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Prof. Veronika Engert (Universitätsklinikum Jena)
Prof. Nicolas Rohleder (Friedrich-Alexander-Universität Erlangen-Nürnberg)

Stress Pathways to Disease: Traditional and Digital Biomarkers of Stress

Date	Thursday, June 13th, 2024
Time	16:00 – 18:00
Location	Hörsaal der Klinik für Psychiatrie & Psychotherapie
	Philosophenweg 3, 07743 Jena

ABSTRACT

Psychosocial stress is an important precursor of disease and reduced quality of life in humans. The biological pathways between stress exposure and pathophysiological processes underlying disease have received substantial attention, primarily focusing on the role of the hypothalamus pituitary adrenal (HPA) axis and sympathetic nervous system (SNS). How activation of these stress systems translates into physiological disease, however, remains insufficiently understood. Recent research has therefore focused on systemic inflammation as a pathway, because (a) stress systems are known to control the inflammatory system, (b) elevated inflammatory system activity often accompanies chronic psychosocial distress, and (c) inflammation plays a key role in the pathophysiology of diseases such as cardiovascular disease, type2 diabetes, and cancer. As quantification of these biological processes is often invasive, expensive, and labor-intensive, we are currently increasing our efforts aimed at permitting more non-invasive, non-intervening, non-interfering biobehavioral research. Data will be presented addressing different aspects of stress system control of inflammatory mechanisms in the context of chronic and acute psychosocial stress, followed by initial results of our aim to reduce invasiveness of our research, including digital biomarkers of stress.

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