

Presseinformation

Skin cells of the skin – Life-savers of the future, the ethical alternative to embryonic stem cells – prophylaxis more important than ever – stem cells of the skin as important precaution

Munich, 21st July 2008 (afk) Stem cells of the skin have caused excitement over the last months and have had a break through. The Japanese team of the university of Kyoto around the researchers Kazotoshi Takahashi and Shinya Yamanaka, pioneers in this field, published in the journal Cell and the American team of researchers around James Tomson in the journal Science that they had succeeded to return human skin cells of the skin to a kind of primordial state that makes them changeable and multipliable. The German stem cell expert Professor Hans Schoeler of the Max-Planck-Institute for biomedicine in Munster, Germany, compares this success to the “Holy Grail”. The “induced, pluripotent stem cells” from the skin resemble the embryonic cells in many ways, however the scientists do neither have to use ovae nor kill embryos. Upon request, these stem cells may turn into any of the 220 different cell and tissue variations of the body and then be used in individual treatment – without any ethical problems.

The physician and entrepreneur M.D. Christoph Ganss from Heidelberg, Germany, has been pointing to these multipotent primordial cells and the big possibilities with regard to the stem cells from the skin for five years. As Dr. Ganss explained on Monday (21st July 2008) during the 21st training week for practical dermatology and venerology in front of the press in Munich, he therefore has founded the first tissue bank for stem cells of the skin, TICEBA (Tissue & Cell Banking), in 2003. The German stem cell researcher Dr.

Markus Frank M.D from Harvard, who is already able to point to important findings in stem cell research, supports him. “We are pioneers, and pioneers often have a hard life. But we staunchly follow our path and have made great progress in the meantime. This latest development, called a “turning point in research” by the international circle of experts, is helping us a lot. We are furthermore convinced that these cells do not have to be induced at all, but are already present in the tissue, e.g. the skin”, explains Dr. Ganss.

Adult stem cells that also do not cause ethical problems as do embryonic stem cells represent a milestone in medicine and are already being used for treatment, - e.g. of leukaemia, heart attacks, skin and cartilage problems, but also of multiple sclerosis and Morbus Crohn as well as of strokes. Stem cell researchers all over the world are working feverishly to make stem cells usable for the big epidemics diabetes, Alzheimer’s disease, Parkinson and cancer. All the while, civilization diseases are spreading further and further and human beings reach an increasingly high age, especially in the Western world.

As the Max-Planck-society states in its publication “The Future Of Aging”, the future of the one-hundred-year olds has increased sixtyfold since 1960.

And every second person born today can expect to celebrate their one hundredth birthday. The art, however, is not to become old, but to enjoy old age in good health. Aside from genetic disposition, a sensible way of life has the greatest impact on a healthy old age - first of all, a healthy, sensible nutrition and the renunciation of smoking and alcohol. 3 times 30 minutes of endurance training a week are also beneficial.

Substances to add to nutrition may be useful, but they are no replacement for a healthy life and conscious enjoyment. Psychological hygiene is equally important. Negative stress, vexations, fears, hectic and superfluous speed should be kept in check, e.g. via mental training. The often-cited “Work-Life-Balance” is more important than people believe.

Furthermore, the prophylaxis of diseases and their treatment at an early stage as well as the use of all measures of modern rehabilitation and regeneration are of the essence. According to Dr.Ganss, very special stem

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cells of a person's own skin are a particularly important component. They are obtained while the person is healthy and as young as possible and may then be used in case of disease. This is made possible by the first tissue bank for stem cells of the skin, the company of TICEBA based in Heidelberg that is able to isolate these particularly variable stem cells using a procedure patented worldwide. Stem cells of a person's own skin are that useful as they are pluripotent primordial cells, easily accessible and available in great numbers. Furthermore, rejection is prevented.

Even though at this point in time, it is not yet clear which medical possibilities will be realisable in the near future, the experts are convinced that the future belongs to the stem cells, concluded Dr. Ganss.