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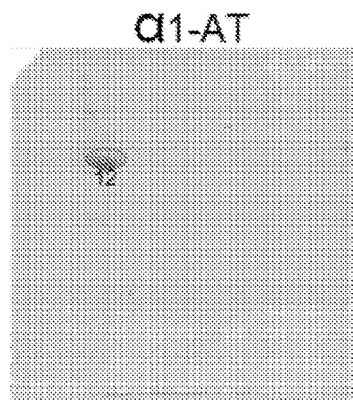
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[Continued on next page]

(54) Title: SEQUENCES OF 55 NEWLY FOUND PROTEINS AND THEIR APPLICATIONS

Figure 4



number	Name of Protein
1222	Alpha-1-antitrypsin

(57) Abstract: Disclosed are amino acid sequences of 55 Newly Found Proteins including: 2 new proteins in Cryoprecipitate, 8 new proteins in Fraction III, 8 new proteins in Prothrombin Complex Concentrate, 2 newly found proteins in AFCC (Fraction 33), 3 new proteins in Fraction IV, 4 new found proteins in AFOD (Fraction 42), 2 in HemoRAAS?, 3 in FibroRAAS, 5 in GammaRAAS, 3 in AFCC, 1 in Fraction 3-2, 2 in Fraction 3, 4 in Fibrinolytic RAAS (Thrombin), 3 in AFOD, 1 in AlbuRAAS, 1 in Fibrinolytic RAAS (High concentrate Fibrinogen), 1 in AFCC (From fraction IV), 2 in Transferrin from Human Plasma. Also disclosed are applications of 16 existing proteins.



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4 June 2015

- *with international search report (Art. 21(3))*
- *with sequence listing part of description (Rule 5.2(a))*

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C07K 1/00, 14/00 (2013.01)

USPC - 530/350

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) - C07K 1/00, 14/00 (2013.01)

USPC - 530/350

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)

PubWEST (PGPB, USPT, USOC, EPAB, JPAB); PatBase; Google Scholar and Google.

Search Terms: cryoprecipitat\$, cryo-precipitat\$, protein, polypeptide, freez\$, froz\$, precipitat\$.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006/0247426 A1 (BARDAT et al.) 02 November 2006 (02.11.2006) para [0012], [0013]	1
A	GARDNER, M.J. et al. UniProt Accession Number Q8IK59 [online]. 10 August 2010 [retrieved on 01 July 2013]. Retrieved from the Internet: <URL: http://www.uniprot.org/uniprot/Q8IK59.txt?version=28 >, pages 1-2.	1

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

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

02 July 2013 (02.07.2013)

Date of mailing of the international search report

10 JUL 2013

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

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 53-71
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

Claims 53-71 are unsearchable because these claims are indefinite (It is not clear what is being claimed, i.e. a protein, a cell, a method or something else). These claims seem to be a mix of different classes of invention and the ISA is unable to determine the scope of protection sought.
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I+: Claims 1-52 and 72-74, drawn to a protein with a specific amino acid sequence. The first invention encompasses SEQ ID NO: 1, namely, Claim 1. Should an additional fee(s) be paid, Applicant is invited to elect an additional SEQ ID NO(s) to be searched. The exact claims searched will depend on the specifically elected SEQ ID NO(s). For an example, a second invention could encompass SEQ ID NO: 2, namely, Claim 2. Failure to clearly identify how any paid additional invention fees are to be applied to the '+' group will result in only the first claimed invention to be searched.

*****Continued in Supplemental
Box*****

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Claims 1-52 and 72-74 limited to SEQ ID NO: 1, namely, Claim 1.

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

Continuation of Box No. III - Observations where unity of invention is lacking:

The inventions listed as Groups I+ do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

Each invention in Group I+ includes a special technical feature of a structurally/functionally distinct amino acid sequence that is unique to each invention. None of the sequences appear to share any common structural core or function, and therefore lack unity because they do not share a same or corresponding special technical feature.

The only technical feature apparently shared between the inventions of Group I+ is a protein with a specific amino acid sequence. However, this shared technical feature does not represent a contribution over the prior art, such prior arts were abundant at the time of the invention, for an example, US 2003/0135028 A1 to Ni et al. (hereinafter 'Ni') teaches a protein with a specific amino acid sequence (para [0046]).

As said shared technical feature was known at the time of the invention, it cannot be considered special technical feature that would otherwise unify the group.

Group I+ therefore lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.

NOTE re Item 4:

Claims 53-71 are unsearchable because these claims are indefinite (It is not clear what is being claimed, i.e. a protein, a cell, a method or something else). These claims seem to be a mix of different classes of invention and the ISA is unable to determine the scope of protection sought.