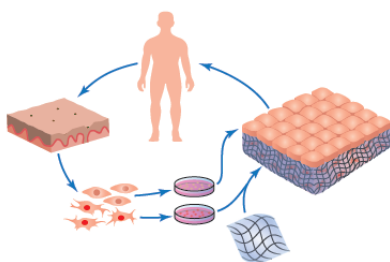


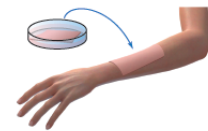
SkinTERM ESR12: PhD position ‘Skin tissue engineering – restoring pigmentation in skin’

Open PhD position at [CUTISS AG](http://www.CUTISS-AG.com) on restoring pigmentation in skin. The position is part of the Innovative Training Network “SkinTERM”, Skin Tissue Engineering and Regenerative Medicine, an EU Horizon 2020 Marie Skłodowska-Curie Actions funded project (www.SkinTERM.eu). This network will train a new generation of entrepreneurial, multidisciplinary and intersectoral scientists able to drive this research area further towards clinical translation in Europe. The ESR12 project will be executed in collaboration with the University of Zurich (UHZ, Switzerland), the Radboud University Medical Center (RUMC, The Netherlands) and the Helmholtz Zentrum Munich (HMGU, Germany).



Technology

To bio-engineer denovoSkin™, a small biopsy of healthy skin is harvested from the patient. The biopsy is processed to isolate epidermal and dermal cells. The cells are expanded *in vitro*, and thereafter used in combination with a hydrogel to create a dermo-epidermal skin graft. denovoSkin™ is now ready to be transplanted on the patient's wounds. The safety trials for denovoSkin™ have been completed. The efficacy trials are supported by Wyss Zurich.



Background: Current treatment methodologies for patients with skin defects (e.g. burns) suffer from donor shortage and results in disfiguring debilitating scars. To improve the quality of life of these patients, CUTISS AG developed denovoSkin™. Briefly, autologous single cells are isolated from small skin biopsy of a patient, amplified in culture, and used to bioengineer skin grafts, to finally be grafted on the same patient.

Because denovoSkin™ lacks pigmentation, as a next challenge, CUTISS AG aims to develop a robust platform for the isolation, characterization and *in vitro* expansion of patient-derived melanocytes that could either i) be included into a new generation of pigmented personalized bioengineered skin grafts, ii) be transplanted to patients in areas that were previously treated with denovoSkin™, or iii) be transplanted to patients harbouring pre-existing non-pigmented skin patches caused by untreatable pigmentation disorders (e.g. vitiligo).

The project: The candidate is tasked with the delivery of a robust melanocyte isolation, characterization, and expansion protocol (cell culture). Additionally, he/she must assess melanocyte efficacy to pigment skin by *in vitro*, *ex vivo* and *in vivo* means. He/she will additionally work in the translation of these protocols into GMP-framed activities. The ESR is expected to closely collaborate with the company's R&D and GMP teams, and potentially with external collaborators. He/she will ensure that the design and execution of the protocols comply with the requirements of ATMPs and Medical Devices production. The ESR will be responsible of conducting science to the highest ethical/scientific standards. Finally, he/she will be responsible of ordering and keeping track of the reagents/consumables needed for the project.

The company: [CUTISS AG](#) is a Swiss startup company composed of 40 experienced professionals. Their mission is to provide personalized tissue therapy to patients suffering from severe skin defects or skin tissue loss. Autologous bio-engineered skin tissue, denovoSkin™, is developed to solve donor shortage and minimize scarring after transplantation.

Methods:

- Cell culture
- Flow cytometry analysis and sorting
- Xenograft animal model
- Transcriptome microarray
- and others

Eligibility criteria for ESR positions in H2020 MSCA-ITNs:

- The candidate must not have resided or carried out his/her main activity (e.g. work, studies, etc.) in Switzerland for more than 12 months in the 3 years immediately before the recruitment date.
- The candidate must hold a Master's degree, be in the first four years of his/her research career and not have a doctoral degree.

Project specific requirements:

Education requirements:

- MSc degree in a biological field (e.g. cell/molecular biology, tissue engineering, biotechnology or similar) or MSc degree in Bioengineering, Medical Devices
- **Note that this ESR position requires additional application for the BioMed PhD program at [the Life Science Zurich Graduate School of UZH](#).**

Required skills and experience:

- **Strong interest with primary cell isolation and culture**
- Experience with a wide range of *in vitro* cellular and biochemical assays
- Aseptic cell culture
- Prior experience conducting research within a field of skin biology (e.g. pigmentation, melanoma, wound healing, stem cell skin biology) is highly advantageous

Desired skills and experience:

- Hands-on experience with flow cytometry, immunohistochemistry or confocal microscopy
- Basic understanding of biostatistics and basic experience with biostats software (Prism, MATLAB, or others)
- Knowledge of QA/regulatory affairs (e.g. Good Manufacturing Practice)

Our offer:

- Working in an innovative, well-equipped and scientifically stimulating laboratory
- Unique training opportunities - the student will be embedded in the BioMed PhD program at UZH as well as the ITN network 'SkinTERM'
- Training and supervision in cutting edge technologies



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- Initial employment contract for 3 years with a standard public service salary (SNSF Switzerland). Attractive salary encompassing a living allowance, a mobility allowance and, if applicable, a family allowance as specified in the [Horizon 2020 Marie Skłodowska-Curie actions Work Programme 2018-2020](#).

How to apply:

Application deadline: Please send your application **before September 27, 2021**.

Application: Upload all documents via the [APPLY](#) link.

Your application must include the following documents:

- Motivation letter for the PhD position
- CV
- Letters of recommendation (at least two)
- Copies of diplomas, including grades

Selection procedure: The first selection round will be an online interview with the representatives of the host institutions and of the secondments. The two best candidates will give a scientific presentation on a subject relevant for the ESR project. Candidates will be selected based on:

- Outstanding academic ability
- Requested skills and experience for the ESR project of interest
- Motivation of the application for the ESR position of interest
- The level to which SkinTERM addresses their training needs and contributes to their future careers

Intended starting date: Successful applicants are expected to start **November, 2021**.

Contact: For more information on the SkinTERM project and application procedure please contact danique.hof@radboudumc.nl.

For more information on this specific ESR12 project please contact vincent.ronfard@cutiss.swiss.