The Edward M. Chester, M.D. Summer Scholars Program awards fifteen collegiate undergraduate students the opportunity to spend ten weeks over the summer in clinical laboratory research settings at MetroHealth Medical Center. There are also opportunities for observation of surgery, hospital rounds, and other experiences at MetroHealth (http://www.metrohealth.org/). Applicants must have completed their second year of undergraduate studies in the sciences, and must be a resident of Ohio or attend a university in Ohio. A stipend of $2000 is provided. A project report (presentation) is required.

Application: Click on the link for the application: Edward M. Chester, M.D. Summer Scholars Program (http://www.metrohealth.org/body.cfm?id=289&oTopID=33) *website will be updated soon! Forms and references also available by contacting the program

Application Deadline January 31, 2007

Program Dates: June 4 – August 9, 2007 (10 weeks)

Contact information:
Frances Brownlee fbrownlee@metrohealth.org
John J. Moore, MD jmoore@metrohealth.org

Division of Neonatology
Old Research Bldg., 2nd Floor, Room 249
Attention: Francis Brownlee
2500 MetroHealth Drive
Cleveland, Ohio 44109-1998
Phone: (216) 778-5909

UNDERGRADUATE RESEARCH OPPORTUNITIES AT CLEVELAND CLINIC FOUNDATION

At the Cleveland Clinic Foundation, under the auspices of the Lerner Research Institute, we provide opportunities for undergraduate college students to participate in summer research projects. Although these positions are, in general, filled on a “first come, first served” basis, preference is given to students with strong backgrounds in molecular biology and biochemistry, or students with some laboratory research experience. It is somewhat difficult to place freshmen in research laboratories, since they usually have not had a sufficient science background and we usually suggest that they wait a year and apply again. In a typical summer, we place a total of 50 students in research laboratories, out of a total of approximately 100-150 applicants. We expect students to work in the research laboratory for a minimum of 10 weeks, full time. We pay students $3000 for their summer of work. There are opportunities in various laboratories for continued employment during the school year for local students. Some investigators give preference to students who can continue on during the school year. By individual arrangement, it is possible for the summer experience to be used as an independent study or for credit at the student’s school. Some investigators invite successful students to return for a second year. There is no housing available at the Cleveland Clinic. Students are responsible for their own living arrangements. Students who are interested in applying for an undergraduate summer student fellowship, such as those provided by the American Heart Association or the American Diabetes Association, may find a mentor interested in sponsoring such an application.

If you are interested in this program, please forward a curriculum vitae (resume) to Dr. Moravec at the above fax number or email address below. The CV should include coursework that has been taken at college, including a designation of which courses had laboratories associated with them, grades in the science classes and labs, grade point average, year in college, career goals, any past research experience, and the names and contact information for three professors who may be contacted for references, one of whom should be a faculty member in your major discipline. You must also include one letter of reference from a faculty member in your major.

If you are not familiar with the Cleveland Clinic and its research opportunities, please visit www.clevelandclinic.org and locate the Lerner Research Institute. Here you will find a description of our research departments and laboratories.
Please note that our summer undergraduate research opportunities exist primarily within basic science laboratories. We do not have opportunities for undergraduates to work in clinical areas or in behavioral research.

**Contact Information:**
Dr. Christine Moravec  
moravec@ccf.org  
Phone: (216)-445-9949  
Fax: (216)-445-9951

**PEDIATRICS PROGRAM IN SUMMER UNDERGRADUATE RESEARCH**

The Department of Pediatrics at Rainbow Babies and Children’s Hospital and Case Western Reserve University provides a program for undergraduates to obtain experience in biomedical and psychosocial research relating to pediatric disorders. It should be noted that this program is not designed for clinical experience, but rather basic research is the focus. Undergraduates who have completed their first year of study from any US college or university are eligible to apply. Students’ responsibilities will include full time work on the research project for 10 weeks, as well as weekly attendance at a meeting in which students will describe their projects to the other students in the program. A stipend is provided.

**Application:** Applicants are selected on a competitive basis. Letters of recommendation, GPA and candidates’ personal statements are evaluated.

**Program Dates:** 10 weeks summer

**Application Deadline:** March 1, 2007

**Contact information:**
Ms. Connie May, Program Manager  
Connie.May@uhhs.com  
216-844-1032

Mitchell Drumm, Ph.D., Program Director  
mitchell.drumm@case.edu  
216-368-6893

**HOWARD HUGHES MEDICAL INSTITUTE SUMMER PROGRAM IN UNDERGRADUATE RESEARCH (SPUR)**

This program consists of ten weeks of full time student research on various biomedically related projects. Students work as part of a research team, with mentors from the College of Arts and Sciences, School of Medicine, and the School of Engineering. Students also participate in extracurricular activities that include weekly seminars and one day workshops which involve visits to the Cleveland Museum of Natural History (CMNH) and the Cleveland Metroparks Zoo. A poster session culminates the program.

