Biomedical Research: Clinical Translational Focus

Translational Research Resources and Laboratories

- Cancer and Infectious Disease
- Women’s and Infant Health
- Diabetes and Obesity
- Cardiovascular

- Molecular Pathology
- Biomedical Proteomics
- Annotated BioRepository
- Microscopy and Imaging Resources
- Translational Animal Models
- Technology Transfer and Commercialization

George L. Wright Center For Biomedical Proteomics

- Bruker Daltonics Ultraflex III MALDI-TOF/TOF w/ tissue imaging sprayer, Thermo LTQ, ABI QTRAP 4000 hybrid triple quadruple MS
- Targeted Mass Spectrometry, small molecule and peptide MRM/SRM assays
- MALDI MS Tissue Imaging
- Protein post-translational mapping
- Glycoprotein analysis and antibody lectin array detection
- Protein Interactome Analysis, protein interface mapping
Leroy T. Canoles Jr. Cancer Research Center

- Biorepository of over 40,000 cancer specimens (Blood, Urine, Tissue, Seminal Plasma, Expressed Prostatic Secretions)
- Annotated and fully populated CAISIS database for tracking/linking clinical specimens and patient data
- Tumor Tissue Microarray
- Molecular Pathology Suite
- Clinical Trials and Studies Coordinator
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Mass Spectrometers and Analytical Equipment

Thermo Finnigan LCQ Ion trap: For shotgun proteomics, identification and characterization of proteins.

Thermo Finnigan LTQ Ion trap: For shotgun proteomics, identification and characterization of proteins and PTMs.

Ultraflex III MALDI-TOF-TOF with Smart Beam Laser: For MALDI MS/MS analysis and Imaging mass spectrometry

ABI/Sciex Q-TRAP 4000 Triple Quadrupole: Multiple reaction monitoring. For targeted hypothesis driven mass spectrometry to identify, characterize and quantitate post translational modifications in proteins and for the validation and quantitation of biomarkers.
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Mass Spectrometers and Analytical Equipment

Proteineer FC picker robot for LC-MALDI MS/MS

ClinProt robot for affinity based biomarker profiling

Ettan Spot picker robot for 2D Gels

ImagePrep™: Matrix deposition device for MALDI Imaging mass spectrometry

Tempo Eksigent Nano HPLC
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Opportunities and Needs

- Collaborations and Resources
  - DNA analysis
  - Informatics
  - Cell Imaging
  - Protein analysis and metabolomics

- Training
  - Equipment and technical
  - Workshops and Seminars

- Best Practices
  - Administration
  - Funding models
  - Upgrade strategies