

1) Family number: 68952404 (WO18050870A1)

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Title: A NOVEL METHOD FOR STABILIZATION OF A BIOPHARMACEUTICAL DRUG PRODUCT DURING PROCESSING

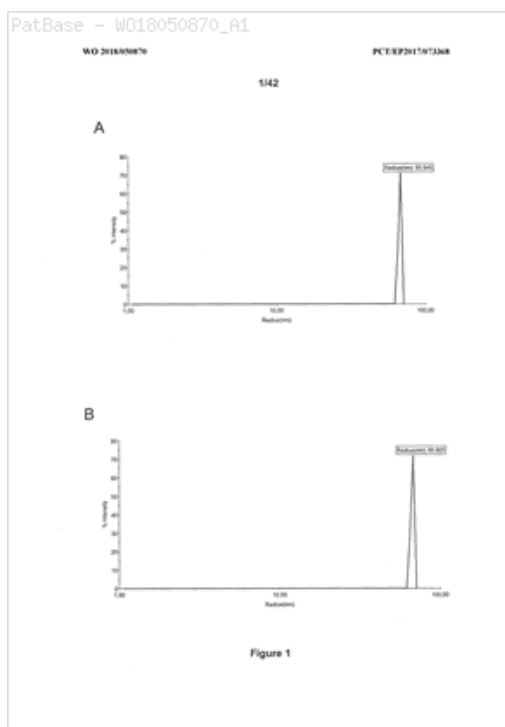
Abstract: The present invention relates to a method of producing a biopharmaceutical drug product comprising a biomolecule of interest, the method comprising: (a) a first phase of preparing a drug substance of the biomolecule of interest, said first phase comprising at least one processing step selected from (a1) harvesting, (a2) purification, (a3) re-buffering, and (a4) enrichment, wherein said at least one processing step in this first phase is carried out in the presence of a composition comprising at least three amino acids, wherein the combination of said at least three amino acids provides at least one positively charged functional group, at least one anti-oxidative functional group, at least one osmolytic function, and at least one buffering function, and (b) a second phase of further processing the drug substance prepared in (a) to obtain a biopharmaceutical drug product, said second phase comprising at least one processing step selected from (b1) re-buffering, (b2) freezing, (b3) thawing, and (b4) filling; wherein said at least one processing step in this second phase is carried out in the presence of a composition comprising (i) at least three amino acids, wherein the combination of said at least three amino acids provides at least one positively charged functional group, at least one anti-oxidative functional group, at least one osmolytic function, and at least one buffering function; and (ii) one or more sugar(s); in an amino acid:sugar ratio between 10:1 to 1:100 (w/w). The present invention further relates to a biopharmaceutical drug product obtained or obtainable by the method of the invention.

Classifications:

International (IPC 8-9): A61K39/395 A61K48/00 C12N15/86

C12N7/00 (Advanced/Invention)

CPC: C12N2710/10343 C07K16/32 A61K39/39591 C07K2317/24



Family:

Publication number	Publication date	Application number	Application date
AU2017328632 AA	20180322	AU20170328632	20170915
WO18050870 A1	20180322	WO2017EP73368	20170915

Priority:

EP20160189346 20160916 WO2017EP73368 20170915

Probable Assignee: LEUKOCARE AG

Assignee(s): (std): LEUKOCARE AG

Inventor(s): (std): ALTRICHTER JENS ; KEMTER KRISTINA ; KRIEHBUR THOMAS ; SCHOLZ MARTIN ; SCHOLZ MARTN ; KEMTER KRSTNA

Agent(s): DAVIES COLLISON CAVE PTY LTD; VOSSIUS AND PARTNER NO 31

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

2) Family number: 68952407 (WO18050873A1)

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Title: A NOVEL METHOD FOR PRODUCING LOW VISCOUS AND HIGHLY CONCENTRATED BIOPHARMACEUTICAL DRUG PRODUCTS IN LIQUID FORMULATION

Abstract: The present invention relates to a method of producing low viscous and highly concentrated biopharmaceutical drug products comprising a biomolecule of interest, the method comprising: (a) a first phase of preparing a drug substance

