

**2014 WEEKLY BULLETIN**  
**DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY**  
**EVANSTON, ILLINOIS**  
**November 10, 2014**

- Tuesday November 11th: *Faculty Lunch Seminar: Franz Geiger*  
Tech K140  
12:00 – 1:00pm
- Wednesday November 12<sup>th</sup>: *Special Seminar: Andreas Klamt, University of Regen*  
"The COSMO-RS solvation model turns 20: What has been achieved and what stays to be done?"  
Ryan Hall 4003  
10:00 – 11:00am
- Friday November 14<sup>th</sup>: *Chemistry Colloquium: Thomas Albrecht-Schmitt*  
Tech LR3  
4:00 – 5:00pm

*For full schedule, including Center events, please see the Department Calendar:*  
<http://www.chemistry.northwestern.edu/events/calendar.html>

### **BIP**

Meets every Friday at 2:45pm in Tech K140

### **Arrivals**

Martino Rimoldi joined the Hupp Group  
George Cutsail joined the Hoffman Group

### **Opportunities**

**The Department of Chemistry and Biochemistry at Samford University** is seeking someone with a background in organic chemistry to fill a full-time (nine-month) tenure-track position at the Assistant Professor level. A Ph.D. is required for this position; postdoctoral and/or teaching experience is desirable.

Primary teaching responsibilities will be in organic chemistry, with additional duties in general chemistry. The normal teaching load in our department is twelve contact hours per week during both the fall and spring semesters. This load is usually met by teaching two lecture sections and two lab sections per week, each section meeting three hours per week. Class sizes are limited to 60 students per lecture section and 24 students per lab section. Opportunities also exist to teach during the summer for additional compensation.

The department is actively growing its undergraduate research program, and the successful applicant will be expected to develop an active research program involving undergraduates. Start-up funds are available.

For more specialized work, collaborative opportunities with researchers at the University of Alabama at Birmingham and Southern Research Institute (also in Birmingham) are also available. After a year or two, the candidate will be expected to begin sharing in committee work and other service activities.

The Department of Chemistry and Biochemistry at Samford University offers B.S. degrees in both chemistry and biochemistry. The successful candidate will become the seventh full-time faculty member in this department. The department currently advises 30-35 chemistry and biochemistry majors and is vigorously attempting to expand the research opportunities available to them. This is presently being achieved by (1) offering students summer research stipends through our summer research program and (2) attracting external grant support for student research projects and new instrumentation.

Applicants should submit to [chemsrch@samford.edu](mailto:chemsrch@samford.edu) the following: a curriculum vitae, a statement of teaching philosophy, a statement of research plans involving undergraduates, undergraduate and graduate transcripts (unofficial copies will suffice), and names and contact information for three references.

Evaluation of applications will begin immediately and will continue until the position is filled.

*Candidates should be willing to contribute to and promote the school's mission as a Christian university. Samford University is an Equal Opportunity Institution that complies with applicable law prohibiting discrimination in its educational and employment policies and does not unlawfully discriminate on the basis of race, color, sex, age, disability, veteran status, genetic information, or national or ethnic origin.*

**Roosevelt University** seeks two full-time, tenure track assistant professors for August 2015, one in organic chemistry and one in biochemistry. Teaching will be primarily in our BS Biochemistry and ACS-certified BS Chemistry programs, as well as in our interdisciplinary MS. Both will be located primarily at our Chicago campus.

Postdoctoral research and teaching experience are preferred. A PhD, commitment to undergraduate education and supervision of undergraduate and MS research are required. See <https://jobs.roosevelt.edu/> for details of each position, online application, and additional faculty positions in biology. Review of applications begins November 21 and continues until filled. Roosevelt University is an Equal Opportunity Employer and welcomes women, LGBTQ, disabled, veterans, international and minority-classified individuals as applicants for all positions.

**Postdoctoral Fellow with the University of Houston** We are currently seeking postdoctoral researchers (Ph.D. in chemistry, biochemistry, or related field) to work on one of two major projects: (1) homogeneous olefin polymerization catalysis or (2) synthetic biocatalysis. For the former, candidates with extensive experience in synthetic inorganic/organometallic chemistry, polymer characterization, and mechanistic studies are preferred. For the latter, researchers with strong backgrounds in biochemistry and chemical biology are desired; candidates should be knowledgeable in mammalian cell culture techniques, fluorescent imaging and microscopy, and standard biological assays. Interested applicants should send a curriculum vitae to Professor Loi Do at the University of Houston at [loido@uh.edu](mailto:loido@uh.edu).

