Main Research Focus

- **Interoception**
  Psychophysiological and neural mechanisms of interoception, „crossmodal interoception“, multisensory integration (interoception, proprioception, exteroception), „body image“, relevance for cognitive, emotional and behavioral functions

- **Measuring Interoception - Development of Methods**
  Interoception comprises different levels and processes: interoceptive sensitivity/accuracy as well as thoughts and feelings about one’s interoceptive sensations. Aim: Developing Methods of measuring interoceptive accuracy and interoceptive awareness –
  - heartbeat tracking tasks and “interoception scales”
  - ‘adapted’ Water Load Test and “interoception scales”

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- **Embodiment / Embodied Cognition – „Mindfulness“**
  Relevance of feedback and perception of bodily states for behavior, cognition and emotion, emotion regulation, „self-awareness“.
  Psychophysiological mechanisms of mindfulness based techniques, relevance of „interoception“ and „embodied cognition“ for somatic and psychosomatic diseases

- **Alexithymia and „Alexisomia“**
  „Emotional awareness“ – Relevance for health and disease, „well-being“ and psychopathology, Cross-cultural differences and importance for concepts of health and disease

- **Adaptive and Maladaptive Eating Behavior, Obesity, Eating disorders**
  Psychophysiological and neural mechanisms, relevance of interoceptive mechanisms

- **Cross-Cultural Differences of Interoception and „embodied cognition“**

- **Mechanisms of Resilience, Stress, Relevance for Health and Disease**

- **Pain**

- **Psychophysiological Methods**
  Heart rate variability (frequency domain, time domain), Cardiodynamic mechanisms (Impedance cardiography), Vasomotor activity, Electrogastrogram (EGG), Electrodermal activity (EDA), Electromyography (EMG, startle response), Pupillometry, Eye Movements (EOG), Electroencephalography (EEG; evoked potentials), fMRI, voxel-based morphometry (VBM), “biofeedback”