Title (en)

SYNTHESIS OF COMPOUNDS AND LIBRARIES OF COMPOUNDS

Title (de)

SYNTHESE VON VERBINDUNGEN UND SUBSTANZBIBLIOTHEKEN

Title (fr)

SYNTHESE DE COMPOSES ET DE BANQUES DE COMPOSES

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Application

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Abstract (en)

[origin: WO9948897A2] The present invention provides a system for the production of chemical compounds and libraries of compounds that are complex, stereochemically and regioselectively pure, and may mimic the structural or functional properties of a peptide. The invention provides methods for producing collections of peptidomimetic compounds which, in one preferred embodiment, comprises (1) providing two diversifiable monomers containing terminal reactive moieties; (2) reacting the monomers under conditions that allow for the control of stereochemistry as well as chemoselectivity; and (3) generating diversifiable isolable compounds or libraries of compounds. In another preferred embodiment, a collection of peptidomimetic compounds is provided by (1) providing at least one diversifiable monomer containing terminal reactive moieties; (2) reacting the monomer with a reagent under conditions that allow for the control of stereochemistry as well as chemoselectivity; and (3) generating diversifiable isolable compounds or libraries of compounds. In another broader aspect, the present invention provides for the synthesis of a collection of compounds comprising peptidomimetics and non-peptidomimetics alike having stereodiversity. This method involves the steps of (1) selecting desired synthetic precursors having a predefined stereochemical relationship; (2) reacting the synthetic precursors so that a compound having a specific stereochemistry is obtained; and (3) repeating these steps of selecting and reacting until a desired library of compounds having stereochemical diversity is obtained. In certain preferred embodiments, a library of compounds having only diversity of stererochemistry is provided. In certain other preferred embodiments, a library of compounds having structural diversity and stereochemical diversity is provided. The present invention also provides various chemical compounds useful in the inventive methods for production of complex peptidomimetic libraries. The peptidomimetic and stereodiverse compounds of the inventive method are useful for interactions with receptors in cells and may emulate the structure and functionality of peptides.

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