

## WORD FROM THE CHAIR, DR. HAL C. REED

Since it now appears that ORU has survived the recent sea of changes, I thought it was about time to produce a new and revised "Gatepost." I want to share some of the highlights of this past year, but in a more condensed format as now so much communication is via email and social websites. Indeed, we have started an ORU Biology and Chemistry Facebook group, so please consider joining and staying in touch with us and your fellow ORU science alumni.

Our faculty and students have been great this past year handling the challenges of the merging of the biology and chemistry programs as well as the changes in various university structures. Thanks to the Green family's gift for summer renovation projects, ORU has been remodeling the LRC chemistry labs. One of the labs has been completed (see photo later in this newsletter) and another is slated to be completed by early August. Our faculty continue to strive for excellence in their classroom instruction, mentoring and professional development. For example, **Dr. Lois Ablin** (Chemistry) was awarded Outstanding Faculty for the Biology and Chemistry Department and also Outstanding Faculty of the School of Science and Engineering; **Dr. Catherine Klehm** (Chemistry) won the Service Award for our school; **Dr. Joel Gaikwad** (Biology) was funded for another summer research project; and **Dr. John Korstad** (Biology and Honors Program) published articles on his sabbatical research on algae and biofuels. We have improved our advising for our pre-medicine and other health professions students by developing a Pre-Health Professions seminar for our incoming students. We continue to send quality students to medical schools as this year seven seniors were accepted

into medical programs, including one student to a prestigious medical school, Washington University in St. Louis. Alumni funds supported students participating in scientific meetings of the Oklahoma Academy of Sciences, TriBeta Biological Honors Society, and the American Chemical Society, with several students winning awards for their research presentations. Your support has been a great blessing as we continue to strive for excellence in our program. We have needs for continued improvement and your support has been such a solid foundation that has enabled us to attract and retain quality students. Your support also shows potential donors and granting agencies that the alumni believe in the program and thus, assists us as we seek extramural funding.

I have selected a few faculty and students to give you a sense of the heart and "spirit" of the department: **Dr. Lois Ablin**, who teaches Organic Chemistry and is the co-advisor for the pre-medicine and health professions students, exemplifies the attitude of the faculty to teach, help, mentor and advise our students; **David Bulger**, a junior biomedical chemistry student who is eagerly conducting interdisciplinary research projects; **Anup Kumar**, a senior biology student who will be matriculating into medical school with the desire and drive to serve in medical missions; and lastly **Dr. Joel Gaikwad**, who teaches Microbiology and Molecular Cell Biology and possesses the investigative curiosity to explore natural compounds in the fight against cancer. There are other faculty and students worthy of note, but I thought these four would represent all of us in the department who are committed to the vision of ORU. ■

## DR. LOIS ABLIN, ASSOCIATE PROFESSOR OF CHEMISTRY, A PROFESSOR WITH A HEART FOR TEACHING AND STUDENTS



**Dr. Lois Ablin** has been doing a great job teaching Organic Chemistry lecture and labs over the last several years. This year our students and faculty of the department acknowledged her outstanding service, teaching and mentoring of students by selecting Lois as the Outstanding Faculty for the Biology and Chemistry Department. Furthermore, she was then honored as the Outstanding Faculty of the entire School of Science and Engineering (left photo). Lois is widely known as a caring teacher who gives individual attention to her students. Indeed, most times when one comes by her office she usually is helping more than one student, giving them quality time to explain the intricacies of the formation of benzene rings, C-C bonds, and of course, the Biginelli Reaction! Lois holds to high academic standards yet does so in a way sensitive to the needs of her students. Also, Lois, along with **Gary Ritzhaupt** (Chemistry), has been leading service learning projects in which they take a group of our students into local el-

ementary schools and demonstrate to them the fascinations of biology and chemistry! Sometimes a few explosions occur, both physical and in the minds of the students! Lois has also been innovative in developing more green chemistry lab exercises so as to minimize organic waste and make it safer for our students. Lois is a doer and finds practical ways to advance our program. For example, she served

