

CMB 710 – Receptor Signaling Networks Class Presentations on 9/9/22

During the last class of the receptor signaling networks module, groups of students will present papers that focus on receptor biology; this can be anything from structural studies to in vivo physiology – as long as it delves into receptor biology, it is fair game. Groups of 2-3 students will present their papers to the class – plan for 12 minutes of presentation followed by 3 minutes (or longer) of questions.

Any approach is reasonable for the presentation as long as it highlights the relevant background (so the class understands the basics of the study), the hypothesis tested or problem that was tackled, any specific techniques that require further detail (e.g., cryoEM, some fancy ion channel stuff). It is probably best to have each team member present a few figures each (but do not feel obliged to present every figure – focus on the important ones and not Supplementary Figure 12Q with a control). Make sure that each team member has the opportunity to speak and try to ensure equal contributions by all.

Please plan on spending roughly 2-3 hours each on this assignment – if you are spending significantly more time than that on the presentation, you are doing something wrong.

Grading rubric (while groups present as a team, grading will be individualized):

Good job or above	A
Meh	B
You don't show up	C

Examples of suitable papers:

Autoantibody mimicry of hormone action at the thyrotropin receptor. *Nature*. 2022 Aug 8. doi: 10.1038/s41586-022-05159-1. Bryan Faust et al.

<https://pubmed.ncbi.nlm.nih.gov/35940205/>

Psychedelic-inspired drug discovery using an engineered biosensor. *Cell* Vol. 184 Issue 10 p2779–2792.e18 Published online: April 28, 2021 Chunyang Dong, Calvin Ly, Lee E. Dunlap, Maxemiliano V. Vargas, Junqing Sun, In-Wook Hwang and others

<https://pubmed.ncbi.nlm.nih.gov/33915107/>

Vertebrate cells differentially interpret ciliary and extraciliary cAMP. *Cell* Vol. 184 Issue 11 p2911–2926.e18 Published online: April 30, 2021 Melissa E. Truong, Sara Bilekova, Semil P. Choksi, Wan Li, Lukasz J. Bugaj, Ke Xu and others

<https://pubmed.ncbi.nlm.nih.gov/33932338/>

Structural insights into probe-dependent positive allostereism of the GLP-1 receptor. *Nat Chem Biol*. 2020 Oct;16(10):1105-1110. doi: 10.1038/s41589-020-0589-7. Epub 2020 Jul 20. Bueno AB, Sun B, Willard FS, Feng D, Ho JD, Wainscott DB, Showalter AD, Vieth M, Chen Q, Stutsman C, Chau B, Ficorilli J, Agejas FJ, Cumming GR, Jiménez A, Rojo I, Kobilka TS, Kobilka BK, Sloop KW.

<https://pubmed.ncbi.nlm.nih.gov/32690941/>