

## Personal information

**Date of birth:** November 18th, 1985

**Place of birth:** Dresden, Germany

**Citizenship:** Germany

## Education

### PhD in Neuroscience

*University Medical Center Hamburg-Eppendorf (UKE)*  
*Department of Systems Neuroscience (Christian Büchel, MD)*

Hamburg, Germany

06/2013 – 08/2017

- Thesis: *Fearing Nature, Nurture and Thyself: Inter-individual Differences Shape the Neurobiology of Fear Processing and Anxious Temperament*
- Research group *Fear, Anxiety & Stress* (Tina B. Lonsdorf, PhD)

### MSc in Psychology

*University of Vienna*

Vienna, Austria

10/2007 – 04/2013

- Thesis: *Introducing Behavioral Candidate Item Selection for Neuroimaging Intermediate Phenotypes: Amygdala - Prefrontal Cortex Functional Connectivity and Corresponding Behavior Implicated in Major Depressive Disorder* (Lukas Pezawas, MD; Claus Lamm, PhD)

### Joint Study Program Semester in Psychology

*University of Illinois at Urbana-Champaign*

Champaign, IL, USA

08/2010 – 12/2010

### Studies in Computer Science

*Dresden University of Technology*

Dresden, Germany

10/2005 – 07/2007

## Additional Research Experience

### Postdoctoral Fellow

*McLean Hospital / Harvard Medical School*  
*Department of Psychiatry*

Belmont, USA

06/2020 – present

- Laboratory for Translational & Affective Neuroscience (Diego Pizzagalli, PhD)

### Postdoctoral Associate

*University of Maryland*  
*Department of Psychology*

College Park, USA

07/2019 – 05/2020

- Affective & Translational Neuroscience Laboratory (Alexander Shackman, PhD)

### Postdoctoral Associate

*University Medical Center Hamburg-Eppendorf (UKE)*  
*Department of Systems Neuroscience (Christian Büchel, MD)*

Hamburg, Germany

08/2017 – 07/2019

- Research group *Fear, Anxiety & Stress* (Tina B. Lonsdorf, PhD)

### Student research assistant

*Medical University of Vienna (AKH)*

Vienna, Austria

04/2011 – 03/2013

- Research group *Clinical Imaging* (Lukas Pezawas, MD)

**Student research assistant***University of Vienna*– Research group *Social Psychology* (Andreas Olbrich-Baumann, PhD)

Vienna, Austria

03/2009 – 03/2010

**Student project assistant***Vienna University of Technology*– Research group *Vision 4 Robotics* (Markus Vincze, PhD)

Vienna, Austria

12/2007 – 10/2012

**Skills****Psychophysiology:** EDA, EMG, EMG-fMRI & basic skills in eye tracking**Neuroimaging:** SPM, VBM/CAT, CONN, basic skills in AFNI, FSL & FreeSurfer**Programming:** MATLAB, R, basic skills in MPLUS, Python, C, HTML, & Shell scripting**Languages:** German (native), English (business fluent), Spanish (basic)**Teaching****Lectures***Introduction to cognitive neuroscience: From genes to behavior*

Hamburg, Germany

01/2018

**Academic supervision***PhD/MD students*

Hamburg, Germany; College Park, USA

2016 - present

**SPM course Hamburg***Tutoring expert and beginner groups in SPM12*

Hamburg, Germany

yearly 2014 - 2017

**MATLAB course Hamburg***Tutoring beginner groups in MATLAB*

Hamburg, Germany

yearly 2014 - 2017

**Workshops***Introduction to Bayesian Analysis for Fear Conditioning Data*

Swansea, UK; Würzburg, Germany

04/2018; 05/2019

**Awards & Scholarships****Poster Award - WASAD 2017**

1st World Association for Stress Related and Anxiety Disorders Congress

Title: *Functional heterogeneity of the human extended amygdala during phasic fear- and anxiety-related processes*

Würzburg, Germany

**Poster Award - Psychology & Gehirn 2015**

41th annual meeting of the German Society of Biological Psychology (DGPs)

