**Molecular and Translational Medicine**

**Director/Co-Director:** Diane Bick Ph.D./Bruce Kone M.D.

**Administrative Coordinator:**

**Mission:** To provide rigorous research and didactic training in the basic, preclinical, and translational sciences of human diseases so that students develop the ability to translate basic and clinical discoveries into better public health.

**Maximum Number of Students/year:** Dependent upon students identifying funding for the summer research project but 15-20 possible.

Change format of the program.

1. Require attendance at a translation seminar/journal club series.
2. Hold an annual translational medicine workshop possibly in association with graduate students.

**Student selection process:**

During their first year students will submit a letter of application and a 250 word essay describing why they wish to enroll in this area of scholarly concentration. Admission will then be dependent upon review by committee comprised of Scholarly Concentration faculty. If approved a guidance committee will be formed for each student. This committee will be responsible for monitoring the student’s progress and designing an individual core curriculum for the student.

Only students in good academic standing will be admitted.

**Timeline (year by year) for student completion of concentration requirements:**

**Year 1**

**Required**

- Identify a mentor
- Apply for a stipend for the summer research program (application is required, if no funding is obtained the through this program we will endeavour to identify alternative sources of funding).
- Form an Advisory Committee and obtain approval for a research/education plan.
- Enrollment in a Summer Research Program between year 1 and 2.
- Attend one of the seminar courses listed below.
- Attend summer research program lecture series run by the C-STEP program

**Optional**

- Spend time shadowing the mentor or other professionals.
- Attend grand rounds in Pediatrics, Pathology, Neurology, or Medicine related field.
Year 2

- Students attend courses and/or seminars as appropriate (potential courses listed below) and approved by the students advisory committee.
- Continue with individual curriculum of study outlined by the advisory committee.
- Attend a “lunch and learn” seminar to discuss diverse topics related to translational and molecular research. These seminars will be held monthly.

Optional:

Serve as a teaching assistant in the Medical School Histology and Cell Biology or Pathology Laboratory (with approval of the course director).

Year 3

- Present poster at UTHSC research day.
- Continue with individual curriculum of study outlined by the advisory committee.

Year 4

- Senior research elective in area of interest.
- Complete core curriculum.
- Submit a final written version of the research project in a modified MS thesis format to the Advisory Committee.
- Present final project at an appropriate venue (Grand Rounds, Research Seminar, regional/national conference).

All Years

- Attend an annual program workshop.
Suggested Didactic Courses.

(The specific courses for each student will be determined by the interests of the student and the advice of individual advisory committees).

GS210061 Critical Thinking in Science
Mattox, William. One semester hour. Summer annually.
GS210052 Introduction to Animal Models
Craig, Suzanne. Two semester hours. Spring annually.
**Introduction to Clinical Research**
**Introduction to Translational Research**
**Biostatistics for Clinical Investigators**
** These classes and several others are offered by the Center for Clinical Research at the Medical School under the direction of Dr. J. Tyson.

Seminar Courses

GS210041 Topics in Clinical and Translational Research
Norris, Steven. One semester hour. Fall and Spring annually.

GS21 1121 Resources and Methods for Analysis of Patient-Derived Samples
Kopetz, Scott. One semester hour. Summer annually. Prerequisite: none

GS07 1731 Seminar in Infectious Diseases
Norris, Steven. One semester hour. Fall, odd-numbered years. Prerequisite: coursework or work experience in microbiology

GS120041 Seminars in Experimental Pathology
Hickson-Bick, Diane. One semester hour. Fall and Spring annually.

GS04 1761 Current Topics in Oncogene Research
Hung, Mien-Chie. One semester hour. Spring, annually.

GS14 1021 Topics in the Neurobiology of Disease
Narayana, Ponnada and Byrne, John, Coordinators. One semester hour. Fall, annually.