Greetings from the Head

Dear Friends,

Welcome to the 2014, fall semester. There’s a lot of news to catch up on from last spring and summer and lots of exciting events looming on the horizon.

First up, Dr. Edwin Webster has joined our faculty this fall. Professor Webster hails from the University of Memphis and is an Associate Professor of Inorganic Chemistry. This fall also saw an addition to our office staff: Beverly Burton is our new Office Associate while Kathy Johnsey was promoted to Accountant for the department. And finally, Dr. Eric Van Dornshuld, a new Teaching Postdoctoral Fellow from the University of Mississippi, has joined the department as an Instructor and will work closely with Professor Webster on modeling Pt NMR chemical shifts. We are in the middle of a search for a 2015 Assistant Professor hire in Organic Chemistry and have an active minority faculty recruitment plan in place. We also continue our efforts to develop at least one endowed professorship in the near future.

This semester we had the largest freshman class ever, 48 students. We are particularly excited about the continued growth of our undergraduate and graduate programs. During the 2013 Academic year we awarded 17 BS degrees, 6 MS degrees, and 14 PhD degrees. We are extremely proud of these students and towards the end of this newsletter you will be able to find out what they are currently doing. We now have 132 undergraduate majors, and 62 PhD students in our graduate program. To put these numbers in perspective, just five years ago we only had 84 majors and 49 graduate students and during the 2009 Academic year we only awarded 4 BS degrees, 2 MS degrees, and 5 PhD degrees.

All of the metrics for the department are up significantly, with the most impressive being the number of proposals submitted (38) and the number of peer reviewed articles published (60) in 2013. In terms of infrastructure development, we are seeking to acquire a new 500 MHz NMR and a Duel Source X-ray diffractometer in early 2015. We have renovated Dr. Todd Mlsna’s research lab and the Mass Spec lab and are in the midst of constructing a climate controlled server room for our computational chemists. We are improving the safety of Hand Lab by installing a fire-suppression system that will be completed by next June. Obviously everyone in the department is busy and our trajectory is very positive.

With Warm Regards,
New Hires

**Charles Edwin Webster**  
**B.S.** University of West Florida  
**Ph.D.** University of Florida

Dr. Webster is our newest Associate Inorganic Chemistry Professor. Edwin’s research involves several areas of theoretical and computational chemistry, including biological catalysis, bond activation, and structure and bonding. He also works with photochromic compounds (think color-changing sunglasses, optical data storage and supramolecular chemistry).

**Eric Van Dornshuld**  
**Teaching Postdoctoral Fellow**

Eric earned his PhD in Chemistry at the University of Mississippi in August of 2014 before joining Dr. Webster here at MSU. Eric is teaching in our General Chemistry program and is working as a postdoc in Dr. Edwin Webster’s research group. Eric’s first exposure to computational chemistry was when he was an undergraduate in college where he signed up for a summer job in a computational chemistry lab. He loved the idea of working on a computer (“I love playing computer games and sitting down all the time”). Since then, quantum mechanics has captured his interest. Eric has a passion for teaching and he loves puppies.

**Beverly Burton**  
**Office Associate**

Beverly is the Chemistry Department’s new go-to travel person and general problem solver. After 22 years of working for the Franklin Corporation in Houston, MS, Beverly was ready for a change---and we’re all the luckier for it.
Faculty Barbecue
On a gorgeous afternoon in late September, Dr. Debbie Beard and her husband, Dr. Svein Saebo, hosted the Department of Chemistry’s faculty and their families for a get-together at their home on the lake. Croquet, fishing, good food and wonderful friends— it was a perfect evening.

Professor Pittman Has Top Cited Papers
Dr. Charles Pittman was recently recognized by Elsevier Publishing for having the top cited paper in the Chemical Engineering Journal for 2011 & 2012. The paper, “Development of Magnetic Activated Carbon from Almond Shells for Triphenol Removal from Water”, was cited over 300 times. This isn’t new for Dr. Pittman: a paper on bio-oil published in Energy and Fuels was the most highly cited paper in that journal for 2006, 2007 and 2008, with over 1300 citations to date. Congratulations Chuck!

