



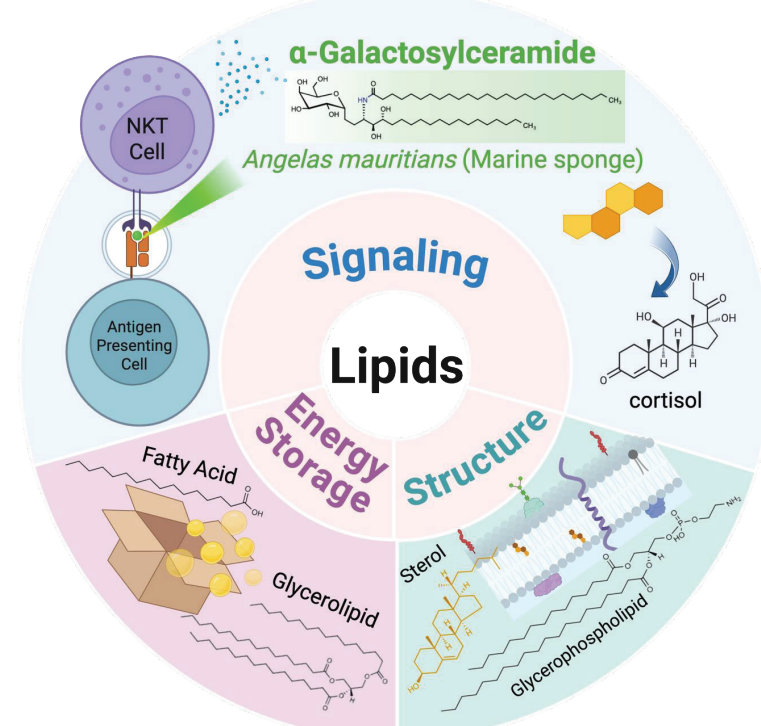
Lily Capecci

Sarah Eby-Ebersole Award
Ph.D. Student, Biochemistry
First Year ARCS Scholar

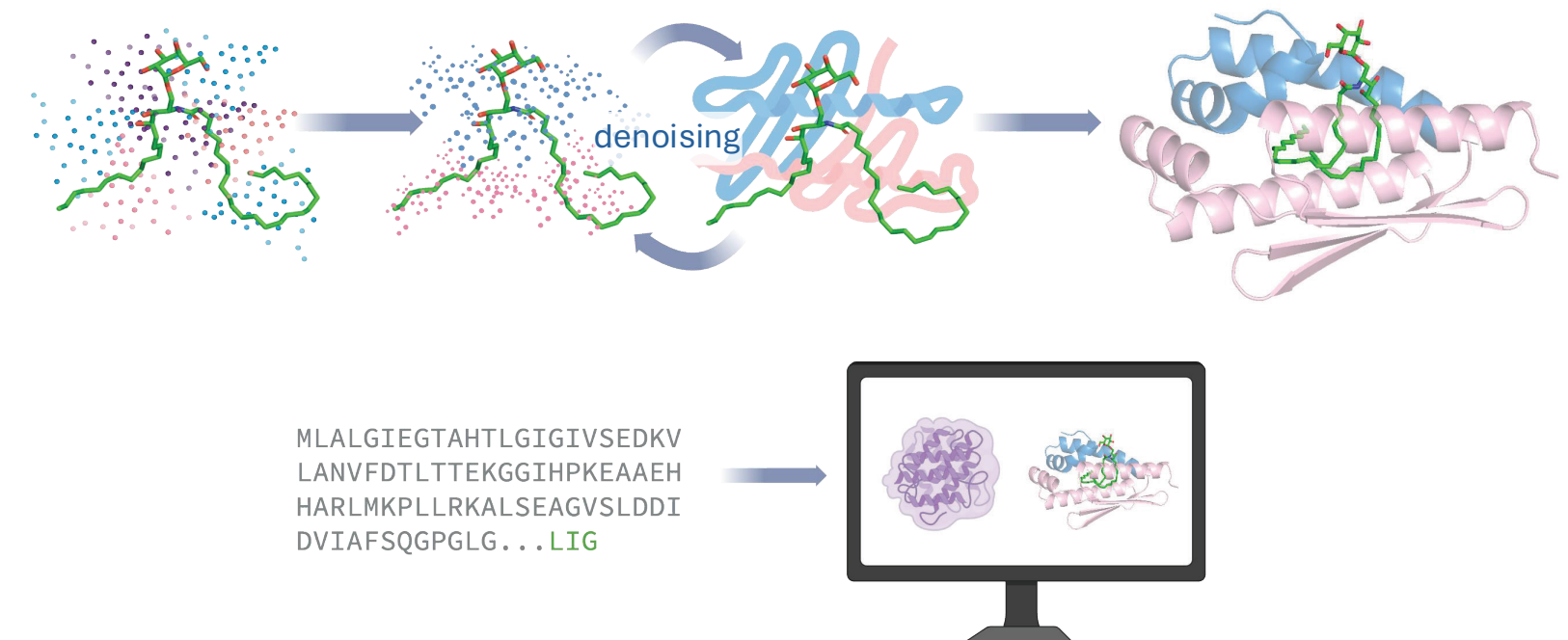


De novo design of lipid-binding proteins for immune modulation and diagnostics

