

IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

From 0601
#30
PATENT
10/19/94

Applicant: LIN, Fu-Kuer
Serial No.: 08/202,874
Filed: February 28, 1994
For:
PRODUCTION OF ERYTHROPOIETIN
Group Art Unit: 1812
Examiner: D. Fitzgerald

) I hereby certify that this paper is
) being transmitted via facsimile to:
) Hon. Commissioner of Patents and
) Trademarks, Washington, D.C. 20231
) on this date:
)
) June 13, 1994
)
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) Registration No. 35,302
) Agent for Applicant

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6/13/94
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PRELIMINARY AMENDMENT

Hon. Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

Please enter the following amendments.

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PTO MALL 1~~

In the Claims

Cancel claims 76-83 without prejudice.

Add the following claims 84-94

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~~PTO MALL 1~~

Rule 166
Sub II
Sub III

~~84. An erythropoietin glycoprotein product having *in vivo* biological activity and having glycosylation which differs from that of human urinary erythropoietin.~~

~~85. A glycoprotein product of the expression in a eucaryotic host cell of an exogenous DNA sequence comprising a DNA sequence encoding human erythropoietin said product possessing the *in vivo* biological property of causing human bone marrow cells to increase production of reticulocytes and red blood cells.~~

08/202,874-15 741,008

⁸⁹
~~86~~ The *in vivo* biologically active human erythropoietin glycoprotein product of the process comprising the steps of:

(a) growing, under suitable nutrient conditions, mammalian host cells transformed or transfected with an isolated DNA sequence encoding the human erythropoietin amino acid sequence set out in FIG 6 or a fragment thereof; and

(b) isolating a glycosylated erythropoietin polypeptide therefrom.

III
cont'd

⁹⁰
~~87~~ The *in vivo* biologically active human erythropoietin glycoprotein product of the process comprising the steps of:

(a) growing, under suitable nutrient conditions, mammalian host cells transformed or transfected with an isolated DNA sequence comprising a sequence encoding the signal sequence of human erythropoietin set out in FIG 6; and

(b) isolating a glycosylated erythropoietin polypeptide therefrom.

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⁹¹
~~88~~ A glycoprotein product according to claim ~~86~~ wherein the exogenous DNA sequence is a cDNA sequence.

⁸⁹

⁹²
~~89~~ A glycoprotein product according to claim ~~86~~ wherein the exogenous DNA sequence is a genomic DNA sequence.

⁸⁹

⁹³
~~90~~ A glycoprotein product according to claim ~~86, 87, 88 or 89~~ wherein the host cell is a non-human mammalian cell.

^{89 90 91 92}

⁹⁴
~~91~~ A glycoprotein product according to claim ~~90~~ wherein the non-human mammalian cell is a CHO cell.

⁹³

⁹⁵
~~92~~ A pharmaceutical composition comprising an effective amount of a glycoprotein product according to claim ~~84, 85, 86 or 87~~ and a pharmaceutically acceptable diluent, adjuvant or carrier.

^{87 88 89 90}

Sub III 4

⁹⁶
~~93~~ A method for providing erythropoietin therapy to mammal
comprising administering an effective amount of a pharmaceutical composition of
claim ~~92~~⁹⁵

⁹⁷
~~94~~ A method according to claim ~~93~~⁹⁶ wherein the therapy
comprises enhancing hematocrit levels

KLL 100
I
antel

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Respectfully submitted,

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June 13, 1994