Swiss Institute of Cell Therapies

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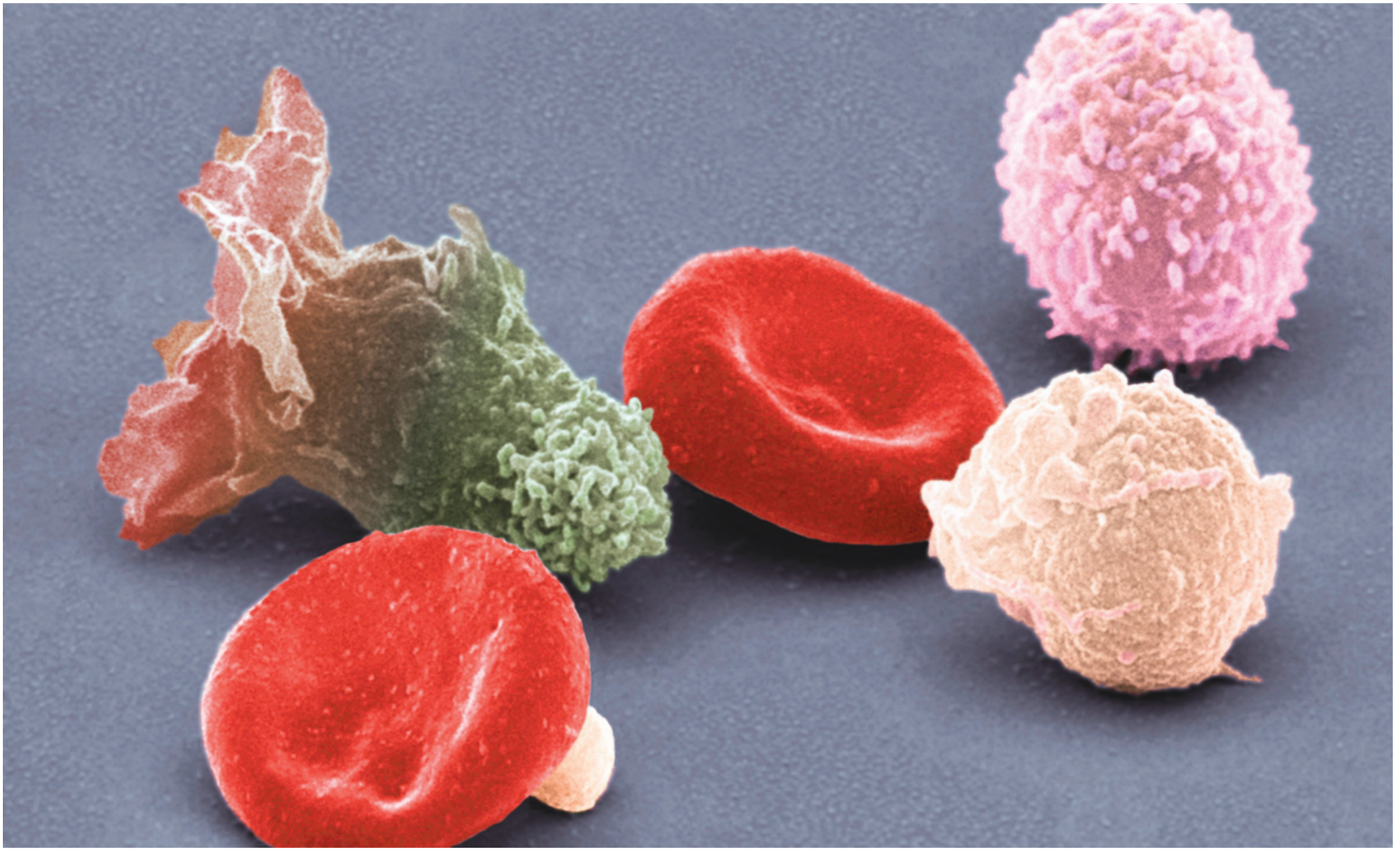

SICT, a foundation for the development of innovative advanced cell therapies

What is cell therapy ?

Cell therapy aims at curing a tissue, an organ or an entire organism through the delivery of new cells, obtained and/or modified from stem cells.
The goal is to replace failing or damaged cells with new functional ones. The cell-treated tissues can thus remodel and function again as in their native status.

What are stem cells ?

