



Undergraduate
Research Center

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SPRING!!

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Special points of interest:

- Next URSCA Proposal Deadline 10/07/08
- URC Website: www.mtsu.edu/urc/
- Have a great

SUMMER!!



U R S C E N E

MIDDLE
TENNESSEE
STATE UNIVERSITY

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From the Director

Undergraduate students doing research were busy during Spring Semester with several events that gave them the opportunity to present their projects. This issue highlights the students' and mentors' accomplishments that were showcased at the Posters-at-the-Capitol event in Nashville, the Posters-on-the-Hill event in Washington, DC, and Scholars Week, MTSU's annual celebration and exhibition of research and creative activity for all students and faculty. Kudos to all participants, not only for their

research and creative work, but in representing MTSU. This newsletter highlights each event mentioned above. I hope you will share it with other students who may be interested in research and/or creative activity and faculty members who are supportive of undergraduate students doing research. To all current students and mentors working on projects, please remember to send a brief description of your projects, and/or news of conference presentations, so your work can be included in the next newsletter. Please email to: duszynsk@mtsu.edu.

Undergraduate research already has an exciting summer underway: McNair Scholars are gearing up for their summer blast-off event on June 12th; Step^{MT} has 6 research teams working and is also sponsoring 10 research internships. (see page 4); and, in addition to the 18 students doing URSCA projects locally, summer dollars are also supporting travel to Colorado, Austria, and Italy for 4 music students. It looks like we will have a lot to tell you about in the fall! Happy summer everyone! Sincerely,

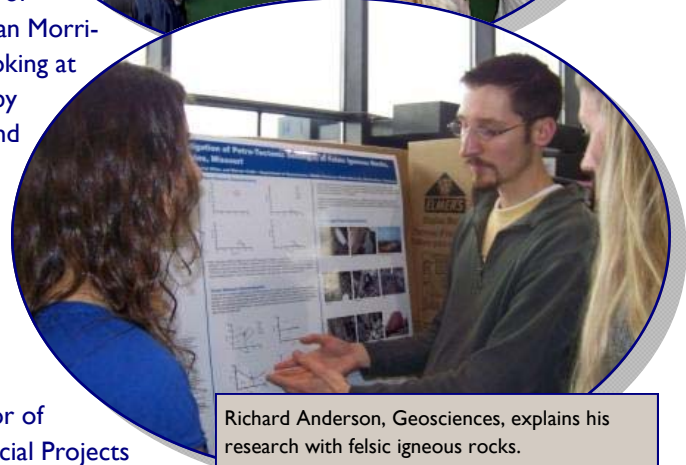
Dr. L. Diane Miller, Director

SCHOLARS WEEK 2008

Scholars Week kicked off its festive week of events this year on March 31st with comments from EVPP Gebert and VPR Allen, music, and a beautiful buffet. The week included a poster session hosted by the College of Business in the BAS lobby; Speaker Susan Morrison, who spoke on "Thirty Ways of Looking at Hillary Clinton" which was sponsored by the College of Mass Communication; and the College of Education and Behavioral Science again hosted the Life's Major Questions Luncheon. Friday closed the week with the university-wide poster and multimedia exposition in Murphy Center. Awards were presented by Scholars Week Committee Chair, EVPP Gebert. Dr. Andrienne Friedli, Professor of Chemistry and Interim Director for Special Projects in the Office of Research, served as technical chair for all events.



Crowds pour in to Murphy Center for the final event of Scholars Week, the Poster & Multi-media Exhibition.



Richard Anderson, Geosciences, explains his research with felsic igneous rocks.



MTSU PRESENTS !



