2009 SBRP Mentor List

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NAME	TITLE	DEPT	RESEARCH	DESCRIPTION
Thomas R Gest, Ph.D.	Associate Professor	Anatomical Sciences	Basic & Medical Education	1. Medical education research - Effects of cadaver medical records upon student learning and attitudes 2. Basic science research - Development of the umbilical and vitelline arteries using scanning electron microscopy of corrosion casts
John L. Zeller, MD, PhD	Assistant Professor	Anatomical Sciences & Medical Education	Basic & Medical Education	1-Pathogenesis of Acromioclavicular Cyst Formation-Anatomical dissections to identify & document stages of degenerative AC joint changes that promote rotator cuff pathology & precipitate cyst formation. 2-Anatomic Presentation of Lateral Femoral Cutaneous Nerve-Measurements & a constructed grid analysis based on cadaver bodies (30) in the gross anatomy lab. Research involves pristine dissections of the lumbar plexus tracing LFC nerve as it crosses the pelvic brim / inguinal ligament – defining the nerve's anatomical variations & its potential risk for injury at the time of surgery.
Wei C. Lau, M.D.	Associate Professor	Anesthesiology	Clinical	Dexmedetomidine-based vs. propofol-based intravenous level two conscious sedation for radiofrequency ablation of atrial fibrillation requiring barium swallow.
Ralph Lydic, Ph.D.	Professor	Anesthesiology	Basic & Clinical	Neurobiology of Sleep and Anesthesia.
Mark Opp, Ph.D., M.D.	Professor	Anesthesiology	Basic & Clinical	Stressor induced alterations in sleep; the impact of immune challenge on central nervous system function.
Michael O'Reilly, M.D.	Associate Professor	Anesthesiology	Basic	Discovery of physiological extremes during acute care by statistical analysis of the MorCARE Clinical Information System
Lucy Waskell, Ph.D., M.D.	Professor	Anesthesiology	Basic	The laboratory uses biochemical and molecular biology technique to study drug metabolism by cytochrome P450.
Ioan Andricioaei, Ph.D.	Assistant Professor	Bioinformatics	Basic	Modeling of DNA-Binding Machines and Protein-DNA interactions. Study of these fundamental genetic processes through computer simulations.
David P Ballou, Ph.D.	Professor	Biological Chemistry	Basic	Mechanistic studies of enzymes containing flavins, hemes, or metals that are involved in bioremediation.
Irwin J. Goldstein, Ph.D.	Professor Emeritus	Biological Chemistry	Basic	Research on complex carbohydrates present on the surface of cells - erythrocytes, tumors, stem cells; Use of carbohydrate - recognizing proteins (lectins) in these studies - isolation with a variety of techniques.
Mark A Saper, Ph.D.	Associate Professor	Biological Chemistry	Basic	Regulation and translocation of capsule polysaccharide in pathogenic E. coli: Function of anovel tyrosine kinase and phosphatase. Structure determination of enzymes important for oligosaccharide synthesis.We utilize biochemical, biophysical and crystallographic techniques.
James B. Grotberg, Ph.D., M.D.	Professor	Biomedical Engineering	Basic	Studies on pulmonay surfactants; molecular basis of lung injury.
Scott Hollister, Ph.D.	Associate Professor	Biomedical Engineering - Surgery	Basic	Development of a neuro-anatomical scaffold seeded with stromal cells for the purpose of spinal cord regeneration after implantation in animal models
Daniel T. Eitzman, M.D.	Associate Professor	Cardiology	Basic	Adipose tissue inflammation and vascular disease. Leukocyte regulation of endothelium.
Daniel A. Lawrence, Ph.D.	Professor	Cardiovascular Medicine	Basic	Information signaling pathways in the vasculature. Studies on molecular biology of stroke.
David J. Pinsky, M.D.	Professor	Cardiovascular Medicine	Basic	Thrombin medicated shedding of endothelial CD39

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James Douglas Engel, Ph.D.	Professor	Cell & Developmental Biology	Basic	Mouse molecular genetics and definition of etiology of human disease; Organogenesis - neuronal development, kidney formation, blood cell differentiation; thymus and parathyroid patterning.
Michael Hortsch, Ph.D.	Associate Professor	Cell and Developmental Biology	Basic	The lab investigates neural cell adhesion molecules, especially how these proteins interact with receptor tyrosine kinases and thereby regulate axonal guidance during development.
Andrzej A. Dlugosz, M.D.	Professor	Dermatology	Basic	Embryonic signaling pathways in cancer
Gary J. Fisher, Ph.D.	Associate Professor	Dermatology	Basic	Molecular alterations of connective tissue following aluminum oxide microderambrasion
Taihao Quan, Ph.D., M.D.	Assistant Professor	Dermatology	Basic	Molecular mechanisms of human skin aging and its prevention.
Phillip A. Scott, M.D.	Associate Professor	Emergency Medicine	Clinical	Using Spatial Analysis/Geographic Information Science software - the student will model and evaluate geographic, demographic and spatial characteristics of patient access to healthcare resources.
Susan A. Stern, M.D.	Associate Professor	Emergency Medicine	Basic	The development and testing of novel resuscitation strategies for the treatment of trauma victims with hemorrhagic shock and/or traumatic brain injury.
John G. Younger, M.D.	Associate Professor	Emergency Medicine	Basic	Studies on the innate defense against pneumonia. Role of complement in protecting the lung and the host from invasive respiratory pathogens. Numerical simulation of events leading to bacteremia during pneumonia.
Zora Djuric, Ph.D.	Research Pofessor	Family Medicine	Clinical	The research in this laboratory concerns prevention of cancer with nutritional approaches. Opportunities in ongoing clinical studies include assisting with subject recruitment, assessments and sample analysis for biomarkers of cancer risk.
Lee Green, M.D., MPH	Professor	Family Medicine	Clinical	1) Measuring the cognitive task load placed on physicians by electronic medical records and clinical reminder systems. 2) Description and analysis of patients who do not fit practice guideline recommendations in primary care.
Donald Nease, M.D.	Associate Professor	Family Medicine	Clinical	PREP colorectal cancer screening, and GRIPS practices' preparedness for clinical trials.
Caroline R. Richardson, M.D.	Assistant Professor	Family Medicine	Clinical	Primary care interventions to increase physical activity in people with chronic diseases including cardiovascular disease, diabetes, and depression.
Thomas L. Schwenk, M.D.	Professor	Family Medicine	Clinical	Survey of physicians re: depressive symptoms, opinions about depression in physicians, effect of depression on licensing, professional role. New studies will focus on sources and domains of stigma in depressed medical students, residents and physicians.
Sara L. Warber, M.D.	Associate Professor	Family Medicine	Clinical	Complementary and alternative medicine - a quantitative descriptive study on patients who choose integrative medicine for their primary care in comparison to those who present for a consultative model of integrative healthcare.
Suzanna M. Zick, MPH, ND	Research Assistant Professor	Family Medicine	Clinical	Chemoprevention using complementary and alternative therapies with a focus on using botanical agents. Cancer sites of interest include GI, cervical, and breast cancers.
Margit Burmeister, Ph.D..	Professor	Human Genetics	Basic	Genomic strategies to identify genes involved in neurological disordersand deafness.
Miriam Meisler, Ph.D.	Professor	Human Genetics	Basic	Neurogenetics of sodium channel disorders in human and mouse; identification of genes responsible for neurological disease.

