

## Description of Additional Supplementary Files

Title: Supplementary Movie 1.

Description: Morph from the apo to serotonin-bound conformation for 5HT3R-Salipro and 5HT3R-detergent. The 5HT3R-Salipro models are coloured light blue, with chain C coloured dark blue. The 5HT3Rdetergent models are coloured yellow with chain C coloured orange. The symmetric apo conformation was used to prepare the morph of the 5HT3RSalipro model, and the 6BE1 and 6DG8 structures for the morph of the 5HT3R-detergent model.

Title: Supplementary Movie 2.

Description: MD simulation of a Na<sup>+</sup> ion permeation event. The serotonin-5HT3R-Salipro model is shown in grey with pore-residues labelled and shown in blue. Red spheres represent water molecules. A sodium ion (yellow sphere) is observed to travel through the pore.