2013-14 Science Scholars

The Norris and Fletcher Jones Science Scholar awards are prestigious scholarships available to some of Occidental’s most outstanding students. These highly competitive awards provide a total of $15,000 dollars for research in the fields of Biochemistry, Biology, Chemistry, Geology and Physics. The Undergraduate Research Center is proud to present this year’s Science Scholars:

Anne Fendick

Anne Fendick is a junior Geology major awarded the Fletcher Jones Science Scholarship for her research examining changes to the Garlock fault in South Eastern California. The fault stretches for approximately 240 kilometers from the San Andreas Fault. Fendick has completed research on the timing of rock uplift and erosion from samples of the fault. She will continue with research on the strike-slip motion of the fault, which helps characterize its evolutionary history. Since working closely with her mentor, Ann Blythe, Fendick has co-authored a presentation with Logan Chin at the American Geophysical Union. Fendick intends to pursue a Masters and PhD degree in Geology after graduating, and hopes to teach and research in her career. “I have been fortunate enough to have incredibly enthusiastic teachers, and I hope to translate that inspiration to someone else,” Fendick wrote.

Kristina Geiger

Kristina Geiger is a junior Biochemistry major awarded the Norris Science Scholarship for her research of the equine disease pigeon fever. Geiger has created a mouse model for vaccine development of the disease. Caused by the bacterium *C. pseudotuberculosis*, pigeon fever affects a large number of horses in the western part of the U.S. In addition to working closely with her faculty mentor, Roberta Pollock, Geiger plans to collaborate with Dr. Chris Adams of Stanford University to compare proteins in horses and mice. Geiger intends to pursue a doctorate and begin a career in biotechnology. “At the appropriate time, I would like to launch a biotech startup, where I can combine both my passion for science with my business acumen,” Geiger wrote. Geiger has already made an impact in Oxy’s scientific community, and will make a positive contribution to society in the future.

Anasheh Sookezian

Anasheh Sookezian is a junior Chemistry major awarded the Norris Science Scholarship for her research on the enantioselective synthesis of DAB-1. DAB-1 is known to help control the body’s glucose levels and can potentially be used in diabetes and hypoglycemia treatments. Sookezian discovered her passion for Chemistry in high school and aims to one day obtain a PhD. “Working in a lab and interacting with my professors has really pushed me toward a PhD because I admire the passion and dedication they have to do both research and teach,” Sookezian wrote. Her mentor, Don Deardorff has helped solidify her academic and career goals. Sookezian hopes to teach Chemistry at a small liberal arts college. As an Academic Mastery Program tutor and teacher’s assistant in the organic chemistry lab, Sookezian has already begun her path toward pursuing her career ambitions.
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Winter Richter ASP Researchers

This winter, senior and Urban and Environmental Policy major Tyler Brewington traveled between Los Angeles, CA and Harlem, NY to research the natural hair movement among African-American women.

Her research project titled “Toxic Beauty: Health Implications and Social Movements in the Black Community” explored beauty norms and hair practices in the black community, their adverse effects on the physical and emotional health of women, and social movements seeking alternative forms of hair care.

Brewington conducted multiple interviews with regular women and professionals in health and hair-related fields. She was inspired to research the natural hair movement after her summer internship with Los Angeles Occupational Safety and Health where she learned of the high toxicity levels in certain hair products used in hair salons catering to black women.

Brewington traveled to New York to interview residents of Harlem to compare their views to those of Los Angeles residents. She conducted interviews with women of the West Harlem Environmental Action Inc. WEACT, an environmental justice organization leading initiatives to promote safer beauty products. Additionally, Brewington interviewed researchers at The Arthur Ashe Institute of Urban Health, which organizes salon health education programs for stylists. Brewington began planning a hair-care safety workshop for stylists and clients.

With a personal interest to eradicate stifling beauty norms surrounding African-American women, Brewington has demonstrated her passion to make change.

Elissa Kim is a senior and pre-med biochemistry major. She hopes to go into oncology after graduating and used her interest in cancer treatment to inform her Richter ASP research. She traveled to South Korea to research traditional Korean medicine treatments for cancer patients.

Kim grew up exposed to traditional medicine alongside Western medicine and saw the benefits of using both approaches in tandem. However, many Western medical professionals dismiss the validity and impact of traditional medicine.

Kim went to South Korea to observe how doctors used traditional medicine to create a holistic treatment for cancer patients. Doctors restore the harmonic balance, yin and yang, in a patient’s body, which can be altered if there is either too much or too little vital energy, or if the patient has contracted a disease.

Kim conducted an interview-based study on the perspectives and integration of traditional Korean medicine among patients in two clinics located in Seoul, South Korea. She designed a questionnaire for traditional Korean doctors to collect information about the frequency and use of herbal medicine and physician-patient contact.

Kim will analyze the data in comparison with data from the patient’s usage of Western medical treatments.

