SCANCO Medical has more than 20 years experience supporting biomedical research and development, particularly in the field of bone structural analysis. All our microCT systems are calibrated for measurement of biological tissue densities, and powerful 3D analysis routines including distance transformation allow measurement of thickness and separation of features like bone trabeculae and blood vessels. These advanced features are combined in standardized evaluation protocols to make reliable quantitative assessment of biological samples a reality. Examples of some interesting projects using our devices can be found in our collection of Application Notes.

**Trabecular bone evaluation**

- Segmentation of bone
- Trabecular thickness
- Trabecular separation
- Finite element analysis of trabecular stress

**Biomedical Applications (µCT 50)**

- Mouse Phalanx (1 µm voxelsize)
- Murine cortex (0.5 µm voxelsize)
- Bone fragment
- 1 µm wide crevice in bone
- Cortical bone
- Haversian canals and osteocytes in cortical bone
- Fly head
- Fly head (cut face=red)
Biomedical Applications (µCT 100)

Biomedical Applications (µCT 35)
**Biomedical Applications (µCT 40)**

- Mouse brain
- Mouse kidney
- Mouse vertebra
- Femur Haversian canals
- Starfish
- Fish jaw
- Mouse brain tumor
- Dragon fly head
- Dragon fly 2D slice

**Biomedical Applications (µCT 80)**

- Horse premolar
- Rabbit cranium
- Human finger detail
- Calcaneus bone
- Mouse kidney
- Human neck vertebra
- Humerus
- Human vertebra (virtual cut)
**Biomedical Applications (vivaCT 40)**

Vertebra, 2D

Detail of vertebra, 2D

Mouse abdomen with contrast agent

Mouse vertebra (courtesy of ETH Zürich)

Whole mouse (courtesy of ETH Zürich)

Segmented mouse spine

Mouse spine with transparent cortex

Mouse cranium

**Biomedical Applications (vivaCT 75)**

Rat head

Rat, segmented

Rat vascular system

Detail of rat vascular system

**Biomedical applications (vivaCT 80)**

Mouse tibia

Bat, courtesy of Zürich

Bat, courtesy of Zürich

Degu
Preclinical measurements (XtremeCT)

Human hand

Human femur

Rat

Preclinical measurements (XtremeCT II)

Cat skull

Cat skull