| CURRICULUM VIT | ΛE |
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| Elisabeth Binder, MD, PhD Kraepelinstr 2-10, | | | Dept. of Translational |
|--|-------------|---|--------------------------|
| 80804 Munich, Germany Phone: ++ 49 89 30622 8125 E-Mail: binder@psych.mpg.de | | Research in Psychiatry, Munich Adjunct Professor, Dept. of Psychiatry and Behavioral Sciences, Emory University School of Medicine | |
| EDUC | CATION/TRAI | NING | |
| INSTITUTION AND LOCATION | DEGREE | YEAR(s) | FIELD OF STUDY |
| Medical School, University of Vienna, | MD | 1989-1995 | Medicine |
| Austria | | | |
| Medical School, Université Libre de | MD | 1992-1994 | Medicine |
| Bruxelles, Belgium | student | | |
| Emory University, Atlanta, GA | PhD | 1995-2000 | Neuroscience |
| Max Planck Institute of Psychiatry, Munich | | 2000-2004 | Residency in psychiatry |
| Germany | | | |
| Max Planck Institute of Psychiatry, Munich | | 2000 2004 | Postdoctoral training in |
| Germany | | 2000-2004 | Human Genetics |

| | POSITIONS AND EMPLOYMENT |
|---------------|---|
| Sept 2004 - | Assistant Professor, Department of Psychiatry and Behavioral Sciences, Emory |
| 2011 | University School of Medicine, Atlanta, GA. |
| Sept. 2011 - | Associate Professor, Department of Psychiatry and Behavioral Sciences, Emory |
| 2016 | University School of Medicine, Atlanta, GA. |
| Sept. 2016 - | Full Professor, Department of Psychiatry and Behavioral Sciences, Emory |
| 2019 | University School of Medicine, Atlanta, GA. |
| Sept. 2019 - | Adjunct Professor, Department of Psychiatry and Behavioral Sciences, Emory |
| | University School of Medicine, Atlanta, GA. |
| June 2007 - | Research Group Leader (RG Molecular Genetics of Depression), Max-Planck |
| | Institute of Psychiatry, Munich, Germany – primary and joint appointment with |
| | Emory |
| August 2013 - | Director, Dept. for Translational Research in Psychiatry, Max-Planck Institute of |
| | Psychiatry Munich, Germany – primary and joint appointment with Emory Honors |

| SCHOLARSHIPS | |
|--------------|---|
| 1995-2000 | Fulbright Scholar for PhD in Neuroscience at Emory University |
| 1998-2000 | Scholar of the Austrian Academy of Sciences |

| | AWARDS and HONORS (selected) |
|------|---|
| 2010 | Theodore Reich Young Investigator Award of the International Society of |
| | Psychiatric Genetics |
| 2012 | Max Hamilton Memorial Prize of the Collegium Internationale |
| | Neuropsychopharmacologicum (CINP) |
| 2016 | The Eva King Killiam Research Award for outstanding Translational Research in |
| | Neuropsychopharmacology by the American College of |
| | Neuropsychopharmacology |
| 2017 | Member of The German National Academy of Sciences Leopoldina |
| 2017 | Carus Medal of the Leopoldina |
| 2019 | Valkhof Chair at the Radboud University Medical Center, Nijmegen, Netherlands |
| 2019 | Ron the Kloet award for Stress Research awarded by the Stress-NL Consortium |

| | 2020 | Member of the National Academy of Medicine (USA) |
|---|--------------|---|
| - | | |
| | | BOARD & COMMITTEE MEMBERSHIPS (SELECTED) |
| | | (EDITORIAL BOARDS, SCIENTIFC ADVISORY BOARDS, SOCIETIES) |
| 2 | 014- present | Member of the Advisory Committee of the Child & Brain Development Program of the |
| | | The Canadian Institute for Advanced Research, currently chair |
| 2 | 015- 2022 | Member of the Advisory Board, Steering committee NCCR (National Centres of |
| | | Competence for Research in Switzerland) "SYNAPSY - Synaptic bases of mental |
| | | diseases" |
| 2 | 017-present | Scientific Advisory Boards des Donders Institute for Brain Cognition and Behaviour, |
| | | Nijmegen, Netherlands |
| 2 | 018-present | Deputy editor, American Journal of Psychiatry |
| 2 | 021-present | Member of the Scientific Advisory Council of the Brainscapes project, Amsterdam, |
| | | Netherlands |

