

Equipment

Tarleton, R.L.

In the Striepen Lab (within Coverdell Center):

type II biosafety hoods (2), refrigerated centrifuges (2), low speed centrifuge, CO2 incubators (7), ultralow freezers (2), refrigerators (4), freezers (3), inverted phase microscope, nitrogen freezer for cell storage, thermocyclers for PCR (4), hybridization oven, incubator shaker, multiple gel apparatus and power supplies for protein and nucleic acid analysis, electroporation apparatus, Leica motorized inverted fluorescence microscope with Hamamatsu camera and Openlab and Volocity software, BD Pathways fully automated high content fluorescence microscope. (additional microscopy facilities within the Coverdell building include two new Zeiss confocals and two Delta Vision in vivo imaging stations).

Other CTEGD Core facilities (within Coverdell Center):

The CTEGD Core Flow Cytometry laboratory, also located in the Coverdell Building, houses a DAKO-Cytomation 9-color CyAn analyzer, a new (2009), all digital Dako/Cytomation Mo-Flo sorter, a B-D. 4-color FACScalibur and a BioRad Luminex bead array reader. A successful NIH equipment proposal added an additional Cyan Analyzer to the facility in 2010.

Other UGA facilities potentially relevant to the project:

Molecular Genetics Instrumentation Facility. The **Sequencing and Synthesis Facility** provides sequencing and synthesis capabilities for protein and nucleic acids. The **Proteomics Resource Facility** provides protein purification and characterization facilities. The facility is equipped with two state-of-the-art mass spectrometers, robotics for mass spectrometry sample preparation, high-throughput two-dimensional gel electrophoresis units, and an automated chromatography station for multi-dimensional chromatography. The **Functional Genomics Resources Facility** is a full service microarray and genotyping laboratory. Services include gene expression analysis include custom microarray printing, RNA purification, probe labeling, hybridization, laser scanning and real time quantitative PCR. The facility also offers genotyping services, including microsatellite analysis, SNP validation, and AFLP fragment analysis.

The Complex Carbohydrate Research Center: The CCRC offers custom synthesis and analysis of complex carbohydrates as a service to scientists in university, industrial, and government laboratories. The CCRC also offers assistance to those who need information on complex carbohydrates derived from animal, plant, and microbial sources. The facility is equipped with three high-field NMR spectrometers (300-, 500-, and 600-MHz), fully equipped for biomolecular studies of liquids and solids. In addition, the GRA- UGA 800-MHz NMR facility is a regional resource for high-field NMR studies of biological macromolecules. The CCRC has one magnetic sector (Jeol SX/SX102A), four electrospray (PE-Sciex API III, Micromass Q-TOF-2, Finnigan LCQ Advantage LC/MS/MS and Finnigan LCQ Deca XP Plus LC/MS/MS), and three laser-desorption (HP G2025A LD-TOF, Kratos Kompact SEQ and Applied Biosystems 4700 Proteomics Analyzer) mass spectrometers.

The Center for Ultrastructural Research provides additional access to a series of high-end light and electron microscopes. These include a new Leica TCS SP2 two photon confocal, a Bio-Rad MRC600 conventional confocal microscope, a very powerful new 200 kV Technai 20 transmission EM as well as a Jeol 100 kV transmission EM and a state of the art Leo 982 scanning EM.

The **Glass Shop** provides custom production and modification of flasks and laboratory glassware. The **Instrument Shop** offers the ability to machine, form and fabricate special laboratory devices, one of a kind research instrument or modifications to existing equipment.