**The Department of Chemistry in the College of Science and Mathematics at California State University, Fresno** is accepting applications for a tenure-track academic year position in Chemical Education at the rank of Assistant Professor. The successful candidate will provide effective instruction and advising to a diverse student population. In addition to teaching responsibilities, the successful applicant is expected to develop an active research program in the discipline of chemical education, involving undergraduate or graduate students. Desired research areas include undergraduate education, science teacher preparation and/or professional development of teachers, teaching assistants and/or faculty members. Specific teaching assignments will depend on departmental needs, but will likely involve general and introductory chemistry courses. The candidate will be responsible for taking a leadership role in department efforts to enhance student success in lower division chemistry courses. The candidate will be expected to implement evidence based best practices in their teaching of these courses and to share their knowledge of teaching and assessment techniques with the department. Other responsibilities include continuing development of professional capabilities and scholarly activities, curriculum development and redesign, participation in department, college, and university governance, and professional service.

As a specialist in chemical education, the selected candidate will have opportunities to participate in cross-disciplinary educational initiatives at the university as their career progresses. This includes potential participation in a current National Science Foundation funded faculty learning community (NSF DUE WIDER #1357822) to redesign lower division chemistry courses. The candidate may also choose to work closely with educational faculty in other departments in the College and in shaping a new vision, direction and programs of the Science and Mathematics Education Center (SMEC).

Overview: The Department of Chemistry at Fresno State offers an ACS recognized BS Chemistry degree, a BA Chemistry degree designed for pre-health professional students, and a thesis based MS degree in Chemistry to approximately 308 undergraduate and 25 graduate students. The 15 full time faculty have a commitment to excellence in both teaching and research and to the success of our students. Department faculty have received 4 Provost's awards in teaching, research, and mentorship and 4 promising new faculty awards since inception of the awards in 1994. The Fresno State Chemistry Club is an active, engaged, and successful ACS student affiliate with five outstanding chapter, one commendable chapter, and three green chemistry awards in the last six years. The department offers students outstanding access to a variety of major instrumentation. A list of instrumentation available for student research can be found at <http://www.fresnostate.edu/csm/chemistry/research/facilities.html>

Library resources to support research and classroom instruction include both SciFinder and Web of Science along with electronic access to a wide variety of major journals, including ACS and Elsevier subscriptions.

Required Education: An earned doctorate (Ph.D.) in chemical education, chemistry, or other closely related disciplines from an accredited institution (or equivalent) is required.

Required Experience: 1) Evidence of publications in scholarly journals; 2) demonstration of grant writing or scholarly activity at the university level, and; 3) ability to demonstrate a commitment to working effectively with faculty, staff, and students from diverse ethnic, cultural, and socioeconomic backgrounds.

Preferred Qualifications: 1) Successful teaching experience at the undergraduate level; 2) productive postdoctoral research or experience; 3) a publication record that is commensurate with the candidate's experience; 4) ability to obtain extramural grants and contracts for research; 5) concrete strategies for closing the achievement gap of underrepresented groups and first generation college students in general and introductory chemistry courses; and 6) knowledge of student and program assessment techniques and strategies.

Application Procedures: Review of applications will begin November 14, 2014, and may continue until the position is filled. To apply, applicants must complete an on-line application at <http://jobs.fresnostate.edu> and attach the following: 1) a cover letter specifically addressing required experience and preferred qualifications; 2) a curriculum vitae; 3) a statement of research interests; 4) a statement of teaching philosophy; and 5) the names, titles, addresses, phone/fax numbers, and email addresses of five professional references. Finalists will be required to submit 1) three current letters of recommendation and 2) official transcripts. For inquiries, contact: Dr. Eric Person, Search Committee Chair; California State University, Fresno; College of Science and Mathematics; Department of Chemistry; 2555 E. San Ramon Ave, SB70; Fresno, CA 93740-8034; Phone: 559-278-2170; E-mail: [eperson@csufresno.edu](mailto:eperson@csufresno.edu).