Posters at the Capitol Nashville, TN February 6, 2008



The annual Posters at the Capitol Competition gives undergraduates from all six TBR universities an opportunity to personally present their research to our state legislators. The event brought together some of our best scholars and their representatives and senators from their home towns. The following delegates were chosen to represent MTSU this year:

Left to right-

Taylor Barnes, Physics: *Measuring Mechanical Deformations in Human Erythrocytes Without Using Force Probes in Both PBS and Calf Serum Samples;*

Stephanie Mills, Music: *A Creative Project Based on the Life and Work of Manuel de Falla;*

Andrea VanHoozer, Psychology: *Learning Strategies of College Students With and Without Learning Disabilities;*

Jeremy Minton, Psychology: *Family Expressiveness and Alexithymia in College Students;*

Richard Anderson, Geosciences: *Investigation of Petrotectonic Settings of Felsic Igneous Rocks;*

Eugene Siebert, ETIS: *Investigation of Granular Segregation in a Horizontal Rotating Tube from an Energy Perspective.*



Senior psychology major and URSCA scholar **Amy Tyler Petty**, along with her faculty mentor Dr. Mary Ellen Fromuth, presented research at the **Southeastern Psychological Association's (SEPA)** conference this past March in Charlotte, North Carolina. Their research focuses on the Perceptions and Attitudes Towards Prescription Drug Misuse. Amy began her research when she won an URSCA assistant award for the summer of 2007, and an URSCA scholar award for the following fall.



MTSU was well represented last February at the **South-eastern Undergraduate Sociological Symposium (SUESS)**, hosted by Emory University in Atlanta. Traveling with Dr. Vicki MacClean to present papers were:

Amber Perkins - *Perceptions of Traditional Womanhood: Race Variations in Attitudes toward Women and Work*

Christina Harness - *Predicting Attitudes Toward Homosexuality in the United States*

Tara Lee - *Children and the Holocaust*

Silviu Scores Again!

Guitar Performance major **Silviu Ciulei** finished his last semester at MTSU adding more awards to his already outstanding list. This Spring he placed 3rd (out of 30) at the Appalachian State University competition, and 4th in Dallas at the Texas Guitar Competition. We wish the best to Silviu, who was often in competition with older guitarists with advanced degrees, as he moves on to pursue his Master's degree at Florida State University. Silviu's mentor is Dr. William Yelverton.



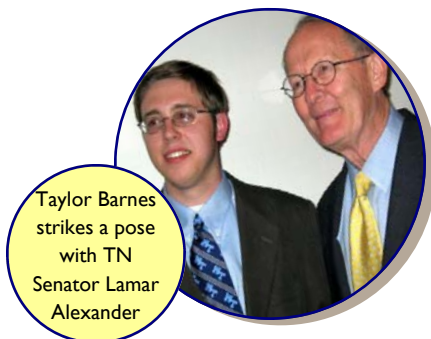


Nearly eighty college students, chosen from hundreds across the country, visited our nation's Capitol on April 30th to share federally funded, impressive and varied research projects with members of Congress, their peers, federal agency representatives and others. The event allowed lawmakers and federal agencies an opportunity to see what findings and innovations investments in young researchers can yield.

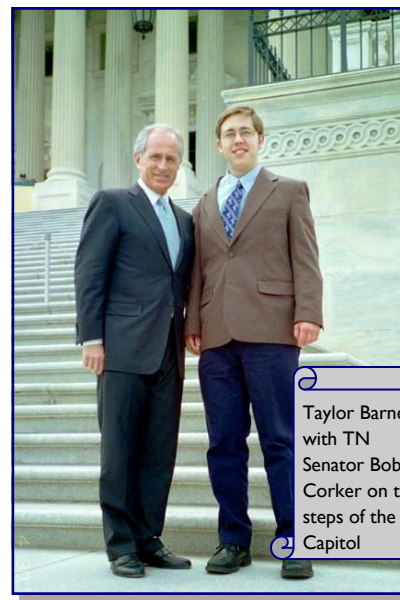
CUR selected two exceptional MTSU students to have the honor of attending this event, Senior Honors College student and Chemistry/Physics double major Taylor Barnes, and Senior Physics major Jeremy Curtis. Taylor presented his research on *Coulombic Model of the Anomalous Conformations of the Chlorinated Acetates*, while Jeremy discussed his work, *Formation of Synthetic Structures with Micron Size Silica Beads Using Optical Tweezers*.

