

Overview

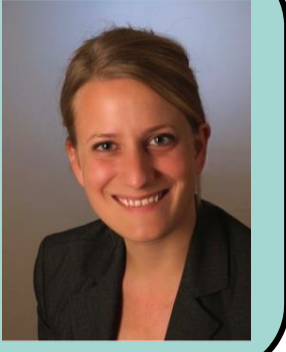
Institute of Forensic Medicine Basel



Institute Director:
Prof. Dr. Eva Scheurer



Forensic Genetics:
Dr. Iris Schulz



Forensic Medicine & Imaging:
Dr. Claudia Lenz



Forensic Chemistry & Toxicology:
Dr. Katja Mercer-Chalmers-Bender



Key Research Area: Institute Director

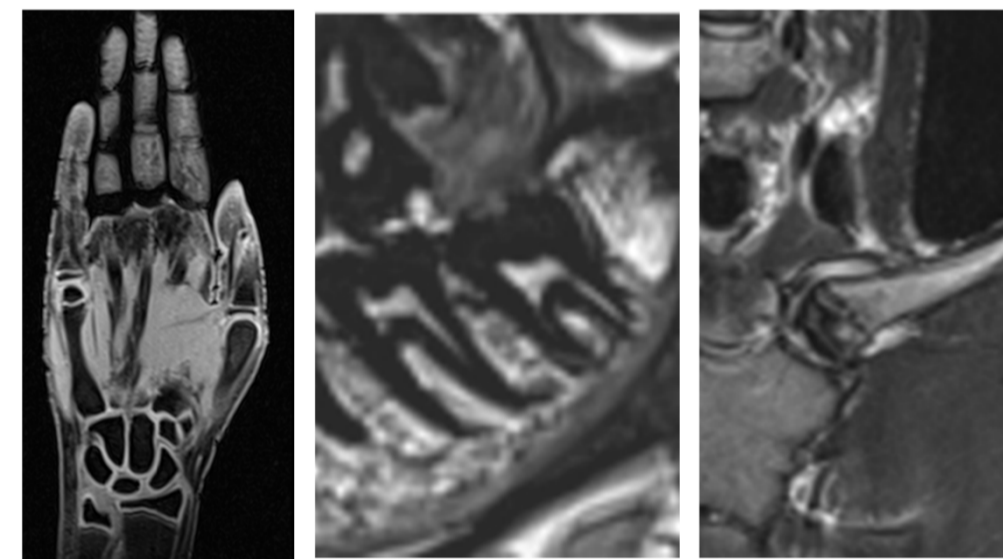
Clinical study CBDrive

- Influence of CBD cannabis on driving ability. Detection of THC after single & repetitive CBD consumption.
- Intervention: CBD >15% & THC 0.7-1% or CBD >15% & THC <0.3% or Placebo



Age estimation in living adolescents

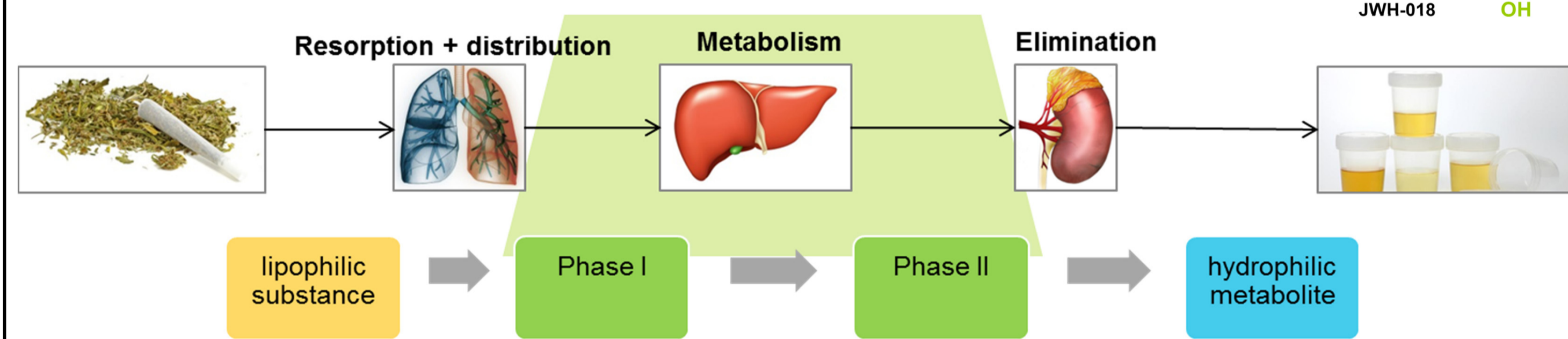
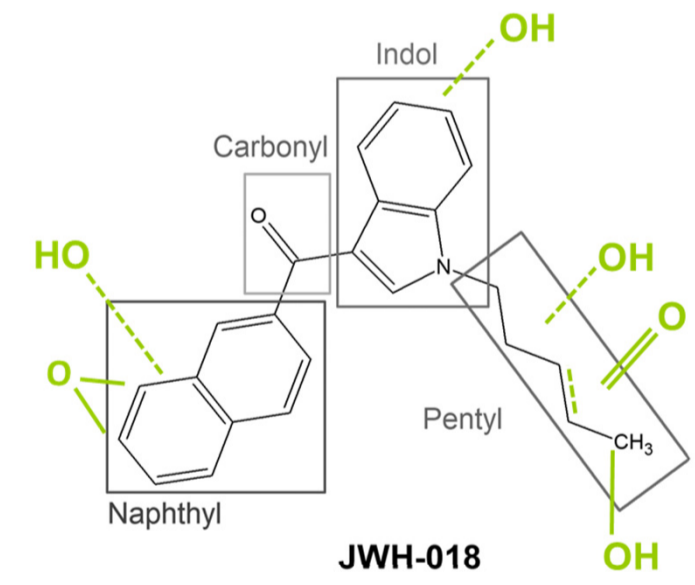
- based on MRI of different body regions, biochemical and epigenetic parameters