**Postdoctoral researcher in the McNally group at Colorado State University** to work on developing new catalytic reactions to transform renewable and abundant feedstocks into valuable chemical compounds. A background in synthetic chemistry is desirable as well as enthusiasm and dedication for high qualitative science. Please see <http://www.chem.colostate.edu/people/amcnally/> for more details and send a CV and brief research summary to [Andy.McNally@colostate.edu](mailto:Andy.McNally@colostate.edu) for consideration.

**The Department of Chemistry at Wright State University in Dayton, OH** invites applications for a full-time tenure-track organic chemist at the ASSISTANT PROFESSOR level to begin Fall 2015. We are seeking candidates who can contribute to a growing interdepartmental cluster in the chemistry and physics of advanced

materials. The successful candidate will be expected to establish a vibrant, extramurally funded program of research in organic chemistry that will complement existing expertise in surface, synthetic, environmental, and structural chemistry. Teaching may include contributing to the department's courses in introductory and intermediate organic chemistry, and the candidate's area(s) of expertise. A doctoral degree in chemistry with postdoctoral experience is required.

Departmental faculty participate in the Chemistry MSc program and the interdisciplinary Environmental Sciences and Biomedical Sciences PhD programs. Resources in support of research include state-of-the-art instrumentation, and opportunities to collaborate with individuals at numerous regional industrial, and research institutions, including the Air Force Research Laboratory at Wright Patterson Air Force Base.

A competitive start-up package will be tailored to the specific needs of the successful candidate. WSU has nearly 20,000 undergraduate and graduate students, and the Department of Chemistry graduates approximately 30 undergraduate students and 12 graduate students per year. More information about Wright State University, the Department of Chemistry, its graduate programs, and this open faculty position can be found at <http://chemistry.wright.edu>. Criteria for promotion and tenure in Chemistry at WSU can be found at <http://science-math.wright.edu/chemistry/about/bylaws>

Applicants should submit a letter of application, curriculum vitae, statements of research and teaching interests, and the names and contact information for three letters of reference via <http://jobs.wright.edu/postings/8090> by December 1, 2014 for first consideration.

Wright State University, an equal opportunity/affirmative action employer, is committed to an inclusive environment and strongly encourages applications from minorities, females, veterans and individuals with disabilities.

**The Department of Chemistry at Wright State University in Dayton, OH** invites applications for a full-time tenure-track analytical chemist at the ASSISTANT PROFESSOR level to begin Fall 2015. We are seeking candidates who can contribute to a growing interdepartmental cluster in global change research and the interdisciplinary Environmental Sciences PhD program (<http://sciencemath.wright.edu/environmental-sciences-phd>). The successful candidate will be expected to establish a vibrant, extramurally funded program of research in analytical chemistry that will complement existing expertise in surface, synthetic, environmental, and structural chemistry. Teaching may include contributing to the department's courses in general and analytical chemistry, and the candidate's area(s) of expertise. A doctoral degree in chemistry with postdoctoral experience is required.

Departmental faculty participate in the Chemistry MSc program and the interdisciplinary Environmental Sciences and Biomedical Sciences PhD programs. Resources in support of research include state-of-the-art instrumentation, and opportunities to collaborate with individuals at numerous regional industrial, and research institutions, including the Air Force Research Laboratory at Wright Patterson Air Force Base.

A competitive start-up package will be tailored to the specific needs of the successful candidate. WSU has nearly 20,000 undergraduate and graduate students, and the Department of Chemistry graduates approximately 30 undergraduate students and 12 graduate students per year. More information about Wright State University, the Department of Chemistry, its graduate programs, and this open faculty position can be found at <http://chemistry.wright.edu>. Criteria for promotion and tenure in Chemistry at WSU can be found at <http://science-math.wright.edu/chemistry/about/bylaws>

Applicants should submit a letter of application, curriculum vitae, statements of research and teaching interests, and the names and contact information for three letters of reference via <http://jobs.wright.edu/postings/8091> by November 17, 2014 for first consideration.

Wright State University, an equal opportunity/affirmative action employer, is committed to an inclusive environment and strongly encourages applications from minorities, females, veterans and individuals with disabilities.

**The Department of Chemistry in the College of Liberal Arts and Sciences at the University of Connecticut**

invites applications for an Assistant/Associate/Full Professor nine-month, tenure-track appointment starting in August, 2015. Applicants are sought with research experience in materials, biological chemistry, or surfactant structures, with preferred focus on applications of emulsions, micelles and surfactants. Candidates whose research complements or supports development of these areas will also be considered. The position will be in the Green Emulsions, Micelles and Surfactants (GEMS) Center, a new collaborative Center in the Department of Chemistry.