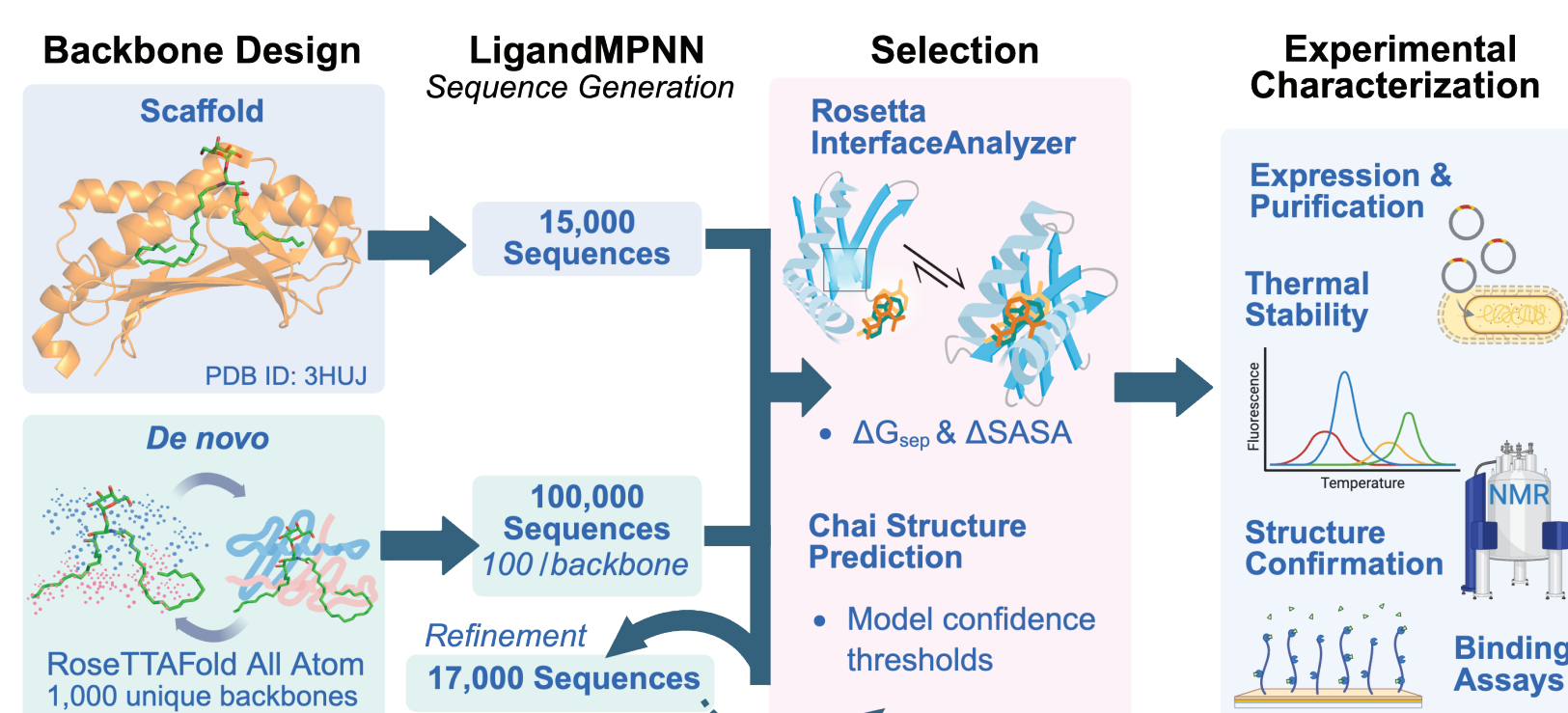
My research aims to build a streamlined, scalable platform for designing, filtering, and validating lipid-binding proteins with immunomodulatory and diagnostic potential.



