

PATHFINDERS MONTHLY

Newsletter of the Office of Grants and Program Review July-August 2007

Dr. Greg Grant Champions Research Opportunities for Chemistry Students

During his 27-year tenure at UTC, Dr. Greg Grant, Grote Professor of Chemistry, has supervised 62 undergraduate researchers and has secured grants totaling more than \$1.4 million to support his efforts to involve these students in research activities, publications in peer reviewed journals, and presentations at professional meetings. In the last five years, his research group has published 25 papers with 24 different UTC undergraduate co-authors in American Chemical Society journals, Royal Society of Chemistry journals, and international chemical journals. In the last two years, seventeen of Dr. Grant's students have presented at professional meetings, and three of his recent students have received prizes for Outstanding Research Posters. This summer, Dr. Grant has continued this excellent track-record, securing grants totaling more than \$90,000 to support research involving undergraduate students at UTC.

Dr. Grant received a \$35,218 Cottrell College Science Award from the Research Corporation to conduct a systematic investigation of the preparation of molecular square metallocupramolecular complexes formed by transition metal mediated self-assembly. This aspect of crystal design has not been widely explored and offers an exciting research opportunity for three undergraduate students who will be working with Dr. Grant on this project. Dr. Grant and his research team will also continue to collaborate with chemists at South Carolina's Clemson University on this research endeavor.

Dr. Grant has also secured a three-year, \$55,000 grant from the American Chemical Society's Petroleum Research Fund to conduct a similar research project involving two undergraduate students. Dr. Grant and his research team will use these funds to explore the possible uses of metallocupramolecular

complexes for specific applications including artificial molecular machines, strategic gas storage, heterogeneous catalysis, and an array of host-guest interactions. In addition to providing excellent research opportunities for undergraduate students, this project has the potential to make a significant contribution to the field of metallocupramolecular chemistry. This is Dr. Grant's fifth research grant from the Petroleum Research Fund since 1987, and support from the PRF has been critical in having continuous external funding over this twenty year period.

These projects showcase Dr. Grant's commitment to providing quality research opportunities for undergraduate chemistry students at UTC. As a testament to his initiative in securing research opportunities for undergraduates, Dr. Grant was recently named one of seven finalists for the prestigious Council on Undergraduate Research (CUR) Fellows Award, which is presented each year to two

individuals who have developed nationally respected research programs involving undergraduates. CUR awardees have established and sustained outstanding records of obtaining funding for their work and for their students, and have published research findings

with undergraduate co-authors. They reach out to students of all backgrounds, incorporate research activities into the courses they teach, and lead efforts to institutionalize research on their campuses and across the nation. In summary, they are leaders and role models

for countless faculty and students. This recognition from CUR highlights Dr. Grant's outstanding support of undergraduate research and underscores UTC's capacity as a research institution.

FUNDED GRANTS AND RESEARCH JULY 1, 2007 – AUGUST 31, 2007

COLLEGE OF ARTS & SCIENCES

DR. STYLIANOS CHATZIMANOLIS

NSF	Phylogenetic Reclassification and Generic Revision of the Rove Beetle Tribe Staphylinini	\$ 77,147
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DR. GREG GRANT

American Chemical Society	Self-Assembly of Molecular Squares From Platinum Group Metal Complexes with Thiocrowns and Related Ligands	\$ 55,000
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PROFESSOR MATT GREENWELL

Hunter Museum	Services of Nandini Makrandi as Chief Curator 2007-08	\$ 34,670
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DR. ANN HOLMES

NSF	Evaluating Student Learning in Geoscience Curricula that Employs Conceptests Using Electronic Student Response Systems	\$35,746
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DR. JONATHAN MIES

TVA	Additional Funding for Analysis of Coal Ash and its Alteration Products	\$8,000
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DR. STEVEN SYMES

NASA	Chronological and Mineralogical Studies of Alteration Products in Martian Meteorites	\$27,387
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DR. SHELA VAN NESS

U.S. Department of Health and Human Services' Administration on Children and Families	Mentoring Children of Prisoners	\$136,972
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DRS. AMYE WARREN AND RICH METZGER

United Way Center of Greater Chattanooga	Amendment to Services for Project Ready for School and Child Care Consortium	\$33,803
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MR. KIM WHEETLEY

Tennessee Arts Commission	Artistic Literacy and Integration Workshop	\$3,700
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COLLEGE OF ENGINEERING & COMPUTER SCIENCE**DR. ED MCMAHON**

Tennessee Department of Education	Project Lead the Way	\$45,000
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DRS. CECELIA WIGAL, ED MCMAHON AND IGNATIUS FOMUNUNG

NSF	Opportunities for Highly Motivated Engineering Students (OHMES)	\$531,257
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SIM CENTER

Aerotomy, Inc.	Computational Analysis of Synthetic Jet Actuators Supporting Aerotomy, Inc. Phase II	\$59,002
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NASA

Validated Aerodynamic Analysis and Design Tools for Integrated Embedded Aircraft Propulsion Systems	\$493,739
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Radiance Technologies, Inc.

