Lerner Research Institute

TOMORROW'S Researcher

THE CLEVELAND CLINIC FOUNDATION

Training the Next Generation of Scientists

Winter 2005

On behalf of the Research Faculty and Graduate Students of The Cleveland Clinic Lerner Research Institute, we would like to welcome you to the inaugural issue of Tomorrow's Researcher. This quarterly newsletter was created to highlight the academic research programs of the Lerner Research Institute and inform prospective students and their faculty advisors of our Ph.D. partnership programs.

The Lerner Research Institute is home to all laboratory-based research at The Cleveland Clinic. Our mission is to understand the underlying causes of human diseases and to create opportunities to collaborate on research projects that begin as experiments at the laboratory bench and progress to bed-side treatments or cures. The Lerner Research Institute:

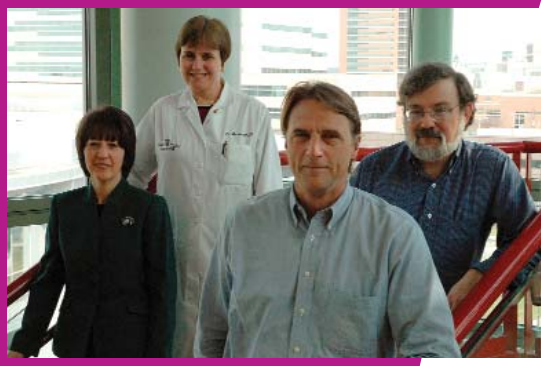
- Is ranked fifth nationally in NIH funding among all U.S. research institutes.
- Consists of nine basic science departments -- Biomedical Engineering, Cancer Biology, Cell Biology, Immunology, Molecular Cardiology, Molecular Genetics, Neurosciences, Pathobiology and the newly created Stem Cell -- and 11 Clinical Research Centers of Research.
- Research programs focus on understanding the mechanisms of cardiovascular, cancer, neurologic, musculoskeletal, allergic and immunologic, eye, metabolic and infectious diseases.
- More than 1,100 scientists and support personnel work in the Lerner Research Institute, including more than 110 Faculty, 350 Junior Faculty and Postdoctoral Fellows, and 130 graduate students.

The Lerner Research Institute has a long history of strong biomedical research programs and has made a significant commitment to the education and training of young researchers by forming partnership academic programs with three local universities: Case Western Reserve University, Cleveland State University and Kent State University. Graduate students can come to The Cleveland Clinic to complete a Ph.D. program and graduate from one of our three affiliate universities.

The continuum of biomedical investigation at The Cleveland Clinic ranges from Basic to Translational to Clinical Research programs and spans The Cleveland Clinic campus. The Lerner Research Institute houses many of the laboratories on campus that conduct basic laboratory research in a wide variety of biomedical research projects.

The Lerner Research Institute is an exciting and dynamic environment for students interested in Ph.D. programs in biomedical research. For more information about our Graduate Programs, The Cleveland Clinic and living in Cleveland, visit our website at www.lerner.ccf.org

We look forward to hearing from you!



Research Education (left to right): Marcia Takacs Jarrett, Ph.D., Director, Research Education; Chris Moravec, Ph.D., Chair of the Student Coordinating Committee; Guy Chisolm, Ph.D., Lerner Research Institute Vice-Chair; and Donal Luse, Ph.D., Chairman of the Postdoctoral Advisory Committee.

Events

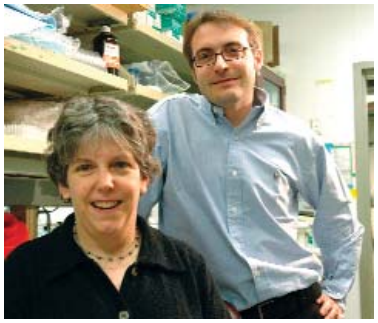
March 19:
Biomedical Scientist Training Program Days

April 12:
Kent State University Research Day

March 16, April 16 & May 11:
Career Development Seminars

POSTDOC PROFILE

Chance for collaborative research a big attraction



Laurent Chavatte, Ph.D., has been a postdoctoral fellow in the Department of Cell Biology for three years. He received his Ph.D. from the University of Paris, France. The focus of Dr. Chavatte's research is understanding the mechanism of selenium insertion into cell-surface proteins and its role in the prevention of a variety of diseases from prostate cancer and heart disease to viral infections. His sponsor is **Donna Driscoll, Ph.D.**, Cell Biology.

