

Outpatient therapy with Autologous Cytokines to treat musculoskeletal diseases in the physician's office



Qrem Cytokine, the first Lab-in-a-Box device that obtains automatically an Autologous Cytokine Rich Serum (ACRS) from the patient's peripheral blood in only 36 minutes.

INTRODUCTION

Tecnologia Regenerativa Qrem, (www.qrem-regenerative.com) is a medical device company founded by Mr. Josep M. Escuer and Ms. Núria Noguera in July of 2016. Qrem researches, develops, manufactures and markets medical devices and it is engaged to autologous regenerative medicine at the patient's side in the physician's office.

Qrem Cytokine, the company's first product, is a Class IIa medical device produced by 3 main sub-contractors based on Barcelona Area.

The product launched on the market in May 2018, obtains an **Autologous Cytokine-Rich Serum** from the patient's peripheral blood that is infiltrated locally in the area to be treated.

THE PRODUCT

Qrem Cytokine is a table top, closed, sterile and 100% automatic Lab-in-a-Box system, consisting of a device Qrem Device and a single-use disposable Kit Qrem Cytokine.

From 38 ml of the patient's peripheral blood and in just 36 minutes, 8 to 15 ml of an Autologous Cytokine-Rich Serum (ACRS) are obtained ready to be infiltrated. This serum directly contains the active substances; the cytokines (growth factors, interleukins,...) released by platelets, white blood cells and recovered from whole plasma. It is also acellular and does not contain fibrinogen. Qrem Cytokine directly provides a natural balance of cytokines (active principle) working in synergy with superior biological potential.

AUTOLOGOUS CYTOKINE THERAPY

The local infiltration of cytokines allows the modulation of the immune system which, applied to musculoskeletal diseases, translates into a regulation of the immune response, inflammation, tissue remodelling and cell differentiation, achieving a more effective cure.

BUSINESS MODEL

B2B - Recurring Revenue Model: Qrem Device assignment per yearly committed quantities of Kit Qrem Cytokine purchase.

COMMERCIALIZATION

Target customers are physicians that treat musculoskeletal diseases, particularly osteoarthritis, tendinopathies and pain. The target medical specialties are: orthopedists, rheumatologists, rehabilitators, sports medicine, anesthesiologists, etc. that are currently using visco-supplements and orthobiologic infiltrations as a therapy.

The commercialization of Qrem Cytokine was launched in Spain in May 2018. Today the company has distributors in Spain, Switzerland, Italy, Austria, Germany and Portugal and negotiations are being carried out with distributors in France and Benelux.

70 units of Qrem Device are installed in the market and more than 3000 un. of Kit Qrem Cytokine have been sold having treated more than 1900 patients

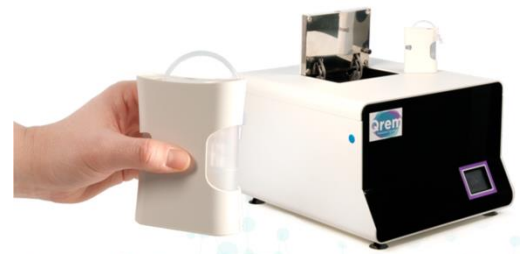
DIRECT COMPETITORS (biological product / technology)

Platelet Rich Plasma (Hundreds of companies). **PRP** is an activated platelets concentrate in Plasma form infiltrated as a mediator assuming the release of growth factors inside the body. Different technologies, mainly centrifugation.

Orthokine (Orthogen). **ACS** is a cell-free serum that contains a high concentration of IL1a anti-inflammatory cytokine. The technology is an open system using glass beads that requires blood manipulation, 6 to 9 hours of incubation, centrifugation and freezing.

nSTRIDE (ZIMMER-BIOMET). **APS** is a protein solution containing also cells and fibrinogen with high concentration of IL1a anti-inflammatory cytokine. The technology is a 2-steps semi-automatic open process using glass beads.

Goldic (Arthrogen). Gold Induced Cytokines. Serum with high concentration of gelsolin. The technology is an open system using micro gold particles that requires blood manipulation, 24 hours of incubation, centrifugation and freezing.



How does QREM CYTOKINE work?

<https://youtu.be/CcP5hqQI-CU>

MANAGEMENT TEAM

- Josep M. Escuer. Co-founder & CEO
- Núria Noguera. Co-founder & CTO
- Jordi Petit. Interim CFO
- Emiliano Tolosa. Operations Manager
- Laia Uriel. Scientific Manager
- Miriam Oliver. Sales Manager

VISION

Immuno-Regenerative therapies will be next revolution in medicine and, in particular, autologous regenerative therapies have shown a great potential in the treatment of degenerative diseases and injuries.

MISSION

Lead autologous regenerative therapies implementation in the clinician's office near the patient by means of making available Lab-in-a-Box devices to perform these kinds of therapies to the greatest number of people as possible at an affordable price.

IP

- US2016263193 (A1); EP3068410 (A1) - Method for obtaining a cytokine-rich composition and composition obtained by means of this method
- WO2016174180 (A1). Separating and transferring phases of a fluid through centrifugation
- WO2018178480: Fluid centrifuge and method for centrifuging a fluid using a centrifuge

QUALITY ASSURANCE & REGULATORY AFFAIRS

- Manufacturer License Nr 7096-PS granted by AEMPS (Spanish Agency)
- ISO 13485 Certification
- Qrem Cytokine CE Mark certification granted by NB0476

FUNDRAISING

Investment needs will be defined together with the partner once the main targets of commercialization markets, regulatory pathways, product development pipeline, etc. will be agreed.