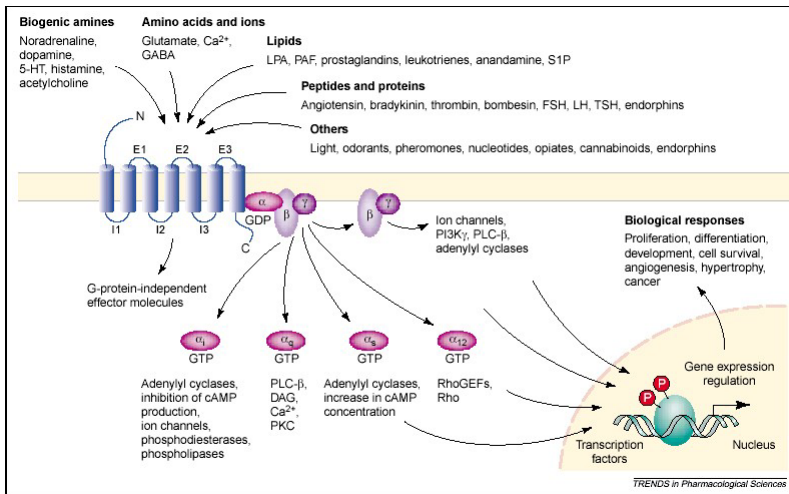


G PROTEINS alpha subunits

Hulya Cabadak
Paula Garcia Nogales
Barbara Guinea

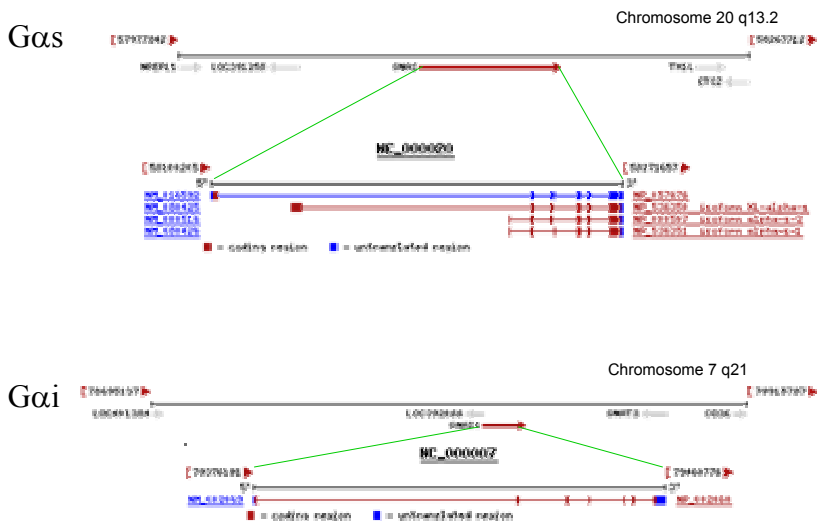
Types of G α subunits

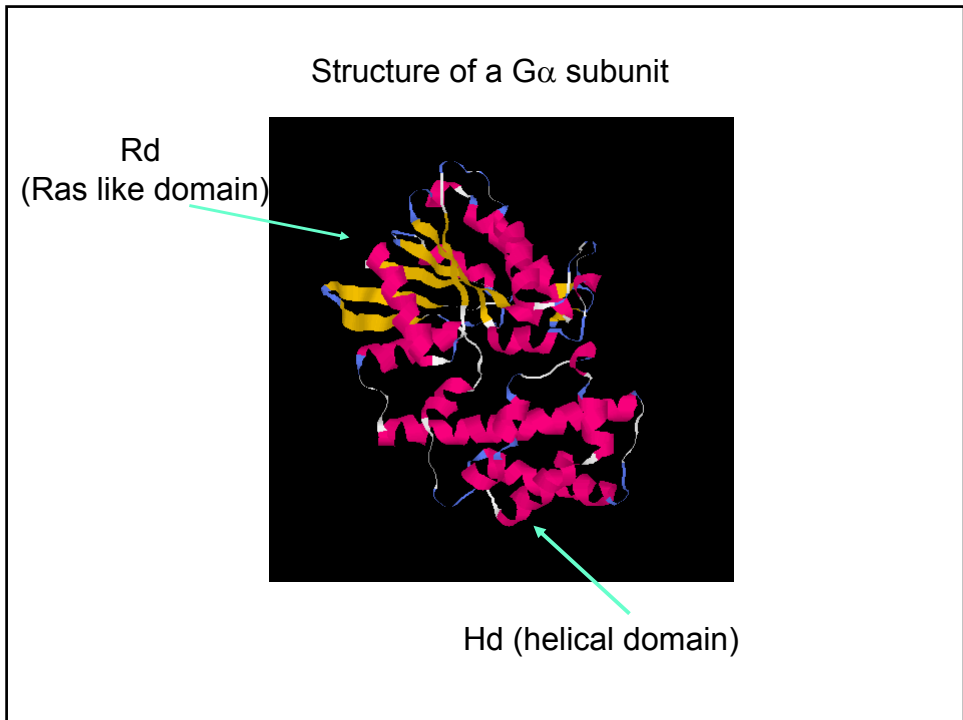
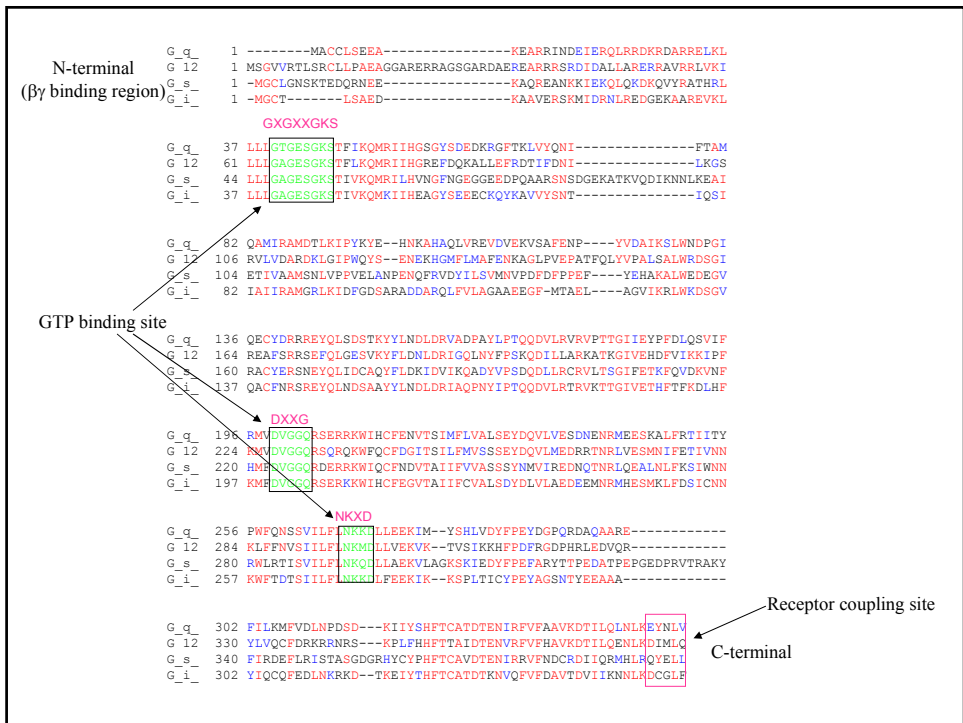
Family	Some member	Action mediated	Functions
I	G _s	α	Activate <u>adenylyl cyclase</u> , Ca ²⁺ channels
	G _{olf}	α	Activate <u>adenylyl cyclase</u> in olfactory sensory neuron
II	G _i	α	Inhibit <u>adenylyl cyclase</u>
		$\beta\gamma$	Activates K ⁺ channel
	G _o	$\beta\gamma$	Activates K ⁺ channel, inactivate Ca ²⁺ channels
		α and $\beta\gamma$	Activates <u>phospholipase C-β</u>
G _t (transducin)	α	Activates cyclic GMP <u>phosphodiesterase</u> in vertebrate photoreceptors	
III	G _q	α	Activates <u>phospholipase C-β</u>
IV	G ₁₂	α	Activates <u>Rho guanine-nucleotide exchange factors(GEFs)</u>



Aim of the project : To study the structure of G α subunits by comparing a member of each family.

G proteins in the Genome







6 α -helices