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Neil Alexander M.D.	Professor	Internal Med/Geriatrics	Clinical	Assessment and enhancement of mobility in both impaired and unimpaired older adults. Projects involve biomechanical and physiological assessments and exercise interventions.
Peter Arvan, M.D., Ph.D.	Professor	Internal Medicine	Basic	1) Protein trafficking in the secretory pathway of endocrine cells 2) Protein misfolding in endocrine diseases
James R. Baker Jr., M.D.	Professor	Internal Medicine	Basic & Clinical	Synthesis and biological characterization of therapeutic nanoparticles. Also, clinical trials of anti-cancer drugs and vaccines based on nanoparticles.
James Beck, M.D.	Associate Professor	Internal Medicine	Basic	The study of pulmonary host defense against the opportunistic pathogen Pneumocystis. Using mouse models, examine the function of CD4+ and CD8+ T cells in defense against the organism. We also study the interaction of cigarette smoke exposure and Pneumocystis colonization in the development of emphysema.
Frank C. Brosius III, M.D.	Professor	Internal Medicine	Basic	How advenoviral mediated up-regulation of Hi-1ot affects the rate of hypoxia-induced apoptosis I A7r5 cells.
Yuqing E. Chen, M.D., Ph.D.	Associate Professor	Internal Medicine	Basic	Studying molecular mechanisms of obesity/diabetes-induced cardiovascular disease.
Kathleen Cooney, M.D.	Professor	Internal Medicine	Basic & Clinical	Our research focuses on determining the molecular basis for inherited prostate cancer susceptibility. We have both clinical and basic science research projects available.
Jeffrey Curtis, M.D.	Professor,	Internal Medicine	Clinical	Analyze human lung tissue and clinical specimens (flow cytometry, Luminex assay, ELISA, immunohistochemistry) to discover the possible causes of chronic obstructive pulmonary disease.
David Ginsburg, M.D.	Professor	Internal Medicine	Basic	Genetic studies of blood coagulation and thrombosis. Special interest in von Willebrand disease and plasminogen activation system
Stephen B Gruber, M.D., Ph.D.	Professor	Internal Medicine	Basic	Genetic and environmental risk factors for colorectal cancer.
Jeffrey B. Halter, M.D.	Professor	Internal Medicine	Clinical	Research focusing on neuroendocrine regulation of metabolism in aging and in type 2 diabetes mellitus.
Gary Hammer, Ph.D., M.D.	Associate Professor	Internal Medicine	Basic	Mechanisms by which transcriptional programs initiate adrenal specific growth and differentiation, emphasis on deregulated developmental programs resulting in hypoplasia and neoplasms of the adrenal cortex.
Mary E. Michele Heisler, M.D., MPA	Assistant Professor	Internal Medicine	Clinical	An assessment of factors influencing diabetes self-management in a nationally representative sample of American adults with diabetes
Joseph Holoshitz, M.D.	Associate Professor	Internal Medicine	Basic & Clinical	1. The role of programmed cell death signaling in the pathogenesis of autoimmune diseases 2. HLA-DR-mediated signal transduction events in the pathogenesis of rheumatoid arthritis 3. Neuroimmunomodulatory peptides
Kenneth A. Jamerson, M.D.	Professor	Internal Medicine	Clinical	Outcome of hypertension for lactose-intolerant African-Americans through intake of Lactase tablets & low fat milk by standards of DASH
Randal Kaufman, Ph.D.	Professor	Internal Medicine	Basic	Growth and metabolic regulation; receptor structure and function
Arno K. Kumagai, M.D.	Associate Professor	Internal Medicine	Medical Education	The effectiveness of active learning workshops for medical students
David Markovitz, M.D.	Professor	Internal Medicine	Basic	(1). HIV/AIDS (2). role of the DEK protein in cancer and autoimmunity. (3). Role of vimentin in cancer and immunity.

