



Laboratory of Molecular Neurobiology



Prof. Chul-Seung Park

E-mail: cspark@gist.ac.kr

Tel.: +82-62-715-2489

Web <http://life.gist.ac.kr/mnl/>

Education :

1992 : Ph.D. in Biochemistry, Brandeis Univ.

1986 : B.S. in Biochemistry, Yonsei Univ.

Experience

1996~present : Assistant / Associate / Full Professor
School of Life Sciences, GIST

2016~present : Director, Division of Life Sciences,
National Research Foundation, Korea

2012~2015 : Dean, Academic and Student Affairs, GIST

1996 : Postdoctoral Associate, The Rockefeller University,
New York, USA

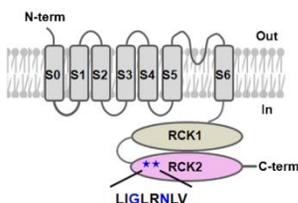
1994~1996 : Postdoctoral Fellow, Harvard Medical School, Boston,
USA



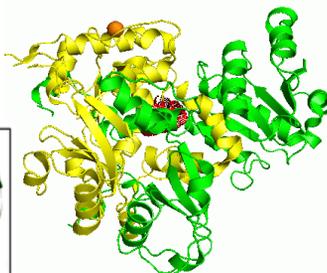
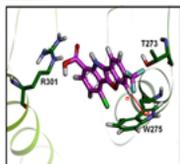
Research Topics

In this laboratory, we would like to understand the specific cellular phenomena in nervous system at the molecular level. We are currently focusing on two research areas.

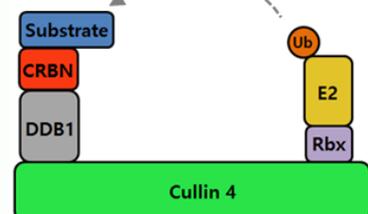
1. Cells permeate ions across the cell membranes using membrane proteins called ion channels. Ion channels play pivotal roles in many important cellular processes. We search for chemical compounds specifically activating a K^+ channel, named BK_{Ca} channel and try to understand the mechanism of their actions.
2. Cellular proteins can be degraded by 'ubiquitin-proteasome system'. We study a substrate receptor, cereblon (CRBN), for the last step of ubiquitination. We found several important proteins are recruited by the complex containing CRBN. We would like to understand the *in vivo* function of CRBN-dependent degradation of these substrates.



BK_{Ca} channel and one of its modulator compound, TCBIC



CRBN as a substrate receptor for E3 ubiquitin ligase, CRL4



■ Selected publications

- [Putative cell adhesion membrane protein Vstm5 regulates neuronal morphology and migration in the central nervous system. *J Neurosci.* 36:10181-97, 2016](#)
- [Urinary bladder-relaxant effect of kurarinone depending on potentiation of large-conductance Ca²⁺-activated K⁺ channels. *Mol Pharmacol.* 140-50, 2016](#)
- [The anoctamin family channel *subdued* mediates thermal nociception in *Drosophila*. *J Biol Chem.* 290:2521-8, 2015](#)
- [Functional effects of a pathogenic mutation in Cereblon \(CRBN\) on the regulation of protein synthesis via the AMPK-mTOR cascade. *J Biol Chem.* 289:23343-52, 2014.](#)
- [Disruption of the *cereblon* gene enhances hepatic AMPK activity and prevents high-fat diet-induced obesity and insulin resistance in mice. *Diabetes.* 62:1855-64, 2013](#)

PUBMED AUTHOR INFORMATION

<https://www.ncbi.nlm.nih.gov/pubmed/?term=Chul-Seung+Park>