Retirement Party

A party was thrown by the Chemistry Department this past fall at the EMU Lakehouse to honor the retirements of Steve Brewer, Stewart Work, Steve Schullery, Ralph Powell, and Jerry Williamson. Many members of the chemistry department present and past were on hand for the event. Each of the retirees was presented with a gift certificate from the department as thanks for their many years of service. In addition, Steve Brewer, Stew Work and John Sullivan (posthumously) were awarded emeritus faculty status this year.

New Faculty Hired

Fall 2001 saw a new addition to the faculty as well. Ruth Ann Armitage joins the department as Assistant Professor in analytical chemistry from St. Mary’s College of Maryland. Ruth Ann received her B.A. in chemistry from Thiel College in Greenville, PA and a Ph.D. in analytical chemistry from Texas A&M University. Her research interests are in the applications of analytical methods to archaeological materials, particularly in determining the age and composition of rock paintings. She was awarded a Spring-Summer Award to study the binder materials in rock paintings by gas chromatography-mass spectrometry over the summer of 2002. Outside of work, Ruth Ann enjoys canoeing with her husband, Daniel Fraser (an instructor in the Chemistry Department) as well as reading medieval mysteries, cooking and working on their house.

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A “new” face in the department

Back with us from retirement is former department head Bert Ramsay. Bert taught an organic course in the fall and has been working part-time as an academic advisor. He remains actively involved in teaching strategies. Current DH Wade Tornquist says it’s nice to have Bert around again for his willingness to always speak his mind and “to remind us what it was like in the good old days.”

Six chemistry students were selected to receive research fellowships from the Honors Program for the 2001-2002 academic year. The award recipients, with their research mentors in parentheses, are: Andrew Jones (Vance Kennedy), Nicole Trease (Heather Holmes), and Adebimpe Adetayo, Oluwaseun Adetayo and Chinanye Iwuchukwu (Elizabeth Butch).

Chemistry Club Activities

Once again, the Chemistry Club has had a very active year. This year, the group, advised by Jose Vites, Steve Pernecky and Vance Kennedy, earned recognition as an Outstanding chapter of the ACS Student Affiliates. Activities in 2001 included a workshop at the Ann Arbor Hands-on Museum for National Chemistry Week, Saturday Morning at the Lab on Family Day, the fall Departmental Picnic at Dr. Spike’s farm, the Halloween party and Holiday Potluck. The Chem Club put together a floor hockey team to challenge a team of physicists. Physics took the first game, but Chemistry is looking for a rematch this spring to avenge the loss. Plans for the upcoming year include an industrial tour at Pfizer, the Pinckney Science Fair, and hosting the undergraduate program for the 2002 ACS Central Regional Meeting. Chemistry Club officers for 2001-2002 are: Adam Gracon (president), Dean Zdravkovski (vice president), Carré Zalma (secretary) and Nicole Trease and Virginia Burkel (treasurers). Other Chem Club members are: Ryan Addington, Renae Beebe, Libby Blaney, Rochelle Ferret, Dave Greiner, Michael Hyde, Andrew Jones, Susan Lesko, Jenny Muniz, Carrie Plunkett, and Michael Pratt.
Sabbatical in the Czech Republic

Mike Brabec reports on his sabbatical leave at Palacky University in the Czech Republic:

This past winter term was the most remarkable in my academic career. I traveled to Olomouc, Czech Republic, on January 29 to begin my sabbatical leave. A scant 12 years before the Parliament declared that the Communist Party was no longer the sole political party, and formally commenced what has become known as the Velvet Revolution. Shortly thereafter Czechs watched in amazement a sight most thought that they would never see: Red Army tanks peacefully leaving on railroad cars. Czechoslovakia elected Václav Havel president, began the adoption of democratic political reforms, and opened the economy to capitalist enterprise. English replaced Russian as the second language taught in Czechoslovakian schools, and Czechs looked to the West for scientific cooperation and competition.

