北京大学基础医学院

院长论坛

报告题目：Mechanisms of pain and itch.

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时　　间：2017年6月30日（星期五）上午10:00

地　　点：生化楼三层中厅

主 持 人：张　勇 研究员

报告内容简介

My laboratory has taken a multidisciplinary approach to understand the cellular and molecular mechanisms of different types of somatosensations including pain and itch, which are initiated and mediated by primary sensory neurons in dorsal root ganglia (DRG). We identified a novel family of G protein-coupled receptors (GPCRs) in mice called Mrgprs. Many of these receptors are exclusively expressed in distinct subsets of small-diameter DRG neurons. Mrgprs provide the sensory biology community a great molecular tool to study various aspects of DRG sensory neuron function. Recently we found that MrgprA3 function as a receptor for chloroquine (an anti-malaria drug) and is required for chloroquine-induced itch. In addition to itch, certain Mrgs play an inhibitory role in spinal central sensitization and chronic pain. In addition to itch receptors, we found that MrgprX2 in humans and MrgprB2 in mice are exclusively expressed in mast cells (a type of innate immune cells) and play an essential role in IgE-dependent mast cell activation and mediate drug-induced pseudo-allergical reactions. My lab has also generated Pirt-GCaMP mice which allow us to do in vivo DRG imaging. This powerful technique has been used by many labs to reveal novel pain mechanisms.

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