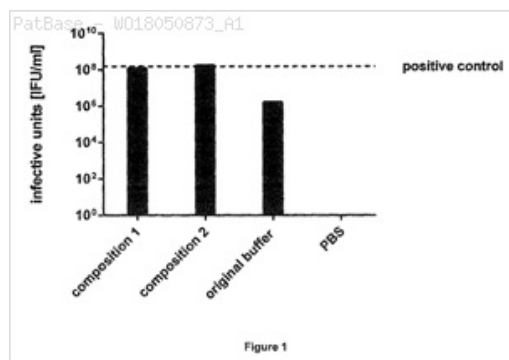
of the biomolecule of interest, said first phase comprising at least one processing step selected from (a1) harvesting, (a2) purification, (a3) re-buffering, and (a4) enrichment, wherein said at least one processing step in this first phase is carried out in the presence of a composition comprising at least three amino acids, wherein the combination of said at least three amino acids provides at least one positively charged functional group, at least one anti-oxidative functional group, at least one osmolytic function, and at least one buffering function, and (b) a second phase of further processing the drug substance prepared in (a) to obtain a low viscous and highly concentrated biopharmaceutical drug product, said second phase comprising at least one processing step selected from (b1) re-buffering, (b2) freezing, (b3) thawing, and (b4) filling; wherein said at least one processing step in this second phase is carried out in the presence of a composition comprising (i) at least three amino acids, wherein the combination of said at least three amino acids provides at least one positively charged functional group, at least one anti-oxidative functional group, at least one osmolytic function, and at least one buffering function; and (ii) one or more sugar(s); in an amino acid:sugar ratio between 10:1 to 1:100 (w/w). The present invention further relates to a low viscous and highly concentrated biopharmaceutical drug product obtained or obtainable by the method of the invention.

Classifications:

International (IPC 8-9): A61K47/18 A61K9/00

A61K9/08 (Advanced/Invention)

CPC: A61K9/0019 A61K9/08 A61K47/183 A61K47/26



Family:

Publication number	Publication date	Application number	Application date
WO18050873 A1	20180322	WO2017EP73373	20170915

Priority:

EP20160189318 20160916

Probable Assignee: LEUKOCARE AG

Assignee(s): (std): LEUKOCARE AG

Inventor(s): (std): ALTRICHTER JENS ; KEMTER KRISTINA ; KEMTER KRSTNA ; KRIEHLER THOMAS ; SCHOLZ MARTIN ; SCHOLZ MARTIN

Agent(s): VOSSIUS AND PARTNER NO 31

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 68952408 (WO18050874A1)

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Title: A NOVEL METHOD OF PRODUCING A LIQUID BIOPHARMACEUTICAL DRUG PRODUCT

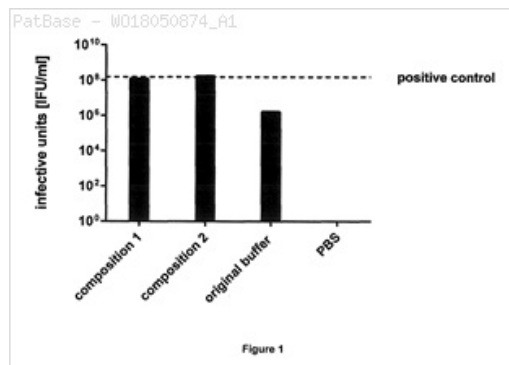
Abstract: The present invention relates to a method of producing a liquid biopharmaceutical drug product, comprising a biomolecule of interest, the method comprising: (a) a first phase of preparing a drug substance of the biomolecule of interest, said first phase comprising at least one processing step selected from (a1) harvesting, (a2) purification, (a3) re-buffering, and (a4) enrichment, wherein said at least one processing step in this first phase is carried out in the presence of a composition comprising at least three amino acids, wherein the combination of said at least three amino acids provides at least one positively charged functional group, at least one anti-oxidative functional group, at least one osmolytic function, and at least one buffering function, and (b) a second phase of further processing the drug substance prepared in (a) to obtain a liquid biopharmaceutical drug product, said second phase comprising at least one processing step selected from (b1) re-buffering, (b2) freezing, (b3) thawing, and (b4) filling; wherein said at least one processing step in this second phase is carried out in the presence of a composition comprising (i) at least three amino acids, wherein the combination of said at least three amino acids provides at least one positively charged functional group, at least one anti-oxidative functional group, at least one osmolytic function, and at least one buffering function; and (ii) one or more sugar(s); in an amino acid:sugar ratio between 10:1 to 1:100 (w/w). The present invention further relates to a liquid biopharmaceutical drug product obtained or obtainable by the method of the invention.

