

Press release for MEDICA 2014 in Düsseldorf

JenLab researches with astronauts from the International Space Station

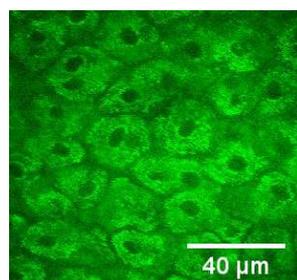
One of JenLab's most exciting ongoing multiphoton studies is its collaboration with the NASA and the European Space Agency (ESA) in evaluating skin ageing effects in astronauts who are working for a half year on the International Space Station (ISS). Skin problems such as dryness, rashes, itchiness, loss of elasticity, thinner skin and slow wound healing are the most commonly described negative impacts on astronauts' health during space flights.

Besides the lack of gravity, astronauts face a significant amount of exposure to extraterrestrial radiation. Furthermore, bioparticles from their own skin tissue - as well as that from other crew members - can cause allergic skin reactions.



SkinB-Team with astronaut Luca Parmitano at the ESA in Colonge (f.l. Gerlach, König, Parmitano, Weinigel, Heinrich)

Normally the lifespan of a skin cell is approximately four to five weeks; meaning the upper skin is renewed once a month. Scientists involved with ESA-Project *Skin B* - also includes JenLab's researchers - hope to answer the question of how astronauts' skin regeneration is affected. It is believed that the skin will age faster than on Earth, but astronauts may develop more efficient cell regeneration and healing rates upon arriving back home. It is a good opportunity to study the use of skin protective agents containing antioxidants.



Currently, JenLab examined the skin from the astronauts *Luca Parmitano*, *Alexander Gerst* and *Samatha Cristoforetti*. The multiphoton tomograph **MPTflex** generates high resolution images of the cell structure from the space travelers before and after their space mission. These "optical biopsies" will be evaluated and analyzed by the company JenLab.

For future interplanetary travel, it will be necessary to measure the effects of cosmic rays, biocontamination and microgravity effects while on board. JenLab is working on a device for the next generation: a compact, easy - to use imaging device for applications both on earth and in space that can be used to monitor medical risks via optical tissue parameters.

JenLab exhibits at the MEDICA 2014 in **hall 11** on **booth B 24** and looking forward to your visit.