In Memoriam
Sadly we had to say good-bye to Dr. Bill Henry, a much-loved organic associate professor in our department. Bill died at his home in Starkville, MS on February 12, 2014. “Doc”, as he was called by his students, earned a B.S. degree in chemistry from the University of Notre Dame in 1979 and a Ph.D. in organometallic chemistry from the University of Nebraska-Lincoln in 1986. He was a postdoctoral fellow at Dartmouth College and Wayne State before joining Mississippi State University as an Assistant Professor in 1988. Bill published more than 40 research papers, graduated 5 Ph.D. students, and directed over 50 undergraduate students in his research lab. He will be sorely missed.

The Bill Henry Memorial Scholarship Fund has been established through the MSU Foundation to continue Dr. Henry’s legacy by supporting undergraduate student scholarships. To give to this fund, see Giving, contact the MSU Foundation, or contact the Chemistry Department.
Professor Todd Mlsna Wins Obama/Singh Award
Dr. Todd Mlsna won a 2014 Obama/Singh 21st Century Knowledge Initiative entitled “Production of Bioenergy and Bio-chars by Biomass Pyrolysis...” The purpose of this award is to develop collaborative research projects between MSU researchers and their counterparts in India. He also received a USDA/Specialty Crop Block Grant: “Detection of Pre-storage and Package Identifications of Fungi Infected Tip/EndRot Sweetpotato roots using Portable Volatile Organic Compounds Detection...” and an EPSCoR award for the “Development of a Portable Instrument for Quantifying Saliva Tetrahydrocannabinol Levels”

Professor Zhang Wins NSF EPSCoR Award
Dr. Dongmao Zhang was recently awarded an NSF EPSCoR seed grant for his proposal “Towards fundamental understanding of structure, dispersion stability, and oil/water/solid phase partitioning of aryl para-dithiol functionalized gold and silver nanoparticles.” He also received a Food Science Dept/USDA award: “Nanoengineering Biologically-active Surface Enhanced Raman Spectroscopic Tags for Ultrasensitive Pathogen Detections”

Professor Nick Fitzkee NSF EPSCoR Award
Dr. Nick Fitzkee was recently awarded an NSF EPSCoR seed grant for his proposal “Understanding the Mechanism of Protein Aggregation in Elastin-Like Proteins (ELPs)”

Peter Rabideau Retires
Say it isn’t so! Dr. Peter Rabideau, former MSU provost and organic chemist extraordinaire, decided to put away the beakers and retire to a life on the beach in AL. But before he got away, the Department of Chemistry threw him a retirement party.

Peter has been an organic chemistry professor at MSU for eight years. He originally came to MSU in 2003 as provost and vice president for academic affairs as well as professor in the Department of Chemistry. Peter had already distinguished himself with his ground-breaking discovery of corannulene (C20H10), also known as a buckybowl, a curved-surface, aromatic hydrocarbon. In 2009, he decided to leave the provost’s office and become a full-time professor in the department. In 2011, Dr. Rabideau was named the Mississippi ACS Chemist of the Year. Professor Rabideau has over 130 publications including articles in Science and Nature.
Alumni Spotlight

Christopher Easley (BS 2002), a Magnolia, MS native, obtained his Bachelor of Science degree in Chemistry at Mississippi State University in 2002. After earning his PhD in analytical chemistry at the University of Virginia, Dr. Easley completed an NIH postdoctoral fellowship at Vanderbilt University Medical Center. He joined the Chemistry Department faculty at Auburn University in 2008, where he is now the Knowles Associate Professor.

Dr. Easley’s research focus is on microfluidic devices and small volume methods to measure proteins in blood or secreted from cells. Whether he’s focusing on diabetes research, where he works closely with the Boshell Diabetes and Metabolic Disease Research Program (sponsored by Auburn’s College of Veterinary Medicine) or engineering devices to detect disease biomarkers, Chris is on the cutting edge of making our quality of life much better.

When Dr. Easley isn’t teaching or in the research lab, he reaches out to the community through the Math and Science Partnership at Tuskegee University. This NSF program enhances the science achievement of students in the 6th-8th grades in selected districts of the Alabama Black Belt Region. Outside the office, most of his free time is spent with his two children, Liam and Annelise, and his wife, Joy, who is a McComb, MS native. Of course, he also takes pride in donning maroon and white when the bulldogs travel to Auburn.

