

# The University of Florida Interdisciplinary Center for Biotechnology Research (UF|ICBR)

2033 MOWRY ROAD, GAINESVILLE, FL 32610 | 352.273.8030 | BIOTECH.UFL.EDU

**UF|ICBR**  
your pursuit is what drives us.  
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## Overview

Since 1987, UF | ICBR has been the premier shared resource facility, providing extraordinary support services while facilitating access to advanced cutting-edge scientific technology for University of Florida faculty, staff, and graduate students. ICBR has a rich history of enabling life science researchers by allowing scientists to focus on their research without the burden of developing and maintaining the infrastructure and expertise to support ever-changing technologies.



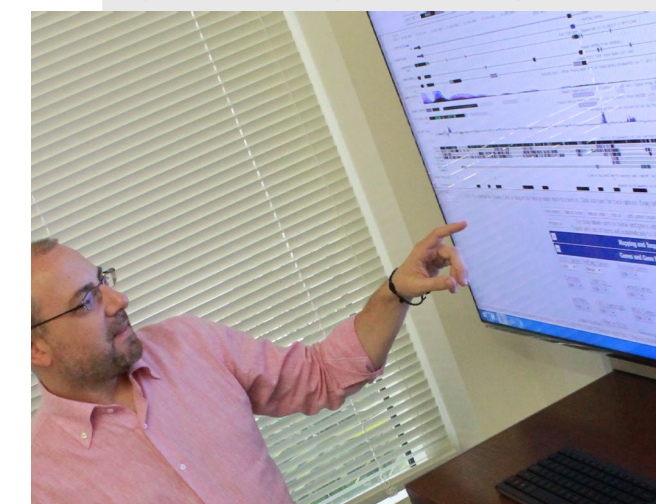
UF | ICBR provides more than 400 different services in 7 core laboratories. Dedicated to advancing discoveries in the life sciences, and with easy access to services, special UF pricing, and multiple locations, it is easy to see why the ICBR remains the first choice for expertise and instrumentation for the UF research community.



## Bioinformatics

ICBR-Bioinformatics@ad.ufl.edu | 352.273.8049

ICBR Bioinformatics provides consultation and data analysis services to help researchers toward an in-depth understanding of large-scale data sets acquired from NGS, gene expression and array-based technologies.



- RNA-Seq data analysis
- Single-cell analysis
- Sequence variation analysis
- Epigenetic analysis (ChIP-Seq, ATAC-Seq)
- Metagenomics analysis
- Genome/Transcriptome assembly and annotation
- Customized data analysis and software development
- Consultation and training



## Cytometry

ICBR-Cytometry@ad.ufl.edu | 352.273.6032 (Cytometry and Nanoparticle) 352.392.1745 (Microscopy)

ICBR Cytometry provides tools and expertise for cellular analysis and sorting using a variety of platforms. Other services include microparticle analysis, in-vivo bioluminescent imaging, multiphoton and confocal microscopy.

- Staff assisted or self service FACS sorting
- Cytometry and microscopy workshops and seminars
- Sorting for single cell RNA-Seq analysis
- Staff consultations for experimental planning, cytometry panel design and data analysis
- Training to use self-service instruments for flow cytometry, microparticle analysis, in-vivo bioluminescent imaging, multiphoton and confocal microscopy
- A variety of cytometry and microscopy instruments available at CGRC and MBI locations; microparticle analysis only available in CGRC and in-vivo bioluminescent imaging at MBI



## Electron Microscopy

ICBR-ElectronMicroscopy@ad.ufl.edu | 352.273.8547

ICBR Electron Microscopy provides expertise and instrumentation for conducting transmission and scanning EM and offers support for sample prep and self-use instrument training.



- Transmission and scanning electron microscopy
- Confocal laser scanning microscopy
- Sample preparation for microscopic examination
- High pressure freezing and freeze substitution sample services
- Cryo-TEM single particle examination
- Self-use training for microscopes, equipment and techniques
- Cryo-SEM



## Monoclonal Antibody

ICBR-MonoclonalAntibody@ad.ufl.edu | 352.273.8040

ICBR Monoclonal Antibody supports the production of mouse monoclonal and polyclonal antibodies for basic and applied research. We provide hands-on training in label-free detection of bimolecular interactions using BLI technology, automated western blotting and immunoassay development.

