

# Séminaire

**Institut de Biologie Structurale J.P. Ebel**  
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**Conférencier invité**

Vendredi 05 Oct. 2012

**A 10h30 - Salle des séminaires**

**Par Vadim Cherezov**

**The Scripps Research Institute, La Jolla, USA**

Department of Molecular Biology

## Structure and function of G protein-coupled receptors

G protein-coupled receptors (GPCRs) are critical eukaryotic signal transduction gatekeepers, which represent the largest protein family in the human proteome. GPCR-mediated signaling pathways have been related to numerous human diseases, and GPCRs are the targets of an estimated 40% of all drugs currently on the market. During the past few years, GPCR crystallography has experienced exponential growth. The talk will focus on the recent breakthroughs. In 2012 structures of all four members of the opioid receptors subfamily have been solved, providing a comprehensive view of the ligand selectivity within the subfamily. Another highlight of the year is the highest resolution GPCR structure to-date of the adenosine A2A receptor at 1.8 Å, shedding light on the role of sodium ions, lipids and water in modulating receptor function and stability.

**Hôte : Valentin Gordeliy (IBS/Groupe Transporteurs Membranaires)**