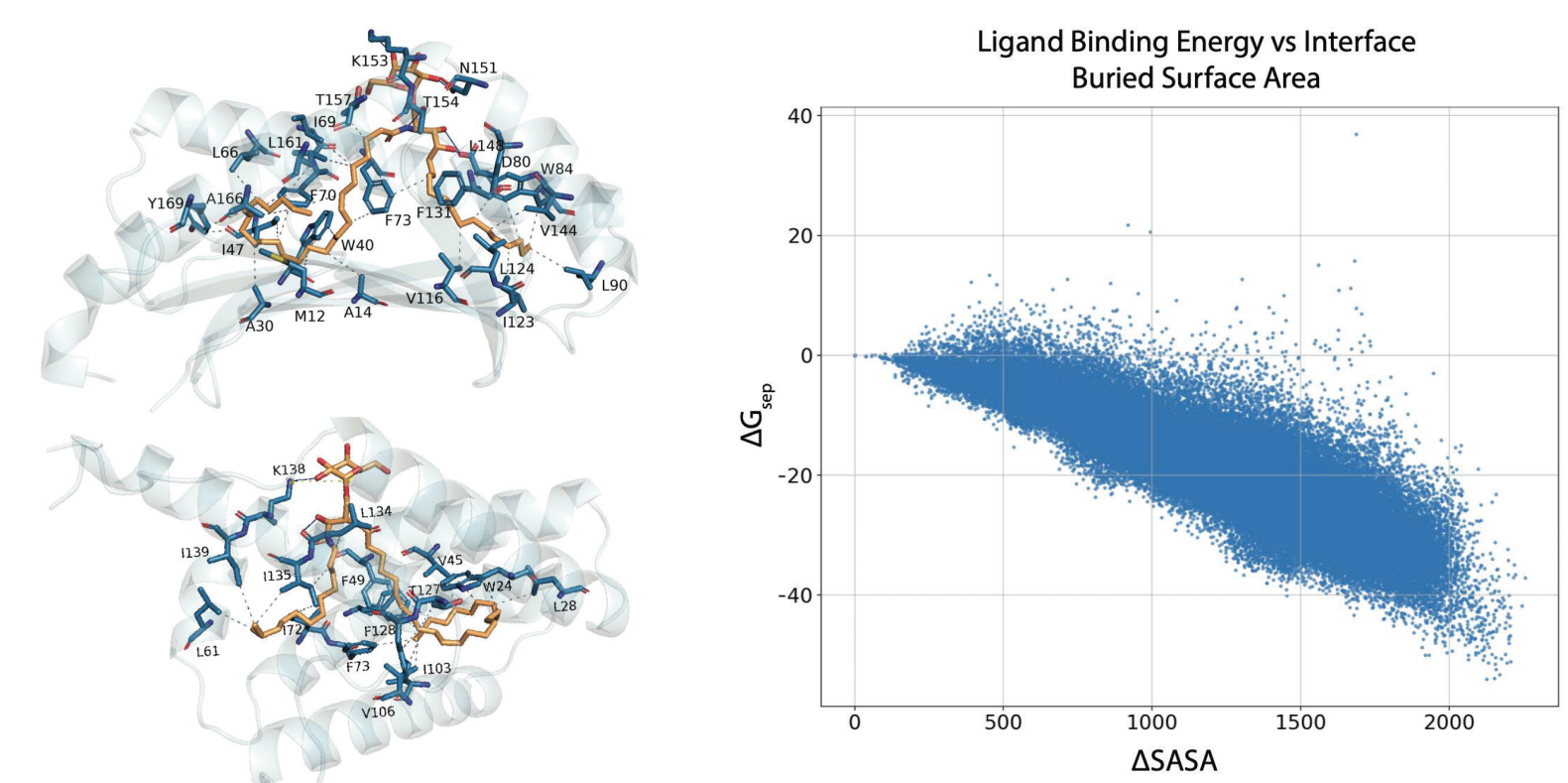
★ Lipids are a diverse class of biomolecules involved in a variety of biochemical processes.