Stem cells are present in virtually all our organs and tissues and work as a «banking» reservoir. They are activated and called to regenerate tissues damaged by a disease, a lesion or simply by aging. It can happen that such a repair process can become defective or result in inefficiency to restore correct tissue function.

Which are the therapeutic goals ?

Cell therapy can target a multitude of pathologies; these include Alzheimer disease, Parkinson disease, diabetes, paraplegia, cancer, cecity, myocardial infarction…
It represents great hope for many patients who can therefore be treated and cured thanks to the research in stem cell biology and function.

How to act ?

Through a donation or a public-private partnership under the umbrella of the Foundation.
Supporting SICT Fundation is to accept the technological and human challenge we face, allowing future generations to treat currently incurable diseases.

Photo Cover: Human blood cells by scanning microscopy.

Foundation

The SICT Foundation (Swiss Institute of Cell Therapies) was created in 2010 by the Geneva University Hospitals (HUG) and the Geneva Faculty of Medicine, in partnership with several other public or private organizations.

It is a private rights Foundation with public interests having its headquarters located in Geneva.

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Here is a testimony that encourages our researchers to continuously engage and pursue the development of new cell therapies:

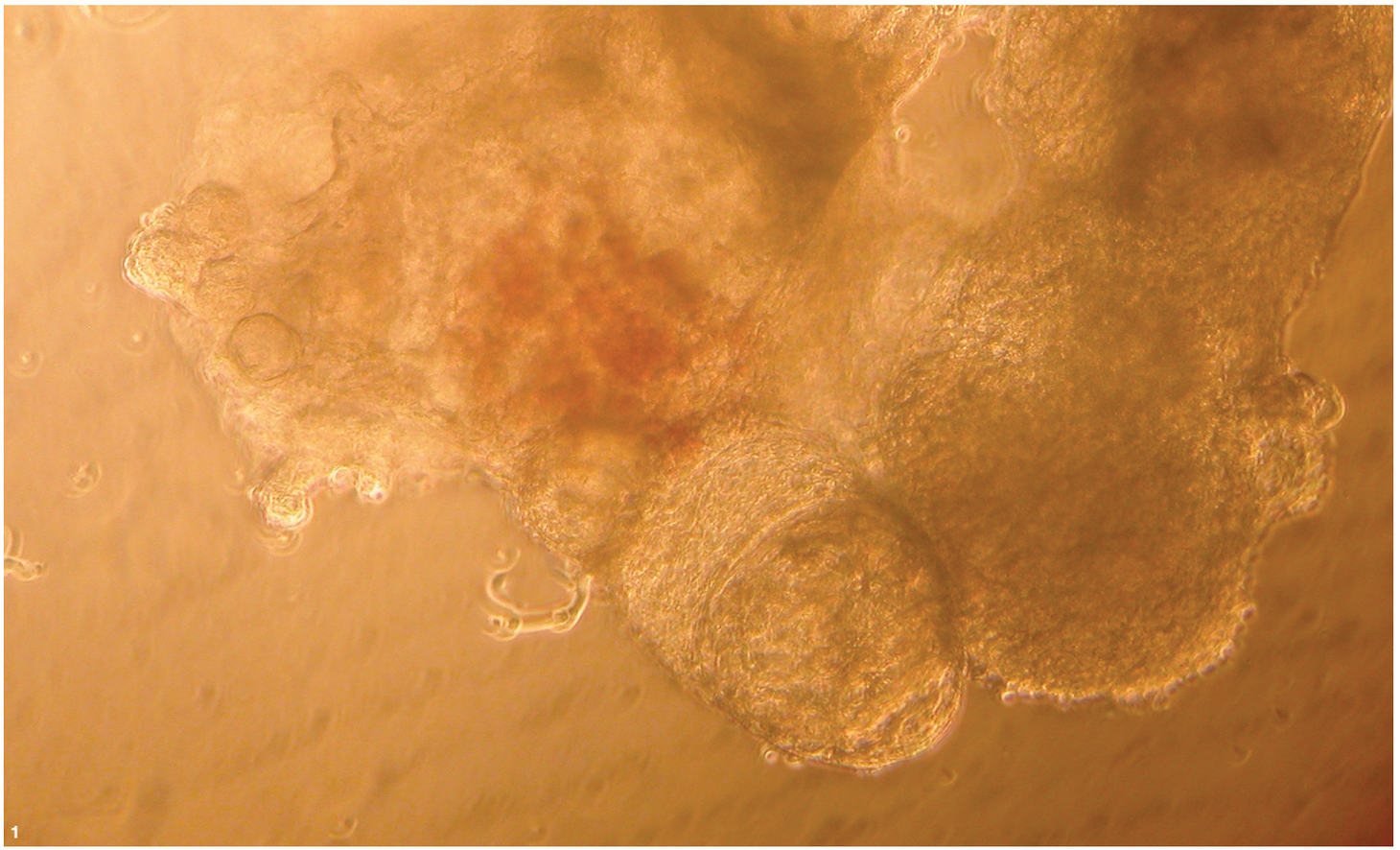
Sébastien Maillard was the victim of a work accident at the age of 23, three months before his scheduled marriage. The explosion of a fuel tank burned him over 92% of his body surface. His skin was reconstructed mainly thanks to the graft of cultured autologous skin regrown from its stem cells.
A skin biopsy of few square centimeters that remained intact enabled to produce more than 13 000 cm^2 of keratinocytes and fibroblasts to be grafted. Sébastien Maillard thus survived thanks to the cell therapy. He is presently married and father of 2 girls. He is professionally active as computer scientist. He has been able to train intensively and his last performance was in the 2011 New York Marathon.

