Genomics Core Facility

East Carolina University
Department of Biology
Greenville, NC 27858
http://www.ecu.edu/cs-cas/biology/genomics_home.cfm
(252) 328-2607/(252) 328-6302

Contact Information:
Ed Stellwag, Ph.D.
stellwage@ecu.edu
(252) 328-6302

Description:
The Genomics Core Facility provides DNA sequencing services for East Carolina University. The facility includes an Applied Biosystems 3130 Genetic Analyzer, Agilent 2100 Bioanalyzer, thermal cyclers, and Nanodrop 2000. End-to-end sequencing services.

Keywords:
DNA and RNA quality analysis; nucleic acid sample preparation, DNA amplification, DNA sequencing
Laser Capture Microdissection Core Laboratory

East Carolina University, Brody School of Medicine
600 Moye Boulevard
Greenville, NC  27834
http://www.ecu.edu/cs-dhs/internalmed/lasercapture
(252) 744-2962

Contact Information:
Cindy Kukoly
kukolyce@ecu.edu
(252) 744-2962

Region: Eastern
Organization Type: Academic / Non-Profit

Description:
The Zeiss PALM Capture unit is located at the Brody School of Medicine. ECU provides instrumentation, facilities for preparing and staining both frozen/paraffin sections, and limited assistance in obtaining samples for DNA or RNA.

Keywords:
LCM, laser capture, cryostat

Additional Comments:
Membrane slides and adhesive caps are available on-site for purchase. Open to outside users collaborating with ECU investigators.
Core Laboratory Facilities in North Carolina – Eastern Region

Marine Conservation Molecular Facility

Duke University Marine Lab
135 Marine Lab Road
Beaufort, NC  28516
http://www.nicholas.duke.edu/marinelab/facilities/mcmf
(252) 504-7641

Contact Information:
Tom Schultz, Ph.D.
tom.schultz@duke.edu
(252) 504-7641

Region: Eastern
Organization Type: Academic / Non-Profit

Director: Tom Schultz, Ph.D.

Description:
The Marine Conservation Molecular Facility (MCMF) is a shared use molecular lab for genetic analysis of marine organisms. The MCMF offers 8 bench spaces, 12 thermal cyclers, 2 real-time thermal cyclers, a pipetting robot, and an ABI Sequencer.

Keywords:
DNA sequencing, microsatellite analysis, SNP detection
Appalachian State University Human Performance Laboratory

Appalachian State University
North Carolina Research Campus, 600
Human Performance Laboratory
Laureate Way
Kannapolis, NC 28787
http://www.ncrc.appstate.edu
(704) 250-5359

Contact Information:
David C. Nieman, Dr. PH.
niemandc@appstate.edu
(828) 773-0056

Region: Greater Charlotte
Organization Type: Academic / Non-Profit

Description:
The mission of the ASU Human Performance Laboratory is to investigate the influence of unique plant molecules on age-related loss of muscle mass (sarcopenia), muscle mitochondrial biogenesis, and exercise-induced immune dysfunction and oxidative stress.

Keywords:
Flavonoids, exercise testing, immune function
Core Laboratory Facilities in North Carolina – Greater Charlotte Region

CHS Research and Therapeutic Innovation Facility

Carolinas Medical Center
1000 Blythe Boulevard
Charlotte, NC  28203

http://www.carolinashealthcare.org/cannon-research-center-centers-and-institutes

Contact Information:
Caren Anderson
caren.anderson@carolinashealthcare.org
(704) 355-9608

Description:
The advanced technology in each core facility enables a collaborative environment in which researchers receive support in the design, implementation, analysis, interpretation and reporting of research. The core labs include biostatistics, comparative medicine, confocal microscopy, electron microscopy, flow cytometry, histology, proteomics and metabolomics, molecular biology, and research machining.

Keywords:
Biostatistics, comparative medicine, confocal microscopy, electron microscopy, flow cytometry, histology, proteomics, metabolomics, molecular biology, research machining

Additional Comments:
The availability of sophisticated, centralized resources offers investigators an exceptional research advantage.
Core Laboratory Facilities in North Carolina – Greater Charlotte Region

David H. Murdock Research Institute (DHMRI)

North Carolina Research Campus
150 Research Campus Drive
Kannapolis, NC 28081
http://www.dhmri.org
(704) 250-2600

Region: Greater Charlotte
Organization Type: Non-Profit Contract Research Organization

Contact Information:
Michael Luther, Ph.D., MBA, Chief Business Officer
mluther@dhmri.org
(704) 250-2611

Director: Jim Oblinger, Ph.D., President

Description:
The DHMRI bridges the research gap between academia and industry by providing applied R&D solutions for agriculture, nutrition, and health, and their intersections in a customer-based, flexible, and collaborative environment. Six areas of concentration: Analytical, Genomics, Immune, Cell and Biochemistry, Informatics, and In vivo Sciences. DHMRI applies a trans-disciplinary approach to solve complex biological problems.

Keywords:
Cutting edge platforms and technologies including but not limited to: 700 and 950 MHz NMRs, Next-Gen Sequencing, Genomics, Epigenetics, RNA analysis, Analytical Chemistry, Proteomics and protein chemistry, Metabolomics, FACS, GcLP Immune Profiling Lab; Compound Profiling; Wide arrangement of Zeiss imaging and microscopy instruments including Confocal Laser Capture, and TIRF. State of the art 40k sq. foot AALAC approved vivarium for small and large animal work.

Additional Comments:
Collaborators range from academia to start-ups to Fortune 100 companies. Flexible business model from fee for service to shared risk.
Core Laboratory Facilities in North Carolina – Greater Charlotte Region

LCM Core Facility
University of North Carolina at Charlotte
9201 University City Boulevard
Charlotte, NC  28223

Region:  Greater Charlotte
Organization Type:  Academic / Non-Profit

Contact Information:
Didier Dreau, Ph.D.
ddreau@uncc.edu
(704) 687-8314

Description:
This is a user-operated facility that allows investigators to micro-dissect from tissue samples specific subsets of cells or sub-cellular structures, which usually are subjected to further protein or nucleic acid analyses.

Keywords:
Microdissection, LCM, User-operated

Additional Comments:
Users are required to undergo training.
UNCG Metabolomics Facility

North Carolina Research Campus
500 Laureate Way, Suite 4226
Kannapolis, NC  28081
http://www.uncg.edu/ntr/pdf ntr files/UNCG Center at NCRC.pdf
(704) 250-5810, 5803, 5807

Region:  Greater Charlotte
Organization Type:  Academic / Non-Profit

Contact Information:
Wei Jia, Ph.D.
w_jia@unCG.edu
(704) 250-5803

Director:  Wei Jia, Ph.D.

Description:
The Metabolomics Facility houses a LECO GC-time of flight mass spectrometry and Agilent LC-time of flight mass spectrometry, which are suitable for small molecule metabolite profiling and high-throughput screening.

