

## Postdoc position @ Inserm U1253 iBrain Tours, France

### Postdoc position in ultrasound and photoacoustic imaging and drug diffusion at Inserm Imaging and Brain Inserm U1253, University of TOURS, France

We are seeking for a postdoctoral researcher in the field of high frequency ultrasound and photoacoustic imaging (duration 18 months).

Within the framework of national project, a multidisciplinary consortium is developing non-invasive methods for the customization of dermo-cosmetic therapies. The effectiveness of cosmetic products depends on the penetration of the active ingredients that they convey into the skin. Knowledge of the composition and morphology of the skin barrier is essential to understand the diffusion mechanisms of cosmetic active ingredients (CAI). Therefore, a multimodal analytical approach that couples optical, high-resolution ultrasound and photoacoustic imaging will be used to collect biochemical and histological information on human skin in vivo.

The postdoc will be responsible for studying and investigating the links between physico-biochemical and morphological properties of the skin and the kinetics of CAI penetration using high frequency ultrasound and photoacoustic imaging ex-vivo and in-vivo. The specific tasks will include the adaptation of the Vevo ultrasound system with an ultra-high frequency probe for the analysis of the epidermis / dermis layers and the development of skin imaging protocols using photoacoustic technology.

#### Requirements:

- The applicant must hold a PhD degree in acoustics, biomedical engineering or related field.
- Experience in ultrasound imaging devices including photoacoustic imaging
- Excellent programming skills (experience in MATLAB)
- Experience in advanced image analysis and processing skills
- Good communication skills in English, both spoken and written

Interested applicants should send the CV with 2 references to:

Dr. Ayache Bouakaz (ayache.bouakaz @inserm.fr)

**Application deadline:** 15/01/2022

**Starting date:** immediate