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(57) Abstract: The present invention provides synthetic peptides and substituted peptides that exhibit potent NaV1.7 inhibition. The present invention provides compounds, methods and compositions effective to image nerve anatomy or physiology, either by PET imaging or by fluorescent optical imaging, to treat pain by way of NaV1.7 inhibition, to treat itching by way of NaV1.7 inhibition, and to treat cancer by way of NaV1.7 inhibition.



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