Key Research Area: Forensic Chemistry & Toxicology

In vitro metabolism of synthetic cannabinoids

- Compared to consumer urine profile using: pHLM, CYP450, *C. elegans* (poster M. Monti)



Organ distribution

- Of NPS in postmortem tissues

Metabolism and pharmacokinetics

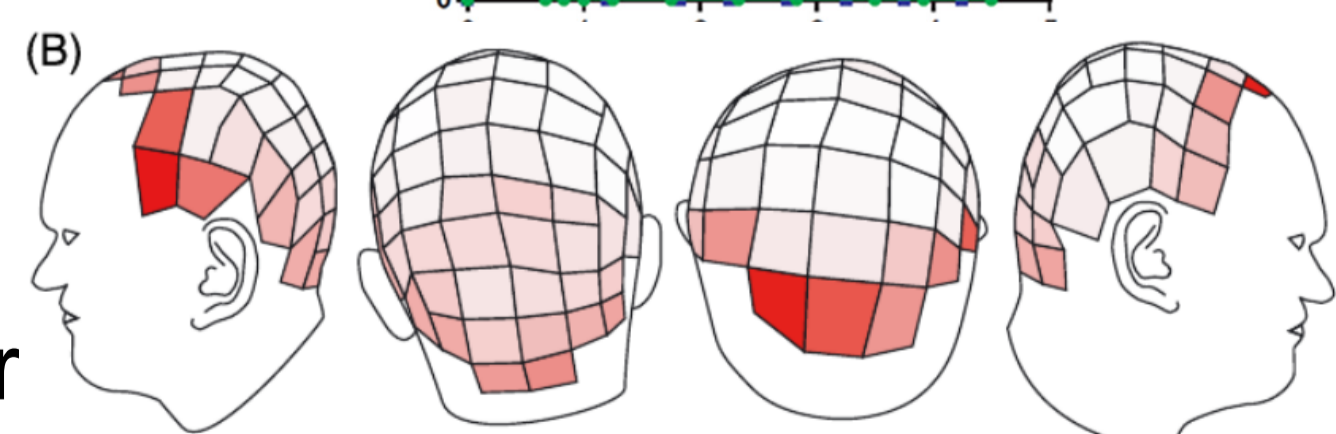
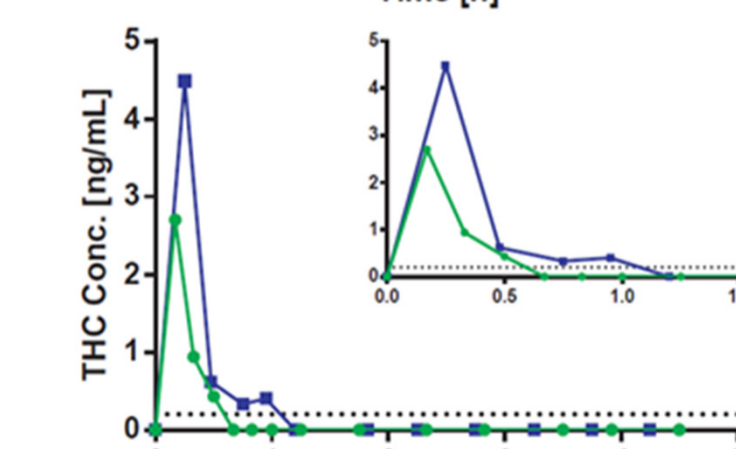
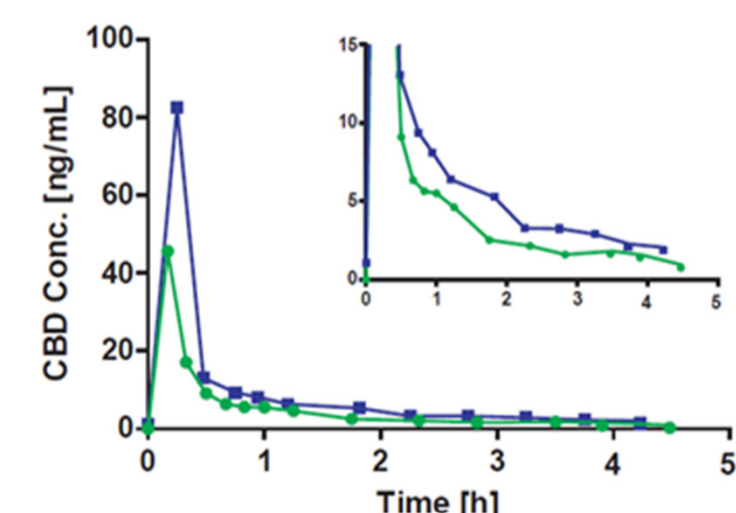
- Of phyto-cannabinoids

