The Department of Chemistry will host a free, open to the public, Chemistry Open House and Science Exploration Gallery (http://www.chem.tamu.edu/openhouse/) to celebrate National Chemistry Week on Saturday, October 23 from 10 a.m.—3 p.m. in the Chemistry Building and the Chemistry Annex.

The event features the popular Chemistry Road Show, which includes demonstrations of popular science; guided lab tours; computer activities; door prizes and goodie bags. The Chemistry Road Show is recommended for all ages.

The Open House also features lectures on chemical topics for the general public. This year Dr. Dong Hee Son will speak about Nanoparticles; Dr. Daniel Romo will talk about Organic Compounds from Marine Sponges, Microalgae and Other Organisms; Dr. Ron MacFarlane will talk about Chemical Methods for Indentifying Heart Disease Risk; and Dr. Chuck Kennicutt will speak about the BP Gulf of Mexico Oil Spill.

This Year, the Chemistry Open House is a Satellite Event (http://usafestival.tamu.edu/) for the USA Science and Engineering Festival (http://www.usasciencefestival.org/), to be held on the National Mall in Washington, DC. This national initiative is intended to inspire the next generation of scientists and engineers.

In addition to the Chemistry Open House, Texas A&M will be hosting Big Physics Day and Discover Engineering.

For more information on the Chemistry Open House or to volunteer, contact Dr. Wendy Keeney-Kennicutt, kennicutt@chem.tamu.edu.

First Year Program Lecture Series Presents Dr. Daniel Nocera

Dr. Daniel Nocera, Henry Dreyfus Professor of Energy and Professor of Chemistry at MIT will speak about The Global Energy Challenge in the Chemistry First Year Program Lecture Series on Tuesday, October 26 at 7 p.m. The lecture will take place at Rudder Theater. The lecture is free and available to the public, but due to limited seating, tickets are required and are available through the MSC Box Office. The First-Year Program in Chemistry Lecture Series is sponsored by Cengage Learning, Inc and the College of Science and Texas A&M University to illustrate the practical implications of general chemistry concepts for the students and the community.

The FYP Lecture Series began in Spring 2006 and has so far featured 21 world-famous scientists speaking about the chemistry in chocolate, wine, art, polymers, dirty bombs, cancer and medicines. Many of the lectures are available online at http://www.chem.tamu.edu/academics/fyp/lecture_series/.
Professor Sherry Yennello Leads NSF Grant to Support Women Faculty

By Shana Hutchins, College of Science

Texas A&M University has received a $3.5 million grant from the National Science Foundation (NSF) to establish a new center dedicated to women faculty and improving their odds of success through a more psychologically healthy workplace.

Texas A&M's ADVANCE Center for Women Faculty is funded under the NSF's ADVANCE Institutional Transformation Program, which is intended to develop systemic approaches to increase the representation and advancement of women in academic STEM (science, technology, engineering and mathematics) careers. In addition to contributing to the development of a more diverse science and engineering workforce, ADVANCE works to ensure that women faculty with STEM degrees consider academia as a viable and attractive career option.

Texas A&M's ADVANCE Center is an interdisciplinary collaboration spanning five colleges -- the College of Science, Dwight Look College of Engineering, College of Geosciences, College of Liberal Arts and Bush School of Government and Public Service -- in its effort to better support women faculty in STEM fields by creating a campus-wide climate for success.

Dr. Sherry J. Yennello, Regents Professor of Chemistry and associate dean for faculty affairs in the College of Science, will serve as principal investigator for the five-year grant, which seeks to leverage Texas A&M's proven commitment to faculty diversity and wide range of existing policies to double its percentage of tenured women faculty in STEM disciplines by 2015 while also increasing the number and diversity of women STEM faculty at all levels across the university.

Yennello is joined in the project by four co-principal investigators: Dr. Robin L. Autenrieth, professor in the Zachry Department of Civil Engineering and associate dean for graduate programs in the Dwight Look College of Engineering; Dr. Stephanie C. Payne, associate professor and associate head of the Department of Psychology; Dr. Antonio Cepeda-Benito, professor of psychology and Texas A&M Dean of Faculties; and Dr. Karan L. Watson, Texas A&M Interim Provost and Executive Vice President for Academic Affairs.

"This is an important issue for Texas A&M University and other universities strongly committed to faculty diversity," said Texas A&M President R. Bowen Loftin. "Under the recent faculty reinvestment program, Texas A&M was fortunate to hire an unprecedented number of women faculty, particularly in the STEM disciplines. With the NSF's help, we can now take that next leadership leap -- the impact of which will be felt across our campus, our state and the nation."

From 2002 to 2008, Texas A&M created 447 new faculty lines, substantially increasing the number of women STEM faculty -- most notably at the assistant professor level -- from 79 to 168. Yennello says that, in order to sustain and build on those gains, the university must improve in its efforts not only to recruit them, but also to retain and promote them through further climate change and diversity accountability.

"The cornerstone of our proposal for this center is encouraging a psychologically healthy workplace," Yennello explains. "If we establish a healthy environment where things like respect, success and employee involvement are realities, then we're going to improve retention of our women faculty, which will then help us attract more of them."