Editorial board member: *Biological Psychiatry, Genes, Brain and Behavior; Neurobiology of Stress; Depression and Anxiety; European Archives of Psychiatry and Clinical Neuroscience*

| | LEADERSHIP/MEMBERSHIP IN RESEARCH SOCIETIES | |
|-------------------------|--|--|
| 2004 - present | International Society of Psychiatric Genetics: (ISPG) Board member | |
| | since 2014, secretary 2016 -2020 | |
| 2006 - present | Member, Society of Biological Psychiatry: | |
| 2007 – present | Member, American College of Neuropsychopharmacology (ACNP), currently fellow | |
| 2012 – present | European College of Neuropsychopharmacology (ECNP), Executive | |
| | Committee Member, 2014-present, 2019-2025 vice-president, fellow | |
| FIELD OF SPECIALIZATION | | |

- Gene x environment interactions in psychiatric disorders
- Epigenetics of early adversity
- Biomarkers in psychiatry

FUNDING WITHIN THE LAST 3 YEARS

Youth-GEM #101057182 (Binder Work package co-lead)10/2022-10/2027Horizon 2020 EU/HORIZON-HLTH-2021-STAYHLTH-01-02399.000 €Youth-GEM - Gene Environment interactions in Mental health trajectories of Youth funded within theEU-call "Towards a molecular and neurobiological understanding of mental health" Co-lead of WP4:Developmental Genomics of the Human Brain.

TECS Project # 458609264 (Binder Co-I)04/2021 - 04/2024German Research Foundation (DFG),122,650 € for proj.Deciphering epigenetic changes associated with the SARS-CoV-2 pandemic in a geneticallyinformative longitudinal twin family study: the TwinLife epigenetic Change Satellite (TECS) Project.

Depression Task Force grant (PI Binder)07/2019-06/2023Hope for Depression Research Foundation350,000 USD/yearDeciphering mechanisms of gene x adversity interactions: new insights for the prevention, diagnosisand treatment of depression

Marie Skłodowska-Curie Innovative Training Network #860895 (Project PI) 09/2019-08/2023 International Training Network - Horizon 2020 252,788 € to MPI, 3,773,266 € total TranSYS - Translational SYStemics: Personalised Medicine at the Interface of Translational Research and Systems Medicine Kids2Health (PI Heim, Binder project PI)11/2017 - 11/2023German Federal Ministry of Health and Education (BMBF); 4,180,492 €/4 years (666,500 € for proj.)Kids2Health: Understanding and Mitigating the Impact of Early Life Stress on Disease Risk: TowardsDevelopmental Programming of Lifelong Health

Else Kröner Fresenius (EKF) Forschungskolleg 06/2017-05/2023 Research College Translational Psychiatry (Co-speaker Binder, with P. Falkai LMU); 2.000.000 €/ 6 years Program supporting the training of clinician scientists to obtain a PhD during their psychiatry residency training

