

# Equipment/Facilities/Services

## Available for Collaboration

The following information was provided by the Rootstown campus offices and the research offices for the institutions listed.

### Akron Campus

#### Akron General Medical Center

##### Calhoun Research Laboratory

Contact: Lisa B. Treen, M.T., M.B.A.  
Laboratory Manager  
330-344-6084  
FAX 330-344-2336  
E-mail: ltreen@agmc.org

Equipped to conduct biomedical research, basic and developmental; small animal studies; in vitro studies; clinical research. Maintains research database for clinical and basic science studies.

##### *Animal/Surgical Applications*

Equipment: Leticia Tail Cuff blood pressure monitor; Applied Fiberoptics MicroSystem operating microscope; Harvard Small Animal Volume Ventilator; Shaw Catheter Oximeter System; Mennen Medical Cardiac Monitor; Bovie; 5 low flow dual channel peristaltic infusion pumps; Instech small animal cannula swivels with stainless steel anchor buttons; general surgical instruments; microsurgical instruments; disposable surgical supplies; ETOH and steam sterilization, pneumoperitoneal insufflators.; microsurgical training apparatus.

Established Small Animal Models: peritoneal insufflation, intraabdominal sepsis; carotid angioplasty and restenosis, preeclampsia, tumor cell growth: local and pulmonary metastasis; orthotopic mammary and ovarian cancers in the Fischer 344 rat; dorsal flap/wound healing, full-thickness wound healing, mastectomy-seroma.

Additional services: assistance with the completion of animal care and use forms and methods development for animal models.

##### *Analytical Equipment & Applications*

Contact: Kimberly Stakleff, M.S.  
Research Biotechnologist  
330-384-6236

##### *Microscopes*

Olympus BX51 light microscope with universal infinity optical design and objectives. Equipped with video camera and BioQuant Nova Prime version 6.50.10 image analysis software for live image capture and evaluating morphometric data. Nikon inverted phase microscope; Nikon light microscope with differential interference contrast (DIC); 35 mm and digital cameras can be attached with either microscope.

##### *Tissue Culture*

Laminar and horizontal flow hoods, CO<sub>2</sub> incubator, Z1 Coulter counter. Culture techniques include normal human derived endothelial cells, endothelial progenitor cells, fibroblasts and keratinocytes, normal rat derived vascular smooth muscle and bone marrow; human and rat breast, ovarian and colon cancer cells.

##### *Cellular/Molecular*

Electrophoresis equipment: vertical - minigel/horizontal - agarose unit. Darkroom for exposing and developing film. Stable transfection and cloning of cells with GFP (green fluorescent protein) for use with in vivo application. Immunohistochemistry of human and animal tissues for a variety of biomarkers.

##### *Gilson High Performance Liquid Chromatography*

Gradient unit with variable UV wavelength detector. Assays for hydroxyproline of tissue and cell culture media, antibiotic levels, prostaglandins, angiotensin peptides and leukotrienes have been developed.

*Smoke exposure system*

Capable of delivering mainstream and sidestream smoke. Adaptable to different experimental models, tissue culture and perfused organs.

*Spectrophotometric Assays*

μQUANT Universal Microplate Spectrophotometer (2-999 nm).  
Gilford variable wavelength spectrophotometer with aspirator.

*Infectious Disease/Microbiology*

Microtiter procedures for MICs and other bioassays.

*Auto-gamma Scintillation Spectrometer  
Beta Scintillation Counter*

Limited approval for use of radioisotopes.

**Computer Capabilities**

7 IBM PCs, HP Laserjet and inkjet printers; HP Scanjet 7400C; research lab staff knowledgeable in data management with Access, Excel, PowerPoint, Sigma Plot. Digital cameras, Kodak MDS Photomicroscopy and Adobe Photoshop software.

***Biomaterials/  
Biomechanical Test Lab***

Resources include Instron material test machine and 20 channel Realtime data acquisition capability for testing mechanical properties of biological and other materials.

Contact: Glen Njus, Ph.D.  
Dir., Solid Mechanics Lab  
330-344-6340

Critical Care Research

Research associate to assist in protocol development, consent forms, data collection and analysis for critical care patients.

Contact: Darell Heiselman, D.O.  
Chief, Critical Care Medicine  
330-344-6416  
Fax: 330-996-2499  
email: darell153@aol.com  
or  
Pam Stock, R.N.  
330-344-1788  
Fax: 330-344-6701  
Email: pstock@agmc.org

Emergency Medicine Research

Research associate to coordinate grants, develop and implement clinical and EMS prehospital research protocols. Provides EM Resident Research Rotation. Assists with presentations and manuscript preparation.

Contact: Lynn White, M.S.  
Research Coordinator  
330-344-6484  
or  
C. Jo Williams, M.S.  
330-344-2044

Internal Medicine Department

Assists in protocol development, implementation of basic and clinical research, grant writing, data analysis and manuscript preparation.

Contact: Nairmeen Awad Haller, Ph.D.  
Research Coordinator  
330-344-6001  
or  
Barb Parks, R.N.  
Research Assistant  
330-344-1181

Research assistant to assist in protocol development, consent forms, data collection and analysis.

Department of Obstetrics/Gynecology

Research coordinator to assist in protocol development, consent forms, data collection and analysis; implementation of clinical research, assist with manuscript preparation and resident research.

Contact: Karen Keaton, R.N., M.P.H.  
Research Coordinator  
330-344-7681

Oncology Research

Three clinical research associates, certified oncology nurses; involved in cooperative research (SWOG, RTOG, GOG, ACOSOG, ACRIN, NSABP) and pharmaceutical company sponsored trials.

Contact: Andrew Fenton, M.D.  
330-344-6500  
or  
Kim Surface, B.S.N., R.N., OCN  
Clinical Research Associate  
330-344-6348

or

Cathy Farmer, R.N., O.C.N.  
Clinical Research Associate  
330-344-6348

or

Amy Gerber, R.N., O.C.N.  
Clinical Research Associate  
330-344-6348

#### Pharmacy Research

Contact: Joe Snoke, R.Ph., BCPS  
Assistant Director  
Clinical Services  
330-344-6626

Doctor of Pharmacy (Pharm.D.) available for research consultation and collaboration. Will assist in protocol development, implementation and grant writing. Coordinates administration of drugs, recordkeeping, etc., for research projects.

