28 de noviembre de 2023

PRS secretome tissue selective immunomodulatory complex (Biological medicinal product)

CÁTEDRA
en terapias avanzadas basadas
en secretomas celulares

UAM Universidad Autónoma de Madrid | Peaches BIOTECH

Dr. Juan Pedro Lapuente

Content

1. The Institution
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    b) Innovative mechanisms of action
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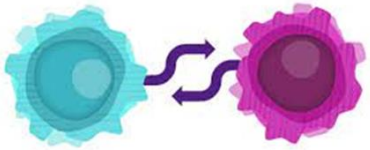
OUR MISSION:

Peaches Biotech S.L. specialises in the generation of new complex biological drugs (secretome) through an innovative cell co-culture platform, capable of generating these drugs in the field of tissue-selective immunomodulation (Immunity Training Platform).

OUR VISION:

Peaches Biotech S.L. has developed tissue-selective secretome-based immunoregulatory drugs with high anti-inflammatory and anti-fibrotic efficacy, which enable an optimised regeneration process by regulating the communication between the innate and adaptive immune system.



Proprietary and patented immunity training platform to create multiple cell-free biologic drugs.

Own ATMPs GMP factory

Biologics drugs
Cell therapies drugs
Medical devices

OUR COMPANY BOARD:

Juan Carlos de Gregorio

- Founder and CEO of PEACHES
- & CEO of Puleva Biotech
- Technical and Marketing Director Andrómaco
- 2005 Innovation Award IESE-Vocento-Ernst&Young
- Degree in Pharmacy. Galenic Specialization

Dr. Juan Pedro Lapuente

- Chief Scientific Officer of PEACHES
- Doctor of Medicine, Master in Transfusion and Advanced Cellular Medicine and Therapies from the University of Liège, Master in Sports Traumatology from the Catholic University of Murcia, Master in Molecular and Cellular Biology from the University of Zaragoza .

Ignacio Vega

- JOINS the shareholding as a financial partner.
- Founder and President of the Cardiva Group 1985, a Spanish medical equipment company with a turnover of more than 70 million euros per year.

Proprietary and patented immunity training platform to create multiple cell-free biologic drugs.

GMP manufacture process aproved by AEMPS

Own ATMPs GMP factory

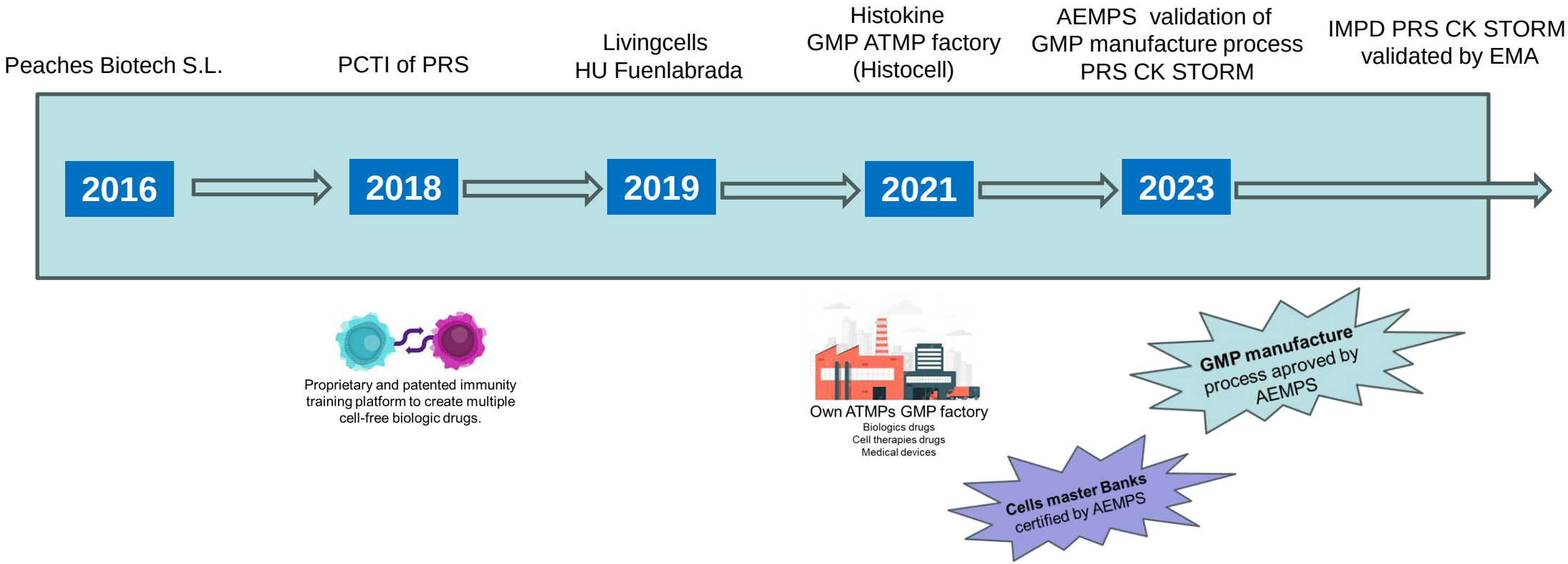
Biologics drugs
Cell therapies drugs
Medical devices

