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*Amygdala Neuroplasticity in Pain*

Dr. Volker Neugebauer is University Distinguished Professor and Chair of the Department of Pharmacology, Founding Director of the Center of Excellence for Translational Neuroscience and Therapeutics, and Executive Director and Chief Scientific Officer of the Garrison Institute on Aging (GIA) at Texas Tech University Health Sciences Center (TTUHSC). Dr. Neugebauer obtained his M.D. and Ph.D. degrees from the University of Würzburg, Germany. He received training in physiology, pharmacology, neuroscience and neurology at the University of Würzburg and the University of Texas Medical Branch (UTMB) at Galveston, TX. Dr. Neugebauer has been studying mechanisms of neuroplasticity and brain functions related to clinically relevant disorders such as chronic pain, neurodegenerative diseases, and various neurological and psychiatric disorders for more than 30 years. The analysis of emotional-affective and cognitive brain mechanisms of pain centered on the amygdala and cortico-limbic interactions is a key contribution to the field of pain research and neuroscience. His team first described neuroplasticity in the amygdala in pain conditions. The current focus on neuroimmune signaling in the brain is pioneering the analysis of neuroplasticity in pain and comorbid disorders. Dr. Neugebauer's research program uses a multidisciplinary approach state-of-the-art in vivo and in vitro electrophysiology, multi-photon imaging in vivo and ex vivo, microendoscopy for in vivo calcium imaging, optogenetics, chemogenetics, viral vector strategies, transgenics, molecular biology, immunohistochemistry, (opto-)pharmacology, and innovative behavioral assays. His work has been continuously funded by NIH since 1999 and published in more than 150 research articles and presented in more than 150 invited lectures and workshops. Since moving to TTUHSC in 2014, Dr. Neugebauer has established collaborative basic science projects and studies in humans on mechanisms, biomarkers and interventions for chronic pain and aging-related health issues such as dementias and Alzheimer's disease in particular. He also oversees the GIA Brain Bank, Project Frontier, a longitudinal epidemiological study that explores the course of chronic disease and cognitive decline in aging in a multi-ethnic sample of adults in rural communities in West Texas, and programs to improve the mental health of informal caregivers of patients with Alzheimer's Disease and Alzheimer's Disease Related Dementias.