Presentation of selected projects and fields of research ENT clinic (AG Biomateriallabor and AG MALDI Imaging)
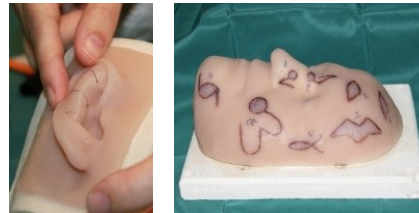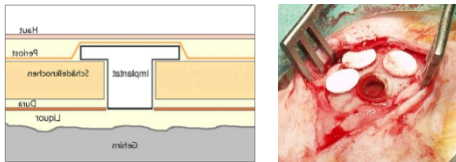
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Focus

development and evaluation of materials and technologies

- Bone replacment materials
- Soft tissue replacement
- tissue adhesives

Preclinical examinations of biomaterials

- Biocompatibility Tests - Cell Viability
- In vivo experiments
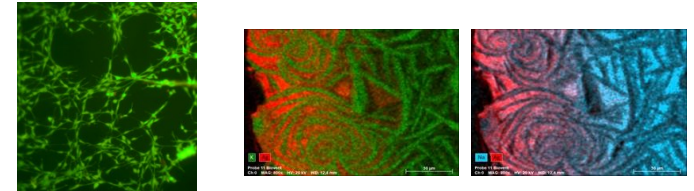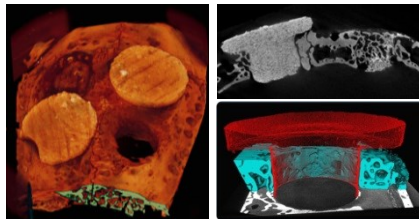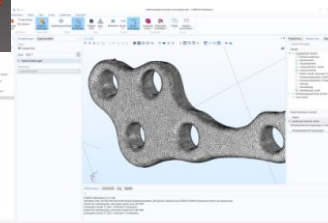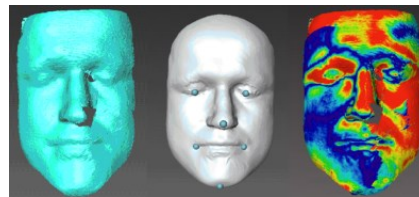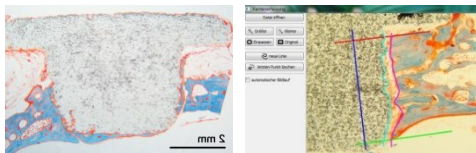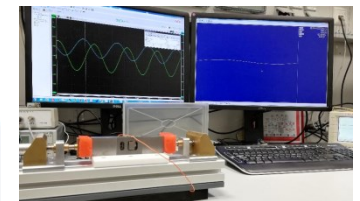- Histological investigations

Image analysis and image processing

- 2D/ 3D- Image analysis
- Finite Element-Modeling(FEM)
- 3D-printing

Vibration analysis for osseointegration

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Current projects

Titan-SLM – modelling of simulation data and development of jaw implants using additive manufacturing

> partners: 3di GmbH, Günter-Köhler-Institut für Fügetechnik und Werkstoffprüfung GmbH (ifw Jena)
> funding: AiF-ZIM

audioTASC – Development of digital hearing training for hearing impaired patients and patients with hyperacusis or tinnitus

> partners: ISMA AG, optrono UG, Ilmotronics
> funding: Thüringer Aufbaubank

otoDentFlex 3D – Development of 3D-printable patient-specific otoplasties and dental prostheses

> partners: BURMS, MEGADENTA Dentalprodukte GmbH
> funding: Bundesministerium für Bildung und Forschung