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Fernando J. Martinez, M.D.	Professor	Internal Medicine	Clinical	Studies on pulmonary diseases - idiopathic pneumonia, COPD, lung transplantation
Sofia D. Merajver, M.D., Ph.D.	Professor	Internal Medicine	Basic & Clinical	Cancer genetics, Breast cancer prevention
Marc Peters-Golden, M.D.	Professor	Internal Medicine	Basic	Studies of inflammation - prostaglandins and leukotrienes; the enzymatic regulation of their biosynthesis, expression and signaling of their receptors; their role in pulmonary inflammation, innate immunity, asthma, and fibrosis.
Robert Sitrin, M.D.	Professor	Internal Medicine	Basic	Lipid raft domains and signaling in human neutrophils.
Theodore Standiford, M.D.	Professor	Internal Medicine	Basic & Clinical	Chemokines in lung antibacterial host defense; pulmonary immune activation for bioterror defense
Grace L. Su, M.D.	Associate Professor	Internal Medicine	Basic	Role of innate immune system in toxic liver injury.
Galen B. Toews, M.D.	Professor	Internal Medicine	Basic & Clinical	Pulmonary host defense mechanisms, pulmonary cellular immunology, and regulation of immune and fibroproliferative responses. Pulmonary fibrosis, alveolar epithelial cell/fibrolast interaction.
Peter A. Ubel M.D.	Professor	Internal Medicine	Clinical	Study of health care decision making, the role that emotions play in how people make health care decisions.
Alan Weder, M.D.	Professor	Internal Medicine	Basic & Clinical	Studies on the genetics of cardiovascular disease, atherosclerosis.
Deneen M. Wellik, Ph.D.	Assistant Professor	Internal Medicine	Basic	The function Hox genes in mammalian development; specifically axial patterning, limb development and kidney organogenesis using targeted genetic mutations in mice.
Max S. Wicha, M.D.	Professor	Internal Medicine	Clinical	Chemoresistance of breast cancer stem cells
Liang Xu, M.D., Ph.D.	Assistant Professor	Internal Medicine	Basic	Molecular targeted novel cancer therapeutics for breast and prostate cancer: drug discovery and mechanism studies focusing on apoptosis pathways
Yi Zhang, Ph.D., M.D.	Assistant Professor	Internal Medicine	Basic	Ongoing projects (1) T cell biology (regulation of memory T cells by Ezh2 and p18) and (2) Transplantation immunology (genetic reprogramming of T cells for efficacious bone marrow transplantation and T cell cancer therapy).
Yuan Zhu, Ph.D.	Assistant Professor	Internal Medicine	Basic	Using mouse genetics to understand the molecular and cellular mechanisms underly initiation and progression of brain cancer and peripheral nerve sheath tumor.
Ben Margolis, M.D.	Professor	Internal Medicine & Biological Chemistry	Basic	The Margolis laboratory uses tissue culture models to study the basis of cilia formation. Insights into cilia structure and function are relevant to many diseases including polycystic kidney disease and retinitis pigmentosa. We examine cilia formation using molecular biology, biochemistry and microscopy techniques.
Hakan Oral, M.D.	Associate Professor	Internal Medicine - Cardiology	Clinical	Atrial activity extraction from surface ECG compared to intracardiac electrogram
Eric S. White, M.D.	Assistant Professor	Internal Medicine - Pulmonary and Critical Care	Basic	Basic science mechanisms of fibroblast activation and extracellular matrix signaling.
Alan R. Saltiel, Ph.D.	Professor	Internal Medicine & Physiology	Basic	Projects on the regulation of glucose transport, the insulin receptor and its interactions, protein phosphorylation and dephosphorylation as regulatory mechanisms, mouse models of diabetes and insulin resistance, spatial and temporal aspects of specificit

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Kenneth J. Pienta, M.D.	Professor	Internal Medicine & Urology Comprehensive Cancer Center	Clinical	Cancer metastasis and prostate cancer, chemotherapeutic programs for prostate cancer.
Susan Dorr Goold, MD, MHSA, MA	Associate Professor	Internal Medicine and Bioethics Program	Clinical	Empirical and conceptual research addressing health/health care resource allocation, with a focus on public input on allocation decisions.
Annette Chang, M.D.	Assistant Professor	Internal Medicine Endocrinology	Clinical	1) Exercise effects on insulin secretion and prevention of type 2 diabetes in older people, 2) Mechanism of human age-related glucose intolerance 2) Development of techniques to image human pancreatic b-cell mass
Ronald J. Koenig, M.D., Ph.D.	Professor	Internal Medicine Endocrinology Division	Basic	1. Role of selenium in development of diabetes and diabetic complications, studied in transgenic and knockout mice. 2. Regulation of transcription by thyroid hormone receptors; the function of proteins that interact with thyroid hormone receptors. using cell culture and cell free systems
Ellen Zimmermann, M.D.	Associate Professor	Internal Medicine Gastroenterology	Basic & Clinical	Studies of inflammatory bowel disease: 1. quality of life in students 2. new radiographic imaging techniques 3. genetic database development 4. fibrosis in animal models
Sami Malek, M.D.	Assistant Professor	Internal Medicine Hematology/Oncology	Basic & Clinical	1) Genetics of Chronic Lymphocytic Leukemia (CLL) and Acute Myleogenous Leukemia (AML) 2) Acute Myleogenous Leukemia (AML) and targeted therapy
Thomas Glaser, Ph.D.	Associate Professor	Internal Medicine Human Genetics	Basic	Genetics of visual system development, retinal cell fate, ribosomes and tissue growth control; using mutant and genetically engineered mice, and human eye malformations.
Bethany B. Moore, Ph.D.	Associate Professor	Internal Medicine Pulmonary & Critical Care Med	Basic	Mechanisms of pulmonary fibrosis; impaired host defense post-bone marrow transplantation
David A. Fox, M.D.	Professor	Internal Medicine Rheumatology	Basic	T cell autoimmunity as applied to the pathogenesis and treatment of rheumatoid arthritis; use of genetically modified dendritic cells to regulate autoimmunity in vivo.
Alisa Erika Koch, M.D.	Professor	Internal Medicine Rheumatology	Basic	The immunopathogenesis of the autoimmune disease rheumatoid arthritis in terms of angiogenesis, cell adhesion, cytokines, and cell signaling.
James R. Seibold, M.D.	Professor	Internal Medicine Rheumatology	Clinical	Diverse investigations into the natural history of systemic sclerosis; design of novel measures of outcome; translational investigations of potential biologic surrogates and development of novel approaches to therapy.
Mariana Kaplan, M.D.	Assistant Professor	Internal Medicine Rheumatology	Basic	Pathogenesis of systemic lupus erythematosus; mechanisms that trigger premature atherosclerosis in autoimmune diseases.
Kim A. Eagle, M.D.	Professor	Internal Medicine, Cardiology	Clinical	Assess medication adherence, develop predictive models in patients with a recent admission for an acute coronary syndrome, improving care in ACS and acute aortic diseases.
Ormond A. MacDougald, Ph.D.	Professor	Internal Medicine, Molecular and Integrative Physiology	Basic	Regulation of adipocyte differentiation and metabolism by Wnt signaling and microRNAs.

