pythium diseases, caused for example by *Pythium ultimum;*

Rhizoctonia diseases, caused for example by *Rhizoctonia solani;*

Rhizopus diseases, caused for example by *Rhizopus oryzae*

Sclerotium diseases, caused for example by *Sclerotium rolfsii;*

Septoria diseases, caused for example by *Septoria nodorum;*

Typhula diseases, caused for example by *Typhula incarnata;*

Verticillium diseases, caused for example by *Verticillium dahliae ;*

Canker, broom and dieback diseases such as :

Nectria diseases, caused for example by *Nectria galligena ;*

Blight diseases such as :

Monilinia diseases, caused for example by *Monilinia laxa ;*

Leaf blister or leaf curl diseases such as :

Exobasidium diseases caused for example by *Exobasidium vexans*

Taphrina diseases, caused for example by *Taphrina deformans ;*

Decline diseases of wooden plants such as :

Esca diseases, caused for example by *Phaemoniella clamydospora ;*

Eutypa dyeback, caused for example by *Eutypa lata ;*

Ganoderma diseases caused for example by *Ganoderma boninense;*

Rigidoporus diseases caused for example by *Rigidoporus lignosus*

Diseases of Flowers and Seeds such as

Botrytis diseases caused for example by *Botrytis cinerea;*

Diseases of Tubers such as

Rhizoctonia diseases caused for example by *Rhizoctonia solani;*

Helminthosporium diseases caused for example by *Helminthosporium solani:*

Club root diseases such as

Plasmodiophora diseases, cause for example by *Plamodiophora brassicae.*

Diseases caused by Bacterial Organisms such as

Xanthomonas species for example *Xanthomonas campestris* pv. oryzae;

Pseudomonas species for example *Pseudomonas syringae* pv. lachrymans;

Erwinia species for example *Erwinia amylovora.*

The composition according to the invention may also be used against fungal diseases liable to grow on or inside timber. The term "timber" means all types of species of wood, and all types of working of this wood intended for construction, for example solid wood, high-density wood, laminated wood, and plywood. The method for treating timber according to the invention mainly consists in contacting one or more compounds according to the invention or a composition according to the invention; this includes for example direct application, spraying, dipping, injection or any other suitable means.

The dose of active compound usually applied in the method of treatment according to the invention is generally and advantageously from 10 to 800 g/ha, preferably from 50 to 300 g/ha for applications in foliar treatment. The dose of active substance applied is generally and advantageously from 2 to 200 g per 100 kg of seed, preferably from 3 to 150 g per 100 kg of seed in the case of seed treatment. It is clearly understood that the doses indicated herein are given as illustrative examples of the method according to the invention. A person skilled in the art will know how to adapt the application doses, notably according to the nature of the plant or crop to be treated.

The compounds or mixtures according to the invention can also be used for the preparation of composition useful to curatively or preventively treat human or animal fungal diseases such as, for example, mycoses, dermatoses, trichophyton diseases and candidiases or diseases caused by *Aspergillus spp.,* for example *Aspergillus fumigatus.*

The various aspects of the invention will now be illustrated with reference to the following table of compound examples and the following preparation or efficacy examples.

Table 1 illustrates in a non-limiting manner examples of compounds of formula (I) according to the invention :

(I)
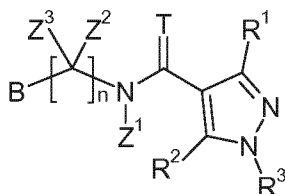
In table 1, unless otherwise specified, M+H (Apcl+) means the molecular ion peak plus 1 a.m.u. (atomic mass unit) as observed in mass spectroscopy via positive atmospheric pressure chemical ionisation.
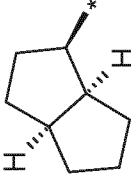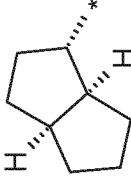
In table 1, the logP values were determined in accordance with EEC Directive 79/831 Annex V.A8 by HPLC (High Performance Liquid Chromatography) on a reversed-phase column (C 18), using the method described below :
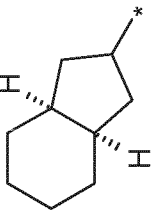
5   Temperature: 40°C ; Mobile phases : 0.1 % aqueous formic acid and acetonitrile ; linear gradient from 10% acetonitrile to 90% acetonitrile.

Calibration was carried out using unbranched alkan-2-ones (comprising 3 to 16 carbon atoms) with known logP values (determination of the logP values by the retention times using linear interpolation between two successive aikanones). lambda-max-values were determined using UV-spectra from 200
10   nm to 400 nm and the peak values of the chromatographic signals.
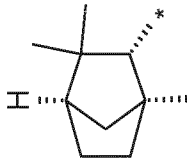
Table 2 provides the NMR data (^{1}H) of a selected number of compounds from table 1.

Table 1:
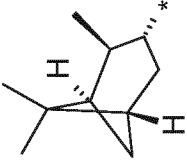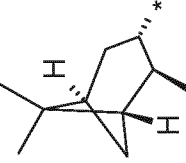
Example	R^1	R^2	R^3	T	n	Z^1	Z^2	Z^3	B	logP	Mass (M+H)	NMR
1	CHF_2	H	Me	O	0	H			octahydropentalen-1-yl	2.51	284	table 2
2	CHF_2	F	Me	O	0	H			octahydropentalen-1-yl	2.86	302	table 2
3	CHF_2	Cl	Me	O	0	H			octahydropentalen-1-yl	3.09	318	table 2
4	CHF_2	F	Me	O	0	cyclopropyl			rel-(1R,3aS,6aS)-octahydropentalen-1-yl	3.55	342	table 2
5	CHF_2	F	Me	O	0	cyclopropyl			rel-(1S,3aS,6aS)-octahydropentalen-1-yl	3.65	342	table 2
6	CHF_2	H	Me	O	0	cyclopropyl			rel-(1R,3aS,6aS)-octahydropentalen-1-yl	3.02	324	table 2
7	CHF_2	H	Me	O	0	cyclopropyl			rel-(1S,3aS,6aS)-octahydropentalen-1-yl	3.19	324	table 2
8	CHF_2	F	Me	O	0	methyl			octahydro-1H-inden-1-yl	3.35	330	table 2

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Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
9	CHF₂	H	Me	O	0	methyl			octahydro-1H-inden-1-yl	2.88	312	table 2
10	CHF₂	F	Me	O	0	methoxy			octahydro-1H-inden-1-yl	3.72	346	table 2
11	CHF₂	H	Me	O	0	methoxy			octahydro-1H-inden-1-yl	3.50	328	table 2
12	CHF₂	F	Me	O	0	cyclopropyl			rel-(3aR,7aS)-octahydro-1H-inden-2-yl	4.11	356	table 2
13	CHF₂	H	Me	O	0	cyclopropyl			rel-(3aR,7aS)-octahydro-1H-inden-2-yl	3.61	338	table 2
14	CHF₂	F	Me	O	0	H			1,1,3-trimethyloctahydro-1H-inden-4-yl	4.29		
15	Me	F	Me	O	0	H			1,1,3-trimethyloctahydro-1H-inden-4-yl	3.76		
16	CHF₂	Cl	Me	O	0	H			1,1,3-trimethyloctahydro-1H-inden-4-yl	4.49		
17	CF₃	H	Me	S	0	H			1,1,3-trimethyloctahydro-1H-inden-4-yl	4.00		
18	CHF₂	F	Me	O	0	H			1,1,3-trimethyloctahydro-1H-inden-4-yl	5.05 + 5.24[1]	374	table 2
19	CHF₂	F	Me	O	0	cyclopropyl			octahydro-1H-inden-4-yl	3.99		table 2

Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
20	CHF_2	H	Me	O	0	cyclopropyl			octahydro-1H-inden-4-yl	3.48	338	table 2
21	CHF_2	Cl	Me	O	0	cyclopropyl			octahydro-1H-inden-5-yl	4.26 + 4.31[1]	372	table 2
22	CHF_2	F	Me	O	0	cyclopropyl			octahydro-1H-inden-5-yl	4.06 + 4.14[1]	356	table 2
23	CHF_2	H	Me	O	0	cyclopropyl			octahydro-1H-inden-5-yl	3.53 + 3.59[1]	338	table 2
24	CHF_2	F	Me	S	0	cyclopropyl			octahydro-1H-inden-5-yl	4.90	372	table 2
25	CHF_2	F	Me	O	0	H			decahydronaphthalen-1-yl	3.60		table 2
26	CHF_2	Cl	Me	O	0	isopropyl			decahydronaphthalen-1-yl	4.83	388	table 2
27	CHF_2	F	Me	O	0	isopropyl			decahydronaphthalen-1-yl	4.58	372	table 2
28	CHF_2	F	Me	S	0	H			decahydronaphthalen-1-yl	4.41		table 2
29	CHF_2	H	Me	O	0	H			decahydronaphthalen-1-yl	3.17 + 3.21 + 3.39[1]	312	table 2
30	CHF_2	Cl	Me	O	0	H			decahydronaphthalen-1-yl	3.76 + 3.90[1]	346	table 2
31	CHF_2	F	Me	O	0	cyclopropyl			decahydronaphthalen-1-yl	4.41 + 4.46[1]	370	table 2
32	CHF_2	Cl	Me	O	0	cyclopropyl			decahydronaphthalen-1-yl	4.68	386	table 2

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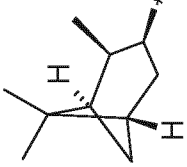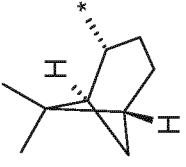
Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
33	CHF₂	H	Me	O	0	cyclopropyl			decahydronaphthalen-1-yl	3.85 + 3.92[1]	352	table 2
34	CHF₂	Cl	Me	O	0	H			decahydronaphthalen-2-yl	3.85 + 3.92 + 3.99[1]	346	table 2
35	CHF₂	F	Me	O	0	H			decahydronaphthalen-2-yl	3.65 + 3.68[1]	330	table 2
36	CHF₂	H	Me	O	0	cyclopropyl			decahydronaphthalen-2-yl	3.94 + 3.99 + 4.09[1]	352	table 2
37	CHF₂	Cl	Me	O	0	cyclopropyl			decahydronaphthalen-2-yl	4.68 + 4.73[1]	386	table 2
38	CHF₂	F	Me	O	0	cyclopropyl			decahydronaphthalen-2-yl	4.49 + 4.56 + 4.63[1]	370	table 2
39	CHF₂	Cl	Me	O	0	H			rel-(1S,2R,4R)-1,3,3-trimethylbicyclo[2.2.1]hept-2-yl	3.92	346	table 2
40	CHF₂	F	Me	O	0	H			rel-(1S,2R,4R)-1,3,3-trimethylbicyclo[2.2.1]hept-2-yl	3.70	330	table 2

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Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
41	CHF_2	H	Me	O	0	H			rel-(1S,2R,4R)-1,3,3-trimethylbicyclo[2.2.1]hept-2-yl	3.35	312	table 2
42	CHF_2	F	Me	O	0	H			1,7,7-trimethylbicyclo[2.2.1]hept-2-yl	3.16 + 3.20[1]	330	table 2
43	CHF_2	Cl	Me	O	0	H			2-cyanobicyclo[2.2.1]hept-2-yl	2.34	329	table 2
44	CHF_2	H	Me	O	0	H			2-cyanobicyclo[2.2.1]hept-2-yl	1.97	295	table 2
45	CHF_2	F	Me	O	0	H			2-cyanobicyclo[2.2.1]hept-2-yl	2.19	313	table 2
46	CHF_2	H	Me	O	0	H			rel-(1R,2R,4S)-bicyclo[2.2.1]hept-2-yl	2.14	270	table 2
47	CHF_2	Cl	Me	O	0	H			rel-(1R,2R,4S)-bicyclo[2.2.1]hept-2-yl	2.64	304	table 2
48	CHF_2	F	Me	O	0	H			rel-(1R,2R,4S)-bicyclo[2.2.1]hept-2-yl	2.46	288	table 2

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Example	R^1	R^2	R^3	T	n	Z^1	Z^2	Z^3	B	logP	Mass (M+H)	NMR
49	CHF_2	F	Me	O	0	H			(1R,2R,3R,5S)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	3.61	330	table 2
50	CHF_2	F	Me	O	0	H			(1S,2S,3S,5R)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	3.61	330	table 2
51	CHF_2	Cl	Me	O	0	H			(1R,2R,3R,5S)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	3.79	346	table 2
52	CHF_2	H	Me	O	0	H			(1S,2S,3S,5R)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	3.19	312	table 2
53	CHF_2	Cl	Me	O	0	H			(1S,2S,3S,5R)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	3.79	346	table 2
54	CHF_2	H	Me	O	0	H			(1R,2R,3R,5S)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	3.19	312	table 2

Example	R^1	R^2	R^3	T	n	Z^1	Z^2	Z^3	B	logP	Mass (M+H)	NMR
55	CHF_2	H	Me	O	0	H			adamantan-1-yl	3.06	310	table 2
56	CHF_2	F	Me	O	0	H			adamantan-1-yl	3.57	328	table 2
57	CHF_2	Cl	Me	O	0	H			adamantan-1-yl	3.81	344	table 2
58	CHF_2	F	Me	O	1	cyclopropyl	H	H	octahydropentalen-1-yl	3.96	356	table 2
59	CHF_2	H	Me	O	1	cyclopropyl	H	H	octahydropentalen-1-yl	3.50	338	table 2
60	CHF_2	F	Me	O	1	cyclopropyl	H	H	octahydro-1H-inden-4-yl	4.41 + 4.53[1]	370	table 2
61	CHF_2	H	Me	O	1	cyclopropyl	H	H	octahydro-1H-inden-4-yl	3.87 + 3.97[1]	352	table 2
62	CHF_2	F	Me	O	1	cyclopropyl	H	H	octahydro-1H-inden-5-yl	4.41	370	table 2
63	CHF_2	H	Me	O	1	cyclopropyl	H	H	octahydro-1H-inden-5-yl	3.92	352	table 2
64	CHF_2	Cl	Me	O	1	cyclopropyl	H	H	octahydro-1H-inden-5-yl	4.59	386	table 2
65	CHF_2	F	Me	O	1	cyclopropyl	H	H	decahydronaphthalen-1-yl	4.90	384	table 2
66	CHF_2	H	Me	O	1	cyclopropyl	H	H	decahydronaphthalen-1-yl	4.37	366	table 2
67	CHF_2	Cl	Me	O	1	cyclopropyl	H	H	decahydronaphthalen-1-yl	5.08	400	table 2
68	CHF_2	Cl	Me	O	1	cyclopropyl	H	H	2-benzylbicyclo[2.2.1]hept-2-yl	5.06	448	table 2

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Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
69	CHF_2	F	Me	O	1	cyclopropyl	H	H	2-benzylbicyclo[2.2.1]hept-2-yl	4.91	432	table 2
70	CHF_2	H	Me	O	1	cyclopropyl	H	H	2-benzylbicyclo[2.2.1]hept-2-yl	4.32	414	table 2
71	CHF_2	F	Me	O	1	cyclopropyl	H	H	bicyclo[2.2.1]hept-2-yl	3.58	342	
72	Me	F	Me	O	1	cyclopropyl	H	H	bicyclo[2.2.1]hept-2-yl	3.04	306	
73	CHF_2	F	Me	O	1	cyclopropyl	H	H	bicyclo[2.2.1]hept-5-en-2-yl	3.23	339[2]	table 2
74	CHF_2	F	Me	O	1	H	H	H	7-oxabicyclo[2.2.1]hept-2-yl	1.32 + 1.48[1]	304	table 2
75	CHF_2	H	Me	O	1	H	H	H	7-oxabicyclo[2.2.1]hept-2-yl	1.17 + 1.31[1]	286	table 2
76	CHF_2	Cl	Me	O	1	H	H	H	7-oxabicyclo[2.2.1]hept-2-yl	1.45 + 1.63[1]	320	table 2
77	CHF_2	F	Me	O	1	cyclopropyl	H	H	2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	4.69	384	table 2
78	CHF_2	H	Me	O	1	cyclopropyl	H	H	2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	4.21	366	table 2
79	CHF_2	Cl	Me	O	1	cyclopropyl	H	H	2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	4.82	400	table 2

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Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
80	CHF₂	Cl	Me	O	1	H	H	H	rel-(1S,2S,3R,5R)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	4.25	360	table 2
81	CHF₂	F	Me	O	1	H	H	H	rel-(1S,2S,3R,5R)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	3.99	344	table 2
82	CHF₂	F	Me	S	1	H	H	H	rel-(1S,2S,3R,5R)-2,6,6-trimethylbicyclo[3.1.1]hept-3-yl	4.82	360	table 2
83	CHF₂	Cl	Me	O	1	H	H	H	(1S,2R,5R)-6,6-dimethylbicyclo[3.1.1]hept-2-yl	3.85	346	table 2
84	CHF₂	F	Me	O	1	H	H	H	(1S,2R,5R)-6,6-dimethylbicyclo[3.1.1]hept-2-yl	3.62	330	table 2
85	Me	F	Me	O	1	H	H	H	adamantan-1-yl	3.11	306	
86	Et	F	Me	O	1	H	H	H	adamantan-1-yl	3.62	320	

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Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
87	CHF_2	H	Me	O	1	H	H	H	adamantan-1-yl	3.29	324	
88	CHF_2	Cl	Me	O	1	H	H	H	adamantan-1-yl	3.89	358	table 2
89	CHF_2	F	Me	O	1	H	H	H	adamantan-1-yl	3.67	342	table 2
90	CHF_2	F	Me	O	1	H	H	H	adamantan-2-yl	3.68	342	table 2
91	CHF_2	Cl	Me	O	1	H	H	H	adamantan-2-yl	3.90	358	table 2
92	CHF_2	H	Me	O	1	H	H	H	adamantan-2-yl	3.27	324	table 2
93	CHF_2	F	Me	O	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	4.01	356	
94	CHF_2	H	Me	O	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	3.52	338	
95	Et	F	Me	O	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	3.83 + 3.92[1]	334	
96	Me	F	Me	O	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	3.46	320	
97	CHF_2	F	Me	S	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	4.47		table 2
98	Me	F	Me	S	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	4.34		table 2
99	CHF_2	F	Me	O	1	methoxy	Me	H	bicyclo[2.2.1]hept-2-yl	3.67	346	table 2
100	CHF_2	H	Me	O	1	methoxy	Me	H	bicyclo[2.2.1]hept-2-yl	3.42	328	table 2

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Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
101	CHF₂	F	Me	O	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-5-en-2-yl	3.55 + 3.62[1]	354	table 2
102	CHF₂	H	Me	O	1	cyclopropyl	Me	H	bicyclo[2.2.1]hept-5-en-2-yl	3.15 + 3.19[1]	336	table 2
103	Me	F	Me	O	1	cyclopropyl	Me	H	adamantan-1-yl	4.30	360	
104	Et	F	Me	O	1	cyclopropyl	Me	H	adamantan-1-yl	4.86	374	
105	CHF₂	H	Me	O	1	cyclopropyl	Me	H	adamantan-1-yl	4.30	378	
106	CHF₂	Cl	Me	O	1	H	Me	H	adamantan-1-yl	4.27	372	table 2
107	CHF₂	F	Me	O	1	H	Me	H	adamantan-1-yl	4.03	356	table 2
108	CHF₂	Cl	Me	O	1	cyclopropyl	H	H	adamantan-1-yl	4.68	398	
109	CHF₂	F	Me	O	1	cyclopropyl	H	H	adamantan-1-yl	4.49	382	
110	OMe	F	Me	O	1	cyclopropyl	H	H	adamantan-1-yl	4.04	362	
111	CHF₂	H	Me	O	1	cyclopropyl	H	H	adamantan-1-yl	3.92	364	
112	CF₃	F	Me	O	1	2-methyl cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	4.92	388	
113	OMe	H	Me	O	1	2-methyl cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	3.48 + 3.55[1]	332	

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Example	R¹	R²	R³	T	n	Z¹	Z²	Z³	B	logP	Mass (M+H)	NMR
114	CHF₂	H	Me	O	1	2-methyl cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	3.79 + 3.85 + 3.99[(1)]	352	
115	CHF₂	F	Me	O	1	2-methyl cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	4.41+ 4.51[(1)]	370	
116	CHF₂	Cl	Me	O	1	2-methyl cyclopropyl	Me	H	bicyclo[2.2.1]hept-2-yl	4.54+ 4.64[(1)]	386	

Note (1) : mixture of two or more isomers
Note (2) : M mass
Note : * denotes the point of attachement to the (CZ²Z³)ₙ-N amide moiety
Note : Me : methyl; Et : ethyl; OMe : methoxy

Table 2 : NMR peak lists

The ¹H-NMR data of selected examples are stated in the form of ¹H-NMR peak lists. For each signal peak, the δ value in ppm and the signal intensity in brackets are listed:

—	¹H-NMR [solvent - spectrometer Mhz]
1	[DMSO-d6, 400 MhZ] 8.3017 (3.76); 8.0255 (1.26); 8.0069 (1.27); 7.9526 (0.42); 7.4654 (1.54); 7.3296 (3.67); 7.1938 (1.71); 3.9736 (0.73); 3.9044 (16.00); 3.8022 (0.38); 3.7861 (0.77); 3.7671 (1.17); 3.7513 (0.74); 3.7481 (0.74); 3.7320 (0.34); 3.3277 (68.44); 2.8907 (3.31); 2.7317 (2.69); 2.7306 (2.58); 2.5244 (1.11); 2.5110 (18.49); 2.5065 (36.29); 2.5020 (47.47); 2.4973 (34.63); 2.4329 (16.94); 2.4650 (0.67); 2.3287 (0.38); 2.3241 (0.32); 2.3090 (0.36); 2.3011 (0.53); 2.2851 (0.82); 2.2645 (0.68); 1.9455 (0.35); 1.9341 (0.47); 1.9289 (0.50); 1.9242 (0.43); 1.9135 (0.81); 1.9075 (0.55); 1.9028 (0.62); 1.8968 (0.83); 1.8861 (0.59); 1.8816 (0.56); 1.8767 (0.39); 1.8652 (0.52); 1.8503 (0.46); 1.8355 (0.82); 1.8209 (0.98); 1.8062 (0.96); 1.7939 (0.76); 1.7790 (0.36); 1.6106 (0.71); 1.5926 (1.00); 1.5817 (1.02); 1.5734 (1.16); 1.5630 (1.23); 1.5520 (1.28); 1.5474 (1.33); 1.5359 (0.79); 1.5303 (0.84); 1.5274 (0.89); 1.5150 (1.25); 1.5010 (1.04); 1.4943 (1.32); 1.4806 (1.71); 1.4755 (1.56); 1.4645 (1.69); 1.4591 (2.10); 1.4421 (1.13); 1.4377 (1.49); 1.4291 (1.29); 1.4183 (1.15); 1.4139 (1.17); 1.4079 (0.69); 1.4052 (0.72); 1.3972 (0.59); 1.3912 (0.54); 1.3881 (0.62); 1.3840 (0.57); 1.3672 (0.41); 1.3039 (0.42); 1.2924 (0.83); 1.2809 (0.78); 1.2768 (0.75); 1.2624 (0.81); 1.2526 (0.71); 1.2354 (0.71); 1.1884 (0.44); 1.1721 (0.77); 1.1641 (0.48); 1.1561 (0.80); 1.1472 (0.71); 1.1405 (0.79); 1.1321 (0.69); 1.1240 (0.47); 1.1161 (0.60); 0.0080 (0.35); -0.0002 (10.53); -0.0086 (0.04)
2	[DMSO-d6, 400 MhZ] 7.9520 (0.41); 7.7905 (1.55); 7.7720 (1.53); 7.2324 (1.99); 7.0978 (4.36); 6.9631 (2.15); 3.7975 (0.61); 3.7729 (16.00); 3.7474 (1.15); 3.7286 (0.46); 3.3284 (109.39); 3.2989 (0.43); 2.8905 (2.80); 2.7308 (2.41); 2.6707 (0.37); 2.5061 (46.86); 2.5017 (60.56); 2.4972 (45.73); 2.4541 (0.87); 2.4321 (0.36); 2.3324 (0.36); 2.3285 (0.46); 2.3245 (0.36); 2.3067 (0.51); 2.2984 (0.68); 2.2832 (1.13); 2.2736 (1.05); 2.2627 (0.99); 2.2394 (0.39); 1.9277 (0.43); 1.9156 (0.61); 1.9112 (0.64); 1.9070 (0.57); 1.8957 (1.04); 1.8898 (0.71); 1.8843 (0.84); 1.8782 (1.05); 1.8678 (0.80); 1.8633 (0.78); 1.8470 (0.78); 1.8391 (0.68); 1.8247 (1.10); 1.8101 (1.36); 1.7955 (1.39); 1.7819 (1.05); 1.7678 (0.49); 1.6292 (0.43); 1.6089 (0.92); 1.6007 (1.02); 1.5912 (1.51); 1.5800 (1.76); 1.5726 (1.70); 1.5603 (1.83); 1.5411 (1.63); 1.5264 (1.07); 1.5126 (1.44); 1.5082 (1.11); 1.4925 (1.83); 1.4859 (1.40); 1.4761 (2.58); 1.4704 (2.82); 1.4561 (3.16); 1.4497 (2.84); 1.4409 (2.18); 1.4321 (1.95); 1.4224 (1.85); 1.4109 (0.89); 1.4023 (0.73); 1.2942 (0.56); 1.2825 (1.18); 1.2716 (1.05); 1.2674 (1.06); 1.2524 (1.10); 1.2419 (1.17); 1.2356 (1.24); 1.1903 (0.55); 1.1738 (1.00); 1.1666 (0.66); 1.1579 (1.03); 1.1496 (0.95); 1.1424 (1.05); 1.1345 (0.92); 1.1258 (0.61); 1.1188 (0.79); 1.1031 (0.38); -0.0002 (9.83); -0.0083 (0.41)
3	[DMS<D-d6, 400 MhZ] 7.9710 (1.16); 7.9521 (1.20); 7.1902 (1.98); 7.0553 (4.54); 6.9204 (2.21); 3.8647 (16.00); 3.8062 (0.36); 3.7915 (0.79); 3.7874 (0.84); 3.7730 (1.48); 3.7584 (0.82); 3.7542 (0.80); 3.7399 (0.34); 3.3260 (108.30); 3.3050 (0.39); 2.8907 (0.75); 2.7317 (0.59); 2.7307 (0.59); 2.6705 (0.40); 2.5241 (1.19); 2.519 (1.90); 2.5107 (23.00); 2.5062 (46.08); 2.5016 (60.98); 2.4369 (44.31); 2.4924 (21.19); 2.4717 (0.82); 2.4563 (0.59); 2.3329 (0.33); 2.3284 (0.43); 2.3238 (0.33); 2.3074 (0.36); 2.2970 (0.50); 2.2842 (0.78); 2.2734 (0.78); 2.2629 (0.71); 2.2527 (0.37); 1.9418 (0.33); 1.9278 (0.52); 1.9205 (0.37); 1.9109 (0.80); 1.9070 (0.61); 1.8964 (0.65); 1.8897 (0.78); 1.8802 (0.60); 1.8751 (0.62); 1.8593 (0.61); 1.8497 (0.54); 1.8354 (0.93); 1.8205 (1.25); 1.8058 (1.27); 1.7906 (0.95); 1.7762 (0.38); 1.6509 (0.43); 1.6339 (0.82); 1.6306 (1.02); 1.6223 (0.69); 1.6149 (1.45); 1.6101 (0.94); 1.6021 (1.41); 1.5944 (1.02); 1.5885 (0.86); 1.5830 (1.40); 1.5656 (0.97); 1.5522 (0.62); 1.5378 (0.72); 1.5325 (0.46); 1.5230 (0.93); 1.5181 (0.64); 1.5081 (0.65); 1.5034 (0.83); 1.4895 (0.83); 1.4785 (1.07); 1.4745 (1.16); 1.4700 (1.07); 1.4625 (1.67); 1.4508 (2.03); 1.4445 (1.71); 1.4393 (1.50); 1.4338 (1.60); 1.4228 (1.42); 1.4142 (0.90); 1.4029 (0.84); 1.2873 (0.37); 1.2747 (0.81); 1.2624 (0.79); 1.2443 (0.79); 1.2342 (0.95); 1.2106 (0.44); 1.1945 (0.84); 1.1887 (0.48); 1.1787 (0.85); 1.1724 (0.75); 1.1630 (0.81); 1.1570 (0.76); 1.1469 (0.48); 1.1414 (0.68); -0.0002 (5.93)
4	[CHCl3-d, 500 MhZ] 6.9918 (2.06); 6.8828 (3.05); 6.7733 (2.09); 4.1741 (1.09); 4.1603 (1.52); 4.1484 (1.53); 4.1351 (1.46); 4.1214 (0.93); 3.8050 (16.00); 3.0866 (0.48); 3.0697 (1.18); 3.0531 (1.52); 3.0365 (1.03); 2.8026 (0.51); 2.7867 (1.26); 2.7811 (1.58); 2.7756 (1.54); 2.7702 (1.13); 2.4650 (0.51); 2.4481 (1.39); 2.4312 (1.92); 2.4141 (1.32); 2.3972 (0.41); 2.0495 (0.71); 2.0367 (1.31); 2.0254 (1.88); 2.0129 (2.74); 2.0036 (8.40); 1.9968 (1.91); 1.9844 (2.48); 1.9773 (1.38); 1.9711 (2.59); 1.9598 (1.99); 1.9523 (0.81); 1.9463 (1.59); 1.9354 (0.48); 1.9218 (0.46); 1.7287 (0.45); 1.6782 (0.91); 1.6649 (1.32); 1.6608 (1.54); 1.6527 (2.16); 1.6434 (1.75); 1.6388 (2.39); 1.6351 (2.40); 1.6272 (1.79); 1.6219 (1.75); 1.6134 (1.62); 1.6100 (1.50); 1.6009 (1.41); 1.5962 (1.70); 1.5826 (1.01); 1.5767 (0.86); 1.5649 (0.53); 1.4686 (1.68); 1.4553 (1.65); 1.4427 (1.31); 1.4296 (1.18); 1.3575 (0.41); 1.3452 (0.56); 1.3358 (0.92); 1.3241 (1.22); 1.3127 (1.35); 1.3031 (1.44); 1.2911 (2.22); 1.2803 (1.63); 1.2774 (1.57); 1.2664 (0.96); 1.2614 (1.01); 1.2504 (0.83); 1.2401 (0.43); 1.2279 (0.41); 1.1636 (0.56); 1.1569 (0.40); 1.1495 (0.85); 1.1362 (0.98); 1.1268 (1.13); 1.1172 (0.75); 1.1144 (0.74); 1.1115 (0.75); 1.1056 (0.63); 1.0900 (0.45); 0.8385 (0.62); 0.8329 (0.78); 0.8243 (1.38); 0.8191 (1.66); 0.8102 (1.63); 0.8049 (1.54); 0.7965 (0.88); 0.7794 (0.39); 0.6896 (0.80); 0.6760 (1.94); 0.6704 (2.46); 0.6614 (3.59); 0.6502 (2.34); 0.6430 (1.51); 0.6347 (0.46); 0.6294 (0.49); 0.5681 (0.41); 0.5580 (0.63); 0.5540 (0.86); 0.5487 (0.98); 0.5402 (1.51); 0.5349 (1.51); 0.5314 (1.13); 0.5269 (1.16); 0.5178 (0.75); 0.5100 (0.45); -0.0002 (2.05)
5	[CHCl3-d, 500 MhZ] 7.2678 (0.37); 6.9349 (1.91); 6.8256 (3.89); 6.7163 (1.97); 5.2984 (0.75); 3.9857 (0.62); 3.9671 (1.10); 3.9511 (1.01); 3.9344 (0.69); 3.7951 (16.00); 2.8137 (0.67); 2.8056 (0.84); 2.7953 (1.23); 2.7885 (0.91); 2.7769 (0.78); 2.7272 (0.98); 2.7181 (1.26); 2.7145 (1.34); 2.7056 (1.06); 2.5819 (0.85); 2.5647 (1.06); 2.5478 (0.69); 1.9979 (0.49); 1.9947 (0.55); 1.9818 (1.09); 1.9735 (0.62); 1.9691 (0.91); 1.9611 (1.74); 1.9425 (2.32); 1.9293 (0.61); 1.9203 (1.92); 1.9149 (0.61); 1.9072 (1.46); 1.8922 (2.08); 1.8849 (1.48); 1.8774 (1.07); 1.8712 (0.80); 1.6558 (0.92); 1.6339 (0.33); 1.6134 (0.72); 1.5967 (1.25); 1.5753 (11.16); 1.3867 (0.77); 1.3807 (1.02); 1.3724 (1.17); 1.3642 (1.19); 1.1667 (0.46); 1.1430 (0.94); 1.1295 (1.05); 1.1255 (1.00); 1.1192 (0.67); 1.1117 (1.00); 1.1029 (0.52); 0.7467 (0.40); 0.7410 (0.37); 0.7333 (1.25); 0.7214 (1.51); 0.7167 (1.42); 0.7037 (2.26); 0.6970 (1.45); 0.6903 (1.19); 0.6819 (1.79); 0.6711