Keywords:
Metabolite profiling, quantitative measure of metabolites and phytochemicals, biochemical analysis
Core Laboratory Facilities in North Carolina – Piedmont Triad Region

Biomolecular Simulation and Bioinformatics Core Lab

University of North Carolina at Greensboro
Greensboro, NC 27402
http://bsbc.uncg.edu/
(336) 256-8610

Region: Piedmont Triad
Organization Type: Academic / Non-Profit

Contact Information:
Karen C. Burton
bsbc_admin@uncg.edu
(336) 256-8610

Director: Patricia H. Reggio, Ph.D.

Description:
The BSBC provides high-performance computing resources to the scientific community (including faculty, scientists, and BioTech/BioPharma companies) in the Piedmont Triad area whose biotechnology research requires high-performance parallel computing.

Keywords:
Hardware: Dual/High Availability head nodes, 80 compute nodes, 528 CPUs, 40 Nvidia Tesla S1070 GPUs each with 960 streaming core processors, 96 port Infiniband switch, 12-TB redundant storage subsystem
Software: NAMD, Conf Memories, NW Chem, AMBER

Additional Comments:
Open to scientific researchers in the Piedmont Triad who require high-performance parallel computing. Application required (see http://bsbc.uncg.edu/).
Core Laboratory Facilities in North Carolina – Piedmont Triad Region

Center for Design Innovation

University of North Carolina  
(interim facility)  
2105 Winston Tower, 301 N. Main Street  
Winston-Salem, NC 27101  
http://www.centerfordesigninnovation.org/  
(336) 727-4310

Contact Information:  
Carol Strohecker, Ph.D.  
cs@centerfordesigninnovation.org  
(336) 354-7358

Director: Carol Strohecker, Ph.D.

Region: Piedmont Triad  
Organization Type: Academic / Non-Profit

Description:  
CDI’s goal is to catalyze the growth of creative industries in the Piedmont Triad through design-focused activity based on advanced technologies. Services in rapid prototyping and design in various media are available.

Keywords:  
Rapid prototyping, Motion capture, Data analysis, Visualization and modeling

Additional Comments:  
Partnerships are in formation and inquiries are encouraged. Open to outside users collaborating with CDI investigators. Research and service functions will be fully realized in the permanent facility soon to be constructed.
Gateway University Research Park

South Campus
2901 East Lee Street, Suite 2500
Greensboro, NC  27401-4904
http://www.gatewayurp.com
(336) 375-9232

Contact Information:
John Merrill
johnm@gatewayurp.com
(336) 375-9232

Region: Piedmont Triad
Organization Type: Academic / Non-Profit

Director: John Merrill

Description:
Gateway University Research Park is developing state-of-art research facilities for cutting-edge work in the areas of life and physical sciences, engineering, technology and other applied sciences.

Keywords:
The Park facilitates academic partnerships and spin-off opportunities. Initial focus will include Nanometry, Nanomaterials (including nanocomposites), Nanobiology (including nanopharmacology), Nanobioelectronics and in the future, Nanoenergy.

Additional Comments:
Open to outside users collaborating with Gateway investigators. Gateway University Research Park ("Gateway") is a 501(c)3 not-for-profit entity created to manage and operate the joint collaboration between North Carolina A&T State University and The University of North Carolina at Greensboro for the purposes of supporting research and economic development within the Triad. Gateway is the bridge to successful commercial application of the research being performed at Greensboro’s two high research universities. The park’s flagship is the nation’s only Joint School of Nanoscience and Nanoengineering whose faculty, students and business partners will forge the products of the future. Gateway is developing two 75-acre campuses. The South campus is located on approximately 75 acres located off Lee Street near the I-40/85 interchange. The South Campus currently has one building comprising 63,000 square feet of space with another 105,000 square feet, which is the Joint School of Nanoscience and Nanoengineering, currently under construction.
Gateway University Research Park – Analytical Laboratory

South Campus
2901 East Lee Street, Suite 2500
Greensboro, NC 27401-4904
http://www.gatewayurp.com
(336) 375-9232

Contact Information:
Karen Ryan
karenr@gatewayurp.com
(336) 217-5146

Director: John Merrill

Description:
Gateway University Research Park is a collaboration between NCA&T and UNCG. The park facilitates academic partnerships and spin-off opportunities. It houses a state of the art analytical lab with mass spectrometers, spectrophotometers, diffractometer, and gas chromatograph.

Keywords:
Gas chromatography, mass spectrometry, chemical analysis, nano characterization, bio analytical, nano particle synthesis, surface characterization, Fourier transform infrared spectroscopy, X-ray diffraction

Additional Comments:
- Open to outside users collaborating with Gateway investigators.
- A suite of analytical tools is now operational and ready for use by corporate and research partners: Varian 240 MS Ion Trap Gas Chromatography Mass Spectrometer; Varian 320 MS Triple Quadrupole GC/LC Mass Spectrometer; Varian 500MS Ion Trap Liquid Chromatography Mass Spectrometer; Varian 6000i UV-Vis Spectrophotometer; Varian Cary Eclipse Spectrophotometer; Varian 610 FT-IR Spectrometer; Varian 710-ES Axial ICP Spectrometer; Varian 920 LC Liquid Chromatography System; Varian/Oxford Gemini Diffractometer; Microtrac Zetatrac zetasizer; Sorvall Centrifuge; Memmert Incubator; SPRi Lab Surface Plasma Resonance System; Labconco Freezone 6 Freeze Dryer
- Coming soon: Varian 400NMR Nuclear Magnetic Resonance System (arrives Aug 2011); Varian 700NMR Nuclear Magnetic Resonance System (arrives Aug 2011); Varian 610 FT-IR Spectrometer with Raman Module (arrives 2011); Varian Bio Dis III Dissolution System; Varian Intelliflash 310 Flash Chromatography System
Gateway University Research Park – Microscopy Laboratory

South Campus
2901 East Lee Street, Suite 2500
Greensboro, NC  27401-4904
http://www.gatewayurp.com
(336) 375-9232

Contact Information:
Karen Ryan
karenr@gatewayurp.com
(336) 217-5146

Description:
Gateway University Research Park, a collaboration between NCA&T and UNCG, facilitates academic partnerships and spin-off opportunities and houses a state of the art microscopy lab featuring a Carl Zeiss Helium Ion microscope.

Keywords:
Helium Ion Microscopy, scanning electron microscopy, spinning disk confocal microscopy, atomic force microscopy, light microscopy, structural analysis and characterization, surface analysis, single molecule DNA analysis, single molecule DNA studies

Additional Comments:
- Open to outside users collaborating with Gateway investigators.
- A suite of microscopy tools, including a Carl Zeiss SMT® Orion Helium Ion microscope, the only one of its kind located in the Southeastern U.S., are operational and ready for use by corporate and research partners: Agilent Technologies Atomic Force Microscope; Hitachi S-4800-I FESEM with Backscattered Detector and INCA 250 EDX Microanalysis System; Olympus IX51 Microscope with Fluorescence; Carl Zeiss Axioimager Z2m Imaging System; Carl Zeiss Axio Observer A1 Microscope; Carl Zeiss SMT Orion® Helium Ion Microscope; Carl Zeiss Spinning Disk Confocal Microscope
- Available soon: Carl Zeiss Auriga Crossbeam Microscope (arrives 2011); Carl Zeiss Libra 120 TEM (arrives 2011); Carl Zeiss LS10 EVO (arrives 2011)
NMR Facility

University of North Carolina at Greensboro
Department of Chemistry/Biochemistry
Patricia Sullivan Science Building, Room 001
301 McIver Street
Greensboro, NC  27402
http://www.uncg.edu/che/nmr.html
(336) 334-3006

Contact Information:
Franklin Moy, Ph.D.
fjmoy@uncg.edu
(336) 334-3006

Research Operations Manager: Franklin Moy, Ph.D.

