



UNIVERSITY *of* MARYLAND
SCHOOL OF MEDICINE

UMSOM Research Core Facilities



Available Core Resources

Imaging Network

Confocal Microscopy
Electron Microscope
Animal Imaging
Diagnostic Imaging
Neuroimaging

Structural Biology Network

NMR
X-Ray Crystallography
Proteomics/Mass Spec.
Biacore
Edman Sequencing

Clinical Resources Network

Pathology Biorepository
Brain & Tissue Banks
Cytokine & Hormone
Immunoassay Core
Flow Cytometry

Drug Development Network

Pharmacokinetics/Biopharmaceutics Lab
Industrial Pharmaceuticals Lab
Center for Nanomedicine and Cellular Delivery
Computer-Aided Drug Design (CADD)
High Throughput Screening Core

Model Development Network

Veterinary Services
Translational Core Lab
Small Animal Physiology Core

Bioengineering & Biorobotics Network

Genomics Network

Biopolymer/Genomics Core
Genomics Resource Center
Biochemical Genetics Lab
Cytogenetics Lab
Translational Genetics Core



Shared Instrumentation Grants*

Blanpied, Thomas	Zeiss Duo Confocal Microscope	\$500,000
Gullapalli, Rao	7T Animal MRI	\$1,978,000
Gullapalli, Rao	Small Animal PET/CT	\$500,000
Carpenter, William	A 3T scanner for neuroimaging	\$2,830,485
Hsia, Ru-Ching	Cryo-Upgrade of UMB EM Core	\$474,030
Lakowicz, Joseph	Fluorescence lifetime imaging	\$420,683
Schneider, Martin	In-incubator live cell fluorescence imaging	\$147,446
Weber, David	950 Mhz NMR spectrometer	\$7,994,900
White, Owen	Data intensive academic grid (NSF-Funded)	\$1,894,381
Weber, David	Multimode fluorescence microplate reader	\$164,375

*Representative examples; only a partial listing. Blue indicates grants funded via ARRA.



Cores will mainly be located centrally





Core Centralization

- Serve as a foundation to establish the “Technology Resource Center” – an administrative home for Core and Resource Facilities
- Provide administrative and financial support to core directors and staff – Let staff focus on Science!
- Co-locating cores will provide a “multidisciplinary” approach to providing core services – ‘One-stop shopping’
- Emphasize the clinical resources available, and facilitate translation of research from the bench to the bedside



The Catalyst to Centralization

- RFA-RR-09-007: Core Facility Renovation, Repair and Improvement (ARRA Funds)
- UMSOM received one of 31 applications funded under this RFA
- G20 RR030969; \$7.3 Million award
- Will enable us to renovate nearly 30,000 gross square feet of space to centralize 20-25 core facilities

Shared Services Renovation of 'Super-Floor'

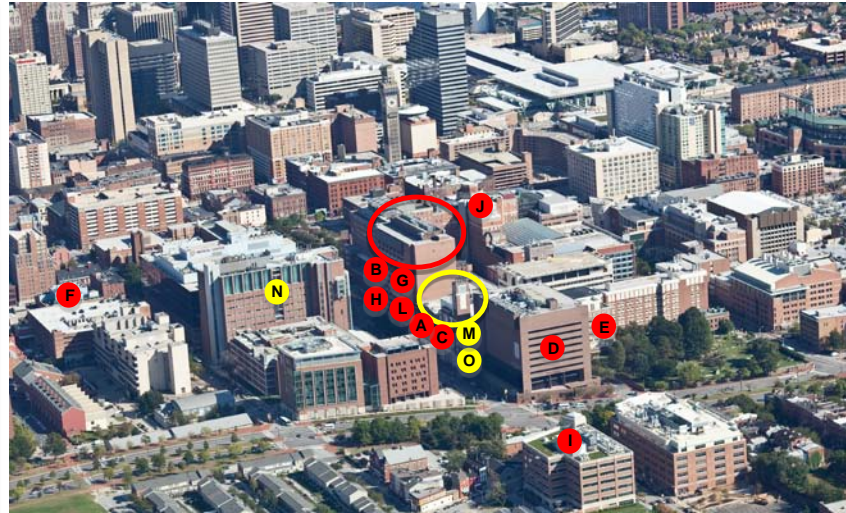
Nicholas P. Ambulos, Jr., PhD, Director of Shared Services

Supported by G20RR030969; \$7,329,060

University of Maryland Baltimore

HSFI/Howard Hall Renovations

- M** Center for Translational Research in Imaging
- N** Electron Microscopy Core Facility
- O** Confocal Microscopy Core Facility
- P** Image Processing Lab*
*New Laboratory

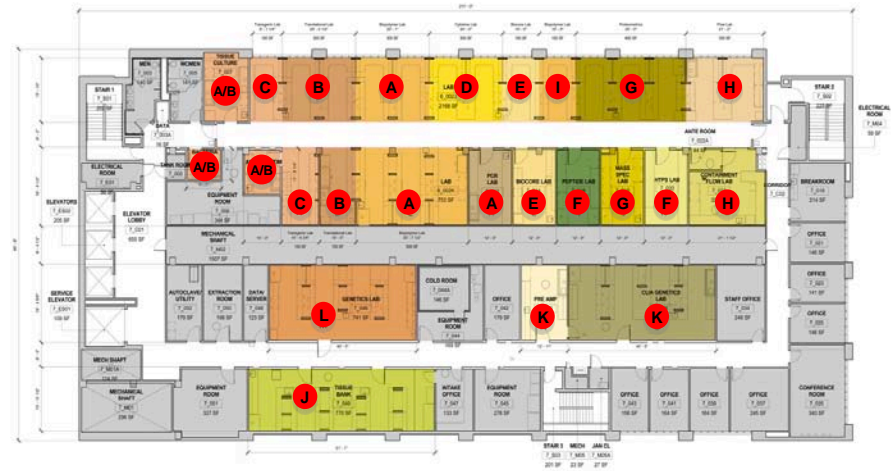


Bressler 7 Renovations

- A** Genomics Shared Service
- B** Translational Laboratory Shared Service
- C** Transgenic Core Facility
- D** Cytokine Core Laboratory
- E** BIACore Facility
- F** High Throughput Screening Shared Service
- G** Service
- H** Proteomics Shared Service
- I** Flow Cytometry Shared Service
- J** Protein Analysis Core Facility
- K** Pathology Biorepository Shared Service*
- L** Molecular Pathology Shared Service**
Biochemical Genetics Laboratory*
*Clinical Laboratories
**New Laboratory

Key Benefits

- Co-location of Shared Services with other UMSOM research cores
- Renovates 28,000 gsf of space
- Catalyze a *multidisciplinary* approach to supporting research
- Includes basic and clinically oriented cores to facilitate translation from bench to clinic
- Ensure coordinated effort to develop complementary services, not duplicative
- Enable collaboration between Shared Services and research cores to develop new services



HSFI-I/Howard Hall Renovations

Bressler 7 Renovations



Howard Hall/HSF-I 6th Floor: Comprehensive Imaging Suite