Example	¹H-NMR [solvent - spectrometer Mhz]
	(1.66); 0.6641 (1.35); 0.6601 (1.10); 0.6510 (1.67); 0.6438 (1.52); 0.6361 (0.76); 0.6269 (1.01); 0.6185 (1.39); 0.61 10 (1.28); 0.6001 (1.28); 0.5936 (0.70); 0.5881 (0.58); -0.0002 (3.43)
6	[CHCl3-d, 500 MhZj 7.5891 (3.74); 7.2660 (0.34); 7.1533 (1.56); 7.0443 (2.35); 6.9344 (1.62); 5.2986 (1.22); 4.1957 (0.69); 4.1818 (1.16); 4.1705 (1.03); 4.1570 (1.26); 4.1431 (0.77); 3.9593 (16.00); 3.0685 (0.87); 3.0518 (1.24); 3.0352 (0.89); 2.6983 (0.40); 2.6875 (0.96); 2.6767 (1.67); 2.6709 (0.79); 2.6658 (1.07); 2.6552 (0.49); 2.4425 (0.96); 2.4255 (1.44); 2.4085 (1.03); 2.0265 (0.58); 2.0150 (1.06); 2.0031 (1.92); 1.9963 (1.29); 1.9847 (1.91); 1.9716 (1.86); 1.9602 (1.53); 1.9472 (1.21); 1.9362 (0.35); 1.6793 (0.51); 1.6657 (0.70); 1.6612 (0.78); 1.6537 (1.40); 1.6479 (1.14); 1.6402 (1.47); 1.6363 (1.78); 1.6293 (1.44); 1.6233 (1.49); 1.6186 (1.28); 1.6141 (1.37); 1.6057 (0.74); 1.6025 (0.76); 1.5971 (1.23); 1.5792 (0.76); 1.5708 (0.63); 1.5619 (0.39); 1.4649 (1.14); 1.4517 (1.16); 1.4389 (0.91); 1.4263 (0.85); 1.3337 (0.56); 1.3219 (0.84); 1.3108 (0.91); 1.3005 (0.99); 1.2894 (1.03); 1.2772 (1.22); 1.2697 (0.82); 1.2659 (0.84); 1.2594 (0.73); 1.2543 (0.76); 1.2483 (0.73); 1.2364 (0.64); 1.2267 (0.82); 1.2364 (0.64); 1.2267 (0.82); 1.1572 (0.34); 1.1447 (0.56); 1.1309 (0.67); 1.1207 (0.83); 1.1106 (0.55); 1.1052 (0.54); 1.0991 (0.50); 1.0837 (0.33); 0.8728 (0.35); 0.8669 (0.45); 0.8587 (0.96); 0.8531 (1.21); 0.8443 (1.17); 0.8387 (1.22); 0.8306 (0.63); 0.8274 (0.45); 0.7151 (0.49); 0.7013 (1.46); 0.6951 (2.01); 0.6861 (2.95); 0.6808 (1.66); 0.6757 (2.01); 0.6722 (1.12); 0.6674 (1.17); 0.6581 (0.42); 0.6540 (0.35); 0.5474 (0.32); 0.5436 (0.55); 0.5377 (0.65); 0.5293 (1.22); 0.5234 (1.24); 0.5157 (0.94); 0.5078 (0.61); 0.4991 (0.34); -0.0002 (2.85)
7	[CHCl3-CJ, 500 MhZ] 7.5938 (4.1 1); 7.1 150 (1.53); 7.0054 (3.10); 6.8958 (1.58); 5.2994 (2.56); 3.9980 (0.52); 3.9850 (0.67); 3.9805 (0.81); 3.9762 (0.88); 3.9673 (0.89); 3.9640 (0.88); 3.9484 (16.00); 2.8279 (0.54); 2.8199 (0.67); 2.8094 (0.93); 2.8028 (0.70); 2.7909 (0.55); 2.6762 (0.40); 2.6679 (0.84); 2.6622 (0.98); 2.6541 (1.60); 2.6462 (1.01); 2.6406 (0.88); 2.6324 (0.43); 2.5838 (0.63); 2.5669 (0.79); 2.5506 (0.50); 1.9866 (0.47); 1.9730 (0.98); 1.9647 (0.47); 1.9570 (1.19); 1.9519 (1.02); 1.9451 (1.35); 1.9403 (1.67); 1.9232 (1.60); 1.9099 (0.87); 1.9004 (0.81); 1.8882 (0.95); 1.8782 (1.42); 1.8680 (0.86); 1.8573 (0.71); 1.6051 (0.52); 1.5884 (1.02); 1.5683 (8.06); 1.5525 (2.41); 1.3845 (0.63); 1.3783 (0.83); 1.3707 (0.92); 1.3642 (0.90); 1.1558 (0.32); 1.1320 (0.96); 1.1 192 (0.80); 1.1144 (0.82); 1.1090 (0.56); 1.1014 (0.75); 1.0910 (0.34); 0.7813 (0.36); 0.7771 (0.63); 0.7700 (0.87); 0.7642 (1.22); 0.7586 (1.70); 0.7512 (1.77); 0.7453 (1.59); 0.7414 (1.22); 0.7382 (1.25); 0.7279 (0.81); 0.7232 (0.62); 0.7179 (0.39); 0.7099 (0.54); 0.7028 (0.62); 0.6945 (0.94); 0.6868 (0.60); 0.6808 (0.70); 0.6726 (1.25); 0.6669 (1.20); 0.6592 (0.57); 0.6333 (0.55); 0.6247 (0.95); 0.6187 (1.08); 0.6086 (0.90); 0.5986 (0.50); 0.5960 (0.62); -0.0002 (1.56)
8	[CHCl3-d, 400 MhZ] 7.2746 (4.91); 6.8801 (0.46); 6.8391 (0.34); 6.8023 (0.45); 6.7658 (0.32); 6.7437 (0.93); 6.7029 (0.59); 6.6073 (0.46); 3.8129 (1.94); 3.7961 (16.00); 3.1 148 (1.26); 3.1 100 (1.26); 3.0848 (0.41); 3.01 19 (7.03); 3.0087 (6.83); 2.9689 (1.52); 2.9261 (4.04); 2.8902 (1.51); 2.1 148 (0.38); 2.1057 (0.55); 2.0984 (0.48); 2.091 1 (0.54); 2.0773 (0.70); 2.0717 (0.70); 2.0607 (0.88); 2.0458 (0.73); 2.0320 (0.70); 2.0101 (10.80); 1.9971 (0.43); 1.9826 (0.47); 1.9770 (0.49); 1.9697 (0.48); 1.9595 (0.57); 1.9537 (0.43); 1.9463 (0.50); 1.9378 (0.54); 1.9307 (0.57); 1.9235 (0.45); 1.9065 (0.62); 1.8971 (0.79); 1.8826 (0.80); 1.8733 (1.17); 1.8666 (1.18); 1.8599 (1.24); 1.8503 (1.03); 1.8379 (1.13); 1.8277 (1.02); 1.8176 (0.81); 1.8032 (0.90); 1.7661 (1.54); 1.7354 (2.17); 1.7162 (1.92); 1.7072 (1.60); 1.6867 (1.38); 1.6736 (1.05); 1.6584 (0.87); 1.6451 (0.79); 1.6347 (0.62); 1.6217 (0.67); 1.61 13 (0.48); 1.5997 (0.43); 1.5869 (0.40); 1.5713 (0.77); 1.5630 (1.24); 1.5534 (1.15); 1.5475 (1.13); 1.5369 (0.97); 1.5249 (0.69); 1.5065 (0.76); 1.4991 (0.79); 1.4645 (0.87); 1.4342 (0.71); 1.4136 (0.50); 1.3828 (0.34); 1.3161 (0.34); 1.2908 (0.58); 1.2666 (1.07); 1.2492 (1.27); 1.2298 (0.91); 1.2223 (0.91); 1.2025 (0.74); 1.1954 (0.81); 1.1673 (0.90); 1.1432 (1.16); 1.1210 (1.39); 1.0969 (1.47); 1.0716 (0.92); 1.0387 (0.68); 1.0157 (0.51); 1.0100 (0.50); 0.9880 (0.33); -0.0002 (3.12)
9	[CHCl3-d, 400 MhZ] 7.5982 (0.47); 7.4721 (2.00); 7.3842 (0.38); 7.2776 (4.71); 7.0092 (0.88); 6.8723 (1.82); 6.8414 (0.56); 6.7355 (0.91); 3.9447 (16.00);; 3.9158 (0.80); 3.0975 (2.1 1); 3.0877 (1.09); 3.0662 (0.80); 3.0060 (12.37); 2.9695 (0.63); 2.9560 (0.53); 2.9209 (1.70); 2.9047 (1.23); 2.0912 (0.34); 2.0844 (0.40); 2.0714 (0.57); 2.0636 (0.51); 2.0592 (0.67); 2.0557 (0.67); 2.0521 (0.67); 2.0456 (0.71); 2.0393 (0.70); 2.0256 (0.74); 2.0174 (0.69); 2.0094 (4.60); 1.9970 (0.54); 1.9847 (0.51); 1.9661 (0.38); 1.9594 (0.43); 1.9425 (0.40); 1.9355 (0.46); 1.9275 (0.41); 1.9194 (0.37); 1.91 18 (0.38); 1.9053 (0.38); 1.8888 (0.44); 1.8643 (0.63); 1.8564 (0.62); 1.8498 (0.75); 1.8409 (0.90); 1.8269 (1.20); 1.8176 (1.1 1); 1.8076 (1.14); 1.8029 (1.21); 1.7985 (1.22); 1.7937 (1.36); 1.7840 (1.21); 1.7701 (1.44); 1.761 1 (1.33); 1.7446 (1.47); 1.7346 (1.31); 1.7299 (1.34); 1.7238 (1.43); 1.7164 (1.43); 1.7013 (1.09); 1.6838 (0.91); 1.6695 (0.65); 1.6553 (0.52); 1.6413 (0.58); 1.6289 (0.44); 1.6183 (0.52); 1.6062 (0.52); 1.5954 (0.42); 1.5833 (0.46); 1.5694 (0.69); 1.5603 (1.07); 1.5502 (0.97); 1.5445 (0.90); 1.5340 (0.81); 1.5222 (0.60); 1.5078 (0.60); 1.5010 (0.65); 1.4755 (0.77); 1.4672 (0.85); 1.4535 (0.57); 1.4434 (0.59); 1.3022 (0.41); 1.2946 (0.46); 1.2778 (0.67); 1.2703 (0.71); 1.2608 (0.88); 1.2449 (0.86); 1.2373 (0.87); 1.2149 (0.64); 1.2052 (0.62); 1.1676 (0.76); 1.1510 (0.93); 1.1270 (1.36); 1.1034 (0.99); 1.0976 (0.92); 1.0784 (0.46); 1.0726 (0.57); 1.0657 (0.49); 1.0403 (0.52); 1.0335 (0.51); 1.0171 (0.47); -0.0002 (2.93)
10	[CHCl3-d, 400 MhZ] 7.271 3 (5.16); 7.0238 (1.20); 6.9713 (0.35); 6.9672 (0.35); 6.8876 (2.26); 6.8350 (0.72); 6.8309 (0.72); 6.7514 (1.23); 6.6987 (0.36); 6.6947 (0.36); 4.6214 (0.39); 4.6071 (0.43); 4.5971 (0.69); 4.5829 (0.69); 4.5725 (0.43); 4.5582 (0.40); 3.8432 (0.54); 3.8149 (2.15); 3.6707 (2.15); 3.6548 (2.22); 3.5305 (16.00); 2.2565 (0.48); 2.2425 (0.60); 2.2277 (0.89); 2.2139 (1.04); 2.1988 (0.94); 2.1848 (0.82); 2.1 180 (0.43); 2.1001 (0.43); 2.0937 (0.46); 2.0774 (0.32); 2.0203 (0.48); 2.01 10 (5.99); 1.9967 (0.63); 1.9835 (0.64); 1.9738 (0.60); 1.9633 (0.60); 1.9609 (0.59); 1.951 1 (0.63); 1.9404 (0.58); 1.9274 (0.60); 1.9186 (0.56); 1.91 10 (0.54); 1.9001 (0.72); 1.8925 (0.98); 1.8841 (0.49); 1.8731 (0.51); 1.8651 (0.47); 1.7944 (0.38); 1.7821 (0.52); 1.7622 (0.93); 1.7514 (0.79); 1.7331 (0.92); 1.7208 (1.12); 1.7046 (0.97); 1.6910 (0.95); 1.6828 (0.82); 1.6758 (0.90); 1.6629 (0.56); 1.6523 (0.72); 1.6393 (0.73); 1.6292 (0.61); 1.6160 (0.64); 1.6062 (0.66); 1.5961 (0.51); 1.5783 (1.34); 1.5684 (1.79); 1.5577 (1.19); 1.5496 (0.92); 1.5388 (1.14); 1.5271 (0.72); 1.5196 (0.54); 1.5105 (0.58); 1.5055 (0.65); 1.4958 (0.69); 1.4839 (0.38); 1.4682 (0.60); 1.4607 (0.72); 1.4420 (0.38); 1.4292 (0.56); 1.4196 (0.59); 1.41 16 (0.56); 1.3965 (0.74); 1.3690 (0.42); 1.3599 (0.38); 1.3481 (0.43); 1.3392 (0.65); 1.3298 (0.48); 1.3179 (0.43); 1.3108 (0.58); 1.2324 (0.40); 1.2242 (0.44); 1.2134 (0.36); 1.1998 (0.98); 1.1919 (1.00); 1.1836 (0.64); 1.1682 (0.94); 1.1608 (1.04); 1.1288 (0.77); 1.1029 (0.59); 1.0959 (0.92); 1.0885 (0.53); 1.0713 (0.50); 1.0640 (0.71); 1.0563 (0.40); -0.0002 (2.48)
11	[CHCl3-d, 400 MhZ] 7.9155 (2.15); 7.8712 (0.67); 7.8684 (0.68); 7.4018 (1.13); 7.2715 (4.03); 7.2657 (2.35); 7.2323

Example	¹H-NMR [solvent - spectrometer Mhz]
	(0.47); 7.2257 (0.43); 7.1297 (1.19); 4.6694 (0.34); 4.6591 (0.51); 4.6448 (0.51); 4.6345 (0.34); 3.9786 (14.41); 3.8433 (0.55); 3.6978 (3-76); 3.6902 (3.65); 3.5980 (16.00); 2.2630 (0.83); 2.2491 (0.97); 2.2338 (0.91); 2.2194 (0.84); 2.2056 (0.44); 2.1289 (0.38); 2.1220 (0.39); 2.1160 (0.38); 2.1093 (0.41); 2.0107 (4.70); 1.9817 (0.52); 1.9686 (0.59); 1.9587 (0.55); 1.9491 (0.55); 1.9454 (0.55); 1.9365 (0.52); 1.9258 (0.42); 1.9194 (0.36); 1.9130 (0.51); 1.8876 (0.34); 1.8796 (0.48); 1.8745 (0.44); 1.7893 (0.39); 1.7750 (0.42); 1.7670 (0.36); 1.7567 (0.61); 1.7438 (0.60); 1.7274 (0.66); 1.7146 (0.58); 1.6986 (0.48); 1.6857 (0.91); 1.6737 (0.83); 1.6628 (0.86); 1.6494 (0.99); 1.6396 (0.84); 1.6300 (0.59); 1.6264 (0.53); 1.6163 (0.45); 1.6062 (0.40); 1.6013 (0.38); 1.5931 (0.41); 1.5714 (1.11); 1.5608 (1.40); 1.5495 (0.77); 1.5422 (0.57); 1.5308 (0.86); 1.5192 (0.57); 1.5101 (0.36); 1.4985 (0.53); 1.4885 (0.53); 14623 (0.47); 1.4539 (0.56); 1.4443 (0.37); 1.3591 (0.37); 1.3390 (0.69); 1.3299 (0.76); 1.3189 (0.56); 1.3090 (0.78); 1.3008 (0.74); 1.2249 (0.43); 1.2166 (0.40); 1.2021 (0.41); 1.1927 (0.89); 1.1849 (0.83); 1.1610 (0.80); 1.1535 (0.67); 1.1293 (0.38); 1.1224 (0.36); 1.1125 (0.43); 1.1050 (0.34); 1.0893 (0.43); 1.0816 (0.78); 1.0737 (0.52); 1.0571 (0.35); 1.0498 (0.58); 1.0421 (0.38); -0.0002 (2.60)
12	[DMSO-d6, 400 MhZ] 7.0928 (1.39); 7.0863 (0.43); 6.9579 (3.07); 6.9514 (0.94); 6.8230 (1.55); 6.8165 (0.47); 4.2528 (0.58); 4.2311 (0.71); 4.2086 (0.46); 3.7879 (11.58); 3.3862 (0.37); 3.3363 (30.55); 2.7334 (0.60); 2.7232 (0.74); 2.7174 (0.73); 2.7071 (0.54); 2.5605 (0.39); 2.5330 (0.54); 2.5282 (0.91); 2.5195 (11.63); 2.5150 (24.45); 2.5105 (33.45); 2.5060 (23.94); 2.5015 (11.10); 2.4605 (0.36); 2.1839 (0.35); 2.0840 (16.00); 1.9079 (2.01); 1.8886 (3.04); 1.8671 (2.59); 1.8525 (1.50); 1.8403 (1.60); 1.8313 (1.29); 1.8189 (1.21); 1.8076 (0.80); 1.7971 (0.35); 1.5416 (2.04); 1.5254 (2.13); 1.5024 (1.00); 1.4892 (1.40); 14687 (1.33); 1.4571 (1.37); 1.2982 (1.30); 1.2847 (1.36); 1.2681 (0.96); 0.7676 (0.45); 0.7536 (1.73); 0.7496 (2.09); 0.7366 (2.25); 0.7324 (1.90); 0.7189 (1.14); 0.7047 (0.68); 0.7002 (0.60); 0.5290 (0.74); 0.5176 (2.46); 0.5117 (2.51); 0.5024 (2.28); 0.4895 (0.62)
13	[DMSO-d6, 400 MhZ] 8.2328 (0.96); 8.2184 (3.23); 7.2570 (0.36); 7.2398 (1.27); 7.1210 (0.83); 7.1038 (2.92); 6.9851 (0.40); 6.9679 (1.41); 4.2507 (0.67); 4.2283 (0.90); 4.2063 (0.55); 3.9033 (16.00); 3.3998 (2.35); 3.3493 (174.70); 3.3277 (0.40); 3.2992 (1.83); 2.8330 (0.57); 2.8255 (0.69); 2.8162 (1.06); 2.8067 (0.69); 2.7994 (0.56); 2.5654 (0.48); 2.5609 (0.63); 2.5564 (0.41); 2.5326 (1.09); 2.5193 (18.74); 2.5149 (38.37); 2.5104 (51.88); 2.5060 (37.20); 2.5016 (17.39); 2.4694 (0.32); 2.4650 (0.44); 2.4604 (0.52); 2.4558 (0.35); 2.1901 (0.35); 1.8936 (1.99); 1.8746 (3.71); 1.8539 (2.42); 1.8457 (2.45); 1.8256 (1.10); 1.8018 (0.43); 1.7965 (0.49); 1.5566 (1.54); 1.5467 (1.76); 1.5288 (1.86); 14908 (1.61); 1.4692 (1.36); 1.4592 (1.42); 1.3192 (0.86); 1.3000 (1.33); 1.2918 (1.32); 1.2856 (1.42); 1.2681 (0.98); 0.8020 (0.51); 0.7838 (2.40); 0.7712 (2.43); 0.7666 (2.21); 0.7542 (0.79); 0.5273 (1.19); 0.5160 (2.58); 0.5106 (2.61); 0.5006 (2.05); 0.4881 (0.58)
18	[DMSO-Cl6, 400 MhZ] 10.0618 (0.92); 10.0424 (0.92); 9.9883 (0.41); 9.9686 (0.41); 7.3587 (0.58); 7.3476 (1.18); 7.2558 (0.34); 7.2454 (0.42); 7.2239 (1.32); 7.2127 (2.71); 7.2059 (0.53); 7.1109 (0.32); 7.0892 (0.69); 7.0778 (1.37); 7.0704 (0.33); 5.7608 (0.59); 4.6199 (0.44); 4.6093 (0.53); 4.6003 (0.56); 4.5897 (0.53); 4.5561 (0.39); 4.5463 (0.40); 4.5345 (0.72); 4.5250 (0.77); 4.5135 (0.82); 4.5037 (0.76); 4.4930 (0.43); 44834 (0.34); 4.1379 (0.37); 3.7807 (12.70); 3.7642 (1.02); 3.7461 (0.59); 3.7327 (0.47); 3.7166 (0.56); 3.6995 (0.74); 3.6458 (0.32); 3.5729 (0.98); 3.4833 (0.86); 3.4725 (0.36); 3.4622 (0.46); 3.4498 (0.69); 3.4377 (0.38); 3.3411 (66.56); 3.2536 (0.51); 3.2397 (0.40); 3.2237 (0.39); 2.5157 (9.51); 2.5114 (19.01); 2.5069 (25.67); 2.5025 (18.93); 24982 (9.76); 2.3340 (0.32); 2.2645 (0.43); 2.2451 (1.00); 2.2267 (1.21); 2.2081 (1.00); 2.1931 (0.75); 2.1852 (0.66); 2.1749 (0.76); 2.1666 (0.79); 2.1569 (0.58); 2.1480 (0.71); 2.1298 (0.43); 2.0267 (0.41); 2.0100 (0.35); 2.0032 (0.36); 1.9158 (0.55); 1.9053 (0.57); 1.9001 (0.53); 1.8893 (0.60); 1.8819 (0.53); 1.8760 (0.55); 1.8655 (0.53); 1.8160 (1.14); 1.8023 (1.46); 1.7849 (1.82); 1.7785 (1.67); 1.7674 (1.37); 1.7591 (1.36); 1.7464 (1.40); 1.7333 (1.18); 1.7226 (1.04); 1.7079 (0.86); 1.6934 (0.78); 1.6823 (0.61); 1.6672 (0.52); 1.6361 (1.39); 1.6175 (1.94); 1.6040 (2.04); 1.5864 (1.77); 1.5592 (0.88); 1.4852 (3.47); 1.4339 (0.96); 1.4182 (0.99); 1.4071 (1.08); 1.3897 (1.15); 1.3730 (1.07); 1.3601 (0.96); 1.3348 (0.90); 1.3198 (0.94); 1.3003 (1.87); 1.2724 (1.72); 1.2687 (1.71); 1.2411 (1.76); 1.2143 (0.89); 1.1975 (0.87); 1.1774 (1.68); 1.1588 (1.69); 1.1320 (0.68); 1.1147 (0.65); 1.0961 (0.61); 1.0891 (0.62); 1.0784 (0.66); 1.0385 (3.90); 1.0305 (2.01); 1.0219 (4.22); 1.0137 (2.30); 1.0040 (3.45); 0.9919 (10.67); 0.9698 (12.75); 0.9552 (16.00); 0.9254 (3.56); 0.9181 (6.67); 0.9099 (3.33); 0.8843 (2.36); 0.8099 (1.96)
19	[DMSO-d6, 400 MhZ] 7.0679 (1.92); 6.9330 (3.89); 6.7982 (2.13); 44754 (0.80); 4.4651 (0.60); 4.4534 (0.61); 44430 (0.84); 3.7872 (16.00); 3.3921 (1.47); 3.3415 (85.55); 3.2909 (1.20); 2.6842 (0.42); 2.6798 (0.57); 2.6753 (0.44); 2.6346 (0.77); 2.6188 (1.06); 2.6085 (0.83); 2.5705 (0.54); 2.5660 (0.95); 2.5614 (1.26); 2.5568 (0.94); 2.5522 (0.59); 2.5332 (2.24); 2.5285 (3.08); 2.5197 (28.32); 2.5153 (59.03); 2.5107 (81.30); 2.5063 (60.10); 2.5018 (30.45); 2.4698 (1.46); 2.4649 (1.51); 2.4603 (1.56); 24557 (1.21); 2.4512 (0.80); 2.4149 (0.36); 2.3421 (0.44); 2.3376 (0.57); 2.3330 (0.43); 2.2796 (0.75); 2.2671 (0.77); 2.2528 (0.63); 2.0848 (4.02); 1.9986 (0.87); 1.9906 (0.82); 1.9666 (1.22); 1.9583 (1.15); 1.9355 (1.18); 1.9237 (1.00); 1.9072 (0.76); 1.8400 (0.58); 1.8267 (0.73); 1.8129 (1.29); 1.7851 (2.39); 1.7678 (1.79); 1.7518 (1.50); 1.6666 (1.10); 1.6594 (1.21); 1.6359 (1.61); 1.6246 (1.86); 1.6081 (2.07); 1.5922 (2.77); 1.5771 (2.59); 1.5547 (2.05); 1.5104 (1.20); 1.3383 (0.93); 1.3227 (1.70); 1.3020 (2.49); 1.2804 (0.96); 1.2704 (0.87); 1.2622 (1.04); 1.2373 (0.37); 1.2293 (0.44); 1.1860 (0.33); 1.0895 (0.42); 1.0822 (0.40); 1.0570 (0.95); 1.0481 (0.89); 1.0251 (0.89); 1.0169 (0.81); 0.9935 (0.38); 0.7822 (0.64); 0.7755 (0.57); 0.7700 (0.84); 0.7645 (1.07); 0.7531 (1.35); 0.7480 (1.04); 0.7417 (0.94); 0.7355 (0.96); 0.7252 (0.75); 0.7140 (0.38); 0.6678 (0.60); 0.6508 (1.10); 0.6389 (1.28); 0.6336 (1.19); 0.6225 (2.14); 0.6106 (1.90); 0.5958 (1.25); 0.5699 (0.43); 0.3568 (0.65); 0.3457 (0.94); 0.3326 (0.94); 0.3169 (0.99); 0.3053 (0.61)
20	[DMSO-d6, 400 MhZ] 8.2298 (0.33); 8.2112 (3.95); 7.2036 (1.60); 7.0790 (0.50); 7.0675 (3.25); 6.9316 (1.80); 4.5064 (0.50); 4.4959 (0.95); 4.4854 (0.61); 44739 (0.60); 4.4632 (0.98); 4.4531 (0.54); 3.8998 (16.00); 3.3923 (0.82); 3.3423 (64.60); 3.2923 (0.69); 2.7258 (0.66); 2.7190 (0.78); 2.7087 (1.22); 2.6988 (0.78); 2.6922 (0.70); 2.6798 (0.58); 2.6749 (0.35); 2.5649 (0.44); 2.5604 (0.64); 2.5559 (0.46); 2.5329 (0.78); 2.5281 (1.32); 2.5194 (18.93); 2.5150 (39.88); 2.5104 (54.54); 2.5059 (39.12); 2.5015 (18.27); 2.4696 (0.36); 2.4650 (0.53); 24605 (0.65); 2.4559 (0.51); 2.3373 (0.36); 2.2730 (0.67); 2.2603 (0.66); 2.2463 (0.51); 2.0844 (1.38); 2.0054 (0.76); 1.9974 (0.69); 1.9737 (0.89); 1.9655 (0.73); 1.9416 (0.87); 1.9278 (0.74); 1.9108 (0.71); 1.8960 (0.58); 1.8238 (0.73); 1.8108 (1.00); 1.7885 (2.31); 1.7740

