

Curriculum Vitae

Personal details:

Surname, first name: Schmitz, Christian

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Education:

2025	Doctorate degree (Dr. med.) Title: Investigation of the neurovascular coupling of D _{2/3} dopamine receptor availability in humans using simultaneous PET/MR Doctoral advisor: Prof. Dr. med. Gerhard Gründer Institution: Central Institute of Mental Health, Mannheim, Germany
2025	Board certification in psychiatry and psychotherapy by the State Medical Association of Baden-Wuerttemberg ("Landesärztekammer Baden-Wuerttemberg")
Since July 2019	Central Institute of Mental Health Mannheim Research associate in the department of Molecular Neuroimaging (Prof. Gruender)
Since July 2018	Central Institute of Mental Health Mannheim Psychiatry residency
2016	Harvard University (Laboratory of Prof. Ölveczky) Master thesis 'Organization of neuronal functional groups in the motor cortex and striatum and their association with behavior'
2014 - 2016	Medical Faculty Mannheim of Heidelberg University Master program „Translational Medical Research“
2011 - 2018	University of Freiburg and Heidelberg University Medical studies

Scientific experience:

Since 2025	King's College London (Psychosis Studies, Prof. Howes): Visiting research fellowship
Since 2019	Central Institute of Mental Health (department of molecular neuroimaging, Prof. Gruender): Conducting clinical trials, performing multi-modal PET/MR neuroimaging, and analyzing behavior of speech an movement
2019	Clinical investigator course at Heidelberg University
June 2018	FELASA course: FELASA lab animal training, FELASA certificate, category B

Scientific and Computational Skills:

Scientific Methods	Training in clinical studies since 2019, multi-modal PET/MR neuroimaging , behavioral analysis and LLM speech analysis , in-vitro whole-cell patch clamp experiments, in-vivo extracellular tetrode recordings in rats (including animal treatment, animal training, surgery, recording and data analysis)
Computational Skills	Experienced in Matlab and the coding language Python , basic knowledge of C++
Imaging toolboxes	Nipype, Nilearn, SPM, FSL, PMOD

Rewards and Scholarships:

2024	AI Health Bridge Scholarship from the AI Health Innovation Cluster (€75,600)
2023	Poster Prize at the DGPPN Congress 2023 for the poster: "How to prove dopamine supersensitivity in humans using simultaneous PET/MR dopamine supersensitivity – a pilot study" (€500)
2018	Funding for an early career project in SFB 1134 (€5,000)
2016	Travel scholarship from the German Academic Scholarship Foundation (Studienstiftung des deutschen Volkes)
2013-2018	General scholarship from the German Academic Scholarship Foundation (Studienstiftung des deutschen Volkes)

Clinical Trial Experience

Efficacy and Safety of Psilocybin in MDD Treatment-Resistant Psychiatric Major Depression; EPIsoDE	2019-003984-24	II Investigator	2020-2024
A phase III randomized, double-blind, placebo-controlled parallel group trial to examine the efficacy and safety of BI 425809 once daily over 26 week treatment period in patients with schizophrenia (CONNEX-1)	2020-003760-11	II Investigator	2021-2025

Publication List

- Schmitz CN***, Sammer G*, Neumann E, Blecker C, Gründer G, Adolphi H, Lamadé EK, Pedraz-Petrozzi B. Functional resting state connectivity is differentially associated with IL-6 and TNF- α in depression and in healthy controls. *Sci Rep*. 2025 Jan 13;15(1):1769. doi: 10.1038/s41598-025-85514-0.
- Gründer G, Mertens LJ, Spangemacher M, **Schmitz CN**. Können Antidepressiva den langfristigen Verlauf depressiver Erkrankungen negativ verändern? [Can antidepressants negatively alter the long-term course of depressive disorders?]. *Nervenarzt*. 2025 Mar;96(2):146-152. German. doi: 10.1007/s00115-025-01801-1.
- Spangemacher M, Reinwald J, Adolphi H, Kärtner L, Mertens LJ, **Schmitz CN**, Gründer G. Wirkmechanismen antidepressiver Pharmakotherapie: Gehirn und Psyche – Körper und Umwelt [Mechanisms of action of antidepressive pharmacotherapy: brain and mind-body and environment]. *Nervenarzt*. 2025 Mar;96(2):119-127. German. doi: 10.1007/s00115-024-01786-3.
- Schmitz CN**, Hart XM, Spangemacher M, Roth JL, Lazarevic I, Oberthür G, et al. Neurovascular coupling of striatal dopamine D2/3 receptor availability and perfusion using simultaneous PET/MR in humans. *Neuroscience Applied*. 2024;3:104094.
- Reinwald JR*, **Schmitz CN***, Skorodumov I, Kuchar M, Weber-Fahr W, Spanagel R, Meinhardt MW. Psilocybin-induced default mode network hypoconnectivity is blunted in alcohol-dependent rats. *Transl Psychiatry*. 2023 Dec 14;13(1):392. doi: 10.1038/s41398-023-02690-1.
- Hart XM, Heesen S, **Schmitz CN**, Dörfler S, Wedekind D, Gründer G, Hiemke C, Havemann-Reinecke U. Concentrations of escitalopram in blood of patients treated in a naturalistic setting: focus on patients with alcohol and benzodiazepine use disorder. *Eur Arch Psychiatry Clin Neurosci*. 2023 Feb;273(1):75-83. doi: 10.1007/s00406-022-01491-9. Epub 2022 Oct 7.
- Hart XM, **Schmitz CN**, Gründer G. Molecular Imaging of Dopamine Partial Agonists in Humans: Implications for Clinical Practice. *Front Psychiatry*. 2022 Apr 6;13:832209. doi: 10.3389/fpsyt.2022.832209.
- Gründer G, Brand M, Kärtner L, Scharf D, **Schmitz C**, Spangemacher M, Mertens LJ. Sind Psychedelika schnell wirksame Antidepressiva? [Are psychedelics fast acting antidepressant agents?]. *Nervenarzt*. 2022 Mar;93(3):254-262. German. doi: 10.1007/s00115-021-01255-1.

* These authors contributed equally to this work