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Long H. Dang, M.D., Ph.D.	Assistant Professor	Internal Medicine/Hematology-Oncology	Basic	Studies to define: 1) the molecular events that allow a tumor to grow in a host and 2) translating this understanding to impact on the prevention and treatment of cancer.
Nicholas J. Donato, Ph.D.	Associate Professor	Internal Medicine/Hematology-Oncology	Basic	1. Targeted ubiquitination of key oncogenic kinases as a novel approach to cancer therapy. This project focuses on investigating the activity of a small MW compound that regulates ubiquitination, trafficking and destruction of specific tyrosine kinases (BCR-ABL, Jak2, Syk). 2. Novel mechanisms of tumor cell resistance to tyrosine kinase inhibitors. This project focuses on the role of novel mutations, structural changes
Carolyn Hoban, D.SC., M.S.C.	Assistant Professor	Internal Medicine/Hematology-Oncology	Basic	Development of animal models of adult human sarcoma from establishment of tumor cell lines and xenografts to genetically engineered mouse models. Preclinical research focuses on molecular mechanisms of tumor biology, response and resistance to therapy.
Juanita Merchant, M.D., Ph.D.	Professor	Internal Medicine-Gastroenterology	Basic	Gastrin regulation of sonic hedgehog processing within the gastric parietal cell.
Elizabeth M. Petty, M.D.	Professor	Internal Medicne & Human Genetrics	Basic, Psycho/Pub Health, Med Edu, Clinical	Use of molecular genetic and cell biology tools to understand the role of cell cycle and genomic instability genes in breast cancer. 2. Examine how patient understanding of genetics impacts health behaviors. 3. Develop and evaluate on-line tools for genetics education. 4. Clinical studies in neurocutaneous disorders and connective tissue disorders.
Tricia S. Tang, Ph.D.	Assistant Professor	Medical Education	Medical Education	Cervical cancer screening beliefs among Indian women.
Kathryn A. Eaton, D.V.M., Ph.D.	Associate Professor	Microbiology & Immunology	Basic	The pathogenesis of disease due to Helicobacter pylori; the roles of CD4 regulatory cells and dendritic cells; the role of interferon-gamma and interleukin-10; H. pylori lipopolysaccharide O-antigen.
Gary Huffnagle, Ph.D.	Professor	Microbiology & Immunology	Basic	The focus of our laboratory is on the concept of "Homeostasis Thresholds" in the immune system, with emphasis on immune responses in the lungs and sinuses to fungal (Cryptococcus, Aspergillus) or allergen challenge.
Michael Imperiale, Ph.D.	Professor	Microbiology & Immunology	Basic	Polyomavirus disease in transplant patients. Virus-host interactions that govern the balance between viral persistence and lytic replication leading to disease. Entry mechanisms of viruses.
Harry L. T. Mobley, Ph.D.	Professor & Chair	Microbiology & Immunology	Basic	The molecular mechanisms of bacterial pathogenesis. Virulence mechanisms of uropathogenic E. coli and Proteus mirabilis that cause urinary tract infection and H. pylori that causes gastritis and peptic ulcer disease.
Mary O'Riordan, Ph.D.	Assistant Professor	Microbiology & Immunology	Basic	We study interactions between intracellular bacterial pathogens and the host cell. The project focus is regulation of innate immune recognition of *Listeria* in the cytosol.
David H. Sherman, Ph.D.	Professor	Microbiology & Immunology	Basic	My group works on the molecular genetics, genomics, and biochemistry of antibiotic production in bacteria, including actinomycetes and cyanobacteria.
Katherine Spindler, Ph.D.	Professor	Microbiology & Immunology	Basic	Molecular genetics of virus-host cell interactions in mouse adenovirus causing acute and persistent infections; viral genes, host genetics, and host immune response.
Philip D. King, Ph.D	Associate Professor	Microbiology and Immunology	Basic	Characterization of the function of novel proteins involved in T lymphocyte signal transduction and in self/non-self discrimination by the immune system
Denise Kirschner, Ph.D.	Associate Professor	Microbiology and Immunology	Basic	Host-pathogen interactions during persistent infections (eg., H. pylori, M. tuberculosis, and HIV-1)

