More goes into a successful career in biomedical research than mastering day-to-day laboratory techniques.

Grant writing. Writing and submitting manuscripts. Creating presentations that leave lasting impressions. These are just some of the skills that biomedical researchers need to successfully move their careers forward.

To help investigators hone their professional skills, the Lerner Research Institute offers the Research Education Career Development Seminar Series. The seminars are held monthly throughout the traditional academic year and cover a broad range of topics.

“The seminar series provides new researchers the chance to tap into the real-life experiences of the Institute’s Faculty,” said Guy M. Chisolm III, Ph.D., Cell Biology and Institute Vice-Chair for Education. “Undergraduate and graduate students and postdoctoral fellows have the opportunity to experience cutting-edge laboratory training at the Institute, but we’re also here to guide them to the next professional level.”

Topics touch on just about every aspect of careers in biomedical research. Next year’s topics will include “The Do’s and Don’ts of Planning Successful Experiments,” “Creating Your Own Scientific Niche,” and “Writing to be Read.”

The series draws presenters from the Institute as well as other institutions. Past Institute seminar presenters have included Paul E. DiCorleto, Ph.D., Institute Chair (“How To Get The Most Out of a National Scientific Meeting”), Peter R. Cavanagh, Ph.D. D.Sc., Chair, Biomedical Engineering (“Developing Your Research Plan and Personality”), Charis Eng, M.D., Ph.D., Chair, Genomic Medicine Institute (“Manuscript Writing and

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Clinical collaboration, support at heart of great experience

Keiji Kamohara, M.D., Biomedical Engineering, has been a postdoctoral fellow at the Lerner Research Institute since July 2003. He received his M.D. at the Saga Medical School in Saga, Japan. His primary research in the Cardiovascular Dynamics Lab is cardiovascular physiology, with a major emphasis on cardiovascular dynamics relating to cardiac devices and surgical interventions to treat heart failure. The current programs in the Cardiovascular Dynamics Laboratory include: left atrial appendage exclusion device; mitral annular remodeling to treat mitral regurgitation; MagScrew total artificial heart; DexAide right ventricular assist system; CorAide™ left ventricular assist device; Coapsys™ – a device to treat mitral regurgitation on a beating heart; PediPump™ pediatric ventricular assist device; Cardioscope; AutoRetroperfusion cannula; and polymer coatings for circulatory devices. Among these programs, Dr. Kamohara, whose mentor is Kiyotaka Fukamachi, M.D., Ph.D., Biomedical Engineering, has been working on the Left Atrial Appendage Exclusion Device, MagScrew Total Artificial Heart, and Mitral Annular Remodeling projects as the fellow-in-charge. In particular, he has focused on the development of a novel device for left atrial appendage exclusion during the last two years. The Atrial Exclusion Device (AED) has been specifically designed to enable rapid, reliable and safe exclusion of the left atrial appendage. It may also provide a new therapeutic option for reducing the risk of stroke in atrial fibrillation patients. Some comments from Dr. Kamohura:

Why should a graduate student or postdoctoral fellow consider the Lerner Research Institute to continue their education?
Because of the vast scientific resources in the Institute related to every field of medical science, graduate students and postdoctoral fellows have an excellent opportunity to learn and experience the highest quality of research in their respective field. The close collaborations with clinicians provide researchers with unique opportunities to conceive of and conduct novel research that is directly related to the needs of patients.

What have you liked the best about your experience at the Institute?
I have had phenomenal opportunities to work with many people from all over the world – an experience that cannot be replicated in my country, Japan. This great experience has given me a new perspective on clinical practices and research techniques, which will be very useful to me as I work as a clinical surgeon in Japan.

Why did you select the Institute?
I had worked as a clinical cardiovascular surgeon for 10 years in Japan before I started my research at the Institute. From my clinical experiences in treating patients with cardiac diseases, in particular those suffering from severe congestive heart failure, I realized that it was very important to understand the fundamental cardiac function and physiology and to study cardiac devices, including artificial valves, hearts and left ventricular assist devices. With perfect timing, I heard that Dr. Fukamachi had an opening for a postdoctoral fellow and applied for the fellowship without hesitation. Although I still harbor an interest in studying cardiovascular dynamics related to surgical interventions, I must return to my clinical work in Japan in August. I believe that the great opportunity which Dr. Fukamachi has provided will be very useful for my clinical work in the future.

What have been some of the surprises about coming to the Institute?
I have received great support and kindness from my colleagues. Before I joined the Institute, I had no experience in research. However, I was able to begin my research work very smoothly and to make very significant achievements, for which I am indebted to my colleagues. In addition, I enjoyed precious opportunities to work closely with clinical cardiovascular surgeons who are recognized around the world as leaders in the field of the cardiovascular surgery. I would really like to thank my colleagues and clinical surgeons for their assistance.
The Biomedical Sciences Training Program allows students to meet with leading researchers and academics, including (above) Martin Snider, Ph.D., Director of BSTP at the Case Western Reserve University School of Medicine.

Josephine Adams, Ph.D., Cell Biology (above right with scarf), and Philip Pellett, Ph.D., Molecular Genetics (right center), are among the Lerner Research Institute Faculty who meet regularly with students to explain the educational and research opportunities available here and to answer any questions that the students might have.

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Submission: A Journal Editor’s Perspective”), and Paul Fox, Ph.D., Cell Biology (“Graphics for Presentations”).

This year’s invited guests included Eric Cottington, Ph.D., Associate Vice President of Research at Case Western Reserve University (“Authorship and Mentorship”) and Alan Willard, Ph.D., Chief of the Scientific Research Branch at the National Institutes of Health’s National Institute of Neurological Disorders and Strokes (“Grant Writing”).

Marcia Takacs Jarrett, Ph.D., Director of the Institute’s Office of Research Education, said the annual seminar series is designed to provide a practical approach to career development for all research trainees. Dr. Jarrett and her office have organized and hosted the seminar series for four years. Her own seminar targets research trainees planning a job search (“Fine Tuning Your CV”).

“We’re fortunate that our Faculty have taken such a keen interest in participating in the series and hope to include many more of them in the future,” Dr. Jarrett said.

“The series benefits from our academic collaboration with Case,” she said. “We provide shuttle services to and from the Case campus. In addition to Dr. Cottington’s presentation, Mark Murray, Director of Case’s Office of Foreign Scholars and Scientists, gave a talk titled ‘Foreign Scientists in U.S. Labs: Visas, Travel, and Legal Issues.’”

Dr. Jarrett said, “Again, our goal is to expose our research trainees to a range of topics and speakers that will be beneficial to their careers.” Sessions are videotaped and available for viewing by researchers who were unable to attend.

While Dr. Jarrett organizes and hosts the series, advice and guidance are also given by the Institute’s Postdoctoral Advisory Committee, composed of representatives from its nine departments.
The educational 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 to 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