Yennello and her fellow researchers acknowledge there's significant work to be done in that regard, citing Texas A&M's 2009 Campus Climate Survey that found women STEM faculty perceive a very different, much less supportive campus than their male counterparts. In an effort to improve the climate at all levels of the university, particularly the departmental level, Texas A&M's ADVANCE Center will focus on transforming the university to create a more supportive workplace with reduced implicit biases about women and minorities among administrators, staff and students.

"Given Texas A&M's size and diverse student population, we're well positioned to make a significant impact, not only in terms of the numbers of women STEM faculty we employ, but also in terms of attitudes and aspirations of the next generation of women and minority students," Yennello adds. "Individually and collectively, they are more likely to study STEM disciplines and pursue careers in academia if they are taught and mentored by women, including minority women, who are well represented and thriving within the STEM faculty." (continued on p. 3)
TAMU Chemists Collaborate to Treat Heart and Lung Disease with Nanotechnology

By Shana Hutchins, College of Science

The College of Science’s Dr. Karen L. Wooley, holder of the W.T. Doherty-Welch Chair in Chemistry, is the co-principal investigator of an $18 million research program to develop nanotechnology-based therapies and diagnostics tools for treating heart and lung diseases. Texas A&M University is one of five collaborating institutions in the five-year, National Institutes of Health-funded study.

Leading one of four primary research projects, Wooley will focus on the design of advanced nanomaterials. In addition, she will be involved in two other projects that will develop nanomaterials to address lung-related infectious diseases and acute lung injury.

Nanoparticles -- tiny particles no more than 1 to 100 billionths of a meter in size -- can be custom-engineered by scientists to deliver imaging agents or therapies, such as drugs, chemotherapies or genetic material, to specific targets, including tumors, particular cell types or sites of inflammation.

"The work that will be conducted through this Program of Excellence in Nanotechnology is expected to lead to remarkable advances in well-defined, multi-functional systems that will dramatically alter the future of medical practice by providing non-invasive detection, diagnosis and treatment of lung and cardiovascular diseases with greater degrees of sensitivity and selectivity," Wooley says.

Internationally renowned Texas A&M biochemist James C. Sacchettini, holder of the Wolfe-Welch Chair in Science, will collaborate on a project led by Carolyn L. Cannon, MD, of the University of Texas Southwestern Medical Center that emphasizes the application of nanoparticles as a means of treating patients with cystic fibrosis, an inherited condition that subjects patients to repeated, life-shortening lung infections.

"Nanoparticles armed with a powerful drug payload aimed at infectious agents in the body are the equivalent of medical star wars," Sacchettini explains. "If this approach works, it will significantly reduce or eliminate drug side effects, even for the most powerful and toxic drugs.

A portion of the funds for the research will support educational programs designed for students from elementary to postgraduate levels to stimulate interest in careers in medical nanotechnology development.

"The success of this [program] will be measured not only by technological advances, but also by the education and training of creative, intelligent and hard-working students and post-doctoral associates who will perform the research activities that will determine the future of the nanotechnologies under development," Wooley adds.

Professor Sherry Yennello Leads NSF Grant to Support Women Faculty

(from p. 2) The center will be guided by the American Psychological Association’s Psychologically Healthy Workplace (PHW) principles and focused on changing the campus climate to enhance the success of women STEM faculty, promoting women STEM faculty to higher ranks and to administration, recruiting the next generation of women STEM academics and increasing accountability for diversity. Specifically, it will encompass 14 specific diversity-enhancing activities organized into five broad psychologically healthy workplace practice areas -- growth and development, health and well-being, involvement, recognition and work-life balance -- which research has shown increase faculty job satisfaction and reduce turnover.

Beyond building collaborative relationships with many offices on campus, Texas A&M’s ADVANCE Center also has created a Faculty Advocacy Council composed of senior faculty members identified by their peers as diversity advocates.

"ADVANCE is the NSF’s signature program to enhance opportunities for women faculty in STEM fields," Yennello says. "We are excited to now be among the institutions that will contribute to this effort."
Good News!

Jennifer Erchinger (BS ‘10) will be presenting her research from this summer’s Cyclotron REU program at the American Physical Society’s Division of Nuclear Physics Conference this fall in Santa Fe, New Mexico. They will have a special Conference Experience of Undergraduates (CEU) program for us, which extends from November 3-6, during which a poster session will be held for undergraduates to present their research. Jennifer’s research advisor is Dr. Sherry Yennello, who will also be attending the conference.

Nicole Reusser (BA ‘11) received the John Beckham award at the College of Science Faculty & Staff Meeting and Awards Presentation on Wednesday, October 13 in the Hawking Auditorium in the Mitchell Physics Building. The Beckham award is the highest award given to undergraduate students in the College of Science and is based on academics, extracurricular activities, and leadership. Also receiving recognition at this meeting were Dr. Simon North and Dr. Kenn Harding, who received the college-level Association of Former Students award for excellence and teaching. Dr. Robert Hildreth and Ms. Linda Redd also received AFS Outstanding Staff Achievement awards.

Chemists Go Away!

