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- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,

[Continued on next page]

(54) Title: CELL CULTURING AND/OR BIOMANUFACTURING SYSTEM

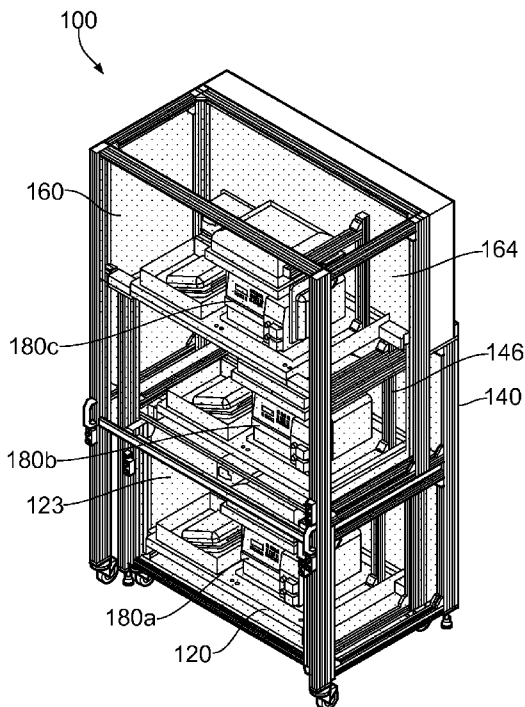


FIG. 1

(57) Abstract: The present invention relates to systems and methods for optimising the usage of laboratory and cell culturing space for cell culture and biomanufacturing. The invention provides a system and method that can be used to provide a plurality of workstations and/or storage bays for bioreactors in cell culturing and/or biomanufacturing facilities.

KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2014/052551

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.:
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:

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:

see additional sheet

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 an 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.:

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.

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2014/052551

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12M3/00 C12M1/00
ADD.
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)
C12M
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)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 2011/130865 A2 (LARCHER YVES [CH]; HAGG RUPERT [CH]) 27 October 2011 (2011-10-27) pages 4-5 pages 21,25-27 figures 3a,11	26-30 1-25
X	GB 2 402 481 A (GENIAL GENETIC SOLUTIONS LTD [GB]) 8 December 2004 (2004-12-08) page 1, paragraph 1 page 4, paragraph 4 - page 5, paragraph 1 page 9, line 2 claim 30; figures 3,4	26-30
X	US 2006/270027 A1 (SHAW CHRISTOPHER M [US] ET AL) 30 November 2006 (2006-11-30) paragraphs [0001] - [0003], [0005], [0006], [0102], [0105] figures 1A,1B,4A	26-30
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Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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</p> <p>"&" document member of the same patent family</p>
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Date of the actual completion of the international search 23 September 2014	Date of mailing of the international search report 01/10/2014
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Böhm, Ingo

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2014/052551

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	WO 2012/066100 A1 (HETTICH ANDREAS GMBH & CO KG [DE]; EBERLE KLAUS-GUENTER [DE]; CLARKE G) 24 May 2012 (2012-05-24) page 3, line 26 - page 4, line 29 page 5, line 32 - page 6, line 4 figure 3 -----	1,22-25
A	US 2007/113474 A1 (EVERETT KEITH [US] ET AL) 24 May 2007 (2007-05-24) figures 7,13 paragraphs [0010] - [0017] -----	1,22-25
A	US 2012/083029 A1 (TSUMURA TAKASHI [JP] ET AL) 5 April 2012 (2012-04-05) figures 1-3 paragraphs [0021], [0056] -----	1,22-25
A	FR 2 849 862 A1 (IN CYTO TOX [FR]) 16 July 2004 (2004-07-16) page 24, lines 5-7 page 26, lines 1-17 page 27, lines 6-15 figures 1-3 -----	1,22-25
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2014/052551

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-25

- i) A system for cell culture and/or biomanufacturing comprising:
 - a base unit comprising: a frame supporting walls, and a movable platform to define a chamber therein;
 - ii. a stacking unit comprising: a frame supporting side walls, a back wall, a ceiling and a movable platform to define an upper and a lower chamber therein, [...]and the guard unit interconnect to provide a plurality of workstations and/or storage bays for a bioreactor. (see claim 1)
- iii) Use of a system according to any preceding claim as a workstation and/or a storage bay for a plurality of bioreactors. (see claim 22)
- iv) Use of a system according to any of claims 1 to 21 for cell culture and/or biomanufacturing. (see claim 23)
- v) A method for cell culture comprising growing a cell culture in at least one bioreactor in a system according to any of claims 1 to 21 to produce a plurality of cells. (see claim 24)
- vi) A method for biomanufacturing comprising harvesting a biomolecule from said plurality of cells produced by the method of claim 24. (see claim 25)

2. claims: 26-30

- A system for cell culture and/or biomanufacturing comprising:
 - i. a housing comprising a plurality of vertically stacked workstations;
 - ii. a mechanism for rotating said plurality of workstations; and
 - iii. a port for providing user access to one of the workstations. (see claim 26)
- ii) Use of a system according to claim 26 for a workstation and/or a storage bay for a plurality of bioreactors. (see claim 27)
- iii) Use of a system according to claim 26 for cell culture and/or biomanufacturing. (see claim 28)
- iv) A method for cell culture comprising growing a cell culture in at least one bioreactor in a system according to claim 26 to produce a plurality of cells. (see claim 29)
- v) A method for biomanufacturing comprising harvesting a biomolecule from said plurality of cells produced by the method of claim 29. (see claim 30)
