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(54) Title: NOVEL ANTI-MICROBIAL PEPTIDOMIMETIC COMPOUNDS AND METHODS TO CALCULATE ANTI-MICROBIAL ACTIVITY

(57) Abstract: This invention encompasses synthetic antimicrobial peptide analogs having certain un-natural amino acids, including the un-natural amino acids hydrophobic tetrahydroisoquinolinecarboxylic acid (Tic) and octahydroindolecarboxylic acid (Oic), incorporated into the polypeptide backbone. These antimicrobial peptides (AMPs) are useful to treat infection in humans and other mammals of such bacteria as Gram positive bacteria, Gram negative bacteria and Mycobacterium. Many of the AMPs also exhibit the property of reduced hemolytic activity. The invention also entails 3D-QSAR models and mathematical equations that calculate the biological activity of any peptide sequence against Staphylococcus aureus or Mycobacterium ranae.



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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US07/26116

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC: **A61K 38/00( 2006.01)**

USPC: **514/2;424/1.69**  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 U.S. : 514/2; 424/1.69

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 USPTO Internal Database.

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,871,923 (MOEHLE) 16 February 1999 (16.02.1999), entire document (peptide antimycotics to combat same microbes).	1-24
A	US 2003/0232040 (BECKMAN et al.) 18 December 2003 (18.12.2003), entire document (peptide biocidals targeting same microbes, incorporation by reference of Lehrer et al. peptide antimicrobials).	1-24

Further documents are listed in the continuation of Box C.       See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means		
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