Region: Piedmont Triad
Organization Type: Academic / Non-Profit

Description:
The NMR Facility houses a 300MHz Bruker spectrometer with a LEAP Technologies automation system and a JEOL 500MHz spectrometer. Both normal geometry and capillary NMR probes are available for small molecule elucidation and high-throughput screening.

Keywords:
NMR structural analysis, NMR screening
Core Laboratory Facilities in North Carolina – Piedmont Triad Region

Triad Mass Spectrometry Laboratory
University of North Carolina at Greensboro
346 Sullivan Science Building
301 McIver Street
Greensboro, NC 27412
http://triadmslab.uncg.edu/
(336) 334-3777

Contact Information:
Brandie M. Ehrmann, Ph.D.
bmcraven@uncg.edu
(336) 334-4768

Region: Piedmont Triad
Organization Type: Academic / Non-Profit

Director: Brandie M. Ehrmann, Ph.D.

Description:
The TMS Laboratory provides mass spectrometry analysis and training to the UNC-Greensboro campus community and the surrounding Piedmont Triad. Our instrumentation can be tailored to small molecule, metabolomics, and/or protein/peptide analyses.

Keywords:
MS Instrumentation: Thermo LTQ Orbitrap XL, Thermo TSQ Quantum Access (triple quad), Waters Synapt G2 HDMS qTOF, Shimadzu GC-MS
Separation Instrumentation: Waters Aquity UPLC, Eksigent 2D nanoLC ultra, Agilent 1100 HPLC

Additional Comments:
Open to scientific researchers in the Piedmont Triad on a fee for service basis who are in need of mass spectrometry analysis. (Please see website http://triadmslab.uncg.edu/).
Wake Forest University Core Laboratory Facilities

Wake Forest University
Winston-Salem, NC  27109
http://www.wfu.edu/academics/research/

Region: Piedmont Triad
Organization Type: Academic / Non-Profit

Description:
WFU is home to many core research facilities which include microscopy, X-ray, NMR, and computer facilities; biomechanics, human performance, blood chemistry, physical function and behavioral physiology laboratories; and a Center for Nanotechnology.
**Core Laboratory Facilities in North Carolina – Research Triangle Region**

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**ADME Mass Spectrometry Center**

University of North Carolina at Chapel Hill  
522 Brinkhous-Bullitt  
Chapel Hill, NC 27599-7525  
[http://www.med.unc.edu/tidwellab/adme/adme-mass-spectrometry-center/](http://www.med.unc.edu/tidwellab/adme/adme-mass-spectrometry-center/)  
(919) 370-6818

**Region:** Research Triangle  
**Organization Type:** Academic / Non-Profit

**Contact Information:**  
Arlene Bridges, Ph.D.  
[argoyle@email.unc.edu](mailto:argoyle@email.unc.edu)  
(919) 370-6818

**Director:** Arlene Bridges, Ph.D.

**Description:**  
Small molecule characterization and quantification by LC-MS/MS with emphasis on drug development, metabolism and disposition.

**Keywords:**  
Mass spectrometry, pharmacokinetics, drug metabolism; preclinical and clinical sample analysis
Core Laboratory Facilities in North Carolina – Research Triangle Region

Almac Diagnostics Molecular Core Lab

Almac Diagnostics
4238 Technology Drive
Durham, NC  27704
http://www.almacgroup.com
(919) 294-0230

Region: Research Triangle
Organization Type: Commercial

Contact Information:
Kevin Ellison
kevin.ellison@almacgroup.com
(919) 294-0234

Director: Kimberly Slentz-Kesler, Ph.D.

Description:
Personalized medicine company offering the following genomics based services: Nucleic acid extraction, mRNA, microRNA and DNA expression profiling, Bioinformatics, cell line modeling, and biomarker discovery and validation.

Keywords:
Gene Expression Profiling, Genotyping, mRNA, microRNA, DNA, qPCR, GLP, cell line modeling, siRNA, ELISA, assay development, Bioinformatics, data analysis, Copy Number Variance, Loss of Heterozygosity, Affymetrix, Diagnostics, Biomarker, SNP, CLIA

Disclaimer: All information provided are deemed reliable from our sources. No warranty or representation is made as to the accuracy thereof and is submitted subject to errors, omissions or other conditions.
Core Laboratory Facilities in North Carolina – Research Triangle Region

Biomolecular Characterization Facility

Duke University
Department of Biochemistry
Nanalive Duke Building, Room 230
Durham, NC 27710
http://www.biochem.duke.edu/modules/biochem_research/index.php?id=6
(919) 684-4363

Contact Information:
Terrence G. Oas, Ph.D.
oas@duke.edu
(919) 684-4363

Region: Research Triangle
Organization Type: Academic / Non-Profit

Description:
User-operated Aviv 62DS CD Spectropolarimeter with automated titrator, thermoelectric temperature control, simultaneous fluorescence and CD detection. Staff-operated Beckman XL-A analytical ultracentrifuge for sedimentation equilibrium and velocity.

Keywords:
circular dichroism, fluorescence, analytical ultracentrifugation, sedimentation velocity, sedimentation equilibrium, temperature control, automated titration

Additional Comments:
User fees apply.
Core Laboratory Facilities in North Carolina – Research Triangle Region

BRITE Drug Discovery Core Facility
North Carolina Central University
1801 Fayetteville Street
Durham, NC 27707
http://brite.nccu.edu/facility
(919) 530-7001

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Li-An Yeh, Ph.D./Mark Hughes
lyeh@nccu.edu
(919) 530-7001 or (919) 530-6751

Description:
The drug discovery core facility is a state-of-the-art high throughput screening (HTS) facility with over 450,000 compound small molecule chemical libraries. It specializes in assay development, HTS, medicinal chemistry and chemo-informatics for drug discovery.

Keywords:
Assay development: cloning expression, protein production
High throughput screening: compound & database management
Medicinal chemistry: organic synthesis, SAR, parallel synthesis, nature product synthesis
Chemo-informatics: molecular modeling, QSAR

Additional Comments:
Open to outside users collaborating with BRITE investigators.
BRITE Imaging Core Facility

North Carolina Central University
1801 Fayetteville Street
Durham, NC  27707
http://brite.nccu.edu/facility
(919) 530-6251

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Jonathan Sexton, Ph.D.
jsexton@nccu.edu
(919) 530-6251

Director: Jonathan Sexton, Ph.D.

