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MASTER THESIS

"Uncovering behavioural influences of stress-relevant genes using non-human primate models"

start: April, 2017

Study aim:

DNA analyses and transcript profiling of genes like *COMT*, *FKBP5*, *MAOA* and *MAOB* important for response of the hypothalamic-pituitary-adrenal (HPA)-axis in species of the genus *Macaca*

Requirements:

- ✓ Theoretical and practical knowledge in molecular biology
- ✓ Interest in interdisciplinary research with a focus on behavioural genetics
- ✓ High communication skills and team spirit

Methods:

- ✓ DNA isolation
- ✓ Target gene amplification by PCR and long-range PCR
- ✓ Sanger sequencing
- ✓ Quantitative PCR (qPCR) and quantitative reverse transcription PCR (RT-qPCR)
- ✓ *In silico* prediction of structural and functional effects caused by the genetic variants
- ✓ Haplotype analysis
- ✓ Statistical analyses

Literature

Allelic variation of the *COMT* gene in a despotic primate society: A haplotype is related to cortisol excretion in *Macaca fuscata*.
Hormones and Behavior, *78*, 220-30. Pflüger LS, Gutleb DR, Hofer M, Fieder M, Wallner B, & Steinborn R (2016).