



# International Programs in the Department of Chemistry and Chemical Biology

## *SHORT TERM EDUCATION PROGRAMS*

Johanna Bernstein

Assistant Dean for International Programs, Chemistry and Chemical Biology

September 28, 2017

## *SHORT-TERM INTERNATIONAL PROGRAMS IN CCB*



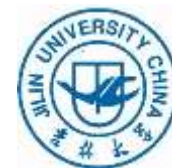
1. Research/collaboration driven – All programs have a component of research associated with them.
2. Creating new opportunities for Rutgers students to experience science on a global scale.
3. Student recruitment.
4. *Challenges*: language (culture)

### Collaborating Rutgers Units:

- Program in American Language Studies (PALS)
- Rutgers China Office
- Global Programs – contracts and MOUs
- Global Services – visa processing and visa requirements
- Other Academic Departments



## RUTGERS-JILIN CHEMISTRY PROGRAM



### UNDERGRADUATE STUDENT EXCHANGE PROGRAM:

- 10 – 15 Jilin senior undergraduate students come to Rutgers for a 5-month, non-credit program during the summer and Fall semester.
- 3 – 5 Rutgers students go to Jilin University for 6 weeks during the summer.

# Program started in 2012:

2013



2014



2015



2016

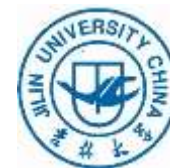


2017





## *RUTGERS-JILIN CHEMISTRY PROGRAM* (Incoming)



### **Part I: Summer (3 weeks in August)**

- Intensive English and Cultural Orientation (China Office)
- Chemistry Journal Club
- Laboratory Safety Training

### **Part II: Fall Semester**

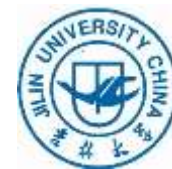
- Academic Classes
  - English for Chemistry
  - Technical Writing (PALS)
  - Chemistry Conversation Groups
  - Rutgers Chemistry Class
- Laboratory Research Experience (Chemistry, Chemical Engineering, Materials Science and Engineering, Biomedical Engineering, etc.)



Prof. Eric Garfunkel with 2013 Jilin Chemistry exchange students.



## RUTGERS-JILIN CHEMISTRY PROGRAM (outgoing)



### Summer exchange for Rutgers students

- 6-week research experience
- Chinese language classes
- Seminar lecture series with Tang students



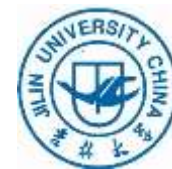
2014 Summer exchange students with Jilin University faculty.



2015 Summer exchange students with Chi Jing and Tang Aoqing class.



## RUTGERS-JILIN CHEMISTRY PROGRAM

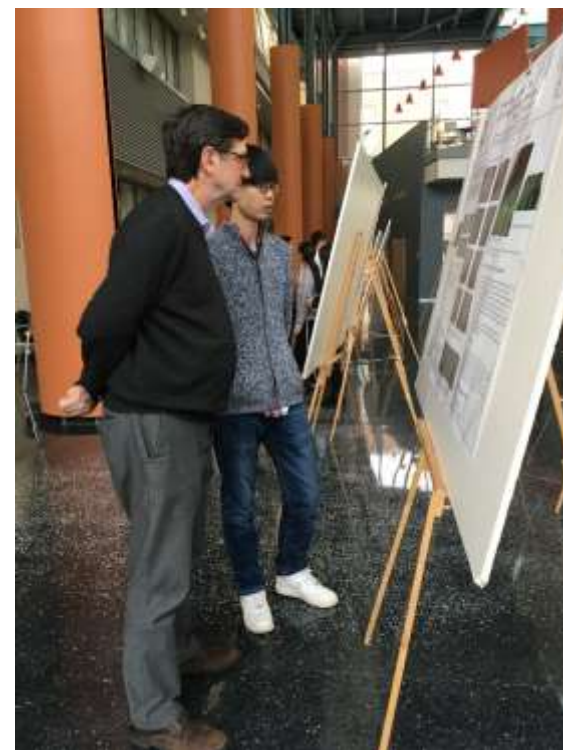


### OUTCOMES:

- Strengthening ties between universities
- Graduate student recruitment
- Internationalizing the chemistry curriculum
- Working towards expanding, i.e. 3+2 program



Prof. Robert Hayes, 2017 Rutgers exchange students and 2017 RU-Jilin students at Jilin University.



Prof. John Brennan with  
2016 Jilin student



...Materials for African Development  
African University of Science and Technology

## PAN-AFRICAN MATERIALS INSTITUTE (PAMI)

- Interdisciplinary/transdisciplinary center
- Education, research and innovation that address African needs
- Training for critical mass of students/scholars across West and Central Africa (Senegal, Ghana, Nigeria, Cameroon)

### *Participating International Universities:*

Princeton University; Arizona State University; **Rutgers University**; Stanford University; Worcester Poly Institute; Tufts University; University of Sao Paulo and Blaise Pascal University.



Prof. Tom Nosker and Dr. Olaoluwa Ogunkunle, 2017 PAMI Fellow.





...Materials for African Development  
African University of Science and Technology

## PAN-AFRICAN MATERIALS INSTITUTE (PAMI)

### Outcomes:

- Creating partnerships that place Rutgers as significant player in the development of science and innovation across the continent.
- Helping to develop the level of science education in targeted African countries.

CCB alumni Brian Moore at the  
Centre for Scientific and Industrial  
Research, Pretoria, South Africa.



CURRENT PROGRAMS	Numbers		
	2015-16	2016-17	2017-18
Jilin University, China (undergraduate)	15	14	11
Univ. Sao Paulo, Brazil (undergrad)	2	0	0
Pan African Materials Institute, Nigeria (graduate/scholar)		1	2
King Abdulazeez University of Science and Technology, KAUST (undergraduate partnership with PALS)	15	-	-

### Programs in development:

Aarhus University, Denmark (undergraduate summer program, graduate exchange)

University of Sao Paulo, Brazil (undergraduate/graduate program)