

**COLLEGE OF SCIENCE, ENGINEERING AND TECHNOLOGY**  
**MAY 2006**  
**GOOD NEWS**

**BIOLOGICAL SCIENCES**

Jessica Bieber (Environmental Science and Biology - Plant Science Emphasis) and Genevieve Miles (Biology - Plant Science Emphasis) each received \$1000 scholarships from Federated Garden Clubs of Minnesota.

Dr. Michael Bentley, Department of Biological Sciences is a co-author on the following paper: Gossel M, Bentley MD, Lerman LO, Review--3D micro CT imaging of renal micro-structural changes. Nephron Clin Pract 2006; 103:c66-c70.

The following papers were presented at the Experimental Biology 2006 meeting in San Francisco:

-- Quartey SS, Ritman EL, Bentley MD, Microvasculature of para-uterine adipose tissue in diet induced obesity. FASEB J. 2006; 20:62.11. (The paper was presented by Mr. Samuel Quartey who was a graduate student in the Department of Biological Sciences and received his MS degree in Dec 2005)

--Taylor M, Lalich IJ, Ortiz MC, Bentley MD, Ritman EL, Romero JC, Reckelhoff JF, The microvasculature in aging kidneys, visualized by micro-computed tomography. FASEB J 2006; 20:853.5. (The paper was presented by Ms, Michelle Taylor and Mr. Ian Lalich who are undergraduate students in SET. Each will receive dual BS, BA degrees in Biology and Chemistry, May 06)

--Bentley MD, Kang N, Hendrickson HI, Ritman EL, Shah VH, Microvasculature of liver tumors in SV-40 transgenic rats, visualized by micro-computed tomography. FASEB J 2006; 20: 307.4.

Dr. Marilyn Hart, Associate Professor in Biological Sciences, has completed her term as chairperson of the Undergraduate Research Conference steering committee. Marilyn served four years on the committee, including the last three as chairperson. During her tenure on the committee, the conference has doubled in undergraduate participation. This year there was participation by students and faculty from five of the colleges. The conference has also received increasing support from the administration and from the Alumni Foundation.

**CHEMISTRY AND GEOLOGY**

Fourteen students from the Department of Chemistry and Geology presented their work at the Undergraduate Research Conference at Minnesota State University Mankato on April 24-25. Faculty mentors are noted in parentheses.

**Heather Finch (D. Swart)** *Detection of Lead in Bullet Wipe Using Sodium Rhodizonate*

**Ariel Howe (D. Swart)** *Kromoscopic Instrument Development and Detection of Oxidation Damaged LDL And DNA*

**Michael Burns and Cassidy Punt (T. Salerno and J. Rife)** Initial Comparison of DNA Sequence Variation Between a 5-SNP Cluster on the Y-Chromosome and an SNP-rich Region of the Mitochondrial DNA

**Rena Haycraft (S. Mercurio and D. Quirk Dorr)** Preventing Inflammatory-Related Liver Damage by Tamoxifen in Rats Given Fish Oil

**Fiona Denge (T. Salerno)** Examination of Proteins in Round-up Ready Soybean Seeds

**Eminimoh Udomah (T. Salerno)** The Effects of Cryo-destruction on 11 $\beta$ -Hydroxysteroid Dehydrogenase Expression in Hypertensive Rats

**Ben Johnson (B. Hoppie and T. Vorlicek)** Geochemical Assay of Natural and Anthropogenic Processes in a Large Prairie Pothole Lake

**Leila Erdmann (T. Vorlicek)** The Influence of Clay Surfaces on the Fate of Antibiotics in Soil Systems

**Elizabeth Drommerhausen (J. Pribyl)** Readability Level of High School And College Chemistry Textbooks

**Ian Lalich and Michelle Taylor (J. Pribyl)** *Identification of the Correlation Between Student Self-Efficacy And Final Course Percentage In A General Chemistry Course*

**Joshua Abraham (B. Groh)** *Analysis of Banana Extract*

**Joseph Bequette (B. Groh)** *Simple and Effective Removal of Organotin Compounds From Reaction Products.* Joe received an award for the best poster presentation in Section D – Biological Sciences and Chemistry. Presenting their work at the Minnesota Academy of Science on April 28-29:

**Elizabeth A. Drommerhausen and Dr. Jeffrey R. Pribyl (Advisor)** *Readability Levels of High School and College Chemistry Textbooks.* Elizabeth received an award for the best oral presentation in the physical science session.