Ex.	¹H-NMR [solvent - spectrometer Mhz]
	(1.50); 1.7658 (1.76); 1.6405 (1.09); 1.6299 (0.88); 1.6171 (1.36); 1.6028 (1.48); 1.5796 (2.54); 1.5478 (1.29); 1.3381 (0.68); 1.3160 (1.67); 1.2896 (1.89); 1.2660 (0.82); 1.2569 (0.89); 1.2490 (0.53); 1.2244 (0.36); 1.0931 (0.36); 1.0609 (0.84); 1.0523 (0.76); 1.0289 (0.74); 1.0206 (0.65); 0.8054 (0.41); 0.7952 (0.75); 0.7886 (0.88); 0.7846 (0.85); 0.7778 (1.02); 0.7715 (0.81); 0.7659 (0.70); 0.7607 (0.68); 0.7491 (0.54); 0.6831 (0.42); 0.6665 (0.89); 0.6536 (1.03); 0.6430 (0.75); 0.6362 (0.89); 0.6264 (1.09); 0.6169 (1.27); 0.6044 (0.87); 0.5929 (1.05); 0.5817 (0.67); 0.5760 (0.65); 0.5648 (0.36); 0.3421 (0.42); 0.3303 (0.71); 0.3181 (0.77); 0.3118 (0.76); 0.3022 (0.77); 0.2939 (0.52); 0.2897 (0.64)
21	[DMSO-d6, 250 MhZ] 7.1974 (1.30); 6.9816 (2.84); 6.7658 (1.39); 4.0844 (0.30); 4.0559 (0.68); 4.0275 (0.64); 3.8796 (12.50); 3.3240 (3.50); 2.6331 (0.66); 2.6081 (0.59); 2.5932 (0.37); 2.5278 (1.86); 2.5205 (3.98); 2.5131 (5.51); 2.5058 (3.89); 2.4985 (1.75); 2.1198 (0.41); 2.0006 (3.04); 1.9215 (0.80); 1.8671 (0.45); 1.7226 (1.96); 1.6982 (1.47); 1.6712 (1.40); 1.6060 (1.22); 1.5647 (1.90); 1.5107 (1.36); 1.3887 (0.34); 1.3575 (0.66); 1.3299 (0.50); 1.2582 (0.81); 1.2154 (0.97); 1.1870 (1.62); 1.1585 (0.88); 0.8709 (0.57); 0.6188 (1.24); 0.5949 (1.23); 0.4734 (1.20)
22	[DMSO-Cl6, 2,50 MhZ] 7.160;5 (1.38); 6.9446 (2.95); 6.728?5 (1.44); 4.105 (0.30); 3.862; i (0.29); 3.814; i (0.71); 3.789⅄ (10.11); 3.326;8 (12.50); 3.3C50 (0.99); 2.6611 (0.73); 2.6452 (0.72); 2.5270 (1.61); 2.5198 (3.47); 2.5125 (4.76); 2.5051 (3.35); 2.4979 (1.53); 2.1477 (0.45); 2.1102 (0.79); 2.0630 (0.40); 1.9997 (0.48); 1.9754 (0.50); 1.9419 (0.83); 1.9242 (0.95); 1.8953 (0.77); 1.8767 (0.71); 1.8454 (0.53); 1.8279 (0.48); 1.7737 (1.13); 1.7242 (2.55); 1.6904 (1.80); 1.6751 (1.57); 1.6398 (1.45); 1.6258 (1.18); 1.5917 (2.08); 1.5663 (2.33); 1.5107 (1.57); 1.3860 (0.37); 1.3535 (0.70); 1.3397 (0.72); 1.2567 (0.30); 1.2204 (0.30); 1.2047 (0.32); 1.1578 (0.26); 0.7438 (0.36); 0.7138 (1.99); 0.6928 (1.89); 0.5147 (0.72); 0.4972 (2.19); 0.4848 (2.13); 0.4561 (0.53)
23	[DMSO-d6, 250 MhZ] 8.1928 (1.04); 7.3162 (0.37); 7.0988 (0.77); 7.0950 (0.64); 6.8812 (0.37); 3.9056 (4.01); 3.3274 (12.50); 3.3035 (0.79); 2.7658 (0.28); 2.7398 (0.26); 2.5266 (1.33); 2.5194 (2.80); 2.5120 (3.84); 2.5047 (2.70); 2.4975 (1.22); 1.9418 (0.26); 1.9243 (0.32); 1.7859 (0.31); 1.7721 (0.26); 1.7225 (0.74); 1.6982 (0.55); 1.6661 (0.42); 1.6419 (0.43); 1.6271 (0.35); 1.5947 (0.69); 1.5649 (0.67); 1.5485 (0.61); 1.3334 (0.26); 0.7571 (0.62); 0.7301 (0.60); 0.4960 (0.66); 0.4838 (0.67)
24	[DMSO-d6, 400 MhZ] 7.3086 (1.15); 7.2884 (2.53); 7.2655 (2.58); 7.2439 (1.13); 7.2278 (0.82); 7.0927 (1.51); 6.9575 (0.76); 5.7604 (7.75); 5.1213 (0.37); 4.8072 (0.35); 4.7798 (0.61); 3.7827 (16.00); 3.3382 (74.92); 2.8128 (1.03); 2.5107 (16.83); 2.5066 (21.38); 2.5025 (15.85); 2.1685 (0.45); 1.9532 (1.26); 1.9087 (1.15); 1.8773 (0.73); 1.8619 (0.66); 1.7394 (2.54); 1.6954 (1.87); 1.6544 (4.43); 1.6009 (2.21); 1.5449 (1.31); 1.4060 (0.78); 1.3692 (0.93); 1.3481 (0.85); 1.2386 (0.49); 0.7656 (1.82); 0.4417 (0.69)
25	[DMSO-d6, 400 MhZ] 7.5850 (1.69); 7.5661 (1.73); 7.2168 (0.43); 7.2125 (0.57); 7.2009 (2.25); 7.1836 (0.52); 7.0821 (0.94); 7.0776 (1.25); 7.0662 (4.79); 7.0491 (1.16); 6.9474 (0.46); 6.9428 (0.61); 6.9316 (2.50); 6.9147 (0.57); 4.0681 (0.33); 4.0608 (0.34); 4.0446 (0.38); 3.8612 (0.37); 3.8424 (0.72); 3.8288 (0.86); 3.8195 (0.85); 3.8086 (0.79); 3.8019 (0.53); 3.7805 (3.66); 3.7663 (16.00); 3.3242 (190.20); 2.8907 (1.13); 2.7307 (0.91); 2.6751 (0.57); 2.6706 (0.79); 2.6660 (0.55); 2.5240 (2.01); 2.5192 (3.31); 2.5106 (44.63); 2.5061 (89.73); 2.5015 (119.67); 2.4969 (87.67); 2.4924 (41.96); 2.3328 (0.56); 2.3283 (0.77); 2.3237 (0.57); 1.8970 (0.34); 1.8860 (0.68); 1.8750 (0.82); 1.8585 (0.90); 1.8460 (0.91); 1.8356 (0.67); 1.8020 (0.41); 1.7631 (1.44); 1.7561 (1.62); 1.7475 (1.63); 1.7407 (1.81); 1.7316 (2.17); 1.7237 (2.34); 1.7165 (2.00); 1.6922 (1.68); 1.6717 (1.11); 1.6321 (1.36); 1.6228 (1.32); 1.6007 (1.53); 1.5914 (1.42); 1.5687 (1.48); 1.5597 (1.28); 1.5358 (1.35); 1.5285 (1.43); 1.4970 (2.62); 1.4898 (2.51); 1.4687 (1.72); 1.4593 (1.45); 1.4420 (3.66); 1.4347 (3.39); 1.4192 (2.44); 1.3876 (3.43); 1.3666 (4.25); 1.3302 (1.75); 1.3222 (1.35); 1.3134 (1.19); 1.3034 (1.24); 1.2923 (1.21); 1.2808 (1.22); 1.2685 (0.89); 1.2598 (0.99); 1.2355 (1.43); 1.2165 (0.56); 1.2012 (0.72); 1.1795 (1.55); 1.1704 (1.59); 1.1557 (1.21); 1.1479 (1.52); 1.1395 (1.72); 1.1093 (0.92); 1.0986 (0.81); 1.0846 (0.46); 0.9952 (0.40); 0.9738 (0.33); 0.9582 (0.39); 0.9433 (0.43); 0.9234 (0.48); 0.0080 (0.87); -0.0002 (27.17); -0.0085 (0.87)
26	[DMSO-d6, 600 MhZ] 7.027"l (1.56); 6.937⅄ (3.38); 6.914 (0.48); 6.847;i (1.77); 3.865; i (12.26); 3.85C)8 (16.00); 3.7997 (0.40); 3.7886 (1.08); 3.7775 (1.50); 3.7665 (1.12); 3.7554 (0.42); 3.5706 (0.77); 3.5594 (1.04); 3.5482 (0.77); 3.3195 (175.77); 3.2960 (0.72); 3.1117 (0.43); 3.1057 (0.45); 3.0924 (0.72); 3.0878 (0.70); 3.0747 (0.49); 3.0688 (0.43); 2.8904 (0.88); 2.7647 (0.51); 2.759C (0.56); 2.745!; (1.00); 2.7418 (0.96); 2.7311 (0.95); 2.730C (0.95); 2.7281 (0.71); 2.7227 (0.62); 2.615E (0.49); 2.6128; (0.66); 2.609S; (0.46); 2.5221 (1.02); 2.519C (1.24); 2.515E (1.28); 2.5071 (37.06); 2.504·1 (78.64); 2.5C10 (107.67); 2.4980 (76.92); 2.4950 (34.76); 2.3882 (0.73); 2.3853 (0.83); 2.3821 (0.74); 2.3662 (0.69); 2.3607 (0.68); 2.3451 (0.69); 2.3400 (0.66); 2.2473 (0.68); 2.2315 (0.68); 1.8377 (0.95); 1.8171 (1.00); 1.7010 (1.42); 1.6962 (1.46); 1.6912 (1.37); 1.6854 (1.53); 1.6801 (1.63); 1.6642 (1.16); 1.6593 (1.18); 1.6491 (1.03); 1.6236 (2.03); 1.6010 (1.57); 1.5552 (1.25); 1.5302 (1.79); 1.5092 (0.84); 1.4347 (0.33); 1.4216 (7.85); 1.4105 (7.80); 1.3983 (1.30); 1.3922 (1.00); 1.3869 (1.15); 1.3638 (6.49); 1.3575 (1.26); 1.3527 (6.16); 1.2345 (0.36); 1.2111 (0.58); 1.2058 (0.78); 1.1851 (1.09); 1.1643 (0.97); 1.1591 (0.86); 1.1430 (1.37); 1.1329 (1.48); 1.1277 (1.89); 1.1117 (1.17); 1.1061 (1.78); 1.1013 (1.39); 1.0690 (4.44); 1.0289 (0.70); 1.0094 (1.11); 0.9982 (1.89); 0.9845 (1.60); 0.9665 (1.26); 0.9574 (1.06); 0.9477 (0.76); 0.9356 (0.78); 0.9313 (0.70); 0.9153 (0.63); 0.9096 (0.62); 0.8506 (0.33); 0.8318 (0.73); 0.8150 (0.95); 0.7953 (0.66); 0.5863 (0.37); 0.5685 (0.33); -0.0002 (0.42)
27	[DMSO-d6, 600 MhZ] 7.952;5 (0.55); 6.963C (3.23); 6.874C (4.72); 6.783C (3.59); 3.972?i (0.75); 3.961?) (1.01); 3.950E (0.76); 3.7951 (0.70); 3.7694 (16.00); 3.7524 (12.60); 3.5746 (0.51); 3.5e34 (1.28); 3.5E22 (1.73); 3.5410 (1.28); 3.5298 (0.50); 3.3877 (0.38); 3.3192 (225.52); 3.2953 (0.98); 3.2292 (0.54); 3.2233 (0.56); 3.2098 (1.06); 3.2052 (1.04); 3.192C (0.61); 3.186E; (0.56); 2.8904 (4.86); 2.755f; (0.52); 2.7502 (0.62); 2.7364 (1.04); 2.7312 (4.68); 2.719C (0.70); 2.7137 (0.63); 2.6156 (0.53); 2.6126 (0.76); 2.6097 (0.53); 2.5404 (0.34); 2.5221 (1.11); 2.519C (1.45); 2.515S (1.57); 2.5071 (40.47); 2.504·1 (87.93); 2.5C10 (121.06); 2.4980 (87.29); 2.4949 (39.63); 2.3882 (0.62); 2.3852 (0.97); 2.3822 (0.71); 2.3790 (0.49); 2.3627 (0.65); 2.3575 (0.65); 2.3418 (0.67); 2.3367 (0.64); 2.1886 (0.73); 2.1728 (0.73); 1.7762 (1.08); 1.7533 (1.73); 1.7290 (1.03); 1.6982 (1.94); 1.6925 (1.75); 1.6754 (2.76); 1.6708 (3.12); 1.6544 (1.77); 1.6481 (2.19); 1.6416 (2.78); 1.6351 (2.02); 1.6200 (3.46); 1.6151 (3.14); 1.6000 (1.38); 1.5944 (1.16); 1.5701 (1.07); 1.5500 (1.91); 1.5290 (1.59); 1.5083 (0.91); 1.4265 (1.15); 1.4214 (1.17); 1.4098 (11.59); 1.3987 (11.36); 1.3844

Ex.	1H -NMR [solvent - spectrometer Mhz]
	(0.92); 1.377e⁾ (0.98); 1.372C⁾ (0.54); 1.3621 (0.39); 1.355E⁾ (0.40); 1.3341 (10.24); **1.32:**⁾0 (10.23); 1.2677 (0.34); 1.2626 (0.34); 1.2471 (0.82); 1.2411 (0.72); 1.2345 (0.77); 1.2320 (0.78); 1.2261 (1.04); 1.2205 (0.85); 1.2045 (0.80); 1.1989 (1.00); 1.1933 (0.73); 1.1836 (0.84); 1.1777 (1.05); 1.1660 (1.47); 1.1619 (1.29); 1.1500 (2.42); 1.1471 (2.41); 1.1317 (2.15); 1.1161 (1.46); 1.0926 (8.46); 1.0815 (8.24); 1.0737 (8.27); 1.0626 (7.52); 1.0319 (0.64); 1.0130 (0.85); 0.9958 (1.31); 0.9858 (1.32); 0.9745 (1.55); 0.9691 (1.94); 0.9600 (1.24); 0.9464 (1.89); 0.9265 (2.28); 0.9112 (1.49); 0.8976 (0.59); 0.8276 (0.33); 0.8229 (0.41); 0.8077 (0.90); 0.8027 (0.83); 0.7872 (0.81); 0.7819 (0.77); 0.6317 (0.68); 0.6274 (0.68); 0.6117 (0.68); -0.0002 (0.50)
28	[CHCl3-d, 250 MhZ] 7.6156 (0.93); 7.2641 (12.16); 7.0831 (1.82); 6.8679 (3.55); 6.6518 (1.86); 4.6644 (0.66); 4.6331 (1.14); 4.6186 (1.19); 4.5853 (0.76); 3.8758 (0.33); 3.7798 (16.00); 2.2893 (1.02); 2.2729 (1.15); 2.2575 (0.95); 2.2384 (1.24); 2.2228 (1.31); 1.8557 (2.21); 1.8082 (4.45); 1.7754 (2.86); 1.7613 (2.55); 1.6870 (1.27); 1.6742 (1.41); 1.6380 (1.52); 1.6242 (1.63); 1.5698 (4.96); 1.5562 (4.71); 1.5329 (4.96); 1.5178 (3.40); 1.4810 (4.45); 1.4664 (4.91); 1.4553 (5.40); 1.4320 (5.08); 1.4201 (4.22); 1.3671 (1.29); 1.3544 (1.37); 1.2952 (3.35); 1.2793 (3.77); 1.2528 (8.92); 0.9007 (0.35); 0.8800 (0.62); 0.8528 (0.52); -0.0002 (7.68); -0.0124 (1.57)
29	**[DMSO-d6, 400 MhZ]** 8.5243 (1.05); 8.3547 (3.73); 8.2993 (0.59); 8.2794 (0.57); 7.9529 (0.43); 7.8473 (1.46); 7.8274 (1.42); 7.4608 (0.61); 7.4534 (1.46); 7.4236 (0.44); 7.3359 (0.37); 7.3249 (1.43); 7.3174 (3.50); 7.2877 (0.96); 7.1890 (0.67); 7.1817 (1.60); 7.1522 (0.45); 3.9131 (4.45); 3.8973 (16.00); 3.8733 (0.33); 3.8622 (0.58); 3.8518 (0.53); 3.8425 (0.82); 3.8311 (0.85); 3.8219 (0.52); 3.8119 (0.53); 3.3267 (171.91); 2.8910 (3.25); 2.7318 (2.69); 2.6755 (0.46); 2.67K⁾ (0.61); 2.6665 (0.45); 2.5243 (1.71); 2.5109 (34.93); 2.5065 (69.60); 2.5019 (92.29); 2.4974 (68.19); 2.4930 (33.22); 2.3334 (0.41); 2.3287 (0.59); 2.3243 (0.41); 1.8838 (0.51); 1.8539 (0.75); 1.8440 (0.68); 1.8348 (0.43); 1.7830 (0.95); 1.7749 (0.87); 1.7510 (1.11); 1.7429 (1.14); 1.7350 (1.13); 1.6977 (1.59); 1.6599 (0.87); 1.6455 (1.19); 1.6361 (1.43); 1.6140 (1.44); 1.6048 (1.37); 1.5820 (1.25); 1.5729 (1.27); 1.5493 (1.00); 1.5402 (1.06); 1.5177 (1.39); 1.5068 (1.67); 1.4963 (1.87); 1.4856 (2.00); 1.4760 (1.66); 1.4545 (1.65); 1.4431 (1.60); 1.4297 (1.57); 1.4090 (1.55); 1.3878 (2.94); 1.3819 (2.96); 1.3693 (3.80); 1.3379 (1.54); 1.3146 (0.64); 1.3052 (0.94); 1.2971 (0.78); 1.2809 (0.70); 1.2731 (0.71); 1.2512 (0.65); 1.2358 (1.17); 1.2246 (0.65); 1.2141 (0.68); 1.1841 (1.59); 1.1513 (1.27); 1.1268 (0.66); 1.1048 (0.64); 1.0969 (0.76); 1.0784 (0.52); 1.0677 (0.45); 0.9549 (0.45); 0.9491 (0.47); 0.9262 (0.46); -0.0002 (5.66)
30	[DMSO-Cl6, 400 MhZ] 7.7901 (0.42); 7.7656 (1.18); 7.7462 (1.01); 7.1978 (0.48); 7.1877 (1.55); 7.1759 (0.37); 7.0630 (1.07); 7.0527 (3.39); 7.0409 (0.77); 7.0354 (0.60); 6.9281 (0.52); 6.9179 (1.69); 6.9058 (0.38); 3.8748 (4.11); 3.8601 (16.00); 3.8343 (0.65); 3.8261 (0.58); 3.8137 (0.50); 3.8065 (0.38); 3.3730 (0.32); 3.3523 (0.72); 3.3287 (233.49); 2.8907 (1.00); 2.7308 (0.79); 2.6753 (0.44); 2.6708 (0.63); 2.6664 (0.46); 2.5243 (1.64); 2.5194 (2.45); 2.5108 (34.75); 2.5063 (70.76); 2.5017 (94.95); 2.4971 (69.97); 2.4927 (33.71); 2.3330 (0.44); 2.3285 (0.62); 2.3238 (0.45); 1.9201 (0.64); 1.9101 (0.70); 1.8997 (0.55); 1.8886 (0.77); 1.8790 (0.79); 1.7621 (1.08); 1.7552 (1.17); 1.7483 (1.17); 1.7400 (1.28); 1.7308 (1.50); 1.7235 (1.50); 1.6990 (1.06); 1.6900 (0.97); 1.6644 (0.52); 1.6470 (0.51); 1.6363 (0.74); 1.6258 (0.91); 1.6049 (1.26); 1.5956 (1.04); 1.5730 (1.14); 1.5641 (0.98); 1.5406 (0.86); 1.5317 (1.05); 1.4990 (2.09); 1.4867 (1.59); 1.4755 (1.15); 1.4561 (2.18); 1.4388 (2.56); 1.4300 (2.75); 1.4114 (1.53); 1.4034 (1.36); 1.3963 (1.41); 1.3875 (1.78); 1.3729 (1.74); 1.3633 (2.04); 1.3552 (1.65); 1.3419 (0.92); 1.3316 (1.57); 1.3230 (1.53); 1.2992 (1.01); 1.2908 (0.94); 1.2805 (0.70); 1.2684 (0.68); 1.2602 (0.52); 1.2358 (1.02); 1.2065 (0.87); 1.1812 (1.43); 1.1480 (1.20); 1.1410 (1.05); 1.1053 (0.52); 1.0943 (0.34); 0.9487 (0.37); 0.9373 (0.42); 0.9160 (0.41); 0.9080 (0.39); -0.0002 (6.46)
31	**[DMSO-d6, 400 MhZ]** 7.0615 (2.02); 7.0445 (0.74); 6.9266 (4.36); 6.9094 (1.55); 6.7918 (2.26); 6.7745 (0.77); 5.7575 (12.35); 3.7821 (16.00); 3.4030 (2.46); 3.3999 (3.42); 3.3510 (414.03); 3.3027 (3.15); 3.2992 (2.13); 3.2787 (0.34); 2.7100 (0.74); 2.6810i (0.55); 2.6770 (0.61); 2.6727 (0.66); 2.5603 (0.54); 2.5564 (0.70); 2.5522 (0.72); 2.5478 (0.52); 2.5120 (21.98); 2.5079 (44.10); 2.5035 (58.91); 2.4991 (42.51); 2.4643 (0.49); 2.4598 (0.60); 2.4554 (0.67); 2.4512 (0.58); 2.4469 (0.38); 2.3350 (0.33); 2.3304 (0.43); 2.3258 (0.33); 2.0864 (0.37); 2.0754 (0.34); 2.0537 (0.86); 2.0439 (0.64); 2.0308 (0.65); 2.0204 (1.03); 2.0112 (0.70); 1.9891 (0.62); 1.9221 (0.85); 1.8858 (1.41); 1.8192 (0.71); 1.8062 (0.94); 1.7899 (1.00); 1.7834 (0.98); 1.7695 (1.40); 1.7539 (1.30); 1.7319 (1.13); 1.7189 (1.24); 1.6547 (4.12); 1.6204 (4.53); 1.5788 (1.71); 1.5704 (1.64); 1.5585 (1.80); 1.5499 (1.99); 1.5423 (1.87); 1.5304 (2.13); 1.5233 (2.23); 1.5022 (1.64); 1.4948 (1.67); 1.3366 (1.17); 1.3213 (1.44); 1.3141 (1.37); 1.3080 (1.34); 1.2789 (0.78); 1.1969 (2.37); 1.1685 (1.65); 1.1345 (0.76); 1.1246 (0.81); 1.1174 (0.83); 1.0855 (1.13); 1.0556 (0.99); 1.0244 (0.73); 0.9875 (1.34); 0.9657 (1.83); 0.9583 (1.74); 0.9363 (1.53); 0.9278 (1.42); 0.9055 (0.95); 0.8954 (0.98); 0.8641 (1.11); 0.8297 (1.60); 0.8125 (1.62); 0.8049 (1.56); 0.7955 (1.38); 0.7877 (1.22); 0.7256 (1.29); 0.6889 (1.79); 0.5076 (0.42); 0.4938 (0.43); 0.4739 (0.74); 0.4638 (1.19); 0.4513 (1.39); 0.4395 (1.46); 0.4250 (1.16); -0.0002 (4.74)
32	[DMSO-d6, 400 MhZ] 7.0863 (0.35); 7.0765 (0.38); 6.9634 (0.59); 6.9542 (0.72); 6.9406 (0.78); 6.8063 (0.39); 5.7582 (11.54); 3.8665 (16.00); 3.3908 (1.10); 3.3408 (68.84); 3.2911 (0.94); 2.7890 (0.52); 2.5572 (0.48); 2.5529 (0.58); 2.5484 (0.47); 2.5114 (12.43); 2.5073 (24.49); 2.5029 (32.50); 2.4985 (23.37); 2.4576 (0.34); 2.4531 (0.42); 2.0754 (0.71); 1.9893 (0.73); 1.9555 (0.80); 1.7294 (1.30); 1.6609 (2.65); 1.6275 (3.36); 1.5431 (1.40); 1.4298 (0.39); 1.4095 (0.42); 1.3414 (0.88); 1.2024 (1.99); 1.0731 (0.46); 1.0557 (0.49); 1.0382 (0.50); 0.9681 (1.27); 0.9517 (1.26); 0.8584 (0.92); 0.8409 (0.82); 0.6387 (0.81); 0.5626 (0.90); 0.4695 (0.65); 0.4596 (0.65); -0.0002 (3.47)
33	[DMSO-d6, 3(X) MhZ] 8.2320 (2.09); 7.2511 (0.34); 7.2230 (0.95); 7.0692 (0.72); 7.0414 (2.04); 6.8884 (0.36); 6.8603 (1.03); 5.7575 (16.00); 4.5862 (0.67); 3.9040 (10.48); 3.8569 (7.70); 3.3367 (1.30); 2.8047 (0.74); 2.5098 (0.89); 2.5040 (1.19); 2.4981 (0.90); 2.0668 (0.42); 2.0551 (0.34); 2.0356 (0.35); 2.0238 (0.53); 2.0128 (0.39); 1.9324 (0.41); 1.8850 (0.75); 1.8194 (0.33); 1.8023 (0.47); 1.7792 (0.56); 1.7710 (0.56); 1.7535 (0.84); 1.7325 (0.85); 1.6587 (2.77); 1.6156 (3.10); 1.5742 (1.40); 1.5486 (0.98); 1.5343 (1.02); 1.5102 (1.33); 1.4753 (0.87); 1.3230 (0.82); 1.3038 (0.85); 1.2861 (0.75); 1.2666 (0.79); 1.2348 (0.95); 1.2031 (1.08); 1.1785 (1.27); 1.1426 (0.90); 1.1043 (0.50); 1.0583 (0.37); 1.0347 (0.36); 0.9936 (0.78); 0.9655 (1.03); 0.9575 (1.00); 0.9264 (0.83); 0.9147 (0.82); 0.8605 (0.94); 0.8386 (0.90); 0.8218 (1.12); 0.7988 (0.68); 0.7872 (0.66); 0.7591 (0.83); 0.7379 (1.47); 0.7208 (1.74); 0.6839 (0.90); 0.6720 (0.63); 0.4275 (0.67); 0.4108 (0.79); 0.3946 (0.82); -0.0002 (0.34)