### **Barberton Citizens Hospital**

#### Overall Research Program

Contact: Joel B. Miller, M.D.  
Chairman, Institutional Review  
Board  
330-745-1611, Ext. 3283

Contact concerning proposed research activity should be made through the Chairman of the Institutional Review Board.

### **Children's Hospital Medical Center**

#### Anesthesiology

Contact: Thomas R. Vetter, M.D.  
330-543-8503

Pediatric pain assessment and management; novel anesthetic techniques; use of complementary and alternative medical therapies for pain control.

#### Developmental Pediatrics Division

Contact: John Duby, M.D.  
Director  
330-543-8261

Provides medical and diagnostic services for children with developmental disabilities or at risk for developmental disabilities. Provides direction for multidisciplinary teams for children with cerebral palsy and spina bifida and for finding community-based ongoing habilitative and rehabilitative services for children with developmental disabilities. Provides direct services to children who graduate from NICU, or children referred by community physicians or agencies.

#### Orthopaedics Department

Contact: Dennis S. Weiner, M.D.  
330-535-7705

Research interests in clubfeet, slipped capital femoral epiphysis, Legg Perthes Disease, congenital hip dislocation, cerebral palsy, complex foot disorders – skeletal dysplasia.

#### Pathology Department

Contact: Robert Novak, M.D.  
Chairman, Pathology  
330-543-8725

Molecular pathology, including real-time PCR, cytogenetics, including FISH, CGH and spectral karyotyping, virology, electron microscopy, fetal pathology, renal pathology and neuropathology.

#### Radiology Department

Contact: Godfrey Gaisie, M.D.  
330-543-8778

Diagnostic ultrasound/X-ray/C.T.; Scanner/Nuclear Medicine/MRI.

### **Summa Health System**

#### **(Akron City Hospital; St. Thomas Hospital)**

#### Acute Care for Elders (A.C.E.) Clinical Research Center (Medicine)

Contact: Kyle Allen, D.O.  
330-630-7044  
or  
Susan Hazelett  
330-375-3051

To determine the efficacy of the A.C.E. Unit's Prehab Program to lessen functional decline in acutely ill medical patients over the age of 70 years in a community hospital. Database contains functional, cognitive, physiological and psychosocial measurements on over 1500 acutely ill elderly patients, one half whom were randomized to care on the A.C.E. Unit, the other half to usual care. This research is one project overseen by the Health Services Research and Education Institute. Access to elderly patients on ACE Unit, and post-hospital geriatric rehab units.

Alcohol Pharmacology Research Laboratory

Contact: Robert A. Liebelt, PhD, M.D.  
Ignatia Hall/Family Practice

Basic science and clinical research laboratory studying the pharmacokinetics and diagnosis of alcoholism, especially acetylaldehyde metabolism.

Biostereometrics Laboratory

Contact: Daniel B. Sheffer, Ph.D.  
or  
C. William Loughry, M.D.  
330-375-3850

Breast cancer detection using laser holographic interferometry, holographic.

Cardiology Research Program (Medicine)

Contact: Richard A. Josephson, M.D.  
330-375-4901 or 330-253-8195

Clinical trials testing thrombolytic agents and cardiac medical devices (cardiac catheters, balloon angioplasty, pacemakers, etc.)

Cardiac Rehabilitation Research Center: Residents, graduate students, staff, physicians and faculty research various areas of cardiac rehab.

Emergency Medicine Research Center (Emergency Medicine)

Contact: Michelle Blanda, M.D.  
330-375-7530

Geriatric emergencies; cost-effectiveness, cost-utilization outcome studies; acute medical emergencies, especially cardiovascular, neurologic, asthma. Geriatric screening and interventions.

Endocrinology

Contact: Mahmood F. Moosa, M.D.  
330-535-4530  
or  
Richard Shewbridge, M.D.  
330-535-4530  
Toni King, M.D.  
330-535-4530

Office suite, access to patients and clinical laboratories. Research related to diabetes control and diagnosis.

Falor Division of Surgical Research (Vascular Research Laboratory)

Contact: Steven P. Schmidt, Ph.D.  
330-375-3693  
or  
Stanley Rittgers, Ph.D.  
330-375-3453

Surgery-related research with primary emphasis upon direct diagnostic and therapeutic relevance. Projects include studies of prosthetic blood vessels, endothelial cell seeding, anti-thrombotic and anti-proliferative agents, angiogenesis, clinical studies of improved diagnostic techniques and wound healing treatments and evaluation of novel surgical techniques and equipment, including advanced laparoscopic surgery. The research is performed in collaboration with the Department of Surgery, the Non-Invasive Vascular Lab, Summa's Wound Care Center of Northeast Ohio, the Department of Biomedical Engineering (The University of Akron) and the Surgical Research/Vivarium Department.

Stroke Outcomes Research

Contact: Kyle Allen, D.O.  
330-375-3747  
or  
Susan Hazelett  
330-375-3051

Research on improving biopsychosocial outcomes in stroke survivors. Access to patients on a specialized Stroke/TIA Unit. A research associate and RN data collector are available to assist in the design, implementation, and analysis of stroke-related trials. This research is one project undertaken by the Health Services Research and Education Institute.

Family Practice Clinical Research Center

Contact: William D. Smucker, M.D.  
330-375-4049  
or  
Everett Logue, Ph.D.  
330-375-7789

Coordinates the research efforts of faculty and residents, concentrating on health care outcomes, research and issues relevant to the care of elderly patients, and research related to nutrition and exercise or the management of chronic disease in primary care.

Infectious Disease Research Department

Contact: James S. Tan, M.D.  
330-375-3894  
or  
Sara-Jane Salstrom  
Research Associate  
330-375-4293

*Clinical Research:* Clinical safety and efficacy trials testing antimicrobial agents and sepsis mediators with low toxicity and a high potential for FDA approval; epidemiological tracking studies; cost-effectiveness, cost-utilization studies.