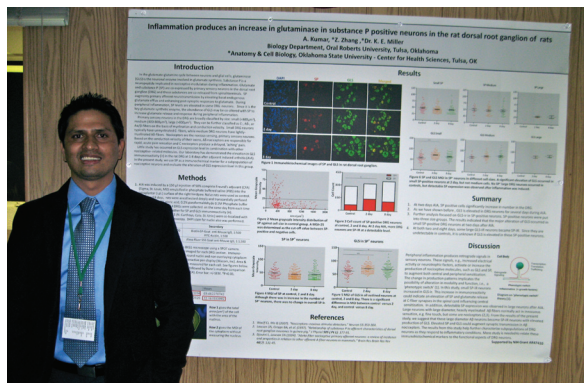
as the Coordinator of the American Chemical Society Oklahoma Pentasectional meeting held on the Oral Roberts University campus in April 2009, is a member of two ORU committees (Green Campus and Safety committees), is a student club advisor, and serves as the co-advisor of the Pre-Health Professions Office. It is in the latter role that I have had the pleasure of working more closely with her this past year as we have been sharing duties of the Pre-Medical advisory office and overseeing our new Pre-Health Professions seminar course. She has been a delight to work with as her insights, suggestions and diligence have made our advising so much better. Lois is a great blessing to our students and her humility and mentoring are fine examples to all of her faculty colleagues. ■

## DAVID BULGER, A STUDENT STRIVING FOR A “SPIRIT OF EXCELLENCE”

**David Bulger** (Honors, junior Biomedical Chemistry major) was supported with alumni funds to conduct an interdisciplinary study involving chemistry, mathematics and biology at Drexel University in Philadelphia, PA and at Rutherford Appleton Laboratory (RAL) in Chilton, Oxfordshire UK during the summer of 2009. David spent two weeks during the summer at Drexel and 18 days at Rutherford Appleton Laboratory conducting research on developing a Sortase A (gram positive bacterial enzyme) inhibitor using the Ugi synthesis reaction. During these visits, he met with two of the judges, Dr. Jean-Claude Bradley (Drexel) and Cameron Neylon (RAL), of the Feb 2009 Open Notebook Science Challenge (ONSC), which he won under the advisement of Dr. Robert Stewart (ORU Chemistry) and Dr. Andy Lang (ORU Mathematics). While at Drexel, he performed Ugi reactions and worked with their 500 MHz Nuclear Magnetic Resonance to determine solubility. At Rutherford he learned lab safety and protocol, transformed bacteria, purified proteins, and developed fluorescence and nickel assays for Sortase A. David's research presentation, “Sortase A inhibition by Ugi products measured using fluorescent protein assays,” won a 3rd place award at the Southcentral Regional convention of the TriBeta Biological Honors Society on March 26-27, 2010 at the University of Oklahoma Biological Station, Lake Texoma, Oklahoma. David plans to continue the research on this bacterial enzyme with **Dr. Joel Gaikwad** (ORU Biology) this fall. In the meantime, he was awarded another research opportunity as a summer REU (Research Experience for Undergraduates) intern at the University of Tennessee Knoxville campus. He will be working on the Biodiversity at the Great Smoky Mountains National Park project. Also, David served as a dependable treasurer for the premed club, AED (Alpha Epsilon Delta), ensuring our financial records were in order this past academic year, and will be AED president this coming year. He has also found time to participate in several community AED service projects, and has been a consistent volunteer at the Tulsa Good Samaritan Medical Outreach which seeks to provide free medical care to underserved communities in Tulsa. It is quite clear that David has a spirit of excellence as displayed in his eagerness to learn, extreme inquisitiveness, and in his focus to succeed in academics and his personal walk in Christ. ■



## ANUP KUMAR (BIO 2010), A DILIGENT STUDENT WITH A HEART FOR THE HURTING



**Anup Kumar** grew up in India where sickness and disease was a common part of daily life, and the number of sick greatly outnumbered physicians. He always knew that he wanted to help in some way those less fortunate than himself. At the age of 17 he joined YWAM (Youth with a Mission) and worked for several years serving the needy in his home country. After marrying his wife, **Kara Bentley Kumar** (BIO 2010), who also served in this YWAM base, they both decided to attend ORU in preparation for medical training. At ORU Anup quickly distinguished himself as a diligent student and worker, and has been one of the most dependable, hard-working assistants we have ever had for the Microbiology labs. Anup also served as a great lab assistant for the Human Cadaver dissection and the Human Anatomy courses. As he desired to broaden his academic training, he sought a research experience and accepted a nonpaid position research student at the Center for Health