Successful applicants will be expected to develop well-funded, nationally and internationally recognized research programs and to be involved in GEMS collaborations. Simultaneous excellence in teaching at undergraduate and graduate levels is also required, as well as the ability to contribute through research, teaching and/or public engagement to the diversity and excellence of the learning experience. Salary and rank will be determined based on qualifications.

Minimum qualifications include: a Ph.D. or equivalent in chemistry or a closely related field in hand by the time the appointment begins; outstanding record of research accomplishments in Chemistry or a related field; and strong oral and written communication skills.

To apply, please visit the University's *Husky Hire* online application system at:

<https://academicjobsonline.org/ajo/jobs/4369> to submit a cover letter, curriculum vitae, a detailed description of research projects and a brief statement of teaching philosophy and interest. Additionally, please follow the instructions in Academic Jobs Online to direct reference writers to submit letters of reference on your behalf.

Screening of applications will begin immediately. For full consideration please apply by January 1, 2015.

Please include the search number with all correspondence. Search # 2015046

All employees are subject to adherence to the State Code of Ethics which may be found at

<http://www.ct.gov/ethics/site/default.asp>.

*The University of Connecticut is committed to building and supporting a multicultural and diverse community of students, faculty and staff. More than 100 research centers and institutes serve the University's teaching, research, diversity, and outreach missions, leading to UConn's ranking as one of the nation's top research universities. As an Affirmative Action/Equal Employment Opportunity employer, UConn encourages applications from women, veterans, people with disabilities and members of traditionally underrepresented populations.*

**The Department of Chemistry in the College of Science and Mathematics at California State University,**

**Fresno** seeks applicants for a tenure-track academic year position, as an Assistant Professor in Organic Chemistry. The successful candidate will have teaching responsibilities primarily in the area of organic chemistry, but may also be asked to teach and contribute to the general chemistry program. The successful candidate is expected to develop a productive research program involving undergraduate and M.S. graduate students. Instructional workload is 12 Weighted Teaching Units (WTUs) per semester. In the first two years, the Department and College typically reduces the teaching load by 50% per semester to allow new faculty extra start-up time for teaching, scholarly work, research, and other professional development efforts. As faculty members progress through their careers, university statistics show that the average instructional load is typically 9 WTUs per semester, as opposed to the formal expectation of 12, usually achieved through assigned-time funded by the College or University or through external grants.

Overview: The Department of Chemistry at California State University, Fresno offers an American Chemical Society recognized BS Chemistry degree, a BA Chemistry degree designed for pre-health professional students, and a thesis based MS degree in Chemistry to approximately 220 undergraduate and 18 graduate students. The 15 full time faculty have a commitment to excellence in both teaching and research, and to the success of our students. Department faculty have received four Provost's awards in teaching, research, and mentorship and three promising new faculty awards since 1994, when these awards were established. The Fresno State Chemistry Club is an active, engaged, and successful ACS student affiliate with five outstanding chapter, one commendable chapter, and three green chemistry awards in the last six years. The Department is active in research and faculty and students have access to a wide variety of major instrumentation. A list of instrumentation available for research can be found at <http://www.fresnostate.edu/csm/chemistry/research/facilities.html> Library resources to support research and classroom instruction include both SciFinder and Web of Science along with electronic access to a wide variety of major journals, including ACS and Elsevier subscriptions.

Required Education: An earned doctorate (Ph.D.) in organic chemistry or a closely related discipline from an accredited institution (or equivalent) is required.

Required Experience: 1) University-level teaching experience; 2) Demonstrated success with research and scholarly activities, including a recent research publication record; 3) Ability to demonstrate a commitment to working effectively with faculty, staff, and students from diverse ethnic, cultural, and socioeconomic backgrounds.

Preferred Qualifications: Preference will be given to candidates who have: 1) Completed postdoctoral research or have industrial experience; 2) Conducted research which complements the research in the department or university, and; 3) Demonstrated success in obtaining outside funding to support their research.