The company

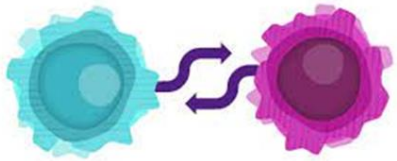
Peaches BIOTECH


Peaches

OUR HISTORY:

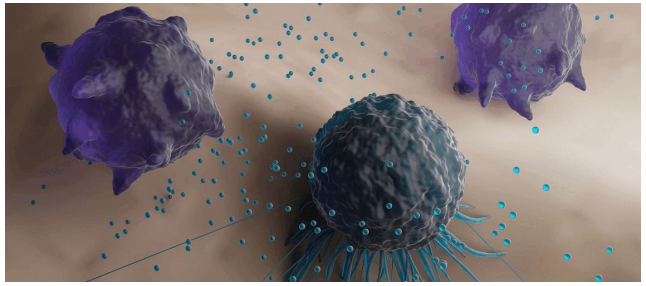

Peaches Biotech S.L.
2016
PCTI of PRS
2018
Livingcells
HU Fuenlabrada
2019
Histokine
GMP ATMP factory
(Histocell)
2021
AEMPS validation of
GMP manufacture process
PRS CK STORM
2023
IMPD PRS CK STORM
validated by EMA
Proprietary and patented immunity training platform to create multiple cell-free biologic drugs.
Own ATMPs GMP factory
Biologics drugs
Cell therapies drugs
Medical devices
GMP manufacture process aproved by AEMPS
Cells master Banks certified by AEMPS

OUR INNOVATION:



Proprietary and patented immunity training platform to create multiple cell-free biologic drugs.

IMMUNITY TRAINING PLATFORM



Innate immune system

Inflammation Fibrosis

Adaptative immune system

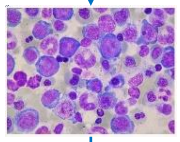
Innovation

Peaches BIOTECH

OUR PRODUCT:

