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(54) Title: MAMMALIAN OBESTATIN RECEPTORS

(57) Abstract: A high affinity obestatin receptor GPR39 is provided which mediates obestatin activities. The obestatin receptor (GPR39) and fragments thereof, particularly soluble fragments thereof, are useful as therapeutic agents capable of inhibiting the action of obestatin. Screening and research methods for the determination of specific analogs, agonists, antagonist mimetics and agents that modulate production, metabolism, and disposition of GPR39 activities are disclosed. Conditions treatable with GPR39 agonists or antagonists include regulation of weight, blood pressure, heart rate and gastric empyting.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 06/30648

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8): C12N 15/09 (2007.01)
USPC: 435/69.4
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)
IPC(8): C12N 15/09
USPC: 435/69.4, 5, 7.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Endocrinology. January 2005, Vol. 146; J. of Clin Endocrin & Metabolism. August 2001, Vol. 86; J. of Biol. Chemistry. January 3, 2003, Vol. 278; J. of Biol. Chemistry. December 17, 2004, Vol. 279

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
WEST (PGPB,USPT,EPAB,JPAB): ghrelin, orexigen, obestatin, GPR39, G protein couple receptor 39, obesity, hsueh, zhang
Dialog Pro: Derwent Patent Abstracts, Life Science ghrelin, obestatin, GPR39
Google Scholar: ghrelin,obestatin,GPR39, stomach, hormone, peptide, proghrelin, obesity

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	HOLST, BIRGITTE et al. "Common Structural Basis for Constitutive Activity of the Ghrelin Receptor Family." J. of Biol. Chemistry. December 17, 2004, Vol. 279, No. 51, abstract, pg 53816, ISSN 0021-9258.	10 and 13
X --- Y	WO 2004/099782 A2 (GOLZ et al) 18 November 2004 (18.11.2004) entire document.	11 and 12 --- 1-9
Y	ARIYASU, HIROYUKI et al. "Transgenic Mice Overexpressing Des-Acyl Ghrelin Show Small Phenotype." Endocrinology. January 2005, Vol. 146, No. 1, abstract, pg 362, ISSN 0022-0795.	1-9
Y	UKKOLA, OLAVI et al. "Mutations in the Preproghrelin/Ghrelin Gene Associated with Obesity in Humans." J. of Clin Endocrin & Metabolism. August 2001, Vol. 86, No. 8, abstract, ISSN 0021-972x.	1-9
Y	HOSADA, HIROSHI et al. "Structural Divergence of Human Ghrelin." J. of Biol. Chemistry. January 3, 2003, Vol. 278, No. 1, pgs 68-69, ISSN 0021-9258.	1-9

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
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"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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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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