



Light therapy in neurodegenerative disorders

A systematic review and meta-analysis of the clinical evidence.

Tübingen / Munich / Remote · English · Master's thesis · Research internship · Erasmus+ research placement

The question

Can light-based interventions improve outcomes for people with neurodegenerative disorders? Clinical studies vary in their participants, interventions and outcomes, making the evidence difficult to interpret as a whole.

The project

Conduct a systematic review of light therapy in a defined neurodegenerative context. Assess what clinical studies support, where uncertainty remains, and whether differences in intervention reporting limit comparison.

What you will do

- Develop a review protocol, systematic searches and explicit screening criteria.
- Extract intervention and outcome information and assess risk of bias.
- Create a reproducible synthesis, using meta-analysis where appropriate and examining heterogeneity.

Possible scope

A thesis could cover a focused review from protocol to synthesis. An internship or Erasmus+ placement could focus on screening, extraction or an agreed analytical question. Clinical knowledge is welcome but not essential; careful interpretation of evidence matters.

Suitable backgrounds

Medicine · Neuroscience · Psychology · Public health · Epidemiology

General expectations

You should be able to analyse data in R or Python, use Git and GitHub, and work reproducibly. Independent reading, careful documentation and increasing responsibility are expected. Previous sleep or circadian research experience is not generally required.

Funding

No salary or stipend from the research group unless explicitly stated. Master's theses are generally unpaid. Mention external funding or mobility programmes when applying.

Suggested backgrounds are not formal programme approval. Confirm requirements with your home institution.

How to apply

Send a short motivation, CV, relevant skills, preferred project, dates, format and location. Mention external funding. Contact Prof. Manuel Spitschan using the address below.

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