

Preclinical High Resolution Imaging



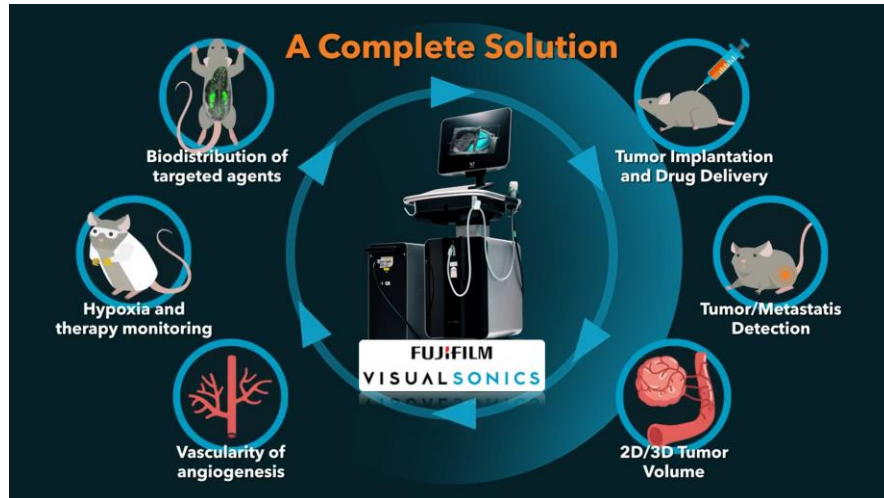
Università degli Studi di Roma "Tor Vergata"

Istituto Zooprofilattico Sperimentale
del Lazio e della Toscana M. Aleandri

July 6, 2021 – Seminar (aula Bovet-Faculty of Medicine and Surgery)

15:00 – 16:30

The Value of in vivo imaging - Vevo Technology as Unique Platform in Preclinical Research
Seminar by Dieter Fuchs, Fujifilm VisualSonics
Seminar and time for Q&A



July 7, 2021 – Module 1

09:30 – 12:30

Mouse echocardiography – Imaging according to the ESC recommendations
Animal model: Mouse transaortic constriction (TAC). Assessing stenotic flow, Aortic diameter, Carotid artery flow, systolic and diastolic function. 4D echocardiography

Non-Surgical Vascular Access to the Mouse Carotid Artery
Image guided injection into the mouse carotid artery. New application!!!

July 7, 2021 – Module 2

14:30 – 18:00

Mouse Aneurysm model
Aneurysm detection, sizing, vascular parameters

Optional: capillary flow in/around the aneurysm using contrast agent

July 8, 2021 – Module 3

09:30 – 12:30

The effect of sterilization on mouse testicular anatomy
Volumetric quantification in 3D
Assessing testicular vascularization in 3D and microcirculation using ultrasound contrast agent

Breast Cancer – Transgenic mouse model
Screening for breast cancer
Volumetric quantification in 3D
Assessing necrotic tumor areas and discussing, metastasis, monitoring of therapeutic effect, drug toxicity, development of treatment resistance and optimizing dosing schedules in combination therapy.

Glioma Tumor – Transgenic mouse model
Imaging without craniotomy: changes in brain blood flow and perfusion (contrast agents)
Imaging with craniotomy: high definition images of the developing brain tumor. Discussion on cranial windows and alternative imaging techniques