Classifications:

International (IPC 8-9): A61K47/18 A61K9/00

A61K9/08 (Advanced/Invention)

CPC: A61K9/08 A61K9/0019 A61K47/183 A61K47/26



Family:

Publication number	Publication date	Application number	Application date
WO18050874 A1	20180322	WO2017EP73374	20170915

Priority:

EP20160189352 20160916

Probable Assignee: LEUKOCARE AG
Assignee(s): (std): LEUKOCARE AG
Inventor(s): (std): ALTRICHTER JENS ; KEMTER KRISTINA ; KEMTER KRSTNA ; KRIEHBURER THOMAS ; SCHOLZ MARTIN ; SCHOLZ MARTN
Agent(s): VOSSIUS AND PARTNER
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

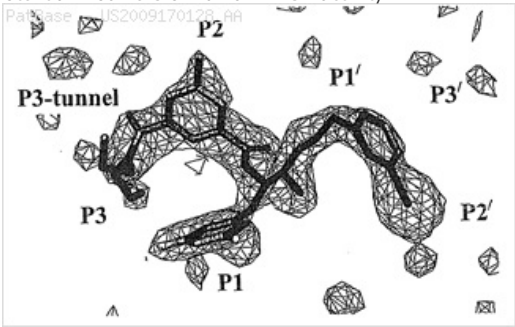
4) Family number: 43190435 (US2009170128A) © PatBase

Title: CRYSTALLIZATION AND STRUCTURE DETERMINATION OF BACE AND/OR BACE-LIKE PROTEINS

Abstract: The x-ray crystal structure of human BACE or BACE-like proteins is useful for solving the structure of other molecules or molecular complexes, and identifying and/or designing potential modifiers of human BACE activity.

Classifications:

International (IPC 8-9): C12N9/50 G01N31/00
G01N33/53 (Advanced/Invention);
C12N9/50 G01N31/00 G01N33/53 (Core/Invention)
CPC: C07K2299/00 C12N9/6478
European: C12N9/64F23 M07K299/00
US: 435/219 435/7.8 435/7.800P 436/4



Family:

Publication number	Publication date	Application number	Application date
US2009170128 AA	20090702	US20080329558	20081206
US7524668 BA	20090428	US20020143723	20020510
US7816114 BB	20101019	US20080329558	20081206

Priority:

US20010290120P 20010510 US20010334648P 20011130 US20020143723 20020510
US20080329558 20081206

Probable Assignee: ELAN PHARMACEUTICALS INC

Assignee(s): (std): ELAN PHARM INC

Assignee(s): ELAN PHARMACEUTICALS INC ; PHARMACIA AND UPJOHN CO

Inventor(s): (std): BENSON TIMOTHY ; PRINCE DONALD ; WOODS D DANIELLE ; PRINCE DONALD BRYAN ; BENSON TIMOTHY E

Agent(s): MCDONNELL BOEHNNEN HULBERT AND BERGHOF LLP

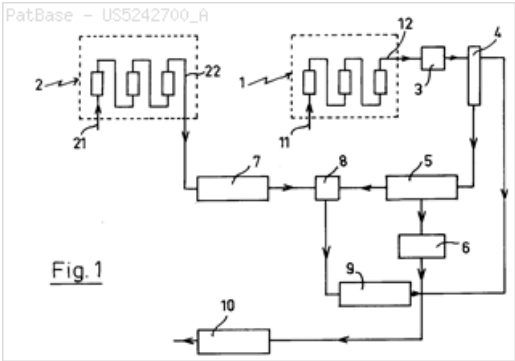
5) Family number: 8359558 (US5242700A) © PatBase

Title: TREATMENT OF EXTRACTS OBTAINED BY SPLIT EXTRACTION OF COFFEE

Abstract: Roast and ground coffee is extracted by a split extraction process to obtain an extract from an atmospheric stage and an extract from a pressure stage. The extract produced by the atmospheric stage is evaporatively concentrated to a dry matter content of above 35 percent by weight, and the evaporation vapors produced during evaporative concentration are condensed and concentrated. The extract produced by the pressure stage also is evaporatively concentrated to increase its dry matter concentration to a dry matter concentration below 25 percent by weight. The two concentrated extracts then are mixed, and that mixture is evaporatively concentrated to a dry matter concentration of more than 40 percent by weight. The condensed and concentrated vapors obtained from evaporative concentration of the atmospheric stage are introduced into the evaporatively concentrated mixture or into a powder obtained from the concentrated mixture.

