

Molecular genetics groups break for annual retreat

By Deepa Singh

The NIEHS Laboratory of Molecular Genetics (LMG) kicked off its two-day departmental retreat May 8 at the North Carolina Botanical Garden on the campus of the University of North Carolina at Chapel Hill (UNC). The event, organized by the LMG Trainee Action Committee (TAC), included scientific talks by academic investigators and career talks by former LMG trainees now working in a range of scientific careers.

Attended by more than 60 lead researchers and trainees from LMG, the retreat had a mixed feeling of career fair and scientific conference. The event was meant to provide current trainees with a chance to interact and seek career advice from a wide range of speakers.

According to Bill Copeland, Ph.D., head of LMG, the retreat was organized to help trainees as they face a changing job market. "Along with the excellent scientific presentations, we wanted a program that included professionals who had opted for traditional postdoc career routes, such as academia and industry, as well as those who had chosen nonbench careers, such as regulatory affairs, science writing, grant review, and management," he said. "As senior scientists, we realize we can no longer assume that trainees will necessarily follow the same path we did decades ago."

Academic speakers discuss recent advances

Academic speakers at the retreat are long-standing experts in their fields, who provided insights into recent advances in leading-edge technologies, such as electron microscopy and next-generation sequencing.

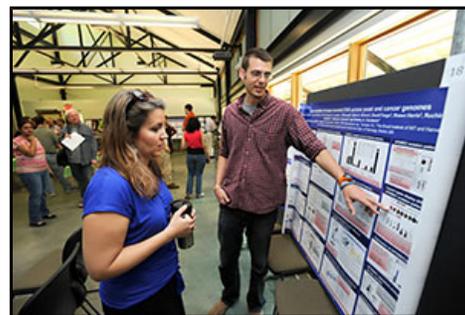
- Jack Griffith, Ph.D., of the UNC Lineberger Comprehensive Cancer Center presented his exciting work on providing visual representations of the loading of DNA replication proteins onto the DNA in bacteriophage T7 and T4, and herpes simplex virus-1. These studies were conducted using transmission electron microscopy and, according to Griffith, together with X-ray crystallography, this technique will provide some of the structural answers that will be critical for examining the similarities and differences across various systems.
- Piotr Mieczkowski, Ph.D., director of the next-generation sequencing and genotyping facility and a professor with the Lineberger Comprehensive Cancer Center at UNC, talked about how next-generation sequencing allows a cheaper, relatively faster and more extensive way of diagnosing inherited diseases.
- Susan Lovett, Ph.D., professor of biology at Brandeis University, described a distinct class of mutagens, widely used in the treatment and prevention of HIV/AIDS, that promote DNA template switching, thereby leading to stalling of the replication fork.
- Duke University cancer biologist David MacAlpine, Ph.D., explored the effects of chromatin architecture in defining the eukaryotic start sites of DNA replication.

Former LMG trainees help guide current trainees

The retreat also gave LMG postdocs a chance to network with a panel of former trainees who have sought careers in other than tenure-track positions. The former trainees talked about how they prepared for the jobs they hold, their responsibilities and experiences at their current jobs, and the various career development opportunities they took advantage of while at NIEHS. They also emphasized the importance of networking and developing management and leadership skills in the different workshops they attended at NIEHS.

Career panelists explore life away from the tenure track

- Christopher Halweg, Ph.D., lecturer of biological sciences at N.C. State University
- Shannon Holmes, Ph.D., senior manager of regulatory affairs at Biogen Idec
- Andres Larrea, Ph.D., application sales representative at Pacific Biosciences
- Robert Kokoska, Ph.D., program manager at the U.S. Army Research Office
- Omari Bandeje, Ph.D., toxicology reviewer at the U.S. Food and Drug Administration Center for Food Safety and Applied Nutrition
- Rajesh Kasiviswanathan, Ph.D., purification development scientist at FUJIFILM Diosynth Biotechnologies
- Rich Gradman, Ph.D., managing editor at American Journal Experts



During a morning break, Steven Roberts, Ph.D., right, who is an Intramural Research Training Award fellow in the Chromosome Stability Group headed by Mike Resnick, Ph.D., explained his research work to Tammy Collins, Ph.D., director of NIEHS Office of Fellows' Career Development. (Photo courtesy of Steve McCaw)

The retreat included a poster flash session, with presenters talking briefly about their research subject, using only one slide. The exercise encouraged the scientists to be creative about their projects and served as a kind of thumbnail advertisement of their work.

(Deepa Singh, Ph.D., is a visiting fellow in the NIEHS Mechanisms of Mutation Group.)



Career talks by former LMG members were the highlight of the first day. Larrea, left, and Holmes, former members of the NIEHS DNA Replication Fidelity Group, led by Thomas Kunkel, Ph.D., shared their experiences at their current jobs. (Photo courtesy of Steve McCaw)



From left, Katarzyna Bebenek, Ph.D.; Carl Anderson, Ph.D.; and Thomas Kunkel, Ph.D., pondered the advice former LMG trainees shared with others. (Photo courtesy of Steve McCaw)



MacAlpine, center, an associate professor at Duke University and one of the scientific speakers, listened to the other talks and contributed to the career panel discussions. (Photo courtesy of Steve McCaw)



LMG members came together for a group photo early in the departmental retreat. Seated in the front row, from left, are lead researchers Marilyn Diaz, Ph.D.; Douglas Bell, Ph.D.; Jan Drake, Ph.D., former chief of LMG; Copeland; Resnick; Roel Schaaper, Ph.D.; and Kunkel, who holds a dual appointment in the NIEHS Laboratory of Structural Biology. (Photo courtesy of Steve McCaw)

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