10 MOST RELEVANT PEER-REVIEWED PUBLICATIONS

- Binder EB, Salyakina D, Lichtner P, Wochnik GM, Ising M, Putz B, Papiol S, Seaman S, Lucae S, Kohli MA, Nickel T, Kunzel HE, Fuchs B, Majer M, Pfennig A, Kern N, Brunner J, Modell S, Baghai T, Deiml T, Zill P, Bondy B, Rupprecht R, Messer T, Kohnlein O, Dabitz H, Bruckl T, Muller N, Pfister H, Lieb R, Mueller JC, Lohmussaar E, Strom TM, Bettecken T, Meitinger T, Uhr M, Rein T, Holsboer F, Muller-Myhsok B. 2004: Polymorphisms in FKBP5 determine a novel subtype of depression characterized by increased recurrence and rapid response to antidepressant treatment, *Nature Genetics* 36(12):1319-25.
- 2. **Binder EB***, Bradley RG*, Liu W, Epstein MP, Deveau TC, Mercer KB, Tang Y, Gillespie CF, Heim CM, Nemeroff CB, Cubells JF, Ressler KJ. Association of FKBP5 Polymorphisms and Childhood Abuse with Risk of Posttraumatic Stress Disorder Symptoms in Adults, *JAMA* 2008;299(11):1-5
- Kohli MA, Lucae S, Saemann PG, Schmidt MV, Demirkan A, Hek K, Czamara D, Alexander M, Salyakina D, Ripke S, Hoehn D, Specht M, Menke A, Hennings J, Heck A, Wolf C, Ising M, Schreiber S, Czisch M, Müller MB, Uhr M, Bettecken T, Becker A, Schramm J, Rietschel M, Maier W, Bradley B, Ressler KJ, Nöthen MM, Cichon S, Craig IW, Breen G, Lewis CM, Hofman A, Tiemeier H, van Duijn CM, Holsboer F, Müller-Myhsok B, **Binder EB.** The neuronal transporter gene SLC6A15 confers risk to major depression. *Neuron*. 2011; 70(2):252-65.
- 4. Klengel T, Mehta D, Anacker C, Rex-Haffner M, Pruessner JC, Pariante CM, Pace TWW, Mercer KB, Mayberg HS, Bradley B, Nemeroff CB, Holsboer F, Heim CM, Ressler KJ, Rein T, **Binder EB**. Allele-specific DNA demethylation in FKBP5: a molecular mediator of gene x childhood trauma interactions. *Nature Neuroscience* 2013 Jan;16(1):33-41.
- Arloth J, Bogdan R, Weber P, Frishman G, Menke A, Wagner KV, Balsevich G, Schmidt MV, Karbalai N, Czamara D, Altmann A, Trümbach D, Wurst W, Mehta D, Uhr M, Klengel T, Erhardt A, Carey CE, Conley ED, Ruepp A, Müller-Myhsok B, Hariri AR, **Binder EB**. Genetic Differences in the Immediate Transcriptome Response to Stress Predict Risk-Related Brain Function and Psychiatric Disorders. *Neuron*. 2015; 86(5):1189-202.
- Halldorsdottir T, Piechaczek C, Soares de Matos AP, Czamara D, Pehl V, Wagenbuechler P, Feldmann L, Quickenstedt-Reinhardt P, Allgaier AK, Freisleder FJ, Greimel E, Kvist T, Lahti J, Räikkönen K, Rex-Haffner M, Arnarson EÖ, Craighead WE, Schulte-Körne G, **Binder EB**. Polygenic Risk: Predicting Depression Outcomes in Clinical and Epidemiological Cohorts of Youths. *Am J Psychiatry*. 2019
- 7. Czamara D, Eraslan G, Page CM, Lahti J, Lahti-Pulkkinen M, Hämäläinen E, Kajantie E, Laivuori H, Villa PM, Reynolds RM, Nystad W, Håberg SE, London SJ, O'Donnell KJ, Garg E, Meaney MJ, Entringer S, Wadhwa PD, Buss C, Jones MJ, Lin DTS, MacIsaac JL, Kobor MS, Koen N, Zar HJ, Koenen KC, Dalvie S, Stein DJ, Kondofersky I, Müller NS, Theis FJ; Major Depressive Disorder Working Group of The Psychiatric Genomics Consortium, Räikkönen K, **Binder EB**. Integrated analysis of environmental and genetic influences on cord blood DNA methylation in new-borns. *Nat Commun.* 2019 Jun 11;10(1):2548
- Provençal N, Arloth J, Cattaneo A, Anacker C, Cattane N, Wiechmann T, Röh S, Ködel M, Klengel T, Czamara D, Müller NS, Lahti J; PREDO team, Räikkönen K, Pariante CM, Binder EB. Glucocorticoid exposure during hippocampal neurogenesis primes future stress response by inducing changes in DNA methylation. Proc Natl Acad Sci U S A. 2019.

- Zannas AS, Jia M, Hafner K, Baumert J, Wiechmann T, Pape J, Arloth J, Ködel M, Martinelli S, Roitman M, Roeh S, Haehle A, Emeny R, Iurato S, Carrillo-Roa T, Lahti J, Räikkönen K, Eriksson JG, Drake AJ, Waldenberger M, Wahl S, Kunze S, Lucae S, Bradley B, Gieger C, Hausch F, Smith AK, Ressler KJ, Müller-Myhsok B, Ladwig KH, Rein T, Gassen NC, **Binder EB**. Epigenetic upregulation of FKBP5 by aging and stress contributes to NF-κB-driven inflammation and cardiovascular risk. *Proc Natl Acad Sci U S A* 2019 Jun 4;116(23):11370-11379
- Cruceanu C, Dony L, Krontira AC, Fischer DS, Roeh S, Di Giaimo R, Kyrousi C, Kaspar L, Arloth J, Czamara D, Gerstner N, Martinelli S, Wehner S, Breen MS, Koedel M, Sauer S, Sportelli V, Rex-Haffner M, Cappello S, Theis FJ, **Binder EB**. Cell-Type-Specific Impact of Glucocorticoid Receptor Activation on the Developing Brain: A Cerebral Organoid Study. *Am J Psychiatry*. 2022, 179:375-387.