Classifications:

International (IPC 8-9): A23F5/18 A23F5/24 A23F5/26 A23F5/28
A23F5/38 A23F5/50 C04B28/00 (Advanced/Invention);
A23F5/24 (Advanced/Non-invention);
A23F5/24 A23F5/46 C04B28/00 (Core/Invention)
International (IPC 1-7): A23F A23F5/18 A23F5/24 A23F5/26
A23F5/28 A23F5/36 A23F5/38 A23F5/50 A23L5/26 A23L5/28
A23L5/58
CPC: A23F5/262 A23F5/285 A23F5/505
European: A23F5/26B A23F5/28D A23F5/50H
US: 426/386 426/387 426/388 426/434



Family:

Publication number	Publication date	Application number	Application date
AR248466 A1	19950818	AR19920323477	19921022
AT128605 E	19951015	AT19910118123T	19911024

AU199226187 A1	19930429	AU19920026187	19921002
AU655322 B2	19941215	AU19920026187	19921002
BRPI9204135 A	19930504	BR1992PI04135	19921023
CA2080503 AA	19930425	CA19922080503	19921014
CA2080503 C	19981027	CA19922080503	19921014
CN1035098 C	19970611	CN19921012357	19921024
CN1071810 A	19930512	CN19921012357	19921024
DE69113629 D1	19951109	DE19916013629	19911024
DE69113629 T2	19960307	DE19916013629T	19911024
DK0538512 T3	19960129	DK19910118123T	19911024
EP0538512 A1	19930428	EP19910118123	19911024
EP0538512 B1	19951004	EP19910118123	19911024
ES2079016 T3	19960101	ES19910118123T	19911024
GR3018190 T3	19960229	GR19950403316T	19951122
IE70914 B	19970115	IE19920002697	19920930
IE922697 A1	19930505	IE19920002697	19920930
IL103325 A0	19930315	IL19920103325	19921002
IL103325 A1	19950330	IL19920103325	19921002
JP2772209 B2	19980702	JP19920285954	19921023
JP5219890 A2	19930831	JP19920285954	19921023
KR0137747 B1	19980425	KR19920018515	19921008
KR19930007359 A	19930520	KR19920018515	19921008
MA22683 A1	19930701	MA19920022970	19921016
MX9206037 A1	19930401	MX19920006037	19921021
NO301684 B1	19971201	NO19920004092	19921022
NO924092 A	19930426	NO19920004092	19921022
NO924092 A0	19921022	NO19920004092	19921022
NZ244595 A	19950427	NZ19920244595	19921002
TW225473 B	19940621	TW19920107857	19921003
US5242700 A	19930907	US19920953565	19920929
ZA9207571 A	19930416	ZA19920007571	19921001

Priority:

EP19910118123 19911024 CA19922080503 19921014

Probable Assignee: NESTLE SA

Assignee(s): (std): DES PRODUITS NESTLE S A SOC ; NESTLE SA ; NESTEC SA ; SOCIE TE DES PRODUITS NESTLE S ;
SOCIERE DES PRODUITS NESTLE S A

Assignee(s): SCHLECHT KLAUS ; SOCIETE DES PRODUITS NESTLE S A ; SOCIETE DES PRODUITS NESTLE S A
VEVEY CH ; SOCIETE DES PRODUITS NESTLE SA ; PURODEYUI NETSUSURU SA SOC ; NESTEC S A ;
SOC PROD NESTLE SA ; SOCIE TE DES PRODUITS NESTLE S A ; DES PRODUITS NESTLE SA SOC ; DES
PRODUITS NESTLE SOC SA ; NESTEC AVENUE NESTLE SA

Inventor(s): (std): CRAUT SHELEHIT ; KURAUSU SHIYUREHITO ; SCHLECHT K ; SCHLECHT KLAUS

Inventor(s): KURAUSU SHUREHITO ; SCHLECHT KLAUS CH 1350 ORBE CH ; K SCHLECHT ; KLAUS SCHLECHT

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; BORDEN LADNER GERVAIS LLP; REINHOLD COHN AND
PARTNERS

Designated states: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

6) Family number: 41886665 (US2008215249A)

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Title: CRYSTALLIZATION AND STRUCTURE DETERMINATION OF BETA SECRETASE AND/OR BETA SECRETASE-LIKE
PROTEINS

Abstract: The x-ray crystal structure of human BACE or BACE-like proteins is useful for solving the structure of other
molecules or molecular complexes, and identifying and/or designing potential modifiers of human BACE activity.