#### Internal Medicine Center

Contact: Dale P. Murphy, M.D.  
330-375-3315

#### Molecular Pathology Research Laboratory (Pathology and Laboratory)

Contact: Thomas Alexander, Ph.D.  
330-375-3719

#### Musculoskeletal Research Laboratory

Contact: Michael J. Askew, Ph.D.  
330-379-5580  
or  
Ivan A. Gradisar, Jr., M.D.  
330-668-4040, Ext. 441

#### Nursing Research Center

Contact: Eileen Fleming, M.S.N., R.N.  
330-375-7553

#### Office of Research and Research Administration

Contact: Jere M. Boyer, Ph.D.  
Director of Research and  
Research Administration  
330-375-4788

#### Oncology Research Program (Medicine)

Contact: Joyce Neading, R.H.I.T.  
Manager, Cancer Research  
Program  
330-375-4221  
or  
William Demas, M.D. (RTOG)  
330-375-3557  
or  
R. Douglas Trochelman, M.D.  
(ECOG) (STAR) (SELECT)  
330-375-3772  
or  
Michael Seider, M.D. (NSABP)  
330-375-3557

#### Pathology and Laboratory Medicine

Contact: Raymond E. Clarke, M.D.  
330-375-3786

#### Pharmacy Department

Contact: Kenneth Komorny, Pharm.D.  
Education, Investigational and  
Clinical Coordinator  
330-375-4397  
E-mail: [komornyk@summa-health.org](mailto:komornyk@summa-health.org)

Twenty examination rooms equipped with an exam table, sphygmomanometer, ophthalmoscope, and a treatment room used for sigmoidoscopy. Four of these exam rooms have videotaping abilities. A full-time clinical research nurse with 15 years experience doing clinical trials is available.

Provides availability of in situ hybridization, pulse gel field electrophoresis, flow cytometry, and nucleic acid amplification technology. Current projects include using lymphocyte activation antigens to assess cell mediated immunity, molecular epidemiological analysis.

Testing equipment for mechanical property and structural behavior tests of metal, plastic and biological materials along with computer hardware, software and programming expertise for real time data acquisition, data reduction and statistical data analysis.

The Clinical Nursing Research Program provides education and consultation to nurses for the development of research proposals, guidance in the review process, and implementation of the study through data collection and analysis. Additional aid is available to develop research posters, papers and manuscripts. The Coordinator also acts as liaison for extramural researchers interested in Summa as a data collection site.

The Office of Research and Research Administration serves as a centralized resource for research within Summa and provides budgetary, pre- and post-award technology transfer, space/equipment requests, personnel and other administrative support and services to investigators. The office also assists the investigator in complying with Federal rules and regulations, developing protocols and informed consent documents, and the preparation and submission of protocols to both internal and extramural scientific review and funding agencies. The office has a website containing information about research activities. For questions regarding protocol submission, budget preparation, activity reports, or identification of other research-related resources within the health system, please contact the director.

Makes available tertiary treatment and prevention protocols from the National Cancer Cooperative Group clinical trials, including Radiation Therapy Oncology Group (RTOG), Eastern Cooperative Oncology Group (ECOG), National Surgical Adjuvant Breast and Bowel Protocols (NSABP), and Study of Raloxifene and Tamoxifen (STAR) for Prevention of Breast Cancer.

Resources include facilities for cytology; drug studies and chemistry parameters; flow cytometry (cell and DNA studies); immunohistochemistry; immunopathology; facilities supporting gynecology, gastrointestinal, infectious disease pathology and orthopaedic pathology.

Research pharmacist coordinates pharmaceutical research within the department, provides protocol coordination for medical staff pharmaceutical research, and assists in protocol development. Provide drug accountability for all inpatient as well as outpatient research including secure storage, tracking, preparation and dispensing.

Applied Surgical Research Unit  
Falor Division of Surgical Research  
Summa Health System

Contact: M. Michelle Evancho-Chapman  
Manager, ASRU  
330-375-7543  
E-mail: [chapmanm@summa-health.org](mailto:chapmanm@summa-health.org)

Peggy Lynch  
Coordinator, ASRU  
330-375-3694  
E-mail: [lynchp@summa-health.org](mailto:lynchp@summa-health.org)

The Applied Surgical Research Unit (ASRU) is a unit of the Falor Division of Surgical Research within the Department of Surgery at Summa Health System. The ASRU is a 4,100 sq. ft. facility featuring a large animal vivarium, surgical suites for training and research, animal prep area, necropsy room, instrument prep room and support offices/locker rooms. The facility is a registered USDA Research Facility and is accredited by the Association for Accreditation of Laboratory Animal Care.

The ASRU provides trained animal care staff and surgical research staff to assist with the conduct of research protocols and education/training programs.

Surgical Suite equipment includes: Laparoscopic surgery equipment; microsurgery equipment and scopes; anesthesia/ventilator machines; electrosurgical units; HP Bedside Patient Monitor - EKG, pressure, Swan Ganz, temperature; suction/irrigation unit; surgical instruments; EtOH & steam sterilization; disposable surgical supplies - trach tubes, IV's, catheters, syringes, etc.

Urology Research Laboratory

Contact: Jack E. Summers, M.D., Ph.D.  
330-375-4848

or

James Jamison, Ph.D.  
330-325-6468

Basic science testing of chemotherapeutic agents (anthraquinone and xanthene dyes) on double stranded RNA for the treatment of bladder and prostatic cancers.

Vitamin CK3 research in genitourinary and gynecologic malignancies.

## The University of Akron

In addition to these centers and institutes, research is conducted within the various academic departments which have particular interest in promoting collaborative and interdisciplinary research.

Faculty Interest Profiles and General Inquiries  
Regarding Research and Sponsored Programs

Contact: Mary A. Dingler  
Faculty Development  
Coordinator  
Research Services and Sponsored  
Programs  
330-972-7774  
FAX 330-972-6281  
E-mail: [mdingler@uakron.edu](mailto:mdingler@uakron.edu)

Center for Nursing

Contact: Elizabeth Kinion, Ed.D., R.N.,  
F.A.A.N.  
Director  
330-972-6968

Promotes interdisciplinary research at The University of Akron Center for Nursing Clinics. Provides a research and practice laboratory for students and faculty. Member of the NEOUCOM Hayes Research Team in the Department of Family Medicine. The Center for Nursing Clinics provide access to primary health care for persons who do not have health insurance.