Cannabinoid pattern in plant material

- Comparison to blood/urine

Distribution pattern in hair

- Distribution of e.g. cocaine in hair



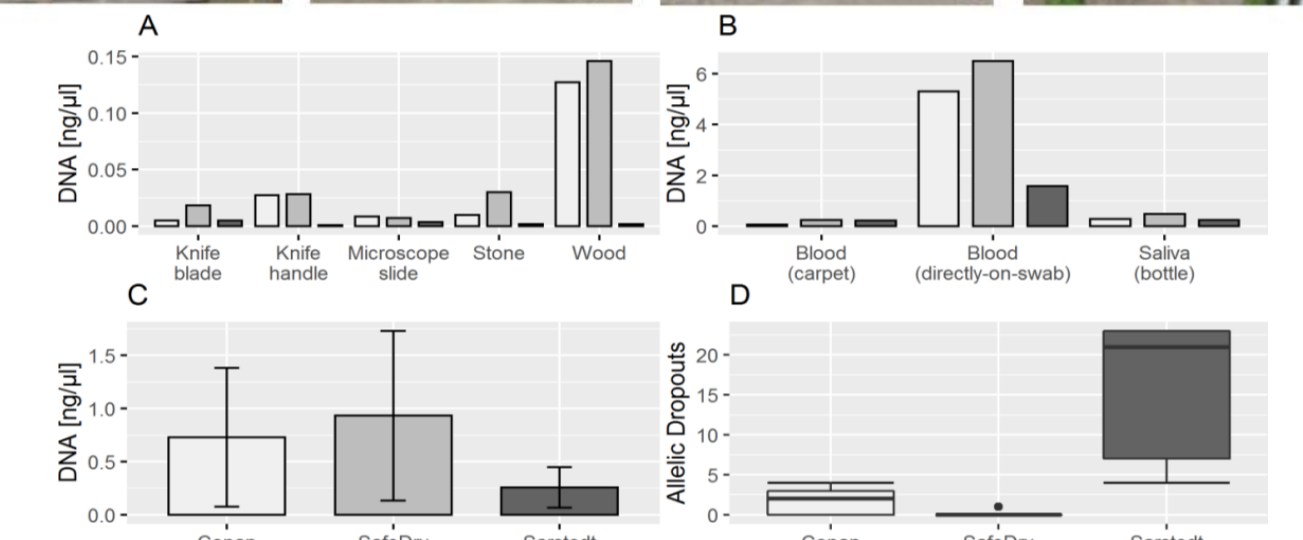
Abbreviations

CBD: Cannabidiol	MRI: Magnetic resonance imaging
CT: Computed tomography	NPS: New psychoactive substances
DEP: Dielektrophoretic	PM: Postmortem
DNA: Deoxyribonucleic acid	THC: Tetrahydrocannabinol.

