Dr. rer. nat. Jolien Rietkerk, Msc.

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Driven by my passion to understand human cognition, I perform interdisciplinary and collaborative research on the genetic and environmental factors underlying depression, its reproductive-related subtypes, and psychiatric comorbidities. My work includes the development of novel statistical genetics methods and takes a data science approach to population-level datasets of psychiatric disorders with a strong focus on translating findings to patients from all populations.

EDUCATION

Doctor of natural sciences in Experimental Medicine (2020-2025) (*magna cum laude)*
TUM school of Medicine and Health, Technical University of Munich, Germany

Master of Science in Molecular and Cellular Life Sciences (2018-2020)
University of Utrecht, The Netherlands

Bachelor of Science in Life Science and Technology (2015-2018)
University of Groningen, The Netherlands

EXPERIENCE

Postdoctoral Researcher Trans-Ancestry Genetics of Reproductive-related Affective Disordes (2025-current)
Joint position with: Population Genetics and Environment in Mental Health (POP-GEM) lab of Dr. Roseann E. Peterson who directs the Institute for Genomics in Health (IGH) at SUNY Downstate Health Sciences University, New York, USA; hosted at the van Loo lab of Prof. Dr. Hanna M. van Loo, at University Center of Psychiatry (UCP) at University Medical Center Groningen (UMCG), The Netherlands; affiliated with Virginia Institute of Psychiatric and Behavioral Genetics (VIPBG), Virginia Commonwealth University (VCU), Richmond, Virginia, USA

- Elucidating the etiological distinction of reproductive-related affective disorders and major depressive disorder (specifically post-partum, peripartum, and pre-menstrual syndrome) in large and ancestrally diverse cohorts (e.g. CONVERGE, Lifelines, COGA, and the All of Us program; N=11K–596K+).
- Projects span novel questionnaire development, cross-cohort phenotype harmonization, detailed epidemiologic and large-scale genetic analysis (e.g. cross-ancestry GWAS, PGS, (g)SEM) and advanced trajectory-based methods. All include a major focus on transferability across populations and advocate for women's health through international interdisciplinary collaborations.

Doctoral Researcher in Psychiatric Genetics (2020-2025) (*magna cum laude)*
Joint position with: Translational Genetics Lab of Dr. Na Cai at Helmholtz Pioneer Campus, Helmholtz Munich, Munich, DE, and Statistical Genetics Lab of apl. Prof. Bertram Müller-Myshok at Max Planck Institute of Psychiatry, Munich, DE

- Dissertation: *Complex Polygenic Pathway Interactions in Psychiatric Disorders and Comorbidity*
- Investigation of Major Depressive Disorder etiology through detecting genetic pathway interactions within and across comorbid diagnoses. We elaborated the development of statistical genetics framework Coordinated Epistasis in big datasets (e.g. N~300K UKBiobank; N ~130K iPSYCH; N~2.5M Danish Register) applied to meta-analyses of Major Depressive Disorder, symptoms, clinical subtypes, family history and psychiatric comorbidities.

SCIENTIFIC COMMUNITY AND LEADERSHIP

2025 - present — **Chair** for the UMCG Postdoc Council, Groningen, Netherlands

- Representing and advocating for workers rights, mental health and improved working conditions of postdoctoral researchers at the UMCG.

2025 - present — **Member** of the cross-population working group of the Psychiatric Genomics Consortium