Center for Urban Studies

Contact: Raymond Cox, Ph.D.,  
Chair, Dept. of Public  
Administration and Urban  
Studies  
330-972-7618

Develops research and professional service projects in response to the needs of the urban community and to perceived urban issues. Provides advisory and research expertise in a wide range of areas to both the public and private sectors. Provide comprehensive planning assistance to small communities and research on planning-related issues, conducts research relevant to economic issues in northeast Ohio, provides technical assistance such as the provision of data and the preparation of needs assessments. The Center strives to stimulate creative solutions to urban problems by coordinating the urban perspective of the various disciplines and professions.

Institute for Biomedical Engineering Research

Contact: Stanley E. Rittgers, Ph.D.,  
Director  
330-972-6650

Promotes interdisciplinary studies in the rapidly growing areas of knowledge which overlap the fields of biology and medicine, on the one hand, and engineering and the physical sciences, on the other. Provides research service to local hospitals and industry, as well as to private and government agencies.

Institute for Life-Span Development and Gerontology

Contact: Harvey L. Sterns, Ph.D., Director  
330-972-7243

Coordinates multidisciplinary programs in gerontology at the undergraduate and graduate levels. Faculty fellows at the institute representing 15 University departments conduct research and participate in community research and demonstration projects.

Center for Policy Studies

Contact: Jesse F. Marquette, Ph.D.,  
Director

The Institute for Policy Studies houses a number of programs, located in two units, the Urban and Policy Research Division and Institutional Research.

The Urban and Policy Research Division houses The University of Akron Survey Research Center with responsibility for external grant and contract research, research support for the Urban University Linkage Program, sponsored research for faculty, and internal University surveys. The research facility is equipped to facilitate telephone interviewing, mail surveys, focus group administration, intercept studies and personal interviews, database analysis, and computer-assisted data entry and multiple method studies. Most of the work conducted at the Urban and Policy Research Division is on behalf of government or non-profit agencies. Institutional professional staff are available for consultation in the development of grant proposals and budgets.

The Urban and Policy Research Division (URPD) also has responsibility for the administration of the Ohio Board of Regent's Urban University Program (UUP) which links eight state universities to collaborate on the identification of urban problems and propose solutions designed to improve urban regions in Ohio. The University of Akron Urban University Program, in addition to the collaborative mission of the Ohio UUP, coordinates GIS activities with the Department of Geography and Planning.

The Institutional Research Division has responsibility for research and analysis of University operations and assessment. The Institutional Research Division mission is to ensure the timely submission of all appropriate Ohio Board of Regents reports and to coordinate the development and maintenance of the appropriate data structures for the continuing analysis of University operations and assessment. The Institutional Research Division also maintains a regularly updated web site of institutional information.

Institute of Polymer Engineering

Contact: James L. White, Ph.D., Director  
330-972-6865

Carries out fundamental and applied research in polymer processing, engineering performance and associated characterization. The institute seeks to be a major intellectual and research resource in northeast Ohio. Maintains up-to-date and futuristic processing and characterization laboratories, with continued interest in development investigation of new process technology and new materials.

Institute of Polymer Science

Contact: Frank Harris, Ph.D., Director  
330-972-5110

Concerned with basic and applied research in polymers. Maintains extensive laboratory facilities and is the principal organization responsible for external funding of research projects and graduate fellowships in polymer science.

Nuclear Magnetic Resonance (NMR)

Contact: Peter L. Rinaldi, Ph.D., Director  
Molecular Spectroscopy Lab  
330-972-5990

Serves as an NMR teaching and research facility—750 MHz NMR as well as several other lower field solution and solid state NMR instruments.

## Canton Campus

### Aultman Hospital

#### Overall Research Program

Contact: Karl M. Nelson, Ph.D.  
Research Director  
330-452-9911, ext. 6793

1 Ph.D. research director; community and hospital-wide clinical research; consults on research; assists with analysis.

#### Cancer Program

Contact: Terry Mamounas, M.D.  
Aultman Cancer Center Medical  
Director  
330-452-9911, ext. 6275

Cancer Protocols; Cancer Registry; 6 research nurses; 4 research associates; 2 registry technicians.

#### Emergency Medicine

Contact: Dean Varian, M.D.  
330-456-2695, ext. 6272

Interested in cost containment. No active research presently.

#### Internal Medicine

Contact: Ronald Crock, M.D.  
Research Director,  
Internal Medicine  
330-489-1087

2 clinical laboratories; 2 nurses; especially interested in research on antihypertensives, diabetes and end-of-life care.

#### Pediatrics

Contact: Martha Magoon, M.D.  
Director, Children's Health  
Programs  
330-363-3830

Interests of department include use of surfactants, follow up of NICU graduates, health care delivery to children.

#### Obstetrics/Gynecology and Perinatology

Contact: Michael Hopkins, M.D.  
Program Director, Ob/Gyn  
330-363-6214

Michael A. Krew, M.D.  
Director, Maternal/Fetal  
Medicine  
330-452-9911, Ext. 6296

Prabhcharan Gill, M.D.  
Perinatologist  
Associate Director  
330-452-9911, Ext. 6296

Directs Ob/Gyn residency research.

#### Radiology

Contact: Barry Rose, M.D.  
Program Director  
330-452-9911, Ext. 6205

1 laboratory; directs radiology residency research.

## **Mercy Medical Center**

### Women's Services

Contact: Bryan R. Hecht, M.D.  
Medical Director  
Chairperson, NEOUCOM  
Department of Ob/Gyn

1 full-time research nurse.

Interests: all areas of reproductive endocrinology.

Clinic??? Trials: menopausal therapy; female sexual dysfunction.

### Overall Research Program

Contact: Ronald D. Crock, M.D.  
Chairman, Research Committee  
330-489-1087

### Internal Medicine

Contact: Ronald D. Crock, M.D.  
CMEF  
330-489-1087

2 clinical laboratories; 2 nurses.

## Kent Campus

### Kent State University

#### Facilities and Research Emphases

##### Anthropology

Contact:	C. Owen Lovejoy 330-672-2730	Biomechanics, taxonomy and evolutionary theory; limb development, forensic anthropology, and human origins; 1 laboratory, development.
	Richard S. Meindl 330-672-4363	Biological anthropology, human and primate demography, forensic anthropology, population genetics, North American Indians.
	Marilyn Norconk 330-672-4123	Primate behavior, ecology, and nutrition; multispecies community ecology in neotropics; 1 laboratory, chemical analysis.
	Chet Sherwood 330-672-5121	Biological anthropology, comparative neuroanatomy of the primates and other mammals, cognition and communication; 1 laboratory, stereology techniques.

