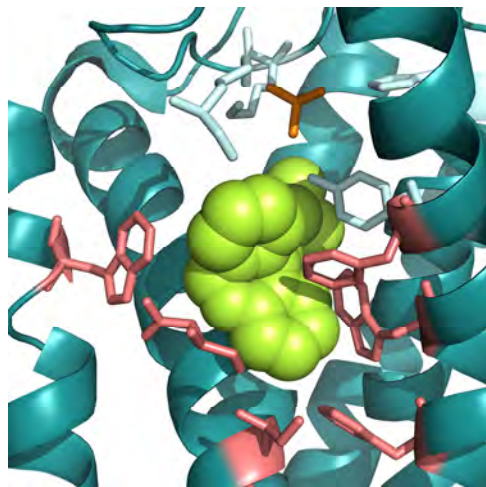


# P12

H1 is responsible for severe allergic reactions, such as hay fever.



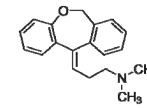
Crystal structure of H1 complex with doxepin revealed the doxepin binding pocket.  
 Docking of second-generation antagonists present interactions with the anion binding site.  
 (Shimamura et al. 2011)



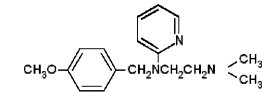
# Structural studies of histamine receptor H1

Tian Geng, Alex Cameron, John Barker, So Iwata, and Isabel Moraes

first-generation:  
low selectivity

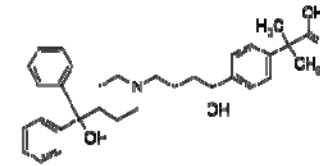


Doxepin

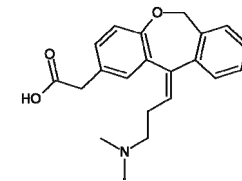


Pyrilamine

second-generation:  
with unique carboxyl group



fexofenadine



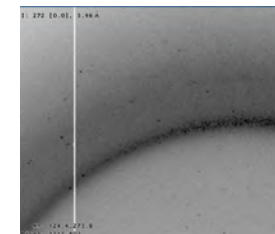
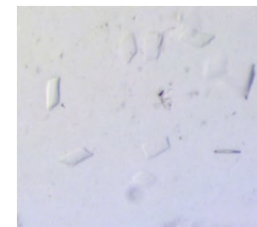
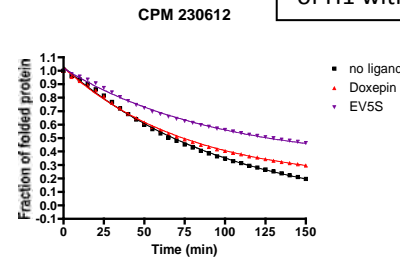
Olopatadine

More need to know ?

More unique features of H1 binding pocket

Solid proof of second-generation antagonists interact with anion binding pocket

X-Ray crystal structure determination of H1 with a range of antagonists.



Crystal of H1/EV5S complex, Tested at Diamond Light Source I24 Best resolution around 4Å