AG Biomateriallabor

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Sibylle Voigt

Dr. Astrid Enkelmann

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AG MALDI-Imaging

Prof. Ferdinand von Eggeling
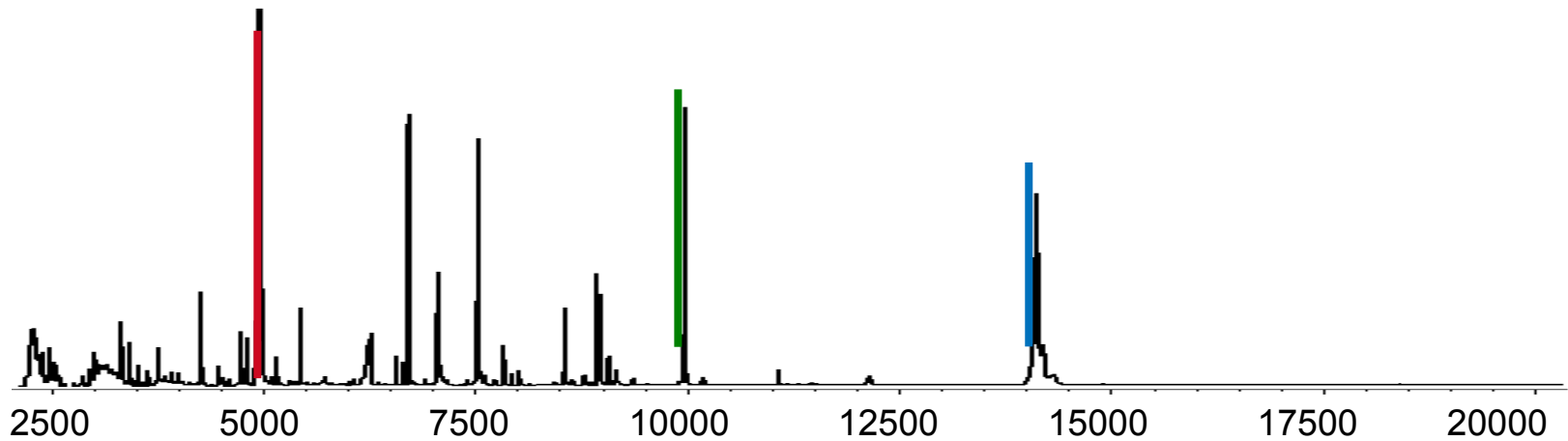
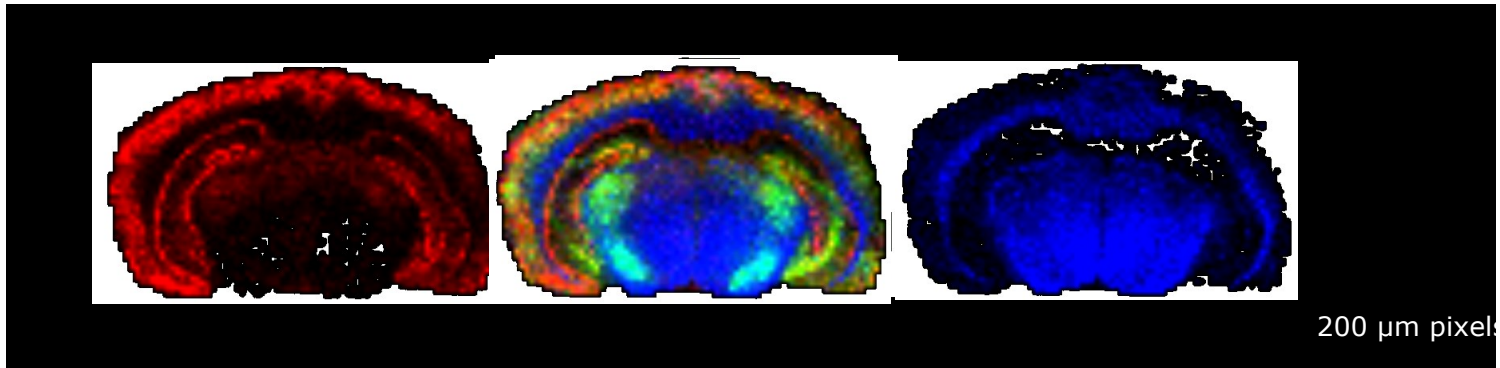Dr. Franziska Hoffmann

Dr. Günther Ernst

Daniela Pelzel

Annett Urbanek

Mass Spectrometry Imaging – Visualization of molecules within tissue

200 µm pixels

Research topics

- ## Mass spectrometry (imaging) analysis:
  - Biomarker discovery in human tumor tissue
  - Host-pathogen interactions in fungal infections

- ## Multimodal optic tissue analysis

- ## Data and imaging analysis

no tumor

tumor

#62174139