My sabbatical activities involved teaching biochemistry to English-speaking students in the English Language Program in the Faculty of Medicine at Palacky University, in Olomouc. I participated in research projects in the Institute of Medical Chemistry and Biochemistry. My host was Dr. Vilim Šimánek, head of the Institute, and President of the Czech Chemical Society. The spring term at the Faculty of Medicine began February 16, so we had a period to become acquainted with the town and meet the faculty and students. Olomouc is an old city about the size of Ann Arbor. The old town square is surrounded by building facades that date to the time of Empress Marie Therese. A cathedral, over 800 years old, a town hall about the same vintage, old city walls extended and reinforced by Empress Marie Therese, and Palacky University define the tripolar traditions of the town: a regional center for Catholicism (and seat of the Holy Roman Empire, during one short, tumultuous, period of its history), military defense, and academia. Cathedrals, chateaux, castle ruins and restored castles surrounded Olomouc in every direction, and simply visiting them were lessons in history, art and architecture.

For most faculty, speaking English was a recent skill, but my colleagues could easily communicate with me. They generally were also fluent in German and could, when necessary, communicate effectively in French and Russian. The students were fluent to some extent in English, but the staff, including the very skilled and valuable laboratory assistants, did not speak English. However, scientists all over Europe regard English as the international language of science, and fluency in English is probably the biggest hindrance the Czechs face in getting their work into the scientific literature.

The society is marvelously computer literate. I saw excellent Power Point seminar presentations, and worked with the computer support staff in the Faculty when I was preparing a Power Point presentation for my seminar. Their computer fluency was perversely demonstrated one day when a post-doctoral student rushed into my office and in some agitation said to shut down my computer. Someone had created a computer virus and attached it to a memo entitled Message from the President of the University. Obedient Czechs would open the memo, and the virus would cause their monitor programs to crash. Not being that fluent in Czech, I missed the message, and my computer was saved.

Textbooks and reference books are expensive for faculty in the Czech Republic. Particularly some of the teaching aids are scarce, such as the colored overheads supplied to us. My colleagues here donated textbooks. I carried 69 pounds of textbooks and course material with me.

My research involved the effects of plant extracts on cell cultures. Use of the plant extracts for the treatment of various internal disorders has a long history in the region. Sanguinarine and chelerythrine are two agents purified from the plant extracts that have demonstrable effects on tissue. My project was part of a larger attempt to establish laboratory certification to operate under Good Laboratory Practices (GLP) protocols.

Early in March, the faculty directed much of their activities to the preparation of grant proposals. Grant applications to Czech government agencies must be submitted in Cesky and in English, and I volunteered to help in the editing and translation of the proposals. After the staff found that I was willing and useful in this capacity, manuscripts and proposals poured my way. I ran a quick tally of my effort in this area and totaled 16 grant proposals, journal article submissions and scientific letters that I edited.

On June 7, I presented a seminar, “Role of Heat Shock Proteins in Male Reproductive Toxicity,” to the regional chapter meeting of the Czech Chemical Society.

I am profoundly grateful to my Department and the Graduate School for granting me this sabbatical leave. The opportunity to interact with Czech scholars and students, and obtain an intimate view of a Czech academic institution, was an experience like none other in my life. My only wish is that I could have stayed longer.
Steve Brewer’s Travel Notes

Steve Brewer and his wife, Ruby traveled the globe this year as well. Last spring and summer, they went on a cruise through the Panama Canal, to Machu Picchu in Peru and then to the Galapagos Islands, where they enjoyed watching the blue-footed boobies and the giant tortoises. In October, they braved the polar bear migration at Churchill, Manitoba and took some wonderful pictures from the safety of a giant tundra buggy and a helicopter. Steve reports that a bear even visited their motel at 4 a.m. one morning, only to be chased away by dogs and firecrackers! The Brewers capped off their 2001 travels with some time in New Orleans, where they greatly enjoyed the food.

Daimler-Chrysler Grant for Chemistry Education

The Daimler-Chrysler Corporation awarded the department a $25,000 grant for the new chemical education position in recognition of the long tradition of teacher preparation by the department. One focus of this new position will be to increase our science outreach to professional science teachers in Southeastern Michigan. The funds will help support the “Science for Elementary Teachers” course with new computer equipment and a new science education research laboratory and Media Resource Room. While the new chemical educator will work with mainly high school teachers and issues in secondary science education, Don Phillips will continue to advise students in elementary science education as he has for many years.

Alumni News

Dr. Minfang Yeh works for Brookhaven National Laboratory. He spends part of his time in deep mines in Canada, which he still "digs" often. James Hylko is currently working as Environmental, Safety and Health Manager for Weskem [Paducah, KY]; the company is mostly involved with waste management and remediation on DoE site.