Title: *The neural correlates of affective startle modulation - results from parallel EMG-fMRI*

Frankfurt, Germany

**Performance scholarship***University of Vienna*

Vienna, Austria

**Performance scholarship***University of Vienna*

Vienna, Austria

**Grant for the Joint Study program at the University of Illinois***University of Vienna*

Vienna, Austria

## Memberships

### Young Scientist Network EIFEL-ROF

Research network for the (European) Interdisciplinary study of Fear and Extinction Learning as well as the Return of Fear (EIFEL-ROF)

### German Society of Psychology (DGPs)

Biological Psychology and Neuropsychology section

## Ad hoc reviewer

Psychophysiology; Social, Cognitive and Affective Neuroscience (SCAN). Translational Psychiatry

## Publications

See also: [Google Scholar](#) or [Researchgate](#)

**Kuhn M.**, Wendt J., Sjouwerman R., Büchel C., Hamm A., & Lonsdorf T. B. (2020). The Neurofunctional Basis of Affective Startle Modulation in Humans: Evidence From Combined Facial Electromyography and Functional Magnetic Resonance Imaging. *Biological Psychiatry*, 87 (8), 548-558.

Mertens G., Braem S., **Kuhn M.**, Lonsdorf T. B., van den Hout M., & Engelhard I. M. (2018). Does US expectancy mediate the additive effects of CS-US pairings to contingency instructions? Results from subjective, psychophysiological and neural measures. *Behaviour, Research and Therapy*, 110, 41-46.

Lueken U.\*, **Kuhn M.\***, Yang Y., Straube B., Kircher T., Wittchen H. U., Pfeiderer B., Arolt V., Wittmann A., Ströhle A., Weber H., Reif A., Domschke K., Deckert J., & Lonsdorf T.B. (2017). Modulation of defensive reactivity by *GLRB* allelic variation: converging evidence from an intermediate phenotype approach. *Translational Psychiatry*. 7 (9), e1227.

Lonsdorf T. B., Menz M. M., Andreatta M., Fullana M. A., Golkar A., Haaker J., Heitland I., Hermann A., **Kuhn M.**, Kruse O., Drexler S. M., Meulders A., Nees F., Pittig A., Richter J., Römer S., Shiban Y., Schmitz A., Straube B., Vervliet B., Wendt J., Baas J. M.\*, & Merz C. J.\* (2017). Don't fear 'fear conditioning': Methodological considerations for the design and analysis of studies on human fear acquisition, extinction, and return of fear. *Neuroscience & Biobehavioral Reviews*, 77, 247-285.

Sjouwerman R., Niehaus J., **Kuhn M.**, & Lonsdorf T. B. (2016). Don't startle me - Interference of startle probe presentations and intermittent ratings with fear acquisition. *Psychophysiology*, 53 (12), 1889-1899.

**Kuhn M.\***, Mertens G.\*, & Lonsdorf T.B. (2016). State-dependent modulation of return of fear by anxious apprehension. *International Journal of Psychophysiology*, 110, 194-199.

**Kuhn M.**, Haaker J., Glotzbach-Schoon E., Schümann D., Andreatta M., Mechias M.L., Raczka K., Gartmann N., Büchel C., Mühlberger A., Pauli P., Reif A., Kalisch R., & Lonsdorf T.B. (2016). Converging evidence for an impact of a functional NOS gene variation on anxiety-related processes. *Social Cognitive and Affective Neuroscience*, 11 (5), 803-812.

**Kuhn M.**, Scharfenort R., Schümann D., Schiele M.A., Münsterkötter A.L., Deckert J., Domschke K., Haaker J., Kalisch R., Pauli P., Reif A., Romanos M., Zwanzger P., & Lonsdorf T.B. (2015). Mismatch or allostatic load? Timing of life-adversity differentially shapes gray matter volume and anxious-temperament. *Social Cognitive and Affective Neuroscience*, 11 (4), 537-547.

Mertens G.\*, **Kuhn M.\***, Raes A.K., Kalisch R., De Houwer J., & Lonsdorf T.B. (2015). Fear expression and return of fear following threat instruction with or without direct contingency experience. *Cognition and Emotion*, 30 (5), 968-84.