Application Procedures: Review of applications will begin November 10, 2014 and will continue until the position is filled. To apply, applicants must complete an on-line application at <http://jobs.fresnostate.edu> and attach the following: 1) a cover letter specifically addressing required experience and preferred qualifications; 2) a curriculum vitae; 3) a one page statement of teaching philosophy; 4) a statement of research plans; and 5) a list of three professional references. Finalists will be required to submit 1) three current letters of recommendation and 2) official transcripts. For inquiries contact the search committee chair, Dr. Joseph Gandler, Department of Chemistry, California State University 2555 E. San Ramon Ave., MS SB70, Fresno, CA 93740 Email: [josephg@csufresno.edu](mailto:josephg@csufresno.edu)

**The Department of Chemistry, Western Illinois University (WIU),** invites applications for a tenure-track faculty position as Assistant Professor of Chemistry.

A Ph.D., preferably in an area with application to Forensic Analytical Chemistry, is required for tenure track status. Teaching responsibilities include upper division forensic chemistry and graduate level forensic analytical chemistry courses, general chemistry, and other courses as appropriate to the incumbent's area of specialization. The successful applicant will also be expected to mentor undergraduate and graduate (M.S.) research students within our chemistry/biochemistry/pharmacy, and forensic chemistry programs.

Starting date: August, 2015. Review begins November 15, 2014 and continues until the position is filled. To apply, please see <http://goo.gl/exRAZA> . For more information about the Department of Chemistry at WIU please see <http://www.wiu.edu/chemistry/>

WIU is a comprehensive public university. WIU has a non-discrimination policy that includes sex, race, color, sexual orientation, religion, age, marital status, national origin, disability, or veteran status. For assistance with the online application system call the Office of Equal Opportunity and Access at (309)298-1977. Questions regarding the search may be directed to: Dr. J. K. Huang at [J-Huang3@wiu.edu](mailto:J-Huang3@wiu.edu)

**The Getty Conservation Institute's (GCI)** postdoctoral fellowship is a two-year program designed to provide recent PhDs in chemistry and the physical sciences with experience in conservation science. The 2015-2017 Postdoctoral Fellow will be an integral part of the GCI Science's newly-formed 'Treatment Studies' research area, working also with colleagues in related research areas, such as Materials Characterization. (<http://www.getty.edu/conservation/about/science/index.html> ).

In support of the GCI's mission to advance conservation practice in the visual arts, 'Treatment Studies' undertakes research and development that specifically addresses conservation methods and materials, focusing mainly on the treatment of movable objects and works of art: essentially, applied scientific research for the betterment of conservation practice. The 'applied' nature of the work means that the Fellow should collaborate closely with practicing conservators as well as with scientific researchers in other organizations.

The Postdoctoral Fellow is expected to engage with, and be involved in, both new and existing projects and research partnerships that are concerned with conservation methods and materials. The GCI anticipates that the primary focus of the Fellow's research activities will be polymeric materials for specific conservation operations, particularly coatings and/or consolidating adhesives. The Fellowship thus will be particularly suited to candidates having a strong polymer science background at the graduate level. In addition to working on existing or nascent research area projects, there is scope for the Fellow to pursue independent research on a topic of their own choosing, and to take full advantage of the diverse research facilities available at the Getty. Professional development will be encouraged and assisted through participation in professional meetings, conferences or workshops. It is hoped that the Fellow's research outcomes become disseminated through publications and conference presentations, both to the scientific community and to art conservation practitioners.

Applicants should have a recent (2010 or later) PhD in chemistry, polymer science, or another relevant physical science, experimental research experience and strong instrumental analysis skills. An aptitude for self-directed learning and for working across academic disciplines is desirable, as are good written and verbal communication skills. Candidates should have an interest in the visual arts and a serious interest in pursuing a career in conservation science within the museum environment.

The fellowship runs from September 2015 to August 2017. In addition to an annual stipend, the fellow will be provided an annual study trip allowance and generous benefits including travel to, and housing in, Los Angeles and full health benefits.

Completed application materials must be received in the Getty Foundation office on or before November 17, 2014. Application materials and full terms of the GCI postdoctoral program can be found on the Getty Foundation website:

[http://www.getty.edu/foundation/initiatives/residential/postdoctoral\\_fellowship\\_conservation\\_science.html](http://www.getty.edu/foundation/initiatives/residential/postdoctoral_fellowship_conservation_science.html)

**The University of North Carolina at Chapel Hill** As part of a continuing commitment to building a culturally diverse intellectual community and advancing scholars from underrepresented groups in higher education, The University of North Carolina at Chapel Hill Carolina Postdoctoral Program for Faculty Diversity (CPPFD) is pleased to offer postdoctoral research appointments for a period of two years. The purpose of CPPFD is to develop scholars from underrepresented groups for possible tenure track appointments at the University of North Carolina and other research universities. Postdoctoral scholars will be engaged full-time in research and may teach only one course per fiscal year. This program is funded by the State of North Carolina. The CPPFD is a nationally recognized and extremely competitive program. We typically receive more than 750 applications per year and typically fund 4-5 new postdoctoral researchers per year.

