# Revolutionary method for cultured skin with hair

**Improving patients' lives and saving animal lives**

***Cultured human skin with functional hair follicles will be the new solution for treatment of severe burn and trauma wounds in the near future. With this technique of using patients' own skin, hair growth will be restored or maintained naturally. The psychological suffering and physical discomfort will be reduced and quality of life increased after severe injury. The underlying micro hair follicle technology was invented by Dr. Gerd Lindner, Technische Universität Berlin[1] and further developed by Dr. Uwe Marx, CEO of TissUse GmbH[2] in close collaboration with his colleague Prof. Dr. Sue Gibbs of the VU University Medical Center Amsterdam and CSO of A-SKIN[3], in the context of the Eurostars[4] TESHI project. Sue Gibbs, Professor for Skin and Regenerative Medicine: "The challenge lies in the introduction of a sufficient number of vital hair follicles in the cultured skin, thereby restoring the damaged or missing hair growth."***

Although there are currently a broad range of hair transplant techniques, they all fall short for patients with severe head injuries. Often hair growth cannot be restored due to insufficient or lack of vital hair follicles. That's exactly why Dr. Marx and Prof. Gibbs have further developed this unique technology for culturing human skin with hair follicles. So, by improving the wound healing process, the skin restores as normal as possible.

**Animal alternative**

This potent new human skin model will be used twofold. In the first place, as outlined above, for improved wound healing in patients with severe burn and trauma injuries to the head and piliferous skin of the body.
Secondly, as a laboratory skin model with hair follicles for cosmetic and pharmaceutical testing or screening. This new *in vitro* skin model will provide an excellent non-animal alternative for multiple studies. It will meet the social requirements and legislation for further reduction of animal testing. It's no surprise that from the concerned industries, there is great enthusiasm for this 'non-animal' alternative.

TissUse will focus on the commercialization of the hair follicle skin model as a contract service. A-SKIN, co-investigator and coordinator of the TESHI project, brings the patient's own skin model for clinical application to the market.

**Contact**

Chantal Blok. Email: cs.blok@vumc.nl. Phone: +31 (0)20 444 3101. Internet: www.a-skin.nl

***[1]Technische Universität Berlin: (doi: 10.1016/j.jbiotec.2011.01.019.) www.medbt.tu-berlin.de***

***[2]TissUse GmbH is a Germany-based, vibrant growth company who has developed a unique "Multi-Organ-Chip" platform that – for the first time ever – provides preclinical insight on the systemic level using human tissue. This enabling technology platform consists of a miniaturized construct that closely simulates the activity of multiple human organs in their true physiological context.***

**[3]A-SKIN, founded in 2006, is an academic spin-off company of the VU University Medical Center in Amsterdam. A-SKIN cultures human skin and develops new top-end skin culturing products (Tiscover® and WHF) and techniques for (hard to heal) wounds. A-SKIN is continuously looking for partners or possible buyers of its IP, knowledge and operational procedures, in order to fulfil its ambition to offer advanced wound care products and techniques to a fast growing patient population.**

**[4]With Eurostars the Dutch Ministry of Economic Affairs and German** Federal Ministry of Education&Research **with the European Commission are stimulating the technological research activities of SME companies.**