**Application Deadline:** Completed application, transcripts, and 2 recommendation forms must be postmarked by February 1, 2007. Click for complete list of participating faculty

**Stipend 2007 Program:** $3,000

**Program dates:** 5/29/07 – 8/3/07

**Contact Information:**
Julia Brown-Allen  
Department of Biology - SPUR  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, Ohio 44106  
Phone: 216-368-3556  
Fax: 216-368-4672  
Email: Jab12@case.edu  
Website: http://www.cwru.edu/artsci/biol/hhmi/spur.html
SUMMER UNDERGRADUATE RESEARCH PROGRAM IN PHYSIOLOGY AND BIOPHYSICS

To provide undergraduates interested in a biomedical research career with an opportunity for firsthand knowledge of how new data are obtained and interpreted in major research laboratories, the Department of Physiology and Biophysics offers summer research traineeships to approximately 20 undergraduate students. Students are assigned to laboratories and work together with faculty to obtain hands-on research experience in the life sciences. The program is designed for outstanding students with majors in biology, chemistry, physics or related disciplines. Stipends or national fellowships in the amount of $2,500 are provided. On-campus housing is available. In general, we accept students who have finished their junior year. Exceptions are possible for advanced sophomores.

Applications: Applications (http://casemed.case.edu/omp/programs.cfm) are accepted until December 31st and decisions on acceptance into the program are made on a continuous basis. Most decisions for acceptance will be made by January 31st although applications will be accepted and decisions on acceptance will be made after this date.

Program dates: 10 weeks summer

Contact information: SURP Coordinator
Department of Physiology and Biophysics, School of Medicine
Case Western Reserve University
Cleveland, Ohio 44106-4970

Telephone: 216-368-2084
E-mail: PHOL-INFO@case.edu

SUMMER UNDERGRADUATE RESEARCH IN PHARMACOLOGY

The Department of Pharmacology has provided "hands on" research experience for sophomores and juniors in the area of molecular pharmacology. Although the projects will vary, each is related to a common theme - elucidation of the molecular mechanisms underlying the interaction of chemical agents such as drugs, hormones and neurotransmitters with biological systems. In addition to research, weekly seminars are presented to acquaint the students with the broad range of research projects in the Pharmacology Department. Generous funding has been provided by the American Society for Pharmacology and Experimental Therapeutics (ASPET) and from the HHMI-sponsored Summer Program in Undergraduate Research (SPUR), which is coordinated by the Department of Biology. Stipends of $2,800 will be awarded to all participants. Lodging, travel funds, and an allotment for food will also be provided.

Application: Successful applicants should have strong academic records and have completed at least one laboratory course prior to application. Previous experience performing independent laboratory research is not required. Current sophomores and juniors are given preference.

Applications completed by January 31, 2007 will be given preference and decisions will be made by February 15, 2007.

The application is electronic and automatically sent when the online form is submitted. Letters of recommendation will be solicited by email according to the addresses provided in the online form. Transcripts must be mailed to SURP Admissions office. Information about the program and access to the application can be found on the web at Pharmacology: Case Western Reserve University

Program dates: May 10, 2007 ending no later than August 10, 2007 (10 weeks)

Contact information: SURP Admissions
Ruth Seigel  ruth.seigel@case.edu
Department of Pharmacology
Case School of Medicine
10900 Euclid Avenue
Cleveland, OH 44106-4965
The Case Med Office of Multicultural Affairs will have opportunities for interested candidates to enroll in the Heart, Lung, and Blood Minority Research Training Program. This program provides undergraduates and medical students with an opportunity to undertake state-of-the-art biomedical research in cardiovascular, pulmonary, hematological, and sleep disorders research and to expose them to the excitement, challenges and rewards of a career in biomedical research. The program provides mentored research training with outstanding investigators. Undergraduates who are not funded under the Heart, Lung, and Blood grant, may be funded from other sources where the compensation may be different.

Students conducting research for our program must work a minimum of two month, but a maximum of 3 months and will receive $1,664 a month compensation. We will provide up to $500 in travel expenses to Cleveland and back to your home. A weekly luncheon speaker series will be held for the students. All students are provided with health insurance for the duration of the program and $400 for assistance with housing and meals.