Why should a graduate student or postdoctoral fellow consider the Lerner Research Institute to continue their education?

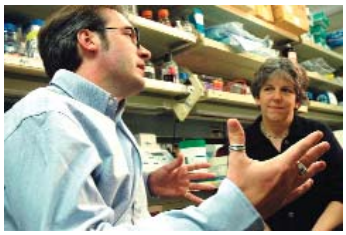
Dr. Driscoll: *You can do basic science research but you also have the opportunity to do it in a clinical context. Being a smaller institute leads to more collaboration. For example, my lab is doing hardcore molecular biology, but the department [Cell Biology] is very interested in atherosclerosis. That provides us with a larger breadth and context in which to work.*

What have you liked the best about your experience at the Lerner Research Institute?

Dr. Chavatte: *It's great to work here; having the clinical research so close is very nice. And the research is related to diseases, so there's a lot of interaction among the departments.*

Dr. Driscoll: *We also have a great training program for our post-doc fellows. We provide support to help them learn how to write resumes and grants. For example, senior students and fellows in our department give 45-minute presentations on their research, and then we offer critiques. We don't provide feedback on the science, but on the presentation skills. The idea is to give them additional skills that are more than just science that can aid in their success as researchers.*

Why did you select the Lerner Research Institute?



Dr. Chavatte: *I'm interested in new areas of research. The Lerner Research Institute is a different environment than in France, where there was little interaction between researchers and the clinical environment.*

What has been some of the surprises about coming to the Lerner Research Institute?

Dr. Chavatte: *I've enjoyed the many talented people who come to give presentations. It's been a chance to hear Nobel Prize recipients. You can also have a great relationship with the Principal Investigators. It's a different type of relationship than what you see at other institutes. There's more collaborative work here - a team effort. It's much less competitive [among departments]. It's more like we're all working together.*

The Graduate Student Activities Committee (GSAC) at the Lerner Research Institute provides social and growth opportunities that help to balance the professional and personal lives of graduate students.

Events include professional development activities, scientific speakers and seminars, and social events, like skating parties and potluck dinners, to allow students to relax and meet students from other departments. Additionally, the GSAC acts as an advocate for graduate students.

The GSAC has the following goals:

- Recognize the research efforts of the graduate faculty.
- Promote research interests of graduate students.
- Support interdepartmental communications among graduate students.
- Organize social and entertainment events for graduate students.
- Disseminate information regarding career opportunities.

"The GSAC plans and supports different activities and services to meet various needs of our graduate students," said GSAC President **Sachin Budhabhatti**, Biomedical Engineering. "Activities include inviting outside scientific speakers and social activities to promote student self-confidence and enjoyment. The ultimate goal of the GSAC is to strengthen graduate student life in the Institute through activities, events and services."

Started in 1999, the GSAC now has more than 130 graduate students.

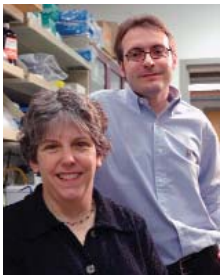
Young investigators' basic, clinical research honored

Each year, the Lerner Research Institute sponsors The F. Merlin Bumpus Junior Investigator Awards in both Basic Science and Clinical Research as a way for young scientists to showcase their research. This year's recipients were introduced at the annual Lerner Research Institute Research Day in November 2004.

Paul DiCorleto, Ph.D., Lerner Research Institute Chairman, presented the honors in the Basic Science category. **Richard Rudick, M.D.**, Chair, Division of Clinical Research, bestowed the recognition in the Clinical Research class.

The following researchers were recognized for their work.

Basic Science



First Place: **Laurent Chavatte, Ph.D.**, Cell Biology (sponsor: **Donna Driscoll, Ph.D.**, Cell Biology), "Mechanism of selenoprotein biosynthesis in eukaryotes: Ribosomal protein L30 is a component of UGA/selenocysteine recoding machinery."

Second Place: **Mark Whitmore, Ph.D.**, Cancer Biology (sponsor: **Bryan Williams, Ph.D.**, Chair,Cancer Biology), "Synergistic activation of innate immunity by poly-IC and CPG DNA stimulates enhanced antitumor activity against established B16-F10 pulmonary metastases."