- Mouse monoclonal and polyclonal antibody development
- Live cell imaging multimode plate reader
- Automated westerns completed in 3.5 hours
- Dip and read, Fluidics-free, 8 Channel Octet System
- Antibody production & purification
- Antibody labeling (e.g., biotin, fluorescent molecules)
- Mammalian cell culture techniques workshop

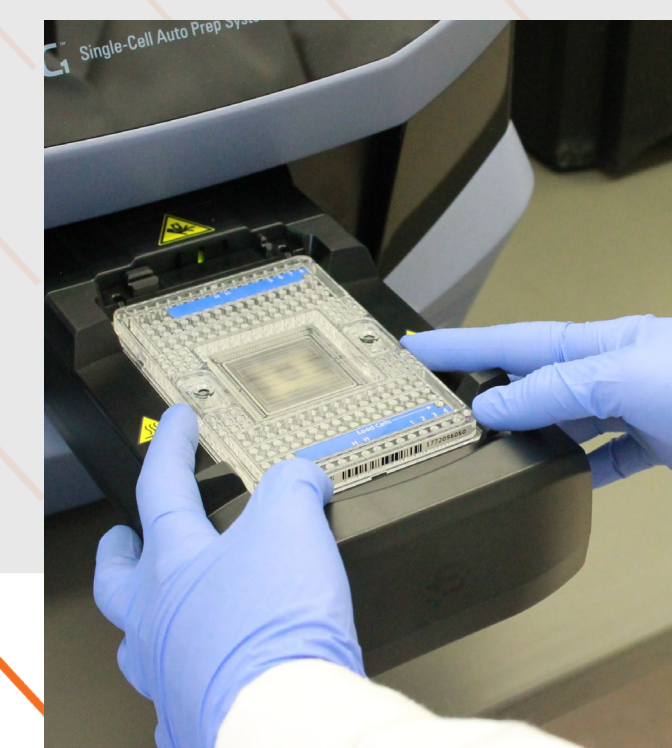


## Gene Expression & Genotyping

ICBR-Genotyping@ad.ufl.edu | 352.273.8036

ICBR Gene Expression & Genotyping provides all aspects of RNA expression and genotyping analysis, including library generation for bulk and single cell RNASeq analysis, targeted RNA transcript analysis by ddPCR, and spatial gene expression analysis.

- Construction of RNA-Seq and exome sequence capture libraries
- miRNA and long non-coding RNA analysis
- scRNA-Seq library generation on IOX genomics chromium
- ddPCR and QuantiGene RNA assays on Luminex FLEXMAP 3D
- Spatial transcriptomics
- 16S Library construction for metagenomics
- GeneTitanAxiom Array
- SNP genotyping by the CFX real-time PCR detection system
- Copy number variation by BioRad digital PCR system
- Drop off sample nucleic acid quality assessment



## NextGen DNA Sequencing

ICBR-NextGenSeq@ad.ufl.edu | 352.273.8050

ICBR NextGen DNA Sequencing provides massively parallel, high-throughput sequencing services supporting a broad range of applications using short and long read technologies for targeted exon sequencing, bulk and single cell RNASeq, metagenomics, and more.

### Sequencing:

- Illumina NovaSeq6000 (high-throughput and high-plexicity projects, any run configuration, partial lane flexibility)
- Illumina MiSeq (Standard v3/v2 runs, Micro and Nano flow cell runs)
- Illumina iSeq (shallow, pilot runs)
- PacBio SEQUEL IIe (Hi-Fi de novo assembly reads, isoform analysis, etc.)
- Oxford NanoPore PromethION-24 (Ultra-long reads for de novo assembly)
- Oxford NanoPore Min ION (Ultra-long reads for de novo assembly of small genomes or pilot runs)

### Library Construction Services for Major Applications:

- Illumina (WGBS, RRBS, 16S metagenomics, COVID-seq, Exome-seq)
- PacBio (large-insert genome, IsoSeq, Amplicon-seq, full-length 16S)
- Oxford NanoPore (full-length cDNA, Direct RNA-seq, COVID-seq & more)
- 10X Genomics (Single-cell: RNA-Seq, ATACseq, VDJ)
- Sample/Library QC:
  - QUBIT ·Covaris S220/E220 ·SAGE ELF ·qPCR ·TapeStation

