From the Chair:

As I begin my third year as department chair I am optimistic about the growth and vitality of our department despite the serious challenges we are still facing. We are continuing to hire new faculty each year, with Dr. Andrew Lowe arriving last year and Dr. Hans Schanz beginning this fall. Ms. Jamie Speed, a licensure graduate of our department, has joined our freshman laboratory program teaching staff. We will shortly begin a search to replace Dr. David Creed, who will be retiring at the end of this year. Dr. Creed was the chair who hired me in 1988!

This past year the department lost another faculty member to retirement. One could not mention chemical education at Southern Miss without noting Dr. J. Emory Howell. One of his many accomplishments is the establishment of the B.S. chemistry licensure program, which has produced many highly qualified high school chemistry teachers. The faculty and staff honored Dr. Howell by sponsoring a scholarship in his name this year.

We are continuing to run our summer NSF-funded Research Experiences for Undergraduates, which brings in a dozen students from other universities to do research at USM. Some of our faculty are participating in the NSF-funded Materials Research Science and Engineering Center, which is funding both undergraduate and graduate researchers in our department.

In a high point of the year, another one of our many excellent undergraduate majors received the prestigious Barry Goldwater Scholarship. Read about Amanda Winters later in this newsletter. Finally, our graduate student Tricia Coleman won the W. H. Peterson Award for her presentation at the 2003 ACS meeting in New Orleans. Tricia was excited to see her name in C&E News.

Robert Bateman

Graduate students defending their thesis or dissertation this past year:

Lydia Lewis (Ph.D. w/Pojman) is an assistant professor at Millsaps College.
Stephanie Misquitta (Ph.D. w/Bateman) is a postdoctoral fellow at the University of Delaware.

Molly Hladick (Ph.D. w/Hoyle) works for Hewlett Packard in San Diego, CA.

Brian Zoltowski (M.S. w/Pojman) is working on his doctorate in chemical biology at Cornell University

Students receiving bachelor’s degree since the last newsletter:
Nicholas Carter, ’02; Brian Zoltowski, ’02; Callie Bounds, ’02; Bonnie Cook, ’03; Audrey Evans, ’03; Renato Granzot, ’03; Kristen Hoehne, ’03; Kayce Leard, ’03; Bryan Lindley, ’03; Amy Maddox, ’03; Latresha Martin, ’03; David Spence, ’03; Teresa West, ’03; David Wilson, ’03. The faculty are proud of these students and wish them much luck in their future careers.

CHEMISTRY AND BIOCHEMISTRY
2002—2003 SCHOLARSHIP RECIPIENTS

Dawn Anderson
John and Janice Wells-Addison Scholarship
Daniel Antrim
Bobby R. Thornton Memorial Scholarship
Thad and Gerry Waites Health Professions Scholarship
Callie Bounds
Litton Industries Scholarship
Hercules Scholarship
Olivia Brooks
Merck Scholarship
Kristi L. Budzinski
Chemistry/Biochemistry Alumni Scholarship
Cecil Sharp Endowed Scholarship
Tara Marie Craft
Bobby R. Thornton Memorial Scholarship
Joshua Deen
Chemistry/Biochemistry Alumni Scholarship
Audrey Leigh Evans
Charles and Carolyn Brent Endowed Scholarship
Michelle Freeman
Bobby R. Thornton Memorial Scholarship
Shelly Gallender
Jordan Endowed Scholarship
Wal-Mart Competitive Edge Scholarship
Graduate students go back to elementary school

Chris Strawbridge and Jana Jenkins are this year’s participants from our department in the NSF-funded GK-12 Program. These two graduate students are part of an effort by the USM Center for Science and Mathematics Education to have graduate students in the sciences spend several hours a week in the local school districts with elementary and secondary school students and their teachers. Bill Ainsworth and Brian McFarland had a busy time last year.

Another Goldwater Scholar!

