Innovation Portfolio

Stem cell-associated 3D printing devices for the treatment of joint injuries

Problem

Orthopedic surgery is performed for multiple reasons, including sports injuries or wear and tear caused by physical agents or trauma. Currently, there is a high demand for these procedures in Brazil's Unified Health System (SUS), and there is also a shortage of available resources, both financial and of specialized professionals. In this context, developing new therapeutic procedures that can reduce costs while improving diagnostic and treatment methods is desirable.

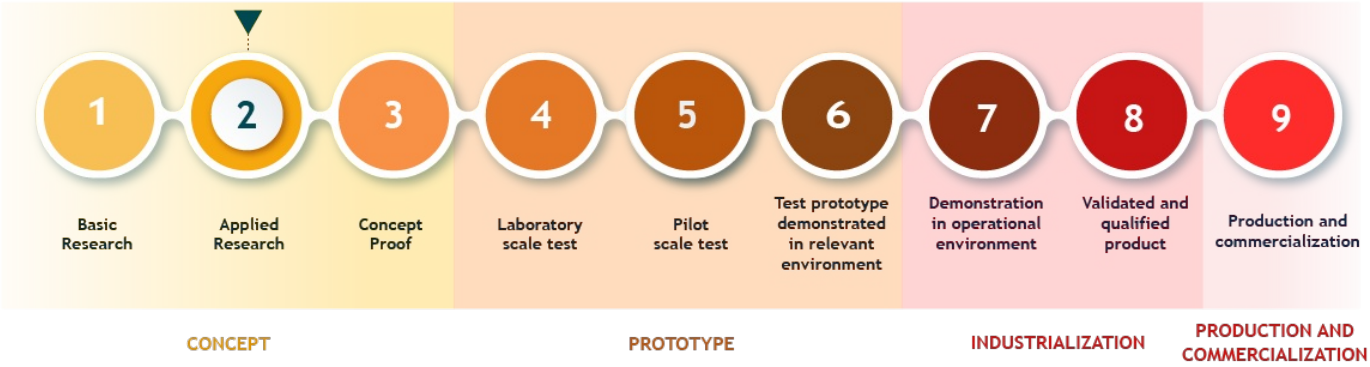
Solution

The project makes use of 3D printing technologies for the construction of three-dimensional devices with synthetic and/or natural, biocompatible, and bioabsorbable materials in association with stem cells. These devices function as tissue substitutes (implants) in orthopedic surgical procedures. The solution reduces the costs and duration of the surgical procedure and accelerates the regeneration of injured tissue, as well as the recovery time of patients.

Differential

- Use in different types of injuries
- More efficient treatment
- Use of stem cells

Development stage



What we are searching for

As it is also dedicated to the study of the use of biopolymers associated with stem cells, the group is looking for partners in the areas of large-scale cell culture (bioreactors) and bioprinting for co-development of tissue engineering solutions/products.

WANT MORE INFORMATION? CONTACT US!

Inventors

Alejandro Correa

Use your phone camera to scan the QR Code:

Campus Fiocruz Maré - Av. Brasil, 4036 - Maré, Rio de Janeiro - RJ

CEP: 21040-361

portfolio@fiocruz.br

+55 (21) 3282-9080