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Louis G. D'Alecy, Ph.D.	Professor	Molecular and Integrative Physiology	Basic	Area 1: Origins and fate of asymmetrical dimethylarginine (ADMA). Involves the "dissection" of blood into its constituents & evaluation of the ability of each component to produce & or eliminate free ADMA, one of the key endogenous inhibitors of nitric oxide synthase. Area 2: Hypoxia, hypoxic tolerance, and hypoxic conditioning mimics & pathways. Involves mouse & possibly rat models of hypoxia & hypoxic conditioning. A series of drug candidates will need to be evaluated for efficacy & ability to up regulate specific signaling pathways.
Daniel Michele, Ph.D.	Assistant Professor	Molecular and Integrative Physiology	Basic	The molecular basis of human muscular dystrophies and cardiomyopathies using genetically engineered mouse models.
Linda Samuelson, Ph.D.	Professor	Molecular & Integrative Physiology	Basic	My laboratory focuses on mechanisms of development of endocrine cells in the gastrointestinal tract through analysis of cholecystokinin cell development and regulation of gene expression. Mouse molecular genetic approaches in vivo as well as cell culture
Ronald D. Chervin, M.D., M.S.	Professor	Neurology	Clinical	Focused on neurobehavioral consequences of sleep disorders.
Eva L. Feldman, M.D., Ph.D	Professor	Neurology	Basic	My laboratory is interested in the process by which cells undergo programmed cell death known to be linked to many diseases (diabetic neuropathy, ALS, and cancer).
Lewis Morgenstern M.D.	Associate Professor	Neurology	Clinical	We explore health disparities with respect to gender, race and ethnicity through stroke epidemiology. We also study acute stroke treatment.
Michael Wang, M.D., Ph.D.	Assistant Professor	Neurology	Basic	Genetic mechanisms of stroke; we are studying molecules involved in CADASIL, an inherited form of stroke
Suresh K. Mukherji, M.D.	Professor	Neuroradiology/Oto laryngology	Clinical	Comparison between CT perfusion and direct laryngoscopy
Hugh J. L. Garton, M.D.	Assistant Professor	Neurosurgery	Clinical	Hydrocephalus, Pediatric cervical spine trauma, traumatic brain injury
Karin M. Muraszko, M.D.	Professor and Chair	Neurosurgery	Clinical	Craniosynostosis and Chiari I malformations: MRI Evaluation
Frank La Marca M.D.	Assistant Professor	Neurosurgery Spine Program	Basic & Clinical	Clinical outcome and anatomical biomechanical studies of spinal pathologies, reconstructive surgery, and cord regen-eration after injury using scaffold and staminal cell implants.
Gregory M. Christman M.D.	Associate Professor	Obstetrics & Gynecology	Basic & Clinical	Basic and translational clinical research examining apoptosis and cellular survival pathways in uterine leiomyomas.
Raymond De Vries, Ph.D.	Associate Professor	Obstetrics & Gynecology	Basic/Medical Education	Health environomics: I am developing a paper that describes a new interdisciplinary approach to the understanding of illness and medical treatment. My focus is on the understanding of disparities in pregnancy outcomes.
Timothy Johnson, M.D.	Chair & Professor	Obstetrics & Gynecology	Clinical	Cognitive predispositions and attitudes towards HIV screening in pregnant Ghanaian Women
Monte A. Del Monte, M.D.	Professor	Ophthalmology	Basic	Factors influencing abnormal retinal pigment epithelial cell proliferation in diabetes & eye diseases (non-surgical treatment)
Anand Swaroop, Ph.D.	Professor	Ophthalmology & Human Genetics	Basic	Genetics of age-related macular degeneration; Animal models and treatment strategies for retinal degenerative diseases; Retinal development; Global gene expression analysis

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Steven A. Goldstein, Ph.D.	Professor	Orthopaedic Surgery	Basic	The influence of mechanical and biologic regulators on bone formation repair and adaptation.
Richard Hughes, Ph.D.	Associate Professor	Orthopaedic Surgery	Basic & Clinical	Development of methods for integrating cost-effectiveness considerations into the design of orthopaedic devices and diagnostic procedures
Thomas E. Carey, Ph.D.	Professor	Otolaryngology	Basic	1) Molecular mechanisms of cancer progression and response to therapy 2) Cellular and molecular basis for autoimmune hearing loss
R. Keith Duncan, M.D.	Assistant Professor	Otolaryngology	Basic	Cellular and molecular mechanisms of sensory coding in the auditory periphery. We study the structure and function of ion channels and signaling domains in hair cells and auditory nerve.
Susan E. Shore, Ph.D.	Associate Professor	Otolaryngology	Basic & Medical Education	Neural coding of complex sounds in cochlear nucleus neurons at the single cell level. Function of pathways innervating the cochlear nucleus, including somatosensory. Changes in pathways after deafness.
David Kohrman, Ph.D.	Associate Professor	Otolaryngology & Human Genetics	Basic	Understanding the critical genes required for function of the auditory and vestibular systems, and the functions of these genes.
Carol R. Bradford, M.D., F.A.C.S.	Associate Professor	Otolaryngology Head & Neck Surgery	Basic	Study of head and neck tumor biology; Response of tumors to chemotherapy and radiation. Utilizing small molecules that inhibit the proteins that block cell death as a strategy to overcome tumor resistance.
David O. Ferguson, Ph.D., M.D.	Assistant Professor	Pathology	Basic	DNA repair and genomic stability in mammals. We study how DNA repair prevents cancer, provides immuno-competence, and ensures proper overall development.
Cory M. Hogaboam, Ph.D.	Associate Professor	Pathology	Basic	Analysis of bone marrow and tissue derived stem cell alterations in the context of a well-described fungal asthma model in the laboratory. Interested in the impact of allergy on the expression of pattern recognition receptors by these stem cells as they are exposed to the Th2-type cytokine environment that dominates during asthma.
Steven Kunkel, Ph.D.	Professor	Pathology	Basic	Cellular and molecular mechanisms of cytokine networks in immune and inflammatory reactions and host defenses
Nicholas W Lukacs, Ph.D.	Professor	Pathology	Basic	The interrelationship of cytokines, chemokines, and leukocyte activation during airway disease and Th1/Th2 immunity during allergen and viral responses.
Gabriel Nunez, M.D.	Professor	Pathology	Basic	Studies in the laboratory are directed at understanding the mechanisms of host defense against bacterial pathogens and pathogenesis of Crohn's disease
Sem H. Phan, Ph.D., M.D.	Professor	Pathology	Basic	Understanding the cellular and molecular mechanisms of tissue repair and fibrosis.
John R. Charpie, M.D., Ph.D.	Associate Professor	Pediatrics	Clinical	The effects of hypoxemia on myocardial ischemia-reperfusion injury in neonates and infants.
James Ferrara, M.D.	Professor	Pediatrics	Basic & Clinical	Validating biomarkers for complications of bone marrow transplantation (BMT) using a comprehensive sample band from of 9,000 samples from 900 patients. Laboratory research will be complimented by clinical shadowing experiences with BMT patients.
Catherine Keegan, Ph.D., M.D.	Assistant Professor	Pediatrics	Basic	Studies of the Adrenocortical dysplasia (acd) mouse, which is a model of telomere dysfunction, genomic instability, and birth defects. Currently available summer projects include:1) Characterization of fetal hematopoietic stem cell defects in acd mutant embryos. 2) Analysis of in vivo interactions between Acd (Tpp1), Pot1, and telomerase. (http://sitemaker.umich.edu/keeganlab/home) for more information.
Betsy Lozoff, M.D.	Professor	Pediatrics	Basic	The effects of iron deficiency anemia, the world's most common single nutrient disorder, on behavior and development