Another Great Saturday Morning at the Lab

This year faculty, staff, and students from chemistry were joined by the EMU Biology Department and volunteers from Pfizer in Ann Arbor, making this year’s Saturday Morning at the Lab on October 6, 2001 an unqualified success. Several hundred grade school students and their parents turned out to learn science and have fun at the same time. The liquid nitrogen ice cream seemed to be an extremely popular treat with the kids!

ACS Central Regional Meeting at EMU

The Huron Valley Section of the American Chemical Society plays host to the 2002 Central Regional Meeting. The meeting will be held here at Eastern this June 26-29. Many symposia are planned on topics including polymers and surface coatings, archaeological chemistry and chemical education. There will be a special program for undergraduate students sponsored by our Chem Club. Watch for details at the meeting website at http://cerm.emich.edu.

CAS Interim Dean Contis

Dr. Ellene Tratras Contis was appointed as Dean of the College of Arts and Sciences on July 1, 2001 on an interim basis and will continue in that position until a permanent appointment is made. Dr. Contis has been a member of the Chemistry Department faculty for many years. She earned her B.S. degree in chemistry from Youngstown State University, a M.S. from the University of Pittsburgh and recently completed a Ph.D. in analytical chemistry at the University of Michigan.
Faculty News

Publications

Many papers were published in refereed journals by EMU Chemistry department faculty in 2001. Underlined names indicate EMU student coauthors.


“CHEM 101: Thirty Years of Experiences with a Chemistry Course for Prospective Elementary School Teachers” Donald B. Phillips, Journal of Chemical Education 78(7), 905.


Upcoming Presentations and Conferences

Krish Rengan is on the planning committee for the Tenth Symposium on Radiation Measurement and Applications, to be held in Ann Arbor this May.

Bert Ramsay, Chemistry, will deliver three presentations, “Those 'Dash-ed' wedges: the use of nomenclature/structure software in the teaching/learning of structural organic chemistry,” “Developing students' chemistry calculation skills with the hand-held (Palm OS) chemical calculator,” and “Active learning/teaching of the historical development of structural organic chemistry using historical recreation exercises,” at the ACS National Meeting in April.

Presentations

EMU Chemistry students and faculty presented papers at a number of conferences in 2001.

Leo Solomon Lucas, a graduate student with Debbie Heyl-Clegg, presented Synthesis and Kinetic Analysis of Tendamistat Based Peptide Inhibitors of α-Amylase at the 21st Midwest Enzyme Chemistry Conference in Chicago, IL last October. Coauthors on the paper presented are: Rebecca Himm, Jennifer Kappler, Jason Groom, Jeffrey Asbill, Jon Nzoma, Janice Lima, Mary Gillipsie, Jara Jarosz, and Elizabeth Blaney.

Tim Friebe and students K. Lahti and Mike Hyde presented “Microwave-Assisted Condensation Reaction Under Solvent-Free Conditions” at the ACS National Meeting in Chicago in August.

Maria Milletti’s research students presented several papers this year:


“Nucleophilic addition of 4-phenyl-2-(1-propenyl)-5-oxazolidinones” Shaun Beier (oral presentation), EMU Undergraduate Symposium XXI.

“Computational analysis of the structure of MEK's active site and of its inhibitors” Adam Gracon (poster) EMU Undergraduate Symposium XXI, and poster at ACS National Meeting (April 2001).

“Determination of excitation energies for a series of boron subphthalocyanines” Dean Zdravkovski (poster) EMU Undergraduate Symposium XXI.

“Nucleophilic addition to a,b-unsaturated doxolanones” Shaun Beier (poster), ACS National Meeting- April 2001.


More Faculty News

Donald M. Snyder served as a member of the NSF Phase I SBIR/STTR Peer Review Panel on Advanced Materials in Washington, D.C., and in October on the NSF Peer Review Panel for Chemistry Information Technology. In May of 2002, Dr. Snyder agreed to serve on the Armstrong World Industries Inc. "Critical Mass Consulting Group" for the New Materials Team of Armstrong Floor Products Research. He attended the 1st meeting of the group at the Armstrong Technical Center in Lancaster, PA in October and in December recieved a grant of $73,000 from Armstrong for the research proposal on "Application of Wavefront Sensors to the Study of PVC Plastisol Fusion Parameters."