Additional Funding for Numerical Simulations for Electromagnetic Applications	\$100,000
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COLLEGE OF HEALTH, EDUCATION & PROFESSIONAL STUDIES

MS. SANDY COLE

TN Commission on Children & Youth	Positive Action for Success	\$40,000
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DR. CHERRY GUINN

U.S. Department of Health and Human Services' Health Resources and Services Administration	Applying Knowledge in Practice for Rural Public Health Nurses 2007-08	\$29,999
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DR. HUNTER HUCKABAY

U.S. Department of Education	GEAR UP in Hamilton County 2007-08	\$537,795
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DR. TONY LEASE

Public Education Foundation	Osborne Fellows Program 2007-08	\$160,344
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DR. DAVID LEVINE

U.S. Department of Health and Human Services' Health Resources and Services Administration	Scholarships for Disadvantaged Students – Physical Therapy 2007-08	\$12,375
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DR. KAY LINDGREN

U.S. Department of Health and Human Services' Health Resources and Services Administration	Scholarships for Disadvantaged Students – Graduate Program 2007-08	\$45,818
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U.S. Department of Health and Human Services' Health Resources and Services Administration	Scholarships for Disadvantaged Students – Undergraduate Program 2007-08	\$27,491
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U.S. Department of Health and Human Services' Health Resources and Services Administration	Advanced Education Nursing Traineeships 2007-08	\$35,465
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U.S. Department of Health and Human Services' Health Resources and Services Administration	Nurse Anesthesia Traineeships 2007-08	\$24,846
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DRS. KAY LINDGREN AND SUSAN DAVIDSON

U.S. Department of Health and Human Services' Health Resources and Services Administration	Nurse Education, Practice and Retention 2007-08	\$311,544
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DRS. KAY LINDGREN AND MARTINA HARRIS

U.S. Department of Health and Human Services' Health Resources and Services Administration	DREAMWork: Diversity Recruitment and Education to Advance Minorities in the Nursing Workforce 2007-08	\$221,988
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DR. DEBORAH MCALLISTER

TN Space Grant Consortium	Challenger Missions and Related Mathematics Activities for Preservice Teachers	\$15,000
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DR. BARBARA RAY

Tennessee Department of Education	BASE-TN 2007-08	\$75,000
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Tennessee Department of Education	Special Education Institute for Teachers 2007-08	\$111,331
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Tennessee Department of Education	Special Education Early Childhood Summer Institute 2007-08	\$44,296
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MS. CYNTHIA WALLACE

U.S. Department of Education	Southern Appalachian Educational Opportunity Center 2007-08	\$263,047
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Tennessee Higher Education Commission	Each One Reach One 2007-08	\$24,300
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DR. BONNIE WARREN

Teachers for a New Era Learning Network	Teacher Preparation – A Collaboration for Adolescent Literacy Instruction	\$9,720
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ADMINISTRATIVE UNITS**DR. ANNIE JONES**

U.S. Department of Education	Upward Bound	\$287,877
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PROPOSAL REVIEW PANEL SERVICE 2007

By serving as proposal review panelists during 2007, the following faculty members have provided an important service to their disciplines, gained valuable knowledge about the review process and funding priorities, and brought recognition to UTC.

MS. SANDY COLE

TN Department of Finance & Administration
U.S. Department of Education

DR. JOE DUMAS

Link Foundation

DR. HELEN EIGENBERG

National Institute of Justice
U.S. Department of Education

DR. GREG GRANT

United States-Israel Binational Science Foundation

DR. GREGORY HEATH

National Institute of Health

DR. DAVID ROSS

National Science Foundation

DR. JOHN SCHAEERER

U.S. Department of Education

If you have served as a proposal review panelist during the 2007 calendar year, and your name does not appear on this list, please notify the Office of Grants and Program Review.