Applications for study in any discipline represented on the campus are welcome. Please specify your discipline of interest when applying.

Stipend

- \$42,000 per calendar year
- \$2,000 per year research fund for research expenses, including travel.

#### Eligibility

- Applicants must have completed their doctoral degree within the past five years and no later than July 1st of the current year.
- The primary criterion for selection is evidence of scholarship potentially competitive for tenure track appointments at the University of North Carolina and other research universities.
- AN IMPORTANT SECONDARY CRITERION IS THE SUPPORT OF PROSPECTIVE DEPARTMENTS.
- Preference will be given to U.S. citizens and permanent residents. The University of North Carolina at Chapel Hill strongly encourages applications from African American, Native American and Hispanic scholars.

#### Application materials

- Cover letter addressed to Vice Chancellor Barbara Entwisle
- Curriculum vitae
- A statement of research plans (1-3 pages)
- A personal statement on why you should be selected for this program (1–3 pages)
- Writing samples (e.g., publications and/or dissertation chapters) – Visual Artists should include a portfolio of their artwork in lieu of writing samples.\*
- Three references for letters of recommendation

*\*VA Candidate's Portfolio should include on a CD/DVD up to 16 images and/or 4 videos as well as a short description of each image/video. The CD/DVD should be mailed separately to:*

*Office of Postdoctoral Affairs*

*The University of North Carolina at Chapel Hill*

*301 Bynum Hall, CB#4100*

*Chapel Hill, NC 27599-4100*

The application deadline is November 15 at 11:59 EST.

#### Contact Information

For questions or additional information regarding the Carolina Postdoctoral Program for Faculty Diversity, please contact:

Jennifer Pruitt

Program Coordinator

[jennifer\\_pruitt@unc.edu](mailto:jennifer_pruitt@unc.edu)

Sibby Anderson-Thompkins

Director, Office of Postdoctoral Affairs

[opa@email.unc.edu](mailto:opa@email.unc.edu)

#### **Department of Pharmaceutical Sciences at The University of Maryland Baltimore School of Pharmacy**

has an FDA funded postdoctoral position available in the Michel laboratory. The Michel laboratory is part of a team that is initiating a clinical trial focused on evaluating iron speciation in the blood plasma of patients who have been treated with generic and brand-named sodium ferric gluconate products to treat anemia. The postdoctoral fellow will lead the development of high-throughput assays to measure iron speciation in blood plasma utilizing cutting edge inductively coupled plasma mass spectrometry (ICP-MS) approaches. A second aspect of the project will involve the development of physical methods to characterize the physiochemical properties of the sodium ferric gluconate nanoparticle products utilized in the clinical trial. The postdoctoral fellow will also have the opportunity to collaborate with faculty and researchers from the UMB Mass Spectrometry Waters Center for Innovation to develop high throughput LC/MS assays to measure oxidative stress and toxicity in blood plasma.



The ideal candidate will have a strong background in bioinorganic chemistry and an interest in translational research in the area of metals in medicine. Interested candidates are asked to send a CV and have 2 letters of recommendation forwarded to Dr. Michel at [smichel@rx.umaryland.edu](mailto:smichel@rx.umaryland.edu). For more information on research in the Michel laboratory see: <http://faculty.rx.umaryland.edu/smichel/>