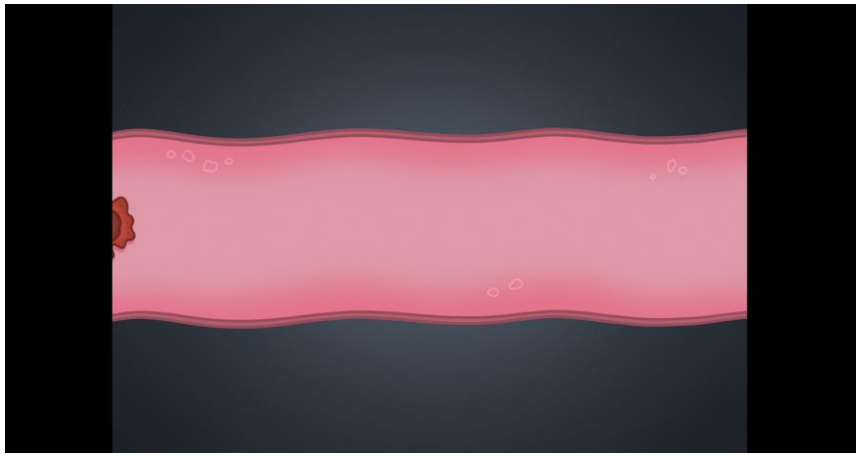
constant in-line production process

Leukopak

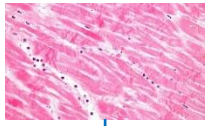


Isolation of monocytes

Monocyte culture



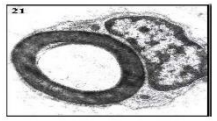
CO-CULTURE with Muscle cells



PRS MIOBOOST

Treatment of muscle ruptures.
Urinary incontinence recovery

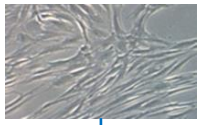
CO-CULTURE with Schwann cells



PRS NEUROPAIN

Treatment
Neuropathic pain

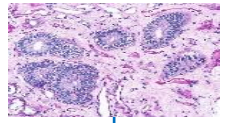
CO-CULTURE with Tenocytes



PRS TENOBOOST

Treatment of tendinosis

CO-CULTURE with Mesenchymal cells



PRS CK STORM

Cytokine Storm Treatment associated COVID-19, associated pancreatitis, asociated carTcell…
Crohn ulcers treatment

●●● etc

The Product

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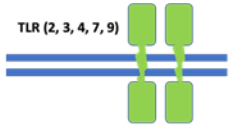
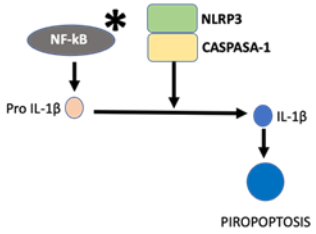
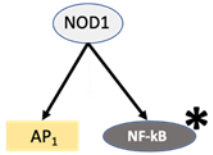
Toll-like receptors

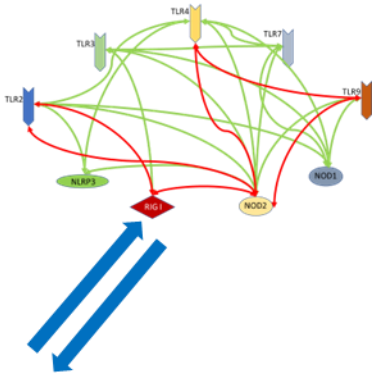


RIG-like helicase receptors

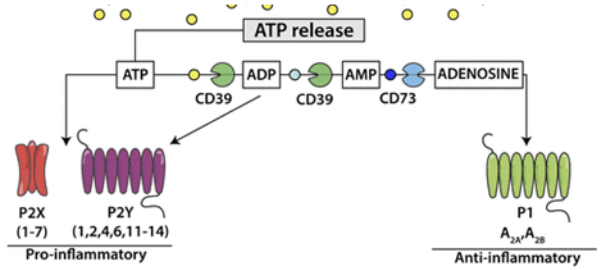


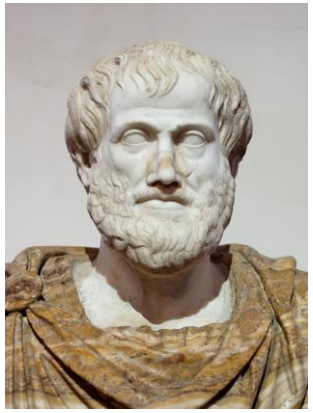
NOD-like receptors





Purinergic system





If cell therapies are safe and effective…

If the MoA of cell therapies is directly linked to the secretome they produce…

…Therapies based on the direct use of the secretome as a drug are also safe and effective.

