

## NIEHS fellows earn honors at NIH Postbac Poster Day

By Sheila Yong

Caitlin McDonough and Jessica Boni, current NIH post-baccalaureate (postbac) Intramural Research Training Award (IRTA) fellows at NIEHS, won Outstanding Poster awards May 1 at the 2014 Postbac Poster Day at the NIH main campus in Bethesda, Maryland.

The annual NIH Postbac Poster Day allows these young researchers to display the research they have been conducting at NIH, and at the same time develop their communication and networking skills. This year, more than 400 postbac and technical IRTA fellows from various NIH institutes and centers (ICs) participated in the event. The posters were judged by panels of graduate students, postdoctoral fellows, clinical fellows, staff scientists, and staff clinicians. Posters that scored in the top 20 percent were acknowledged with the awards.

Most of the participants were from ICs in the Bethesda, Baltimore, and Frederick, Maryland, areas, but NIEHS Scientific Director Darryl Zeldin, M.D., was determined to have the presence of NIEHS felt at the event. "The poster day was a great opportunity for NIEHS postbac IRTAs to network with their colleagues at other ICs, which is why I encouraged them to participate in this event, and paid out of the Office of the Scientific Director for their travel," he explained. Seven out of the 11 postbac IRTAs at NIEHS in Research Triangle Park, North Carolina, presented their research at this year's event.

### A head start in scientific research

The NIH Postbac IRTA program provides recent college graduates, who are planning to apply to graduate or professional school, with an opportunity to spend one or two years performing full-time research at NIH institutes. McDonough and Boni took full advantage of this opportunity to prepare themselves for their future careers.

A native of Fuquay-Varina, North Carolina, **Boni** worked as an undergraduate intern during the summer of 2011 in the NIEHS Intracellular Regulation Group led by **David Miller, Ph.D.**, where she first discovered her passion for scientific research. "I had such a wonderful experience that summer that I decided to take some time off before starting graduate school, and came back here as a postbac," she said.

Boni's experience at NIEHS has given her the confidence to begin her Ph.D. study this fall, when she will enter the Cell, Molecular, and Developmental Biology program at the University of Alabama at Birmingham. "Dr. Miller and everyone in my lab have been so supportive of my goals, and I have learned so much from all of them," she said. "I can't imagine a better way to be introduced to research, or learn how to be an independent researcher."

**McDonough** found her calling in reproductive research through a more indirect route. After graduating from Beloit College in 2012, she spent a year performing research in conservation reproduction at the San Diego Zoo and the Smithsonian Conservation Biology Institute. "Although I loved this research, I realized it was not exactly what I wanted to do," McDonough explained. While searching for new research opportunities, she came across the NIEHS Reproductive Medicine Group led by **Carmen Williams, M.D., Ph.D.**, and the rest is history.

In the Williams lab, McDonough found mentors who allowed her to try new things, encouraged her to be independent, and challenged her to achieve her fullest potential. "The highlight of my experience has been working with people who share my passion and interest for reproduction research," she said.

Williams is impressed with McDonough's performance in her lab. "Caitlin is absolutely outstanding in her ability to perform highly technically challenging experiments, in her drive to understand scientific questions, and in her intellectual rigor and curiosity," she said.



*In the Miller lab, Boni, right, studies glucocorticoids, a class of steroid hormones that bind to the glucocorticoid receptor, which is expressed in almost all cells. She is specifically interested in how these hormones affect the blood-brain barrier and the potential issues they may cause in drug delivery to the brain. (Photo courtesy of Steve McCaw)*



*Research in the Williams group focuses on mechanisms of fertilization, using a mouse model system. In the fall, McDonough, left, will be entering a Ph.D. program at Syracuse University to study reproductive biology. "I will be very sorry to see her go off to graduate school, but am glad she is pursuing her dream career," Williams said. (Photo courtesy of Steve McCaw)*

Williams readily acknowledged the contributions of other members of her group to the quality of the mentoring experience. "Postdoc Miranda Bernhardt, Ph.D., has been Caitlin's mentor this whole year and is completely responsible for Caitlin's being able to accomplish so much."

(Sheila Yong, Ph.D., is a visiting fellow in the NIEHS Inositol Signaling Group.)

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