Opportunities in Biomedical Sciences
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Assistant Dean
Graduate School of Biomedical Sciences

Scientific Thought

Observation

Experimentation

Hypothesis

The Traditional Path

- College Degree
- Grad School
- After Grad School
The College Years

Traditional Science Degree
- Biology
- Molecular Biology
- Cell Biology
- Microbiology
- Zoology
- Chemical
- Chemistry
- Biochemistry
- Physical
- Physics
- Math
- Computer Science

Non-science degrees are OK
- Still need some science
- Biochemistry
- Molecular/Cell Biology
- Genetics
- Extra effort to justify choices

Preparation for Graduate School

- Strong desire and interest in Science as a career.
- Most students have traditional science degree.
- Research Experience

Graduate School Preparation

- Strong desire and interest in Science as a career.
- Most students have traditional science degree.
- Research Experience
  - Volunteer
  - Summer programs
  - Internships/Fellowships
  - Research credit
  - Honors/Senior thesis
  - Student assistant
**UT Southwestern**

**SURF**
Summer Undergraduate Research Fellowship

- Must complete sophomore year
- Applications due in February
- Prior research experience not required
- www.utsouthwestern.edu/SURF

**UT Southwestern**

**QP-SURF**
Quantitative and Physical Sciences Summer Undergraduate Research Fellowship

- For Majors in: Chemistry, Computer Sciences, Mathematics, Physics
- Summer Research in Biophysics, Chemistry, Computational Biology, and Math Biology
- www.utsouthwestern.edu/QPSURF

**Grad School:**
Masters or Ph.D.?  

- **Masters**
  - 1-2 years with research or not
  - Jobs are likely technical work, as part of a team
  - Average salaries $28K to $50K

- **The Ph.D.**
  - Highest academic degree
  - 4-5 years, research based
  - Jobs are independent, leadership
  - Average salaries $45K to $100K or more
Research

- More than 3,000 research projects
- $400 million in research expenditures
- 5 Nobel Prize Winners, 20 National Academy of Science Members, 13 HHMI Investigators

Research Advising

Large research faculty with diverse research interests
Excellent training in basic disciplines
Programs are multidisciplinary

Division of Basic Science

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<th>Biological Chemistry</th>
<th>Biomedical Engineering</th>
<th>Cancer Biology</th>
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<td>Chemistry</td>
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Graduate School of Biomedical Sciences
Division of Basic Science

- Multidisciplinary in nature
- Based on faculty’s area of interests
- Common core curriculum

Pathway to DBS PhD

- 1st year: Core course, laboratory rotations, and advanced electives
- 2nd year: Preliminary labwork, and qualifying exam
- Final 2-3 years: Development into an independent scientist!

Student Publications

- # of Pubs by Journal
**Application process**

- Information at [www.utsouthwestern.edu/graduateschool](http://www.utsouthwestern.edu/graduateschool)
- On-line application at [www.utsouthwestern.edu/dbsapp](http://www.utsouthwestern.edu/dbsapp)
- Fall 2013 application deadline is December 15, 2012.
- Applicants evaluated based on research experience, essay, letters of recommendation, GPA, and general GRE.
- Successful applicants brought to UT Southwestern for visit and interviews.

**Application Evaluation**

- Research experience and essay
  - Hypothesis driven, story of your science journey
- Letters of recommendation
  - Critical thinking, work ethic, skills, future colleague
- GPA, and general GRE
  - Important as metric, not absolute
- Interviews
  - Most important, motivation, passion, creativity

**Graduate School of Biomedical Sciences**

**Division of Basic Science**

- Research experience
  - Typically more than a single summer
- Average GPA ~ 3.6
- Average GRE ~ 154V, 159Q, 4.1A
More than 100 schools nationwide represented:

- Baylor University
- Boston College
- Boston University
- Brigham Young
- California Lutheran
- Colorado State
- Duke
- East Carolina
- Emory
- Florida State
- Fordham University
- Hendrix College
- Illinois Wesleyan
- Indiana U
- Johns Hopkins
- Kansas State
- Kenyon
- Michigan State
- MIT
- Mount Holyoke
- New Mexico State
- Northwestern
- Ohio State
- Oregon State U
- Pomona College
- Purdue
- Rice
- Saint Mary's
- Sanford University
- San Diego State
- San Francisco State
- San Jose State
- Seattle University
- Skidmore
- Southwestern
- Stonybrook
- Texas Christian
- Texas Tech
- Trinity
- Texas Wesleyan
- U Alabama
- U Arizona
- U Colorado - Boulder
- U Delaware
- U Denver
- U Houston
- U Iowa - Urbana
- U Maryland - College Park
- U Michigan
- U Minnesota - Twin Cities
- U New Mexico
- U of Florida
- U of NC Chapel Hill
- U of Utah
- U of VT
- U of Washington
- U of Wisconsin/Madison
- U Oklahoma
- U Pennsylvania
- U Puerto Rico
- U San Diego
- UC Berkeley
- UC Davis
- UC San Diego
- UC Santa Cruz
- UCLA
- Univ of Richmond
- UT - Austin
- UT - San Antonio
- UT El Paso
- UT Houston
- Virginia Polytechnic
- Washington U
- Whitworth College

More than 40 countries represented:

- More than 40 countries represented:
- Medical Scientist Training Program
- Approx. 15 students accepted yearly
- Applicants are evaluated based on research experience and letters of recommendation, MCAT, and GPA.
- Full stipend and paid tuition during both MD and PhD years

www.utsouthwestern.edu/mstp
What others say about UT Southwestern

“Top 20 Biological Sciences Ph.D. Granting Programs”
(US News & World Report, 2010)

“Top Research Programs in US”
#1 Biology & Biochemistry, #1 Clinical Medicine, #2 Neuroscience & Behavior,
#3 Molecular Biology & Genetics
(Science Watch, 2010)

“Top Ten Best Places to Work in Science”
#1 of Academic Medical Centers, #9 overall
(The Scientist, 2009)

www.utsouthwestern.edu/gradschool

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