

Special Issue

Protein Kinases and Neurodegenerative Diseases

Message from the Guest Editors

Protein kinases have pivotal or detrimental functions in brain aging and neurodegenerative disorders. For example, PI3K/AKT/mTOR and AMPK pathways are essential for brain longevity through the regulation of protein synthesis and mitochondrial energy production, respectively. Mitogen-activated protein kinase pathways including JNK, p38, and ERK mediate neuronal damages via oxidative stress induced by brain ischemia and neurodegenerative disorders. Likewise, ASK-1/p38 signaling with CaMKII accounts for oxidative neuronal death. In addition, neuroinflammation and upregulation of death receptor family ligands such as TNF α promotes necrotic cell death, named necroptosis, which is mediated by receptor interacting protein kinase 1, RIPJ3, and mixed lineage kinase domain-like protein (MLKL). Our aim is to establish, with this Special Issue, a strong research network to share the pathological mechanisms mediated by protein kinases in human neurodegenerative disorders.

Guest Editors

Prof. Dr. Kohji Fukunaga

Department of Pharmacology, Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai 980-8578, Japan

Dr. Ichiro Kawahata

Department of CNS Drug Innovation, Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai 980-8578, Japan

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4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Prof. Dr. José L. Quiles
Department of Physiology, Institute of Nutrition and Food Technology
"Jose Mataix", Biomedical Research Center, University of Granada,
Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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