Welcome

UF College of Medicine
Interdisciplinary Program (IDP) in Biomedical Sciences
Important (Helpful) People
Office of Graduate Education
Medical Science Bldg. room M-130

Brett Looney
Course Management, Fiscal, Web
273-8602

Susan Gardner
Admissions, Student Records
273-8601

James Dean
Event planning, alumni relations
273-8600
Ph.D.s awarded in Science & Engineering

1. University of California (Berkeley)
2. University of Michigan
3. University of Florida
4. Purdue University
5. Stanford University

SOURCE: NSF, NIH, USED, USDA, NEH, NASA, Survey of Earned Doctorates, 2014
Ph.Ds awarded in Life Sciences

1. Johns Hopkins University
2. Harvard University
3. University of North Carolina (Chapel Hill)
4. University of Florida
5. University of Wisconsin

SOURCE: NSF, NIH, USED, USDA, NEH, NASA, Survey of Earned Doctorates, 2014
IDP-Biomedical Science
Seven Concentrations

- Biochemistry
- Molecular Biology
- Physiology
- Pharmacology
- Immunology
- Microbiology
- Cancer Biology
- Molecular Cell Biology
- Neuroscience
- Genetics
Interdisciplinary Program in Biomedical Sciences

Eight Basic Science Departments

- Anatomy & Cell Biology
- Biochemistry & Molecular Biology
- Molecular Genetics & Microbiology
- Pathology, Immunology, and Lab. Med.
- Neuroscience
- Oral Biology
- Pharmacology & Therapeutics
- Physiology & Functional Genomics
Interdisciplinary Program in Biomedical Sciences

Faculty

Colleges of Medicine, Dentistry, Agricultural and Life Sciences, Engineering, Liberal Arts and Sciences, Pharmacy, Public Health and Health Professions, Veterinary Medicine
Trends in NIH and UF College of Medicine Grant Funding

Percent Change in NIH Grant Funding compared to 2008

Percent Change in UF COM Grant Funding compared to 2008
UF Preeminence Initiative

• Launched in 2013
• Legislature appropriated $100 million
• $800 million 3-year fund-raising initiative
• 120 new endowed faculty positions
  – Targeted recruitment of distinguished faculty in health, agriculture, computing, and education
  – Synergize with the efforts of current faculty & students
• Focus on solving important world problems

http://ufpreeminence.org/
Recent Preeminence Arrivals in the Health Sciences

- William R. Hogan, MD, MS
- Jatinder Lamba, PhD, MS
- Faming Liang, PhD
- Steven D. Munger, PhD
- Gail Keenan, PhD, RN
- Herbert P. Schweizer, PhD
- Gordon Mitchell, PhD
- Mattia Prosperi, PhD
- Meng Chris Vulpe, MD, PhD
- Roy Curtiss III, PhD
- Josephine Clark-Curtiss, PhD
- Diana J. Wilkie, PhD, RN, FAAN
- Cynthia Johnson, PhD
- Jiang Bian, PhD
- Eduardo Davila, PhD
- Glenn Smith, PhD
- Lee Sweeney, PhD
- Francois Modave, PhD
- Jane Aldrich, PhD
- Jay P. McLaughlin, PhD
- Dorina Avram, PhD
- David Tran, MD, PhD
- Thomas Schmittgen, PhD
- Andrew Berglund, PhD
- Jurgen Bulitta, PhD
- Liang Zhou, MD, PhD
- Carol A. Mathews, MD
- Jose A. Lemos, PhD
- Somnath Datta, PhD
- Susmita Datta, PhD
- Karyn A. Esser, PhD
Current Students

• ~200 students
• Median time to graduation 5.0 years
• Diverse
  – 14% minorities
  – 28% international
  – 60% non-Florida residents
• 20% are currently funded by NIH training grants or fellowships
NIH Training Grants & Fellowships

http://idp.med.ufl.edu/admissions/nih-training-grants

• Basic Microbiology & Infectious Disease (T32)
• Training in Regenerative Medicine (T32)
• Training in Movement Disorders and Neurorestoration (T32)
• Training in Rehabilitation and Neuromuscular Plasticity (T32)
• Research Training in Vision Science (T32)
• Immunologic & Genetic Mechanisms in Rheumatic Diseases (T32)
• Clinical & Translational Science Training (TL1)
• Training in Hypertension (T32)
• Surgical Oncology Research Training (T32)
• Integrative and Translation Training in Pain Research (T32)
• Molecular Biology & Gene Therapy in Burns and Trauma (T32)
• Training Program in Urologic Research (T32)
• Comprehensive Training Program in Oral Biology (T90)
• Substance Abuse Training Center in Public Health (T32)
• Physical, Cognitive & Mental Health in Social Context (T32)
• Renal Training & Retention Program (T32)
Graduate Student Organization (GSO)