Key Research Area: Forensic Genetics

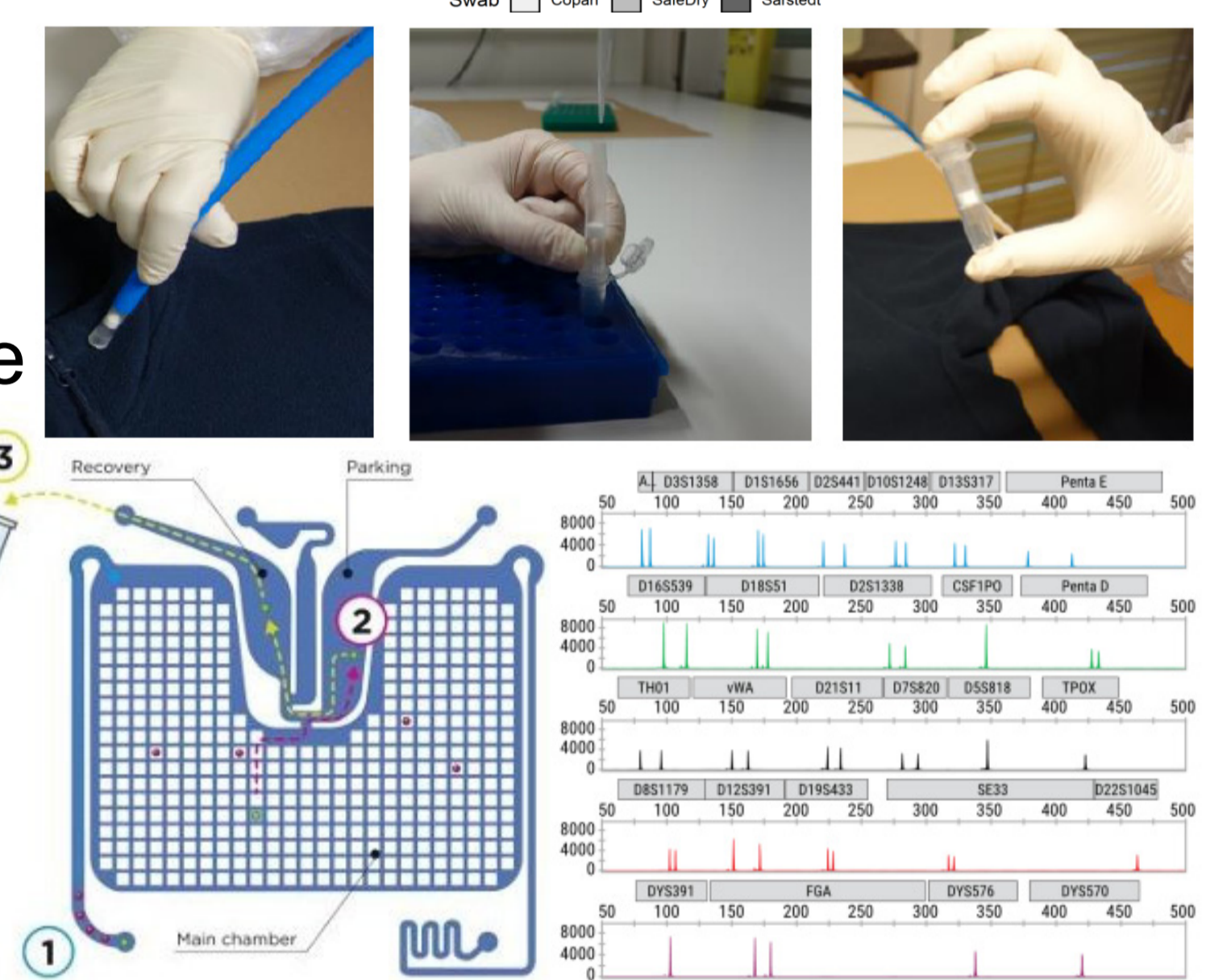
Multicenter studies

- PM DNA analysis of human remains with different degrees of decomposition (poster A. Senst)
- Swab performance comparison for trace sampling and DNA recovery



Innovative technologies

- DNA-Buster: a new technique for mobile collection of forensic evidence
- Single cell analysis with the DEPArray™ NxT instrument



