

Abstract Submitted
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Phase Studies of Model Biomembranes JIGESH PATEL, Texas Tech Univ — The effects of adding 2 mol% of nACHRs to DOPC/DSPC/cholesterol lipid bilayer are studied in this experiment. To the best of our knowledge, previously, no 4-component phase diagram, with protein such as nACHRs as one of the components, has been reported. This work is the first study of this kind which investigates the effect of ion-transmitter nACHRs on L_o+L_d phase boundaries. The work will also construct tie-lines and calculate various thermodynamic variable. The phase boundary will be used to calculate the chemical potential and partition coefficients. These values will determine the exact amount of nACHRs present in the cell membranes. Measurements of the perturbations of the boundaries of this accurate phase diagram could serve as a means to understand the behaviors of a range of added lipids and proteins.

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