Photo: P. Gétaz Cemcav-CHUV

Mission

The priority goals of the SICT Foundation are to:

- **Promote and implement novel cell therapies.**
- **Federate, under the umbrella of the Foundation, clinical teams and research groups in the field of cellular therapies from Swiss universities, while involving their private partners.**
- **Exploit and create specialized infrastructures.**
- **Define a legal and ethical framework, in accordance with Swiss law and European directives for research on stem cell therapies.**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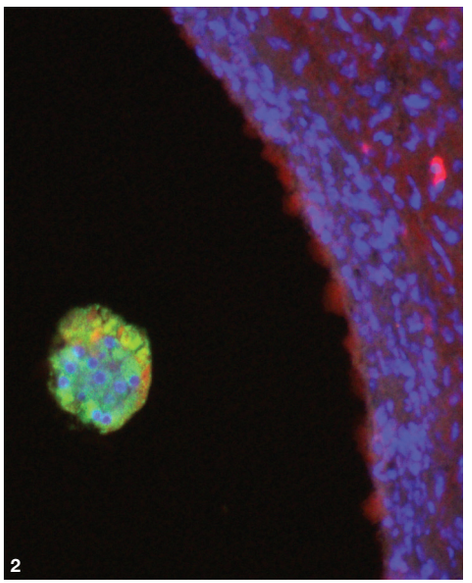
STEM CELLS AND ETHICAL ISSUES

The SICT Foundation strives for respect of the ethical principles for obtaining stem cells (as for instance appropriate informed consents), their culture and their packaging into therapeutic products, in accordance with the Swiss regulations and the European directives.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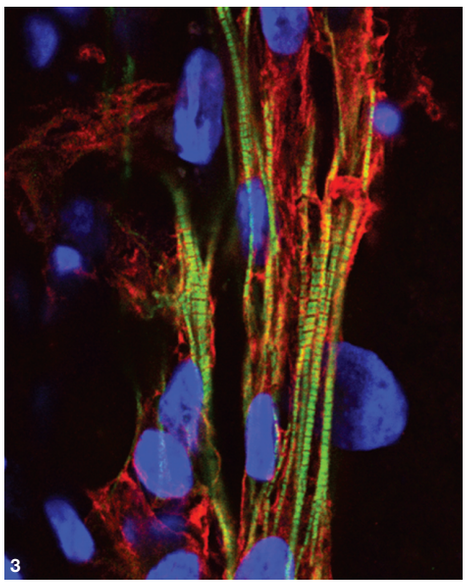
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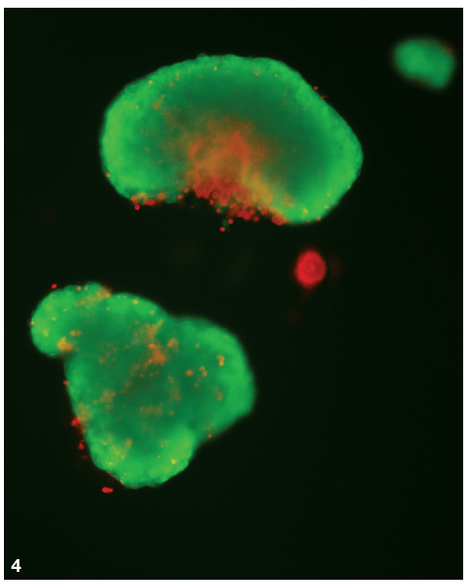
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[1] Hematopoietic stem cell obtained from differentiating human pluripotent stem cells
[2] Islets of Langerhans, encapsulated to prevent immune rejection
[3] Ventricular cardiomyocytes (green) derived from human pluripotent stem cells.
[4] Islets of Langerhans before their transplantation into a diabetic patient.