E.	^{1}H-NMR [solvent - spectrometer Mhz]
3 4	[DMS(D-d6, 600 MhZ] 7.8634 (1.51); 7.8501 (1.47); 7.7777 (1.01); 7.7647 (0.96); 7.1656 (1.33); 7.1472 (1.08) ; 7.0759 (3.13) ; 7.0653 (0.37); 7.0575 (2.35); 7.0546 (1.10); 6.9863 (1.49); 6.9679 (1.19); 6.9651 (0.53); 3.8729 (2.59) ; 3.8670 (16.00) ; 3.8601 (15.19); 3.7242 (0.35); 3.7173 (0.44); 3.71 12 (0.72); 3.7047 (0.87); 3.6980 (0.76); 3.6915 (0.85 5); 3.685 1 (0.67); 3.6787 (0.38); 3.6720 (0.33); 3.3189 (106.48); 3.2951 (0.62); 2.8902 (2.33); 2.7308 (1.91); 2.6 1 5 5 (0.38) ; 2.6126 (0.49); 2.6096 (0.34); 2.5216 (1.42); 2.5185 (2.07); 2.5067 (32.62); 2.5038 (60.71); 2.5008 (78.06) ; 2.497J 1 (55.12); 2.4949 (25.04); 2.3880 (0.37); 2.3850 (0.48); 2.3821 (0.34); 1.8437 (0.49); 1.8375 (0.49); 1.8 168 (0.58) ; 1.7844 (1.01); 1.7791 (0.95); 1.7686 (0.97); 1.7632 (1.05); 1.7378 (0.33); 1.7345 (0.34); 1.7091 (0.84) ; 1.6795 (1.71) ; 1.6588 (3.30); 1.6389 (2.30); 1.6176 (1.10); 1.6101 (0.77); 1.6039 (0.81); 1.5875 (1.60); 1.5831 (1.84) ; 1.5768 (1.75) ; 1.5706 (1.46); 1.5626 (2.03); 1.5569 (2.02); 1.5526 (2.10); 1.5459 (1.70); 1.5412 (1.53); 1.5313 (1.56) ; 1.5243 (1.85) ; 1.5170 (1.86); 1.5084 (2.37); 1.5028 (2.27); 1.4878 (1.69); 1.4804 (2.01); 1.4632 (0.77); 1.4557 (1.04) ; 1.4450 (0.95) ; 1.4372 (0.91); 1.4236 (0.81); 1.4088 (1.85); 1.4045 (1.68); 1.3884 (2.27); 1.3822 (2.10); 1.3685 (1.43) ; 1.3613 (1.49) ; 1.3493 (1.68); 1.3129 (0.59); 1.3058 (0.58); 1.3003 (0.55); 1.2908 (0.86); 1.2844 (1.13); 1.2695 (1.05) ; 1.2636 (1.26) ; 1.2432 (1.28); 1.2246 (1.51); 1.2084 (2.21); 1.1925 (1.40); 1.0049 (0.37); 0.9896 (0.50); 0.9773 (0.45) ; 0.9736 (0.39) ; 0.9265 (0.33)
3 5	|DMSO-cl6, 6 (X) MhZ] 7.952c 5 (0.49); 7.678' (1.35); 7.664 7 (1.39); 7.581C i (1.31); 7.568; 5 (1.33); 7.2095 ! (1.47); 7.183 4I (1.53); 7.1 19 6 (3.48); 7.0936 (3.48); 7.0301 (1.66); 7.004C i (1.69); 3.892C (0.50); 3.8847 (0.52); 3.8675 (0.61); 3.8603 (0.32); 3.7764 (13.47); 3.767 5 (16.00); 3.75 6 0 (0.36); 3.71 9 5 (0.42); 3.71 3 6 (0.74); 3.7C 6 8 (0.93); 3.7C 0 2 (0.78); 3.6938 (0.93) ; 3.6872 (0.77); 3.681 1 (0.43); 3.6743 (0.39); 3.3189 (131.25); 3.2951 (0.71); 2.8904 (3.90); 2.7310 (3.17); 2.6157 (0.45); 2.6127 (0.62); 2.6097 (0.45); 2.522C (0.43); 2.518E (0.41); 2.5158 (0.98); 2.507C (35.89); 2.504 0 (78.39); 2.501 0 (108.05); 2.4979 (76.03); 2.4949 (33.94); 2.3882 (0.46); 2.3851 (0.63); 2.3821 (0.44); 1.8174 (0.68); 1.81 14 (0.63) ; 1.7963 (0.82); 1.7708 (1.10); 1.7549 (1.08); 1.7498 (1.14); 1.7279 (0.38); 1.7094 (1.96); 1.6897 (2.70) ; 1.6690 (2.45) ; 1.6483 (3.01); 1.6123 (0.62); 1.6069 (0.72); 1.5904 (2.05); 1.5795 (2.28); 1.5744 (1.86); 1.5586 (1.34) ; 1.5531 (1.24) ; 1.5371 (1.96); 1.5263 (2.04); 1.5186 (2.57); 1.51 17 (2.84); 1.5048 (3.06); 1.4983 (2.60); 1.4912 (1.68) ; 1.4836 (2.19) ; 1.4758 (1.84); 1.4658 (1.90); 1.4429 (1.32); 1.4318 (1.11); 1.4169 (1.02); 1.4096 (1.38); 1.3978 (1.22) ; 1.3899 (1.41) ; 1.3771 (2.09); 1.3555 (2.10); 1.3507 (1.91); 1.3377 (1.70); 1.3132 (1.44); 1.2982 (1.23); 1.2920 (1.52) ; 1.2864 (1.12) ; 1.2769 (1.01); 1.2709 (1.28); 1.2653 (0.96); 1.2503 (0.79); 1.2449 (0.86); 1.2298 (1.11); 1.2247 (1.43) ; 1.2074 (2.57); 1.1910 (1.65); 1.0416 (0.32); 1.0233 (0.50); 1.0163 (0.48); 1.0048 (0.32); 0.9862 (0.39); 0.9672 (0.38) ; 0.9496 (0.35); 0.9242 (0.38); 0.9185 (0.34); -0.0002 (0.42))
3 6	[DMSO-Cl6, 250 MhZ] 8.2007 (2.31); 8.190 (1.91); 8.186" (1.92); 7.320C) (1.06); 7.309C 5 (1.00); 7.102J) (2.39); 7.0921 (2.21); 6.8850 (1.15); 6.8746 (1.09); 5.766S (4.67); 3.9057 (12.50); 3.87E 2 (0.46); 3.86C 3 (0.55); 3.32E 5 (10.46); 3.3057 (0.84); 2.8210 (0.37); 2.8093 (0.43); 2.7940 (0.73); 2.7772 (0.57); 2.7666 (0.51); 2.7486 (0.50); 2.7314 (0.45); 2.7159 (0.48); 2.7001 (0.32); 2.5267 (1.48); 2.5195 (3.16); 2.5122 (4.36); 2.5048 (3.08); 2.4976 (1.41); 2.2044 (0.67); 2.1547 (0.74); 2.1047 (0.39); 2.0503 (0.34); 2.0315 (0.41); 1.9994 (0.56); 1.9815 (0.41); 1.9485 (0.35); 1.9009 (0.28); 1.8034 (1.66); 1.7651 (1.52); 1.7135 (1.32); 1.6068 (2.07); 1.5707 (1.99); 1.5364 (2.49); 1.4904 (2.09); 1.3820 (1.44); 1.3460 (1.29); 1.3304 (1.44); 1.2471 (1.35); 1.2241 (1.10); 1.2144 (1.10); 1.1856 (0.62); 0.9986 (0.43); 0.9146 (0.36); 0.8812 (0.26); 0.7813 (1.27); 0.7539 (2.22); 0.7289 (1.46); 0.7210 (1.49); 0.7003 (0.33); 0.5387 (0.77); 0.5222 (1.41); 0.5090 (1.56); 0.4945 (1.63); 0.4870 (1.61)
3 7	[DMSO-d6, 2.50 MhZ] 7.1993 (0.94); 7.1917 (0.69); 6.9835 (2.06); 6.9758 (1.50); 6.7676 (0.99); 6.7600 (0.72); 5.7669 (1.74); 3.954e (0.27); 3.8792 (10.48); 3.8774 (10.46); 3.3282 (12.50); 3.3043 (0.91); 2.6610 (0.48); 2.6437 (0.37); 2.6158 (0.34); 2.6023 (0.29); 2.5264 (1.61); 2.5192 (3.35); 2.51 19 (4.62); 2.5045 (3.27); 2.4972 (1.45); 2.1769 (0.25); 1.7613 (1.00); 1.6973 (1.07); 1.6048 (1.41); 1.5728 (1.58); 1.5360 (1.51); 1.4946 (1.70); 1.3569 (1.18); 1.3070 (1.00); 1.2467 (1.06); 1.2182 (0.84); 0.9964 (0.27); 0.9192 (0.26); 0.6108 (1.24); 0.4816 (1.01)
3 8	[DMS< D-d6, 250 MhZ] 7.1663 (1.21); 7.1589 (1.11); 6.9507 (2.59); 6.9431 (2.42); 6.7349 (1.26); 6.7274 (1.19); 4.1 1 10 (0.26); 3.9203 (0.47); 3.9056 (0.37); 3.8718 (0.74); 3.7900 (12.50); 3.3420 (9.00); 3.3183 (0.81); 2.6992 (0.61); 2.6906 (0.62); 2.6726 (0.58); 2.6501 (0.49); 2.6401 (0.50); 2.6226 (0.52); 2.6135 (0.47); 2.5273 (1.38); 2.5203 (2.81); 2.5130 (3.77); 2.5058 (2.67); 2.4987 (1.23); 2.2524 (0.27); 2.2027 (0.76); 2.1532 (0.85); 2.1037 (0.37); 2.0915 (0.29); 2.0413 (0.41); 2.0216 (0.48); 1.9908 (0.41); 1.9722 (0.48); 1.9433 (0.44); 1.8949 (0.38); 1.8045 (1.61); 1.7922 (1.69); 1.7627 (2.02); 1.6973 (1.56); 1.6487 (1.23); 1.6071 (2.24); 1.571 1 (2.67); 1.5341 (2.76); 1.5064 (2.22); 1.4903 (2.47); 1.3756 (1.55); 1.3627 (1.68); 1.3183 (1.66); 1.2487 (1.43); 1.2225 (1.29); 1.0261 (0.37); 1.0016 (0.46); 0.9208 (0.37); 0.8866 (0.29); 0.7349 (1.54); 0.7073 (2.57); 0.6863 (1.72); 0.5216 (1.55); 0.5082 (1.77); 0.4920 (2.01)
3 9	[DMSO-d6, 4 0 0 MhZ] 7.4512 2 (0.84); 7.4285 (0.84); 7.1856 (1.67); 7.0506 (3.55); 6.9157 (1.86); 3.8745 (13.38); 3.6219 (1.46); 3.6175 (1.45); 3.598E (1.44); 3.5942 (1.40); 3.3410 (95.55); 3.3389 (89.15); 3.3359 (104.49); 2.8912 (0.46); 2.7321 (0.35); 2.6716 (0.39); 2.5249 (1.22); 2.5201 (1.87); 2.51 16 (22.25); 2.5070 (44.60); 2.5024 (59.07); 2.4978 (42.44); 2.49C 2 (19.75); 2.35 9 2 (0.38); 1.7100 (1.44); 1.7006 (1.54); 1.6508 (1.06); 1.6205 (1.50); 1.6001 (145); 1.5860 (0.69); 1.5799 (0.92); 1.5728 (0.44); 1.4298 (0.33); 1.4188 (0.54); 1.4124 (0.53); 1.4007 (0.70); 1.3895 (0.45); 1.3820 (0.37); 1.3712 (0.42); 1.2356 (0.50); 1.2012 (1.43); 1.1978 (1.35); 1.1769 (1.30); 1.1736 (1.23); 1.0816 (14.19); 1.0650 (0.40); 1.0542 (1.16); 1.0390 (16.00); 1.0226 (1.09); 0.8573 (0.61); 0.7841 (11.66); -0.0002 (8.24)
4 0	[DMSO-d6, 400 MhZ] 7.2126 (0.89); 7.1897 (0.93); 7.1792 (1.70); 7.0446 (3.30); 6.9101 (1.66); 3.7802 (10.08); 3.5853 (1.41); 3.5810 (1.43); 3.5624 (1.41); 3.5580 (1.38); 3.3233 (73.82); 2.6704 (0.35); 2.5238 (1.06); 2.5104 (20.59); 2.5059 (40.57); 2.5014 (53.49); 2.4968 (39.00); 2.4923 (18.60); 2.3282 (0.34); 1.7133 (1.54); 1.7038 (1.58); 1.6459 (0.91); 1.6423 (0.94); 1.6194 (1.23); 1.5935 (1.55); 1.5774 (1.26); 1.5718 (1.58); 1.5579 (0.54); 1.4378 (0.44); 1.4302 (0.46); 1.4213 (0.54); 1.4122 (0.52); 1.4073 (0.58); 1.3973 (0.64); 1.3918 (0.46); 1.3814 (0.39); 1.2031 (1.59); 1.1999 (1.54); 1.1789 (1.43); 1.1755 (1.39); 1.0853 (0.75); 1.0718 (14.57); 1.0421 (0.81); 1.0319 (0.65); 1.0141 (16.00); 0.9950 (0.77); 0.8336 (0.56); 0.7627 (12.23); -0.0002 (9.22)

Ex.	¹H-NMR [solvent - spectrometer Mhz]
4 1	[DMSO-d6, 400 MhZ] 8.5120 (3.54); 7.4162 (1.47); 7.2806 (3.40); 7.1450 (1.64); 7.1 149 (1.07); 7.0919 (1.06); 3.9126 (13.87); 3.6807 (1.48); 3.6762 (1.46); 3.6576 (1.47); 3.6531 (1.41); 3.3245 (69.64); 2.6709 (0.35); 2.5242 (1.15); 2.5108 (21 .18); 2.5063 (41 .47); 2.5018 (54.13); 2.4972 (39.29); 2.4927 (18.66); 2.3285 (0.34); 1.7614 (0.32); 1.7541 (0.50); 1.7469 (0.46); 1.7418 (0.51); 1.7341 (0.56); 1.7122 (1.83); 1.7026 (1.99); 1.6408 (1.47); 1.6145 (1.89); 1.5947 (0.41); 1.5868 (0.45); 1.4540 (0.40); 1.4433 (0.38); 1.4363 (0.56); 1.4235 (0.78); 1.4126 (0.54); 1.4055 (0.37); 1.3940 (0.35); 1.2355 (0.44); 1.2025 (1.46); 1.1998 (1.39); 1.1783 (1.28); 1.1754 (1.27); 1.0783 (0.66); 1.0628 (14.12); 1.0500 (1.16); 1.0334 (0.48); 1.0185 (0.54); 1.0107 (0.44); 0.9944 (16.00); 0.8143 (0.35); 0.7683 (12.06); -0.0002 (7.37)
4 2	[DMSO-d6, 400 MhZ] 7.1945 (2.02); 7.1708 (1.04); 7.0602 (2.28); 7.0510 (0.60); 6.9259 (1.38); 3.9424 (0.44); 3.9217 (0.93); 3.9081 (0.76); 3.8867 (0.38); 3.7904 (2.50); 3.7776 (10.07); 3.3386 (56.12); 3.3151 (0.49); 2.5106 (13.28); 2.5063 (17.30); 2.5021 (12.55); 1.7612 (0.33); 1.7529 (0.55); 1.7427 (0.84); 1.7346 (1.00); 1.7198 (2.75); 1.7094 (2.71); 1.6987 (2.21); 1.6878 (1.22); 1.6655 (0.96); 1.6543 (0.68); 1.6395 (0.54); 1.6282 (0.44); 1.5693 (0.58); 1.5584 (0.46); 1.5398 (0.69); 1.5312 (1.02); 1.51 17 (0.62); 1.2659 (0.48); 1.21 15 (0.39); 1.1883 (0.84); 1.1814 (0.98); 1.1603 (3.20); 1.1421 (0.76); 1.1331 (0.74); 1.0293 (0.37); 0.9958 (0.37); 0.9236 (15.44); 0.8532 (2.75); 0.7983 (14.31); 0.7923 (16.00); 0.7433 (3.07)
4 3	[DMSO-d6, 400 MhZ] 8.8780 (0.68); 8.7072 (3.1 1); 7.9521 (0.83); 7.1983 (0.45); 7.1887 (1.88); 7.0638 (0.99); 7.0541 (4.15); 6.9294 (0.50); 6.9197 (2.1 1); 3.8923 (3.98); 3.8816 (16.00); 3.3207 (61 .51); 3.0093 (0.39); 3.0001 (0.40); 2.8905 (6.81); 2.7568 (2.06); 2.7305 (5.62); 2.6748 (0.47); 2.6703 (0.65); 2.6657 (0.48); 2.5238 (1.74); 2.5190 (2.70); 2.5103 (35.83); 2.5058 (72.92); 2.5012 (97.84); 2.4966 (72.00); 2.4921 (34.69); 2.3328 (2.17); 2.3281 (1.97); 2.3238 (1.70); 2.0255 (0.46); 2.0185 (0.59); 2.0090 (0.46); 1.991 1 (0.86); 1.9846 (1.14); 1.9748 (0.87); 1.9193 (1.73); 1.9136 (1.76); 1.8853 (0.90); 1.8794 (0.96); 1.6649 (0.70); 1.6553 (1.04); 1.6349 (2.99); 1.6215 (2.52); 1.5976 (0.85); 1.5892 (0.81); 1.5825 (0.68); 1.5762 (0.67); 1.5655 (0.58); 1.5515 (0.51); 1.5200 (0.49); 1.4904 (0.38); 1.3553 (1.24); 1.3302 (1.07); 1.2647 (0.42); 1.2491 (0.81); 1.2359 (1.15); 1.2069 (0.41); 0.0080 (0.86); -0.0002 (26.90); -0.0085 (0.78)
4 4	[DMSO-d6, 4 0 0 MhZ] 8.646? 5 (0.59); 8.469 5 (3.06); 8.4015 (0.78); 8.369(5 (3.90); 7.409 5 (1.73); 7.2742 (3.97); 7.1391 (1.90); 3.935C (3.54); 3.925C 1 (16.00); 3.322 1 (49.54); 3.0278 (0.33); 3.01 97 (0.34); 2.8 9 06 (1.77); 2.7762 (2.00); 2.7307 (1.42); 2.6751 (0.35); 2.6706 (0.50); 2.6660 (0.36); 2.5239 (1.45); 2.5105 (28.68); 2.5061 (56.81); 2.5015 (75.03); 2.4 9 1 59 (54.80); 2.4 9 24 (26.10); 2.3 239 (2.19); 2.1041 (0.53); 2.C 982 (0.68); 2. 0 873 (0.55); 2.0700 (0.75); 2.0638 (0.95); 2.0531 (0.72); 1.9069 (1.48); 1.9010 (1.50); 1.8728 (1.08); 1.8669 (1.10); 1.7059 (0.42); 1.6987 (0.41); 1.6615 (0.88); 1.6445 (1.97); 1.6362 (1.47); 1.6291 (1.53); 1.6237 (1.39); 1.6128 (0.83); 1.5978 (1.52); 1.5726 (1.71); 1.5540 (0.56); 1.5046 (0.43); 1.4818 (0.46); 1.3437 (1.22); 1.3183 (1.03); 1.2657 (0.40); 1.2494 (0.77); 1.2357 (1.21); 1.2249 (0.67); 1.2064 (0.42); 0.0079 (0.58); -0.0002 (16.56); -0.0086 (0.4·9)
4 5	[DMSO-d6, 400 MhZ] 8.6978 (0.84); 8.4857 (4.21); 7.9520 (1.12); 7.2145 (0.54); 7.2043 (2.43); 7.0803 (1.18); 7.0700 (5.40); 6.9462 (0.61); 6.9359 (2.74); 3.8001 (4.01); 3.7909 (16.00); 3.3208 (44.87); 2.9919 (0.49); 2.9829 (0.49); 2.8905 (9.29); 2.7615 (2.86); 2.7504 (0.99); 2.7316 (7.26); 2.7305 (7.55); 2.6749 (0.48); 2.6704 (0.67); 2.6657 (0.47); 2.5237 (1.92); 2.5104 (37.1 1); 2.5058 (73.87); 2.5013 (98.33); 2.4967 (71 .80); 2.4922 (34.17); 2.3277 (3.06); 2.0232 (0.65); 2.0168 (0.83); 2.0068 (0.65); 1.9888 (1.18); 1.9826 (1.54); 1.9725 (1.20); 1.9128 (2.38); 1.9071 (2.40); 1.8786 (1.28); 1.8728 (1.33); 1.6954 (0.35); 1.6622 (0.95); 1.6536 (1.37); 1.6373 (2.60); 1.6312 (2.60); 1.6207 (2.77); 1.5943 (2.17); 1.5690 (2.53); 1.5272 (0.65); 1.5186 (0.65); 1.5124 (0.70); 1.5053 (0.63); 1.4856 (0.50); 1.4203 (0.32); 1.3465 (1.76); 1.321 0 (1.47); 1.261 8 (0.60); 1.2456 (1.16); 1.2354 (1.50); 1.2035 (0.51); 0.0080 (1.20); -0.0002 (32.69); -0.0086 (0.91)
4 6	[DMSO-Cl6, 4 (X) MhZ] 8.322" (3.85); 7.8231 (1.23); 7.8062 (1.24); 7.4484 (1.69); 7.3126 (4.09); 7.1768 (1.89); 3.9004 (16.00); 3.66E 2 (0.45); 3.656 8 (0.55); 3.64E 8 (0.86); 3.6421 (0.88); 3.6333 (0.54); 3.6238 (0.44); 3.3224 (39.01); 2.8907 (1.82); 2.7319 (1.38); 2.7308 (1.43); 2.6708 (0.33); 2.5242 (0.96); 2.5193 (1.49); 2.5108 (18.76); 2.5062 (37.60); 2.501 6 (49.87); 2.4 9 70 (36.22); 2.4 925 (17.04); 2.3284 (0.33); 2.2333 (1.50); 2.1252 (1.65); 2.1 171 (1.49); 1.6451 (0.53); 1.6404 (0.55); 1.6246 (0.59); 1.6192 (0.66); 1.6134 (0.81); 1.6085 (0.78); 1.5928 (0.70); 1.5880 (0.70); 1.5059 (1.17); 1.4818 (1.36); 1.4775 (1.18); 1.4644 (0.73); 1.4427 (1.66); 1.4342 (1.92); 1.4233 (1.38); 1.4184 (1.47); 1.3907 (0.90); 1.1762 (0.47); 1.1514 (0.93); 1.1330 (1.07); 1.1283 (0.95); 1.1 154 (1.95); 1.1 120 (1.89); 1.091 1 (1.16); 1.0872 (1.26); 0.0080 (0.46); -0.0002 (14.4 7); -0.0086 (0.45)
4 7	[DMSO-d6, 400 MhZ] 7.8812 (1.09); 7.8643 (1.08); 7.1751 (1.94); 7.0402 (4.37); 6.9054 (2.15); 3.8616 (16.00); 3.6618 (0.48); 3.6534 (0.58); 3.6436 (0.93); 3.6347 (0.95); 3.6254 (0.56); 3.6174 (0.49); 3.3202 (28.32); 2.8907 (1.40); 2.7315 (1.10); 2.6750 (0.34); 2.6704 (0.46); 2.6658 (0.33); 2.5237 (1.33); 2.5189 (2.07); 2.5103 (26.50); 2.5058 (53.08); 2.5012 (70.37); 2.4967 (51 .01); 2.4921 (24.12); 2.3326 (0.35); 2.3281 (0.46); 2.3236 (0.33); 2.2206 (1.57); 2.1659 (1.69); 2.1573 (1.55); 1.6682 (0.64); 1.6627 (0.66); 1.6479 (0.69); 1.6422 (0.76); 1.6367 (0.90); 1.631 1 (0.88); 1.6162 (0.82); 1.6108 (0.82); 1.4859 (1.31); 1.4818 (1.28); 1.4709 (1.21); 1.461 1 (1.96); 1.4513 (1.34); 1.4465 (1.23); 1.4404 (1.81); 1.4295 (0.70); 1.4196 (0.67); 1.41 11 (0.67); 1.4028 (0.36); 1.3834 (0.84); 1.3736 (1.11); 1.3580 (0.44); 1.3529 (0.42); 1.3429 (0.69); 1.3356 (0.66); 1.3263 (0.33); 1.2355 (0.34); 1.1862 (0.46); 1.1620 (1.02); 1.1417 (0.99); 1.1373 (0.96); 1.1 173 (2.24); 1.0969 (1.56); 1.0931 (1.63); 1.0756 (0.40); 0.0080 (0.73); -0.0002 (22.30); -0.0085 (0.69)
4 8	[DMSO-d6, 4 0 0 MhZ] 7.690" (1.58); 7.673J (1.56); 7.1971 (2.18); 7.062^ (4.78); 6.927? i (2.35); 3.7701 (16.00); 3.6467 (0.71); 3.628E (1.35); 3.620E (1.37); 3.6021 (0.70); 3.3205 (25.52); 2.89C 7 (0.52); 2.731 0 (0.43); 2.6745 (0.37); 2.6705 (0.47); 2.666C (0.34); 2.5057 (55.24); 2.501 3 (70.88); 2.4968 (52.29); 2.4 926 (25.88); 2. 3322 (0.35); 2.3279 (0.46); 2 .3237 (0.34); 2 .2218 (2.28); 2. 1470 (2.49); 2.1391 (2.26); 1.6617 (0.89); 1.6569 (0.89); 1.6415 (0.97); 1.6358 (1.10); 1.6305 (1.24); 1.6252 (1.20); 1.6098 (1.16); 1.6046 (1.12); 1.5038 (0.33); 1.4939 (0.43); 1.4658 (2.43); 1.4542 (1.82); 1.4450 (3.83); 1.4373 (3.23); 1.4182 (1.04); 1.4087 (1.00); 1.4008 (0.56); 1.3726 (1.55); 1.3573 (0.65); 1.3527 (0.63); 1.3422 (1.00); 1.3360 (0.97); 1.2356 (0.45); 1.1784 (0.69); 1.1538 (1.47); 1.1341 (1.52); 1.1300 (1.44); 1.1 122 (3.30); 1.0883 (2.24); 1.071 1 (0.64); 0.0077 (0.88); -0.0002 (18.32); -0.0084 (0.7 0)

