

Services Provided

- ☆ Custom synthesis of oligonucleotides
- ☆ Custom synthesis of peptides
- ☆ Genotyping
- ☆ DNA Sequencing
- ☆ Analysis of point mutations by ASO hybridization.
- ☆ Analysis of PCR generated DNA fragments by automated DNA sequencing or restriction enzyme digestion.
- ☆ Restriction fragment length polymorphism (RFLD) analysis of genomic DNA in Southern Blots.
- ☆ Analysis of point mutations in DNA by SSCP, DGGE, CDGE, TTGE, and in proteins by PTT using the DCODE System.

Research Applications

- * Molecular genetics of human disorders.
- * Molecular biology applications in clinical diagnostic procedures. (HCV genotyping)
- * Molecular and cell biology of the cytoskeleton.
- * Molecular and cell biology of cell proliferation and cell cycle control.
- * Molecular biology of parasites.
- * Control of gene expression in eukaryotic organisms.
- * Molecular characterization of genetic coagulopathies
- * Characterization of Hemoglobinopathies.
- * Characterization of Human Gene Variants.

Users of the Human Molecular Genetics Unit should acknowledge RCMI support by including the following sentence in their publications:

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Molecular Genetics Core Facility

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Molecular Genetics Core Facility

RCMI Program
University of Puerto Rico
Medical Sciences Campus

Instrumentation

Description of Facilities

The RCMI Molecular Genetics Core Facility is located in the Department of Biochemistry on the sixth floor of the UPR Medical Sciences Campus. It was created to support research in areas of basic and clinical research. The Facility provides research and technical support for human genetics projects in the areas of molecular biology and genetics. Several basic and clinical science faculties with overlapping research interests are collaborating in this endeavor. The facility services Faculty and Graduate Students from different departments and schools at the Medical Sciences Campus, as well as many scientists from other academic institutions in Puerto Rico. Technical support and consultation are also available through the core facility coordinator, the participant faculty, and staff. This facility contains the necessary instrumentation to perform molecular genetics methodologies such as genotype analysis, DNA sequencing and quantitative PCR analysis. It also provides custom synthesis of molecular biology reagents such as oligonucleotides and peptides.

Room A-621

- Pharmacia-LKB Gene Assembler Plus DNA Synthesizer
- ABI 3400 DNA Synthetizer
- Barnstead Reverse Osmosis Water System
- Barnstead E-pure (Ultrapure) Water System
- Pharmacia Phast Electrophoresis Apparatus
- Vti50 Rotor and Accessories
- Mac Computer with Oligo V.6 Software

Room A-633

- AB1 310 Genetic Analyzer
- BioRAD iCycler with Real Time PCR Module
- GS-15R Refrigerated Centrifuge with Rotor for 1.5, 15 and 50 mls Tubes
- Portable Polaroid Camera and UV Transilluminator
- BioRAD Dry-Blot Apparatus
- Manual DNA Sequencing Apparatus and Gel Dryer
- Perkin Elmer 2400 Thermal Cycler

Room A-624

- BioRAD GS525 Molecular Imager Mac System with Screens for 35S, 32P, and Chemiluminescence
- BioRAD Gel Doc 1000 Gel Documentation System

Room A-634

- ABI 433A Peptide Synthesizer
- Class II Biological Safety Cabinet
- Bio-Rad 5µm Versarray Chip Reader for Microarray Slides Scanning
- IBM Computer with Versarray Software for Slides Scanning and GeneSight and Imagene Softwares for Microarray Data Analysis
- Perkin Elmer DNA Thermalcyclers (2)
- Stratalinker (UV Cabinet)

Room A-638

- BIORAD DCODE Gel Electrophoresis System
- Beckman refrigerated High Speed Centrifuge, Model: Avanti 30, with 1.5ml and 50ml rotors
- Hybaid Double Hybridization Oven
- Revco Low Temperature Freezer
- Savant Speedvac
- BTX 100 Electroporator
- Manual DNA Sequence Apparatus and Power Suppliers
- Mettler Digital, Analytical and Top Loading Balances
- Macintosh G4 computer with Internet Access
- Beckman UV Spectrophotometer
- Perkin Elmer 2400 Thermal Cycler
- Autoclave
- MJ Research PTC-100 Thermal Cyclers
- BioRAD iCycler

General Laboratory Equipment includes incubators, laminar flow hoods and crosslinker water baths, polaroid cameras, agarose and polyacrilamide gel and blotting systems, microcentrifuges, pH meter, microwave ovens, gynaquant fluorimeter.

Room A-635

- Cold Room and PCR/Tissue Culture Room

Room A-640

- Macintosh G4 Computer with Internet Access