**Table S1 - Thickness (Å) and area per lipid (Å2) for the lipid bilayer for 10 μs coarse grain simulations on GlyT2 in a POPC/CHOL membrane with no lipid inhibitors (control) or 20 of the specified lipid inhibitors present.**

|  |  |  |
| --- | --- | --- |
|  Lipid Inhibitor | Area Per Lipida  | Membrane Thicknessb  |
| None  | 58.28±0.41  | 41.35±0.21  |
| OLLys  | 58.13±0.68  | 41.33±0.20  |
| OLLeu  | 57.94±0.55  | 41.36±0.22  |
| OLTrp  | 58.55±0.40  | 41.39±0.20  |
| OLSer  | 58.23±0.84  | 41.33±0.21  |
| aArea per lipid is measured for the POPC lipid headgroups |

bMembrane thickness is measured at the distance between P atoms in the POPC headgroups