2-SL06 Special Lecture6

CryoEM of GPCRs: from molecular mechanism to drug discovery

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G protein coupled receptors (GPCRs) comprise the main conduit for information transfer between cells and their environment and participate in most physiological processes through innumerable signaling networks. Accordingly, GPCRs are the largest family of pharmaceutical targets in therapeutic areas ranging from cardiovascular and metabolic diseases to neuropsychiatric and behavioral disorders. Here, I will describe our results from the structural and functional characterization of GPCRs in complex with a range of ligands and signal transducers, providing general mechanisms of transmembrane signal instigation from different receptor classes in this family.