

Press Release October 2011

Novel Laser Tomograph avoids Skin Biopsies

The novel laser tomograph MPTflex® will be demonstrated during the *medica*. The tomograph provides a spectacular precise view into the skin. The tight focused beam of a femtosecond laser scans the skin within a few minutes and depicts the living skin cells onto the screen. Single cancer cells can be monitored without any physical taken biopsies and without any staining. Furthermore, the skin age can be determined and the efficacy of anti-ageing-products can be evaluated. The laser tomograph is based on the detection of the fluorescence of light-emitting endogenous biomolecules.

The laser tomograph *MPTflex*™ was developed from JenLab GmbH in its facilities in Saarbruecken and Jena. It is currently in operation in California, Mannheim/Germany, and Vienna. At Irvine, researchers develop a fast method on fast melanoma diagnosis whereas biologists at San Diego employ the system to track stem cells in hair follicles. The dermatologists in Mannheim use the tomograph to optimize the treatment of chronic wounds. Scientists at Vienna perform comparative studies with other imaging tools. In Japan starts a study on the biosafety of sunscreen nanoparticles and the effect of anti-ageing lotions within the next weeks.

The novel multiphoton tomograph MPTflex® was awarded with the *Oscar of Photonics* as most innovative Life sciences product in San Francisco this year. According to **Dr. Karsten König**, CEO of the German company JenLab GmbH, the tomograph MPTflex® is the imaging system with the best resolution so far. About a factor of 100 better than ultrasound. Even small organelles such as mitochondria as well as single elastin fibers and collagen structures can be depicted in three dimensions on the computer screen.

The multiphoton tomograph has the potential to reduce the number of skin biopsies in hospitals significantly. And it is possible to evaluate exactly the effect of anti-ageing products. The precise view under the skin becomes reality.

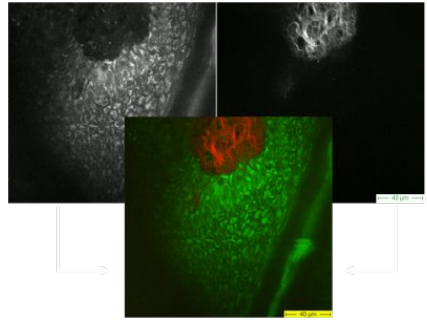
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JenLab Experts in Femtosecond Laser Technology 

MPTflex™

Flexible in-vivo multiphoton tomography for optical biopsy

In vivo optical biopsies with subcellular spatial resolution based on near infrared femtosecond laser technology for:

- melanoma detection
- diagnostics of dermatological disorders
- tissue engineering
- cosmetic research, skin aging
- in situ drug monitoring
- animal research studies
- stem cell research
- detection of fluorescent proteins

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