



# Office of International Programs *Monthly Newsletter*

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## Zhejiang summer apprenticeship program finishes strong by Jason Mierek



**Zhejiang students visit capital building in Springfield.**

On June 24, 2012, 36 students from China's Zhejiang University arrived on campus to begin their six-week research internship program coordinated by the Office of International Programs. In the subsequent month-and-a-half, they worked with faculty, postdoctoral, and graduate student mentors on completing research projects in diverse areas of interest.

On the afternoon of Friday, August 3, our 36 visiting students showcased their research findings in a poster session hosted in the Heritage Room of the ACES/Funk Library. Many faculty members, staff, postdocs, and graduate students dropped by to speak with the Zhejiang students, look at their research posters, and discuss their findings. The turnout was quite impressive, with approximately two mentors present for every student. The scope of the research undertaken spanned a variety of areas, including the effects of green space on childhood health; treatment of municipal wastewater with microalgae; dynamic modeling of the economic interactions among US, EU, and China; and an improved method for making chocolate using ultrasonic tempering technology. This latter poster was especially popular, probably because the student researcher, Mr. Yue Zhao, included tasty sample treats of his research outcome!

Students also participated in several cultural activities, including excursions outside of Urbana-Champaign to regional industry-related and cultural attractions. In Chicago, after overlooking the trading floors of the Mercantile Exchange, they viewed the entire city from the Willis Tower Skydeck. A trip to St. Louis took them to Monsanto's Chesterfield Village Research Center, the North American headquarters of Bunge, and the singular Gateway Arch. A final excursion brought them to Illinois Amish country, with lunch at Yoder's Kitchen followed by a shopping spree at the Tuscola outlet mall.

The summer program concluded after the poster session with a presentation to the students of certificates of achievement by Dr. Schuyler Korban, Director of the Office of International Programs. Student response to the entire program was overwhelmingly positive, and while many of the Zhejiang students definitely looked forward to returning home after six weeks abroad, many also anticipated hopefully their possible return to Illinois as graduate students in the College of ACES. Of the 36 students we hosted this year, 14 are already enrolled in our 3+2 programs in FSHN and ABE. After capitalizing on their presence here, even more are planning to apply to our graduate programs.

## Goldsmith and Winter-Nelson evaluating livestock systems'



**Enumerators surveying a husband and wife in Zambia.**

To evaluate the effects of livestock placement and possibly justify additional investments, a team from ACES is surveying 330 households across five communities in northern Zambia. Dr. Peter Goldsmith, associate professor in agriculture and consumer economics (ACE) explains,

"Livestock systems are one way to intervene and reduce poverty and/or improve nutrition. However, these systems are large and complicated mechanisms, for which there have yet to be controlled studies on their effects. We are the first ones to do this type of scientific evaluation on such a project."

Goldsmith and his colleague Dr. Alex Winter-Nelson, also a professor in ACE, became involved in the project at the request of Elanco, a veterinary pharmaceutical company. With the goal of getting directly involved in the food security questions facing the poorest nations in the world, Elanco, along with Heifer Project International, has placed dairy cows, meat goats, and draft animals in three communities in the Copperbelt region of northern Zambia. However, after providing this investment, Elanco was interested in scientifically measuring the impact of their project, which is where ACES' expertise was needed.

The team from ACES prepared a survey, designed a data collection process (to take place under some of the most difficult surveying conditions possible), and are conducting surveys in four rounds that extend through July 2013. They added two communities (not currently receiving livestock placement) to the study to serve as controls. So far, the surveys have been successful and have allowed the establishment of baseline results across more than 300 households. Two graduate students, Clement Belanger and Carol Takawira, are integral to this project, and they are living onsite throughout the data collection period as well as managing a team of enumerators that canvas the remote study sites on bicycles and live in local villages.

## Baylis, Arends-Kuenning, and Kandpal promoting women's empowerment in rural India



Participants in the *Mahila Samakhya* program. .