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Julie Lumeng, M.D.	Research Investigator	Pediatrics	Clinical	Studying of eating behavior in low-income, minority populations. How social cues (from peers and adults) affect eating, and relation to obesity
Susana R. Patton, Ph.D.	Assistant Professor	Pediatrics	Clinical	Examining the impact of eating attitudes and behaviors on blood glucose excursion and disordered eating behavior in children with type 1 diabetes mellitus.
Steven Pipe, M.D.	Associate Professor	Pediatrics	Basic	Regulation of coagulation factor VIII secretion and activity. Bioengineering improved recombinant factor VIII therapies.
Timothy Cornell, M.D.	Clinical Lecturer	Pediatrics and Communicable Diseases	Basic	Investigating the regulation of the signal transduction pathways of the innate immune system in sepsis. We use cellular and mouse models of sepsis and compare the signal transduction pathways to isolated monocytes from pediatric patients in the intensive care unit.
Suzanne Dawid M.D., Ph.D.	Assistant Professor	Pediatrics and Communicable Diseases	Basic	1. Determining the role that unencapsulated strains of Streptococcus pneumoniae play in the competion for colonization of the nasophrynx. 2. Distribution of pneumococcal bacteriocins (antimicrobial peptides produced by S. pneumoniae) in a collection of isolates cultured from an unvaccinated community.
Peter J. Dempsey, Ph.D.	Associate Professor	Pediatrics and Communicable Diseases	Basic	1. Investigate the role of ADAMs in the regulation of beta cell function and survival with the goal to develop new strategies for beta cell expansion for the treatment of diabetes. 2. Study the role of ADAMs in regulating cell fate specification of intestinal crypt stem cells and to determine their functional rle in models of mucosal injury and repair associated with inflammatory bowel disease and cancer.
Barbara T. Felt, M.D.	Associate Professor	Pediatrics and Communicable Diseases	Basic & Clinical	Identification, management and outcome of sleep disorders in children
Cheryl Gariepy, M.D.	Assistant Professor	Pediatric & Communicable Diseases	Basic	The role of the endothelin system in the development of the enteric nervous system
Marc Hershenson, M.D.	Professor	Pediatrics & Communicable Diseases	Basic	Mechanisms of rhinovirus-induced airways inflammation and hyperresponsiveness; Role of mesenchymal stem cells in lung injury and repair.
Caren Goldberg, M.D., M.S.	Assistant Professor	Pediatric Cardiology	Clinical	Research is focused on measuring and working to find ways to improve neurocognitive outcomes for children with congenital heart disease.
Joyce Lee, MD, MPH	Assistant Professor	Pediatric Endocrinology	Clinical/Health Services	Pediatric Obesity and Diabetes/Childhood Linear Growth and Pubertal Development
Donna M. Martin, M.D., Ph.D.	Associate Professor	Pediatrics, Human Genetics	Basic	Study of genetic regulation of neuronal development, using mouse and chicken as experimental models. Ask basic questions re how transcription factors & chromatin remodeling proteins contribute to multiple aspects of neuronal biology, including neural stem cell proliferation, neuronal differentiation, migration, & physiological function.
Jason Weinberg, M.D	Assistant Professor	Pediatrics; Microbiology & Immunology	Basic	Cell culture & animal models of mouse adenovirus type 1 infection & study a) specific components of the immune system contribute to the control of adenovirus infection in the lung and b) ways in which specific viral proteins modulate these host factors immune responses.
Sucheta M. Joshi, M.D.	Assistant Professor	Pediatrics - Neurology	Clinical	Quality of life in adolescents with epilepsy

