analysis of mineralized tissues using microCT (Ramot)

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The general purpose of my research is to describe the genetic and endocrine regulation of bone metabolism. To this end, we developed expertise in most aspects of bone research, from in vivo models, imaging of bone microarchitecture, in vitro cell cultures and molecular biology.

Main Research Topics

Regulation of bone metabolism by sex steroids

Role of Krox20 in bone resorption

Identification of new genetic determinants of bone metabolism and structure

Osteogenic and inflammatory responses to titanium implants

Available Research Services (description of the services)

We offer services for the analysis of mineralized tissues using microCT. These analyses include (i) trabecular and cortical bone microarchitecture, (ii) epiphyseal growth plate thickness (longitudinal growth), (iii) fracture repair, (iv) endosseous titanium implants, (v) endodontic preparation (root canal shaping), and (vi) dental root fracture. Any radio-opaque material may also be visualized and analyzed three-dimensionally, or be processed for finite element analysis.

Lab facilities

MicroCT 50, Scanco Medical, Switzerland. This system allows image acquisition at high resolution (up to 0.5 micrometer), 3D visualization, image processing and morphometry.

Potential industries
Bone research for osteoporosis, titanium implants, endodontics, biomaterials.

Contact Information

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