##### Biological Sciences

Contact:	James L. Blank 330-672-2984	Male reproductive physiology; environmental control of seasonal reproductive and metabolic cycles; neuroendocrinology; behavioral neuroendocrinology; primate biology.
	Brent C. Bruot 330-672-2819	Cellular aspects of reproductive endocrinology; endocrine and paracrine regulation of steroid hormone synthesis; endocrine correlates of induced rheumatoid arthritis.
	Robert V. Dorman 330-672-2363	Neurochemistry of neurotransmitter release and stroke-induced brain damage; signal transduction in vascular smooth muscle cells, as related to atherosclerosis and restenosis.
	J. David Glass 330-672-2934	Neurobiology of the mammalian biological clock; behavioral neuroendocrinology; plasticity in the adult brain; primate circadian behavior.
	Mary Louise Harrison 330-678-4281	Behavioral endocrinology of primates; nutrient selection and primate ecology.
	Douglas Kline 330-672-3810	Gamete physiology; oocyte maturation; in vitro fertilization of mammalian eggs and the regulation of egg activation; cellular imaging.
	Jennifer L. Marcinkiewicz 330-672-5554	Ovarian physiology; ovarian follicle development; oocyte-somatic cell interactions; effect of cytokines on ovarian function, effects of endocrine disrupting chemicals on female reproduction.
	John R.D. Stalvey 672-2945	Molecular endocrinology; cell physiology of the gonads and adrenal gland; endocrine genetics; interaction between hormonal and genetic factors regulating steroid hormone synthesis; regulation of sex determination and differentiation.
	Suzette D. Tardif	Reproductive physiology of neotropical primates; environmental effects on follicular development, gestation, lactation, and maternal behavior.

##### Chemistry

Contact:	Roger B. Gregory 672-2979	Proteomics - development and application of high sensitivity methods for protein characterization, including protein-protein interactions and protein chemical modification. Protein conformational dynamics, protein hydration and glass transition behavior and its role in protein stability and folding. Solid state NMR studies of proteins.
	Thomas I. Pynadath 672-2483	Biochemistry; lipid and lipoprotein metabolism in atherosclerosis; drug-induced effects on serum lipoproteins; thromboxane and prostacyclin synthesis and platelet aggregation.

Chun-che Tsai  
672-2989

Interaction of drugs with nucleic acids; structure and activity of anticancer drugs, antiviral agents, and interferon inducers; structure and biological function relationships; X-ray diffraction; quantitative structure-activity relationships; drug design.

Frederick G. Walz, Jr.  
672-2493

Random and site-directed mutagenesis studies of enzyme catalysis and substrate recognition; comparative enzymology of simple ribonucleases; xenobiotic metabolizing enzymes in liver endomembranes; sexually dimorphic gene expression in rat liver.

College of Nursing  
Center for Nursing Research

Contact: Kathleen Huttlinger, Ph.D., R.N.  
Professor and Director of the  
Center for Nursing Research  
College of Nursing  
Henderson Hall  
330-672-8827  
Fax: 330-672-5003  
E-mail: khuttlin@kent.edu

Functions to develop research and programs within the College of Nursing, to procure extramural funding for research, and to enable interdisciplinary and introagency research efforts. The center provides resource development and depository, consultation and technical assistance, collaboration, and information exchange. Activities and services include:

- Consultation to faculty, graduate students and community for proposal development, grant writing, design, data analysis, and data management,
- Faculty development programs and continuing education offerings to enhance research skills/knowledge,
- Cooperative Site for the International Institute for Qualitative Methodology University of Alberta,
- Facilitation of dissemination and use of research findings,
- A reference materials collection available to faculty and others to facilitate research knowledge acquisition and/or proposal development,
- A directory of faculty research activities including proposals submitted,
- An information and resource center regarding federal and private funding sources,
- Facilitation of collaborative activities with other units on campus to enhance interdisciplinary research endeavors,
- A resource for health care institutions seeking assistance to conduct and collaborate on nursing research.

Diana L. Biordi, R.N., Ph.D.  
330-672-7430

Respite care, women's health; nursing and health care administration.

Sharon Black, R.N., Ph.D.  
330-672-3686

Self-efficiency; scaling.

Harriet Coeling, R.N., Ph.D.  
330-672-3686

Culture and organization.

Claire Draucker, R.N., Ph.D.  
330-672-3686

Incest and sexual abuse in women or men.

Patricia J. Estok, R.N., Ph.D.  
330-672-3686

Women's health care; menstrual response to exercise; menopause.

Davina Gosnell, R.N., Ph.D.  
330-672-7930

Pressure ulcers.

Greer Glazer, R.N., Ph.D.  
330-672-3686

Midlife women.

Barbara Hoshiko, R.N., Ph.D.  
330-672-3686

Pulmonary embolism and thoracic pressure.

Susan L. Jones, R.N., Ph.D.  
330-672-3686

Caregiver burden on the chronically mentally ill; predictors of divorce in long-term marriages.

Ruth Ludwick, R.N., Ph.D.  
330-672-3686

Aging: women's health.

Anita W. O'Toole, R.N., Ph.D.  
330-672-3686

Variables associated with recognition and reporting child abuse.

Susan Taft, R.N., Ph.D.  
330-672-3686

Evaluation; health care administration.

Beatrice Turkowski, R.N., Ph.D.  
330-672-3686

Gerontology.

### Psychology

Contact: Stephen B. Fountain  
330-672-3826/2166

Comparative cognition; neural correlates of learning and memory processes; neurobehavioral toxicology.

Lawrence E. Melamed  
330-672-2335/2166

Neuropsychological assessment of brain damage and cognitive/perceptual deficits.

David C. Riccio  
330-672-2365/2166

Forgetting of stimulus attributes; behavioral aspects of retrograde amnesia; alleviation of memory failure.

### Speech and Pathology and Audiology

Facilities:

The Orofacial Motor Control Laboratory, housed in the School of Speech Pathology and Audiology is designed to acquire and analyze lip and jaw kinematic patterns. Additional equipment allows for objective measures of labial, mandibular and lingual forces. Instrumentation may be attached for use with a wide variety of subjects including children, normal adults, patients with neuromotor disease and the elderly. Indirect examination of speech patterns may also be achieved via acoustic analyses.