Description:
This core facility offers high-resolution imaging of biological samples, including fluorescence microscopy, confocal high content imaging, and Widefield. It also features live cell imaging in high throughput format and calcium influx-efflux measurement using FLIPER.

Additional Comments:
Open to outside users collaborating with BRITE investigators.
Core Laboratory Facilities in North Carolina – Research Triangle Region

BRITE Protein Expression, Purification and Formulation Core Facility

North Carolina Central University
1801 Fayetteville Street
Durham, NC  27707
http://brite.nccu.edu/facility
(919) 530-6703

Region:  Research Triangle
Organization Type:  Academic / Non-Profit

Contact Information:
David Lamson
dlamson@nccu.edu
(919) 530-6703

Director:  David Lamson

Description:
This core facility offers large-scale expression and purification services for biopharmaceutical research and performs investigations of protein stability/aggregation using several advanced methods.

Keywords:
30-liter bioreactor
E. coli, baculovirus, and mammalian cell expression systems
differential scanning calorimetry, self-interaction chromatography, dynamic light scattering, circular dichroism

Additional Comments:
Open to outside users collaborating with BRITE investigators.
Core Laboratory Facilities in North Carolina – Research Triangle Region

BRITE Technology Core Facility
North Carolina Central University
1801 Fayetteville Street
Durham, NC  27707
http://brite.nccu.edu/facility
(919) 530-6884

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Sam Witherspoon
switherspoon@nccu.edu
(919) 530-6884

Description:
This facility features atomic force microscopy and biosensor development. It also offers laser scanning confocal microscope, 500 MHz NMR, flow cytometry, TOF-MS, and HTS capillary electrophoresis.

Additional Comments:
Open to outside users collaborating with BRITE investigators.
Core Laboratory Facilities in North Carolina – Research Triangle Region

Campbell University Pharmaceutical Education and Research Center (PERC)

Campbell University
130 Burt Road
Buies Creek, NC 27506
http://www.campbell.edu/cphs/centers-and-programs
(910) 893-1694

Contact Information:
Mali R. Gupta, Ph.D., Director
guptam@campbell.edu
(910) 893-1694

Region: Research Triangle
Organization Type: Academic / Non-Profit

Executive Director: Emanuel J. Diliberto, Jr., Ph.D.

Description:
FDA registered GMP compliant QC and Pharmaceutical Analysis laboratories, Analytical Development, and GMP-like Manufacturing facilities. Our analytical, and formulation development capabilities support sterile, oral, and topical product development.

Keywords:
Pre-Clinical Trial Materials, Analytical Testing, Formulation Development, Stability Testing, Analytical Method Development
Core Laboratory Facilities in North Carolina – Research Triangle Region

Cell Biology/Ultrastructure Core Research Facility

University of North Carolina at Chapel Hill
104 Mason Farm Road
Chapel Hill, NC  27599-7310
(919) 966-0763

Region:  Research Triangle
Organization Type:  Academic / Non-Profit

Contact Information:
Johnny L. Carson, Ph.D.
jcarson@med.unc.edu
(919) 966-0763

Director:  Johnny L. Carson, Ph.D.

Description:
This facility provides dedicated 3,000 sq. ft. designed for high resolution imaging and physiologic studies of airway epithelial cell structure/function.

Keywords:
Transmission electron microscopy, scanning electron microscopy, laser scanning confocal microscopy, freeze-fracture, immunohistochemistry, high speed video analysis
Cellular and Molecular Imaging Facility (CMIF)

North Carolina State University
CMIF, Plant Biology Department
Box 7612
Raleigh, NC 27695-7612
http://www.ncsu.edu/project/cmif-micro/
(919) 515-3525

Contact Information:
Eva Johannes, Ph.D.
eva_johannes@ncsu.edu
(919) 515-3525

Region: Research Triangle
Organization Type: Academic / Non-Profit

Description:
The CALS Cellular and Molecular Imaging Facility at North Carolina State University is located in the Department of Plant Biology (4115 Gardner Hall) and contains a number of state-of-the-art light microscopes, including a Zeiss LSM 710 confocal.

Keywords:
Advanced light microscopy; Zeiss LSM 710 confocal; Zeiss Axioimager M2; Bitplane Imaris software; Metamorph software

Additional Comments:
CMIF primarily serves the NC State community and is also open to scientists from other universities and local industries. The rates posted on our website are for NCSU students, faculty and staff. Please enquire about rates for facility users outside NCSU. Training and imaging assistance is available.
Core Laboratory Facilities in North Carolina – Research Triangle Region

Celplor, LLC
Celplor, LLC
617 Hutton Street, Suite 101
Raleigh, NC 27606
http://www.celplor.com
(919) 794-7457

Region: Research Triangle
Organization Type: Commercial

Contact Information:
William W. HE
info@celplor.com
(919) 794-7457

Director: William W. HE

Description:
Celplor provides full sets of molecular biology services including: Protein expression and purification (all systems), genotyping, viral construction, plasmid vector construction and mutagenesis, stable cell line, antibody production and assay development.

Keywords:
Protein purification, genotyping, viral construction, mutagenesis, stable cell, antibody
Center for Electron Microscopy

North Carolina State University
1219 Gardner Hall
Campus Box 7615
Raleigh, NC 27695
http://www.ncsu.edu/cem/
(919) 515-2664

Contact Information:
Valerie Knowlton Lapham
valerie_knowlton@ncsu.edu
(919) 515-2664

Description:
The CALS Center for Electron Microscopy provides scanning and transmission electron microscopy services including associated tissue preparation for the biological sciences. Digital imaging services are also available.

Keywords:
Transmission electron microscopy, Scanning electron microscopy, TEM, SEM, Ultramicrotomy, Critical point drying, Sputter coating, Biological samples, Digital Imaging
Core Laboratory Facilities in North Carolina – Research Triangle Region

Center for Human Genetics Biobank (CHG)

Duke University
905 S. LaSalle Street
Durham, NC 27710
http://www.chg.duke.edu/research/dnabank.html
(919) 681-5535

Region: Research Triangle
Organization Type: Academic / Non-profit

Contact Information:
David Layfield
david.layfield@duke.edu
(919) 668-0232

Director: Michael Hauser, Ph.D.

Description:
The Center for Human Genetics (CHG) Biobank uses state-of-the-art automation for the extraction and allocation of DNA. Extensive quality-control ensures maximum investigator confidence in sample processing and storage.

Keywords:
DNA extraction, RNA, blood, tissue, liquid handling, clinical, Oragene, storage, sample tracking, Biobank, licensable samples

Additional Comments:
The CHG Biobank is part of a larger Duke-wide Biobank spanning the Duke campus. The service offerings of the Duke-wide Biobank can be discussed upon request.
**Core Laboratory Facilities in North Carolina – Research Triangle Region**

**Center for Structural Biology (CSB)**

University of North Carolina at Chapel Hill  
4079 Genetic Medicine, CB#7365  
120 Mason Farm Road  
Chapel Hill, NC 27599-7365  
http://www.med.unc.edu/csb  
(919) 843-4485

**Contact Information:**
Mischa Machius, Ph.D.
machius@med.unc.edu  
(919) 843-4485

**Region:** Research Triangle  
**Organization Type:** Academic / Non-profit

**Description:**
The CSB provides expertise and infrastructure in protein expression & purification, macromolecular X-ray crystallography, multidimensional NMR spectroscopy, homology modeling and molecular dynamics. We are open to academia, non-profit labs and industry.

