

## Frost Research Areas

If you think you might be interested in working in one of these areas, stop by and see me!

- ⊕ Dietary fats aggregate together in the body since they contain non-polar portions and body is mainly aqueous. Watching these molecules aggregate and finding out how big they are in certain environments is where my interest lies. This aggregation behavior can be observed using light scattering and fluorescence spectroscopy techniques.
- ⊕ Molecular modeling is a powerful tool for visualizing molecules and macromolecular assemblies. Predicting aggregation behavior can be done using these techniques.
- ⊕ I have had undergraduates work on the development of some biochemistry laboratory exercises (depending on their interest) which included other biochemistry studies in DNA extraction, PCR, phospholipid vesicle diffusion, enzyme kinetics assays and microplate screening.

## Papers Published with Undergraduate Authors

1. Frost, L. D.; Peart, S.T. DNA Isolation from a Dried Blood Sample, PCR Amplification, and Population Analysis: Making the Most of Commercially Available Kits. *Biochemistry and Molecular Biology Education*, **2003**, 31, 418 – 421.

## Recent Presentations Made by Undergraduates in Research Group (Underline indicates student)

1. J. Patrick Hill and Laura D. Frost, "Design of an Enzyme Kinetics Laboratory: Combining Structural Data Mining and Microplate Screening", Poster Presentation #688, 229<sup>th</sup> National ACS Meeting, San Diego, CA, **March 2005**.
2. L.D. Frost, C.M. Davis, A. Stewart, S. Peart, and Z.N. Spencer, "The Bradford Assay Under Fire: A study of Common Protein Assays for the Undergraduate Biochemistry Laboratory", Poster Presentation #273, Chemistry Education Section E, 225<sup>th</sup> National ACS Meeting, New Orleans, LA, **March 2003**.
3. Sharifa T. Peart, Zandis N. Spencer, and Laura D. Frost, "A Biochemistry Laboratory Exercise to Study Drug Diffusion Through Natural and Synthetic Phospholipid Vesicles", Poster Presentation at the Southeastern Undergraduate Research Conference sponsored by the American Chemical Society, Kennesaw State University, Kennesaw, Georgia, **April 2003**.
4. H. Jodi Long and Laura J. DeLong, "A Synthetic Peptide/Phospholipid Vesicle Model to Study Antagonist Binding to the Human Beta-2-Adrenergic Receptor using Fluorescence Anisotropy" Program No. 883.14 at Experimental Biology Meeting (ASBMB Session), New Orleans, LA, **April 2002**.
5. Kirk Latibeaudiere and Laura J. DeLong, "Molecular Modeling of Bile Salt/Lipid Aggregates" Poster No. CHED 424 presented at the 223<sup>rd</sup> National Meeting of the American Chemical Society, Orlando FL, **April 2002**.
6. Sharifa Peart and Laura J. DeLong, "An Undergraduate Biochemistry Laboratory Exercise: DNA Isolation from a Dried Blood Sample and Amplification of the Alu-TPA Intron 8 on Chromosome 8", Poster No. CHED 617 presented at the 223<sup>rd</sup> National Meeting of the American Chemical Society, Orlando FL, **April 2002**.
7. Latibeaudiere, Kirk and Laura DeLong "Molecular Modeling of Bile Salt Aggregates," Poster Presentation at the Annual Georgia Legislative Wild Game Supper, **Jan. 2002**.