

Spectral tuning of the *Drosophila* Rh6 visual pigment

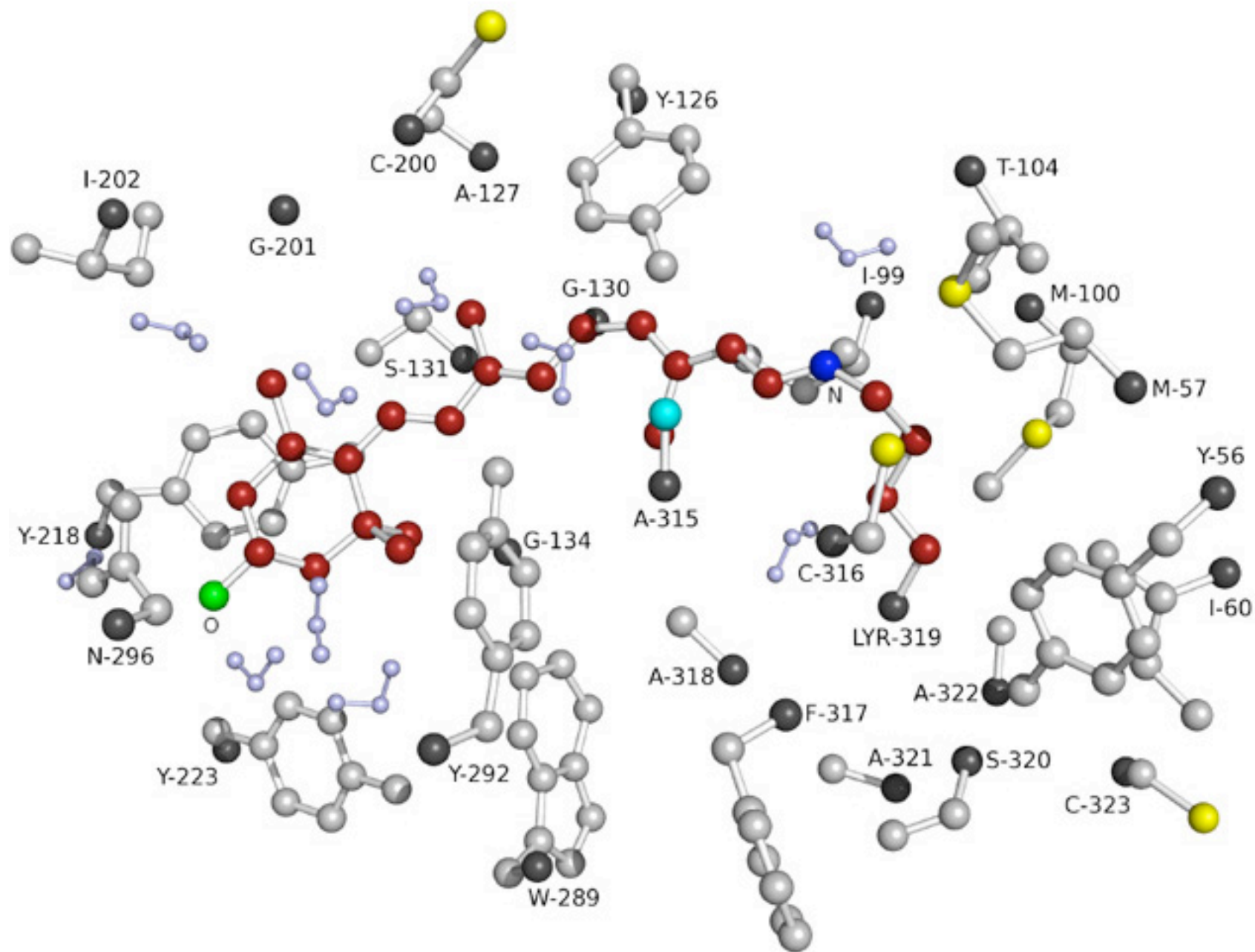
Supplemental Figure 1. Molecular model of *Drosophila* Rh1 wildtype. Model of *Drosophila* Rh1 wildtype pigment showing all residues within 3.2 Å of the lysine bound Schiff-base chromophore. Binding site residues are shown for the pigment after 2ns simulation. The 3-hydroxy-11-cis-retinal chromophore is shown in red with the Schiff base nitrogen in dark blue and the 3-hydroxyl oxygen in green. The α carbons are shown in black. Hydrogen atoms are omitted except on water molecules, which are shown in light purple. Wild-type and mutated residues (315) are colored cyan. Sequence numbering based on P06002 (19).