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Delia M. Vazquez, M.D.	Professor	Pediatrics and Psychiatry	Clinical	Research on the role of maternal risk for depression on infant stress hormone levels early in life, and effects on mother-infant attachment
Daniel Teitelbaum, M.D.	Professor	Pediatric Surgery	Clinical	Laparoscopic versus open surgical approach for intussusceptions regarding operative intervention
Ronald W. Holz, M.D., Ph.D.	Professor	Pharmacology	Basic	Mechanisms underlying calcium dependent exocytosis - the effects of specific proteins on regulated secretion and granule dynamics immediately adjacent to the plasma membrane.
Jorge A. Iñiguez-Lluhí, Ph.D.	Associate Professor	Pharmacology	Basic	Molecular dissection of the mechanism of action of protein SUMOylation through the study of target proteins linked to human diseases such as the androgen receptor and voltage gated potassium channels.
Lori Isom, Ph.D.	Professor	Pharmacology	Basic	Role of voltage-gated sodium channels in the regulation of electrical excitability in normal development and in paroxysmal disease, including epilepsy, cerebellar ataxia, and cardiac arrhythmia.
Jeffrey Martens, Ph.D.	Assistant Professor	Pharmacology	Basic	The role of protein-lipid interactions in ion channel targeting and function with an emphasis on understanding the details of K+ channel/lipid interactions and relation to normal cellular signaling and the pathogenesis of disease.
Richard Neubig, Ph.D., M.D.	Professor	Pharmacology	Basic	Mechanisms of G-protein-coupled receptors; regulators of G-protein signaling; drug design.
Robert U. Simpson, Ph.D.	Professor	Pharmacology	Basic	Molecular mechanism of action of 1,25-Dihydroxyvitamin D3 [Calcitriol] on cardiac muscle function, structure and gene expression. Studies on Calcitriol, or an analog.
John Tesmer, Ph.D.	Associate Professor	Pharmacology	Basic	Determining atomic-resolution structures of critical proteins involved in G protein-coupled receptor signaling. Techniques include X-ray crystallography, biochemistry and molecular and cell biology.
John Traynor, Ph.D.	Professor	Pharmacology	Basic	Morphine and heroin are analgesics with high abuse potential. Our research characterizes their pharmacology to provide improved pain relief and treatments for heroin abuse.
Rita Ayyangar, M.B.B.S.	Associate Professor	Physical Medicine & Rehabilitation	Clinical	1. Assessment of quality of life in children with cerebral palsy receiving intrathecal baclofen therapy. 2. Validation of the Gross Motor Functional Classification System- Comparison of care professional determined level of functioning using the Gross Motor Classification System versus the parent determined level of functioning.
Steven L. Britton, Ph.D.	Professor	Physical Medicine & Rehabilitation	Basic	Based on ideas about evolution, we developed rat genetic models that are suitable for mechanistic evaluation of complex diseases at all levels of organization.
Anthony Chiodo, M.D	Associate Professor	Physical Medicine & Rehabilitation	Clinical	1. EMG based projects - several ongoing studies utilizing our database of patients who have intrathecal baclofen pumps. 2. Outcome after non-traumatic spinal cord injury.
Andrew J. Haig, M.D.	Professor	Physical Medicine & Rehabilitation	Clinical & Medical Education	1. Studies on imaging and electromyography in degenerative diseases 2. Developing an infrastructure for a web based, modular resident and student training program on rehabilitation for medical schools in third world countries.
Edward A. Hurvitz, M.D.	Associate Professor	Physical Medicine & Rehabilitation	Clinical	Health and Fitness in children and adults with cerebral palsy.

2009 SBRP Mentor List
(Sorted by Department)

NAME	TITLE	DEPT	RESEARCH	DESCRIPTION
Matthew Smuck, M.D.	Assistant Professor	Physical Medicine & Rehabilitation	Clinical	Spine injection procedures are being used more frequently to diagnose and treat common degenerative spine disorders, and are often a minimally invasive alternative to spine surgery. I am the primary investigator of several studies examining methods to reduce the risks, reduce the discomfort, and increase the benefits of these percutaneous procedures.
Denise Tate, Ph.D.	Professor	Physical Medicine & Rehabilitation	Clinical	The use of Venlafaxine XR to prevent major depression disorder in person with spinal cord injury.
Seth Warschausky, Ph.D.	Associate Professor	Physical Medicine & Rehabilitation	Clinical	Studies of cognitive processing speed in children with cerebral palsy.
Richard Mortensen, M.D., Ph.D.	Associate Professor	Physiology & Cellular & Molecular Biology	Basic	The role of PRARy in the mitigation of lipotoxicity and cardiomyopathy in diabetic mice treated with rosiglitizone
J. Todd Arnedt, Ph.D.	Assistant Professor	Psychiatry	Clinical	Mechanisms and treatment of sleep disturbances in psychiatric disorders
Scott A Langenecker, Ph.D.	Assistant Professor	Psychiatry	Clinical	fMRI studies of emotion processing and executive functioning and PET study of 5HT1a binding before and after treatment in depression
Karen F. Stein, Ph.D.	Associate Professor	Psychiatry	Clinical	Studies focused on social cognitions in psychopathology, specifically the eating disorders; current work focuses on self-schemas in onset of disordered eating, alcohol and tobacco use behaviors in young adult women of Mexican origin.
Robert C. Thompson, Ph.D.	Assistant Professor	Psychiatry	Basic	1. Determine which microRNAs might be related to specific brain functions in the adult and more precisely, what this role might be. At this time, we are very intrigued by the specific brain sites where unique microRNAs are found implicating them in the known functions of these brain regions or nuclei. 2. Identification of bio-markers associated with clinical outcomes linked to therapeutic interventions.
Marcia A. Valenstein, M.D.	Associate Professor	Psychiatry	Basic	Research on using health system data on outcomes and services to improve the care of patients with depression and serious mental illness. We also conduct studies on medication adherence.
Stanley J. Watson, M.D., Ph.D.	Professor	Psychiatry	Basic	The biology of the limbic-hypothalamic-pituitary adrenal axis at the molecular, anatomical, and integrative levels, and association with mental illness.
Jon-Kar Zubieta, M.D., Ph.D.	Associate Professor	Psychiatry	Clinical	Effect of MAOA polymorphism on u-Opioid responses to a pain stressor.
Bruno J. Giordani, Ph.D.	Associate Professor	Psychiatry	Clinical	(1) Development and validation of screening techniques for early identification of dementia and/or cognitive decline associated with medical disorders and treatment approaches. (2) Biomechanical and cognitive control of mobility and gait parameters in dementia and movement disorders underlying increased falls risk (co-mentored project).
Avraham Eisbruch, M.D.	Professor	Radiation Oncology	Clinical	Radiotherapy induced xerostomia as a function of target and dosage in the parotid glands
Theodore S. Lawrence, M.D., Ph.D.	Professor, Chair	Radiation Oncology	Basic	Combining molecularly targeted therapies anti-cancer therapies with chemotherapy and radiation therapy.