**Kuhn, M.**, Popovic, A., & Pezawas, L. (2014). Neuroplasticity and Memory Formation in Major Depressive Disorder: An Imaging Genetics Perspective on Serotonin and BDNF. *Restorative Neurology and Neuroscience*, 32(1), 25-49.

Popovic, A., **Kuhn, M.**, & Pezawas, L. (2013). Chronic pain from a psychiatric perspective - Neurobiology and therapy. *Manuelle Medizin*, 51(1), 47-52.

\*contributed equally

## Publications in preparation

**Kuhn M.\***, Kaplan, C. M.\*, Hur J., Bradford D. E., Fox A. S., Curtin J. J., Smith J. F., & Shackman A. J. *Neural systems underlying the anxiolytic effects of ethyl alcohol in humans.*

Hur J.\*, **Kuhn M.\***, Smith J. F., DeYoung K. A., Anderson, A. S., & Shackman A. J. *Neural predictors of emotional reactivity in daily life.*

Hur J., Smith J. F., DeYoung K., Anderson A. S., Kuang J., Kim H. C., Tillman R. M., **Kuhn M.**, Fox A. S., & Shackman A. J. *Anxiety and the neurobiology of uncertain threat anticipation.*

**Kuhn M.** & Lonsdorf T. B. *Evidence for cross-modal/cross-experimental trait-like amygdala response habituation as inferred by latent startle habituation profiles.*

**Kuhn M.** & Lonsdorf T. B. *Functional heterogeneity of the human extended amygdala during phasic fear- and anxiety-related processes.*

Nold, J., Ehlers, M., **Kuhn, M.**, Klingelhöfer-Jens, M. & Lonsdorf T. B. *Inter-individual differences in conditioned responding during fear acquisition training and extinction are not associated with brain morphology in a large, healthy sample.*

## Oral presentations

### 35th Symposium of the Clinical Psychology and Psychotherapy section of the DGPs

Chemnitz, Germany  
May 2017

Title: *The impact of life events on the return of fear and fear generalization - mechanisms and clinical implications*

### Psychologie & Gehirn 2016

Trier, Germany  
Jun 2016

Symposium: *The impact of stress and life adversity on anxiety-related processes*

Title: *Mismatch or allostatic load? Timing of life-adversity differentially shapes gray matter volume and anxious-temperament*

### 6th SFB TRR-58 PhD student symposium

Bad Gandersheim, Germany  
Aug 2014

Title: *Converging evidence for an impact of the NOS1 ex1f-VNTR polymorphism on fear- and anxiety-related processes from different modalities*

### 5th SFB TRR-58 PhD student symposium

Marktbreit, Germany  
Aug 2013

Title: *Genetic impact on neuronal mechanisms underlying human fear learning and extinction. The role of NOS1 mediated HTR1A signaling in hippocampus-dependent fear conditioning*