Supplemental Figure 2. Molecular model of *Drosophila* Rh1A315S mutant pigment. Model of *Drosophila* Rh1A315S mutant pigment. Details for the figure are as noted in the legend for Supplemental Figure 1.

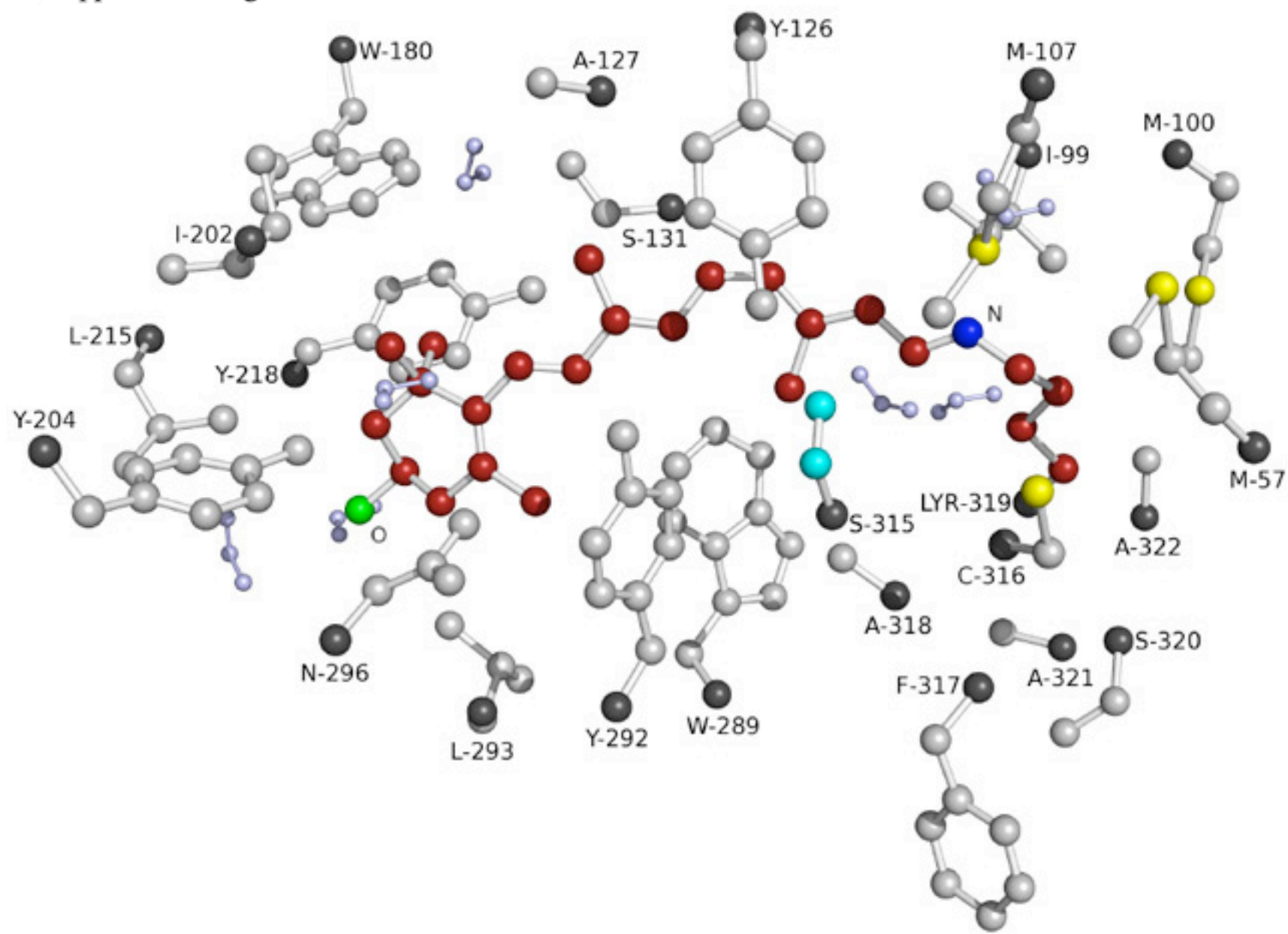
Supplemental Figure 3. Molecular model of *Drosophila* Rh1A315C mutant pigment. Model of *Drosophila* Rh1A315C mutant pigment. Details for the figure are as noted in the legend for Supplemental Figure 1.

