

University of Alabama at Birmingham, Hughes Med-Grad Fellowship Program

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Overview and Description

The UAB Howard Hughes Medical Institute Med-Grad Fellowships consist of three elements:

Specialized HMGF Curriculum. The specialized HMGF curriculum includes four courses focused upon the clinicopathologic diagnosis and management of disease; clinical research topics; research approaches to drug discovery and development; and disease phenotyping. Students must also complete the program requirements for their respective graduate programs of study.

Mentored Thesis Research. HMG Scholars complete mentored disease-oriented thesis research.

HMGF Enrichment Program. The HMGF enrichment program catalyzes interaction between fellows and faculty, providing valuable training and career development.

UAB HMG fellows will bridge the current knowledge/language gap that exists between physicians and basic scientists. A new breed of Ph.D. graduates will have the requisite vocabulary and understanding of pathobiology of disease to work as tenure-track faculty alongside physician-scientists, as members of drug discovery teams in pharmaceutical industry or as members of pharmaceutical regulatory teams.

Program Elements

I. Hughes Med-Grad Courses

Modeling Human Disease

A case-based, clinical pathological, conference-style course that presents relevant physical exam and laboratory data key to the diagnosis and clinical management of specific diseases.

Phenotyping Human Disease

This course covers disease processes, such as cancer metastasis, that will form the basis of modules for instruction in modern methodology.

Vocabulary in Clinical Research

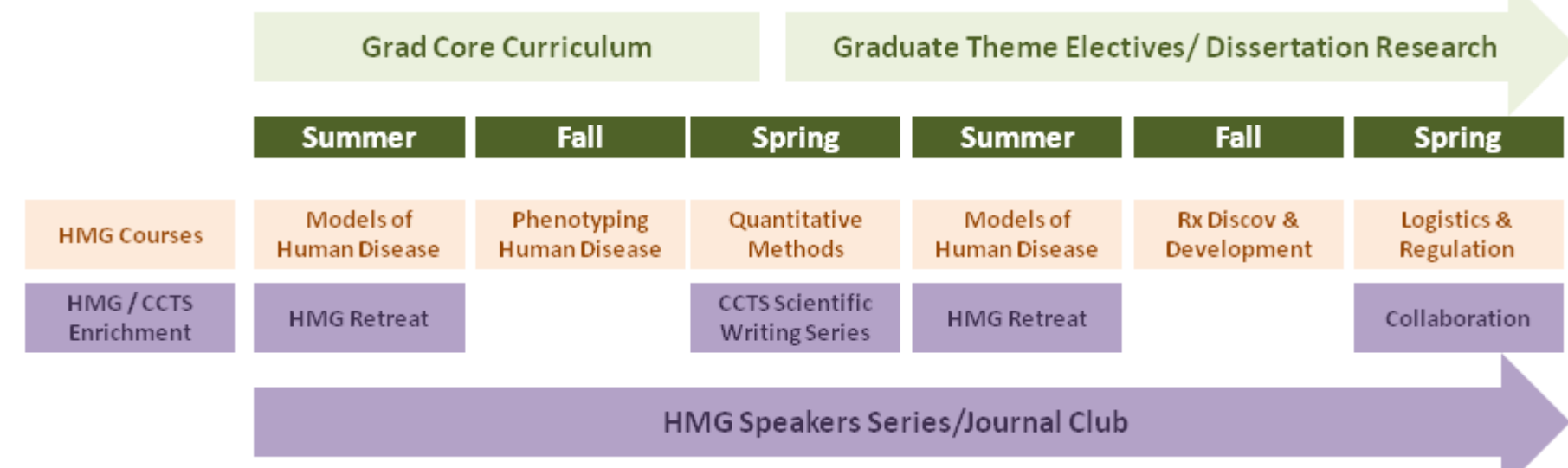
Sessions cover fundamental information on clinical research topics, including hypothesis generation and testing; biostatistics; epidemiology and population research; clinical trials; ethics; overviews of behavioral, prevention, outcomes, and surgical research; the IRB and oversight of research; and critical review of literature.

Drug Discovery & Development

This course provides instruction in modern approaches to drug discovery; coordinated by the Southern Research Institute (SRI) and the UAB Center for Biophysical Sciences and Engineering.

II. Matriculation

An example of the courses and pathway for matriculation of Hughes Med-Grad Scholars is below.