Click here to apply (http://casemed.case.edu/omp/ApplyHBL.cfm)

Contact information:
Edna Fuentes-Casiano, Program Coordinator
(216) 368-1914  
exf28@case.edu
Website: http://mediswww.case.edu/omp

SMDEP (http://casemed.case.edu/omp/SMDEP.cfm) is a rigorous six week summer program for pre-medical and pre-dental students. Participants have classes in the basic sciences: biology, general chemistry, organic chemistry, and physics. Every student will also take a pre-calculus or calculus class. Participants can also sign up for an elective writing strategies class as well. In addition students will have opportunities for interaction with a diverse group of medical students and physicians as well as direct observation with a physician in a health care setting. Students will also learn about the application process for professional school and the personal qualities that are important in order to be successful.

SMDEP is funded by the Robert Wood Johnson Foundation and is designed to prepare students considering professional careers in the health care industry. SMDEP targets students from groups that have been historically underrepresented in medicine: Latinos, African Americans, and Native Americans—and other students who are disadvantaged. All are welcome to apply. Only students who are currently freshmen or sophomores can apply. Housing and meals are provided free of cost. Limited travel expenses are also provided. Each student receives a $700 stipend after successfully completing the program. Limited health insurance is also provided to participants.

Applications: To qualify for the SMDEP, applicants must have a U.S. Citizenship or a permanent resident visa, must be a freshman or sophomore in college at the time of application, have at least 3.0 GPA with a minimum 2.75 in the sciences, combined SAT or ACT scores of at least 950 or 20, respectively, and a serious interest in a medical or dental career.

Students interested in attending the SMDEP 2007 program should apply online by going to the website at: www.smdep.org or call the toll free number at (877)-310-6637

SMDEP Application Deadline: March 1, 2007

Program dates: June 9 – July 20, 2007

Contact information:
Edna Fuentes-Casiano, Program Coordinator
(216) 368-1914  
exf28@case.edu
Website: http://mediswww.case.edu/omp

Joseph T. Williams, Director
(216) 368-1914  
joseph.williams@case.edu
ACADEMIC CAREERS IN ENGINEERING AND SCIENCE (ACES) FOR MINORITY STUDENTS

Case Western Reserve University offers research opportunities for minority undergraduate students in science and engineering. Students spend ten weeks working in a research laboratory or research program under the direction of a faculty member. They also attend lectures by science and engineering faculty and give poster presentations at the end of the program. The Summer Undergraduate Research Program includes a stipend, plus support for housing, meals, travel, and supplies.

The ACES (http://www.case.edu/admin/aces/summer.htm) program will run from May 22 through July 26, 2007. This is a hands-on, intensive program that seeks to attract minority undergraduate students to pursue research careers in science and engineering. Students are assigned a faculty mentor with related research interests. Students learn new skills and gain valuable experience by contributing to ongoing research activities.

The application deadline for this year is March 17, 2007. Interested students should submit a completed application, a transcript, and two short letters of recommendation. The application may be downloaded and printed from this link. Last year's ACES students are welcome to reapply.

OTHER RESOURCES FOR UNDERGRADUATE RESEARCH OPPORTUNITIES AT
CASE WESTERN, IN CLEVELAND, AND AROUND THE COUNTRY

The CWRU Office of Undergraduate Studies has a long listing of Research Opportunities. Many programs accept non-Case students, check with each program.

ON CAMPUS PROGRAMS:  http://www.case.edu/provost/source/opp/oncampus.htm
OFF CAMPUS and NATIONAL PROGRAMS:  http://www.case.edu/provost/source/opp/offcampus.htm
FUNDING:  http://www.case.edu/provost/source/opp/funding.htm

SUMMER ON THE CUYAHOGA

Visit the website below for information on a summer internship program open to students of Case, Colgate, Princeton, Smith and Yale that exposes interns to the professional, civic, and social offerings of the Cleveland area. http://www.summeronthecuyahoga.com/

LINKS TO SOME NATIONAL UNDERGRADUATE RESEARCH EXPERIENCES

Summer programs funded by the Howard Hughes Medical Institute:  http://www.hhmi.org/
Undergraduate Summer Research Opportunities in Chemistry:  http://rainier.chem.plu.edu/sumr_res.html

SELECTED LINKS FOR LOCAL VOLUNTEERING

MetroHealth  The Cleveland Free Clinic  University Hospitals  Cleveland Clinic

Click on the following links to learn more about Cleveland and the CWRU School of Medicine

Distributed by:  Christian Essman (cpe3@case.edu) Director of Admissions, CWRU School of Medicine