

## 特別講演会のお知らせ

演題： Beyond the Dopamine Receptor: Regulation and Roles of Serine/Threonine Protein Phosphatases

演者： Professor Angus C. Nairn

(Yale University School of Medicine, Dept of Psychiatry)

日時：平成26年10月20日（月）17：00～18：30

場所：北海道大学薬学部1階 臨床薬学講義室

主催：北海道大学大学院薬学研究院 日本薬学会北海道支部

共催：日本生化学会北海道支部

北海道分子生物学会

### 概要

Dopamine plays an important role in the central nervous system, helping to control critical aspects of motor control, as well as of reward learning. Moreover, the disruption of normal dopaminergic neurotransmission is known to underlie neurological diseases, including schizophrenia, Huntington's and Parkinson's disease. Modulation of dopamine-regulated signaling pathways is also likely to play an important role in the addictive actions of various drugs of abuse. Our studies focus on the molecular actions of dopamine in the medium spiny neurons of the striatum. Striataly-enriched phosphoproteins, particularly DARPP-32, RCS (Regulator of calmodulin signaling) and ARPP-16, have been found to mediate a variety of actions of dopamine. Notably, each of these proteins either directly or indirectly acts to control the activity of three major subclasses of serine/threonine protein phosphatases, PP1, PP2B and PP2A, respectively. Recent studies highlighting novel aspects of the functions of these dopamine-regulated pathways will be discussed, with a focus on the regulation of cell signaling in specific populations of striatal neurons.

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