Contact: Anthony J. Caruso  
330-672-2672

Sensorimotor processes underlying lip and jaw coordination during speech and nonspeech movements; the breakdown of coordination patterns exhibited by adults and children with fluency disorders; changes in articulatory coordination associated with the normal (nonpathologic) aging process.

Donald P. Gans  
330-672-2672

Auditory electrophysiology; clinical application of otoacoustical emissions.

### Sponsored Programs Development

Contact: Charlee Heimlich  
Director  
330-672-2070

Assists faculty with pre-award activities including information on funding sources, facilitation of proposal preparation, proposal budgeting, proposal writing workshops, funding sources newsletters. Assures proposal compliance with federal regulations. Maintains computerized faculty interests profile database.

### Sponsored Programs Administration

Contact: Carol Toncar  
Director  
330-672-2070

Assists faculty and administrators with post-award activities including grant and contract management, award negotiation, preparation and coordination of inter-institutional subagreements. Administers expanded institutional prior approval authority and monitors university compliance with federal regulations as they apply to grants and contracts.

### Pre and Post Award Administration

Contact: Vacant

Assists the Directors of Development and Administration in activities listed above.

## Rootstown Campus

### NEOUCOM

330-325-2511 Akron  
330-456-0025 Canton  
216-579-1181 Cleveland  
330-747-2247 Youngstown

#### Anatomy

##### *High Performance Liquid Chromatography Lab*

Contact: Dean E. Dluzen, Ph.D.  
Ext. 6300

This laboratory is equipped with an ESA HPLC system for assay of amines (dopamine, norepinephrine, epinephrine, serotonin), and their metabolites. Current work focuses on dopamine and norepinephrine release. This facility is also equipped for in vitro superfusion, push-pull perfusion, microdialysis techniques and analyses of locomotor and sensorimotor performance in rodents.

##### *Histology Laboratory*

Contact: Jeanette G. Killius, M.S.  
Ext. 6311

This facility is fully equipped for preparation, embedding, sectioning and staining soft tissue samples. Both plastic and paraffin embedding are performed. Standard and cryostatic microtomes are in routine use.

#### Center for Academic Technology

Contact: Rey Notareschi  
Ext. 6796

The Center for Academic Technology has a total of ten computers available for faculty and staff use. Five Compaq computers running Windows 95 are available with memory configurations ranging from 32 megabytes to 128 megabytes. All PCs are equipped with CD-ROM drives. Some of the PCs have Iomega Zip drives as well. Five Macintosh PowerPC computers are also available ranging from a 16 megabyte iMac with CD-ROM to a 300mhz G3 PowerPC with 256 megabytes of memory. Video digitizing capability is available on two of the PowerPC Macintosh computers. Some of the Macintosh computers also have Iomega Zip drives.

A Lasergraphics MKIII laser film recorder is available to create 35mm slides or negatives from your electronic files. The film recorder can be used with either a Macintosh or Windows computer located in the center.

A Codonics Photographic Network Printer is available to create photographic quality prints from your computer images. This is a state-of-the-art dye sublimation printer capable of printing 16.7 million simultaneous colors. Images are printed at a true 300 dpi and are not dithered.

A Xerox Office 6 color laserprinter is available to print either paper copies or color transparencies.

Software applications on the lab computers include the NEOUCOM standard software suite including Netscape and WordPerfect. Adobe Photoshop, Macromedia Director, Authorware, and other authoring tools are available on the lab computers.

#### Community Health Sciences

Contact: James Boex, Ph.D.  
Ext. 6165

Provides methodologic, statistical, and analytical assistance to researchers; provides education for medical students, medical residents, faculty and community physicians in evidence-based medicine, critical appraisal of clinical literature, clinical decision-making, and research design, methods, and analysis.

##### *Design, Measurement and Evaluation Group*

Contact: James Boex, Ph.D. (Interim)  
Ext. 6165

The group provides methodologic consultation on research design and methods, and on measurement issues. Data analyses and special purpose statistical programming are also provided. Biostatistics concepts are taught to residents, medical students, and graduate students.

#### Comparative Medicine Unit

Contact: Walter I. Horne, D.V.M.  
Ext. 6555

A modern, fully-equipped, U.S.D.A. licensed and AAALAC (Association for Assessment and Accreditation of Laboratory Animal Care) accredited 25,000-square-foot facility which includes operating, diagnostic, and x-ray and fluoroscopic facilities; necropsy room; space to conduct research in comparative pathology, and biohazard-designed small rooms. This facility also provides surgical/technical services and assistance for a wide range of surgical exercises, i.e., experimental surgery for first-year surgical residents, laparoscopic surgery and trauma management trainin Mammography machine (used to x-ray small animals in Comparative Medicine Unit), x-ray film developer (in dark room at south end of C building.)

General Counsel (Office of)

Contact: Maria Schimer, M.P.H., J.D.  
General Counsel  
Ext. 6357

Contact: Brooke Brady, J.D.  
Assistant General Counsel  
Ext. 6358

Contact: Trish Wilson  
Compliance Coordinator  
Ext. 6357

Geriatric Medicine/Gerontology Office

Contact: Barbara Palmisano, MA, RN  
Ext. 6359

or

Margaret Sanders, MA, LSW  
Ext. 6360

Institutional Research

Contact: Stephen Manuel, Ph.D.  
Ext. 6268

Provides application forms and review to assure compliance with Federal guidelines regarding research encompassing human subjects.

The Office of Geriatric Medicine/Gerontology and the Western Reserve Geriatric Education Center at NEOUCOM provide consultation on aging-related curriculum and educational program development which includes curriculum on Elder Abuse and Dementia.

Available to provide and analyze information on NEOUCOM's students and programs as they relate to admissions issues. Services include data reporting, program evaluation, survey development, and strategic planning for the admissions process.