The Mechanism of action (MoA)

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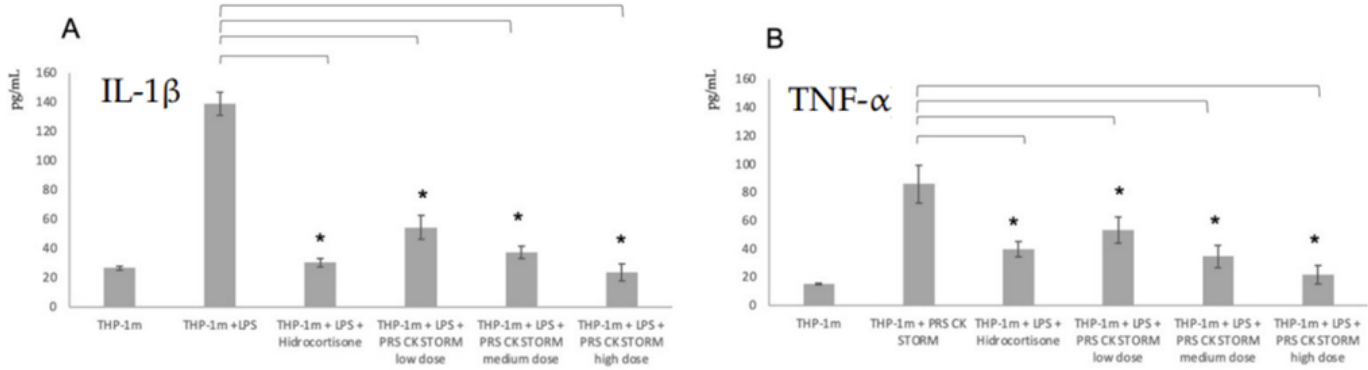
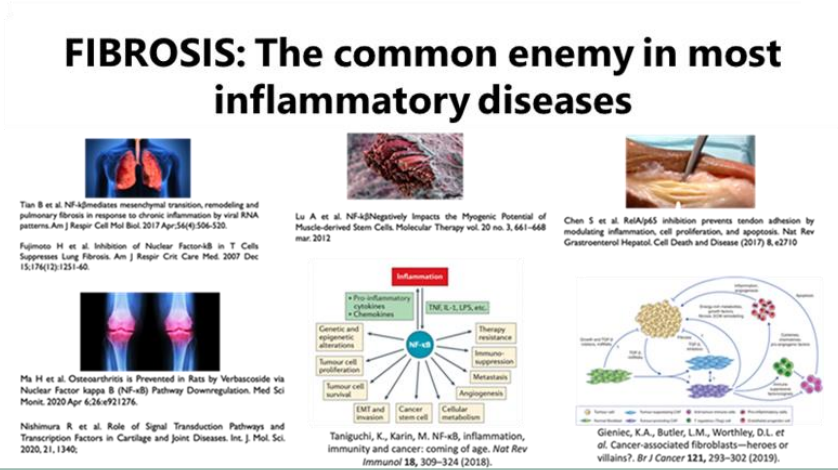
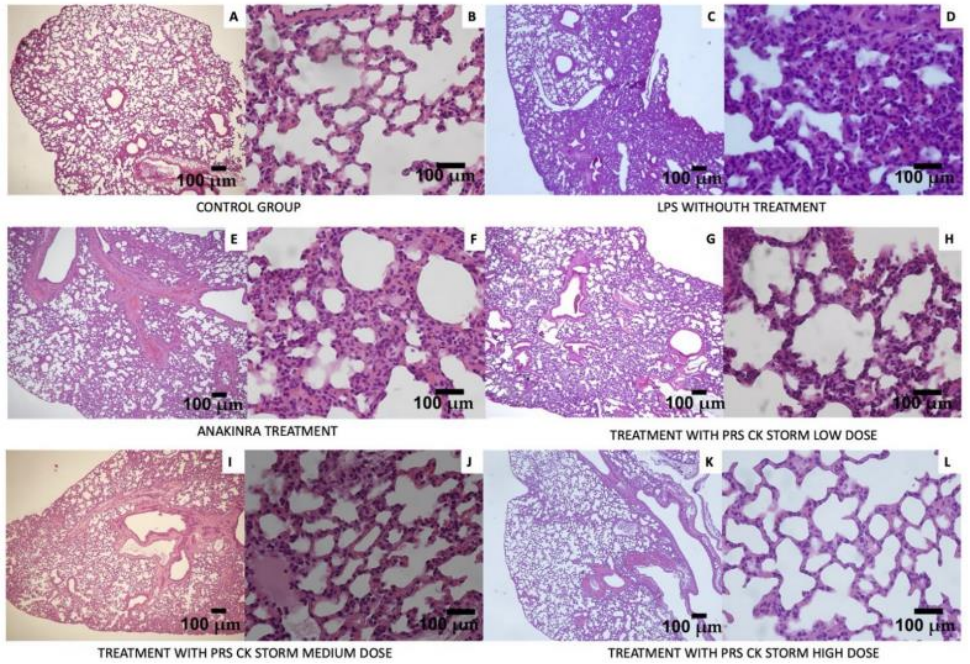
MoA:





Activation of **innate immunity** usually leads fibrosis (the common enemy in most of inflammatory diseases)



The Mechanism of action (MoA)

Peaches BIOTECH

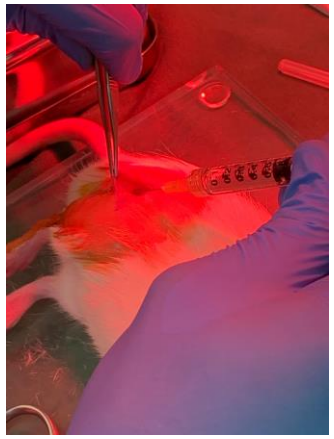
The biological composition of all PRS® controls and limits inflammation, favoring tissue regeneration, through a triple mechanism of immunomodulation tissue selective:

1) of the NF-kβ pathway

2) of the NLRP3 inflammasome

3) of the purinergic system

EU trial number
2023-507700-32-00



vivotecnia researching for you

FINAL REPORT B-03327

14 Day Intravenous Toxicity Study of PRS CK STORM in the Sprague Dawley Rats with a 14 Day Treatment-Free Period

Volume I of IV

10th March 2022

vivotecnia researching for you

FINAL REPORT B-03328

14 Day Intravenous Toxicity Study of PRS CK STORM in the Göttingen Minipig with a 14 Day Treatment-Free Period

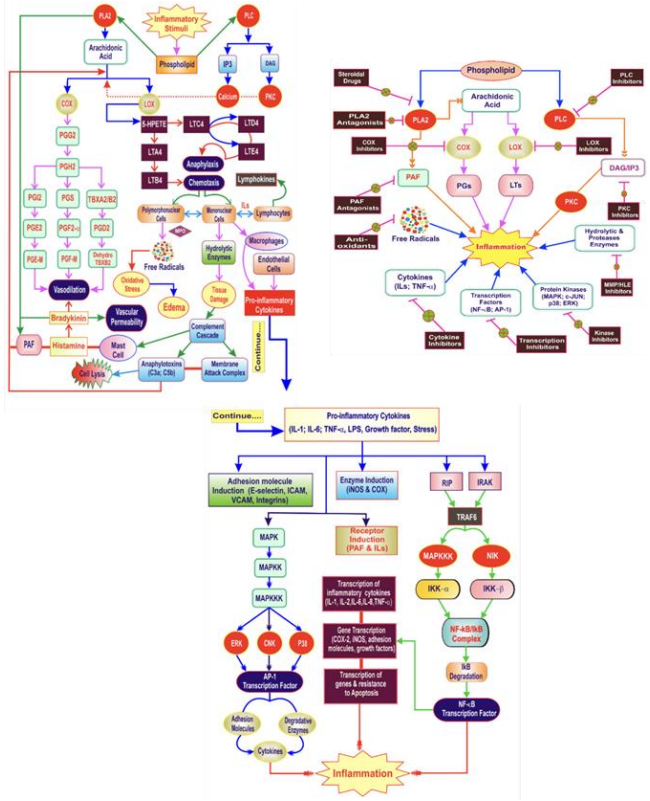
Volume I of IV

31st March 2022

Non treated vs treated

The Mechanism of action (MoA)