Through her research, Kim aims to increase awareness in the U.S. regarding the use of traditional medicine as an additional treatment option for cancer patients. She hopes to continue to bring Western medicine and traditional Korean medicine together in her future career, perhaps as a physician.
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New Play Festival 2013

The New Play Festival (NPF) is a staged reading of several student-written plays. Any Occidental student is eligible to submit his or her play, but the selection process is competitive. Submissions are read by several professors and faculty members in the Theater department.

Selected writers have certain responsibilities including attending rehearsals, collaborating with others who help with re-writing and developing the play, attending set-up and strike days, and working with a director and festival producers. Students also work to mount the piece by overseeing casting, fundraising, marketing and assembling a design team. The writers work with professional directors and actors from the Los Angeles area to bring their visions to life.

This year featured six plays: *Back to Broadway* by senior Kirsten Easton, *Film Buff* by freshman Brian Erickson, *We Ain’t Well* by senior Giulia Davis, *Flush* by senior Robert Lundgren, *Dwell* by senior Mandi Bossard, and *Kinky Roots* by senior Shanequa Hammock. Each writer worked on his or her play for several months and looked to gain feedback on the scripts through the staged readings. The productions are intended to serve as learning experiences for the writers to improve their work.

The URC provides funding for students to pay directors and professional actors, produce copies of the scripts and programs, provide food to the cast and crew, as well as rent or build sets, props, and costumes.

The festival took place in Keck Theater in late February and played to three nights of enthusiastic audiences.

ASP Conference Travel

The ASP conference travel funds provide students who have completed individual research or creative projects an opportunity to publicly present their work. This semester a group of Biology and Biochemistry students attended the Midwinter Conference of Immunologists in Pacific Grove, CA. Utsav Patwardhan, a senior, and Megan Sumida, a junior, were among those who attended the conference.

**Utsav Patwardhan:**

Patwardhan received the honor of Young Investigator Travel Award for Outstanding Poster while at the conference. He reflected, “It was really rewarding to have won this in competition with all the much older researchers that presented their research.”

“I learned a lot about academic research and the way things work in the field. Since we were among only six undergraduates attending, we spent all of our time mingling with graduate students, post-doctorates, and principal investigators. They were all so friendly and forthcoming with advice on our future careers.”

“The conference really re-invigorated in me a love for what I do. Being at the conference and hearing how others spent years working to get their projects to work really reminded me how we aren’t alone.”

**Megan Sumida:**

Sumida had the opportunity to meet one of the scientists whom she had researched and reviewed in her classes at Oxy. She reflected. “I got to discuss my interpretation of his data and his lab’s future experiments. I felt like I was talking to a celebrity.”

People asked much more difficult and technical questions that forced me to reflect on details of my own project in perspectives I hadn’t thought of before.”

Sumida discussed how the mentors helped in the process leading up to the conference. “I really enjoyed getting to know Professor Pollock and Professor Molinder outside of a lab/classroom setting. They are mentors for me not only as scientists, but also as very inspirational women in their everyday lives.”

Megan Sumida, Utsav Patwardhan, Kristina Geiger, and Margaret Winterkorn enjoy the scenic location of the conference.
Young Fellows

Young Fellowships are available for full time DWA or Economics majors to conduct independent research, undertake internships, and participate in conferences, colloquia, or workshops. Lauren Mahoney and Karsten Potts are two of this year’s Young Fellows. Both DWA majors traveled abroad, using their grants to gain a deeper understanding of their particular areas of interest.

Lauren Mahoney

Mahoney traveled to Guadalajara, Mexico to make a documentary that examines comparisons between entrepreneurial culture in the United States, particularly the Silicon Valley, and in Mexico.

The film explores the social implications of entrepreneurship and perspectives from different genders and cultures. Mahoney attended the YN1K conference in Silicon Valley as part of the DWA 490 task force course taught by Professor Sanjeev Khagram.

Mahoney interviewed 20 entrepreneurs from around the world. She was inspired by entrepreneur Irina Delgado, CEO of a tech startup Geek Girls Co. based in Guadalajara. Mahoney reached out to Delgado’s community of entrepreneurs for the film project.

Working with mentor Garret Williams, Mahoney is currently putting together footage for the final film for her senior comprehensive project.

With a life-long interest in film, Mahoney combined both of her passions in her meaningful work.

Karsten Potts

Karsten Potts traveled to The Republic of Djibouti in Africa to work with the Intergovernmental Authority on Development (IGAD). Potts assisted the Executive Secretary of IGAD, Mahboub Maalim with daily office work regarding the formation of the most recent Somali government, The Federal Republic of Somalia.

Potts’ interest in Somalia stems from his upbringing in Minneapolis, Minnesota where he befriended many Somali refugees. After picking up the language and culture throughout the years, Potts decided to focus on the region as his particular area of interest throughout his studies at Occidental.

Potts studied the impacts of the new government on the politics and economy of surrounding regions. He also met with important dignitaries such as Abdiweli Mohamed Ali, former Prime Minister of Somalia and Mohamed Osman Jawari, the current Speaker of Parliament.

By assisting with the daily operations of IGAD, Karsten observed first hand the functioning of the critical organization and made steps towards pursuing future career goals in the area.