Don Phillips designed a new chemistry course for prospective elementary school teachers, tentatively numbered Chem 302. It will deal with air and water pollution, an introduction to organic chemistry, and an introduction to carbohydrates, lipids, and proteins. The laboratory will have simple experiments related to the major themes of the lecture. This course will give students in the elementary education program a more advanced course with which to begin if they have had previous college chemistry. They also may take both Chem 101 and 302 to apply to science group minor or major. Currently, there is no good alternative, relevant course not having a great deal of overlap with the 101 course. Dr. Phillips also took the opportunity to learn Power Point and put outlines of all of his Chem 101 lectures onto Power Point slides and handouts.

We also recognize the accomplishments of our lecturers! Charles Kotulski was a 2001-2002 Writing Fellow, participating in the 2001 Writing Across the Curriculum Summer Workshop.

The following faculty received travel grants to attend professional meetings: Elizabeth Butch, Tim Friebe, and Tim Brewer.

Vance Kennedy spent part of the summer of 2001 doing research at Case Western Reserve University in Cleveland.

Debbie Heyl-Clegg received two awards this past year, an EMU Faculty Research Fellowship and a Graduate School Research Support Award. Debbie was also promoted to full professor over the summer.

Undergraduate Symposium 2001

Several other chemistry students took part in Undergraduate Symposium XXI. Advisors are listed in parentheses.

Noelle Ochotny, Investigation of the Biochemical Mechanisms that Prevent Autoimmune Diseases. (Dr. Steven Pernecky)

Ligor Manushi, Synthesis and Stereochmical Analysis of 3-Isobutyl-7α-methyl-dihydro-1H-pyrrolo[1,2-ajimidazole-2,5(3H,6H)-dione. (Dr. Arthur Howard)

Oluwaseun Adetayo and Ben Collman, Study of Protein Kinase Pathways in Mammalian Systems (Dr. Elizabeth Butch)

Korey Bahash and Andrew Jones, Bright Colors: Investigating Phthalocyanine Derivatives (Dr. Vance Kennedy)

Stacy Haynes and Will Thompson, An Approach to the Synthesis of Aza Analog of Alkaloids Containing a Bridged Ring System (Dr. Arthur Howard)

Patrizia Iannone and Tomio Wemert, Evaluation of Epidermal Growth Factor Receptor Inhibitors as Tumor Imaging Agents (Dr. Elizabeth Butch)

Jacinda Lisi, In Vitro Kinetic Evaluation of Cholinesterase Substrates Using Spectroscopy (Dr. Elizabeth Butch)

Michael Pratt and Nicole Trease, Quantitative Structure-Retention Relationships for Gas Chromatography: Using Ab Initio Calculations to Model Chromatographic Retention (Dr. Heather L.S. Holmes)

Rebecca Himm and Jennifer Kappler, Inhibition of Amylase by Minimal Sequence Peptides: Synthesis and Kinetic Analysis (Dr. Debroah Heyl-Clegg)

Graduate Research Fair Participants

Five chemistry students participated in the Graduate Research Fair. Thesis advisors are listed in parentheses.

Peter Rajan Selvaraj, Condensation of Diamines with Carbonyl Compounds: An Approach to Aza Alkaloid Skeletons (Dr. Arthur Howard)

Leo Solomon Lucas, Peptide Enzyme Inhibitors Based on Tendamistat: Synthesis and Kinetic Study (Dr. Heyl-Clegg)

Holupatirage Lakshman Caldera, Modeling of Length Tunable Selectivity For Gas Chromatography (Dr. Heather L.S. Holmes)

Karthik Venkatachalam, Instrument and Method Development for the Analysis of Lipid Peroxidation in Microsomal Suspensions Using Gas Chromatography Time-of-Flight Mass Spectrometry (Dr. Heather L.S. Holmes)

Nicole, Carré, Mikey, Andy (in back), Ryan and Libby take a break from cooking at the Department Picnic at the Spike’s farm.

Maria Milletti demonstrates cabbage juice indicator at Saturday Morning at the Lab.

Chem Club members show kids Oobleck at the Ann Arbor Hands-on Museum.

Oluwaseun Adetayo and Ben Collman present their poster, *Study of Protein Kinase Pathways in Mammalian Systems* at the Undergraduate Symposium XXI with advisor Dr. Elizabeth Butch.

Mike Brabec in the Upper Square of Olomouc, Czech Republic during his sabbatical at Palacky University.