Ex.	¹H-NMR [solvent - spectrometer Mhz]
49	[DMSO-d6, 400 MhZ] 7.9160 (1.07); 7.8948 (1.07); 7.2386 (1.50); 7.1038 (3.39); 6.9692 (1.66); 4.2672 (0.54); 4.2451 (0.75); 4.2238 (0.55); 3.7841 (9.85); 3.3243 (77.00); 2.6705 (0.35); 2.5240 (0.94); 2.5191 (1.47); 2.5106 (19.96); 2.5061 (40.08); 2.5015 (53.40); 2.4969 (39.09); 2.4924 (18.66); 2.4268 (0.40); 2.4232 (0.39); 2.4181 (0.36); 2.3984 (0.70); 2.3930 (0.79); 2.3845 (0.41); 2.3678 (0.45); 2.3646 (0.42); 2.3588 (0.46); 2.3388 (0.74); 2.3331 (0.93); 2.3283 (0.76); 2.3242 (0.86); 2.3162 (0.79); 2.3106 (0.61); 2.3001 (0.37); 1.9862 (0.64); 1.9825 (0.64); 1.9679 (1.00); 1.9642 (1.00); 1.9497 (0.67); 1.9459 (0.69); 1.9273 (0.62); 1.9202 (0.90); 1.9145 (0.94); 1.9060 (0.91); 1.8914 (0.32); 1.7957 (0.80); 1.7922 (0.79); 1.7810 (1.35); 1.7778 (1.31); 1.7670 (0.63); 1.7632 (0.59); 1.6503 (0.68); 1.6448 (0.69); 1.6339 (0.67); 1.6285 (0.67); 1.6162 (0.67); 1.6108 (0.61); 1.6000 (0.66); 1.5946 (0.60); 1.2353 (0.34); 1.2123 (13.38); 1.1241 (2.06); 1.1005 (2.01); 1.0356 (9.42); 1.0281 (16.00); 1.0176 (8.76); -0.0002 (5.53)
50	[DMSO-d6, 400 MhZ] 7.9151 (1.08); 7.8939 (1.09); 7.2386 (1.52); 7.1039 (3.45); 6.9692 (1.69); 4.2673 (0.54); 4.2451 (0.76); 4.2240 (0.56); 3.7841 (9.87); 3.3224 (55.97); 2.8907 (0.37); 2.6705 (0.33); 2.5239 (0.99); 2.5190 (1.50); 2.5105 (19.15); 2.5060 (38.79); 2.5015 (52.00); 2.4969 (38.28); 2.4924 (18.48); 2.4268 (0.43); 2.4234 (0.43); 2.4183 (0.40); 2.3983 (0.71); 2.3931 (0.79); 2.3847 (0.42); 2.3728 (0.34); 2.3680 (0.46); 2.3588 (0.46); 2.3387 (0.73); 2.3330 (0.94); 2.3283 (0.77); 2.3242 (0.87); 2.3161 (0.80); 2.3107 (0.62); 2.3002 (0.36); 1.9863 (0.64); 1.9826 (0.66); 1.9680 (0.99); 1.9642 (1.01); 1.9498 (0.67); 1.9461 (0.70); 1.9268 (0.62); 1.9202 (0.89); 1.9142 (0.93); 1.9060 (0.91); 1.8915 (0.34); 1.7958 (0.80); 1.7923 (0.81); 1.7811 (1.33); 1.7778 (1.32); 1.7667 (0.64); 1.7631 (0.60); 1.6503 (0.67); 1.6448 (0.70); 1.6340 (0.68); 1.6286 (0.69); 1.6163 (0.66); 1.6108 (0.62); 1.6001 (0.66); 1.5946 (0.61); 1.2353 (0.44); 1.2124 (13.37); 1.1243 (2.07); 1.1006 (2.01); 1.0357 (9.22); 1.0281 (16.00); 1.0177 (8.61); -0.0002 (9.57)
51	[DMSO-Cl6, 400 MhZ] 8.1140 (1.12); 8.0929 (1.13); 7.1894 (1.62); 7.0545 (3.67); 6.9197 (1.82); 4.2536 (0.56); 4.2316 (0.81); 4.2094 (0.57); 3.8735 (13.73); 3.3241 (88.58); 2.8905 (1.16); 2.7318 (0.94); 2.7305 (0.97); 2.6705 (0.41); 2.5239 (1.08); 2.5191 (1.73); 2.5105 (23.08); 2.5060 (46.69); 2.5014 (62.51); 2.4968 (46.44); 2.4924 (22.68); 2.4569 (0.38); 2.4509 (0.47); 2.4426 (0.41); 2.4320 (0.36); 2.4227 (0.75); 2.4174 (0.82); 2.4088 (0.43); 2.3973 (0.36); 2.3924 (0.47); 2.3839 (0.38); 2.3415 (0.69); 2.3363 (0.86); 2.3332 (0.87); 2.3279 (1.05); 2.3237 (0.79); 2.3188 (0.96); 2.3131 (0.68); 2.3028 (0.39); 1.9914 (0.67); 1.9876 (0.68); 1.9733 (1.03); 1.9695 (1.07); 1.9552 (0.71); 1.9513 (0.73); 1.9317 (0.60); 1.9223 (0.93); 1.9163 (1.02); 1.9083 (0.96); 1.8944 (0.35); 1.7957 (0.84); 1.7923 (0.84); 1.7809 (1.41); 1.7782 (1.39); 1.7666 (0.66); 1.7631 (0.64); 1.6546 (0.70); 1.6489 (0.72); 1.6386 (0.70); 1.6330 (0.71); 1.6202 (0.67); 1.6147 (0.64); 1.6043 (0.68); 1.5988 (0.64); 1.2345 (0.38); 1.2120 (13.87); 1.0746 (2.21); 1.0602 (9.11); 1.0510 (2.75); 1.0421 (8.96); 1.0295 (16.00); 0.0080 (0.43); -0.0002 (13.36); -0.0085 (0.43)
52	[DMSO-Cl6, 400 MhZ] 8.3211 (3.44); 8.0652 (1.26); 8.0441 (1.23); 7.4771 (1.40); 7.3412 (3.38); 7.2055 (1.57); 4.2935 (0.55); 4.2709 (0.75); 4.2497 (0.54); 3.9164 (14.37); 3.3243 (70.30); 2.8909 (0.86); 2.7318 (0.68); 2.6709 (0.37); 2.5242 (1.11); 2.5194 (1.83); 2.5109 (21.76); 2.5064 (43.20); 2.5018 (56.98); 2.4972 (41.22); 2.4926 (19.35); 2.4290 (0.39); 2.4207 (0.39); 2.4009 (0.68); 2.3957 (0.85); 2.3871 (0.70); 2.3718 (1.16); 2.3669 (1.03); 2.3585 (0.77); 2.3494 (0.81); 2.3440 (0.60); 2.3333 (0.62); 2.3286 (0.65); 2.3241 (0.35); 2.0004 (0.66); 1.9966 (0.65); 1.9821 (1.02); 1.9783 (1.02); 1.9641 (0.69); 1.9601 (0.69); 1.9429 (0.48); 1.9288 (0.90); 1.9230 (0.95); 1.9148 (0.91); 1.9002 (0.33); 1.8093 (0.79); 1.8059 (0.81); 1.7946 (1.35); 1.7917 (1.31); 1.7804 (0.63); 1.7768 (0.59); 1.6278 (0.68); 1.6223 (0.70); 1.6116 (0.63); 1.6060 (0.65); 1.5937 (0.66); 1.5883 (0.62); 1.5775 (0.62); 1.5721 (0.57); 1.2355 (0.54); 1.2181 (13.64); 1.1141 (1.95); 1.0906 (1.96); 1.0358 (16.00); 1.0272 (9.27); 1.0092 (8.54); 0.0080 (0.32); -0.0002 (9.89)
53	[DMSO-d6, 400 MhZ] 8.1139 (1.17); 8.0929 (1.16); 7.1896 (1.58); 7.0546 (3.51); 6.9198 (1.76); 4.2542 (0.58); 4.2318 (0.85); 4.2093 (0.59); 3.8736 (13.55); 3.3223 (66.65); 2.8908 (1.02); 2.7316 (0.81); 2.6748 (0.33); 2.6705 (0.46); 2.6659 (0.34); 2.5237 (1.47); 2.5104 (26.44); 2.5060 (51.86); 2.5014 (68.24); 2.4969 (51.00); 2.4925 (25.45); 2.4569 (0.43); 2.4517 (0.50); 2.4484 (0.49); 2.4431 (0.43); 2.4229 (0.79); 2.4177 (0.84); 2.4088 (0.46); 2.3976 (0.40); 2.3923 (0.50); 2.3889 (0.47); 2.3841 (0.41); 2.3572 (0.34); 2.3522 (0.34); 2.3418 (0.73); 2.3335 (0.94); 2.3279 (1.12); 2.3234 (0.85); 2.3189 (0.99); 2.3133 (0.71); 2.3027 (0.41); 1.9915 (0.68); 1.9878 (0.71); 1.9735 (1.05); 1.9696 (1.09); 1.9552 (0.73); 1.9515 (0.76); 1.9368 (0.52); 1.9316 (0.64); 1.9228 (0.98); 1.9166 (1.06); 1.9084 (1.00); 1.7957 (0.86); 1.7923 (0.88); 1.7809 (1.44); 1.7779 (1.44); 1.7668 (0.69); 1.7636 (0.66); 1.6547 (0.71); 1.6490 (0.76); 1.6388 (0.73); 1.6331 (0.73); 1.6205 (0.69); 1.6149 (0.68); 1.6045 (0.71); 1.5990 (0.66); 1.2353 (0.52); 1.2122 (13.90); 1.0749 (2.26); 1.0603 (9.05); 1.0510 (2.98); 1.0422 (8.96); 1.0296 (16.00); 0.0080 (0.44); -0.0002 (10.69); -0.0084 (0.39)
54	[DMSO-Cl6, 400 MhZ] 8.3211 (3.60); 8.0649 (1.36); 8.0439 (1.33); 7.4770 (1.35); 7.3411 (3.12); 7.2054 (1.49); 4.2932 (0.60); 4.2713 (0.83); 4.2504 (0.60); 3.9163 (14.58); 3.3234 (60.46); 2.8907 (0.62); 2.7313 (0.52); 2.6708 (0.40); 2.5104 (23.85); 2.5061 (45.66); 2.5016 (59.39); 2.4971 (43.69); 2.4929 (21.35); 2.4299 (0.46); 2.4212 (0.41); 2.4008 (0.75); 2.3957 (0.93); 2.3874 (0.78); 2.3716 (1.26); 2.3667 (1.15); 2.3498 (0.87); 2.3332 (0.66); 2.3286 (0.69); 1.9999 (0.70); 1.9966 (0.71); 1.9819 (1.07); 1.9784 (1.08); 1.9637 (0.73); 1.9601 (0.73); 1.9422 (0.52); 1.9287 (0.97); 1.9225 (1.04); 1.9149 (0.99); 1.8061 (0.88); 1.7942 (1.46); 1.7805 (0.68); 1.6274 (0.71); 1.6222 (0.74); 1.6112 (0.68); 1.6061 (0.68); 1.5935 (0.70); 1.5885 (0.65); 1.5774 (0.65); 1.5721 (0.60); 1.2351 (0.61); 1.2181 (13.77); 1.1140 (2.01); 1.0905 (2.01); 1.0357 (16.00); 1.0272 (9.12); 1.0091 (8.22); 0.0079 (0.35); -0.0002 (8.80)
55	[DMSO-d6, 400 MhZ] 8.3259 (3.98); 7.4210 (1.51); 7.3418 (2.40); 7.2851 (3.59); 7.2000 (0.60); 7.1494 (1.66); 3.9594 (0.79); 3.9080 (2.60); 3.8832 (14.66); 3.3277 (58.06); 2.8907 (0.74); 2.7316 (0.60); 2.7305 (0.59); 2.5243 (0.94); 2.5195 (1.46); 2.5109 (16.59); 2.5064 (33.12); 2.5018 (43.84); 2.4973 (32.24); 2.4928 (15.89); 2.0371 (5.10); 2.0159 (16.00); 1.6399 (11.89); 1.2348 (0.55); -0.0002 (8.98); -0.0085 (0.32)

Ex.	^{1}H-NMR [solvent - spectrometer Mhz]
56	[DMSO-d6, 400 MhZ] 7.1925 (2.14); 7.1700 (2.26); 7.0578 (4.70); 6.9232 (2.26); 3.7576 (12.50); 3.3217 (55.15); 2.8906 (1.03); 2.731 1 (0.80); 2.6704 (0.42); 2.5238 (1.05); 2.5190 (1.57); 2.5104 (22.29); 2.5059 (45.50); 2.5013 (61 .14); 2.4967 (44.80); 2.4922 (21 .50); 2.3280 (0.41); 2.0330 (4.18); 1.9927 (16.00); 1.9861 (12.01); 1.6435 (8.00); 1.6371 (13.32); 0.0079 (0.41); -0.0002 (13.14); -0.0086 (0.38)
57	[DMSO-d6, 400 MhZ] 7.4100 (2.14); 7.1790 (1.95); 7.0440 (4.42); 6.9091 (2.15); 3.8517 (16.00); 3.3233 (83.58); 2.8907 (1.42); 2.7314 (1.11); 2.6751 (0.34); 2.6705 (0.46); 2.6659 (0.33); 2.5239 (1.29); 2.5191 (1.95); 2.5105 (25.21); 2.5060 (50.86); 2.5014 (67.86); 2.4968 (49.65); 2.4924 (23.74); 2.3328 (0.32); 2.3282 (0.44); 2.0363 (3.95); 2.0026 (15.56); 1.9965 (11.11); 1.6401 (12.69); 1.2352 (0.37); 0.0080 (0.37); -0.0002 (12.09); -0.0084 (0.36)
58	[CHCl3-d, 500 MhZ] 7.2697 (4.26); 6.9337 (0.56); 6.8245 (1.14); 6.7153 (0.57); 3.8018 (16.00); 3.4784 (1.08); 2.8672 (0.59); 2.4921 (0.47); 2.4780 (0.68); 2.4633 (0.60); 2.0636 (0.45); 2.0031 (0.33); 1.9463 (0.85); 1.9322 (1.01); 1.9182 (0.92); 1.9046 (0.76); 1.8091 (0.38); 1.7973 (0.72); 1.7858 (0.87); 1.7746 (0.89); 1.7656 (0.72); 1.6702 (5.65); 1.6517 (1.00); 1.6422 (0.95); 1.6341 (1.00); 1.6274 (1.00); 1.6178 (1.08); 1.61 19 (0.85); 1.6028 (1.08); 1.5940 (0.97); 1.5874 (0.78); 1.5791 (1.08); 1.5640 (0.82); 1.5518 (0.65); 1.5399 (0.98); 1.5365 (0.88); 1.5227 (1.78); 1.5086 (2.1 1); 1.4990 (1.32); 1.4949 (1.10); 1.4851 (0.74); 1.3837 (0.67); 1.3724 (0.68); 1.3304 (0.61); 1.3207 (1.06); 1.3098 (1.16); 1.2970 (1.07); 1.2880 (1.03); 1.2708 (0.45); 1.2585 (0.49); 1.2471 (0.49); 1.1732 (0.45); 1.1596 (0.71); 1.1472 (0.77); 1.1358 (0.80); 1.1282 (0.62); 1.1214 (0.54); 1.1 158 (0.52); 0.7285 (1.28); 0.5860 (2.67); -0.0002 (2.62)
59	[CHCl3-d, 500 MhZ] 7.6364 (1.30); 7.2715 (3.50); 7.0380 (0.40); 3.9596 (16.00); 3.4772 (1.30); 2.7938 (0.87); 2.7869 (0.98); 2.4640 (0.66); 2.0474 (0.47); 2.0028 (1.65); 1.9487 (0.51); 1.9343 (0.87); 1.9188 (1.05); 1.9042 (0.93); 1.8895 (0.69); 1.791 1 (0.39); 1.7791 (0.74); 1.7674 (0.86); 1.7592 (0.83); 1.7553 (0.85); 1.7477 (0.76); 1.7363 (0.43); 1.7066 (1.20); 1.6684 (0.33); 1.6521 (0.76); 1.6365 (0.97); 1.6277 (1.05); 1.621 1 (0.71); 1.61 18 (1.44); 1.5956 (1.23); 1.5865 (0.94); 1.5791 (0.78); 1.5713 (1.07); 1.5619 (0.55); 1.5568 (0.77); 1.5451 (0.62); 1.5336 (0.98); 1.5290 (0.87); 1.5177 (1.80); 1.5048 (1.96); 1.4955 (1.09); 1.4904 (0.84); 1.4813 (0.59); 1.3731 (0.68); 1.3614 (0.72); 1.3508 (0.66); 1.3265 (0.59); 1.3170 (0.94); 1.3058 (1.01); 1.2938 (0.90); 1.2843 (0.87); 1.2745 (0.40); 1.2198 (0.48); 1.1586 (0.47); 1.1454 (0.67); 1.1328 (0.71); 1.1219 (0.75); 1.1 129 (0.51); 1.1068 (0.48); 1.1008 (0.43); 0.8126 (1.94); 0.8029 (1.92); 0.6380 (3.31); 0.6304 (3.12); 0.6199 (0.81); -0.0002 (2.09)
60	[CHCl3-d, 400 MhZ] 7.2713 (6.56); 6.9854 (0.36); 5.9753 (0.36); 6.8486 (0.73); 6.8391 (0.73); 6.7122 (0.37); 6.7024 (0.37); 3.8070 (16.00); 3.4575 (0.95); 3.4281 (0.89); 3.3954 (0.50); 2.8420 (0.73); 1.8877 (1.29); 1.8596 (1.33); 1.8172 (1.58); 1.81 14 (1.64); 1.7820 (1.93); 1.7740 (1.57); 1.7577 (1.39); 1.7439 (1.31); 1.7300 (1.20); 1.71 68 (1.03); 1.6793 (5.77); 1.6402 (1.38); 1.6282 (1.35); 1.6174 (1.98); 1.601 7 (1.83); 1.5951 (1.78); 1.5883 (1.59); 1.581 6 (1.66); 1.5660 (1.15); 1.5461 (0.63); 1.5243 (0.50); 1.5120 (0.55); 1.4850 (1.06); 1.4724 (1.02); 1.4140 (0.34); 1.3763 (0.50); 1.3524 (0.36); 1.2769 (0.60); 1.2687 (0.48); 1.2432 (0.72); 1.2102 (0.59); 1.2043 (0.58); 1.1835 (0.53); 1.1695 (0.51); 1.1614 (0.54); 1.1051 (1.54); 1.0829 (1.35); 1.0592 (0.63); 1.0287 (0.42); 0.9747 (0.86); 0.9494 (0.80); 0.8374 (0.51); 0.7192 (1.79); 0.5862 (2.53); -0.0002 (4.27)
61	[CHCl3-d, 400 MhZ] 7.6602 (0.57); 7.2725 (5.35); 3.9647 (11.81); 3.4831 (0.36); 3.4557 (0.52); 3.4253 (0.47); 3.4140 (0.46); 2.7570 (0.54); 2.0100 (16.00); 1.8777 (0.76); 1.8547 (0.89); 1.8472 (0.80); 1.8384 (0.60); 1.81 14 (0.45); 1.8035 (0.61); 1.7953 (0.62); 1.7866 (0.84); 1.7773 (1.02); 1.7669 (1.04); 1.7606 (0.98); 1.7523 (1.36); 1.7445 (0.98); 1.7383 (1.05); 1.7243 (0.79); 1.7103 (0.79); 1.7054 (0.80); 1.6896 (0.84); 1.6815 (0.85); 1.6739 (0.76); 1.6624 (0.77); 1.6537 (0.84); 1.6341 (0.93); 1.6219 (0.84); 1.61 13 (1.21); 1.5955 (1.05); 1.5893 (1.03); 1.5822 (0.86); 1.5752 (0.91); 1.5597 (0.66); 1.5401 (0.37); 14797 (0.64); 1.4676 (0.69); 1.3709 (0.34); 1.2629 (0.51); 1.2398 (0.33); 1.2306 (0.52); 1.221 1 (0.38); 1.1966 (0.35); 1.1862 (0.37); 1.1583 (0.39); 1.1337 (0.46); 1.1257 (0.45); 1.1 195 (0.43); 1.1062 (0.73); 1.0969 (0.96); 1.0866 (0.64); 1.0737 (0.89); 1.0509 (0.41); 0.9876 (0.37); 0.9579 (0.50); 0.9355 (0.43); 0.8087 (1.36); 0.8008 (1.35); 0.6492 (0.93); 0.6404 (2.18); 0.6316 (2.31); -0.0002 (3.43)
62	[CHCl3-d, 300 MhZ] 7.2656 (1.95); 7.0138 (0.65); 6.8315 (1.30); 6.6495 (0.66); 5.3027 (1.44); 3.8080 (16.00); 3.3556 (1.40); 2.8236 (0.72); 2.0472 (0.50); 2.0168 (0.78); 2.0041 (0.89); 1.9908 (0.90); 1.9791 (0.95); 1.9679 (0.96); 1.9542 (0.86); 1.8991 (0.34); 1.8810 (0.54); 1.8605 (0.68); 1.8399 (0.88); 1.8198 (1.00); 1.8028 (0.95); 1.7895 (0.92); 1.7503 (1.20); 1.6997 (2.66); 1.6800 (2.96); 1.6566 (2.46); 1.6452 (2.06); 1.6379 (2.12); 1.6037 (7.1 1); 1.5836 (1.59); 1.5595 (2.17); 1.5512 (2.20); 1.5135 (2.36); 1.4973 (2.15); 1.4834 (1.90); 1.3949 (1.06); 1.3695 (1.60); 1.3417 (1.32); 1.2853 (0.56); 1.2545 (0.71); 1.1744 (0.37); 1.1656 (0.39); 1.1310 (0.75); 1.0863 (0.80); 1.0492 (0.51); 0.9815 (0.38); 0.9461 (0.36); 0.8993 (0.35); 0.8813 (0.41); 0.8570 (0.42); 0.8149 (0.50); 0.7203 (1.67); 0.6585 (0.53); 0.6460 (0.49); 0.5824 (3.17); -0.0002 (0.99)
63	[CHCl3-d, 300 MhZ] 7.6542 (1.09); 7.2636 (4.00); 7.0431 (0.41); 3.9676 (16.00); 3.3404 (1.48); 2.9270 (0.63); 2.9027 (0.64); 2.7593 (0.83); 2.7493 (0.85); 2.0475 (0.36); 2.01 14 (0.71); 1.9988 (0.71); 1.9870 (0.73); 1.9743 (0.76); 1.9621 (0.76); 1.9489 (0.65); 1.8723 (0.43); 1.8517 (0.51); 1.8310 (0.65); 1.8128 (0.84); 1.7987 (0.75); 1.7747 (0.74); 1.7605 (0.82); 1.7465 (0.88); 1.7385 (0.89); 1.7317 (0.90); 1.6947 (2.14); 1.6744 (2.00); 1.6633 (2.16); 1.6297 (1.57); 1.6165 (1.57); 1.6033 (1.61); 1.5785 (18.67); 1.5548 (1.87); 1.5248 (1.56); 1.5069 (1.75); 1.4929 (1.76); 1.4800 (1.58); 1.4639 (1.24); 1.4495 (1.13); 1.4189 (0.70); 1.3867 (0.69); 1.3609 (1.39); 1.3313 (1.18); 1.3204 (0.88); 1.2841 (0.80); 1.2635 (1.63); 1.2529 (2.05); 1.2283 (2.09); 1.2040 (1.00); 1.1 187 (0.61); 1.1090 (0.59); 1.0709 (0.68); 1.0368 (0.43); 0.9034 (0.64); 0.8817 (1.48); 0.8584 (0.77); 0.8200 (2.22); 0.7995 (2.38); 0.7486 (0.43); 0.7126 (0.32); 0.6594 (1.10); 0.6436 (2.93); 0.6350 (3.02); 0.6299 (2.74); 0.6229 (2.31); 0.6054 (0.74); -0.0002 (2.01)
64	[CHCl3-d, 300 MhZ] 7.2637 (3.07); 6.9081 (0.53); 6.7263 (1.09); 6.5444 (0.55); 5.3023 (4.31); 4.1 102 (0.32); 3.891 1 (16.00); 3.3743 (0.38); 3.0518 (0.38); 2.8521 (0.76); 2.0474 (1.81); 1.9672 (0.82); 1.8879 (0.41); 1.81 16 (1.01); 1.7613 (1.42); 1.7023 (2.14); 1.6835 (2.04); 1.6612 (1.80); 1.6186 (1.66); 1.6107 (1.63); 1.5828 (14.20); 1.5621 (2.52); 1.3712 (1.30); 1.3500 (1.29); 1.2844 (0.85); 1.2605 (1.51); 1.2367 (0.57); 1.1449 (0.61); 1.1055 (0.67); 1.0608 (0.54); 1.0167