**Keywords:**
Protein expression, protein purification, macromolecular X-ray crystallography, multidimensional NMR spectroscopy, sequence-informed molecular modeling, homology modeling, molecular dynamics

**Additional Comments:**
Projects are carried out in a collaborative manner. CSB scientists work with and train students, post-docs and PIs, allowing the transfer of valuable know-how back into collaborating labs.
Chapel Hill Analytical and Nanofabrication Laboratory (CHANL)

University of North Carolina at Chapel Hill
243 Chapman Hall, CB#3216
Chapel Hill, NC  27599-3216
http://chanl.unc.edu/
(919) 843-2859

Contact Information:
Carrie Donley
cdonley@email.unc.edu
(919) 843-2859

Description:
The Chapel Hill Analytical and Nanofabrication Laboratory (CHANL) offers access to a series of microscopy and spectroscopy tools as well as fabrication tools in our cleanroom. We are open to researchers from academia, non-profit labs and industry.

Keywords:
Electron microscopy with EDS, atomic force microscopy, mask aligner, deep reactive ion etch, PECVD, sputter and e-beam deposition, laser ablation, hot embossing, x-ray photoelectron spectroscopy
Duke IGSP Genome Sequencing and Analysis Core Facility

Duke University
Duke Institute for Genome Sciences & Policy
119 Biological Sciences Building
130 Science Drive
Durham, NC  27708
http://www.genome.duke.edu/cores/sequencing
(919) 660-7436

Contact Information:
Lisa Bukovnik
lisa.bukovnik@duke.edu
(919) 660-7436

Director: Lisa Bukovnik

Description:
The Core Facility serves Duke and non-Duke researchers with Illumina, 454, and SOLiD sequencing. Sanger sequencing is conducted for Duke researchers only.

Keywords:
Roche 454, Illumina, SOLiD

Additional Comments:
Non-Duke samples are taken on a space available basis.
Duke Microarray Facility

Duke University
Duke Institute for Genome Sciences & Policy
101 Science Drive
Rm. 2208B CIEMAS
Durham, NC 27708
http://www.genome.duke.edu/cores/microarray
(919) 664-8224

Contact Information:
Holly Dressman, Ph.D.
holly.dressman@duke.edu
(919) 668-1583

Description:
The DNA Microarray facility provides access to gene expression analysis for Affymetrix and Agilent platforms, RT-PCR arrays, Liquid Handling via Biomek FXP, access to Agilent and Axon Scanners, and data analysis support.

Keywords:
Affymetrix and Agilent gene expression assays, RT-PCR, Biomek FXP
Duke NMR Spectroscopy Center
Duke University
B139-B147 Levine Science Research Center
Durham, NC  27710
http://NMRCenter.mc.duke.edu/instruments.php
(919) 613-8886

**Contact Information:**
Ronald Venters, Ph.D.
ronald.venters@duke.edu
(919) 613-8888

**Description:**
The Duke Magnetic Resonance Spectroscopy Center is a shared instrument facility. It provides access to high field NMR instrumentation, training and expert consultation on advanced applications for research at Duke and in the Southeastern region.

**Keywords:**
NMR spectroscopy, high field NMR, structural biology, molecular characterization

**Additional Comments:**
300, 400, 500, 600 and 800 MHz NMR spectrometers are available to users. Additional information and NMR Center policies can be found on the Center website http://NMRCenter.mc.duke.edu/instruments.php
Duke RNAi Screening Facility

Duke University
RM0050 CARL-DUMC
Research Drive
Durham, NC 27710

(919) 684-2059

**Contact Information:**
James L. Pearson, Ph.D.
[james.pearson@duke.edu](mailto:james.pearson@duke.edu)
(919) 613-5132

**Region:** Research Triangle  
**Organization Type:** Academic / Non-Profit

**Description:**
The DRSF provides infrastructure and expertise for the implementation of RNAi-based technologies, both small and genome scale. We also provide custom high-throughput cell-based assay development.

**Keywords:**
RNAi screening, Chemical screening, High-throughput assay development, High-content imaging and assay development, Cellomics ArrayScan, Molecular Devices Velos (440,488,532)

**Additional Comments:**
Open to outside users collaborating with Duke investigators.
Eshelman School of Pharmacy NMR Facility

University of North Carolina at Chapel Hill
Eshelman School of Pharmacy
Chapel Hill, NC 27599-7568
[http://www.pharmacy.unc.edu/research/facilities-resources-and-services/nmr-facility](http://www.pharmacy.unc.edu/research/facilities-resources-and-services/nmr-facility)
(919) 962-0060

Contact Information:
Karl Koshlap, Ph.D.
koshlap@unc.edu
(919) 962-0060

Description:
The facility houses both Inova 400 and 500 MHz spectrometers, as well as a 400MR spectrometer. The laboratory has experience and capabilities with both small molecule and natural product NMR, as well as biomolecular structure and dynamics.

Keywords:
NMR; small molecule NMR; natural-products NMR; biomolecular NMR; biomolecular structure and dynamics
Eton Bioscience DNA Sequencing

Eton Bioscience Inc.
104 T.W. Alexander Drive, Building #7
Research Triangle Park, NC 27709
http://www.etonbio.com
(919) 314-5539

Contact Information:
Richard Tsai
richard@etonbio.com
(919) 314-5539

Region: Research Triangle
Organization Type: Commercial

Director: David Butterfield

Description:
A bio-services company specialized in DNA sequencing and fragment analysis. Offers fast turnaround time with overnight delivery. Local clients will also enjoy free sample pick-up by Eton staff.

Keywords:
DNA sequencing, peptide synthesis, primer walking, genes, genomics, vectors, fragment analysis, ABI 3730, microarray, core facility, next generation sequencing, Solexa, Illumina, ABI Solid, 454 Roche, adenovirus, protease
Expression Analysis

Expression Analysis
4324 S. Alston Avenue #101
Durham, NC 27713
http://www.expressionanalysis.com
(919) 405-2248

Contact Information:
Karen Michailo
kmichailo@expressionanalysis.com
(919) 287-4277

Region: Research Triangle
Organization Type: Commercial

Director: Steve McPhail

Description:
Providing whole genome to focused set gene expression/genotyping assays and sequencing services. Genomic services for clinical trials and research – solutions for whole blood specimens and FFPE tissues, also nucleic acid isolation and bioinformatics.