#### **INTERIOR DESIGN AND CONSTRUCTION MANAGEMENT**

Four faculty from the Construction Management department -- Scott Fee, Farid Sabongi, Richard Krohn, Ryan Langemeier – plus Angie Bomier of the Student Relations Coordinator' office at the College of Science, Engineering and Technology represented Minnesota State University Mankato at the 42<sup>nd</sup> Annual Associated Schools of Construction International Conference in Fort Collins, Colorado, April 20-23. The conference was hosted by the construction management department of Colorado State University. It drew 175 individuals from 64 colleges and universities in the United States and Canada.

The conference was an opportunity for faculty to discuss issues of mutual interest, especially teaching methods and ideas to enrich construction management courses.

Conference activities included presentation of faculty papers and discussion sessions. Conference attendees enjoyed more than 80 different presentations. Subjects of discussion included these topics:

- Stimulating Demand for Knowledge Exchange between Industry and Universities

- Use of an Ongoing Construction Project as a Teaching Tool
- The Feasibility of Generating and Using Rapid Prototype Architectural Models in a Construction Program with a Design-Build Emphasis
- Teaching Leadership
- What Does the Construction Industry expect from recent Construction Management Graduates?
- Methods to Assist in Teaching, Planning and Scheduling
- Performance and Efficiency in Design-Build Delivery
- Knowledge Sharing in the Inter-disciplinary Construction Team
- Web-Centric Partnering Systems for Total Quality Management
- Ethics and Professionalism in Construction
- Development of an Internship Program
- Industry Perceptions and Expectations: Implications for Construction Management Internships

### **MATHEMATICS AND STATISTICS**

Dr. Mary Ann Lee, Professor, participated by invitation in a Math Curriculum Meeting among higher education and school educators at St. Peter Public Schools on May 2. St. Peter School District is beginning their Curriculum Improvement Process in the area of mathematics.

### **PHYSICS AND ASTRONOMY**

Dr. Hai-Sheng Wu, Professor, was invited to the 5<sup>th</sup> International Conference on Heluo Culture and 2006 International Forum on the Han Nationality. The conference was held in Luoyang, China from April 25-28, and Dr. Wu has submitted a paper in Chinese to the Conference.

Eric Raymer, an undergraduate physics major, won the award for the best student presentation at the Spring 2006 MAAPT Meeting. The title of his presentation was "Investigation of the Magnetic Properties of Strongly Correlated and Hybridized Electron Systems." His faculty mentor is Dr. Igor Kogoutiuk.

Steve Besser, an undergraduate physics major, won the award for the best presentation in his session at the Spring 2006 URC at MSU. The title of his presentation was "Interfacing and Establishing a Lab Station for Optoelectronic Measurements of OLEDs." His faculty mentor is Dr. Hai-Sheng Wu.

### **WATER RESOURCES CENTER**

The Water Resources Center received a number of grants to support summer interns and five interns will be working for the Center this year. Two interns will be monitoring wetlands on behalf of the Board of Water and Soil Resources, two interns will be conducting water quality evaluation on grants provided by the Environmental Protection Agency and the Minnesota Pollution Control Agency, and one additional intern will be providing macroinvertebrate support on behalf of our Minnesota River Monitoring Project.

The Water Resources Center has received several new grants, including funds provided by: Lily and Center Creek Clean Water Partnership, Board of Water and Soil Resources, Minnesota Pollution Control Agency, Minnesota River Board, and Minnesota Department of Agriculture.

**COLLEGE OF SET**

Ms. Angie Bomier, CSET Student Relations Coordinator, and Dr. Ann Quade, Professor in Computer and Information Science, received MSU's Commission on the Status of Women 2006 Research Award for their work, "Raising Elizabeth: The importance of self-efficacy in women pursuing science and engineering majors."