

IDEA Spark Cantabria 2019

Reference #	12954112
Status	Complete
Login Username	Andoni Cruz
Login Email	cruz@cellulis.com
Project Title	Democratization of cell therapy treatments through standardization of cryopreservation processes
Short project title (max 20 alpha-numeric characters)	Limbo
How long have you (or your team) been working on this project?	Since 2013
How many people are on your project team? (Count only those who will be involved in doing the work of the program and/or those you would like included on any email communications from the program. Note that each person will need to submit a registration form; instructions will be provided after this application is submitted.)	2
Applicant name:	Andoni Cruz
Applicant E-mail address (when you submit, a copy of your entry will be sent to this email)	cruz@cellulis.com

Project Description:

Provide a brief overview of your project.

Please comment on the problem you propose to solve and the potential societal impact of solving it. This should be understandable and compelling to someone not skilled in the art.

Cell Therapy products need to be frozen in order to maintain product stability and also for inventory and logistic reasons. To avoid freezing injury, cells need to carry high amounts of toxic excipients just at the time of freezing. Upon thawing, current clinical standard procedures dictate the removal (or dilution) of these excipients from the cells before human infusion to avoid cell toxicity and also to avoid undesired side effects to the patient. These thawing and reconstitution processes produce severe stress to the cells leading to inconsistencies in the quality of the final medicinal product that is infused into the patient. Therapeutical efficacy is therefore jeopardized.

Our unique technology is capable of drastically reducing the toxicity associated to the current cryopreservation protocols and for the first time, it provides an enclosed final product formulation at the point of care for cryopreserved cell therapy products. Our technological solution addresses the urgent need for appropriate clinical cell recovery standardization protocols, at the same time that improves cell viabilities, avoids contamination risks associated to cell therapy product handling and greatly reduces expensive costs and resources at the point of care.

Since no manipulation of samples is needed, we aim for the democratization of cell therapy treatments.

Have there been any previous approaches to solving this problem (or answering the question)?

Please describe how your idea is original.

The only previous (and current) approaches to deal with the elimination of these toxic excipients (mainly DMSO) from cells at the point of care, are based on expensive equipment that replaces the excipients with a physiological diluent to further dilute the cell solution until no longer is toxic. This is typically done by centrifuging the thawed cells in an enclosed manner (to avoid contamination) and then adding the excipient. The problem with this is that cells, after the recovery of their frozen state, are highly stressed and further manipulations should be avoided. The dilemma comes when cells that have just been thawed, are in contact with high concentrations of the toxic excipient and therefore this excipient needs to be diluted or cleared out from the cells (hence manipulation of cells is needed). Furthermore, the addition of diluent must be done step by step to avoid osmotic injury to the cells.

Our solution is original since we pack the cells with very little amounts of this excipient to start with, therefore manipulations are not needed after cell thawing. The way our Limbo™ technology works is by concentrating the cells in a very high number with the right amount of excipient and then placing a large amount of diluent in another compartment of the container. Both compartments are frozen separately and they only mix upon thawing. The dilution step is therefore integrated into the proprietary bi-compartmented container and the diluent is gradually integrated into the cells avoiding the osmotic shock. US patented.

**Tell us something interesting about yourself
(and your team)**

I am a very active entrepreneur and I like to form teams with open-minded people with special talents to solve social challenges. My team usually complements my weaknesses. I fill comfortable finding the right team members that fit to accomplish our mission.

I like to learn as much as possible and my fields of interest cover from IT technologies to life sciences.

I am a co-founder of several biotech companies.

My passions are diving and swimming in open waters and skiing and I feel truly lucky because I like in Cantabria one of those exotics counties where you can sky at the mountains in the morning and dive at the sea on the same day.

Why do you want to participate in the program and what do you hope to gain from the program?

I would like to participate in this program to further gain experience in managing this kind of projects, to obtain different points of views, to become resourceful in the implementation of strategic ideas, to accelerate the launching of our technology, to find financial support and stakeholders and above all, to make important contacts that may help us to develop this interesting and much-needed technology.

Last Update

2019-04-15 09:12:40

Start Time

2019-04-15 08:44:18

Finish Time

2019-04-15 09:12:40

IP

62.43.203.39

Browser

Chrome

OS

Mac

Referrer

<https://fs24.formsite.com/res/formLoginReturn>

Registration for IDEA Spark

Reference #	12960435
Status	Complete
Short Project Title (use title from IDEA Spark Application)	LIMBO
First Name	Andoni
Last Name	Cruz
Preferred name (for name tags)	Andoni
Institution or organizational affiliation	Cellulis S.L.
Degree	MS
Role in Institution	Entrepreneur
City	SANTOÑA
Country (if US, enter State)	Spain
Phone Number	0034610958858
Email Address	cruz@cellulis.com
In what way will you be participating in IDEA Spark?	In person
Last Update	2019-04-15 09:18:10
Start Time	2019-04-15 09:16:12
Finish Time	2019-04-15 09:18:10
IP	62.43.203.39
Browser	Chrome
OS	Mac
Referrer	N/A

Registration for IDEA Spark

Reference #	12960635
Status	Complete
Short Project Title (use title from IDEA Spark Application)	Limbo
First Name	Roberto
Last Name	Hernan
Preferred name (for name tags)	Roberto
Institution or organizational affiliation	Cellulis
Degree	PhD
Role in Institution	<ul style="list-style-type: none">• Other:• CSO
City	Santoña
Country (if US, enter State)	Cantabria
Phone Number	+34658728325
Email Address	hernan@cellulis.com
In what way will you be participating in IDEA Spark?	e-communication access only (not participating)
Last Update	2019-04-15 10:08:45
Start Time	2019-04-15 10:06:18
Finish Time	2019-04-15 10:08:45
IP	62.43.203.39
Browser	Chrome
OS	Windows
Referrer	N/A