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Molecular Insights into Addiction

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Message from the Guest Editors

Addiction is a complex condition influenced by genetic, neurobiological, and molecular factors. Recent studies have identified specific genes and neurotransmitter systems, particularly the dopamine system, as key players in addiction. Critical brain regions, such as the ventral tegmental area, nucleus accumbens, and prefrontal cortex, are involved in the stages of addiction: binge/intoxication, withdrawal/negative affect, and preoccupation/anticipation. These regions undergo significant neuroplastic changes during addiction, affecting reward processing, motivation, and stress responses. Understanding the molecular pathways behind these processes, including how psychoactive substances alter the brain's reward systems, is essential in comprehending the underlying mechanisms of addiction. This comprehensive approach is crucial in advancing our knowledge of the complexities of addiction.

The aim for this Special Issue is to bring together the most recent developments and state-of-the-art research works in molecular insights into addiction. Suitable topics: genetics, epigenetics, neurobiological mechanisms, molecular pathways, biostatistical methods, and animal and human studies, etc.

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Message from the Editor-in-Chief

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