Several Chemistry majors have taken advantage of study abroad opportunities recently, or are planning to in the near future. Yen-Nan Lin (BS ‘12) is currently on a Transfer Credit program with Semester at Sea. His voyage will take him all around the world. He started in Montreal, Canada, and is visiting Morocco, Senegal, South Africa, India, several ports in East Asia, Hawaii, and Costa Rica before returning to the U.S. Yen-Nan is posting occasional blogs at https://studioabroad.tamu.edu/index.cfm?FuseAction=Abroad.ViewLink&Parent_ID=14A0FAF2-A39B-A50C-45C37C672F33DCCA&Link_ID=14B3DBB6-F1B0-6C02-418EB3146F4E24F9.

Several students studied abroad last summer, including Nicole Reusser (BA ‘11) who worked as an intern at Air Liquide in France and Viviana Salom (BA ‘12) who worked in a hospital in Spain. Viviana describes her experience: “I lived in Madrid for 2 months while interning at a hospital in the northern area of the city. I got hands-on medical experience, including the opportunity to assist in multiple cesarean sections and live births. I traveled around Spain on weekends and was in Madrid for the FIFA World Cup finals when Spain won the 2010 FIFA World Cup. I want to go back very badly!”

Next semester, Jonathan Banke (BS ‘12) will travel to the National University of Singapore, as part of a Reciprocal Education Exchange Program. Also in Spring 2011, Hannah Sturm (BA ‘12) will be traveling to New Zealand. Jimmy Hemmer (BS ‘12) will be spending the semester during research at University of Heidelberg in Germany.

To learn more about the study abroad opportunities available for chemistry majors, please visit the Study Abroad Programs Office webpage at http://studyabroad.tamu.edu. The next general information session about Study Abroad will be held Tuesday, November 16 at 5:30 p.m. in the Sbisa Quiet Room.

Welcome to Recently Declared Chemistry Majors

Devon Kebodeaux
Brenda Longoria
Michael Pham
Miranda Wysocki
Old Ags

**Nathaniel Young (BA’08)** I just finished up a really good first year of graduate school at UT. I think Materials Science ended up being a very good fit for me. If I can keep up the same pace I had last year I think I should be graduating next May with my masters. It’s been a really wonderful experience and I’m so happy I was fortunate enough to get this opportunity. My main fear of going to graduate school, at UT, was that I wouldn’t have enough time for my family. Ironically, I actually spent more time with my family this past year than I ever did when I worked at Samsung. Once this past year went so well for our family, my wife and I jointly decided that it would be best for me to continue my education and apply for law school admission this coming Fall.

**Jennifer Nichols (BA ‘08)** has been accepted to the graduate program in Public Health at the UT Health Science Center. She’ll be getting her MPH in Community Health Practice. Since graduation, Jennifer has been working as a research assistant at the Evidence-Based Outcomes Center at Texas Children’s Hospital. That department creates clinical pathways and plans of care for children based on existing evidence.

**Karissa Cryer (BA ’09)** wrote in this summer, “I just wanted to update you on my medical school path... I can’t remember if I told you that I got into the University of North Texas Health Science Center Texas College of Medicine in Fort Worth! I am moving July 6th and start orientation and class on July 19th.”

**Megan (Stussi) Naylor (BA ’08)** wrote in, “I am currently making good use of my Chemistry degree, by pursuing my own professional photography business! I do on location, natural light photography in the Dallas Metroplex. You can look me up at [www.naylormadephotography.com](http://www.naylormadephotography.com). My husband and I are hoping to move to Budapest, Hungary next year to do mission work for two years.”

**Bret Macha (BS ’08)** wrote in “I am starting the second year of my Master’s study in Quebec Canada (Universite Laval). I may submit some of my findings for publication before the end of the year. I am currently working on borabenzene/boratabenzene derivatives of classic 2e- donating ligands for metal complexes under the direction of Dr. Frederic-Georges Fontaine.”

**Trevor Davis (BS ’09)** sent his update, “So I began working for ExxonMobil at their Beaumont Refinery in the QC department, but then 4 months later became a victim of the woeful economy by way of layoff. For 2 months I was unemployed until I received a job offer by way of networking. The job was with Hess Corporation in downtown Houston as a Business Analyst, and I mainly work in IT but the money is really good. I even use some of my chemistry background when needed in discussions about the oil/gas industry. Everything is going great so far, as I am having a lot of success working with my project team.”

**James Cantu (BA ’08)** wrote in, “Things are going well. I haven’t switched jobs since I will still be in the marine corps for over two more years. I got stationed in Twentynine palms ca. I’m actually in the middle of a two week long training exercise and I’m getting good reception so I was checking my emails. I’m an artillery officer so at least I get to experience some chemical reactions. I’ve been in training a year after I graduated and am still new to my unit.”

**Lutece Adams (BA ’09)** wrote in, “Just a quick update, I am still working on my Master of Science in Kinesiology (part-time) at the University of Incarnate Word. Additionally, I am working full-time at an assisted living facility in San Antonio and just completed my one year anniversary there. So far my goal is to get into physical therapy school for the 2012 Fall school year. Incarnate word is opening up a brand new PT school in 2012.”