Classifications:

International (IPC 8-9): C12N9/50 G01N31/00

G01N33/48 (Advanced/Invention);

C12N9/50 G01N31/00 G01N33/48 (Core/Invention)

CPC: C07K2299/00 C12N9/6421

European: C12N9/64F M07K299/00

US: 435/219 436/4 702/19

Figure 1

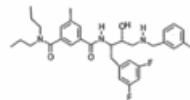
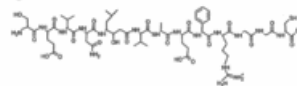


Figure 2

**Family:**

Publication number	Publication date	Application number	Application date
US2008215249 AA	20080904	US20080148041	20080416
US7384773 BA	20080610	US20020143502	20020510

Priority:

US20010290107P 20010510 US20020143502 20020510 US20080148041 20080416

Probable Assignee: PHARMACIA AND UPJOHN CO

Assignee(s): (std): PFIZER

Assignee(s): PFIZER INC ; PHARMACIA AND UPJOHN CO

Inventor(s): (std): TOMASSELLI ALFREDO G ; EMMONS THOMAS L ; DURBIN JIM D ; BENSON TIMOTHY E

Agent(s): PFIZER INC STEVE T ZELSON; ZELSON STEVE T; DORIGO ANDREA E; DONAHUE E VICTOR; STEVE T; E VICTOR; ANDREA E

7) Family number: 53182888 (US2014342014A)

© PatBase

Title: METHODS OF STERILIZING FETAL SUPPORT TISSUES

Abstract: Disclosed herein, are methods of preparing sterilized amniotic tissues. Further disclosed herein, are methods of using the sterilized amniotic tissues.

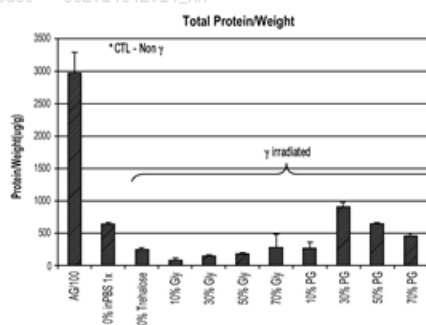
Classifications:

International (IPC 8-9): A01N1/02 A61K35/50 A61L2/00 A61L2/08 A61P27/02 C12N13/00 C12N5/073 (Advanced/Invention)

CPC: A61K35/50 A61L2/0035 A01N1/021

US: 422/22 424/572

PatBase - US2014342014_AA

**FIG. 1****Family:**

Publication number	Publication date	Application number	Application date
CA2844115 AA	20140203	CA20122844115	20120824
CN103874762 A	20140618	CN201280041738	20120824
EP2748308 A1	20140702	EP20120828158	20120824
EP2748308 A4	20150429	EP20120828158	20120824
US2014342014 AA	20141120	US20120240712	20120824
US2015335771 AA	20151126	US20150819319	20150805
US9682160 BB	20170620	US20150819319	20150805
US9931423 BB	20180403	US20120240712	20120824
WO13032938 A1	20130307	WO2012US52358	20120824

Priority:

US20110528059P 20110826 US20120240712 20120824 WO2012US52358 20120824
US20140240712 20140514 US20150819319 20150805

Probable Assignee: TISSUETECH INC

Assignee(s): (std): TAN EK KIA ; TISSUETECH INC ; TSENG SCHEFFER

Inventor(s): (std): TAN EK KIA ; TSENG SCHEFFER

Agent(s): GOWLING LAFLEUR HENDERSON LLP; WILLIAMS RICHARD ANDREW NORMAN; WILSON SONSINI
GOODRICH AND ROSATI; POULOS SABRINA D

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR
CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID
IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR
MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL
SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW