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(54) Title: LOW EFFICACY GONADOTROPIN AGONISTS AND ANTAGONISTS

(57) Abstract: The present invention provides glycoprotein hormone analogs having partial agonist/antagonist activity comprising an α -subunit polypeptide and a β -subunit polypeptide. The analog lacks a naturally occurring oligosaccharide on α -subunit α loop 2 and is crosslinked to the β -subunit by a disulfide bond. The present invention also provides a method for stimulating fertility in mammals by promoting apoptosis of ovarian cells and/or luteal cells, which comprises administering to the mammal a therapeutically effective amount of a glycoprotein hormone analog having partial agonist/antagonist activity.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/00474

<p>A. CLASSIFICATION OF SUBJECT MATTER IPC: A61K 38/16(2006.01)</p> <p>USPC: 514/8 According to International Patent Classification (IPC) or to both national classification and IPC</p>												
<p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) U.S. : 514/8</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet</p>												
<p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1"> <thead> <tr> <th>Category *</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>TROUT et al. Deglycosylation of a bifunctional lutropin-follitropin agonist reduced its follitropin activity more than its lutropin activity. Fertility and Sterility. 1999, Vol. 72, No. 6, pages 1093-1099, esp. entire Materials and Methods section and p. 1098, left column, 3rd paragraph.</td> <td>1</td> </tr> <tr> <td>A</td> <td>BERNARD et al. Crosslinked bifunctional gonadotropin analogs with reduced efficacy. Molecular and Cellular Endocrinology. 2005, pages 25-31, esp. p. 30, right column, last paragraph.</td> <td>1-31</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	TROUT et al. Deglycosylation of a bifunctional lutropin-follitropin agonist reduced its follitropin activity more than its lutropin activity. Fertility and Sterility. 1999, Vol. 72, No. 6, pages 1093-1099, esp. entire Materials and Methods section and p. 1098, left column, 3 rd paragraph.	1	A	BERNARD et al. Crosslinked bifunctional gonadotropin analogs with reduced efficacy. Molecular and Cellular Endocrinology. 2005, pages 25-31, esp. p. 30, right column, last paragraph.	1-31	
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<p>Date of the actual completion of the international search 06 June 2006 (06.06.2006)</p>		<p>Date of mailing of the international search report 04 AUG 2006</p>										
<p>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</p>		<p>Authorized officer Christina Borgeest <i>J. Roberts for</i> Telephone No. 571-272-1600</p>										

INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:
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