Peaches BIOTECH



Biological medical complex drug

- -Cell-free drug
- -MoA multiple immunoregulatory properties
- -Effects tissue-selective
- -High safety and effectiveness
- -Standardised product, highly characterised

High industrial applicability

- -Allogenic product
- -Multiple therapeutic indications (inflammation and…)
- -Easy transport and storage (freeze-dried product)
- -Homogeneous batches with high reproducibility
- -Low manufacturing costs
- -GMP production protocols validated by AEMPS-EMA
- -Factory ATMPs and biologics own GMP authorised by AEMPS

Differential features facing the market

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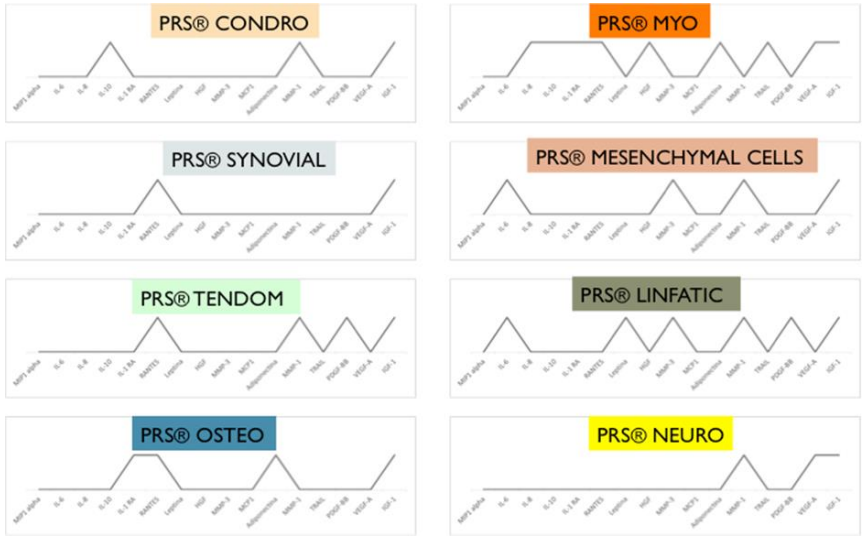

