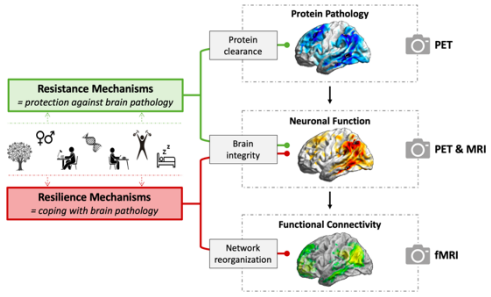
# WissPro-Angebote

## The effects of lifestyle in Parkinson's and Alzheimer's disease




Lifestyle and genetic factors contribute to the build-up of resilience and resistance mechanisms, which influence individual brain aging and disease trajectories. Neuroimaging techniques, such as PET or fMRI, can be used to study the underlying mechanisms of these protective mechanisms. In two ongoing studies, detailed information on lifestyle in addition to neuroimaging information is being collected in a cohort of PD and AD patients. The aim is to identify distinct lifestyle profiles that protect against the accumulation and distribution of neuropathology.

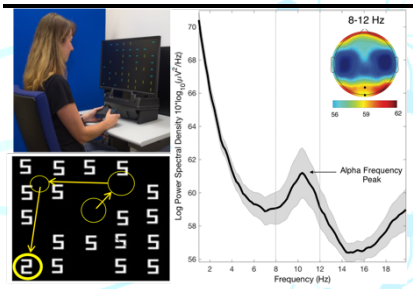
**Tasks:**

- Digitalisation of collected lifestyle information
- Computation of lifestyle quotient

**Contact:**

- Dr. Merle Hönig
  m.hoenig@fz-juelich.de

## Instabilität des Wachzustands bei der Demenz mit Lewy-Körperchen




Die Demenz mit Lewy-Körperchen (DLK) ist eine sehr häufige und schwere neurodegenerative Erkrankung, die trotz intensiver Forschung noch relativ unverstanden ist. Ein Hauptmerkmal der DLK sind starke Schwankungen in der Aufmerksamkeit. Zusammen mit dem Deutschen Zentrum für Luft- und Raumfahrt (DLR) wollen wir die Schwankung der Aufmerksamkeit bei DLK unter Laborbedingungen objektivieren und deren EEG-Signaturen in noch nie dagewesener Tiefe charakterisieren.

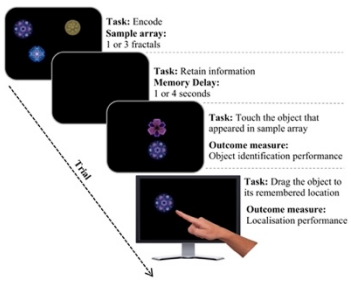
**Tasks:**

- Auf- und Abbau des Versuchs
- Durchführung der Messungen

**Contact:**

- Dr. Hendrik Theis
  hendrik.theis@uk-koeln.de

## What was where? Assessment of working memory in Parkinson's disease




Although Parkinson's disease is mainly characterized by profound motor impairment, patients are also at an increased risk for developing cognitive deficits, particularly in the domains of working memory and executive function. Using a novel neuropsychological working memory task, the aim of this project is to shed light onto the source of impaired working memory performance in Parkinson's disease by identifying error patterns characteristic for these patient cohort.

**Tasks:**

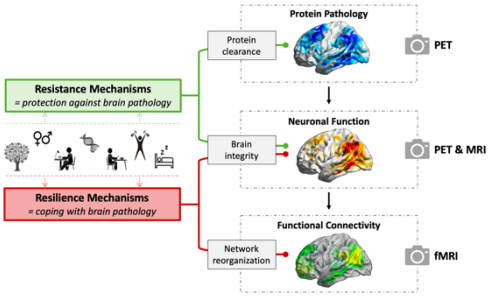
- Data analysis (using SPSS)
- Graphical visualization of results

**Contact:**

- Dr. Kathrin Giehl
  kathrin.giehl@uk-koeln.de

# Promotions-Angebote

## The effects of lifestyle in Parkinson's and Alzheimer's disease




Lifestyle and genetic factors contribute to the build-up of resilience and resistance mechanisms, which influence individual brain aging and disease trajectories. Neuroimaging techniques, such as PET or fMRI, can be used to study the underlying mechanisms of these protective mechanisms. In two ongoing studies, detailed information on lifestyle in addition to neuroimaging information is being collected in a cohort of PD and AD patients. The aim is to identify distinct lifestyle profiles that protect against the accumulation and distribution of neuropathology.

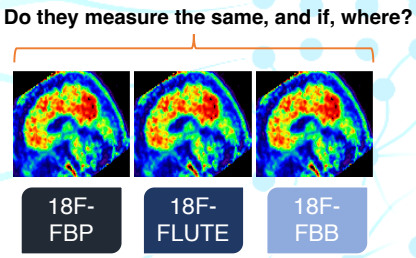
**Analyses:**

- Associate PET data with lifestyle to determine resistance mechanisms
- Analysis of fMRI data to identify compensatory network structures

**Contact:**

- Dr. Merle Hönig
  m.hoenig@fz-juelich.de

## Comparison of Amyloid PET Tracer to detect Amyloid Pathology in AD




Different radioactive ligands are available that measure beta-amyloid pathology *in vivo* in individuals spanning across the AD spectrum. But to compare them, we need to assess their commonalities and their differences. We currently have a ongoing project available that has collected data to answer this question.

**Tasks:**

- Analysis of PET data measuring beta-amyloid
- Adding a new set of data to the existing data pool
- Performing imaging analysis under supervision
- Assisting in the write up of an already existing manuscript

**Contact:**

Dr. Gérard N Bischof

- Gerard.bischof@uk-koeln.de