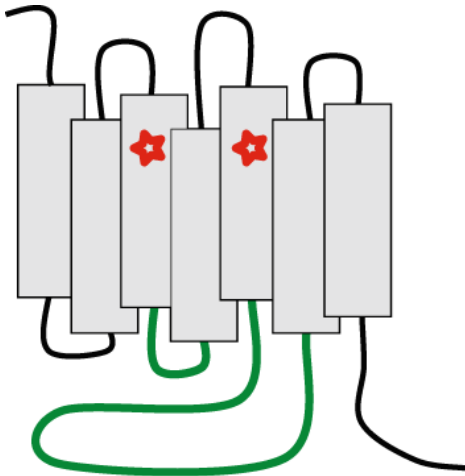


## Two point mutations convert native receptor into DREADD



- **hM3D(Gq)** is Gq coupled DREADD. It is derived from human muscarinic receptor M3 sequence with two point mutations (**Y149C, A239G**)
- **hM4D(Gi)** is Gi coupled DREADD. It is derived from human muscarinic receptor M4 sequence with two point mutations (**Y113C, A203G**)
- **rM3D(Gs)** is Gs coupled DREADD. It is derived from rat muscarinic receptor M3 sequence with **replacement of i2 and i3 loop with turkey  $\beta_1$  AR sequence**. It also contains two point mutations (**Y148C, A238G**).