Keywords:
Gene Expression Profiling, Genotyping, DNA Sequencing, RNA-Seq, Gene Enrichment, Bioinformatics, Affymetrix, Illumina, Fluidigm, RainDance Technologies, Pacific Biosciences, FFPE Data Analysis, Bioinformatics

Additional Comments:
Our quality system follows CLSI guidelines and our CLIA-registered laboratory supports GLP compliance.
Flow Cytometry Core Facility

University of North Carolina at Chapel Hill
618 Mary Ellen Jones Building, CB#7290
Chapel Hill, NC  27599-7290
http://www.med.unc.edu/flowcytometry
(919) 966-1530

Contact Information:
Nancy C. Fisher, Ph.D.
nancy_fisher@med.unc.edu
(919) 966-7812

Description:
The UNC Flow Cytometry Facility provides state-of-the-art flow cytometry and related services to the entire UNC-CH research community as well as to others in the Research Triangle Park area.

Keywords:
Flow Cytometry Analysis
Cell Sorting
BSL-2 containment
Cell Cycle, Cell Division, Detection of Fluorescent Protein expression, Microparticle analysis, Cell phenotyping with fluorescent antibodies, viability, Signaling, Cytokine expression

Additional Comments:
A skilled staff provides help with instrument setup, data analysis, and consultation for experiment design. Training is available to enable investigators and their staff to run the analytical cytometers themselves at reduced cost. A major part of our mission is to teach this technology to investigators, students, and staff. Please do not hesitate to contact us if you have any questions about flow cytometry, if you want to know if you can use it in your research, how to design experiments, prepare samples, or how to analyze your data.
Core Laboratory Facilities in North Carolina – Research Triangle Region

Genomic Sciences Laboratory (GSL)
North Carolina State University
Genomic Research Laboratory
Campus Box 8619
Raleigh, NC 27695
http://gsl.cals.ncsu.edu
(919) 513-3881

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Jennifer Schaff, Ph.D.
jeschaff@ncsu.edu
(919) 513-0738

Director: Jennifer Schaff, Ph.D.

Description:
The GSL provides NCSU and other scientific communities with high-throughput DNA sequencing and genotyping, functional genomic assays, protein identification and characterization as well as metabolomics, biochem. profiling and target compound analyses.

Keywords:
DNA sequencing (Sanger) and genotyping, GS FLX 454 sequencing, Proteomics, Protein ID, Metabolomics profile, target compounds, robotic liquid handling, 96-well DNA plasmid or tissue prep
Core Laboratory Facilities in North Carolina – Research Triangle Region

Gentris Corporation

Gentris Corporation
133 Southcenter Court, Suite 400
Morrisville, NC  27560
http://www.gentris.com/
(919) 465-0100

Contact Information:
Scott Clark, Ph.D.
clarks@gentris.com
(919) 653-5534

Region: Research Triangle
Organization Type: Commercial

Director:  Scott Clark, Ph.D.

Description:
Gentris Corporation is a GLP facility providing genomic and biostorage services to pharmaceutical and biotechnical companies.

Keywords:
Nucleic Acid Purification, Assay Development, Genotyping, qRT-PCR, microarray technology, bioinformatics, tumor profiling, sample management, biostorage, and consulting
Core Laboratory Facilities in North Carolina – Research Triangle Region

Golden LEAF Biomanufacturing Training and Education Center (BTEC)

North Carolina State University
850 Oval Drive
Raleigh, NC  27606
http://www.btec.ncsu.edu
(919) 513-2000

Contact Information:
Rick Lawless
rick_lawless@ncsu.edu
(919) 515-8526

Description:
BTEC houses 63,000 GSF of fermentation, cell culture, recovery, purification, and analytical lab space for training NCSU students and industry professionals in bioprocessing. BTEC also offers its capabilities for projects with industry and use by NCSU researchers.

Keywords:
pre-clinical process development, analytical testing, analytical test development, cGMP training, fermentation, BL-2 laboratory, cell culture, centrifugation, homogenization, chromatography, ultrafiltration, diafiltration, filtration, clean utilities

Additional Comments:
Pre-clinical processing for non-human use only, Good Large-scale Safety Practice only
Interdisciplinary Human Movement Science Lab

University of North Carolina at Chapel Hill
180 Medical School Wing D
Chapel Hill, NC 27599
(919) 966-4041

Contact Information:
Michael Lewek, PT, Ph.D.
mlewek@med.unc.edu
(919) 966-4041

Description:
This state-of-the-art laboratory is designed to perturb, measure, and analyze human movement, primarily gait. The centerpieces of the lab are a 3D motion capture system, dual-belt instrumented treadmill, and custom designed virtual environment.

Keywords:
kineomatic/kinetic/electromyographic monitoring, visual and proprioceptive feedback/perturbations
Kryosphere

Kryosphere, Inc. - RTP
4222 Emperor Blvd., Suite 300
Durham, NC  27703
http://www.kryosphere.com
(919) 941-9999

Region: Research Triangle
Organization Type: Commercial

Contact Information:
L. Eric Hallman, Ph.D.
ehallman@kryosphere.com
(919) 941-9999 x223

Director: Douglas Baker

Description:
The comprehensive solution to any researcher’s sample management needs. We offer custom biorepository services; management of clinical trial samples; tracking; stability studies; cryopreservation training; and transportation in a GMP, regulatory compliant environment.

Keywords:
Biorepository; cold-chain-of-custody logistics; management clinical trial samples; lab relocation; sample tracking; grant maximization; sample management; biostorage; stability studies; cryopreservation; local or global transport of samples and freezers
Core Laboratory Facilities in North Carolina – Research Triangle Region

Laboratory for Advanced Electron and Light Optical Methods

North Carolina State University
College of Veterinary Medicine
4700 Hillsborough Street
Raleigh, NC  27607
http://www.cvm.ncsu.edu/research/laelom
(919) 513-6202

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Michael J. Dykstra, Ph.D.
michael_dykstra@ncsu.edu
(919) 513-6202

Director: Michael J. Dykstra, Ph.D.

Description:
Light and Electron Microscopy Services

Keywords:
Light microscopy, scanning electron microscopy, transmission electron microscopy, specimen preparation services
Light Microscopy Core Facility (LMCF)

Duke University
4215 French Family Science Center
124 Science Drive
Box 90338
Durham, NC 27708
http://microscopy.duke.edu
(919) 613-8216

Contact Information:
Sam Johnson, Ph.D.
sam.johnson@duke.edu
(919) 613-8216

Region: Research Triangle
Organization Type: Academic / Non-Profit

Description:
The Light Microscopy Core Facility (LMCF) offers a wide range of confocal and fluorescence microscopes and image analysis resources. We aim to offer affordable and efficient access to standard and advanced imaging instrumentation.

Keywords:
Light microscopy, fluorescence imaging, confocal, multiphoton, live cell imaging, image analysis
Core Laboratory Facilities in North Carolina – Research Triangle Region

Michael Hooker Microscopy Facility

University of North Carolina at Chapel Hill
6129 Thurston Bowles, CB#7248
Chapel Hill, NC  27599-7248
http://microscopy.unc.edu
(919) 843-3268

Contact Information:
Michael Chua, Ph.D.
microscopy@unc.edu
(919) 843-3268

Region:  Research Triangle
Organization Type:  Academic / Non-Profit

Director:  Michael Chua, Ph.D.