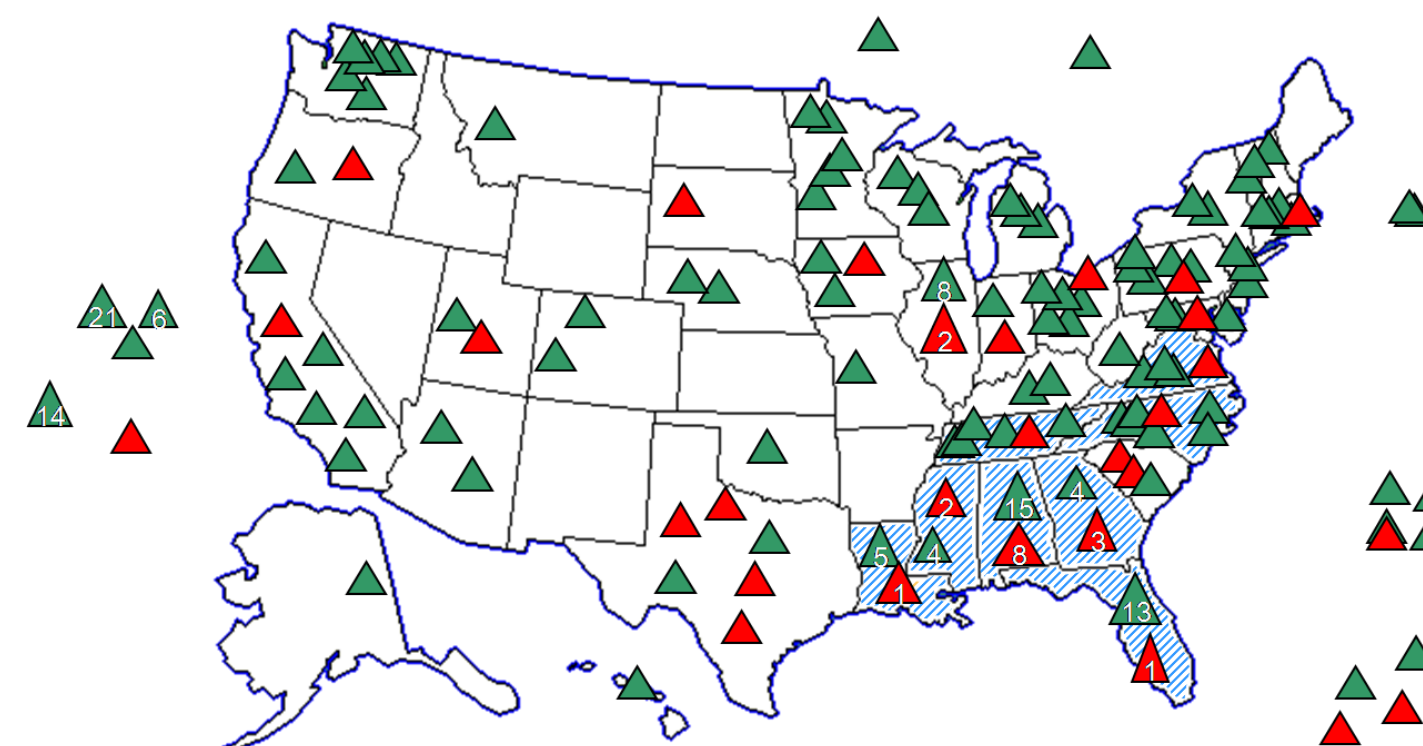
III. Mentor Thesis Training Phase

The UAB Hughes Med-Grad Fellowship Program is designed to provide specialized Ph.D. training in disease-based research. In addition to the 4 courses during the first 2 years, dissertation mentors will catalyze additional training in clinical research, drug discovery, and basic pathobiology during the student's research years. To facilitate this process, the HMGF Program Steering Committee has prepared a set of guidelines which should be discussed with, and agreed upon, prior to the HMG Scholar committing to a mentor's lab. Included in this plan are guidelines for mentors, dissertation committees, and continuing requirements for HMG Scholars.

Accomplishments

I. Recruiting

-  HMG Fellows (2006-2010)
-  HMG Applicants (2006-2010)
-  Historical Recruiting Region



Students are recruited in conjunction with all biomedical graduate programs at UAB. We utilize GRE searches (>1200) and send emails and postcards to prospective students. We also email and mail brochures to undergraduate biology departments and advertise on nationally known recruiting web sites as well as our own website (<http://www.medgrad.uab.edu>).

