

The **Radboud University Medical Centre (RUMC)** and the **Donders Institute (DI)** for Brain, Cognition and Behaviour is a leading University Medical Centre and research institute in Nijmegen, The Netherlands. The DI is a leading centre of research with a strong reputation and over 600 researchers working at unravelling the neural, cognitive and behavioural mechanisms involved in neuropsychiatric disorders, including their genetic, molecular and cellular processes. Karakter Child and Adolescent Psychiatry is a large specialized hospital with multiple locations and out- and inpatient facilities for children and adolescents with severe psychiatric disorders. Karakter provides the clinical infrastructure for research in pediatric psychopathology at the RUMC and DI. Head and principal investigator: Jan Buitelaar

Scientific interests:

Genetic, cognitive, imaging, pharmacological and intervention research in ADHD, Autism Spectrum Disorders, Conduct Disorders and related aggression disorders

Ongoing projects:

- NeuroIMAGE: clinical, genetic, cognitive, MRI and biomarker study in ADHD and its comorbidities
- TACTICS: examine the neural correlates of impulsivity and compulsivity, and role of glutamate in ADHD, ASD, OCD and TS
- CU2: neural and cognitive correlates of psychopathy / high callous unemotional traits, and developing effective interventions for aggression
- EU FP7: Pediatric European PERS: examine efficacy and safety of risperidone in RCTs in pediatric population with Conduct Disorder.
- STOP: Examine predictors of suicidality in adolescents using risperidone.
- ADDUCE: Examine long-term cardiovascular effects of stimulant medication
- EU-AIMS: establish neural, cognitive and biomarkers to segment autism into more homogenous subgroups.
- Brain Matters: build a brain bank of patients with ADHD and autism.
- AGGRESSOTYPE and MATRICS: Aggression subtyping for improved insight and treatment innovation in paediatric psychiatric disorders
- BRAINVIEW: examine prenatal and early postnatal brain and cognitive mechanisms preceding the onset of ADHD and ASD

Clinical capabilities:

- Number of patients seen by year: 3000 new outpatient referrals 0-18 year old
- Availability of patients and volunteer databases: existing databases and cohorts of patients with ADHD and ASD
- Easy access to particular patient or volunteer groups through affiliated clinics, consortia
- Capability of performing clinical trials: type of patients, ages, possibility of placebo-controlled trials: experience with clinical trials (medication and various psychological interventions) in ADHD, ASD in children and adolescents age 6-18 year, including placebo-controlled studies

Technical capabilities:

- full access to Donders Centre for Cognitive Neuroimaging (research MRI facilities of 1.5, 3 and 7 Tesla, EEG, MEG, NIRS, PET, rTMS)
- full access to the facilities of the Department of Genetics (the generation of human induced pluripotent stem cells, Affymetrix genotyping facilities and next generation sequencing)
- translational preclinical pharmacology unit