Alumni Briefs

Robert Moore (BS 1988) is a native of Northport, Alabama. He obtained his Bachelor of Science in Chemistry at Mississippi State University and then attended the University of Alabama at Birmingham School of Optometry where he received his Doctor of Optometry in 1992. He returned to Tuscaloosa and opened a private practice in the fall of 1992. He is the recipient of numerous awards including the Dean’s Award from the UBA School of Optometry, the Beta Sigma Kappa Silver Medal, the Bausch and Lomb Practice Initiation Award, and Alcon Contact Lens Award. He was also selected as the Young Optometrist of the Year for the state of Alabama in 1998. He is currently a member of the American Optometric Association, the Alabama Optometric Association, and the American Optometric Association Contact Lens Section. He and his wife Shara have three children—Addison, Braden and Catherine.
Dr. Lester S. Andrews made a significant gift of forest land in Oktibbeha County in 2012 that will be used to fund faculty fellowships in the Department of Chemistry. We hope that this generous donation will grow into an endowed Professorship in the near future. In 2013, Lester created an endowment supporting the MSU Andrews Graduate Research Symposium in perpetuity. The Andrews Symposium provides an annual opportunity for graduate students from around the Southeastern U.S. to showcase their research (see the next page for a write up of the 4th Annual Andrews Symposium).

Lester is an MSU alum and has been a Professor of Physical Chemistry at the University of Virginia for over 40 years. Andrews is well known for his development of matrix-isolation spectroscopy, an experimental method to study individual molecules of chemical compounds at very low temperatures. He has authored or co-authored more than 750 scientific papers since 1966 and his work has been cited over 18,500 times.

Golf Tournament Donors
Thanks to the generosity of our donors, the 3rd Annual Department of Chemistry Scholarship Golf Tournament was a total success. Over $12,000 was raised for undergraduate scholarships, which supported six students working on summer research projects. Our donors included:

Jim Swanson. Mr. Swanson is the President of Harrington Plastics located in Chino, CA. Jim is an avid golfer---when he’s not jetting around the world, you can find him on a golf course. Jim has consistently supported our department year after year with his generous contributions.

Dr. David Wigley and his wife, Dr. Dana Fox. Dr. Wigley is a Partner at the law firm of Sutherland, Asbill and Brennan in Atlanta, GA. His wife, Dana, is the Chair of the Department of Middle and Secondary Education at Georgia State University. The Wigleys have also established the David Wigley Endowed Scholarship in the Chemistry Department.
The 4th Annual Lester S. Andrews Graduate Research Symposium was held May 20—21, 2014 at Mississippi State University. Conference participants were graduate students from regional universities who presented the results of their research projects. This symposium also allowed students to meet Professor Guy Bertrand, Distinguished Professor of Chemistry and Biochemistry from UC San Diego. Professor Bertrand is a much celebrated inorganic chemist who is well known for his work with stable carbene complexes.

Award winners included:

**Oral Presentations:**
- **1st Place** - Anthony Prosser  
  Emory University
- **2nd Place** - Stephen Kelly  
  University of Alabama
- **3rd Place** - Roberta Rodriguez  
  Texas State University

**Poster presentations:**
- **1st Place** - Tanya Jones  
  University of South Carolina
- **2nd Place** - Hadi Khani  
  Mississippi State University

Next year’s Keynote Lecture will feature Dr. Naomi Halas from Rice University. Professor Halas is the Stanley C. Moore Professor in Electrical and Computer Engineering and is also a Professor of Biomedical Engineering, Chemistry, Physics & Astronomy. She is the Director of Rice’s Laboratory for Nanophotonics.
With 34 players teeing it up, the department’s 3rd golf tournament got off to a roaring start on April 26th. Thanks in large part to our generous donors, over $12,000 was raised for undergraduate chemistry student scholarships.

This year’s tournament has been renamed in memory of Dr. William P. Henry, Associate Professor in the Department of Chemistry. Dr. Henry was a tenured faculty member in the Department for 25 years during which time he made a significant impact on many students’ lives, being involved as an undergraduate academic and research advisor, a graduate advisor and as an advisor to the CGSA (Chemistry Graduate Student Association). Dr. Henry was an avid golfer and supporter of this tournament.