2015-16 Officers:
- Angela McCall- President
- Brittany Lee-McMullen - Vice-President
- Avni Bhatt- Secretary
- Kennon Smith- Treasurer
- Allyson Shea – Social Chair
- Heran Getachew– Community Services Chair
- Jamie Shirley– Athletic Chair
- Heather Drew– Recruiting Chair
- Brittany Rife and Rosha Poudyal – Career Development
- IDP Advisory Board representatives: Miranda White, Danielle Sambo, Brian Mahon
- Student Advocates: Joe Lebowitz, Doug Miller, Michael Pace, Brittney Newby, & Catherine Marten

➢ GSO web link from “IDP Students” web page
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- Molecular Cell Biology
- Neuroscience
- Genetics
- Immunology
- Microbiology
- Biochemistry
- Molecular Biology
Biochemistry

Exploration of the biochemical basis of disease

- Molecular mechanisms of aging
- Bacterial biochemistry & pathogenesis
- Molecular signaling
- Developmental & stem cell biology
- Enzyme regulation & disease
- RNA structure & function
- Structural architectural of biologic macromolecules
- Biochemical pathways in cancer
- Circadian regulation
- DNA replication & repair
- Protein misfolding & disease
- Epigenetics & disease
- Regulation of chromatin structure & function
- Metabolomics
- Molecular virology
- Cell membrane biophysics & signaling
- Gene networks
Cancer Biology

Exploration of the molecular, cellular and physiologic processes that regulate the development, progression, & dissemination of cancer

- Cancer genetics
- Molecular and cell biology
- Oncogenic signaling
- Cancer immunology
- Tumor microenvironment
- Metastasis

- Gene therapy
- Therapy resistance
- Drug development
- Radiation biology
- Cancer diagnostics
- Epidemiology
- Stem cells
Genetics

Exploration of the genetic basis of disease

- Neurogenetic disorders
- Gene therapy
- Epigenetics
- Bacterial genetics & pathogenesis
- Immunogenetics
- Cancer genetics
Immunology
Exploration of basic regulation and role of the immune system in human disease

& Microbiology
Exploration of the pathogenesis of infectious disease

- Innate immunity
- Immunotherapeutics
- Autoimmunity
- Inflammation
- Immunogenetics
- Immunopathogenesis

- Epidemiology of infectious diseases
- Bacterial, Viral, & Parasitic pathogenesis
- Neurovirology
- Host-pathogen interactions
- Microbial genetics
Molecular & Cell Biology

Exploration of cellular processes in human disease

- Cell trafficking & cytoskeleton
- Stem & cell-based therapies
- Cellular signaling pathways
- Autophagy & treatment of cancer and liver disease
- Response & repair of cellular injury
- micro RNAs & cellular regulation
- Bone remodeling & disease
- Cell differentiation & developmental biology
- Apoptosis and ageing
Neuroscience
Exploration of pathways regulating learning, behavior, sensation & disease

- Neurodegenerative disease
- Brain & Spinal Cord Repair
- Addiction & Psychiatric Disorders
- Age-related Memory Loss
- Evolution of Neural Systems
- Neurodevelopment
- Sensory systems
Physiology & Pharmacology

Exploration of physiologic systems and disease
Exploration of drug action and use in the treatment of disease

- Neurosensory systems
- Cardiovascular system & diseases
- Renal system & diseases
- Neuroendocrine physiology
- Myology
- Genetic patterning

- Receptors, signaling
- Targeted therapeutics
- Drug discovery
- Neuropharmacology
- Gene therapy
- Cardiovascular pharmacology
- Translational medicine
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- Physiology
- Pharmacology
- Immunology
- Microbiology
- Cancer Biology
- Molecular Cell Biology
- Neuroscience
- Genetics
- Nanoscience Institute
- Diabetes Institute
- Genetics Institute
- Center for Smell & Taste
- Gene Therapy Institute
- McKnight Brain Institute
- Emerging Pathogens Institute
- Cancer Center
- Center for Regenerative Medicine
- Institute on Aging
- Myology Institute
- Clinical Translational Science Institute
Clinical & Translational Science (CTS) Program

Directors:
Thomas Pearson, M.D., M.P.H., Ph.D., Marion Limacher, M.D., Wayne McCormack, Ph.D.

• “Co-concentration”: Partners with PhD programs
  – Requires additional coursework
    • CTS core courses (11 credits)
    • Electives (8 credits)
  – Dual mentoring: Clinical & Basic Science
  – Human health-related research with at least one clinical and/or translational research Specific Aim

• CTS Graduate Certificate
• TL1 Training Grant opportunity
• Available to students in over 30 Ph.D. programs in 11 colleges at UF
• Emphasis on Team Science
What’s your plan?

B.S./B.A./M.S.

Ph.D.