2009 SBRP Mentor List
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NAME	TITLE	DEPT	RESEARCH	DESCRIPTION
Donna L. Livant, Ph.D.	Assistant Professor	Radiation Oncology	Basic	Use proteomics and array analysis to explore the effects of an integrin inhibitor, currently in clinical trial, that prevents cancer cell invasion and induces apoptosis.
Alnawaz Rehemtulla, Ph.D.	Professor	Radiation Oncology	Basic & Clinical	Mechanism of phosphorylated FADD in cel proliferative activity
Yi Sun, Ph.D	Professor	Radiation Oncology	Basic & Clinical	Mechanism of apoptosis induction by p53 and apoptosis inhibition by SAG-SCF E3 ubiquitin ligases. Drug discovery in p53 signaling pathways.
Daniel Normolle, Ph.D.	Associate Professor	Radiation Oncology	Basic	Biostatistics and/or bioinformatics in oncology and/or chemoprevention
J. Brian Fowlkes, Ph.D.	Professor	Radiology	Clinical	Studies on the use of microbubbles in imaging and ultrasound - blood flow measurement
Jonathan M. Rubin, M.D., Ph.D.	Professor	Radiology	Basic & Clinical	Ultrasound imaging including flow, elasticity, signal processing.
Gary Luker, M.D.	Assistant Professor	Radiology Microbiology & Immunology	Basic	Molecular imaging of chemokines and chemokine receptor signaling pathways in primary and metastatic breast cancer.
Robert Bartlett, M.D.	Professor Emeritus	Surgery	Clinical	Management of edema and mechanical ventilation in ICU patients
David G. Beer, Ph.D.	Professor	Surgery	Basic	Genes associated with poor outcome in human lung and esophageal cancer. Projects to determine the potential function of these genes and why they portend reduced patient survival.
Keith Bishop, Ph.D.	Professor	Surgery	Basic	Immunology of transplant rejection vs. acceptance with an emphasis on T-cells, cytokines, and co-stimulatory pathways.
Steven Bolling, M.D.	Professor	Surgery	Basic & Clinical	Area of research : cell signaling in heart failure
Peter Henke, M.D.	AssociateProfessor	Surgery	Basic	Mechanisms of vein wall healing after DVT to try to decrease the long-term manifestations of fibrosis and venous insufficiency.
William M. Kuzon, Jr., M.D., Ph.D.	Professor	Surgery	Basic & Clinical	The biomechanical pathogenesis of ventral abdominal hernias; methods for hernia repair. Properties of the fascia and muscles of the abdominal wall are measured in both unrepaired and repaired hernias in an animal model.
John C. Magee, M.D.	Associate Professor	Surgery	Clinical	Identifying and evaluating factors to improve efficiency in the kidney transplant process.
Rebecca Minter, M.D.	Assistant Professor	Surgery	Medical Education	Development of proficiency based metrics for surgical skills acquisition.
Gilbert Upchurch Jr., M.D.	Professor	Surgery	Basic & Clinical	Laboratory and clinical studies on the development of abdominal aortic aneurysms. Outcomes research and my basic science lab have focused gender differences in AAAs.
Stewart C. Wang, Ph.D., M.D.	Professor	Surgery	Clinical	Utilizing medical imaging data in conjunction with clinical and crashdata, we analyze how differences in composition affect the body's tolerance to blunt trauma.
Margaret Westfall, Ph.D.	Assistant Professor	Surgery	Basic	My laboratory studies the role of troponin I in cardiac contractile function using gene transfer techniques.
Weizhen Zhang, Ph.D.	Assistant Professor	Surgery	Basic	Neuroendocrine regularion of food intake and energy metabolism, relating to obesity
Himanshu J. Patel, M.D.	Assistant Professor	Surgery - Cardiac	Clinical	Outcomes after repair of aortic dissection, aortic aneurysms and aortic valve surgery are analyzed using a variety of databases available to us.

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(Sorted by Department)

NAME	TITLE	DEPT	RESEARCH	DESCRIPTION
Lisa A. Newman, M.D.	Associate Professor	Surgery - General	Basic & Clinical	Breast cancer in women of African ancestry.
Edward M Wojtys, M.D.	Professor	Surgery - Orthopaedic	Basic & Clinical	Injury mechanics and prevention strategies about the knee.
Diane M. Simeone, M.D.	Professor	Surgery and Molecular and Integrative Physiology	Basic & Clinical	Surgical approaches to the treatment of pancreatic cancer; mechanisms of pancreatic growth regulation and molecular events leading to the development and progression of pancreatic adenocarcinoma;
Kevin C. Chung, M.D., M.S.	Professor	Surgery - Plastic	Clinical	Clinical trials and epidemiology studies with an evidence-based approach for musculoskeletal conditions
Melanie Urbanchek, Ph.D.	Assistant Professor	Surgery - Plastic	Basic	In Vivo Focal Nerve Reinnervation of Muscle Regenerating Within an Engineered Conducting Polymer Environment. Determine whether the conductive properties of the engineered tissue persist in vivo, lead to advantageous or disadvantageous reinnervation of muscle, affect the contractile properties of muscle, & the conduction properties of peripheral nerves. Techniques include: electromyography, nerve conduction velocity, muscle contractile testing, extensile testing, rat surgery, polymer polymerization on tissue, muscle & nerve histology.
Thomas Wakefield, M.D.	Professor	Surgery Vascular	Basic & Clinical	The role of inflammation in venous thrombosis pathogenesis, and means to inhibit formation of venous thrombosis using novel anti-inflammatory approaches.

Total = 200