Speakers at the morning session included Congressman Vernon J. Ehlers, Ph.D, nuclear physicist and former professor, 3rd District of Michigan, and Dr. John H. Marburger III, Science Advisor to the President and Director of the Office of Science and Technology Policy. Both students also had the opportunity to meet several congressmen, tour the city, and meet other undergraduate researchers from around the country. Dr. Daniel Erenso, MTSU assistant professor of Physics and Astronomy, researcher, and URSCA mentor, also attended the event. Congratulations to both students for their outstanding work!

MTSU Students Selected to Represent Tennessee at the 12th Annual Council on Undergraduate Research Posters on the Hill Event in Washington, D.C.



Taylor Barnes strikes a pose with TN Senator Lamar Alexander



Taylor Barnes with TN Senator Bob Corker on the steps of the Capitol



Jeremy Curtis receives his Outstanding Achievement in Research Certificate from event co-chair Michael Castellani of Marshall University.



Jeremy Curtis (above) and Taylor Barnes (right) explaining their research to U.S. Representative Bart Gordon.

TN Congressman Gordon is chairman of the U.S. House Committee on Science and Technology. He and Senator Alexander were instrumental in crafting, negotiating, and signing the landmark America COMPETES Act.



URSCA Announces Recipients for Summer/Fall 2008

The Undergraduate Research and Creative Activity Committee (URSCA) awarded over \$58,000.00 last month to students who applied to pursue research or creative activity in their field of interest. This amount was awarded in stipends, supplies and travel to 22 students who applied to either be an assistant or a scholar. The 6 students funded at the assistant level will contribute to a faculty member's project, and those 16 students funded at the scholar level will take more ownership of their project while collaborating with one or more faculty members. The committee received 31 proposals to review, with the majority, 17, coming from the College of Liberal Arts. Students from the College of Education and Behavioral Science contributed 7; students from the College of Basic and Applied Sciences submitted 6 proposals; and the College of Mass Communication proposed 1.

16 Scholars:

Busler, Jessica
Green, Rachel
Gregory, Steven
Haselden, Andrew
Hicks, Suzanne
Levic, Daniel
Mayi, Diyar
McCoy, Shane
McQuain, Byron
Melton, Mallory
Mills, Stephanie
Parker, Joshua
Peterson, Tad
Pflum, Adam
Roberts, Walter
Tilton, Hannah

6 Assistants:

Brewer, Brittany
Kennedy, Kyle
Lawrence, Stacy
Roberts, Walter
Ronner, Amy
Visocky, Sarah

Our congratulations to all students and faculty mentors!



STEP^{MT}

Stepping Up Undergraduate Research

STEP^{MT} continued to provide strong support for undergraduate research on campus by funding 120 research participants working on 86 different projects during 2007-2008. The STEP^{MT} grant is a \$1.7 million initiative at MTSU funded by the National Science Foundation which promotes undergraduate research as the mechanism to retain student interest in careers in science, engineering, technology, and mathematics. During the past academic year we funded 70 students at either the Assistantship or Award levels; a record number of funded academic year research

projects for the grant. We hope to surpass this number next year which is the final year for the current STEP^{MT} grant.

In addition to the academic year program the STEP^{MT} summer program is in full swing with its most productive season yet. We have record numbers of participants conducting research all over Tennessee. This year six teams are doing research on campus. Each team typically has a faculty mentor, 2 MTSU students, a high school teacher, and a high school student. We even have students from the University of Memphis and

Tennessee State University. Research projects include converting sand into hydrogen, testing aquatic bacteria, evaluating mathematics education, programming robots, converting biomass fuels, and nanostructuring sensor materials. STEP^{MT} is also sponsoring ten industrial research internships this summer with companies including BlueCross/BlueShield, ATI Stellram, BioMimetics, Polymer Technology, Stinger Medical, Bridgestone Firestone, and CIM Patrons. Our summer is heating up with over 50 research participants working on 16 projects.

“In addition to the academic year program, the STEP^{MT} summer program is in full swing with its most productive season yet.”



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Mailing label