



Academic Medical Center

University of Amsterdam



Netherlands Institute for Neuroscience

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*Subject: Position for a postdoctoral researcher*

A postdoctoral position in the Willuhn/Denys lab at the Netherlands Institute for Neuroscience (NIN) in Amsterdam is available immediately. The pre-clinical group headed by Ingo Willuhn studies both the neurobiology of compulsive behavior and basic behavioral functions potentially contributing to compulsivity (<http://herzeninstituut.nl/en/research/researchgroups/denyswilluhn-group/>). The team has close ties to clinical researchers studying such behaviors at the Department of Psychiatry of the Academic Medical Center (AMC; chaired by Damiaan Denys), providing optimal conditions for a translational, multidisciplinary approach.

Current research in the lab includes rodent models of obsessive-compulsive disorder and drug addiction, but also aims at understanding basic behavioral function of cortico-basal ganglia circuits. Behavioral assays testing cognitive flexibility, emotion, and decision making in mice and rats are combined with simultaneous methods for neurostimulation (DBS, optogenetics, pharmacogenetics), neurochemical measurements (microdialysis, fast-scan cyclic voltammetry), electrophysiological recordings (single units, local field potentials), and fMRI. The latest addition to this tool set is *in vivo* calcium imaging in freely-moving animals.

The primary focus of the successful applicant will be to investigate neurobiological signals in the basal ganglia during operant behavior using *in vivo* fast-scan cyclic voltammetry and *in vivo* calcium imaging in freely-behaving transgenic rats. The goal of these studies is to better characterize neuronal mechanisms of cognitive flexibility and habit formation, and eventually compulsive behavior. The ideal candidate has a strong background in the analysis and modeling of complex data and is an expert in using Matlab and/or similar software packages (necessary). Experience in neuroeconomics, calcium imaging, and rodent behavioral testing in neuroscience is desirable, but not necessary. Candidates should be enthusiastic, have excellent oral and written communication skills in English, and should be motivated to integrate well into a fun, creative, and collaborative team of international scientists that offers opportunities to cooperate with some of the best groups in the field worldwide.

The fully funded position is for a period of four years (1 + 3 years), including competitive salary and excellent benefits. Highly motivated candidates are encouraged to contact Ingo Willuhn ([i.willuhn@nin.knaw.nl](mailto:i.willuhn@nin.knaw.nl)). Your email should contain a CV, brief descriptions of past research experience, future research goals, and contact info for at least two people that could provide letters of reference.

**The Netherlands Institute for Neuroscience (NIN)** is a not-for-profit subsidiary of the prestigious Royal Netherlands Academy of Arts and Sciences (KNAW), located in the South of beautiful Amsterdam, just a short train ride from the inner city. The institute's operating language is English, as it is for many Amsterdam organizations. The NIN collaborates with the AMC Department of Psychiatry, part of the University of Amsterdam, conducting neurobiological and patient-centered research on compulsivity, anxiety, depression, psychosis, and addiction. The department aims at developing a better understanding of neuropsychopathology and at improving treatment options.