**The "Synthesis and Biological Recognition Stream" (SBRS) in the Freshman Research Initiative (FRI) at the University of Texas, at Austin** is uniquely designed to provide an organized platform for second-semester freshmen and first-semester sophomores to conduct original research at the exciting interface of chemistry and biology. Students are first taught routine and specialized laboratory and instrumental methods they will need to perform their research using a course manual that is complemented by online instructional videos and modules. Students learn to visualize molecular interactions between proteins and ligands using PyMOL. Small teams of students work together to design potential antagonists they believe will bind to a selected protein target from their analysis of crystallographic data of protein-ligand complexes. Once the small molecule target is identified, the students are trained to use Reaxys and SciFinder to search for reactions and precedent that will enable them to prepare the compound. After preparing the "rationally-designed" ligands, the students determine the thermodynamic binding parameters for its association with its target protein (*e.g.*, mouse major urinary protein, the Src and Grb2 SH2 domains, and HCV protease) using ITC. Interested students can learn the techniques of protein expression and purification, but these tasks are often performed by student "mentors", who have participated in the stream and help supervise new students in addition to performing their own independent research. Some ligands are selected for structural studies by X-ray crystallography, and students assist hanging drops in crystallization screens. Students are evaluated by formal written reports, a lab practicum, oral presentations, a research proposal, and a final research report. *The interdisciplinary curriculum is uniquely designed to provide undergraduates with an applied understanding of advanced laboratory techniques and computational tools in order to develop experimental, technical, writing, and presentation skills and knowledge that will be invaluable in preparing them to enter graduate or professional school or the workplace.*

#### ***More Information and How to Apply***

The Texas Institute for Discovery Education in Science in the College of Natural Sciences is seeking a Specialist to teach Research Experience courses and conduct research at the interface of organic chemistry and biology as part of its innovative science education program, the Freshman Research Initiative (FRI) and specifically as a leader of the **Synthesis and Biological Recognition Stream (SBRS)**. FRI merges the teaching and research missions of the university by engaging undergraduates in conducting research project(s) related to a faculty member's ongoing research. For more information about the FRI, please visit: <http://cns.utexas.edu/fri> and for more information on the SBRS, see <http://sbrc.cm.utexas.edu/>

Responsibilities include teaching research-based courses, managing a fast-paced undergraduate research group, and coordinating research- and teaching-related activities in the *area of organic synthesis with a focus on applications in biological molecular recognition.* The position is renewable on an annual basis depending on job performance and class enrollments.

Applications will be reviewed and interviews conducted until position is filled. Start dates will be negotiated with the finalists, but preferred start date is between January 15 and April 1, 2015. Qualifications: A Ph.D. or equivalent is required in the field of chemistry, with doctoral or postdoctoral research in organic synthesis. The preferred applicant will also have experience with techniques in biochemistry/molecular biology, which may include testing of organic compounds in biological assays, protein expression, isothermal titration calorimetry, and/or protein crystallography. The preferred candidate will also have experience teaching or mentoring undergraduates.

Applicant Instructions: Please email a cover letter with the contact information for three references, a current CV or resume, and a statement of teaching experience and accomplishments. The official job posting can be found here:

[https://facultyjobs.utexas.edu/potential/view\\_job.cfm?jobID=2353](https://facultyjobs.utexas.edu/potential/view_job.cfm?jobID=2353)

All application materials should be submitted to:  
Erin Dolan  
Painter Hall 3.04  
103 W. 24th Street, G2550  
Austin, TX 78712 [edolan@austin.utexas.edu](mailto:edolan@austin.utexas.edu)

**The National Research Council of the National Academies** sponsors a number of awards for graduate, postdoctoral and senior researchers at [participating federal laboratories and affiliated institutions](#). These awards include generous stipends ranging from \$45,000 - \$80,000 per year for recent Ph.D. recipients, and higher for additional experience. [Graduate](#) entry level stipends begin at \$30,000. These awards provide the opportunity for recipients to do independent research in some of the best-equipped and staffed laboratories in the U.S. Research opportunities are open to U.S. citizens, permanent residents, and for some of the laboratories, foreign nationals.

Detailed program information, including online applications, instructions on [how to apply](#) and a [list of participating laboratories](#), is available on the NRC Research Associateship Programs [Website](#) (see link above).

Questions should be directed to the NRC at 202-334-2760 (phone) or [rap@nas.edu](mailto:rap@nas.edu).  
There are four annual review cycles.

Review Cycle: **August**; Opens June 1; Closes August 1  
Review Cycle: **November**; Opens September 1; Closes November 1  
Review Cycle: **February**; Opens December 1; Closes February 1  
Review Cycle: **May**; Opens March 1; Closes May 1

Applicants should contact prospective Adviser(s) at the lab(s) prior to the application deadline to discuss their research interests and funding opportunities. More detailed information and an online application can be found at [www.nationalacademies.org/rap](http://www.nationalacademies.org/rap).