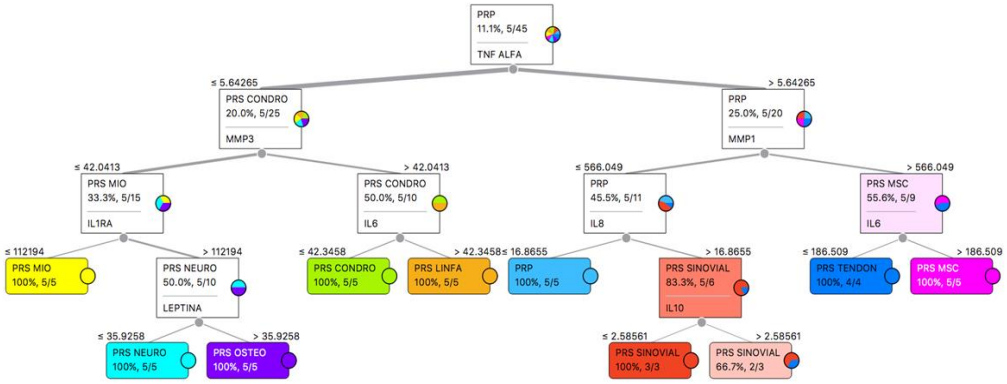

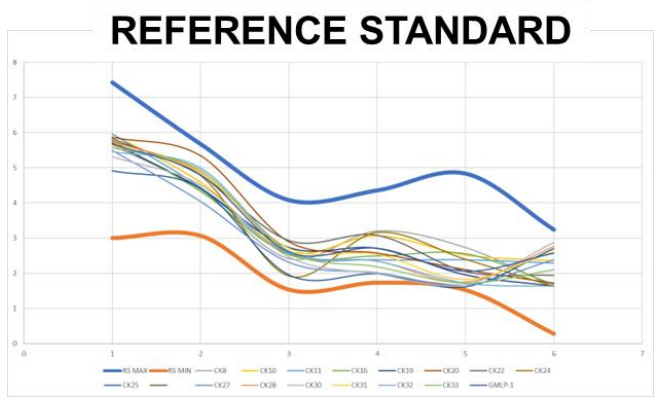

Specific potency test
Cytokines, chemokines, and growth factors
Microvesicles
miRNA
Aggregates
Albumin
Residual DNA
Proteomic
Lipidomic
Adventitious viruses
Sterility test
Cytometric análisis of cells
NGS and several bioinformatic análisis …

Current status of development

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TIME PLANNING																
	2023				2024				2025				2026			
PRS CK STORM *																
PRS MIO																
PRS TENDON																
PRS NEUROPATIC PAIN																

* **EU trial number**
2023-507700-32-00

Preclinical BPL development

Phase I-IIa

Phase IIb-III

Phase IV

Current status of development

Peaches BIOTECH

(19) Europäisches Patentamt / European Patent Office / Office européen des brevets

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(22) Date of filing: 03.04.2019

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A61P 19/02 (2006.01) A61P 21/00 (2006.01)
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Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

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(54) TISSUE-SPECIFIC GROWTH FACTORS, METHOD OF PRODUCTION AND USES THEREOF

(57) The invention describes a method for producing growth factors and/or cytokines, a composition and pharmaceutical composition comprising thereof and their uses. The compositions obtained by this method are suitable in medicine regenerative treatments, since are able to regenerate injured tissue. The compositions of the invention may be stored for long periods until its use, avoiding any subsequent blood extraction from the cell-donor, being the stored growth factors and/or cytokines biologically active after storage. Moreover, the compositions may be applied in both autologous and allogenic treatments.

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patent protection up to the year **2040**

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Declarations under Rule 4.17:
— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:
— with international search report (Art. 21(3))

WO 2020/201404 A1

(54) Title: COMPOSITION FOR TISSUE REGENERATION, METHOD OF PRODUCTION AND USES THEREOF

(57) Abstract: The invention describes a method for obtaining a composition for tissue regeneration, comprising the following steps: providing M2-macrophages, co-culturing the M2-macrophages with tissue-specific cells in serum free medium; and collecting the supernatant of the co-culture. The compositions obtained by this method are suitable in medicine regenerative treatments, since are able to regenerate injured tissue. These products are sterile cell-free physiological aqueous solutions that show specific tissue concentration patterns to provide optimal tissue-specific regenerative effects. The compositions of the invention may be stored for long periods cryopreserved or lyophilized until its use, avoiding any subsequent blood extraction from the cell-donor, being the stored growth factors and/or cytokines biologically active after long-term storage. Moreover, the compositions may be potentially applied in both autologous and allogenic treatments.

IPR protection

Peaches BIOTECH

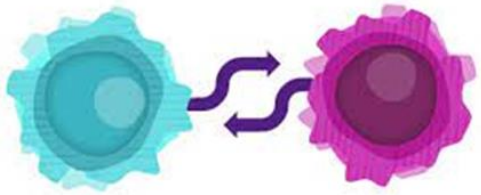
- Biological Complexity
- Sterility
- Variability
- Quality control
- Development Timelines
- Intellectual Property
- Regulatory
- Scalability Industriousness
- Funding

Pitfalls & risks to be considered

Peaches BIOTECH

Own ATMPs GMP factory

Biologics drugs
Cell therapies drugs
Medical devices



Proprietary and patented immunity training platform to create multiple cell-free biologic drugs with different clinical indications

CÁTEDRA
en terapias avanzadas basadas en secretomas celulares

UAM Universidad Autónoma de Madrid | Peaches BIOTECH

Products manufactured under GMP conditions, fully characterised, standardised, lyophilised and allogeneic, with clinical trials in progress

High profitability at low risk

Partnering opportunities

Peaches BIOTECH

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