Year	Enrolled/ Applicant	States Admitted/ Applicant	Minorities Enrolled/ Applicant	Enrolled Students				Institutions
				Mean GRE	Mean GPA	Median GRE	Median GPA	
'06-'07	6 / 20	6 / 14	1/2	1280	3.59	1250	3.66	UC Riverside; Warren Wilson College (NC); Wheaton College (IL); Philadelphia Univ.; Clemson Univ.; Southwestern Univ. (TX)
'07-'08	6 / 40	5 / 21 + India	1/6	1285	3.7	1315	3.78	Univ of Wisconsin, Madison; Univ. of Maryland; Indiana Univ.; Mississippi State Univ.; Univ of Alabama; UAB
'08-'09	8 / 31	5 / 18 + Puerto Rico & Cyprus	2/5	1341	3.54	1300	3.6	Syracuse Univ.; Univ. of Notre Dame; Mercer Univ. (GA); St. Louis Univ.; Southeastern Univ. (FL); Univ of South. Miss., TX State, Tulane Univ.
'09-'10	8 / 37	5 states + 2 countries / 21 states + 4 countries	2/8	1380	3.62	1360	3.59	Clemson Univ.; Worcester Polytechnic Inst.; Emory Univ.; Missouri Southern State Univ.; Loyola Univ. New Orleans; Univ. of Georgia; South Dakota State Univ.; Brigham Young Univ.
'10-'11	12 / 99	9 states + 1 country / 28 states +13 countries	2/12	1283	3.35	1290	3.5	Louisiana State A&M; Alabama State Univ.; Stanford Univ.; Brigham Young Univ.; Auburn Univ. (2); Butler Univ.; Centenary College of Louisiana; Univ. of Georgia (2); Cornell College

II. Hughes Med-Grad Fellows: Selected Spotlights

Rebecca Rudicel ('06)	Co-author - Nature. 2009 Jul 23;460(7254):515-9 Young Investigator Award (17th Conf. Retroviruses & Opportunistic Infections (CROI))
Scott Tanner ('07)	Presentation – Int'l Congress of Immunology (Kobe Japan) Presentation – HHMI Southeastern Cluster Meeting 2010
Dennis Steverson ('08)	NSF Alabama Louis Stokes Alliance Fellowship
Christina Croney ('08)	NIH Training Grant (TL1) from UAB Center for Clinical & Translational Science (CTSA)
Aimee Vincent-Franklin ('08)	Neurobiology T32 Training Grant
Monica Lewis ('10)	Comprehensive Minority Faculty and Student Development Program Fellowship

III. Site Visit: Peer Cluster Meeting (August 14-15, 2008)

UAB hosted the 1st HHMI Med-Grad Scholars Peer-Cluster Student Meeting in August 2008. Six students from Baylor Translational Biology & Molecular Medicine Graduate Program and two students from the Rice BioE Program attended the meeting.



IV. Southeastern US Cluster Meeting

Two students (Scott Tanner and Angelina Londono Joshi) and D. Welch attended the meeting in Chapel Hill, NC. Scott Tanner presented results from his research.

V. Programmatic and Faculty Integration

Hughes Med-Grad Fellows Program promoted the consolidation of the biomedical-based graduate programs under the new Graduate Biomedical Sciences Office. This drive integrated the departments into theme-based programs. The Hughes-Med-Grad Program also stimulated restructuring of the UAB graduate programs.

Hughes Med-Grad Program was the catalyst for the UAB's Center for Clinical and Translational Science (CCTS), with the overall goal to promote clinical and translational research at the participating sites, and nationally.

Integration and Community Programs with Southern Research Institute, which encourages students to perform lab rotations and provide insight into the workings of modern drug discovery, allowing fellows to follow the pipeline of drug discovery from target selection to FDA approval.

Hughes Med-Grad students also participate in the CTSA developed Scientific Writing Course and Grant Writing Workshops

Evaluation

The evaluation process is conducted through the developed surveys (listed below). Dr. M. Patrick McNees, Associate Dean of Research, Health Professions has been enlisted as the HMG evaluator because of his experience in program evaluation and survey development. Dr. McNees' experience is vital for proper evaluation of our program. We will continue to gather more data each year, which will assist in long-term program evaluation.

•HMGF Entry Survey:

Given to 1st Year students each September.

•HMGF Annual Fellows Survey:

Given to students at the end of their 2nd Year and again upon completion of their PhD training.

•HMGF Mentoring Survey:

Given to faculty mentors upon completion of student's training.