



VANDERBILT
School of Medicine Basic Sciences
Department of Pharmacology

2024 - 2025 Seminar Series

Structural basis for activation of the RXFP1 relaxin receptor

The RXFP1 relaxin receptor is a highly atypical G protein coupled receptor (GPCR) and is among the principal mediators of physiologic adaptation to pregnancy. Its major roles include increasing renal perfusion, decreasing fibroblast activity, pulmonary vasodilatory effects, and lusitropic activity on the heart, among other activities. The RXFP1 receptor is expressed in both men and women, and has emerged as a compelling target for therapeutic treatment of pulmonary hypertension, kidney disease, and other severe conditions. We have determined the structure of the RXFP1 receptor in both active and inactive-state conformations, and we have developed long-acting agonists as potential therapeutic agents. One of these is currently in Phase 2 clinical trials for the treatment of a lung vascular disease, and we are working to develop high-affinity antagonists for treatment of reproductive tissue cancers.



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4:00 PM

1220 MRB III

Hosts: Seva Gurevich &
Prashant Donthamsetti