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# RESEARCH TRACKS

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# URSA Scholars Week showcases outstanding research and scholarship by Baylor undergraduates

Nearly 150 students from across the university recently took part in the OVPR's fifth annual URSA Scholars Week, a celebration of undergraduate research presented by Baylor's Undergraduate Research and Scholarly Achievement Steering Committee. The event included two days of platform presentations and two days of poster sessions designed to showcase the best independent scholarship from Baylor students.

Students presented a wide variety of projects including work completed as part of research classes, capstone courses, and field schools. Many students also presented results from projects funded by research grants from the OVPR through the URSA Small Grants program.

Dr. Susan Bratton, professor of environmental science and chair of the URSA Steering Committee, said she was impressed with the quality of presentations she saw at Scholars Week.

"Our students are doing very legitimate research with sophisticated analytics and using professional presentation techniques," she said. "It's clear from what



Junior history major Alexander Jaina presents his work on female fox spirits in Chinese folk tales during a platform session in the Bill Daniel Student Center.

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Senior pre-med biology major Carlo Manzana (right) discusses his research on drug-resistant bacteria with classmates during the poster sessions at the Baylor Sciences Building.

we're seeing here that we can be very proud to have our students present their work at off-campus meetings."

Dr. Bratton believes the high quality of research presented at Scholars Week and beyond points to a greater understanding among students that research experience at the undergraduate level is becoming critical to success in graduate or professional schools.

Taylor Kohn, a junior pre-med university scholar major from Wichita, Kansas, understands the importance of gaining research experience as an undergraduate. He said the experience of participating in research as an undergraduate has helped him to develop the kind of critical thinking skills that are crucial to the practice of medicine.

"In research, there's no answer in the back of the book," he said, "you have to discover the answers yourself. That's just like medicine; you don't know what's wrong with a patient, so you have to problem-solve and decide what tests are necessary."

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#### Formula for success

To help improve the opportunities provided to Baylor undergraduates, Dr. Bratton has conducted survey research on the factors that contribute to a supportive environment for undergraduate research.

She found that students who have frequent contact with faculty other than their research mentor and those who work on longer-term research projects (those lasting more than one academic term) had higher perceptions of their research skills and the value of research to their future graduate and professional options.

Dr. Bratton believes the study reveals a need for students to become involved in research early in their academic careers.

#### Good for students and the university

In addition to preparing students for future success, Dr. Bratton said that promoting high quality student research pays dividends for the entire university community.

"When our students are successful in graduate or professional schools or when they perform well at offcampus meetings," she said, "it represents Baylor very positively. That type of success helps us in recruiting



A number of students from Anthropology, Forensic Science & Archaeology presented at Scholars Week. Pictured, from left to right, are faculty mentor Carol Macaulay-Jameson with students Miranda Leddy, Hasan Dimayuga, Nathan Fischer, and Danielle Shifferdecker.

future students and faculty who want to be part of the good things we're doing."

### **Off-campus opportunities**

Among the students successfully presenting off campus was a group of biology students who participated in Scholars Week, then traveled to New Braunfels to attend the American Society for Microbiology's Texas Branch meeting. Led by Dr. Tamarah Adair, Dr. Diane Hartman and Dr. Bessie Kebaara, a group of 21 students had the opportunity to meet and network with other students and faculty from universities across Texas. The students' work was well received at the meeting, with six Baylor presentations earning awards.

## URSA Steering Committee receives official status

Baylor's faculty senate voted at its March 6 meeting to grant official all-university committee status to the Undergraduate Research and Scholarly Achievement Steering Committee. The designation means that faculty who serve on the committee can now receive university service credit for their work.

The role of the URSA Steering Committee is to facilitate undergraduate participation in research campus-wide. To that end, the committee administers the URSA small grant program, organizes Scholars Week and other university venues for presentation or publication of undergraduate research and creative activity, oversees an institutional website communicating undergraduate research opportunities, and promotes development of faculty mentors.

Faculty members who are interested in serving on the URSA Steering Committee may contact the committee chair, <u>**Dr. Susan Bratton**</u>, or OVPR/ URSA Administrative Associate <u>Julia Bales</u>.

### Internal Grants

## University Research Committee awards grants for 2013 fiscal year

The University Research Committee has just completed the review cycle for its small and mid-range grant programs for the 2013 fiscal year.

This year's grant program distributed funds broadly across the university, with funded proposals representing 22 academic departments in seven colleges and schools.

The funded projects include STEM fields as well as arts and humanities, social sciences and professional programs.

The URC is an all-university committee charged with

distributing funds for the support of scholarly research projects and creative activities.

The committee annually awards small grants of up to \$4,500 and mid-range grants of up to \$7,500. Small grants may support stand-alone projects, while midrange grant recipients are required to apply for external funding following completion of the internal grant period.

More information about URC grants is available on the **OVPR website**.

