

Marloes Henckens, Radboud University Medical Center Nijmegen

<https://www.ru.nl/english/people/henckens-m/>



Professor Marloes Henckens' research aims to understand how stress exposure can lastingly affect brain function, and how this differs between individuals. Using animal models that allow for controlled study of the mechanistic underpinnings of stress-related psychopathology, she intends to elucidate how stress affects the brain. She focuses on the neural circuit level (e.g., by whole-brain analyses of neuronal activation by means of rodent MRI or cellular neuronal activity markers, viral tracing, and opto- and chemogenetics) and combines this with molecular studies to provide detailed mechanistic insight in the causes of altered neuronal circuit structure and function (investigating epigenetic mechanisms and local gene expression). Her interest lies in studying the inter-individual differences in the neural correlates of stress responsivity and subsequent coping, as she thinks that the natural resiliency against developing stress-related mental disorders contains unique information for new treatment options. Therefore, she combines these brain analysis methods with a wide variety of behavioral assays, to determine which individuals are relatively stress resilient and which succumb to mental disease.