Ex.	¹H -NMR [solvent - spectrometer Mhz]
	(0.43); 0.9730 (0.41); 0.9338 (0.54); 0.9037 (0.64); 0.8817 (0.95); 0.8581 (0.67); 0.8092 (0.52); 0.6325 (1.74); 0.6155 (1.91); 0.5633 (2.25); -0.0002 (1.56)
65	[DMSO-d6, 400 MhZ] 7.056J3(1.85); 6.9222 (3.97); 6.7875 (2.06); 5.7619 (0.85); 3.7875 (16.00); 3.4647 (0.96); 3.4545 (1.07); 3.4315 (1.98); 3.421E (1.91); 3.4007 (2.31); 3.3976 (2.21); 3.3558 (302.88); 3.3148 (2.47); 3.3109 (1.69); 2.7379 (0.83); 2.6771 (0.33); 2.5535 (0.43); 2.5495 (0.43); 2.5304 (0.59); 2.5169 (12.37); 2.5125 (25.57); 2.5080 (34.60); 2.50C5 (24.62); 2.4991 (11.46); 2.4669 (0.45); 2.4626 (0.42); 1.9891 (0.70); 1.9658 (0.78); 1.7549 (0.87); 1.7194 (2.11); 1.6976 (2.31); 1.6608 (2.05); 1.6298 (1.73); 1.5837 (1.36); 1.5629 (1.50); 1.5324 (1.72); 1.5099 (1.89); 1.2646 (1.04); 1.2337 (1.75); 1.2094 (2.16); 0.9448 (3.63); 0.8585 (0.99); 0.8319 (0.98); 0.7314 (1.12); 0.6938 (2.69); 0.5621 (1.07); 0.5435 (1.18); 0.4522 (1.39); 0.4472 (1.47); 0.4276 (1.06); 0.4221 (1.01)
66	[DMSO-d6, 400 MhZ] 8.3528 (0.68); 7.2475 (0.53); 7.1115 (1.11); 6.9757 (0.56); 5.7634 (0.36); 3.9080 (16.00); 3.4635 (0.53); 3.4534 (0.63); 3.4304 (1.16); 3.4206 (1.13); 3.4001 (1.86); 3.3838 (0.42); 3.3708 (0.61); 3.3501 (139.96); 3.3003 (1.56); 2.8733 (0.50); 2.5169 (7.96); 2.5125 (16.64); 2.5079 (22.63); 2.5034 (16.03); 2.4990 (7.42); 1.9840 (0.61); 1.9547 (0.66); 1.7513 (0.73); 1.7225 (1.54); 1.6935 (1.26); 1.6858 (1.18); 1.6538 (1.54); 1.6333 (1.10); 1.5856 (0.82); 1.5621 (0.96); 1.5105 (1.29); 1.2393 (0.92); 1.2162 (1.67); 1.1953 (1.51); 1.1673 (0.65); 0.9568 (2.19); 0.9418 (2.36); 0.8683 (0.79); 0.8382 (0.73); 0.7799 (2.67); 0.7641 (2.73); 0.7507 (1.30); 0.7271 (0.69); 0.5954 (0.73); 0.5869 (0.81); 0.5719 (0.96); 0.5588 (0.87); 0.5492 (0.36); 0.4753 (0.89); 0.4633 (0.90); 0.4480 (0.74); 0.4396 (0.68)
67	[DMSO-d6, 400 MhZ] 7.0902 (1.06); 6.955^^ (2.23); 6.9185i (0.36); 6.8206 (1.12); 5.7612 (4.00); 3.8786 (16.00); 3.4598 (0.78); 3.452S (0.73); 3.4312 (0.93); 3.4097 (2.53); 3.3597 (192.46); 3.3158 (1.81); 3.3106 (1.52); 3.2626 (0.33); 2.7853 (0.35); 2.7410 (1.53); 2.5582 (0.56); 2.5540 (0.58); 2.5307 (0.69); 2.5171 (9.28); 2.5128 (19.20); 2.5083 (26.37); 2.50C8 (20.04); 2.4£96 (10.62); 2.4695 (0.41); 2.4640 (0.40); 2.4595 (0.35); 2.0793 (1.37); 2.0297 (1.09); 2.0016 (1.21); 1.9259 (1.02); 1.8971 (1.09); 1.7938 (0.39); 1.7663 (0.45); 1.7052 (2.55); 1.6732 (2.66); 1.6354 (2.27); 1.5896 (1.67); 1.5677 (1.78); 1.5181 (2.05); 1.2207 (2.62); 1.2009 (2.75); 0.9569 (4.41); 0.8937 (1.67); 0.8735 (1.86); 0.8446 (1.42); 0.7990 (1.09); 0.7741 (1.36); 0.5815 (2.85); 0.4470 (1.09)
68	[DMSO-d6, 400 MhZ] 7.2836 (6.96); 7.2661 (5.57); 7.2476 (2.24); 7.2301 (0.42); 7.2101 (1.69); 7.2054 (1.65); 7.1954 (1.35); 7.1887 (2.36); 7.1731 (0.75); 7.1675 (0.66); 7.1375 (0.87); 7.0026 (1.70); 6.8679 (0.86); 5.7637 (10.08); 4.0468 (0.52); 4.0290 (0.50); 3.8968 (16.00); 3.8670 (1.17); 3.3830 (1.27); 3.3327 (77.57); 3.2823 (1.15); 3.1875 (0.34); 2.9595 (0.65); 2.7615 (1.18); 2.6792 (0.34); 2.5650 (0.44); 2.5606 (0.56); 2.5560 (0.40); 2.5325 (0.65); 2.5191 (12.39); 2.5147 (25.48); 2.5102 (34.62); 2.5057 (24.74); 2.5013 (11.58); 2.4645 (0.34); 2.4599 (0.45); 2.4553 (0.33); 2.1765 (0.32); 2.0474 (1.09); 1.9970 (1.91); 1.5739 (0.92); 1.4599 (0.96); 1.4338 (0.70); 1.2868 (0.53); 1.2515 (0.71); 1.2010 (0.86); 1.1832 (1.56); 1.1654 (1.43); 1.1503 (1.14); 1.0651 (0.44); 1.0203 (0.34); 0.9170 (0.55); 0.8834 (0.54); 0.8665 (0.73); 0.8487 (0.39); 0.7040 (2.18); 0.6032 (0.40); 0.5817 (0.39); 0.5158 (0.41)
69	[DMS0-d6, 400 MhZ] 7.2832 (1.12); 7.2640 (5.23); 7.2482 (15.33); 7.2320 (1.72); 7.2069 (1.69); 7.2017 (1.74); 7.1929 (1.66); 7.1857 (2.09); 7.1771 (1.03); 7.1701 (0.90); 7.1644 (0.54); 7.1239 (1.54); 6.9891 (3.33); 6.8544 (1.69); 5.7639 (12.66); 3.8012 (16.00); 3.6814 (0.87); 3.6470 (1.60); 3.5824 (1.49); 3.5479 (0.80); 3.3829 (0.87); 3.3335 (74.82); 3.2838 (1.16); 2.8643 (1.05); 2.7136 (0.96); 2.6791 (3.42); 2.6554 (2.80); 2.6208 (0.85); 2.5597 (0.40); 2.5550 (0.33); 2.5326 (0.85); 2.5278 (1.28); 2.5192 (11.80); 2.5148 (24.13); 2.5103 (32.82); 2.5058 (23.31); 2.5013 (10.78); 2.4650 (0.38); 2.4605 (0.52); 2.4560 (0.39); 2.0927 (2.48); 2.0852 (2.55); 2.0587 (2.04); 1.9971 (0.63); 1.8932 (0.57); 1.8661 (0.91); 1.8411 (0.65); 1.5851 (0.97); 1.5750 (0.83); 1.5540 (1.22); 1.4876 (0.45); 1.4649 (0.99); 1.4380 (1.27); 1.3069 (2.28); 1.2760 (2.16); 1.2562 (0.65); 1.2452 (0.52); 1.2011 (0.33); 1.1833 (0.65); 1.1707 (0.90); 1.1653 (1.06); 1.1488 (1.68); 1.1331 (1.62); 0.9329 (1.34); 0.9095 (1.12); 0.8407 (0.43); 0.8216 (1.58); 0.8001 (2.39); 0.7820 (1.66); 0.7579 (0.45); 0.6165 (3.99)
70	[DMS0-d6, 400 MhZ] 8.7121 (0.44); 8.4231 (2.25); 7.269C5(2.00); 7.2582 (11.63); 7.2462 (8.36); 7.2314 (1.16); 7.2279 (1.48); 7.208C (0.67); 7.197C (1.29); 7.189C (1.47); 7.186C (1.32); 7.1818 (1.17); 7.1758 (1.59); 7.1694 (0.95); 7.1545 (0.53); 7.133E (2.80); 6.997C (1.39); 5.763E (12.22); 3.9792 (1.72); 3.9182 (16.00); 3.7248 (1.13); 3.6903 (1.58); 3.5394 (1.60); 3.5048 (1.22); 3.3849 (0.51); 3.3361 (19.20); 3.0056 (1.41); 2.7180 (1.14); 2.6836 (3.46); 2.6553 (3.24); 2.6209 (1.18); 2.5608 (0.47); 2.5564 (0.39); 2.5325 (1.03); 2.5278 (1.39); 2.5191 (11.81); 2.5147 (24.29); 2.5102 (33.33); 2.50E6 (24.45); 2.5C12 (12.37); 2.4640 (0.55); 2.4594 (0.54); 2.1280 (1.81); 2.1209 (1.88); 2.0501 (1.70); 1.8951 (0.48); 1.8647 (0.78); 1.8415 (0.58); 1.5923 (0.76); 1.5892 (0.77); 1.5826 (0.70); 1.5677 (0.81); 1.5612 (1.01); 1.5518 (0.80); 1.4817 (0.37); 1.4593 (0.80); 1.4335 (0.56); 1.3502 (1.39); 1.3195 (1.43); 1.2966 (0.73); 1.2895 (0.72); 1.2787 (1.02); 1.2657 (0.76); 1.2446 (0.52); 1.2355 (0.40); 1.1825 (0.75); 1.1717 (1.86); 1.1538 (3.50); 1.1356 (2.09); 1.0822 (1.04); 1.0591 (1.21); 0.9058 (1.40); 0.8821 (1.22); 0.8539 (0.90); 0.8415 (1.31); 0.8253 (2.00); 0.8110 (1.35); 0.7971 (0.92); 0.7827 (0.49); 0.6137 (0.96); 0.6034 (2.54); 0.5957 (2.64); 0.5808 (1.04)
73	[CHCl3-d, 400 MhZ] 7.3129 (0.39); 7.2634 (25.60); 6.9575 (1.64); 6.8210 (3.41); 6.6846 (1.72); 6.1863 (0.70); 6.1178 (0.48); 6.1041 (1.42); 6.0955 (2.42); 6.0878 (1.51); 6.0811 (0.49); 6.0741 (0.51); 5.9903 (0.36); 3.8110 (16.00); 3.5423 (0.63); 3.2196 (0.53); 2.8906 (0.60); 2.8400 (2.12); 2.8129 (1.47); 2.6237 (1.14); 2.5856 (0.48); 2.5745 (0.57); 2.5686 (0.54); 2.5616 (0.54); 2.5512 (0.45); 2.0105 (1.46); 1.9426 (0.51); 1.9301 (0.55); 1.9230 (0.56); 1.9102 (0.99); 1.9009 (0.66); 1.8872 (0.65); 1.8804 (0.76); 1.8722 (0.59); 1.8582 (0.52); 1.8488 (0.46); 1.5739 (11.10); 1.4755 (0.99); 1.4705 (1.03); 1.4552 (1.29); 1.4502 (1.28); 1.3800 (0.73); 1.3613 (0.52); 1.3055 (0.37); 1.2901 (1.91); 1.2699 (1.73); 1.2582 (1.12); 0.7362 (1.60); 0.5955 (2.20); 0.5751 (2.30); 0.5667 (2.23); 0.0079 (0.62); -0.0002 (16.65); -0.0084 (0.64)
74	[DMS0-d6, 400 MhZ] 7.9976 (0.49); 7.9837 (0.89); 7.9698 (0.50); 7.9528 (0.34); 7.9404 (0.48); 7.9264 (0.80); 7.9136 (0.45); 7.2699 (1.28); 7.2463 (1.20); 7.1353 (3.00); 7.1117 (2.72); 7.0007 (1.44); 6.9771 (1.31); 4.4916 (0.74); 4.4798 (1.44); 4.4675 (0.84); 4.4445 (0.90); 4.4313 (1.70); 4.4181 (0.88); 4.3660 (0.84); 4.3540 (1.70); 4.3417 (0.92); 4.2914 (1.61); 4.2795 (1.50); 3.7790 (16.00); 3.3408 (0.43); 3.3230 (96.56); 3.2921 (0.97); 3.2787 (0.77); 3.2738 (0.76); 3.2606 (0.69); 3.2428 (0.67); 3.2277 (0.78); 3.2207 (0.80); 3.2061 (0.82); 3.1946 (0.33); 3.1874 (0.36); 3.0759 (0.34);

Ex.	1H-NMR [solvent - spectrometer Mhz]
	3.061; i (0.41); 3.054; 2 (0.38); 3.0429 (0.82); 3.0286 (0.72); 3.0213 (0.79); 3.0068 (0.72); 2.9810 (0.65); 2.9661 (1.21); 2.950! 3 (0.83); 2.933 1 (0.61); 2.9182 (0.36); 2.8907 (1.77); 2.7308 (1.40); 2.6752 (0.46); 2.6706 (0.63); 2.6660 (0.46); 2.524() (1.68); 2.510C5 (36.07); 2.5061 (72.47); 2.5015 (96.36); 2.4969 (70.49); 2.4924 (33.93); 2.3329 (0.46); 2.3282 (0.63); 2.3238 (0.46); 2.2572 (0.36); 2.2449 (0.41); 2.2408 (0.42); 2.2283 (0.39); 1.9816 (0.35); 1.9756 (0.55); 1.9719 (0.46); 1.9656 (0.60); 1.9605 (0.59); 1.9502 (0.59); 1.9444 (0.35); 1.8566 (0.45); 1.8348 (0.55); 1.8261 (0.83); 1.8178 (0.59); 1.81 13 (0.40); 1.8043 (0.91); 1.7977 (0.38); 1.7902 (0.59); 1.7824 (0.56); 1.7755 (0.60); 1.7685 (0.56); 1.7618 (0.57); 1.5765 (1.51); 1.5676 (0.85); 1.5552 (1.88); 1.5466 (2.47); 1.5324 (1.31); 1.5256 (2.04); 1.5145 (0.70); 1.5093 (0.63); 1.5024 (0.37); 1.4806 (0.36); 1.4666 (0.50); 1.4574 (0.37); 1.4521 (0.41); 1.4470 (0.37); 1.4362 (0.63); 1.4265 (0.65); 1.4152 (1.41); 1.3986 (2.06); 1.3925 (1.63); 1.3878 (1.32); 1.3767 (1.35); 1.3732 (1.55); 1.361 7 (1.39); 1.3550 (1.03); 1.3390 (0.33); 1.2354 (0.49); 1.2073 (0.32); 1.2020 (0.37); 1.1940 (0.57); 1.1783 (0.54); 1.1646 (0.50); 1.0202 (1.01); 1.0070 (1.00); 0.9908 (0.94); 0.9775 (0.94); 0.0079 (0.57); -0.0002 (17.60); -0.0085 (0.57)
75	[DMSO-d6, 400 MhZ] 8.3147 (0.52); 8.2999 (0.73); 8.2857 (0.38); 8.2524 (2.04); 8.2478 (1.86); 8.2440 (2.21); 8.1560 (0.34); 8.1432 (0.61); 8.1305 (0.33); 7.9525 (0.33); 7.4595 (0.91); 7.4483 (0.79); 7.3238 (2.20); 7.3126 (1.89); 7.1881 (1.01); 7.1769 (0.88); 4.4940 (0.56); 4.4819 (1.07); 4.4698 (0.61); 4.4474 (0.62); 4.4343 (1.16); 4.421 1 (0.59); 4.3997 (0.58); 4.3876 (1.15); 4.3753 (0.63); 4.3045 (1.18); 4.2924 (1.10); 3.91 19 (16.00); 3.3550 (0.34); 3.3275 (123.40); 3.297 1 (0.61); 3.284 1 (0.55); 3.279 1 (0.60); 3.2661 (0.42); 3.2252 (0.44); 3.2105 (0.48); 3.2029 (0.47); 3.1886 (0.52); 2.978; 2 (1.39); 2.963(5 (1.65); 2.959; 2 (1.64); 2.9446 (1.43); 2.8908 (2.69); 2.7320 (2.10); 2.7308 (2.12); 2.6710 (0.41); 2.524f5 (1.29); 2.519C5 (2.04); 2.51 1() (24.30); 2.5065 (47.89); 2.5019 (62.65); 2.4973 (45.29); 2.4928 (21.16); 2.3287 (0.41); 1.9506 (0.46); 1.9407 (0.52); 1.9302 (0.52); 1.9204 (0.49); 1.8204 (0.50); 1.8121 (0.76); 1.8038 (0.73); 1.7969 (0.50); 1.7901 (0.78); 1.7832 (0.42); 1.7751 (0.39); 1.5820 (1.05); 1.5609 (1.27); 1.5522 (1.57); 1.531 1 (1.44); 1.5159 (0.49); 1.5108 (0.45); 1.4723 (0.36); 1.4443 (0.43); 1.4321 (0.45); 1.4207 (0.80); 1.3988 (1.27); 1.3927 (1.37); 1.3803 (1.04); 1.3738 (0.92); 1.3656 (0.98); 1.3589 (0.73); 1.1712 (0.41); 1.1544 (0.38); 1.1416 (0.36); 1.0050 (0.69); 0.9918 (0.67); 0.9757 (0.65); 0.9625 (0.63); -0.0002 (4.75)
76	[DMSO-d6, 4()0 MhZ] 8.160-! (0.39); 8.146^/ (0.73); 8.132; i (0.42); 8.1 14 5 (0.38); 8.1008 (0.60); 8.0879 (0.35); 7.952C (0.34); 7.2234 (1.12); 7.1987 (0.91); 7.088e¡ (2.45); 7.064C¡ (2.05); 6.953E¡ (1.18); 6.9293 (1.00); 4.4992 (0.57); 4.4871 (1.15); 4.474£¡ (0.66); 4.451 1 (0.65); 4.437E¡ (1.22); 4.424E¡ (0.65); 4.4121 (0.62); 4.4001 (1.21); 4.3880 (0.65); 4.3083 (1.25); 4.2964 (1.20); 3.881C¡ (1.30); 3.871C¡ (16.00); 3.34e¡0 (0.48); 3.322¡8 (82.17); 3.2997 (0.65); 3.2948 (0.66); 3.2820 (0.54); 3.2484 (0.49); 3.2334 (0.52); 3.2260 (0.51); 3.2109 (0.56); 3.0537 (0.67); 3.0396 (0.59); 3.0323 (0.68); 3.0179 (0.62); 3.0003 (0.58); 2.9854 (1.01); 2.9697 (0.72); 2.9526 (0.47); 2.8907 (2.80); 2.7313 (2.17); 2.6752 (0.41); 2.6706 (0.56); 2.6659 (0.41); 2.5239 (1.53); 2.5192 (2.30); 2.5106 (31.25); 2.5061 (63.39); 2.5015 (84.92); 2.4969 (62.41); 2.492 4 (29.97); 2.3C¡29 (0.40); 2.32¡83 (0.55); 2.32¡37 (0.39); 1.97¡80 (0.43); 1.9729 (0.34); 1.9675 (0.45); 1.9622 (0.46); 1.9563 (0.35); 1.9516 (0.45); 1.8518 (0.33); 1.8302 (0.54); 1.8208 (0.70); 1.8127 (0.54); 1.7993 (0.64); 1.7887 (0.45); 1.7823 (0.54); 1.5955 (0.95); 1.5741 (1.26); 1.5665 (1.51); 1.5536 (0.90); 1.5441 (1.58); 1.5338 (0.78); 1.5265 (0.64); 1.5149 (0.47); 1.4753 (0.38); 1.4436 (0.45); 1.4335 (0.45); 1.4217 (1.07); 1.4053 (1.48); 1.3999 (1.38); 1.3859 (1.07); 1.3802 (1.12); 1.3700 (0.97); 1.3637 (0.83); 1.2358 (0.41); 1.2076 (0.44); 1.1907 (0.41); 1.1783 (0.38); 1.0178 (0.73); 1.0046 (0.71); 0.9883 (0.68); 0.9751 (0.67); 0.0080 (0.47); -0.0002 (15.90); -0.0085 (0.48)
77	[DMSO-d6, 400 MhZ] 7.0746 (1.67); 6.9399 (3.53); 6.8052 (1.76); 5.7648 (1.37); 3.7935 (15.02); 3.4985 (0.55); 3.4942 (0.56); 3.3343 (12.87); 3.31 16 (1.95); 3.2933 (1.35); 3.2794 (1.22); 2.8139 (0.82); 2.5105 (24.96); 2.5064 (31.92); 2.5025 (24.57); 2.2983 (1.08); 2.1743 (1.00); 2.1052 (1.05); 2.0697 (1.20); 2.0425 (0.75); 1.9937 (0.79); 1.8997 (1.71); 1.7669 (1.84); 1.7246 (0.95); 1.7020 (0.97); 1.6105 (0.43); 1.5171 (0.79); 1.5102 (0.79); 1.4952 (0.79); 1.2482 (0.74); 1.2270 (0.69); 1.1899 (14.78); 1.1615 (1.24); 1.0646 (4.07); 1.0479 (4.24); 1.0079 (16.00); 0.9353 (0.55); 0.8873 (0.55); 0.8795 (0.65); 0.8727 (0.65); 0.8626 (0.86); 0.8450 (0.54); 0.7467 (3.07); 0.6398 (0.36); 0.6325 (0.36); 0.6006 (1.12); 0.5775 (1.45); 0.4766 (1.47); 0.4536 (1.04)
78	[DMSO-d6, 400 MhZ] 8.3397 (1.73); 7.2632 (0.95); 7.1273 (1.98); 6.9914 (1.01); 5.7591 (0.82); 3.9153 (16.00); 3.5331 (0.36); 3.5058 (0.62); 3.4814 (0.48); 3.3573 (0.53); 3.3244 (121.07); 3.3038 (1.53); 3.2894 (1.10); 2.9293 (0.77); 2.51 14 (28.31); 2.5070 (37.63); 2.5()27 (27.59); 2.3334 (0.58); 2.3293 (0.60); 2.3120 (0.91); 2.3024 (0.81); 2.2936 (0.93); 2.2772 (0.49); 2.2193 (0.37); 2.1956 (0.71); 2.1799 (0.77); 2.1577 (0.54); 2.1420 (0.35); 2.1 188 (0.77); 2.0893 (0.99); 2.0635 (0.54); 1.8932 (1.43); 1.8864 (1.24); 1.7760 (1.06); 1.7627 (1.67); 1.7476 (1.07); 1.7227 (0.70); 1.7061 (0.91); 1.6914 (0.69); 1.51 19 (0.77); 1.5043 (0.76); 1.4792 (0.93); 1.4716 (0.65); 1.2293 (0.41); 1.2050 (0.93); 1.1897 (15.03); 1.1721 (0.92); 1.0943 (0.43); 1.0615 (5.96); 1.0438 (5.71); 1.0094 (15.72); 0.9693 (0.39); 0.8870 (0.37); 0.8708 (0.38); 0.8530 (0.37); 0.825C (2.36); 0.8186 (2.20); 0.8120 (2.16); 0.8080 (2.39); 0.7768 (1.29); 0.7510 (1.00); 0.6357 (0.76); 0.6301 (0.82); 0.6075¡ (1.12); 0.5018 (1.20); 0.4938 (0.91); 0.4792 (0.76); 0.4725 (0.69)
79	[DMSO-d6, 4(X) MhZ] 7.105 7 (0.93); 6.97W/ (1.84); 6.834?i (0.91); 3.881 ¡ (16.00); 3.5861 (0.39); 3.3395 (261.58); 3.3166 (4.51); 3.2564 (1.18); 3.2327 (0.94); 2.7775 (1.21); 2.6761 (0.52); 2.6713 (0.47); 2.51 15 (44.42); 2.5072 (58.56); 2.502 9 (43.69); 2.3C¡38 (1.32); 2.1¡665 (1.90); 2.1C¡67 (1.52); 2.0559 (0.53); 1.9938 (0.36); 1.9199 (1.50); 1.7842 (1.48); 1.7410 (0.66); 1.7232 (0.55); 1.6478 (1.89); 1.4745 (0.33); 1.4602 (0.33); 1.2394 (0.54); 1.1969 (8.92); 1.1225 (0.65); 1.0863 (3.98); 1.0702 (4.13); 1.0482 (1.73); 1.0420 (1.71); 1.0142 (9.92); 0.9882 (3.37); 0.9320 (0.93); 0.8933 (1.03); 0.8763 (1.00); 0.8046 (1.58); 0.7835 (1.61); 0.7387 (0.59); 0.7047 (0.47); 0.6057 (2.90); 0.5941 (2.86); 0.4447 (1.08)
80	[DMSO-d6, 4()0 MhZ] 8.090^i (0.68); 8.076Ci (1.25); 8.062*·¡ (0.71); 7.235c5 (1.45); 7.1008 (3.19); 6.9660 (1.62); 3.8739 (14.55); 3.32E¡8 (80.1 1); 3.2927 (0.61); 3.2785 (0.97); 3.26¡06 (0.96); 3.24¡64 (1.47); 3.2326 (0.81); 3.1761 (0.76); 3.1598 (0.99); 3.1562 (1.03); 3.1403 (1.03); 3.1274 (0.60); 3.1241 (0.66); 3.1079 (0.50); 2.5056 (22.01); 2.5013 (28.59); 2.497 0 (21.26); 2.3C¡42 (0.39); 2.28¡85 (0.88); 2.27¡84 (0.77); 2.27¡01 (0.93); 2.2538 (0.48); 2.0897 (0.45); 2.0636 (0.90); 2.0589 (0.86); 2.0315 (0.81); 1.9999 (0.54); 1.9812 (0.73); 1.9646 (0.68); 1.9403 (0.35); 1.8828 (1.29); 1.8757 (1.08); 1.751 1 (1.95); 1.7362 (3.24); 1.7203 (1.51); 1.5643 (0.74); 1.5577 (0.80); 1.5507 (0.79); 1.5444 (0.75); 1.5312 (0.72); 1.5251 (0.73); 1.5177 (0.76); 1.5123 (0.95); 1.1904 (1.21); 1.1784 (15.36); 1.0372 (7.54); 1.0196 (7.33);

Ex.	¹H-NMR [solvent - spectrometer Mhz]
	1.0044 (0.66); 0.9810 (16.00); 0.9651 (0.89); 0.7881 (2.39); 0.7643 (2.34)
81	[DMSO-Cl6, 400 MhZ] 7.9731 (0.63); 7.9587 (1.22); 7.9447 (0.70); 7.2705 (1.45); 7.1358 (3.32); 7.0012 (1.61); 3.8743 (0.43); 3.7827 (10.95); 3.3295 (109.92); 3.2579 (0.38); 3.2433 (0.71); 3.2260 (0.89); 3.2110 (1.37); 3.1968 (0.79); 3.1854 (0.81); 3.1682 (1.28); 3.1519 (1.08); 3.1362 (0.59); 3.1196 (0.37); 2.8909 (0.60); 2.7311 (0.48); 2.5108 (10.13); 2.5065 (20.12); 2.5020 (26.28); 2.4975 (19.18); 2.4932 (9.49); 2.3002 (0.40); 2.2842 (0.88); 2.2729 (0.75); 2.2649 (0.93); 2.2487 (0.48); 2.2381 (0.35); 2.0540 (0.41); 2.0287 (0.86); 1.9981 (1.27); 1.9789 (0.87); 1.9631 (0.68); 1.9385 (0.35); 1.8862 (0.76); 1.8735 (1.35); 1.8657 (1.05); 1.7565 (0.86); 1.7432 (2.20); 1.7281 (2.12); 1.7190 (1.24); 1.5401 (0.62); 1.5282 (0.88); 1.5218 (0.77); 1.5088 (0.72); 1.5024 (0.78); 1.4969 (0.71); 1.1895 (1.04); 1.1757 (15.36); 1.0259 (7.84); 1.0082 (7.48); 0.9774 (16.00); 0.9629 (0.98); 0.7721 (2.35); 0.7484 (2.27)
82	[DMSO-Cl6, 400 MhZ] 10.2656 (1.11); 10.2536 (0.70); 7.4003 (1.43); 7.2655 (3.37); 7.1309 (1.62); 5.7599 (0.85); 3.8766 (0.50); 3.7907 (11.08); 3.7635 (0.45); 3.7345 (0.50); 3.7259 (0.67); 3.7126 (1.07); 3.6982 (0.78); 3.6939 (0.96); 3.6802 (1.38); 3.6666 (0.78); 3.5818 (0.71); 3.5728 (0.41); 3.5668 (0.85); 3.5599 (0.84); 3.5451 (0.94); 3.5347 (0.69); 3.5276 (0.68); 3.5126 (0.63); 3.4975 (0.42); 3.3462 (17.23); 2.5157 (3.71); 2.5114 (7.37); 2.5069 (9.94); 2.5025 (7.33); 2.4983 (3.78); 2.3322 (0.47); 2.3158 (0.90); 2.3068 (0.80); 2.2970 (0.94); 2.2810 (0.53); 2.2510 (0.42); 2.2273 (0.76); 2.2202 (0.67); 2.2119 (0.80); 2.2044 (0.90); 2.1891 (0.54); 2.1166 (0.68); 2.0910 (0.91); 2.0864 (0.93); 2.0658 (0.46); 2.0585 (0.52); 1.9017 (1.30); 1.7786 (1.64); 1.7625 (3.19); 1.7476 (1.99); 1.7312 (0.49); 1.5729 (0.74); 1.5667 (0.81); 1.5585 (0.80); 1.5523 (0.79); 1.5394 (0.76); 1.5333 (0.74); 1.5251 (0.76); 1.5187 (0.67); 1.2035 (1.13); 1.1891 (15.34); 1.1559 (0.56); 1.0788 (0.40); 1.0562 (7.26); 1.0386 (7.01); 1.0203 (0.74); 1.0130 (0.86); 0.9852 (16.00); 0.9678 (1.03); 0.9466 (0.38); 0.8091 (2.40); 0.7852 (2.29)
83	[DMS0-Cl6, 400 MhZ] 8.0225 (0.64); 8.0083 (1.23); 7.9943 (0.70); 7.2099 (1.47); 7.0750 (3.21); 6.9402 (1.60); 3.8680 (14.28); 3.3352 (125.57); 3.2472 (1.33); 3.2400 (1.42); 3.2324 (1.54); 3.2263 (2.31); 3.2205 (1.61); 3.2126 (1.46); 3.2055 (1.38); 2.5067 (18.55); 2.5024 (23.70); 2.4980 (17.29); 2.3543 (0.38); 2.3496 (0.36); 2.3335 (0.91); 2.3249 (0.82); 2.3159 (0.93); 2.2995 (0.45); 2.2957 (0.45); 2.2578 (0.54); 2.2384 (0.87); 2.2187 (0.81); 1.9417 (0.76); 1.9302 (1.74); 1.9181 (1.38); 1.9073 (1.00); 1.8951 (1.29); 1.8865 (1.73); 1.8729 (2.59); 1.8649 (2.15); 1.8591 (1.92); 1.8357 (1.62); 1.8212 (0.65); 1.8158 (0.69); 1.8082 (0.70); 1.5260 (0.53); 1.5096 (0.73); 1.4997 (0.57); 1.4888 (0.58); 1.4828 (0.64); 1.4740 (0.56); 1.1827 (0.57); 1.1646 (15.76); 1.0376 (16.00); 0.8717 (2.52); 0.8481 (2.45); 0.7923 (0.34)
84	[DMSO-d6, 400 MhZ] 7.8849 (0.63); 7.8713 (1.18); 7.8573 (0.67); 7.2588 (1.36); 7.1241 (2.98); 6.9894 (1.48); 3.8683 (0.42); 3.7760 (10.95); 3.6611 (0.33); 3.3285 (74.89); 3.2239 (1.66); 3.2055 (2.82); 3.1889 (1.90); 2.5064 (17.48); 2.5021 (21.94); 2.4978 (15.91); 2.3477 (0.40); 2.3429 (0.39); 2.3286 (1.01); 2.3189 (0.82); 2.3094 (0.95); 2.2935 (0.48); 2.2465 (0.61); 2.2276 (0.89); 2.2201 (0.73); 2.2085 (0.63); 1.8982 (2.40); 1.8811 (2.74); 1.8686 (2.49); 1.8596 (2.09); 1.8290 (2.19); 1.8052 (1.52); 1.5190 (0.48); 1.5015 (0.65); 1.4920 (0.64); 1.4833 (0.57); 1.4737 (0.69); 1.1804 (0.56); 1.1615 (15.78); 1.0376 (16.00); 1.0169 (0.35); 0.9508 (0.42); 0.8598 (2.52); 0.8483 (0.34); 0.8363 (2.44); 0.7894 (0.34)
88	[DMSO-d6, 400 MhZ] 7.9252 (0.71); 7.9098 (1.31); 7.8942 (0.70); 7.2103 (1.69); 7.0754 (3.72); 6.9406 (1.83); 3.8747 (16.00); 3.3230 (49.80); 2.9410 (5.38); 2.9250 (5.36); 2.8906 (1.95); 2.7312 (1.60); 2.5101 (9.81); 2.5058 (19.42); 2.5014 (25.26); 2.4969 (18.45); 1.9335 (4.55); 1.6831 (1.99); 1.6533 (4.18); 1.6015 (4.17); 1.5725 (2.08); 1.5127 (0.82); 1.4915 (13.76); 1.4864 (13.54)
89	[DMSO-d6, 400 MhZ] 7.7488 (0.75); 7.7339 (1.47); 7.7187 (0.83); 7.2298 (1.72); 7.0950 (3.70); 6.9604 (1.84); 3.8751 (0.51); 3.7834 (13.90); 3.7166 (0.37); 3.3247 (55.37); 2.9256 (5.88); 2.9097 (5.72); 2.5060 (18.74); 2.5019 (23.68); 2.4978 (17.60); 1.9279 (5.57); 1.6807 (2.61); 1.6510 (4.93); 1.5916 (4.90); 1.5623 (2.58); 1.5072 (0.53); 1.4880 (1.13); 1.4634 (16.00); 1.4589 (15.54)
90	[DMSO-d6, 400 MhZ] 7.8721 (0.91); 7.8579 (1.69); 7.8441 (0.90); 7.2569 (2.59); 7.1222 (6.17); 6.9875 (2.90); 3.7717 (16.00); 3.3470 (3.61); 3.3315 (5.22); 3.3221 (80.94); 3.3133 (4.32); 2.8909 (1.30); 2.7318 (1.02); 2.6752 (0.41); 2.6706 (0.56); 2.6660 (0.40); 2.5241 (1.41); 2.5193 (2.24); 2.5107 (31.99); 2.5061 (64.92); 2.5015 (86.46); 2.4969 (62.75); 2.4924 (29.70); 2.3329 (0.41); 2.3283 (0.56); 2.3237 (0.39); 1.9136 (2.08); 1.8796 (3.43); 1.8613 (3.42); 1.8225 (2.24); 1.7946 (4.91); 1.7373 (3.86); 1.6910 (6.66); 1.6527 (1.89); 1.4969 (2.82); 1.4660 (2.50); 1.2356 (0.35); 0.0080 (0.65); -0.0002 (22.54); -0.0086 (0.67)
91	[DMSO-d6, 400 MhZ] 8.0145 (0.70); 8.0001 (1.27); 7.9852 (0.66); 7.2068 (1.87); 7.0719 (4.34); 6.9371 (2.08); 3.8646 (16.00); 3.3647 (2.72); 3.3497 (3.24); 3.3458 (3.33); 3.3301 (4.56); 3.3224 (69.22); 2.8904 (0.77); 2.7317 (0.60); 2.7305 (0.63); 2.6750 (0.34); 2.6704 (0.46); 2.6658 (0.34); 2.5238 (1.26); 2.5104 (25.71); 2.5059 (51.60); 2.5013 (68.80); 2.4967 (50.55); 2.4922 (24.29); 2.3327 (0.32); 2.3281 (0.44); 1.9160 (1.53); 1.8825 (2.50); 1.8657 (2.51); 1.8292 (1.61); 1.7987 (3.48); 1.7737 (2.95); 1.6940 (5.53); 1.6602 (1.40); 1.5021 (2.07); 1.4709 (1.81); 1.2353 (0.44); 0.0080 (0.55); -0.0002 (16.65); -0.0085 (0.51)
92	[DMSO-d6, 400 MhZ] 8.2531 (3.80); 8.1463 (0.69); 8.1323 (1.29); 8.1176 (0.65); 7.4641 (1.60); 7.3283 (3.85); 7.1926 (1.78); 3.9035 (16.00); 3.3361 (3.41); 3.3244 (92.73); 3.3027 (2.58); 2.8907 (1.26); 2.7311 (0.98); 2.6754 (0.33); 2.6709 (0.45); 2.6662 (0.33); 2.5242 (1.28); 2.5194 (2.01); 2.5108 (25.08); 2.5063 (50.15); 2.5017 (66.45); 2.4971 (47.94); 2.4926 (22.43); 2.3286 (0.44); 1.9127 (1.42); 1.8797 (1.97); 1.8730 (1.94); 1.8650 (1.92); 1.8566 (1·57); 1.8484 (1.60); 1.8216 (1.97); 1.7939 (3.05); 1.7465 (2.62); 1.6927 (4.79); 1.6575 (1.27); 1.5030 (1.93); 1.4718 (1.68); 1.2352 (0.32); -0.0002 (9.54)
97	[CHCl3-d, 250 MhZ] 7.3618 (0.32); 7.2672 (8.92); 7.2649 (9.59); 7.2602 (4.22); 7.1392 (0.64); 6.9230 (0.38); 5.0211 (0.65); 3.7762 (16.00); 2.8047 (0.91); 2.7752 (1.02); 2.7537 (1.09); 2.2665 (2.64); 2.1794 (1.21); 2.0430 (1.38); 1.7094