## Poster presentations

- Klingelhöfer-Jens M., **Kuhn M.**, Immisch C., Lonsdorf T.B. *A Look on the Dark Side of Life: The Impact of Life Adversity on Return of Fear in a Longitudinal Study*. 9th European Meeting on Human Fear Conditioning (EMHFC) 2019. Würzburg, Germany.
- Kuhn M.**, & Lonsdorf T.B. *Functional heterogeneity of the human extended amygdala during phasic fear- and anxiety-related processes*. World Association for Stress Related and Anxiety Disorders (WASAD) 2017. Würzburg, Germany.
- Kuhn M.**, & Lonsdorf T.B. *Functional heterogeneity of the human extended amygdala in fear and anxiety processes*. 57th Annual Meeting of the Society for Psychophysiological Research (SPR) 2017. Vienna, Austria.
- Kuhn, M.**, Lueken U., Yang, Y., Straube, B., Kircher, T., Wittchen, H.U., Pfeleiderer B., Arolt, V., Wittmann, A., Ströhle, A., Weber, H., Reif, A., Domschke, K., Deckert, J., & Lonsdorf, T.B. *Modulation of defensive reactivity by GLRB allelic variation: Converging evidence from an intermediate phenotype approach*. 7th European Meeting on Human Fear Conditioning (EMHFC) 2017. Hamburg, Germany.
- Lueken U., **Kuhn, M.**, Yang, Y., Straube, B., Kircher, T., Wittchen, H.U., Pfeleiderer B., Arolt, V., Wittmann, A., Ströhle, A., Weber, H., Reif, A., Domschke, K., Deckert, J., & Lonsdorf, T.B. *Neural substrates of fear conditioning are modulated by GLRB allelic variation: converging evidence from an independent replication*. 30th European Neuropsychopharmacology Congress (ECPN) 2017. Paris, France.
- Kuhn M.**, Wendt J., Sjouwerman R., Möller M., Büchel C. & Lonsdorf T.B. *The neural basis of the human affective startle modulation - Evidence from two independent studies using parallel EMG-fMRI*. Annual Meeting of the Society for Neuroscience (SfN) 2016. San Diego, USA.
- Kuhn M.**, Wendt J., Sjouwerman R., Möller M., Büchel C. & Lonsdorf T.B. *The neural basis of the human fear-potentiated startle reflex*. 7th European Meeting on Human Fear Conditioning (EMHFC) 2016. Utrecht, Netherlands.
- Kuhn M.**, Wendt J., Lindner K. & Lonsdorf T.B. *The neural correlates of affective startle modulation - results from parallel EMG-fMRI*. 54th Annual Meeting of the Society for Psychophysiological Research (SPR) 2015. Seattle, USA.
- Kuhn M.**, Wendt J., Lindner K. & Lonsdorf T.B. *The neural correlates of affective startle modulation - results from parallel EMG-fMRI*. Psychologie & Gehirn 2015. Frankfurt, Germany.
- Kuhn M.**, Haaker J., Glotzbach-Schoon E., Andreatta M., Mühlberger A, Pauli P, Kalisch R., Reif A & Lonsdorf T.B. *Converging evidence for an impact of the NOS1 *ex1f*-VNTR polymorphism on fear- and anxiety-related processes from different modalities*. 6th European Meeting on Human Fear Conditioning (EMHFC) 2014. Affligem, Belgium.
- Rabl U., Meyer B., Bartova L., Kalcher K., Boubela R., Scharinger C., **Kuhn M.**, Popovic A., Endstraßer F., Praschak-Rieder N., Windischberger C., Kasper S., Moser E., Sitte H., & Pezawas L. *Brain Correlates of Acute Depression before and after Treatment Initiation with Escitalopram*. Organization for Human Brain Mapping (OHBM) 2013. Seattle, USA.
- Bartova L., Diers K., Meyer B., Rabl U., Scharinger U., Popovic A., Pail G., **Kuhn M.**, Kalcher K., Schwarzbaum-Russo S., Praschak-Rieder N., Windischberger C., Moser E., Kasper S., Brocke B., & Pezawas L. *Neural Correlates of Full Remission in Adolescent- and Adult-Onset Major Depressive Disorder*. Organization for Human Brain Mapping (OHBM) 2013. Seattle, USA.

Meyer, B., Rabl, U., Bartova, L., **Kuhn, M.**, Diers, K., Berger, A., Popovic, A., Ott, L., Kalcher, K., Huf, W., Perkmann, T., Haslacher, H., Windischberger, C., Esterbauer, H., Brocke, B., Kasper, S., Moser, E., Sitte, H., & Pezawas, L. *Impact of Blood Cholesterol Levels on Striatal and Frontal Functional Connectivity*. Organization for Human Brain Mapping (OHBM) 2012. Beijing, China.

Bartova, L., Diers, K., Scharinger, C., Rabl, U., Meyer, B., **Kuhn, M.**, Popovic, A., Moser, E., Kasper, S., Brocke, B., & Pezawas, L. *Functional abnormalities within the working memory network in remitted major depressive disorder*. 28th CINP World Congress of Neuropsychopharmacology 2012. Stockholm, Sweden.