The hierarchical structure imposed by the caste system, particularly prevalent in India, restricts peer networks and limits women's interactions to a small subset of the community, therefore reinforcing social norms that skew bargaining power to the male in the household. Dr. Kathy Baylis, assistant professor, and Dr. Mary Arends-Kuenning, associate professor, along with collaborator and recent ACES PhD

graduate Eeshani Kandpal, now serving as an extended term consultant in the Development Research Group of The World Bank, have measured the effects of women's empowerment groups in rural India, specifically the *Mahila Samakhya* program, which is funded by the British Department for International Development and provides education and support to a diverse group of women. Their work has demonstrated that such programs do significantly increase women's access to employment, mobility, and political participation.

Using a sample size of 487 women from six districts in Uttarakhand and empirical analysis, Baylis and Kandpal found that participants in the *Mahila Samakhya* program were more likely to have friends of different castes, and as a result, the program was able to diversify social networks and improve bargaining power. Baylis foresees policy makers using this network-based learning to change social norms. "We've found evidence that government programs may be able to affect social norms through changing peers," says Baylis.

Baylis and Kandpal's latest work, "Expanding Horizons: Can women's support groups diversify peer networks in rural India?" will be published in the *American Journal of Agricultural Economics* in January 2013.

## Rodriguez takes students to Puerto Rico to ponder sustainable biosystems



During June 2012, as part of a team-based study tour to the University of Puerto Rico at Mayagüez, Dr. Luis Rodriguez, associate professor in agricultural and biological engineering, led seven University of Illinois students to explore sustainable biosystems in an international context. Students were encouraged to consider these major questions: What are the objectives for truly sustainable renewable energy? Is urban agriculture the solution to feeding the world's population? What are the most viable opportunities for improving the sustainability of agriculture?

Working in small teams on practical engineering-based projects, the students were considering the answers to these questions well before their flight left for Puerto Rico on May 31, 2012. During spring 2012 semester, they assembled into teams, began research and analysis, formulated a work plan, and provided regular progress reports. This year's project themes ranged from hydroponics (to target low water availability in Puerto Rican agriculture) to algae bioreactors. Upon arrival in Puerto Rico, students set to work on their research and analysis with their Puerto Rican counterparts while also fitting in field trips, nature excursions, and cultural programs. The teams presented their work in a written report and as an oral presentation, and the students from Illinois will give another presentation about their experience as part of the departmental seminar during this coming semester.

Ofelia Rodríguez, a marketing and international business major, gained much from the study tour: "I experienced firsthand how much dedication a product, in our case lettuce, needs in order to compete in the marketplace. I learned much more than I anticipated, and my experience abroad in Puerto Rico is one that I will forever cherish."

Dr. Rodriguez is extremely impressed with this year's students and their project designs, "The group leveraged all of their resources. By the end of the trip, they had met everyone on the campus. I'm pretty proud of them."

## Loor hosts Argentinian colleague to study the transition period in dairy cows



Dr. Rafael Alejandro Palladino, a lecturer in the Department of Animal Production in the Faculty of Agriculture at the University of Buenos Aires, recently completed a two-month visit in Dr. Juan Loor's laboratory. Specifically, Palladino worked with Loor, an associate professor in animal sciences, to determine changes of microbial population during the transition period (-20 to 20 days pre- and post-calving, respectively) in dairy cows. However,

he also worked on several other projects in the area of nutrigenomics, Loor's area of specialty.

"Understanding what happens at the level of the rumen during the transition period will lead to improved animal performance and reduced health problems, which are very common during this short period of time," Palladino explains.

Palladino's visit spanned the months of May through July. He says of his visit, "To be honest, two months were not enough time to complete my research, but within this timeframe I was able to greatly increase my understanding about the techniques used, such as DNA extraction from ruminal microorganisms and real time RT-PCR to determine the abundance of several ruminal microorganisms. During this period, I trained in bacterial primer design, sequencing, RT-PCR, and preliminary data analyses and interpretation. Although the project will be completed this fall, we were able to obtain some interesting preliminary results. I also helped with rumen epithelium and adipose tissue biopsies. But the most important thing for me was to meet this important research group. I plan to keep in contact for current and future collaborations."