Example	¹H-NMR [solvent - spectrometer Mhz]
	(0.52); 1.5648 (3.37); 1.5354 (3.60); 1.4583 (2.09); 1.4062 (4.44); 1.3814 (4.13); 1.3384 (1.88); 1.3177 (2.15); 1.2539 (6.45); 1.2051 (4.59); 1.1653 (4.82); 1.1263 (3.03); 1.0774 (1.01); 1.0144 (1.08); 0.8130 (1.47); 0.561 1 (1.23); 0.0021 (5.47); -0.0002 (6.17)
98	[CHCl3-d, 250 MhZ] 7.2750 (3.63); 7.2708 (3.76); 7.2649 (2.10); 5.3072 (0.83); 5.3030 (0.86); 5.2969 (0.52); 5.0470 (0.69); 3.6552 (16.00); 2.7050 (1.31); 2.3318 (6.79); 2.2622 (4.06); 2.1839 (1.96); 2.0906 (0.98); 2.0362 (1.32); 1.6673 (0.99); 1.6226 (1.31); 1.5308 (3.53); 1.4505 (1.99); 1.4077 (4.37); 1.3881 (4.36); 1.3382 (1.85); 1.2533 (7.47); 1.2076 (5.19); 1.1635 (5.05); 1.1277 (3.07); 1.0657 (1.08); 1.0127 (1.09); 0.8525 (1.17); 0.7946 (1.39); 0.6277 (1.08); 0.3015 (0.68); 0.0040 (2.36); -0.0002 (2.46); -0.0061 (1.40)
99	[CHCl3-d, 400 MhZ] 7.31 19 (0.56); 7.2629 (34.05); 7.2138 (0.44); 7.0265 (0.67); 6.9987 (0.66); 6.9912 (1.57); 6.8963 (0.41); 6.8902 (1.39); 6.8613 (1.04); 6.8549 (3.19); 6.7540 (0.71); 6.7251 (0.53); 6.7187 (1.59); 5.3016 (7.67); 3.8623 (0.34); 3.8144 (16.00); 3.7650 (0.33); 3.6544 (3.12); 3.6292 (3.37); 3.5959 (0.98); 3.5266 (1.91); 2.2329 (1.79); 2.1935 (1.34); 2.1 101 (1.56); 1.8073 (0.43); 1.7914 (0.86); 1.7785 (1.16); 1.7727 (1.17); 1.7595 (1.07); 1.7453 (0.88); 1.7315 (0.52); 1.6096 (0.44); 1.5987 (0.34); 1.5890 (0.58); 1.5793 (0.96); 1.5648 (11.87); 1.5444 (0.94); 1.5221 (1.82); 1.5162 (1.85); 1.5006 (1.78); 1.4938 (1.72); 1.4695 (1.1 1); 1.4619 (1.04); 1.4509 (1.00); 1.4424 (0.99); 1.4369 (0.92); 1.4198 (1.00); 1.3878 (9.05); 1.3712 (9.72); 1.3578 (4.62); 1.3412 (5.29); 1.3216 (1.52); 1.3157 (1.42); 1.3039 (1.71); 1.2871 (2.01); 1.2538 (1.54); 1.2458 (1.38); 1.2294 (8.10); 1.2128 (7.91); 1.2018 (1.19); 1.1965 (1.48); 1.1851 (1.18); 1.1722 (2.19); 1.1552 (2.45); 1.1263 (2.15); 1.1019 (1.56); 1.0683 (0.49); 1.0514 (0.44); 0.0079 (0.78); -0.0002 (23.1 1); -0.0083 (1.18); -0.0493 (0.37)
100	[CHCl3-d, 500 MhZ] 7.8854 (0.98); 7.8764 (0.67); 7.8586 (1.15); 7.8440 (2.08); 7.3759 (0.37); 7.3439 (0.77); 7.2668 (0.86); 7.2606 (2.99); 7.2432 (0.58); 7.2350 (1.56); 7.1580 (0.38); 7.1261 (0.78); 7.0939 (0.57); 5.2978 (0.92); 4.1698 (0.62); 4.1648 (0.62); 3.9817 (12.52); 3.9769 (8.44); 3.9713 (16.00); 3.8533 (3.83); 3.7095 (12.32); 3.6818 (14.95); 3.6659 (2.33); 3.6495 (0.45); 3.5830 (1.69); 2.2660 (1.05); 2.2204 (1.65); 2.1966 (0.68); 2.1 115 (1.61); 2.1035 (1.35); 2.0752 (1.14); 2.0029 (8.44); 1.8017 (0.49); 1.7889 (0.98); 1.7789 (1.22); 1.7728 (1.23); 1.7642 (1.09); 1.7519 (0.88); 1.7417 (0.45); 1.6165 (0.41); 1.6077 (0.62); 1.5987 (0.56); 1.5923 (0.89); 1.5837 (1.35); 1.5749 (0.94); 1.5688 (0.90); 1.5605 (1.18); 1.5525 (0.81); 1.5381 (0.48); 1.5295 (0.69); 1.5158 (1.96); 1.5091 (1.76); 1.4984 (2.13); 1.4951 (2.13); 1.4679 (1.01); 1.4549 (0.73); 1.4492 (0.95); 1.4434 (0.68); 1.4304 (0.69); 1.4264 (0.66); 1.3854 (1.33); 1.3824 (1.34); 1.3677 (9.03); 1.3544 (8.33); 1.3340 (3.68); 1.3207 (3.75); 1.3098 (0.84); 1.3018 (1.16); 1.2976 (1.10); 1.281 1 (2.29); 1.2732 (1.03); 1.2677 (1.43); 1.2551 (1.59); 1.2426 (1.31); 1.2342 (1.02); 1.2159 (1.48); 1.2085 (6.77); 1.1952 (6.68); 1.1710 (2.34); 1.1675 (2.22); 1.1555 (2.03); 1.1513 (2.22); 1.1454 (1.42); 1.1413 (1.26); 1.1284 (1.63); 1.1 124 (1.65); 1.0958 (1.21); 1.0798 (0.49); 1.0668 (0.47); 0.0692 (2.27); -0.0002 (22.13); -0.0067 (0.86)
101	[CHCl3-d, 400 MhZ] 7.2726 (8.52); 6.9856 (0.57); 6.9758 (1.25); 6.9634 (1.46); 6.9490 (1.26); 6.8489 (1.13); 6.8390 (2.57); 6.8266 (3.02); 6.8124 (2.46); 6.7124 (0.57); 6.7023 (1.31); 6.6899 (1.53); 6.6757 (1.25); 6.2093 (1.41); 6.2028 (1.61); 6.1971 (1.62); 6.1386 (0.65); 6.1245 (1.51); 6.1 171 (2.10); 6.1084 (2.37); 6.1020 (3.23); 6.0950 (2.46); 6.0888 (2.14); 6.0832 (1.61); 6.0763 (0.67); 6.0689 (0.65); 5.9843 (0.58); 5.9222 (0.75); 5.3013 (9.94); 4.1293 (0.53); 4.1 117 (0.54); 3.81 13 (16.00); 3.7938 (9.91); 3.7830 (8.68); 2.8600 (2.29); 2.8134 (4.39); 2.7591 (0.84); 2.6647 (2.36); 2.5447 (1.31); 1.9238 (1.10); 1.9144 (1.17); 1.9010 (1.1 1); 1.8947 (1.68); 1.8855 (1.35); 1.8729 (1.14); 1.8634 (1.29); 1.8559 (0.58); 1.8401 (0.76); 1.8309 (0.71); 1.8177 (0.58); 1.8107 (0.78); 1.8017 (0.60); 1.7890 (0.55); 1.7793 (0.52); 1.6927 (1.33); 1.4994 (1.30); 1.4943 (1.38); 1.4889 (1.15); 1.4794 (1.46); 1.4743 (1.59); 1.4380 (1.22); 1.4331 (1.27); 1.4280 (0.86); 1.4140 (8.50); 1.3972 (7.41); 1.3828 (1.22); 1.3608 (2.33); 1.3473 (8.29); 1.3305 (9.58); 1.3257 (8.29); 1.3086 (8.02); 1.2767 (8.24); 1.2596 (7.56); 1.2368 (0.85); 1.2322 (0.47); 1.2268 (0.40); 1.2162 (1.03); 1.21 14 (1.01); 1.1965 (1.13); 1.1902 (1.26); 1.1697 (0.85); 1.1553 (0.45); 0.7487 (1.66); 0.7298 (2.87); 0.7120 (3.18); 0.6958 (3.08); 0.6802 (2.62); 0.6593 (1.97); 0.6462 (2.18); 0.6410 (2.19); 0.6176 (2.45); 0.6125 (2.71); 0.6077 (2.49); 0.6008 (2.43); 0.5900 (2.30); 0.5830 (2.12); 0.5792 (2.06); 0.5722 (1.50); 0.5517 (0.51); 0.5408 (0.42); 0.5284 (0.51); 0.5152 (0.58); 0.5017 (0.49); 0.4897 (0.33); -0.0002 (5.63)
102	[CHCl3-d, 400 MhZ] 7.601 1 (1.67); 7.5531 (1.91); 7.5156 (1.07); 7.3152 (0.48); 7.2650 (24.53); 7.2145 (0.43); 7.1916 (1.13); 7.1492 (1.43); 7.1321 (0.99); 7.0546 (2.32); 7.0122 (2.94); 7.0080 (1.41); 7.0012 (0.53); 6.9952 (2.00); 6.9177 (1.16); 6.8752 (1.47); 6.8708 (0.70); 6.8583 (1.01); 6.2047 (1.40); 6.1969 (1.59); 6.1908 (1.71); 6.1837 (1.51); 6.1406 (0.69); 6.1328 (0.69); 6.1267 (1.36); 6.1 192 (1.43); 6.1066 (1.90); 6.0992 (2.88); 6.0903 (3.1 1); 6.0835 (1.81); 6.0759 (0.50); 6.0689 (0.52); 5.9814 (0.62); 5.9020 (0.78); 4.1481 (1.00); 4.1303 (2.59); 4.1 124 (2.64); 4.0946 (1.10); 3.9918 (0.36); 3.9674 (16.00); 3.9534 (12.05); 3.9420 (10.78); 3.9242 (0.49); 3.9126 (0.40); 3.9025 (0.38); 2.8574 (1.84); 2.8022 (3.20); 2.7977 (3.26); 2.7620 (0.85); 2.7480 (1.03); 2.7334 (0.83); 2.7206 (0.58); 2.71 12 (0.49); 2.6627 (1.50); 2.6377 (0.50); 2.5633 (1.08); 2.5224 (1.25); 2.0447 (9.79); 1.9470 (0.33); 1.9225 (0.92); 1.9129 (0.89); 1.8993 (1.1 1); 1.8939 (1.23); 1.8848 (1.03); 1.8775 (0.80); 1.8713 (0.96); 1.8614 (0.84); 1.8486 (0.40); 1.8352 (0.56); 1.8256 (0.55); 1.8128 (0.55); 1.8065 (0.69); 1.8036 (0.66); 1.7971 (0.57); 1.7845 (0.53); 1.7748 (0.52); 1.6088 (6.1 1); 1.4987 (0.93); 1.4932 (1.00); 1.4880 (0.76); 1.4783 (1.28); 1.4729 (1.31); 1.4460 (0.50); 1.4288 (1.19); 1.4245 (1.24); 1.4126 (8.00); 1.3958 (7.53); 1.3788 (1.26); 1.3563 (2.24); 1.3455 (8.39); 1.3285 (10.30); 1.3253 (8.32); 1.3080 (7.61); 1.2809 (8.42); 1.2776 (5.38); 1.2639 (7.33); 1.2593 (6.67); 1.2414 (2.83); 1.231 1 (0.56); 1.2208 (0.40); 1.2090 (0.86); 1.2041 (0.80); 1.1888 (1.08); 1.1827 (1.25); 1.1621 (0.83); 1.1554 (0.75); 1.1478 (0.56); 0.8065 (0.46); 0.7918 (1.02); 0.7706 (2.20); 0.7527 (4.1 1); 0.7358 (3.87); 0.7233 (2.75); 0.7171 (2.78); 0.7009 (2.84); 0.6832 (2.06); 0.6738 (1.87); 0.6631 (1.57); 0.6502 (1.15); 0.6330 (0.82); 0.6237 (0.92); 0.6129 (1.53); 0.6058 (1.77); 0.6025 (1.89); 0.5920 (1.68); 0.5823 (1.37); 0.5768 (1.17); 0.5724 (1.04); 0.5659 (0.95); 0.5492 (0.39); 0.5358 (0.48); 0.5231 (0.61); 0.5079 (0.49); 0.4957 (0.35); 0.0079 (0.67); -0.0002 (16.48); -0.0085 (0.55)
106	[DMSO-d6, 400 MhZ] 7.6702 (1.33); 7.6467 (1.39); 7.1928 (1.62); 7.0578 (3.13); 6.9229 (1.75); 3.8690 (16.00); 3.7259 (0.46); 3.7089 (1.04); 3.6914 (1.22); 3.6855 (1.21); 3.6679 (1.07); 3.3232 (70.82); 2.8900 (2.03); 2.7305 (1.74); 2.5051 (23.28); 2.5009 (29.65); 2.4966 (21.71); 1.9441 (4.67); 1.6765 (2.00); 1.6468 (4.25); 1.6017 (4.38); 1.5709 (2.26);

Ex.	¹H-NMR [solvent - spectrometer Mhz]
	1.5262 (11.25); 1.4934 (0.85); 1.0098 (9.17); 0.9924 (8.99)
107	[DMSO-d6, 400 Mhz] 7.4663 (1.65); 7.4426 (1.68); 7.2019 (1.91); 7.0671 (3.71); 6.9326 (2.05); 3.8689 (0.58); 3.7783 (15.39); 3.7257 (0.34); 3.7085 (0.40); 3.6909 (1.27); 3.6734 (1.41); 3.6676 (1.39); 3.6500 (1.24); 3.6328 (0.38); 3.4832 (0.36); 3.3240 (78.74); 2.5051 (26.28); 2.5011 (33.25); 2.4968 (24.30); 1.9409 (5.81); 1.6774 (2.60); 1.6478 (5.23); 1.5917 (5.14); 1.5627 (2.70); 1.5260 (1.10); 1.5001 (16.00); 1.0086 (11.30); 0.9912 (11.15)

Intensity of sharp signals correlates with the height of the signals in a printed example of a NMR spectrum in cm and shows the real relations of signal intensities. From broad signals several peaks or the middle of the signal and their relative intensity in comparison to the most intensive signal in the spectrum can be shown.

The ¹H-NMR peak lists are similar to classical ¹H-NMR prints and contain therefore usually all peaks, which are listed at classical NMR-interpretation. Additionally they can show like classical ¹H-NMR prints signals of solvents, stereoisomers of the target compounds, which are also object of the invention, and/or peaks of impurities. To show compound signals in the delta-range of solvents and/or water the usual peaks of solvents, for example peaks of DMSO-d6 in DMSO-d6-d6 and the peak of water are shown in our ¹H-NMR peak lists and have usually on average a high intensity.

The peaks of stereoisomers of the target compounds and/or peaks of impurities have usually on average a lower intensity than the peaks of target compounds (for example with a purity >90%). Such stereoisomers and/or impurities can be typical for the specific preparation process. Therefore their peaks can help to recognize the reproduction of our preparation process via "side-products-fingerprints".

An expert, who calculates the peaks of the target compounds with known methods (MestreC, ACD-simulation, but also with empirically evaluated expectation values), can isolate the peaks of the target compounds as needed optionally using additional intensity filters. This isolation would be similar to relevant peak picking at classical ¹H-NMR interpretation.

Further details of NMR-data description with peak lists can be found in the publication "Citation of NMR Peaklist Data within Patent Applications" of the Research Disclosure Database Number 564025.

The following examples illustrate in a non-limiting manner the preparation and efficacy of the compounds of formula (I) according to the invention.

Preparation example 1 : preparation of N-[1-(adamantan-1-yl)ethyl]-N-cyclopropyl-5-fluoro-1,3-dimethyl-1H-pyrazole-4-carboxamide (compound 103)

Step 1 : preparation of N-[1-(adamantan-1-yl)ethyl]cyclopropanamine hydrochloride

To a solution of 640 mg (11.2 mmol) of cyclopropylamine in 10 mL of methanol is added 1 g of 3 Å molecular sieves followed by a slow addition of 673 mg (11.2 mmol) of acetic acid and 1 g (5.6 mmol) of 1-(adamantan-1-yl)ethanone. The reaction mixture is stirred for 5 hours at reflux. The reaction mixture is then cooled to 0 °C and 528 mg (8.4 mmol) of sodium cyanoborohydride are slowly added. The reaction mixture is further stirred for 2 hours at reflux then left overnight at ambient temperature. The reaction mixture is filtered over a cake of diatomaceous earth and the cake is washed twice by 50 mL of methanol.

The combined methanolic extracts are concentrated under vacuum. The residu is dissolved in 50 mL of ethyl acetate and the organic solution is washed twice by 100 mL of a 1N solution of sodium hydroxide followed by water and dried over magnesium sulfate. Vacuum concentration gives a yellow oil which is dissolved in 5 mL of diethyl ether. Addition of 2 mL of a 4 N solution of HCl in dioxan and filtration, yields 702 mg (57% yield) of the hydrochloride salt of N-[1-(adamantan-1-yl)ethyl]cyclopropanamine as a white solid (M+H = 256). logP = 5.82 (for the free base).

Step 2 : preparation of N-[1-(adamantan-1-yl)ethyl]-N-cyclopropyl-5-fluoro-1.3-dimethyl-1H-pyrazole-4-carboxamide

At ambient temperature, a solution of 114 mg (0.645 mmol) of 5-fluoro-1,3-dimethyl-1H-pyrazole-4-carbonyl chloride in 2 mL of acetonitrile is added dropwise to a solution of 150 mg (0.586 mmol) of N-[1-(adamantan-1-yl)ethyl]cyclopropanamine and 178 mg (1.76 mmol) of triethylamine in 2 ml of acetonitrile. The reaction mixture is stirred for 16 hrs at ambient temperature. 25 mL of water are then added to the reaction mixture and extracted twice by 25 mL of ethyl acetate. The combined organic layers are washed by brine, dried over magnesium sulfate and concentrated. Column chromatography on silica gel (heptane/ethyl acetate 70/30) yields 146 mg (69% yield) of N-[1-(adamantan-1-yl)ethyl]-N-cyclopropyl-5-fluoro-1.3-dimethyl-1H-pyrazole-4-carboxamide (M+H = 360).

General preparation example 2 : thionation of amide of formula (I) on Chemspeed ™ apparatus

In a 13 ml Chemspeed ™ vial is weighted 0.27 mmol of phosphorous pentasulfide (P2S5). 3 mL of a 0.1 8 molar solution of the amide (I) (0.54 mmol) in dioxane is added and the mixture is heated at reflux for two hours. The temperature is then cooled to 80 "C and 2.5 mL of water are added. The mixture is heated at 80 °C for one more hour. 2 mL of water are then added and the reaction mixture is extracted twice by 4 mL of dichloromethane. The organic phase is deposited on a basic alumina cartridge (2 g) and eluted twice by 8 mL of dichloromethane. The solvents are removed and the crude thioamide derivative is analyzed by LCMS and NMR. Insufficiently pure compounds are further purified by preparative LCMS.

Example A : *in vivo* preventive test on *Sphaerotheca fuiiginea* (cucumber)

Solvent: 49 parts by weight of N,N-dimethylformamide

Emulsifier: 1 part by weight of alkylarylpolyglycolether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound at the stated rate of application. One day after this treatment, the plants are inoculated with an aqueous spore suspension of *Sphaerotheca fuiiginea.* Then the plants are placed in a greenhouse at approximately 23 "C and a relative atmospheric humidity of approximately 70%.

The test is evaluated 7 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, high (at least 80%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table A:

Table A :

Example	Efficacy	Example	Efficacy	Example	Efficacy
14	98	78	95	96	95
18	83	82	93	97	100
25	88	83	90	98	93
71	100	93	100	103	96
72	93	94	100	104	96
77	100	95	95	105	100

Example B : _in vivo_ preventive test on _Sphaerotheca fuiiginea_ (powdery mildew on cucurbits)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO and then diluted with water to obtain the desired active material concentration.

Gherkin plants ("Vert petit de Paris" variety), sown in starter cups on a 50/50 peat soil-pozzolana substrate and grown at 24 °C, are treated at the Z11 cotyledon stage by spraying with the active ingredient prepared as described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not containing the active material.

After 24 hours, the plants are contaminated by spraying the cotyledons with an aqueous suspension of _Sphaerotheca fuiiginea_ spores (100 000 spores per mL). The spores are collected from infected plants. The contaminated gherkin plants are incubated at about 20 °C and at 70-80% relative humidity.

Grading (% of efficacy) is carried out 12 days after the contamination, in comparison with the control plants.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table B :

Table B:

Example	Efficacy	Example	Efficacy	Example	Efficacy
5	98	29	95	66	100
6	100	30	100	67	100
7	100	31	100	68	98
10	100	32	100	69	100
11	100	33	94	70	98
12	98	38	93	87	79
13	80	50	90	99	100
19	100	59	100	100	100
20	100	62	100	101	100
22	100	63	100	102	100
23	83	64	89		
25	100	65	100		

Example C : _in vivo_ preventive test on _Alternaria solani_ (tomato)

Solvent: 49 parts by weight of N,N-dimethylformamide

Emulsifier: 1 part by weight of alkylarylpolyglycolether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound at the stated rate of application. One day after this treatment, the plants are inoculated with an aqueous spore suspension of *Alternaria solani.* The plants remain for one day in an incubation cabinet at approximately 22 °C and a relative atmospheric humidity of 100%. Then the plants are placed in an incubation cabinet at approximately 20 °C and a relative atmospheric humidity of 96%.

The test is evaluated 7 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control while an efficacy of 100% means that no disease is observed.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table C:

Table C:

Example	Efficacy	Example	Efficacy	Example	Efficacy
14	100	38	95	93	95
15	89	71	100	94	100
17	94	72	100	95	100
18	80	77	95	96	100
21	90	78	100	97	95
22	100	79	94	98	95
23	80	80	100	103	100
25	100	81	100	104	95
28	70	82	90	105	95
34	95	83	95	106	100
35	80	84	95	107	95
36	95	88	100		
37	95	89	95		

Example D : *in vivo* preventive test on *Alternaria brassicae* (leaf spot on radish)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO, and then diluted with water to obtain the desired active material concentration.

Radish plants ("Pernod Clair" variety), sown in starter cups on a 50/50 peat soil pozzolana substrate and grown at 17 °C, are treated at the cotyledon stage by spraying with the active ingredient prepared as described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not containing the active material.

After 24 hours, the plants are contaminated by spraying the cotyledons with an aqueous suspension of *Alternaria brassicae* spores (50 000 spores per ml). The spores are collected from a 15-day-old culture. The contaminated radish plants are incubated at 20 °C and at 100% relative humidity.

Grading (% of efficacy) is carried out 6 days after the contamination, in comparison with the control plants.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table D :

Table D:

Example	Efficacy	Example	Efficacy	Example	Efficacy
2	70	19	100	67	97
3	90	22	93	69	96
4	100	31	100	70	91
5	100	32	100	90	90
6	100	49	96	91	96
7	80	50	80	92	96
10	100	65	100	101	92
11	100	66	96	102	92

Under these conditions, excellent (at least 90%) to total protection is observed at a dose of 100 ppm of active ingredient with the following compounds from table D2 :

Table D2:

Example	Efficacy
8	100
9	100
60	100
61	92

Example E : *in vivo* preventive test on *Pyrenophora teres* (barley)

Solvent: 49 parts by weight of N.N-dimethylformamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound at the stated rate of application. One day after this treatment, the plants are inoculated with an aqueous spore suspension of *Pyrenophora teres.*

The plants remain for 48 hours in an incubation cabinet at 22 "C and a relative atmospheric humidity of 100%. Then the plants are placed in a greenhouse at a temperature of approximately 20 °C and a relative atmospheric humidity of approximately 80%.

The test is evaluated 7-9 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control while an efficacy of 100% means that no disease is observed.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table E:

Table E:

Example	Efficacy	Example	Efficacy	Example	Efficacy
14	100	36	100	84	100
15	100	37	100	93	100
16	100	38	100	94	100
17	95	71	100	95	100
18	95	72	100	96	100
21	100	77	100	97	100
22	100	78	100	98	100
23	100	79	100	103	100
24	95	80	100	104	95
25	95	81	100	105	100
28	95	82	95	106	90
34	70	83	100	107	80

Example F : *in vivo* preventive test on *Pyrenophora teres* (barley)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO, and then diluted with water to obtain the desired active material concentration.