## **Baylor faculty receive external research funding**

#### William Weaver, Great Texts

Dr. William Weaver, an assistant professor of great texts, has received a fellowship from Harvard University's Loeb Classical Library Foundation to support his research on marginal notes made in printed copies of the Homeric epics by 16th century theologian and educator Philip Melanchthon.

Melanchthon's notes illuminate his teaching of Homer as an exercise in "rhetorical reading," a practice meant to cultivate critical judgement and help students analyze the rhetorical construction of discourse.

While marginal notes in literature had previously been considered peripheral to academic study, Dr. Weaver and other scholars now consider them a critical body of evidence regarding culture and the reception of texts.

Dr. Weaver's preliminary research, funded through the OVPR's Young Investigator Development Program, shed new light on Melanchthon's use of rhetorical terminology in three more commonly studied textbooks published in the early 16th century. His work also uncovered evidence pointing to a later dating of many manuscript notes than was previously believed, helping to contextualize the material with Melanchthon's other works.

The Loeb fellowship will allow Dr. Weaver to expand on that research and complete the critical studies of his planned monograph on Melanchthon and the literary culture of the Protestant Reformation.

### Bryan Brooks, Kevin Chambliss and Bruce Byars, Center for Reservoir and Aquatic Systems Research

Dr. Bryan Brooks, professor of environmental science, Dr. Kevin Chambliss, associate professor of chemistry, and Bruce Byars, research associate and director of the Center for Spatial Research, have secured a research agreement with the U.S. Department of Agriculture to study the transport of contaminants in the North Bosque River watershed.

While models currently exist for predicting the transport of historically studied industrial chemicals, it is not clear whether these models are appropriate for assessing other emerging contaminants which can react differently to site-specific pH in soils, sediments, and surface waters.

Artificial sweeteners are used in thousands of consumer products and are increasingly recognized as emerging contaminants. One particular sweetener, sucralose, has been detected in various water systems across the U.S. and Europe, including the North Bosque River and Waco Lake.

By studying the movement of sucralose through the North Bosque River, the team hopes to assist in development of future models for predicting the transport of other emerging contaminants.

#### Compliance Corner

## IACUC test-driving new inspection, reporting procedures ahead of required implementation

A newly updated set of federal requirements won't require changes in the way animals are used in research and instruction at Baylor, but it will create additional documentation requirements for the university's Institutional Animal Care and Use Committee.

Dr. Rick Duhrkopf, associate professor of biology and chair of the federally mandated compliance committee, explained that the 8th edition of the National Research Council's *Guide for the Care and Use of Laboratory Animals* makes mandatory a number of practices which were only suggestions in previous versions.



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HE NATIONAL ACADEMIES PRESS Washington, D.C. www.nep.adu "At Baylor, we were already doing all the things that were suggested before," he said, "so no changes are necessary in the way we handle animals. The difference is that now we have to report on these procedures as part of our regular inspection processes."

The new requirements won't become mandatory until the fall round of inspections, but the Baylor IACUC has chosen to implement them this spring as a test of the new process.

Dr. Duhrkopf asks faculty members to be patient during inspections, as the new reporting requirements have created additional paperwork which may increase the time required.

## Federal Grants

<b>Opportunity Title</b>	Due Date
U.S. Dept. of Education - Education Research and Special Education Research Grant Programs	Various
National Institute of Justice - Violent Victimization Among Racial and Ethnic Minorities	05/29/2012
U.S. Dept. of Justice - Field-Initiated Research and Evaluation Program	06/04/2012
<u>NIH - Short-Term Research Education Program to Increase Diversity in</u> <u>Health-Related Research (R25)</u>	06/09/2012 (LOI)
NSF - Research and Evaluation on Education in Science and Engineering	07/17/2012
NEH - Humanities Collections and Reference Resources	07/19/2012
NSF - Science, Technology, and Society (STS)	08/01/2012
<u>NSF Scholarships in Science, Technology, Engineering, and Mathematics</u> ( <u>S-STEM)</u>	08/14/2012

## **Foundation Grants**

<b>Opportunity Title</b>	Due Date
Compton Foundation - Courageous Storytelling	Continuous (LOI required)
Fromm Music Foundation at Harvard University - Commission	06/01/2012
Smith Richardson Foundation - Strategy and Policy Fellows Program	06/15/2012
Spencer Foundation - Teaching, Learning, and Instructional Resources	07/09/2012
World Anti-Doping Agency - Social Science Research Grants	07/11/2012
Leakey Foundation - Grants for Research Related to Human Origins	07/15/2012

## Search for funding with COS Pivot

The OVPR maintains a subscription to COS Pivot, a searchable database of funding opportunities in all academic areas. To search for funding in your discipline and receive email alerts with newly listed opportunities, <u>sign up with COS Pivot</u> today. If you have quesions or would like training on using COS Pivot, contact <u>Blake Thomas</u> in the OVPR at 254-710-3153.

## **Ready to apply?**

If you'd like to apply for these or other specific opportunities, contact your department's assigned OSP coordinator.