Microbiology, Immunology & Biochemistry

Contact: John J. Docherty, Ph.D.  
Ext. 6133

Contact: John Y.L. Chiang, Ph.D.  
Ext. 6694

Contact: Angelo L. DeLucia, Ph.D.  
Ext. 6135

Contact: James P. Hardwick, Ph.D.  
Ext. 6684

Contact: Donna King, Ph.D.  
Ext. 6688

Tissue Culture Facility  
β-scintillation Counters  
Ultracentrifuges and Rotors

Beckman LS9000 Scintillation Counter  
Beckman L7-65 Ultracentrifuge  
DNA sequencers  
Sorvall OTD-55B Ultracentrifuge  
Sorvall RC-5 Superspeed Centrifuge  
Lablin Incubator-Shaker  
Nuair 425-400 Biological Safety Cabinet (Hood)  
High pressure liquid chromatograph (with diode array detector)  
(Waters)  
Thermal cycler  
Electroporator  
Luminometer  
FPLC System  
Phosphor Imager, Typhoon

PCR Facility (includes in situ PCR)

Beckman Refrigerated Centrifuge  
LKB Laser Scanner  
ISCO HPLC with fluorescence and UV detector  
Nuair 425-400 Biological Safety Cabinet (Hood)  
Queue tissue culture incubator  
DNA sequencer  
Power supplies  
VWR rotary shaker  
9600 Perkin Elmer PCR machine

Perkin Elmer GeneAmp 9700 thermal cycler  
Narashige vertical pipet puller  
Narashige microforge  
Packard gamma counter (Room F-216)

Contact: William J. Landis, Ph.D.  
Ext. 6685

Gilford Model 250 Spectrophotometer  
H.P. 8451A Spectrophotometer  
Pixcell II laser capture microdissection system  
Reichert Ultracut microtome  
Digital Instruments Bioscope atomic force microscope  
Kodak IBI Biolyzer  
Spectrum Laboratoreis Quad bioreactor system

Contact: Philip W. Westerman, Ph.D.  
Ext. 6686

Buchi/Fisher RE-111A Rotavapor  
HP 5890 Gas chromatograph with flame ionization detector  
Labconco Freeze Dry System  
Labconco Controlled Atmosphere Glove Box

### Neurobiology

Contact: Sharon Usip, Ext. 6633  
Megan Storey-Workley, Ext. 6634  
Jen Hafemeister, Ext. 6634

Cryostat  
Eppendorf MasterCycler Gradient PCR  
Thermocycler with in situ PCR Adapter  
Kodak Image Station 440CF  
Savant Speed Vac Evaporator/Concentrator

Contact: Megan Storey-Workley, Ext. 6634

Olympus Provis research microscope equipped with epi-illumination fluorescence, Nomarski optics and with appropriate filter system for FITC, Texas Red, TRITC, AMCA, Alexa 488, CY2, CY3, Fast Blue and Fluorogold.

### Ocasek Medical Library

Contact: Onadell Bly, M.L.S.  
Ext. 6616

M.L.S.NEOUCOM's Ocasek Medical Library and the Associated Hospital libraries provide the primary access to medical information for medical researchers. The NEOUCOM Information Center provides back-up reference and interlibrary loan services to the hospitals. Internet and dial access to MEDLINE, OhioLINK and the online catalog for NEOUCOM and its associated hospitals are available for individual access. Reference services are available at the Information Center and hospital libraries.

### Physiology and Pharmacology

Individual laboratories are equipped to pursue investigations in the following areas of research:

Contact: Mary J. Cismowski, Ph.D.  
Ext. 6537

Intracellular regulation of G-protein coupled receptor signaling pathways; identification of novel G-protein signal regulations via high-throughput screening using the yeast *Saccharomyces cerevisiae*. DNA sequencing services available.

Contact: Hans G. Folkesson, Ph.D.  
Ext. 6436

Lung development with specific emphasis on maturation of the fluid-absorptive capacity of the lung. Regulation and induction of preterm lung maturation by endogenous and exogenous factors such as epinephrine, interleukin-1, and cortisol.

Contact: Paul J. Kammermeier, Ph.D.  
Ext. 6530

Total internal reflection fluorescence system with 60X, 1.45 NA objective and 488 NM laser, fit to an Olympus IX-71 inverted fluorescence microscope.

Contact: Michael B. Maron, Ph.D.  
Ext. 6429

Recovery from pulmonary edema: effects of beta-adrenergic agonists on alveolar epithelial sodium and water transport, regulation of alveolar type II beta-adrenergic receptors; effects of congestive heart failure on the ability of the lung to absorb edema fluid.

Contact: J. Gary Meszaros, Ph.D.  
Ext. 6432

G-protein-coupled signaling cross-talk in the heart: synergism between Gq- and Gs-linked signaling pathways in adult rat cardiac fibroblasts; enhancement of cyclic AMP as a potential mechanism to restore beta-adrenergic signaling in the failing myocardium

Contact: Gary D. Niehaus, Ph.D.  
Ext. 6420

Mononuclear Phagocyte Function: (1) Role of mononuclear phagocytes in wound repair and angiogenesis in the cornea; (2) Role of the pulmonary intravascular mononuclear phagocyte (PIMP) in the Acute Respiratory Distress Syndrome; (3) Development of a proprietary technology for detection of biologic pathogens, such as bacteria or virus.

Contact: Charles F. Pilati, Ph.D.  
Ext. 6423

Cardiac dysfunction after massive sympathetic nervous system activation: mechanisms of action.

Research and Sponsored Programs (Office of)

Contact: Raymond E. Papka, Ph.D.  
Interim Associate Dean for Research  
Ext. 6636

Contact: Christine H. Block, Ph.D.  
Acting Assistant Dean for Research  
Research Administrator and Grants  
Facilitator  
Ext. 6518

Contact: Marcia Kibler  
Program Secretary  
Ext. 6501

Contact: Debbie Severt  
Administrative Assistant  
Ext. 6499

*Electron Microscopy Laboratory*

Contact: Jeanette G. Killius, M.S.  
Ext. 6311

*Automated Microtomes*

*Bone Densitometer*

*Darkrooms*

*Denton DV-502 High Vacuum Evaporator*

*Image Analysis*

*JEOL 100S Transmission Electron  
Microscope*

*JEOL 35C Scanning Electron Microscope*

*Polaron Critical Point Dryer*

*Reichert FC-4E Cryoultramicrotome*

*Anatech Hummer VI-A Sputter Coater*

*Olympus Fluoview Confocal Laser  
Microscope*

The Office of Research and Sponsored Programs assists faculty in the preparation and processing of grant applications. The Research Administrator assists in identifying funding sources, providing application forms and working with investigators to ensure that federal certifications and funding source compliances have been met prior to submission of applications. The Program Secretary and Administrative Assistant maintain a faculty research database containing information on consortium research interests and Equipment/Facilities/Services available for collaboration. A searchable database is accessible through the "Community of Science" World Wide Web site ([www.cos.com](http://www.cos.com)). Information on this site is accessible globally to other researchers interested in collaborative efforts with NEOUCOM faculty.