Barley plants ("Plaisant" variety), sown in starter cups on a 50/50 peat soil pozzolana substrate and grown at 22 °C, are treated at the 1 leaf stage (10 cm height) by spraying with the active ingredient prepared as described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not containing the active material.

After 24 hours, the plants are contaminated by spraying the leaves with an aqueous suspension of *Pyrenophora teres* spores (12 000 spores per mL). The spores are collected from a 12-day-old culture. The contaminated barley plants are incubated for 48 hours at 20 °C and at 100% relative humidity, and then for 12 days at 20°C at 70-80% relative humidity.

Grading (% of efficacy) is carried out 14 days after the contamination, in comparison with the control plants.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table F :

Table F:

Example	Efficacy	Example	Efficacy	Example	Efficacy
4	100	33	100	66	100
5	97	38	100	67	98
6	100	47	88	69	97
7	100	48	88	70	79
10	93	49	88	73	100
11	100	50	88	90	81
12	100	53	75	91	75
13	97	58	100	99	100
19	100	59	100	100	100
20	97	62	97	101	100
25	86	63	79	102	100
31	97	64	71		
32	97	65	100		

Under these conditions, good (at least 70%) to total protection is observed at a dose of 100 ppm of active ingredient with the following compounds from table F2 :

Table F2:

Example	Efficacy
8	98
9	75
60	98
61	100

Example G : _in vivo_ preventive test on _Venturia inaequaiis_ (apple scab)

Solvent: 24.5 parts by weight of acetone

                    24.5 parts by weight of N,N-dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound at the stated rate of application. After the spray coating has dried on, the plants are inoculated with an aqueous conidia suspension of the causal agent of apple scab _(Venturia inaequaiis)_ and then remain for 1 day in an incubation cabinet at approximately 20 °C and a relative atmospheric humidity of 100%.

The plants are then placed in a greenhouse at approximately 21 °C and a relative atmospheric humidity of approximately 90%.

The test is evaluated 10 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, excellent (at least 95%) to total protection is observed at a dose of 100 ppm of active ingredient with the following compounds from table G :

Table G:

Example	Efficacy	Example	Efficacy	Example	Efficacy
14	99	93	100	103	100
19	100	94	100	105	100
71	100	97	98		

Example H : *in vivo* preventive test on *Septoria tritici* (wheat)

Solvent: 49 parts by weight of N.N-dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound or active compound combination is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound or active compound combination at the stated rate of application.

After the spray coating has been dried, the plants are sprayed with a spore suspension of *Septoria tritici.* The plants remain for 48 hours in an incubation cabinet at approximately 20 "C and a relative atmospheric humidity of approximately 100% and afterwards for 60 hours at approximately 15 °C in a translucent incubation cabinet at a relative atmospheric humidity of approximately 100%.

The plants are placed in the greenhouse at a temperature of approximately 15 °C and a relative atmospheric humidity of approximately 80%.

The test is evaluated 21 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table H:

Table H:

Example	Efficacy	Example	Efficacy	Example	Efficacy
12	100	62	100	94	100
14	75	69	100	103	100
19	100	71	100	104	90
20	100	93	83	105	80

Example I : *in vivo* preventive test on *Septoria tritici* (wheat)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO, and then diluted with water to obtain the desired active material concentration.

Wheat plants ("Scipion" variety), sown in starter cups on a 50/50 peat soil pozzolana substrate and grown at 22 °C, are treated at the 1 leaf stage (10 cm height) by spraying with the active ingredient prepared as described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not containing the active material.

After 24 hours, the plants are contaminated by spraying the leaves with an aqueous suspension of cryopreserved *Septoria tritici* spores (500 000 spores per mL). The contaminated wheat plants are incubated for 72 hours at 18 °C and at 100% relative humidity, and then for 21 days at 90% relative humidity.

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Grading (% of efficacy) is carried out 24 days after the contamination, in comparison with the control plants.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table I :

Table I:

Example	Efficacy	Example	Efficacy	Example	Efficacy
1	80	32	80	65	100
3	92	33	92	66	100
5	100	38	96	67	94
7	97	46	75	68	71
10	93	47	83	69	97
11	71	48	83	70	96
12	100	50	97	85	96
13	90	53	83	90	92
19	96	56	83	92	83
20	96	57	75	101	100
22	88	62	100	102	75
25	96	63	97		
31	96	64	93		

Example J : *in vivo* preventive test on *Blumeria graminis* (barley)

Solvent: 49 parts by weight of N.N-dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound. 1 part by weight of active compound or active compound combination is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound or active compound combination at the stated rate of application.

After the spray coating has been dried, the plants are dusted with spores of *Blumeria graminis f.sp. hordei.*

The plants are placed in the greenhouse at a temperature of approximately 18 °C and a relative atmospheric humidity of approximately 80% to promote the development of mildew pustules.

The test is evaluated 7 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, good (at least 75%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table J :

Table J :

Example	Efficacy	Example	Efficacy	Example	Efficacy
12	100	62	100	94	89
14	90	69	100	104	78
19	100	71	100		
20	95	93	100		

Example K : _in vivo_ preventive test on _Leptosphaeria nodorum_ (wheat)

Solvent: 49 parts by weight of N,N-dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound or active compound combination is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound or active compound combination at the stated rate of application. After the spray coating has been dried, the plants are sprayed with a spore suspension of _Leptosphaeria nodorum._

The plants remain for 48 hours in an incubation cabinet at approximately 20 °C and a relative atmospheric humidity of approximately 100%.

The plants are placed in the greenhouse at a temperature of approximately 22 °C and a relative atmospheric humidity of approximately 80%.

The test is evaluated 8 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, high (at least 80%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table K:

Table K:

Example	Efficacy	Example	Efficacy	Example	Efficacy
12	93	62	100	93	100
19	100	69	100	94	80
20	86	71	100	104	83

Example L : _in vivo_ preventive test on _Puccinia thticina_ (wheat)

Solvent: 49 parts by weight of N,N-dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound or active compound combination is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound or active compound combination at the stated rate of application.

After the spray coating has been dried, the plants are sprayed with a spore suspension of _Puccinia thticina._

The plants remain for 48 hours in an incubation cabinet at approximately 20 °C and a relative atmospheric humidity of approximately 100%.

The plants are placed in the greenhouse at a temperature of approximately 20 "C and a relative atmospheric humidity of approximately 80%.

The test is evaluated 8 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, good (at least 75%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table L:

Table L:

Example	Efficacy	Example	Efficacy	Example	Efficacy
12	100	20	78	93	100
14	83	62	100		
19	100	71	100		

Example M : _in vivo_ preventive test on _Puccinia recondite_ (brown rust on wheat)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO, and

5   then diluted with water to obtain the desired active material concentration.

Wheat plants ("Scipion" variety), sown in starter cups on a 50/50 peat soil pozzolana substrate and grown

at 22 °C, are treated at the 1 leaf stage (10 cm height) by spraying with the active ingredient prepared as

described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not

containing the active material.

10   After 24 hours, the plants are contaminated by spraying the leaves with an aqueous suspension of

Puccinia recondita spores (100 000 spores per mL). The spores are collected from an infected plant and

are suspended in water containing 2.5 mL/L of Tween 80 at 10%. The contaminated wheat plants are

incubated for 24 hours at 20 °C and at 100% relative humidity, and then for 10 days at 20 °C and at 70-

80% relative humidity.

15   Grading (% of efficacy) is carried out 12 days after the contamination, in comparison with the control

plants.

Under these conditions, good (at least 75%) to total protection is observed at a dose of 500 ppm of active

ingredient with the following compounds from table M :

20   Table M:

Example	Efficacy	Example	Efficacy	Example	Efficacy
1	94	21	94	63	81
2	98	22	100	64	94
3	75	23	81	65	100
4	78	25	100	66	94
5	100	31	100	67	97
7	98	32	98	68	75
10	100	38	100	69	81
11	94	48	75	87	75
12	94	58	98	99	95
19	100	59	89	100	90
20	81	62	98	102	90

Example N : _in vivo_ preventive test on _Fusarium nivale_ (wheat)

Solvent: 49 parts by weight of N.N-dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

25   To produce a suitable preparation of active compound, 1 part by weight of active compound or active

compound combination is mixed with the stated amounts of solvent and emulsifier, and the concentrate is

diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound or active compound combination at the stated rate of application.

After the spray coating has been dried, the plants are slightly injured by using a sandblast and afterwards they are sprayed with a conidia suspension of *Fusarium nivale* (var. majus).

The plants are placed in the greenhouse under a translucent incubation cabinet at a temperature of approximately 10 °C and a relative atmospheric humidity of approximately 100%.

The test is evaluated 5 days after the inoculation. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, high (at least 85%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table N:

Table N:

Example	Efficacy	Example	Efficacy	Example	Efficacy
12	100	20	100	71	100
14	88	62	100	93	100
19	100	69	93	94	100

Example O : *in vivo* protective test on *Botrytis cinema* (beans)

Solvent: 24.5 parts by weight of acetone

                      24.5 parts by weight of N.N-dimethylacetamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for preventive activity, young plants are sprayed with the preparation of active compound. After the spray coating has dried on, 2 small pieces of agar covered with growth of *Botrytis cinerea* are placed on each leaf. The inoculated plants are placed in a darkened chamber at 20 °C and a relative atmospheric humidity of 100%.

2 days after the inoculation, the size of the lesions on the leaves is evaluated. 0% means an efficacy which corresponds to that of the untreated control, while an efficacy of 100% means that no disease is observed.

Under these conditions, excellent (at least 95%) to total protection is observed at a dose of 100 ppm of active ingredient with the following compounds from table O:

Table O:

Example	Efficacy	Example	Efficacy	Example	Efficacy
14	100	94	100	105	100
71	97	97	100		
93	100	103	99		

Example P : *in vivo* preventive test on *Botrytis cinerea* (grey mould)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO and then diluted with water to obtain the desired active material concentration.

Gherkin plants ("Vert petit de Paris" variety), sown in starter cups on a 50/50 peat soil pozzolana substrate and grown at 24 °C, are treated at the Z11 cotyledon stage by spraying with the active ingredient prepared as described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not containing the active material.

After 24 hours, the plants are contaminated by spraying the cotyledons with an aqueous suspension of cryopreserved *Botrytis cinema* spores (50 000 spores per mL). The spores are suspended in a nutrient solution composed of 10 g/L of PDB, 50 g/L of D-Fructose, 2 g/L of NH4NO3 and 1 g/L of KH2PO4. The contaminated gherkin plants are incubated at 17 °C and at 90% relative humidity.

Grading (% of efficacy) is carried out 4 to 5 days after the contamination, in comparison with the control plants.

Under these conditions, good (at least 70%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table P :

Table P:

Example	Efficacy	Example	Efficacy	Example	Efficacy
2	70	49	98	70	100
3	95	50	99	73	93
4	80	51	95	86	70
6	100	52	80	90	100
12	100	53	99	91	99
13	100	54	85	92	100
19	100	56	100	99	100
20	100	57	75	100	100
31	100	59	100	101	98
46	88	63	85	102	95
47	97	65	100		
48	83	66	99		

Example Q : *in vivo* preventive test on *Uromyces appendicuiatus* (bean rust)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO, and then diluted with water to obtain the desired active material concentration.

Bean plants ("Saxa" variety), sown in starter cups on a 50/50 peat soil pozzolana substrate and grown at 24 "C, are treated at the 2 leaf stage (9 cm height) by spraying with the active ingredient prepared as described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not containing the active material.

After 24 hours, the plants are contaminated by spraying the leaves with an aqueous suspension of *Uromyces appendicuiatus* spores (150 000 spores per mL). The spores are collected from infected plants and are suspended in water containing 2.5 mL/L of Tween 80 at 10%. The contaminated bean plants are incubated for 24 hours at 20 °C and at 100% relative humidity, and then for 10 days at 20 °C and at 70-80% relative humidity.

Grading (% of efficacy) is carried out 11 days after the contamination, in comparison with the control plants.

Under these conditions, good (at least 75%) to total protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table Q :

Table Q:

Example	Efficacy	Example	Efficacy	Example	Efficacy
1	95	19	100	48	87
2	98	20	100	59	75
3	100	21	98	62	100
5	100	22	100	65	100
6	77	25	80	66	88
7	94	31	100	67	87
10	100	32	89	69	96
11	100	38	100	70	88
12	97	46	85	100	100
13	91	47	83	102	92

Example R : *In vivo* preventive test on *Pyricuiaria oryzae* (rice blast)

The active ingredients tested are prepared by homogenization in a mixture of acetone/tween/DMSO, and then diluted with water to obtain the desired active material concentration.

Rice plants ("Koshihikari" variety), sown in starter cups on a 50/50 peat soil pozzolana substrate and grown at 26 °C, are treated at the 2 leaf stage (10 cm height) by spraying with the active ingredient prepared as described above. Plants, used as controls, are treated with the mixture of acetone/tween/DMSO/water not containing the active material.

After 24 hours, the plants are contaminated by spraying the leaves with an aqueous suspension of *Pyricuiaria oryzae* spores (40 000 spores per mL). The spores are collected from a 15-day-old culture and are suspended in water containing 2.5 g/L of gelatin. The contaminated rice plants are incubated at 25 °C and at 80% relative humidity.

Grading (% of efficacy) is carried out 6 days after the contamination, in comparison with the control plants.
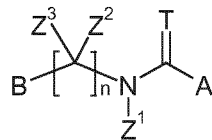
Under these conditions, good (at least 70%) to excellent (at least 90%) protection is observed at a dose of 500 ppm of active ingredient with the following compounds from table R :

Table R:

Example	Efficacy
2	71
11	92
31	80
68	80

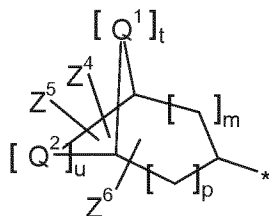**CLAIMS**

1. A compound of formula (I)

(I)

wherein

- T represents O or S ;

- n represents 0 or 1 ;

- B represents

B^1 or   B^2

where the bond marked by * is attached to the $(CZ^2Z^3)_n$-N amide moiety ;

- m represents 0 or 1 ;

- p represents 0, 1, **2** or 3 : providing that m + p is equal to 1 to 3 ;

- t represents 1 or **2 ;**

- u represents 1, 2, 3 or 4 ;

- Q^1 represents a direct bond, $CZ'Z^8$, O, S, SO, SO_2, NZ^{11}, -C(=V)-, -C(=NZ^{12})-, a non-substituted **Ci-Ce**-alkylidene or a substituted Ci-Ce-alkylidene substituted by up to 10 atoms or groups that can be the same or different and that can be selected in the list consisting of halogen atoms, cyano, **Ci-Ce**-alkyl, **Ci-Ce**-halogenoalkyl comprising up to 9 halogen atoms that can be the same or different, Ci-Ce-alkoxy, Ci-Ce-halogenoalkoxy comprising up to 9 halogen atoms that can be the same or different, **Ci-Ce**-alkoxycarbonyl, **Ci-Ce**-halogenoalkoxycarbonyl comprising up to 9 halogen atoms that can be the same or different, Ci-Ce-alkylaminocarbonyl and **di-Ci-Ce**-alkylaminocarbonyl ; providing that

  - when Q^1 is not a direct bond then t + u is equal to **2** to 4 ; or

  - when Q^1 is a direct bond then u is equal to 3 or 4 : or

  - when t is equal to **2** then $[Q^1]_2$ is not a peroxide group ;

- Q^2 represents CZ^9Z^{10} or -CH=CH- ;

- V represents O or S ;

- Z^1 represents a hydrogen atom ; a formyl group; a substituted or non-substituted **C_1-C_8-alkyl** ; a substituted or non-substituted **C_1-C_8**-alkoxy; a non-substituted C_3-C_7-cycloalkyl or a C_3-C_7-cycioalkyl substituted by up to 10 atoms or groups that can be the same or different and that can be selected in the list consisting of halogen atoms, cyano, **C_1-C_8**-alkyl, **C_1-C_8**-halogenoalkyl comprising up to 9 halogen atoms that can be the same or different, C_1-C_8-alkoxy, **C_1-C_8**-halogenoalkoxy comprising up to 9 halogen atoms that can be the same or different, **C_1-C_8**-alkoxycarbonyl, **C_1-C_8**-halogenoalkoxycarbonyl comprising up to 9 halogen atoms that can be the same or different, C_1-C_8-alkylaminocarbonyl and di-**C_1-C_8**-alkylaminocarbonyl ; provided that when Z^1 represents a hydrogen atom, n represents 0, T represents O and B represents a optionally mono alkyl-substituted, saturated or partially unsaturated, decahydronaphthalenyl group, octahydro-1 H-inden-4-yl group or octahydro-1 H-inden-5-yl group then R^1 and R^3 are not simultaneously a methyl group when R^2 is a fluorine atom.

- Z^2 and Z^3 independently represent a a hydrogen atom ; a halogen atom ; cyano ; substituted or non-substituted C_1-C_8-alkyl ; **C_1-C_8**-halogenoalkyl having 1 to 5 halogen atoms ; substituted or non-substituted **C_1-C_8**-alkoxy; substituted or non-substituted **C_1-C_8**-alkylsulfanyl; or substituted or non-substituted C_1-C_8-alkoxycarbonyl ; or Z^2 and Z^3 are a C_2-C_8-alkylene group that can be substituted by up to four **C_1-C_8-alkyl** groups ;

- Z^4, Z^5, Z^6, Z^7, Z^8, Z^9 or Z^{10} independently represent a hydrogen atom ; a halogen atom ; cyano ; substituted or non-substituted **C_1-C_8-alkyl** ; **C_1-C_8**-halogenoalkyl having 1 to 5 halogen atoms ; substituted or non-substituted **C_1-C_8**-alkoxy ; substituted or non-substituted **C_1-C_8**-alkylsulfanyl ; substituted or non-substituted **C_1-C_8**-alkoxycarbonyl ; or benzyl group ;

- Z^{11} represents a hydrogen atom ; a substituted or non-substituted **C_1-C_8-alkyl** ; a **C_1-C_8**-halogenoalkyl comprising up to 9 halogen atoms that can be same or different ; substituted or non-substituted **C_2-C_8**-alkenyl ; **C_2-C_8**-halogenoalkenyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted **C_3-C_8**-alkynyl ; **C_3-C_8**-halogenoalkynyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted **C_3-C_7**-cycloalkyl ; **C_3-C_7**-halogeno-cycloalkyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted **C_3-C_7**-cycloalkyl **-C_1-C_8**-alkyl ; formyl ; substituted or non-substituted **C_1-C_8**-alkylcarbonyl ; **C_1-C_8**-halogenoalkylcarbonyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted **C_1-C_8**-alkoxycarbonyl ; **C_1-C_8**-halogenoalkoxycarbonyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted **C_1-C_8**-alkylsulfonyl ; **C_1-C_8**-halogenoalkylsulfonyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted benzyl ; or substituted or non-substituted phenylsulfonyl;

- Z^{12} represents a hydrogen atom, a substituted or non-substituted **C_1-C_8-alkyl** ; **C_1-C_8**-halogenoalkyl comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted **C_1-C_8**-alkoxy ; **C_1-C_8**-halogenoalkoxy comprising up to 9 halogen atoms that can be the same or different ; substituted or non-substituted **C_3-C_7**-cycloalkyl ; **C_3-C_7**-halogeno-cycloalkyl comprising up to 9 halogen atoms that can be the same or different ; substituted or

non-substituted C_3-C_7-cycloalkoxy ; C_3-C_7-halogenocycloalkoxy comprising up to **9** halogen atoms that can be the same or different ; substituted or non-substituted benzyl ; substituted or non-substituted phenyl ; substituted or non-substituted benzyloxy ; or substituted or non-substituted phenoxy ;

· R^1, **R2** and R^3 independently represents a hydrogen atom ; halogen atom ; nitro ; cyano ; hydroxy ; amino ; sulfanyl ; pentafluoro-λ^6-sulfanyl ; substituted or non-substituted **(Ci-Ce-**alkoxyimino)-Ci-Ce-alkyl ; substituted or non-substituted (benzyloxyimino **)-Ci-Ce**-alkyl ; substituted or non-substituted **Ci-Cs-alkyl** ; **Ci-Ce**-halogenoalkyl having **1** to **9** halogen atoms ; substituted or non-substituted C_2-**Ce**-alkenyl ; C_2-**Ce**-halogenoalkenyl having **1** to **9** halogen atoms ; substituted or non-substituted C_2-Ce-alkynyl ; **Ci-Ce**-halogenoalkynyl having **1** to **9** halogen atoms ; substituted or non-substituted Ci-Ce-alkoxy ; C_1-C_8-halogenoalkoxy having **1** to **9** halogen atoms ; substituted or non-substituted **Ci-Ca**-alkylsulfanyl ; **Ci-Ce**-halogenoalkylsulfanyl having **1** to **9** halogen atoms ; substituted or non-substituted **Ci-Ce**-alkylsulfinyl ; **Ci-Cs-**halogenoalkylsulfinyl having **1** to **9** halogen atoms ; substituted or non-substituted **Ci-Ce**-alkylsulfonyl ; **Ci-Ce**-halogenoalkylsulfonyl having **1** to **9** halogen atoms ; substituted or non-substituted **Ci-Ce**-alkylamino ; substituted or non-substituted d i-**Ci-Ce**-alkylamino ; substituted or non-substituted $C_{:?}$-C_8-alkenyloxy ; substituted or non-substituted **Cs-Ce**-alkynyloxy ; substituted or non-substituted C_3-C_7-cycloalkyl ; C_3-C_7-halogenocycloalkyl having **1** to **9** halogen atoms ; substituted or non-substituted tri**(Ci-Ce**)alkylsilyl ; substituted or non-substituted **Ci-Ce**-alkylcarbonyl ; Ci-Cs-halogenoalkylcarbonyl having **1** to **9** halogen atoms ; substituted or non-substituted **Ci-Ce**-alkoxycarbonyl ; Ci-Ce-halogenoalkoxycarbonyl having **1** to **9** halogen atoms ; substituted or non-substituted **Ci-C »**-alkylcarbamoyl ; substituted or non-substituted **di-Ci -Ce**-alkylcarbamoyl ; phenoxy ; phenylsulfanyl ; phenylamino ; benzyloxy ; benzylsulfanyl ; or benzylamino ;

as well as its salts, N-oxides, metal complexes, metalloid complexes and optically active isomers

2. A compound according to claim 1 wherein R^1 represents a substituted or non-substituted **Ci-Cs**-alkyl, **C'-Cs**-halogenoalkyl comprising up to **9** halogen atoms that can be the same or different, or substituted or non-substituted C_1-C_5-alkoxy ; **R2** represents a hydrogen atom, or a halogen atom ; and **R3** represents a substituted or non-substituted **Ci-Cs**-alkyl.

3. A compound according to claim **1** or **2** wherein R^1 represents **Ci-Cs-alkyl** or C_1-**Cs**-halogenoalkyl comprising up to **3** halogen atoms that can be the same or different ; R^2 represents a hydrogen atom, a chlorine atom, or a fluorine atom ; and R^3 represents a methyl.

4. A compound according to any one of claim **1** to **3** wherein **T** represents **O**.

5. A compound according to any one of claim **1** to **4** wherein **B** represents **B1** ; Q^1 represents a direct bond ; u is equal to **3** or **4** ; and m + p is equal to **2** or **3**.

6. A compound according to any one of claim 1 to 4 wherein B represents a substituted or non-substituted decahydronaphthalenyl group, a substituted or non-substituted octahydro-1 H-indenyl group, or a substituted or non-substituted octahydropentalenyl group.

7. A compound according to any one of claim 1 to 4 wherein B represents B^1 ; Q^1 represents a methylene group, or an oxygen atom ; t is equal to 1 ; and u is equal to 1 or 2.

8. A compound according to any one of claim 1 to 4 wherein B represents a substituted or non-substituted bicyclo[2.2.1]heptyl group, a substituted or non-substituted bicyclo[2.2.1]hept-2-enyl group, a substituted or non-substituted 7-oxabicyclo[2.2.1 jheptyl group, a substituted or non-substituted 7-oxabicyc!o[2.2. 1]hept-2-enyl group, a substituted or non-substituted bicyclo[2.2.2]octyl group, or a substituted or non-substituted bicyclo[3. 1.1]heptyl group.

9. A compound according to any one of claim 1 to 4 wherein B represents B^2

10. A compound according to any one of claim 1 to 9 wherein Q^1 represents a direct bond, an oxygen atom, a substituted or non-substituted methylene group, or a substituted or non-substituted C_1-C_5-alkylidene group.

11. A compound according to any one of claim 1 to 10 wherein Q^2 represents a methylene group, or a -CH=CH- group.

12. A compound according to any one of claim 1 to 11 wherein V represents O.

13. A compound according to any one of claim 1 to 12 wherein Z^1 represents a hydrogen atom, a substituted or non-substituted C_1-C_8-alkyl, a substituted or non-substituted **Ci-Ce**-alkoxy, or a substituted or non-substituted cyclopropyl.

14. A compound according to any one of claim 1 to 13 wherein Z^2, Z^3, Z^4, Z^5, Z^6, Z^7, Z^8, Z^9 or Z^{10} independently represent a hydrogen atom, or a substituted or non-substituted **Ci-Ce**-alkyl.

15. A compound according to any one of claim 1 to 14 wherein Z^{11} represents **Ci-Ce**-alkyl, substituted or non-substituted benzyl, or a Boc protecting group.

16. A compound according to any one of claim 1 to 15 wherein Z^{12} represents **Ci-Ce**-alkyl, **Ci-Ce**-alkoxy, substituted or non-substituted benzyl, substituted or non-substituted benzyloxy

17. A compound of formula (lla) :

(IIa)
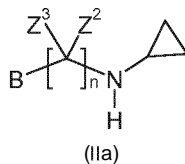
wherein B, n, Z2 and Z3 are defined according to any one of claims 1 to X, with the exclusion of :

- N-(bicyclo[2.2.1]hept-2-ylmethyl)cyclopropanamine   and its hydrochloride salt

- N-[(2-methylbicyclo[2.2.1]hept-2-yl)methyl]cyclopropanamine

- N-[(2-propylbicyclo[2.2.1]hept-2-yl)methyl]cyclopropanamine

- N-[(2-butylbicyclo[2.2.1]hept-2-yl)methyl]cyclopropanamine

- N-[(2-isobutylbicyclo[2.2.1]hept-2-yl)methyl]cyclopropanamine

- N-{[2-(3-methylbutyl)bicyclo[2.2.1]hept-2-yl]methyl}cyclopropanamine

- N-{[2-(2-methylbutyl)bicyclo[2.2.1]hept-2-yl]methyl}cyclopropanamine

- N-{[2-(2-isopropoxyethyl)bicyclo[2.2.1]hept-2-yl]methyl}cyclopropanamine

- N-{[2-(2-butoxyethyl)bicyclo[2.2.1]hept-2-yl]methyl}cyclopropanamine

- N-cyclopropylbicyclo[2.2.1]heptan-2-amine

- N-cyclopropyl-1,3,3-trimethylbicyclo[2.2.1]heptan-2-amine

- N-cyclopropyl-1,7.7-trimethylbicyclo[2.2.1Jheptan-2-amine

- 3-[(cyclopropylamino)methyl]-1,7,7-trimethylbicyclo[2.2.1]heptan-2-one and its hydrochloride salt

- N-cyclopropyl-8-methyl-8-azabicyclo[3.2.1]octan-3-amine

- 3-(cyclopropylamino)-8-methyl-8-azabicyclo[3.2.1]octane-3-carbonitrile

- methyl 3-(cyclopropylamino)-8-methyl-8-azabicyclo[3.2.1]octane-3-carboxylate

- ethyl 3-(cyclopropylamino)-8-methyl-8-azabicyclo[3.2.1]octane-3-carboxylate

- N-cyclopropyldecahydronaphthalen-2-amine

- N-(adamantan-1-ylmethyl)cyclopropanamine

- N-[1-(adamantan-1-yl)ethyl]cyclopropanamine

- N-cyclopropyladamantan-2-amine

- 2-(cyclopropylamino)adamantane-2-carbonitrile.

18. A fungicide composition comprising, as an active ingredient, an effective amount of a compound of formula (I) according to any one of claims 1 to 16 and an agriculturally acceptable support, carrier or filler.

19. A method for controlling phytopathogenic fungi of crops, characterized in that an agronomically effective and substantially non-phytotoxic quantity of a compound according to claims 1 to 16 or a fungicide composition according to claim 18 is applied to the soil where plants grow or are capable of growing, to the leaves and/or the fruit of plants or to the seeds of plants.