Law
science policy, patents, intellectual property

Communications
journalism, information media

Industry
pharmaceuticals, biotech research

Business
biotechnology, venture capital

Academia
Professor
Research & Teaching

Government
NIH, CDC, etc.
Our Mission

To prepare our graduates to be innovative independent research scientists for academic, government, industry, biotechnology, business, and other career paths
IDP Curriculum

**Year 1:** Core Curriculum and Research Rotations

**Year 2:** Advanced Courses (Modules), Journal Club, and Laboratory Research

**Qualifying Exam**

**Year 3+:** Dissertation Research, Journal Club, and Advanced Courses

median time to degree 5.0 years
Lab Rotations

◆ Research Rotations (2 in Fall, 1-2 in Spring)
  • Written rotation report – submit to mentor and online
  • Oral rotation reports – scheduled in Journal Clubs

◆ Selecting rotations:
  • IDP website – Faculty/Research web page
  • Schedule meetings with faculty

Lake Nona

Whitney Lab Marine Bioscience
Financial Support

- All students receive a stipend plus paid tuition for the duration of their studies
- Base stipend $28,227 per year
- Health insurance (GatorGradCare)
- Grinter Fellowships
  - competitive
  - $2,000 per year for 3 years
Admissions Process

• **Preview by Admissions Committee**
  – Criteria: research, personal statement, letters of recommendation, transcripts, GRE

• **Interviews** – January 24-26 and February 7-9
  – All expenses paid

• **Offers of admission**
  – usually within 1 week of interview

• **April 15: deadline to accept admission offer**
  – (earlier decisions are encouraged & appreciated!)

• **Grinter Fellowship offer (time-limited)**
  – Graduate School: promote recruitment of outstanding students
  – $2,000/year for first 3 years of predoctoral training
Interview Process

• Applicants were asked to identify concentration in IDP that represented major area of research interest
  – Facilitate review process and promote interaction of the applicant with students & faculty with similar research interests

• **Choice is not binding**
  – Applicants are encouraged to explore other concentrations and research opportunities
Today’s Schedule

9:15 – 10:00  Interview #1 (concentration students escort to next interview)
10:15 – 11:00 Interview #2 (concentration students escort to next interview)
11:15 – 12:00 Interview #3 (concentration students escort to next interview)
12:00 - 2:00  Primary Concentration Events (lunch, tours) (concentration students escort to BMS Building)
2:00 PM    Tours by graduate students of labs (Diabetes, NMR facilities, Structural Biology Facility)
3:00 PM    Coffee in BMS Lobby
3:30 PM    Tours of facilities at ICBR provided by Director of Science, Steve Madore.
4:00 PM    Tour Campus and Gainesville Area
5:00 pm    Return to the Hotel (for local residents, return to HSC)
6:00 PM    Concentration Dinner (pick-up at Hampton Inn)
Tomorrow’s Schedule

9:00 AM  Check-out of hotel and depart for Campus BMS building
          Breakfast Buffet (set up on the upper level)

          **IDP Exposition** – Concentration Poster Session featuring (1 faculty, 2 students) 3 posters per
collection- 21 total posters

9:30 – 12:00  **Faculty Presentations** (BMS Building) The room up the stairs (JG32) Faculty Presentations -
schedule to be randomly with most popular at the end. The idea of this day is to have students
able to see all the concentrations and have some time to connect with faculty on a casual yet
professional atmosphere.

12:00 PM  Lunch with Students (HPNP Reception Hall)
1:30 PM  BMS – JG 32 - check-out and departure for airport
# Exposition Presentations

<table>
<thead>
<tr>
<th>TIME</th>
<th>Concentration Presentations</th>
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<tbody>
<tr>
<td>9:30 AM</td>
<td>9:45 AM  Stephen P. Sugrue, Ph.D.</td>
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<tr>
<td></td>
<td>Senior Assoc Dean Research Affairs</td>
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<tr>
<td>9:55 AM</td>
<td>10:05 AM  MSI-Immunology &amp; Microbiology</td>
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<tr>
<td>10:10 AM</td>
<td>10:20 AM  MSB-Biochemistry</td>
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<tr>
<td>10:25 AM</td>
<td>10:35 AM  MSA-Cancer Biology</td>
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<tr>
<td>10:40 AM</td>
<td>10:50 AM  MSG-Genetics</td>
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<tr>
<td>10:55 AM</td>
<td>11:05 AM  MSM-Molecular Cell Biology</td>
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<tr>
<td>11:10 AM</td>
<td>11:20 AM  MSN-Neuroscience</td>
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<tr>
<td>11:25 AM</td>
<td>11:35 AM  MSP-Physiology &amp; Pharmacology</td>
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<tr>
<td>11:40 AM</td>
<td>11:50 AM  Clinical Translational Science Program</td>
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Office of Graduate Education
Admissions Staff

- Thomas C. Rowe, Ph.D.
  - Associate Dean for Graduate Education & IDP-BMS Director
  - Chair of Admissions Committee
- Susan Gardner
- Brett Looney
- James Dean

Office Location: Room M-130, Medical Science Bldg.

Phone: (352) 273-8600

E-mail: idp@ufl.edu

Web: idp.med.ufl.edu
Questions?