Objectives

The major goals of SICT Foundation are to:

- **Develop an institute focused on the opportunities and clinical needs of patients as well as the translation and promotion of Innovative Cell Therapies (ICT).**
- **Support translational research by coordinating and facilitating the work of clinical teams, research groups and private companies involved in ICT.**
- **Create, distribute and thus make available biological resources, technical, legal, and ethical procedures for ICT.**
- **Implement the creation of cell/tissue banks for therapeutic use following GMP (Good Manufacture Practice) standards.**
- **Train specialists in innovative cellular therapies and participate in academic publications and teaching.**

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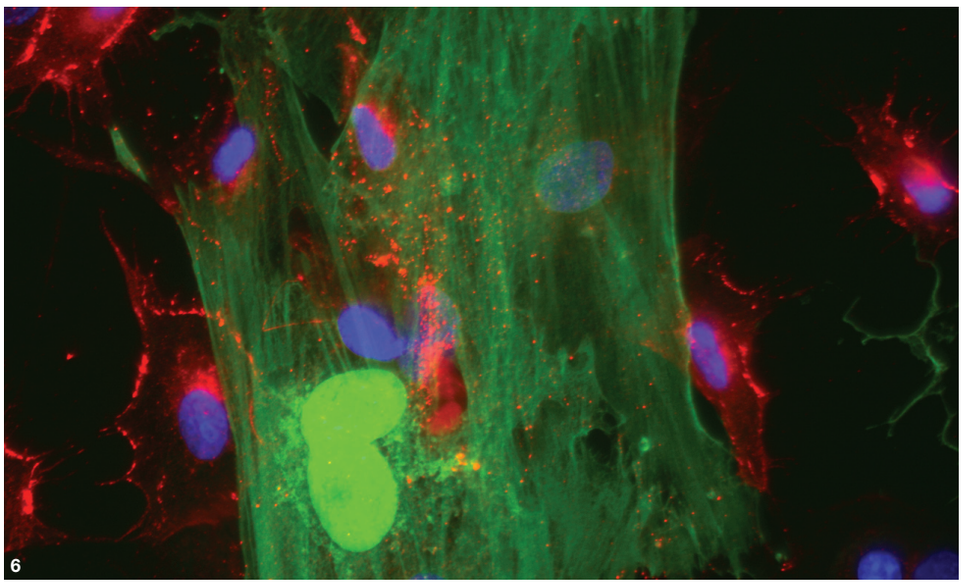
PROJECTS

SICT Foundation focuses on the development of cell preparations for innovative cell therapies. These include, for instance, strategies to repair different tissues (e.g. epithelial skin or heart constructs), supplement defective organs (e.g. pancreatic beta cells for diabetes), destroy tumors (tumor immuno-therapy using encapsulated cells).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[5] Laboratory of Cell Therapies at the Geneva University Hospitals.
[6] Human mesenchymal stem cells expressing the green fluorescent protein and human ES cell-derived cardiomyocytes, both stained for connexin 43 (in red).

Fondation Council

SICT Foundation is governed by a Board of Trustees consisting of ten members, mainly from medico-scientific, political, financial, industrial and legal backgrounds.
It also benefits from a scientific board composed of internationally recognized scientists.

Message of the President:

"In Switzerland, several teams of researchers and clinicians are currently at the forefront of research and application of cellular therapies and compete in quality with the best international groups. In this context, I am convinced that the SICT Foundation will help coordinate the efforts of the Swiss teams ensuring greater synergy in their work. The objective is to transfer cellular therapies from the research laboratory to the clinical setting to benefit the patients as quickly as possible of these novel stem cell-based therapeutic developments".

Thérèse Meyer-Kaelin

Mme Thérèse Meyer-Kaelin

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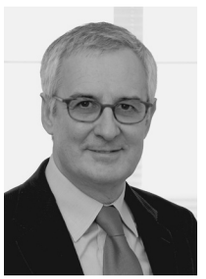

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