Supplemental Figure 4. Molecular structure of squid rhodopsin. Structure of squid rhodopsin showing all residues within 3.2 Å of the lysine bound Schiff-base chromophore. The 11-cis-retinal chromophore is shown in red with the Schiff base nitrogen in dark blue. The α carbons are shown in black. Hydrogen atoms are omitted. Squid rhodopsin residue V301 corresponds to *Drosophila* Rh1 A315. Sequence numbering based on X70498 (47). The structure is from PDB entry 2z73 (33).

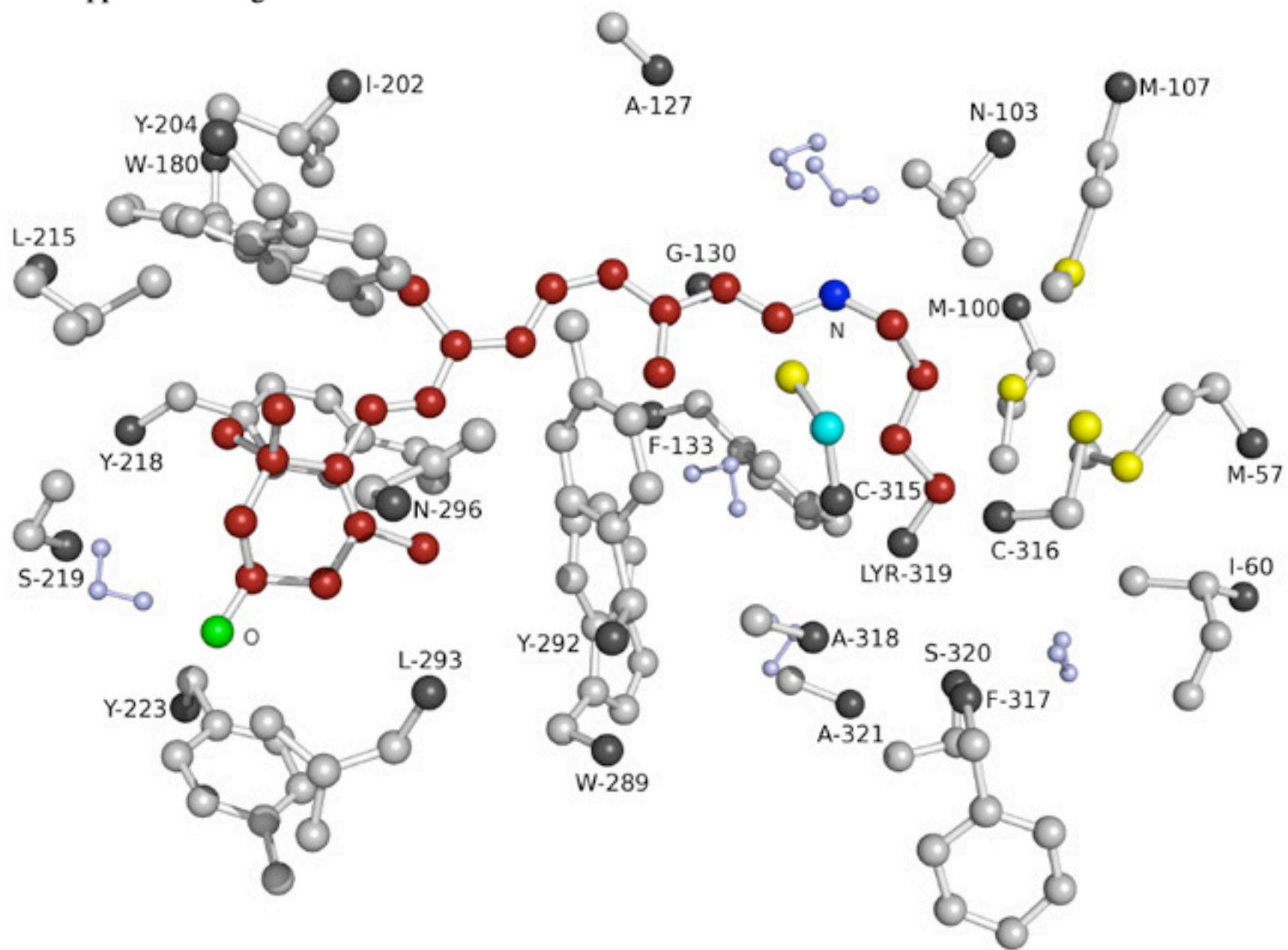
Spectral tuning of the *Drosophila* Rh6 visual pigment.
Supplemental Figure 1



Spectral tuning of the *Drosophila* Rh6 visual pigment.
Supplemental Figure 2



Spectral tuning of the *Drosophila* Rh6 visual pigment.
Supplemental Figure 3



Spectral tuning of the *Drosophila* Rh6 visual pigment.
Supplemental Figure 4

