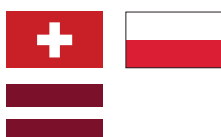




Raffael Kalisch



PHASR-PP

PHarmacological Augmentation of Stress Resilience - Proof of Principle

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Stress-related mental problems and disorders often start during adolescence or early adulthood, and they have their highest levels during this life period. During the COVID-19 pandemic, children, adolescents and young adults were among the most strongly mentally affected groups. The prevalence of mental disorders in this age group is on the rise. Health care services are increasingly overburdened. This situation motivates a search for new strategies to combat stress-related mental health problems in this age group. Further, individuals who experience severe mental health problems already early in their lives are more vulnerable for the rest of their lives, having an increased risk to develop mental disorders. Therefore, emerging adulthood might be a "window of opportunity", where to intervene in a preventive fashion might have long-lasting benefits and be a very efficient way to reduce the burden of stress-related mental disorders in society as a whole.

Based on findings from animal research, we test for the first time in a clinical trial whether a 3 months treatment of young adults at risk for mental health problems with a well-known and well-tolerated commercially available drug that is currently used in the treatment of bodily disorders will reduce the probability that these individuals will develop stress-related mental health problems. We also test the assumption that the drug will exert this effect by protecting the function of the Blood-Brain Barrier (BBB), which is a tissue surrounding blood vessels in the brain that shields the brain against damaging factors in the blood, including in states of stress and stress-related inflammation, and which can itself become dysfunctional under stress. A pharmacological method to prevent stress-related disorders would be novel and may well complement psychological approaches. Ethical and social issues potentially raised by this pharmacological approach will also be investigated.

