



2012. 11. 19 (月)
10:00-12:00

講演者： Madan Rao 教授

National Centre for Biological Sciences, Bangalore, India

**演 題： Active cell surface organization
and information processing**

Dr. Madan Rao will discuss a model of an active composite cell surface wherein certain classes of cell surface molecules form dynamic nanoclusters as a consequence of being actively driven by cortical actomyosin. The active composite model makes several predictions which Dr. Rao's team verified using high resolution fluorescence methods. He will then discuss the consequences of this active composite model to the regulation and optimization of information processing on the cell surface.

講演者： Antoine Triller 教授

Ecole Normale Supérieure and
Institut National de la Santé de la Recherche Médicale (INSERM)

**演 題： From stochasticity of molecular processes to
synapse stability and plasticity:
toward chemistry in cellulo with microscopes**

Dr. Triller has been investigating the issue of postsynaptic receptors dynamics, their interactions with scaffolding proteins, and regulations implicated in synaptic plasticity. Combination of single particle tracking and super-resolution methods has opened accesses to molecular counting and energy involved in receptor-scaffold interactions as well as on and off rate of molecular interactions. Thus beyond super-resolution methods is chemistry "in cellulo" accounting for the regulation of receptor number and consecutively that of synaptic strength. Dr. Triller will address these issues in his talk.

**場 所： 京都大学 アイセムス本館（東一条北西角）2 階
セミナーホール（A207）**

主 催： 京都大学 物質-細胞統合システム拠点 (iCeMS=アイセムス)
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