Our next tournament will be bigger and better than ever! The 4th Annual Department of Chemistry Scholarship Golf Tournament will be held on Saturday, April 11, 2014. Please check the Chemistry Department website www.chemistry.msstate.edu for details and registration.
Students

Fall 2014 Awards & Scholarships

Olivia Todd – Don G. Wright Memorial Scholarship
Zachary Cuny, Glenn Crisler - Hach Scholarship
Mary Remley, Jada Parish - Donald W. Emerich Endowed Scholarship
Andrew Hanna - Ian Chen Scholarship
Thomas Ricks, Alex Coats - L.C. Behr Memorial Endowed Scholarship
Sarah Hunter, Danielle Francis, Anna Curtis, David Fulton, Jeffrey Johnston - Harry & Mary Simrall Scholarship
Jayme Castillo - Mary V. Simrall Undergraduate Research Scholarship
Torin Harrison – Dr. David E. Wigley Endowed Scholarship
Courtney Hill – William A. Peeples Endowed Scholarship
Margaret Davis -David E. Wigley Endowed Scholarship

Congratulations to MSU SAACS MSU’s SAACS Chapter received the 2014 Outstanding Chapter Award from the American Chemical Society for the hard work done by the SAACS students in preparing undergraduates for a scientific career, fostering fellowship among our chemistry students, and introducing science to the community at large. Only 50 chapters across the country were awarded this honor.

New SAACS Officers for the 2014 Academic Year:

President: Maggie Parker
Vice President: Mary Jo Pakkala
Treasurer: Patrice Simmons
Secretary: Jayme Castillo

SAACS Ambassadors

Olivia Todd Mary Jo Pakkala Mary Linda Remley
Patrice Simmons Tyler Shack Jessi Collier
Andrew Hanna Terah Winborne Jayme Castillo
Taylor Clark Claylee Chism

SAACS Fundraiser

The SAACS group has designed Chemistry t-shirts that are available for a donation of $15.00. For more information go to: http://www.chemistry.msstate.edu/undergraduate/s
Chemistry Department Spring 2014 Awards Banquet
Monte Carlo Casino Night, aka the annual Spring Awards Banquet, was held April 27, 2014 at the M Center. While no real money changed hands (although there was a “prize” at the end), there was plenty of food and lots of fun. Awards (yes, that’s what we were really there for) went to:

Integrated General Chemistry Award
Courtney Hill
Integrated Organic Chemistry Award
Torin Harrison
Analytical Chemistry Award
Matthew McGuire
Inorganic Chemistry Award
Taylor Clark
Biochemistry Award
Mary Jo Pakkala
Outstanding 1st Year Chemistry Major
Alex Rogers
Outstanding 2nd Year Chemistry Major
Jayme Castillo
Outstanding 3rd Year Chemistry Major
Danielle Francis
Outstanding 4th Year Chemistry Major
Tam Vo
Outstanding Undergraduate Researcher
Ashley Horn
SAACS Awards
Maggie Parker
Jayme Castillo
Olivia Todd
Trip Kennon
Jay Ballard
Claylee Chisolm
Patrice Simmons
Outstanding Researcher
Analytical Chemistry – Fathima Ameer
Biological Chemistry – Ailin Wang
Inorganic Chemistry – David Wilson
Physical Chemistry – Vu Le
Organic Chemistry- Wesley Clark
Outstanding Teaching Assistant
Lower Division – Hadi Khani
Organic – Radhika Nareddy
Upper Division – Sameera Guntilake
Outstanding Service Award
Kate Henderson
Most Outstanding Faculty Member
Dr. Deb Mlsna
## Chemistry Degrees Granted 2013-2014