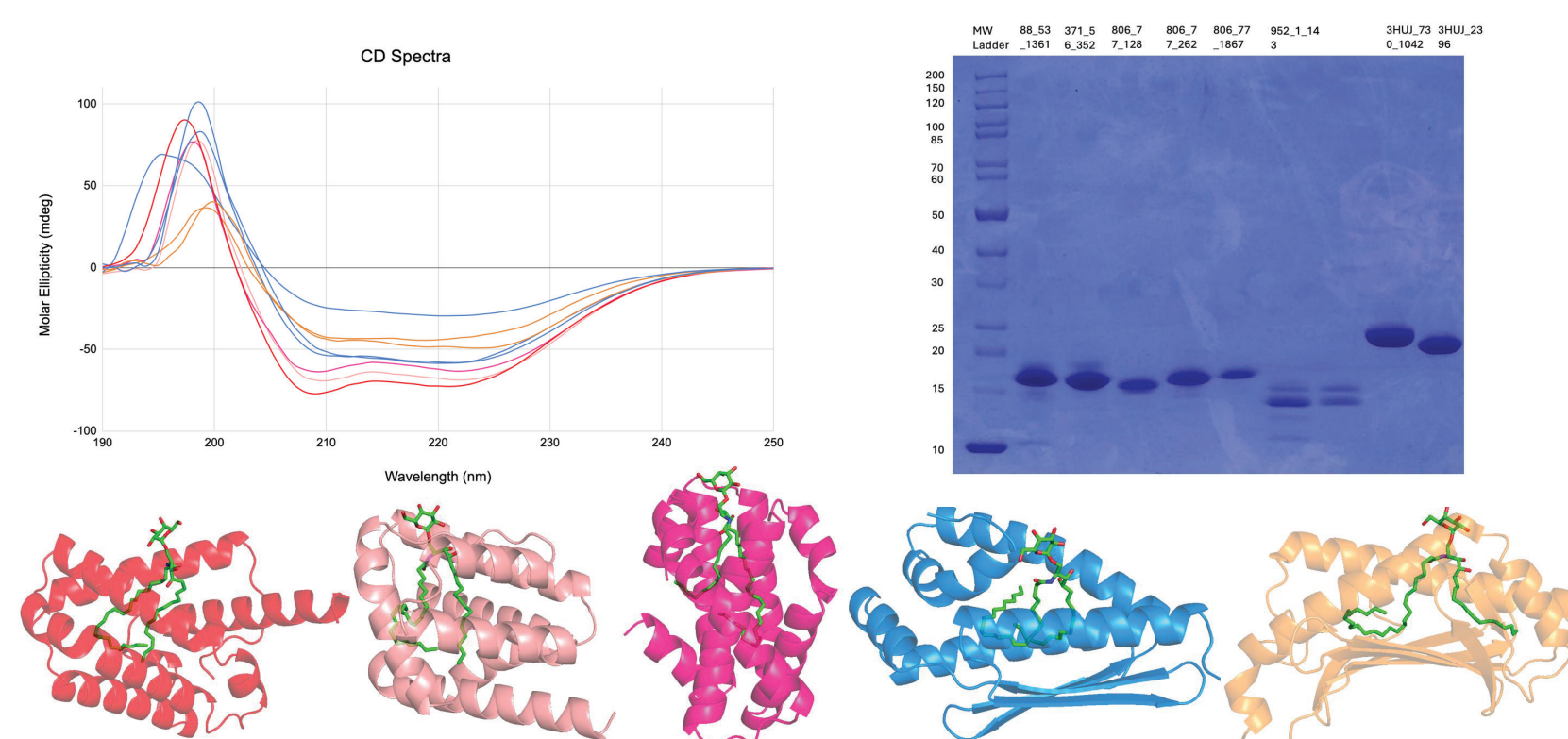
★ AI-Guided software can be harnessed to design lipid binding proteins.



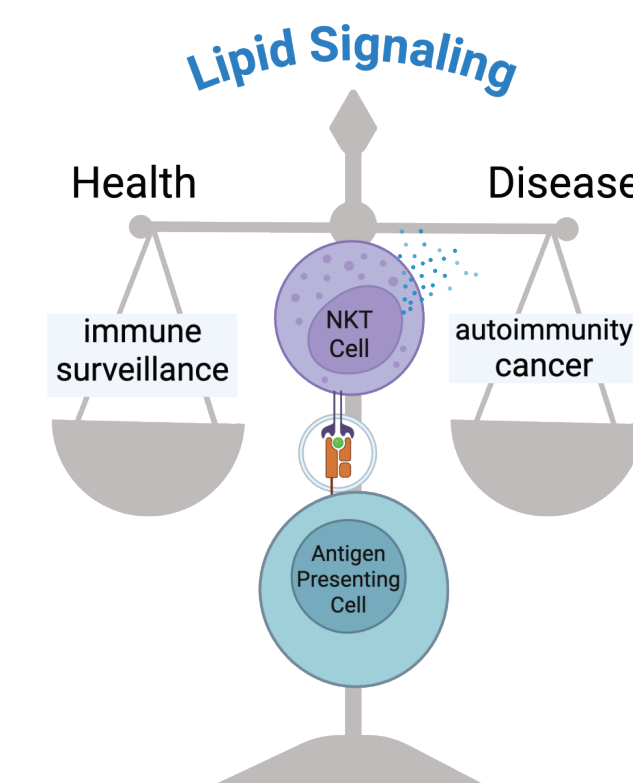
★ Pipeline to develop proteins that bind diverse lipid molecules.



★ 100,000+ design candidates filtered using a suit of physics-based and ML metrics.



★ Top candidates were expressed & characterized in the wet lab.



★ Enable tunable immune modulation & protein-based diagnostics.

Scholar Awards Celebration
November 12, 2025



**Igniting
Innovation
in Georgia**