Description:
The facility provides standard and advanced light microscopy and image processing resources, including live cell/tissue multiphoton confocal. Assistance is provided to enable users to acquire, process and analyze images from samples they have prepared.

Keywords:
Microscopy; microscope; imaging; light; image; processing; laser scanning; confocal; multiphoton; live cell; tissue; colocalization; fluorescence; FRAP; FRET; photoactivation; 3D; volume render; deconvolution; time lapse; montage; macroscope; stereo
NCSU Flow Cytometry and Cell Sorting Facility

North Carolina State University
College of Veterinary Medicine
4700 Hillsborough Street
Main Vet Building, Room C-309
Raleigh, NC  27607
http://www.cvm.ncsu.edu/ccmtr/flocyt.html
(919) 513-6443

Contact Information:
Janet Dow
jldow@unity.ncsu.edu
(919) 513-6443

Description:
The laboratory provides instrumentation and assistance for multi-parameter flow cytometric analysis and sorting. It is available for use to all NCSU researchers and to those outside the NCSU community and operates as a by appointment, fee for service lab.

Keywords:
Sorting, Flow Cytometry, Fluorochromes, Lasers
Core Laboratory Facilities in North Carolina – Research Triangle Region

NCSU Mass Spectrometry Facility

North Carolina State University
2620 Yarbrough Drive
Dabney Hall Room 16, Campus Box 8204
Raleigh, NC  27695
http://www.ncsu.edu/chemistry/msf/
(919) 515-6279

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Taufika Islam Williams, Ph.D.
taufika_williams@ncsu.edu
(919) 513-7791

Director: Taufika Islam Williams, Ph.D.

Description:
The North Carolina State University Mass Spectrometry Facility (NCSU MSF) offers a variety of mass spectrometers providing analysis through an array of methods for sample introduction, ionization and mass measurement.

Keywords:
Mass spectrometry, accurate mass analysis, MS/MS, gas chromatography, MALDI, liquid chromatography, proteomics, small molecule analysis, quantification

Additional Comments:
Our mass spectrometers include the following: Thermo Fisher Scientific LTQ Orbitrap XL, Agilent Technologies 6210 LC-TOF, Agilent Technologies 5975 GC/MS, Thermo Fisher Scientific TSQ Quantum Discovery MAX Triple Quadrupole MS, Agilent Technologies GCD and AB Sciex 5800 MALDI-TOF/TOF MS.
Core Laboratory Facilities in North Carolina – Research Triangle Region

Shared Materials Instrumentation Facility (SMIF)

Duke University
Box 90271
Fitzpatrick Building
Durham, NC 27708
http://smif.lab.duke.edu
(919) 660-5486

Contact Information:
Mark D. Walters, Ph.D.
mark.walters@duke.edu
(919) 660-5486

Description:
SMIF provides researchers with access to advanced characterization and clean room fabrication capabilities. SMIF is available to all Duke University researchers and to external users from other universities, government labs, and industry.

Keywords:
Electron Microscopy (SEM, TEM)
Atomic Force Microscopy (AFM)
Optical Spectroscopy (Raman, FTIR, UV-Vis)
XPS
X-ray Diffraction
E-Beam and Optical Lithography
Evaporation, Sputter and PECVD Deposition
RIE and Chemical Etching
Furnace Processing

Region: Research Triangle
Organization Type: Academic / Non-Profit

Director: Mark D. Walters, Ph.D.
TransViragen Inc.
PO Box 110301
Research Triangle Park, NC 27709
http://transviragen.com
(919) 371-0286, (866) 245-6076

Contact Information:
Donna Bortner, Ph.D.
donna@transviragen.com
(919) 371-0286

Description:
Contract research services company specializing in custom genetically modified rodent models. Services include model design, vector construction, gene targeting, ES cell microinjection, transgene pronuclear injection model breeding and characterization.

Keywords:
Animal model design, gene targeting in embryonic stem cells, blastocyst microinjection, pronuclear microinjection, targeting vector and transgene construction, ES cell derivation, model breeding and characterization
UNC Animal Models Core Facility

University of North Carolina at Chapel Hill
5061 Genetic Medicine Building
120 Mason Farm Road, CB#7264
Chapel Hill, NC 27599-7264
http://med.unc.edu/amc
(919) 843-9125

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Dale Cowley, Ph.D.
dale_cowley@med.unc.edu
(919) 843-9125

Description:
The UNC Animal Models Core provides custom genetically modified mice and related services including model design, vector construction, gene targeting, ES cell screening, ES cell microinjection, transgene pronuclear injection and model characterization.

Keywords:
Animal model design and consulting, gene targeting in embryonic stem cells, blastocyst microinjection, pronuclear microinjection, targeting vector and transgene construction, ES cell derivation, model breeding and characterization
UNC High Throughput Peptide Synthesis and Array Core Facility (HTPSA)

University of North Carolina at Chapel Hill
3057 Genetic Medicine Building
120 Mason Farm Road, CB#7260
Chapel Hill, NC 27599-7260
http://www.med.unc.edu/biochem/unc-peptides
(919) 843-3935

Region: Research Triangle
Organization Type: Academic / Non-Profit

Contact Information:
Krzysztof Krajewski, Ph.D., Director
kka@med.unc.edu
(919) 843-3935

Faculty Director: Brian D. Strahl, Ph.D.

Description:
Our facility makes synthetic peptides and peptide arrays for research. We specialize in synthesis of multiply modified peptides containing PTMs, unnatural amino acids, and fluorescent tags.

Keywords:
Peptides, post-translational modified peptides, peptide libraries, peptide arrays
UNC Macromolecular Interactions Facility (Mac-In-Fac)

University of North Carolina at Chapel Hill
B-30 Wilson Hall, CB#3280
110 South Road
Chapel Hill, NC 27599-3280
http://www.med.unc.edu/biochem/macinfac
(919) 962-2362

Contact Information:
Ashutosh Tripathy, Ph.D.
ashutosh_tripathy@med.unc.edu
(919) 962-2362

Description:
The Mac-In-Fac provides instrumentation and resources for biophysical characterization of macromolecules and their interactions using microcalorimeters, SPR-based biosensors, analytical ultracentrifuges, CD spectrometer, and light scattering instruments.

Keywords:
Biomolecular Interactions, light scattering, SPR, biosensor, SPR-based biosensor, analytical ultracentrifugation, Auto-ITC200, microcalorimeters, FS plate reader, circular dichroism, fluorimeter, molecular weight determination
Core Laboratory Facilities in North Carolina – Research Triangle Region

UNC Microbiome Core Facility

University of North Carolina at Chapel Hill
312 Isaac Taylor Hall, CB#7545
School of Medicine
Chapel Hill, NC 27599-7545
http://www.med.unc.edu/microbiome
(919) 962-3569

Contact Information:
M. Andrea Azcarate-Peril, Ph.D.
azcarate@med.unc.edu
(919) 966-9838

Director: M. Andrea Azcarate-Peril, Ph.D.

Description:
Our mission is to provide the research community of the UNC School of Medicine and the state of North Carolina with the facilities and the expertise to characterize complex microbial communities in a variety of environments.