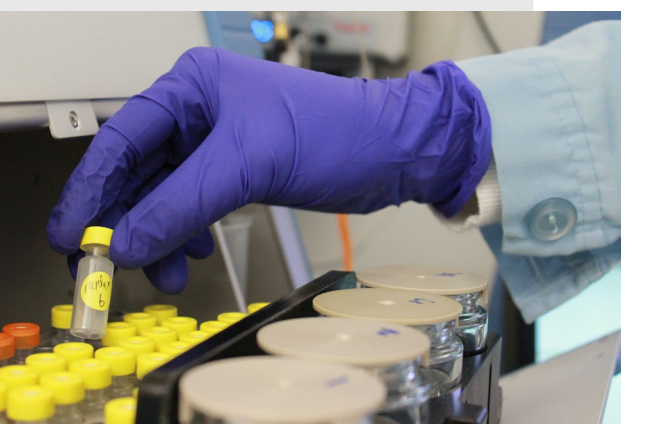


## Proteomics & Mass Spectrometry

ICBR-Proteomics@ad.ufl.edu | 352.273.8060

ICBR Proteomics & Mass Spectrometry provides proteomics services and trains faculty, staff and students in state-of-the-art proteomics and mass spectrometry technologies.

- MRM self service and training
- Luminex biomarker assay
- Protein identification
- Quantitative proteomics
- Post-translational modification analysis
- ID and 2D gel analysis
- Liquid chromatography with UV/diode array
- Targeted metabolite analysis

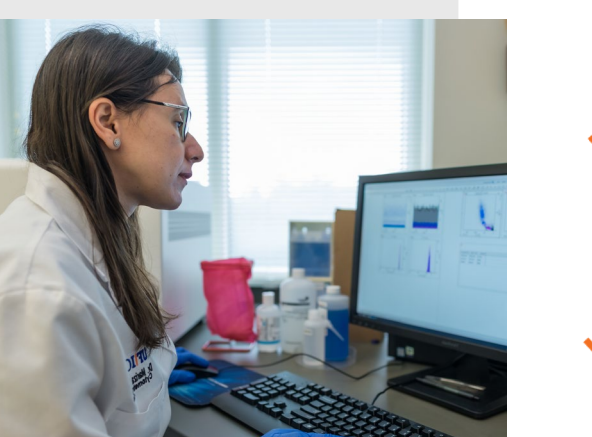


## FEATURED SERVICES

- Single cell RNA-Seq
- Monoclonal antibody production
- Long and short read DNA sequencing
- Exome sequencing, whole genome sequencing and de novo genome assembly
- Metagenomics and 16S rDNA Sequencing
- Quantitative proteomics and targeted metabolite analysis
- Flow cytometry and FACS
- CryoEM, Transmission and Scanning Electron Microscopy
- Immunoassay development and automated Western Blotting
- Biomarker discovery
- SNP Genotyping

## FEATURED INSTRUMENTS

- Illumina NovaSeq6000, PacBio SEQUEL IIe and ONT PromethION DNA Sequencers
- Bruker TIMStof fleX mass spectrometer
- QIAQUITY ddPCR instrument
- Keyence Fluorescence Microscope BZ-x800
- Sony SP6800 Spectral Analyzer
- Luminex FLEXMAP 3D® Multiplexing Instrument
- FEI G2 F20 200kV Transmission Electron Microscope
- Nikon Multiphoton Super Resolution Imaging System
- IVIS Spectrum 770 Pre-Clinical Optical Imaging System
- BD Fortessa, CytoFLEX and SYMPHONY S6 Flow Cytometers
- ThermoFisherQ ExactivePlus Hybrid Quadrupole-Orbitrap Mass Spectrometer
- 10X Genomics Chromium Single Cell Analysis System
- ProteinSimpleWes™ Protein Analysis System
- Cytation 5 Cell Imaging Multimode Reader



## UF | ICBR Mission

To champion and enable scientific discovery and innovation throughout the University of Florida research community by providing access to world-class biotechnology expertise and instrumentation. UF | ICBR is committed to creating a welcoming and creative environment, building upon the underlying principles of workforce diversity, equity and inclusion.

**Free Consultations. Special UF Pricing.**  
**All on Campus.**

**Get Started Today**



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