

## Clinical Neuroscience of Stress Vulnerability

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The number of stress-related psychiatric disorders like Depression, Post-Traumatic Stress Disorders (PTSD) has been increasing in all generation from young to elderly age. It has already passed a half-century since the appearance of chlorpromazine and imipramine which produced a revolution in psychiatry and the new research field of psychopharmacology. However, there is no new psychotropic drug beyond monoamine hypothesis. The research techniques in neuroscience such as neuroimaging and molecular neurobiology have remarkably progressed in recent decade which may be able to elucidate the biological mechanism of these psychiatric disorders and to develop their new treatments. Stress vulnerability has been thought to underlie the pathophysiology of these disorders. Early life adverse experiences are reported to contribute to the development of stress vulnerability, and to increase the onset of stress-related psychiatric disorders in stressful environments in adulthood.

In this symposium, the speaker will demonstrate our recent clinical neuroimaging study on depression using the emotional stress prediction task and multi-step delayed reward task and also our basic animal experiment on stress vulnerability using neonatal isolation rats, and discuss the future direction on psychopharmacology.