Keywords:
Amplicon pyrosequencing, Terminal Restriction Fragment Length, Polymorphism (TRFLP) Analysis, Quantitative (q)-PCR, Clone Library Creation, Consulting and Research Support including: Sample genomic DNA isolation, Plasmid and virus nucleic acids
University of North Carolina at Chapel Hill Core Laboratory Facilities

University of North Carolina at Chapel Hill
Chapel Hill, NC 27515
http://www.med.unc.edu/corefacilities

Region: Research Triangle
Organization Type: Academic / Non-Profit

Description:
UNC-Chapel Hill hosts more than 50 core facilities. A wide range of services is provided from analytical chemistry to microscopy to X-ray crystallography among others. Access to services may vary. Contact the individual core facility for more information.
Core Laboratory Facilities in North Carolina – Southeastern Region

Biotechnology Research and Training Center (BRTC)

University of North Carolina at Pembroke
115 Livermore Drive
Pembroke, NC  28372
http://www.uncp.edu/biotech
(910) 521-6650

Contact Information:
Len Holmes, Ph.D.
len.holmes@uncp.edu
(910) 521-6650

Description:
Fermentation: bench to pilot scale  We will provide affordable, practical hands-on training on bioreactor set-up, operation and harvest. Also, we will grow biomass (non-cGMP) for customers.

Keywords:
fermentation technology; microbial liquid culture
Core Laboratory Facilities in North Carolina – Southeastern Region

CMS DNA Core Facility
University of North Carolina Wilmington
5600 Marvin K. Moss Lane
Wilmington, NC  28409
http://www.uncw.edu/cms
(910) 962-2375

Contact Information:
D. Wilson Freshwater, Ph.D.
freshwaterw@uncw.edu
(910) 962-2375

Region: Southeastern
Organization Type: Academic / Non-Profit

Director: D. Wilson Freshwater, Ph.D.

Description:
The CMS DNA Analysis Core Facility provides UNCW faculty, students and researchers with the state-of-the-art infrastructure and expertise needed to generate and analyze DNA data for research and education.

Keywords:
DNA sequencing, DNA fragment analysis, Q-PCR

Additional Comments:
Open to outside users collaborating with UNCW investigators.
Core Laboratory Facilities in North Carolina – Southeastern Region

UNCW Center for Marine Science

University of North Carolina Wilmington
5600 Marvin K. Moss Lane
Wilmington, NC 28409
http://www.uncw.edu/cmsr
(910) 962-2301

Region: Southeastern
Organization Type: Academic / Non-Profit

Contact Information:
Mellissa Dionesotes
dionesotesm@uncw.edu
(910) 962-2330

Director: Daniel G. Baden, Ph.D.

Description:
The mission of the Center for Marine Science at UNCW is to promote basic and applied research in the fields of oceanography, coastal and wetland studies, marine biomedical and environmental physiology, and marine biotechnology and aquaculture.

Keywords:
Mariculture, diagnostics, bioassays, screening, chemical diversity, molecular diversity, culturing of marine organisms, structure determination, and dna sequencing
Core Laboratory Facilities in North Carolina – Western Region

BioNetwork BioBusiness Center & Laboratory
North Carolina Community College System
Asheville Buncombe Technical Community College, Enka Campus
1463 Sand Hill Road
Candler, NC 28715
http://www1.abtech.edu/content/bionetwork-biobusiness-center/biobusiness-laboratory
(828) 254-1921 x5845

Contact Information:
Sarah Schober
sschober@abtech.edu
(828) 254-1921 x5845

Description:
The BioNetwork BioBusiness Center & Laboratory’s mission is to support natural product and life science entrepreneurs through tailored business, education, laboratory and manufacturing services. We specialize in helping our customers understand and comply with the Food and Drug Administration (FDA) current good manufacturing practices (cGMP) regulations for dietary supplements. Not only do we provide method development, analytical services and limited product development for our customers, but we also provide rentable lab space for individuals and companies interested in performing their own product research, testing and development.

Keywords:
Natural Products Laboratory, NPL, Herbal Medicine, Dietary Supplements, FDA Herb, Herbal Good Manufacturing Practices, GMP, Herb School, Herbal GMP, Herbal GMP Manufacturing, FDA Herbs
Core Laboratory Facilities in North Carolina – Western Region

Dewel Microscopy Facility

Appalachian State University
112 Rankin Science South
572 Rivers Street
Campus Box 32027
Boone, NC 28608-2027
http://www.casmifa.appstate.edu/
(828) 262-2682

Contact Information:
Guichuan Hou, Ph.D.
houg@appstate.edu
(828) 262-2682

Region: Western
Organization Type: Academic / Non-Profit

Description:
We provide light microscopy, laser scanning confocal microscopy, and electron microscopy (TEM & SEM) equipment and technical support to ASU and western North Carolina.

Keywords:
Optical microscopy imaging, Laser scanning confocal microscopy imaging, scanning electron microscopy (SEM) imaging, and transmission electron microscopy (TEM) imaging, and SEM/TEM x-ray elemental analysis.

Additional Comments:
See policy at: http://www.casmifa.appstate.edu/Policies.html
Core Laboratory Facilities in North Carolina – Western Region

Enology Services Laboratory

Appalachian State University
CAP Building, Room 433
525 Rivers Street
Boone, NC 28608
http://wine.appstate.edu/lab/services
(828) 406-6014

Contact Information:
Hollis Price
enology@appstate.edu
(828) 406-6014

Director: Hollis Price
Region: Western
Organization Type: Academic / Non-Profit

Description:
The Enology Services Laboratory offers basic and advanced chemical analysis of craft beverage products. Detailed analyses such as phenolics, aroma compounds, and microbiology panels are also available. Call to discuss tailored analytical services.

Keywords:
Fermentation, wine, beer, grape, hop, phenolics, alcohol, distillate, food science, GC, HPLC, biofuels, sensory analysis
Core Laboratory Facilities in North Carolina – Western Region

Molecular Genetics Research Lab
North Carolina State University
Mountain Horticultural Crops Research and Extension Center
120 Research Drive
Mills River, NC  28759
(828) 654-8590

Region: Western
Organization Type:  Academic / Non-Profit

Contact Information:
Dilip Panthee, Ph.D.
dilip_panthee@ncsu.edu
(828) 654-8590

Director: Dilip Panthee, Ph.D.

Description:
Molecular genetics analysis including genotyping of populations for molecular markers analysis, QTL analysis and marker-assisted selection. The real-time PCR can be used for gene expression analysis.

Keywords:
Capillary electrophoresis, DNA extraction, Genotyping, Marker-assisted selection (MAS), Real-time PCR

Additional Comments:
All investigators working at Mountain Horticultural Crops Research and Extension Center (MHCREC) will have free access to use any of these equipment for their research. However, they will have to schedule their time in coordination with the technician from the tomato breeding program. Investigators from outside the MHCREC are also encouraged to use the research facility whenever necessary. All users are expected to contribute supplies, particularly QIAxcel cartridge, micro plates, grinding beads, and tubes.