Finalists: **Mukesh Kumar Agarwal, Ph.D.**, Molecular Genetics (sponsor: **George Stark, Ph.D.**, F.R.S., Molecular Genetics), "Placental transforming growth factor beta protects p53-null ovarian cancer cells from PALA-mediated death"; **Hiroyuki Amano, M.D.**, Immunology (sponsor: **Rob Fairchild, Ph.D.**, Immunology), "Acute rejection of cardiac allografts in the absence of recipient CCR5 is mediated by antibody"; and **Lisa Middleton, Ph.D**., Cell Biology (sponsor: Dr. Driscoll), "Translational recoding of UGA as selenocysteine in selenoprotein synthesis."

Neal Peachey, Ph.D., Ophthalmic Research, Cole Eye Institute, was Chair of the Basic Science Abstract Selection Committee.

Clinical Research

First Place: **Michael B. Davidson, D.O.**, Internal Medicine (sponsor: Daniel Brotman, M.D., General Internal Medicine), "Diurnal blood pressure variation and triglyceride to HDL ratio in patients without diabetes ."

Second Place: **David Anthony, M.D.**, Anesthesiology and Critical Care Medicine (sponsor: C. Allen Bashour, M.D., Anesthesia), "Serial changes in creatinine to predict postoperative hemodialysis, extended length of stay, and mortality after cardiac surgery."

Finalists: **Joseph Abdelmalak, M.D.**, Urology (sponsor: Raymond Rackley, M.D., Glickman Urological Institute), "Botulinum A toxin (BOTOX) injection for the treatment of refractory overactive bladder"; **Ratna Sajja, M.D.**, Radiation Oncology (sponsor: John Suh, M.D., Brain Tumor Institute), "Gamma knife radiosurgery for newly diagnosed and recurrent intracranial meningiomas"; and **Huseyin Nail Aydin, M.D.**, Colorectal Surgery (sponsor: Feza Remzi, M.D., Colorectal Surgery), "Evaluation of operative morbidity and mortality in diverticular disease - analysis of predictive risk factors and their impact on medical and surgical outcome."

Maria Siemionow, M.D., Ph.D., Plastic Surgery, was the Chair of the Clinical Research Abstract Selection Committee.

Frederick W. Alt, Ph.D., Department of Genetics, Harvard University, was the keynote speaker. His presentation was titled "The Role of the DNA Double Strand Break Response Recombination and Suppression of Oncogenic Translocations and Amplification." Research presentations were given by Michael Kattan, Ph.D., Chair, Department of Biostatistics and Epidemiology; **Marina Antoch, Ph.D.**, Cancer Biology; **Riqiang Yan, Ph.D.**, Neurosciences; and **Roy Silverstein, M.D.**, Chair, Cell Biology.

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Marcia Takacs Jarrett, Ph.D., Director
Research Education
Lerner Research Institute (ND 53)
9500 Euclid Avenue
Cleveland, OH 44195
216/444-4860
jarretm@ccf.org

Keith Jameson, Editor
jamesok@ccf.org

FAX 216/444-3279
Jim Lang, Photographer
Christine Kassuba, Editorial Assistant
David Schumick, Designer
Connie Gast, Administration

Tomorrow's Researcher is published quarterly by the Lerner Research Institute's Research Education Office. The educational mission of the Lerner Research Institute is to provide an excellent research training experience, encourage career development and facilitate transition into the next level of a career in science.

The academic mission of The Cleveland Clinic Lerner Research Institute is to provide an excellent research training experience, encourage career development and facilitate transition into the next level of a career in biomedical science. To achieve that goal, the Research Education Office recruits qualified individuals who wish to further their scientific careers by participating in and contributing to leading-edge biomedical research.

The Lerner Research Institute offers partnership graduate programs with Cleveland State University, Case Western Reserve University and Kent State University. Many Lerner Research Institute faculty also have adjunct and/or primary appointments at one or more of these institutions making it possible to complete the research requirements for the Ph.D. with a Lerner Research Institute advisor at The Cleveland Clinic and graduate with a doctorate from one of these universities.

The Lerner Research Institute provides training and research education programs for nearly 250 postdoctoral research fellows, more than 130 graduate students and more than 100 summer research students.

For more information about postdoctoral, graduate student and summer research opportunities, visit:

www.lerner.ccf.org/education

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The Cleveland Clinic
Foundation
Lerner Research Institute
9500 Euclid Avenue / ND53
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