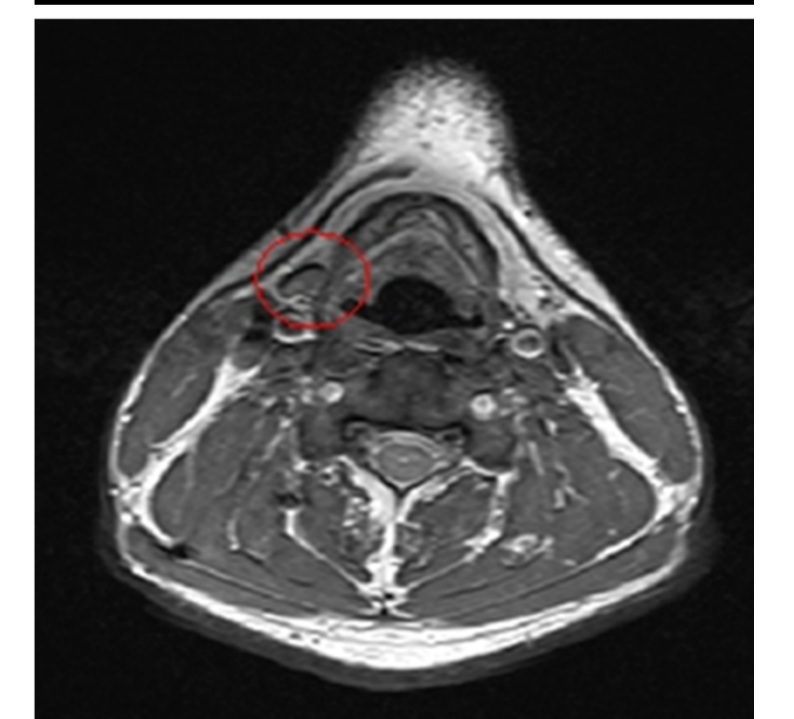
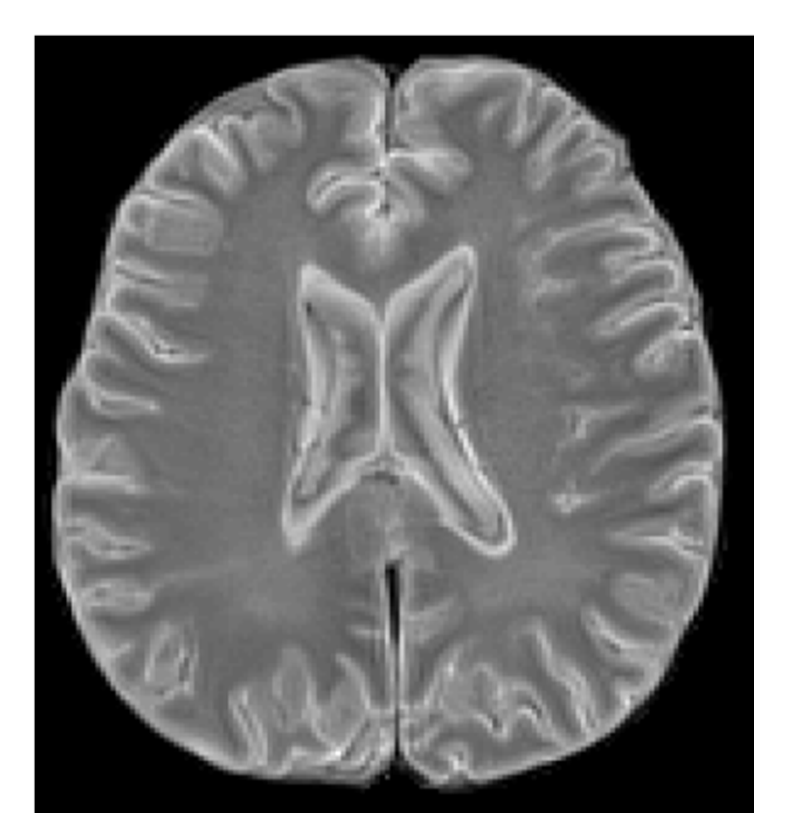
Key Research Area: Forensic Medicine & Imaging

PM CT studies

- Radiological identification of deceased

PM MRI studies

- Temperature sensitivity of quantitative PM MRI (poster C. Berger)
- PM diffusion MRI (poster M. Bauer)
- Analysis of cerebral oedema using PM MRI
- Orientation dependency of quantitative MRI



In vivo MRI studies

- Investigation of strangulation victims

PM infrared photography studies

- Identification of deceased based on tattoos
- Investigation of gunshot residues
- Detection of hematomas