Sciences at Oklahoma State University in Tulsa. His research mentor was quite pleased with his diligence and commitment to his project. Anup completed a fine research project and presented a poster (Chronic inflammation produces an increase in glutaminase in Substance P positive cells in the dorsal root ganglia of rats, Dr. Ken Miller, Oklahoma State U., research mentor) that won 1st place at the Southcentral Regional convention of the TriBeta Biological Honors Society this past March. His work ethic and respectful attitude make Anup a pleasure to teach and train. Anup will now be attending the OSU Osteopathic medical school here in Tulsa, while his wife Kara (ORU Biology Outstanding Student 2010) will also be attending medical school, yet in Oklahoma City. Please pray for them as they train apart for a few years, and that they will fulfill God's plans for them to serve together in medical missions. ■



## DR. JOEL GAIKWAD, ASSOCIATE PROFESSOR OF BIOLOGY, A PASSION FOR TEACHING AND RESEARCH



Since his arrival at ORU in 2003, **Dr. Joel Gaikwad** has been a cooperative and hard-working member of the department. His primary responsibilities have been to teach Microbiology, Molecular Cell Biology and Immunology courses and coordinate our new Methods in Biotechnology course. Joel has been an integral part of our thrust to upgrade the molecular biology components of our curriculum and uses his vast experience as a post-doctoral researcher to train students in the use of equipment and molecular techniques. Joel has become a professor who demands excellence in his courses and challenges students to think analytically. Yet he does this with an exuberance and love for the students that uplifts them to a higher level of performance while not depressing their spirits. He is not only a good teacher as evidenced by being selected twice for the Outstanding Biology Faculty, but also has mentored several research students whose work has been selected the outstanding project of the department

or won awards at competitions like Oklahoma Academy of Sciences and TriBeta Biological Honors Society. He has also been a finalist in the competition for the ORU Scholar of the Year award for his work with student researchers, a published peer-reviewed article with a student researcher, and for his award of two summer grants to support his research that has established collaboration with other researchers. His 2010 research opportunity grant from the IDeA Networks of Biomedical Research Excellence (INBRE), a program of the National Institutes of Health (NIH), will allow him to continue his work on the "Identification of the downstream targets of Survivin pathway in HT29 colon cancer cell line." This work will be conducted in collaboration with Dr. Kent Teague at the University of Oklahoma Health Sciences Center in Tulsa. In this process he has upgraded our cell culture laboratory, maintains a cancer cell line, and brought his research experiences into his upper-division courses and student research projects. Joel is indeed a true professor in that he "professes" what he knows and what he does. Joel exemplifies the professor who believes we are not truly scientists unless "we do science," and do it alongside our students. In this way Joel has been an outstanding example to his students, colleagues and to the entire university community. ■

## THE ORIGINAL LRC SCIENCE LAB IS BEING RENOVATED!

After more than 40 years of good use, the university determined it was time to update the original General Chemistry labs in the LRC building. Plans began in the spring of 2009 and 40 years of lab materials and "stuff" had to be temporarily relocated. The first lab was completed and put in use this spring (photo right) and it is projected that the second adjoining lab will be ready for classes this coming August 2010. Dr. Catherine Klehm (Chemistry) has effectively served as departmental liaison with the construction crews to ensure that the final product will be an excellent teaching lab. She was honored with the ORU Service Award for the School of Science and Engineering for her oversight of this project. The faculty are each excited about the changes the renovations will bring and are extremely grateful to the Green family and the administration for funding this project. New labs will certainly go a long way to improving the first lab experience many new students encounter during their time at ORU.



## A FINAL WORD

Thanks again for your concern, prayers and support of the biology and chemistry programs here at ORU. Please continue to think about and pray for us, tell potential students about our programs, and pass the news about our department to friends, families and contacts in your sphere of influence. As the Lord leads, support us with your financial contributions. Gifts should be sent to the ORU Alumni Foundation with a note that the funds should be directed to the Biology or Chemistry Program (e.g., note the specifics in the memo line of a check). Of course, we still maintain specific subaccounts so you can direct your donation to one of those specific areas (e.g., Muccio pre-medicine scholarship, Biology equipment fund, Chemistry equipment fund, etc.). You may give online at the ORU alumni website ([https://webapps.oru.edu/new\\_php/give/index.php?memorial=](https://webapps.oru.edu/new_php/give/index.php?memorial=)) and still direct your gift to our programs. May the Lord richly bless you, your family and your work for the Lord and others.