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Research Success Story



TAKING THE LEAD TO TREAT KNEE CARTILAGE WITH ENGINEERED GRAFTS

Finding new ways to treat knee cartilage injuries using engineered grafts based on autologous nasal chondrocytes is the aim of the Horizon 2020 project “BIO-CHIP” (Bioengineered grafts for cartilage healing in patients). Prof. Ivan Martin of the Department of Biomedicine, University of Basel/University Hospital Basel is coordinating this multi-centre phase II clinical trial to test the treatment’s efficacy and to prepare commercial exploitation.

The idea to use cells from the nose to treat knee injuries came up in 2000 and the BIO-CHIP project is testing the formulated hypothesis. “The results of the phase I clinical trial show that the treatment is safe and feasible. For the phase II clinical trial, we are teaming up with three other hospitals to increase the number of patients and test the efficacy of the treatment”, says Ivan Martin from the University of Basel/University Hospital Basel. For him, dealing with all the regulatory aspects is the biggest challenge. “Not only do rules in Switzerland differ slightly from EU regulations but different national rules also apply and all these requirements need to be adhered to, while at the same time maintaining one study protocol for all centres.” Next to the regulatory challenge, being the project coordinator also means he

has to deal with administrative and management tasks. However, Ivan Martin is happy to have the responsibility and to take the lead in the implementation.

“By receiving input from different perspectives, we were better able to address the proposed goals and develop new ideas for future projects”

New ideas for future projects

“I like the enthusiasm and determination of the partners and the many new proposals for collaborations”, says Martin. “Partner ECRIN made valuable suggestions for the design of the clinical studies, whereas the Swiss company Medacta brought in the industrial perspective and helped us to plan ahead.

By meeting new people and by receiving input from different perspectives, we were better able to address the proposed goals and develop new ideas for future projects.”

High responsiveness of Euresearch

“Euresearch helped us a lot during the proposal phase, with the preparation of the grant agreement and with the project itself”, says Martin. “The input consisted of workshops as well as direct help with financial and administrative issues.” He continues: “The personal contact, expertise in critical factors of the review process, and the high responsiveness and scientific input from the Regional Office Basel and the Head Office in Bern made it possible to meet the sometimes challenging timelines.”

About BIO-CHIP



The BIO-CHIP team at the University Hospital Basel. From left to right: Prof. Ivan Martin, Dr Adelaide Asnaghi, Dr Marcus Mumme, Prof. Marcel Jakob, Ms Anke Wixmertens, Ms Hilary Ireland, PD Dr Andrea Barbero, Dr Sylvie Miot. Absent: Dr Amir Steinitz and Dr David Wendt.

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Prof. Ivan Martin

Department of Biomedicine,
University of Basel/
University Hospital Basel

CONTENT SUMMARY

The Horizon 2020 project BIO-CHIP aims to demonstrate the therapeutic efficacy of a new treatment for knee cartilage injuries using engineered grafts based on autologous nasal chondrocytes. For this project, coordinated by the University of Basel, 7 partners in 5 countries work together to carry out a multicentre phase II clinical trial, to extend the range of clinical indications of untreatable pre-osteoarthritic lesions, and to prepare commercial exploitation.

FACTS AND FIGURES

Project Name

BIO-CHIP – Bioengineered grafts for cartilage healing in patients

Research Area

Clinical research on regenerative medicine

Organisations

University of Basel, Switzerland (Coordinator) and 6 partners

Start Date – End Date

01.11.2015 – 31.10.2019

Duration

4 years

Project Cost

€5.11 million

Project Funding

€5.11 million

Programme

Horizon 2020 Societal Challenge: Health, Demographic Change and Wellbeing

More Information

<http://biochip-h2020.eu/>

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