The office also includes a Grants Facilitator to work with faculty and assist in the development of proposals dealing with Clinical, Basic Medical, and Community Health Sciences projects.

This imaging facility is equipped to perform a variety of morphological analyses on cells and tissues. Along with expert technical support staff, the following instruments are available for use:

Reichert Ultracut E  
Dupont MT-5000  
American Optical Ultracut  
Sorvall MT-2

The Norland peripheral computed tomography bone mineral densitometry system can be used to analyze isolated bones from small animals. The instrument analyzes individual slices through a whole bone and generates up to 60 fields of information including geometric parameters, bone density values, bone content values and area values. It can also be used for three-dimensional reconstructions.

One printing darkroom, two negative developing darkrooms and one autoradiography darkroom.

Carbon or platinum shadowing samples, glow discharge cleaning, gold sputter coating.

The Bioquant image analysis system is interfaced with a photomicroscope equipped with a variety of optics for microscopic analyses.

With sheet film camera, magnification 100X to 200,000X with 0.5 nm resolution in biological samples.

With 4"x 5" Polaroid camera and 120/220 roll film camera, backscatter detector, magnification 10X to 180,000X with 6.0 nm resolution in the secondary mode.

To critically dry SEM samples.

Capable of ultrathin frozen sections.

Gold/palladium sputter coating samples, plasma processing, DC etching.

Allows optical sectioning and 3D reconstruction of cells or tissues labeled with fluorophores, including fluorescein, CY3, green fluorescent protein, and rhodamine. Images can be stored in different formats to be imported into image analysis programs.

## Youngstown Campus

### Forum Health

**(Hillside Hospital; Northside Medical Center; Tod Children's Hospital;  
Trumbull Memorial Hospital)**

Contacts: Marti Echols, Ph.D.  
Corporate Administrator of Medical  
Education and Research  
330-884-3575

Kimberly Howe, Ph.D., R.N.  
Corporate Director of Research  
330-884-3924

William Bunn, M.D.  
Chairman, Institutional Review  
Board  
330-884-3151

Mari Mangino, R.N.  
Research Nurse  
330-884-4796

Jo Wilms, R.N., C.C.R.P.  
Research Nurse  
330-884-3523

Linda Martin  
Secretary, Department of Research  
and Institutional Review Board  
330-884-3151

Forum Health, the third largest integrated health care system in northeastern Ohio, is committed to advancing health care knowledge through clinical research. As a result of our size, our investigators have the unique ability to utilize a large set of patient populations for possible enrollment into clinical trials. Investigators at Forum Health are currently conducting research projects, many of which are clinical trials aimed at investigating the safety and effectiveness of new medical therapies and devices.

The Department of Research at Forum Health is dedicated to providing tools and support to faculty, staff and students for the effective fiscal and administrative operation of research studies. Members of our staff provide education and consultation for the entire research process from the development of research proposals, budgets, identification of funding sources, informed consent documents, guidance with institutional review board approval, and data analysis. Additional aid is available to develop manuscripts and poster presentations.

### St. Elizabeth Health Center

Contact: Vincent W. Vanek, M.D.  
Chairman, Medical  
Research Committee  
330-480-3124

The overall research mission of St. Elizabeth Health Center is facilitated through the efforts of the Medical Research Committee. This committee provides proposal review for scientific merit, guidance and assistance in project improvement, and possible funding for completion. As projects are approved at this level, they rapidly move forward to IRB for appropriate review.

### Youngstown State University

#### Center for Urban and Regional Studies

Contact: Hunter Morrison  
Director  
330-941-3355

The Center provides basic and applied research and technical assistance to local government, business and public service organizations. The Center has a strong computer mapping and spatial analysis (GIS) capacity, partnerships with statewide urban research consortiums and considerable expertise in urban and regional planning. The Center is a partner in improving the civic, economic and social well being of Youngstown, the Mahoning Valley region and the entire Youngstown State University service area.

#### Engineering Services Center

Contact: Cynthia S. Hirtzel  
Dean, School of Engineering  
330 941-3009

Provides convenient access to the significant technical and engineering expertise of the faculty and staff of the Rayen College of Engineering and Technology. The services offered to organizations outside the University do not duplicate those provided by engineering consultants in the area. Both development and testing services are available.

Grants and Sponsored Programs (Office of)

Contact: Edward Orona, Ph.D.  
Director  
330-941-2377

Assists faculty in pre-award activities such as project development, funding source identification, proposal preparation and processing. The Office can provide information on faculty research interests, grant support, books and publications. Coordinate human subjects and animal care compliance review and reporting.

Human Services Development Center

Contact: Rick George  
Associate Director  
330-941-3469

Serves as a community resource for health and human service organizations, community leaders and the general public. Staff at the center work with a community-wide spectrum of people to identify problems, meet needs, develop solutions and evaluate activities in the health and human services field. Four major programs – grants writing, planning, evaluation, and community leadership building.

Molecular-Cellular Biology Lab

Contact: John Yemma, Dean  
Bitonte College of Health and  
Human Services  
330-941-3320

Four rooms separated into histochemical, analytical, computer and preparation. Eight graduate students doing thesis research in the molecular-cellular area. Their studies require the utilization of quantitative tools such as high pressure liquid chromatography, gas chromatography, isoelectric focusing, microspectrophotometry, and high resolution electrophoresis.

YSU Structure Center

Contact: Allen Hunter  
Department of Chemistry  
330-941-7176  
adhunter@cc.ysu.edu

400 MHz NMR spectrometer capable of high resolution solution-state studies of complex biomolecules including multi-nuclear, variable temperature, 1- and 2-dimensional studies, and solvent suppression methods. X-ray Diffractometers for carrying out structural studies of molecules in solid state including both single crystal and powder methods. Mass spectroscopy facilities including both GC-MS and LC-MS. Complete polymer and materials characterization facilities including DSC, TGA, GPC, FT-IR, TEM, etc.