This year Amanda Winters received the Barry Goldwater Scholarship, becoming the latest in a long line of our majors to receive this prestigious national award. Amanda has worked since her freshman year in the research laboratory of Dr. David Wertz. This past summer she was a researcher in the proteomics laboratory at St. Jude Children’s Research Hospital. Previous Goldwater winners and their postgraduate schools are Dana Leard (Ph.D. MIT), Kathy Burns (MD/Ph.D. Baylor), Russell Thomas (MD Emory), Paul Sykes (MD/Ph.D U. Virginia), and Mignon Keaton (Ph.D. Duke). Ashley Trahan (Ph.D. U. Colorado) received an honorable mention. The department continues to attract high ability students from other majors. For example, Brittney Hemba, who received a Goldwater Scholarship last year as a biology major, changed her major to biochemistry, and is doing research with Dr. Sabine Heinhorst. Chip Fillingane, a Presidential Scholar, has switched from polymer science to chemistry.

Research Accomplishments of Faculty

Andrew B. Lowe

Professor Lowe received two awards this year. His first award was from DOE for $1,300,000, and is a joint project with Dr. Charles L. McCormick in Polymer Science to examine novel methods for preparing so-called “smart” materials. Also this year Professor Lowe received the Ralph E. Powe Junior Faculty Enhancement Award, from Oak Ridge Associated Universities. The award was given based on proposed research to study methods of controlled drug delivery using novel well-fined, highly functional polymers.

John A. Pojman

Professor Pojman continued his work with NASA on miscible fluids. He worked during the summer to develop a ‘zero upmass’ experiment that could be performed using materials already on the International Space Station. The experiment, planned for this fall, is called Miscible Fluids in Microgravity (MFMG). His worked was detailed in the Clarion-Ledger, Hattiesburg American and USA Today.

There were several visiting scientists working in Pojman group including Ms. Boon Teo of Singapore and Australia, Mr. Birsen Varisli of Bolivia and Dr. Svetlana Evstratova of Russia. More details can be found at www.pojman.com.

David Wertz

The Wertz group has been involved in environmental and energy chemistry and particularly in areas where these two themes interface. Two currently funded projects reflect these activities. The first project, funded by the Mississippi Department of Environmental Quality and the US Department of Agriculture, involves the conversion of scrap tires into useful fuels and is being conducted in a 1200 sq. ft. pilot plant adjacent to the main Hattiesburg campus. The second project, funded by the Department of Defense, involves measuring long-term chemical/environmental effects caused by firing multi-launch rockets. It is hoped that the X-ray and sample handling methodologies associated with the multiple-launch rocket project will be adapted by the Department of Defense.

Physical Science Project Teacher Enhancement

Angela and Jack Bedenbaugh, along with Emory Howell and Iva Brown, continue their NSF-funded statewide Physical Science Teacher Enhancement project. During the past two years a carefully selected teaching corps was given special training to enable them to offer workshops for physical science teachers. The project directors also developed a workshop manual to be used as a text by workshop presenters. This summer the teaching teams offered 20-day workshops to 120 physical science teachers at five different locations across Mississippi. Participating teachers learned how to present a modern course in physical science that meets national and Mississippi science standards while using inexpensive, readily available supplies. This fall these teachers are utilizing their new skills as they incorporate workshop materials and methodology in their own classrooms. The Bedenbaughs are busy developing programs for Saturday “follow-up” instructional sessions to be held during this academic year for all the summer workshop participants.

Hans Schanz

Dr. Hans Schanz will be joining our department as an assistant professor this month. Dr. Schanz received his Diploma and Ph.D. (summa cum laude) in chemistry from the Universität Bayreuth in Germany. He held postdoctoral fellowships at the University of New Orleans, the University of Virginia, and University College in Dublin, Ireland. Dr. Schanz broadens the research areas of the department with his expertise in organometallic and combinatorial chemistry.