		• Presenting research and engaging in feedback exchange with international leaders in psychiatric genetics, contributing to collaborative efforts in cross-ancestry analyses and data harmonization.
	2025 - present	**Member** of the Major Depressive Disorder working group at the Psychiatric Genomics Consortium and its MDD heterogeneity subgroup. • Regular participation in collaborative meetings, sharing feedback, and engaging with international leaders in depression genetics. • Replication analyses for collaborators, including conducting predictive testing of genetic variants within the CONVERGE cohort to validate key findings across diverse populations.
	2022-2024	**Chair** of the Max Planck Institute Doctoral Researchers Bookclub. • Fostering community across Max Planck Institute and Helmholtz Center through organizing social activity of the bookclub
	2021-2024	**Member and Mental Health Advocate** at DINI: doctoral researcher initiative at Helmholtz Munich. • Fostering community through organizing social events for doctoral researchers and advocating for doctoral researchers mental health and working conditions across multiple organizational levels at Helmholtz Munich and graduate school HELENA.
SELECTED CONFERENCES AND SEMINARS	2026	**Accepted Oral Presentation** to present at Behavioral Genetics Association Annual Meeting symposium session, Amsterdam, Netherlands *Characterizing the polygenic profile of reproductive-related affective disorders in an East Asian population*
	2025	**Invited Speaker**, European College of Neuropsychopharmacology, Amsterdam, Netherlands *Using Polygenic Methods and Pedigrees to Understand Within-Disorder and Cross-Disorder Genetic Architecture and Heterogeneity*
	2024	**Speaker and symposium panel member,** World Congress of Psychiatric Genetics, Singapore *Coordinated Epistasis Detects Heterogeneous Pathways Across Psychiatric Disorders and Comorbidities*
	2024	**Speaker,** Behavior Genetics Association meeting, London, United Kingdom *Using Coordinated Epistasis to Investigate Genetic Architecture of Psychiatric Comorbidity*
	2023	**Poster**, 75th annual meeting of the American Society of Human Genetics, Washington DC, USA *Heterogeneous Pathways Characterized in Meta-Analyses of Psychiatric Disorders using Coordinated Epistasis*
	2023	**Oral Presentation Award Finalist,** World Congress of Psychiatric Genetics, Montréal, Canada *Coordinated Epistasis Reveals Pathway Architecture (and method considerations)*
	2023	**Speaker**, Gordon Research Seminar, Quantitative Genetics and Genomics, Ventura, USA *Coordinated Epistasis Reveals Symptom-Driven Pathways Towards Major Depressive Disorder*
	2022	**Poster**, World Congress of Psychiatric Genetics, Florence, Italy. *Investigating Divergent and Convergent Pathways in Major Depressive Disorder through Coordinated Epistasis*
TEACHING AND SUPERVISION	2026	**Writing Coach** for Science Writing Course by UMCG, to coach 3 graduate students through peer-review process and support writing of their papers.

	2023-2024	**Chair** of co-writing peer-group of international collaborating doctoral researchers.
SCIENTIFIC OUTREACH	2026	**Peer-reviewer** American Journal of Human Genetics; Journal impact factor 8.1
	2026	**Peer-reviewer** Translational Psychiatry; Journal impact factor 6.2
	2025	**Peer-reviewer** Translational Psychiatry; Journal impact factor 6.2
PUBLICATIONS	• B. Balbona, K.Kendler, D.Lapato, J. Payne,R.E. Peterson, **J. Rietkerk**, R. Roberson-Nay, M. Singh, M. Stephenson: *Postpartum Psychosis Genetic Architecture And Clinical Correlates*. OSF preregistration (2026) osf.io/t6d4m • N. Cai, A. Dahl, R. Border, A. Gorla, **J. Rietkerk**, J. Mefford, N. Zaitlen, M.D. Krebs, A.J. Schork, K.Kendler, J. Flint: *The predicament of heritable confounders.* Nature Genetics (2026) DOI: 10.1038/s41588-025-02465-y • M. Tesfaye, **J. Rietkerk**, J. Cárcamo, S. S. de Viteri, D. Singman, Z. Neale, C. Chatzinakos, T.B. Bigdeli, J.L. Meyers, R.E. Peterson: *Molecular Genetics of Neuro-Psychiatric Disorders: Current Research and Perspectives, with editor*, Henry's Clinical Diagnosis and Management by Laboratory Methods, 25th edition (under revision) • **J. Rietkerk,** M.D. Krebs, J. Mefford, L. Huang, K.G. Hellberg, iPSYCH Study Consortium, A. Børglum, T. Werge, K.S. Kendler, J. Flint, A.J. Schork, A.Dahl, N. Cai: *Genetic Risk Effects on Psychiatric Disorders Act in Sets.* medRxiv, (under revision) DOI: 10.1101/2025.07.23.25332043 • L. Huang, S. Tang, **J. Rietkerk**, V. Appadurai, M.D. Krebs, A.J. Schork, T. Werge, V. Zuber, K. Kendler, N.Cai: *Polygenic Analyses Show Important Differences Between Major Depressive Disorder Symptoms Measured Using Various Instruments.* Biological Psychiatry (2024) Volume 95, Issue, 12, p1110-1121, DOI: 10.1016/j.biopsych.2023.11.021	
REFEREES	Available upon request	