Stress at the Molecular Level

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Traumatic stress not only affects our brains, but can also strike us at the cellular level. Iris-Tatjana Kolassa explores the biological, particularly the molecular, changes that occur after situations of extreme stress. She is also studying whether therapeutic interventions can reverse such alterations. Kolassa's work has been of increasing influence on an international scale as it signals a paradigmatic breakthrough, creating the scientific sub-discipline of "molecular psychology," which employs molecular biology for the advancement of psychological science. It uniquely demonstrates how molecular methods may be incorporated into the system sciences of clinical psychology and behavioral neuroscience. Additionally, she investigates genetic risk factors that contribute to the development of a fear network in which memories of traumatic events are stored. As part of her work, she collaborates intensively with partners from molecular biology, molecular toxicology, immunology, genetics, and molecular medicine. She is the recipient of an APS Janet Taylor Spence Award for Transformative Early Career Contributions. Q&A with Iris-Tatjana Kolassa