News from Other Graduates

-- Rachell Booth (Ph.D. ’01) has joined husband Chad Booth (Ph.D. ’00) at the University of Texas at San Marcos.
Both are assistant professors.
-- Stephen Dubose (Ph.D. ’96) works for the US Customs Service in their analytical chemistry division.
-- Chuck Smithhart (Ph.D. ’95) is an assistant professor at Delta State where alumni Mark Steele (Ph.D. ’76) is department chair.
-- Randy Washington (Ph.D. ’98) is now with Proctor and Gamble.
-- Michael Lundy (B.S. ’79) is a physician in Columbia, SC.
-- R. Joy Alford Klick (B.S. ’73) is a medical technologist in Aubrey, Texas.
-- J. Stacy Tucker (B.S. ’95) is Director of Global Health Practice for Covansys, Inc. He still lives in Ellisville, MS.
-- David Hong (B.S. ’92) is a physician in Myrtle Beach, SC.
-- Chris Anderson (B.S. ’95) is a surgical resident at Vanderbilt University.
-- Ted Cizadlo Selig (B.S. ’83) is a computer consultant in Iowa City, IA.
-- Singleton Finch (B.S. ’74) is a Senior Safety and Environmental Consultant with Dupont. He resides in Gulfport, MS.

I consider it a privilege to have been a faculty member in the Department of Chemistry and Biochemistry for 33 years, fall 1970 – spring 2003. I retired at the end of May, 2003, concluding 40 years of teaching chemistry in high school and college. To all the alumni who were part the department during those years, and to all the faculty with whom I served, I wish to say thank you. Thank you for the support and encourage from Department Chairpersons Jack Bedenbaugh, Dave Wertz, David Creed, Stella Elakovich and Robert Bateman. For those who enrolled my classes, not necessarily of your own choosing, thank you for your commitment to mastering a demanding and fascinating discipline. To those who completed graduate degrees working with me – Bill Curtis, Tim Pennington, Jeff Solomon, Robert Wilson, Terry Liles, and Steve Yuchs -- thank you for your hard work, perseverance and initiative. Alumni who graduated in the 1970s and 1980s may not know, but beginning in 1992 the department began offering an emphasis for high school chemistry teacher candidates. Because of my previous experience as a high school teacher, I was given responsibility for developing the emphasis, with the collaboration of several colleagues. To those of you alumni who graduated from the program and are teaching currently, I salute you for dedication to a career that makes a great difference in young lives, even when you cannot see it while faced with daily pressures of your profession. I am happy to report that the teaching emphasis is now in the capable hands of veteran chemistry teacher Dr. Debbie Booth. I admire faculty members that continue to work in Chemistry and Biochemistry endeavors after retirement, but I have taken a different direction and I am enjoying what I am doing. On August 15, I began a part-time appointment in the area of congregational care on the staff of Asbury Church in Petal. Different than chemistry teaching in many ways, but once again it allows me the privilege of working with people.

Emory Howell
Emeritus Professor of Chemistry
2001 Scholarship Banquet Highlights

Drs. Jon and Christy Thornton (right) with Bobby R. Thornton Scholarship recipients Michelle Freeman, Ann Marie Burns, Ashley Burns, and Daniel Antrim.

John and Janice Wells-Addison with Wells-Addison scholarship recipient Ryan Smith.

Past USM Vice President for Research Donald Cotton talks with past department chair Stella Elakovich at the scholarship banquet.

Mr. Fred Drews and Kayce Leard, recipient of the Fred and Nadyne Drews Scholarship.

Dr. Ronald Brent, Carolyn Brent, and Dr. Charles Brent with Brent Scholarship recipient Audrey Evans.

Parting Words:
We are working hard to build our graduate program, so as you meet promising students please mention your experiences with our program and encourage them to apply. If they are early in their undergraduate career, our summer undergraduate research program is an excellent opportunity for them to become acquainted with our department.

Finally, we depend on gifts from alumni and friends to fund our undergraduate scholarships, so please remember us when you have money to donate to such a worthy cause. Several of you give consistently year after year, and we very much appreciate your generosity. Gifts are welcome in memory of loved ones, in honor of retired or deceased faculty, or just to the general scholarship fund.