### Bachelors Degrees

<table>
<thead>
<tr>
<th>Name</th>
<th>Hometown</th>
<th>Where Are They Now</th>
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</thead>
<tbody>
<tr>
<td>Julianna Stratton</td>
<td>Starkville, MS</td>
<td>Graduate Student at Mississippi State University</td>
</tr>
<tr>
<td>Kyle Piner</td>
<td>Pensacola, FL</td>
<td>New York City School of Podiatry</td>
</tr>
<tr>
<td>George Salomon</td>
<td>Pearl, MS</td>
<td>Research Scientist at NALCO, Napersville, IL</td>
</tr>
<tr>
<td>James Ballard</td>
<td>Brookhaven, MS</td>
<td>University of Mississippi Dental School</td>
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<tr>
<td>James Wingo</td>
<td>Starkville, MS</td>
<td>Graduate Student at the University of Alabama</td>
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<tr>
<td>Evan Browning</td>
<td>Madison, MS</td>
<td>Graduate Student at University of Mississippi Medical</td>
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<tr>
<td>Megan Burt</td>
<td>Starkville, MS</td>
<td>Applying to medical school</td>
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<tr>
<td>Amanda Holloway</td>
<td>Pelham, AL</td>
<td>Auburn University Pharmacy School</td>
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<tr>
<td>Ashley Horn</td>
<td>Golden, MS</td>
<td>University of Mississippi Medical School</td>
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<tr>
<td>Elizabeth Jacobs</td>
<td>Caledonia, MS</td>
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<tr>
<td>Ashland King</td>
<td>Grenada, MS</td>
<td>South College School of Pharmacy, Knoxville, TN</td>
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<tr>
<td>Holly Nelson</td>
<td>Columbus, MS</td>
<td>Research Scientist at Research Triangle Park, NC</td>
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<tr>
<td>Hannah Plavnick</td>
<td>Starkville, MS</td>
<td>Research Chemist at Axiall Corp. in Lake Charles, LA</td>
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<tr>
<td>Damion Proctor</td>
<td>Jackson, MS</td>
<td>Missile Command, U.S. Air Force</td>
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<tr>
<td>Anna Robinson</td>
<td>Jackson, TN</td>
<td>Union University School of Pharmacy, Jackson, TN</td>
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<tr>
<td>Curtis Virges</td>
<td>West Point, MS</td>
<td>Graduate Student at Mississippi State University</td>
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<tr>
<td>Tam Vo</td>
<td>Vietnam</td>
<td>Graduate Student at Georgia State University</td>
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### Masters Degrees

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<tr>
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<tr>
<td>Hawa Gyamfi</td>
<td>Fitzkee</td>
<td>Graduate Student at Waterloo University, Canada</td>
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<tr>
<td>Chinni Yalamanchili</td>
<td>Pittman</td>
<td>University of Mississippi Pharmacy School</td>
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<tr>
<td>Tyler Howell</td>
<td>Hollis</td>
<td>University of Mississippi Medical School</td>
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<tr>
<td>Virginia Tyson</td>
<td>Hollis</td>
<td>Chemistry Teacher at Prattville High School, AL</td>
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<td>Jarquees Williams</td>
<td>Henry</td>
<td>Graduate Student at University of Georgia</td>
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<tr>
<td>Yue Zhang</td>
<td>Fitzkee</td>
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### PhD Degrees

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<tr>
<td>Vu Le</td>
<td>Lewis</td>
<td>Postdoc at MIT</td>
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<tr>
<td>Venkata Maccha</td>
<td>Lewis</td>
<td>Postdoc at Mayo Clinic, Rochester, MN</td>
</tr>
<tr>
<td>Bidya Kunwar</td>
<td>Mlsna</td>
<td>Postdoc at University of Illinois</td>
</tr>
<tr>
<td>Maria Cabada-Ricalde</td>
<td>Wipf</td>
<td>Assistant Professor at Universidad de Nacion</td>
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<tr>
<td>Shamitha Dissanayake</td>
<td>Mlsna</td>
<td>Postdoc at Marquette University</td>
</tr>
<tr>
<td>Mohamed Ansar</td>
<td>Zhang</td>
<td>Postdoc at Clemson University</td>
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<tr>
<td>Habib Rehman</td>
<td>Gwaltney</td>
<td>Postdoc at Auburn University</td>
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<tr>
<td>Sasith Karunarathna</td>
<td>Saebo</td>
<td>Postdoc in Forest Products at Mississippi State University</td>
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<tr>
<td>Tibor Pechan</td>
<td>Gwaltney</td>
<td>Assistant Research Professor at IGBB at MSU</td>
</tr>
<tr>
<td>Yulin Wang</td>
<td>Wipf</td>
<td>Research Chemist at Cymar Corp, San Diego, CA</td>
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<tr>
<td>Kumudu Peiris</td>
<td>Henry</td>
<td>Lecturer at Appalachian State University</td>
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<tr>
<td>Nuwan De Silva</td>
<td>Henry</td>
<td>Postdoc in Sri Lanka</td>
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<tr>
<td>Manikanthan Bhavaraju</td>
<td>Gwaltney</td>
<td>Postdoc at University of Oklahoma</td>
</tr>
<tr>
<td>Sameera Gunatilake</td>
<td>Mlsna</td>
<td>Assistant Professor at Institute of Chemistry Ceylon</td>
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