Greetings Alumni Friends! We are pleased to announce the formation of the Department of Biochemistry and Molecular Biology Alumni Association. Join us in heralding the birth of the BMB Alumni Association with the spirited fanfare so typical of our collegial band of scholars. Our hope is that you will become an active participant from day one and witness history in the making. The purpose of the BMB Alumni Association is to re-connect with alumni, keep current with our colleagues, and keep abreast of everyone’s accomplishments. In short, we wish to foster a multigenerational alumni network.

Bill Weppner ‘74 and Rebecca Hoffman ‘09 have agreed to join me on the BMB Alumni Board to get the Association started. Your input on what you see as important activities and goals would be much appreciated. Send your comments and any information you wish to share to biochemistry@okstate.edu.

Earl Mitchell, Professor Emeritus

From the Department Head. Welcome to the department’s annual alumni newsletter. This issue is dedicated to highlighting current student achievements and renewing our commitment to alumni. Dr. Earl Mitchell, Professor Emeritus, has graciously agreed to establish the new BMB Alumni Association, with the goal of reconnecting with all of you! Alumni provide support to the department in many ways, including serving as role models for our current students, and future issues of the newsletter will reflect this philosophy. In this issue, we are featuring a special section called “Lab Connections” to reunite alumni who worked and learned together as biochemistry students at OSU. You’ll find photos from our first alumni homecoming tailgate, news from young alumni, and in the Alumni Spotlight, we feature the careers of Dr. Collis Geren (’72) and Dr. Bill Weppner (’74). The Department has had an amazing year, and we are eager to share our accomplishments with you.

Gary A. Thompson, Professor and Head

From the Archives

Biochemistry “Hormones”
1967 League I Champions

“Our achievements at slow pitch softball were exceeded only by our scholarly endeavors in biochemistry!”
Wayne Fish

Front Row (left to right): Gary Price, Arian Richardson, Virgil Ackerson, Duane Pierson, Wayne Fish

Back Row (left to right): Charles Rudolph, Phil Koehler, Bob McKenzie, Don Schmidt, Wayne Denton, Jon Newell, Jerry Chandler
Lab Connections: The Franklin Leach Lab

Franklin R. Leach joined the department in 1959 as a Research Associate and in 1960 as an assistant professor. From 1962-1972, Dr. Leach was a Research Career Development Awardee from the National Cancer Institute, NIH. In 1965-1966 he took a sabbatical as a research fellow with Dr. Robert Sinsheimer at the California Institute of Technology, and in 1968, he was promoted to professor. Professor Leach taught biochemistry laboratory, enzymes, regulation and metabolism courses. He was the editor for the Oklahoma Academy of Science from 1989-96 and a founding member of the International Society for Bioluminescence and Chemiluminescence. Professor Leach was a scientist with a broad range of contributions to the fields of bacterial metabolism, bacterial enzymes, protein synthesis, RNA phages, bacterial transformation, cell culture, vitamin transport, analytical and environmental biochemistry, and firefly luciferase and ATP analysis. Dr. Leach retired in September 1998 and in 2002 moved back to Texas to be near some of his kids where he continues to teach Biochemistry online and at the University of Health Sciences Antigua. Dr. Leach directed the theses of 7 MS students and 14 doctoral students and influenced many other students at OSU.

“I had the privilege of being Frank’s first graduate student back in 1960-62. I remember that an entry in a then current Biochemistry text described DNA as ‘a base-sugar-phosphate molecule of ubiquitous distribution who’s biological function is unknown.’ The rumor that there were only four elements [earth, air, fire and water] when I worked with Frank is probably a rumor started by an OU graduate.” Don Sanders

“One of many memories includes the summer of 1964 after my freshman year when the Biochem Department was getting ready to move from its home in Whitehurst Hall to its new home in the “new” physical sciences building. I was assigned the task of cleaning out a refrigerator that must have been installed when Whitehurst was built. Strange, often unlabeled cultures abounded in there. Some were several years old. For this time period, the pay scale for inexperienced students was 90 cents/hour.” Linda Aksamit

Read more about alumni highlighted in Lab Connections at http://biochemistry.okstate.edu

Lost Leach Lab Connections?

- Lois Wilson, M.S. 1963
- Lula Northrup, M.S. 1963
- Sue Darcie, M.S. 1964
- Wayne Wray, M.S. 1965
- James Rupp, M.S. 1965
- Thomas Dunn, Ph.D. 1965
- Semih Erhan, Ph.D. 1965
- Yong Oh, Ph.D. 1969
- Madeline Muzyka, Ed.D. 1970
- Thomas Griffith, Ph.D. 1972
- Stanley Stadnicki, Ph.D. 1977
- Phillip Clark, Ph.D. 1978
- Jeffrey Howard, Ph.D. 1980
- Li Ye, Ph.D. 1994
The Department’s Homecoming 2009 Tailgate Party!

You are invited to join us for Homecoming 2010 & the pre-game BMB tailgate October 22-23
The BMB Core Facilities have a New Home

The Department’s core facilities for DNA, protein, microarray, and bioinformatics have moved into new lab spaces! Their spacious new laboratory was designed specifically to accommodate and showcase their major instruments, and to raise the prominence of the facilities and their missions. This new space creates a state of the art showcase laboratory for research and hands-on training using modern major instruments for analytical biochemistry.

The core facilities’ new spaces are located within OSU’s new Henry Bellmon Research Center (HBRC). The HBRC is built on the site of the old Dairy Building, on Monroe Street directly across from Ag Hall, placing it just “across the quad” from the Department’s home in the Noble Research Center. The HBRC is OSU’s newest research building, featuring beautiful modernized Georgian architecture that matches OSU’s other buildings, and natural lighting throughout the structure. This exciting development gives the Department more than 5,000 square feet of new space, and will provide much needed room for the ongoing expansion of Departmental programs.

Let’s hear from our Faculty

### Dr. Junpeng Deng

**Job:** Scientist  
**What I do:** Protein crystallography, revealing 3D atomic structures of macromolecules  
**What is the most exciting aspect of your research?** Seeing is believing. What we see changes how we think, which may guide the road from bench to bedside.  
**Who works in your lab?** Three post docs, three grad students, one research specialist, and a number of undergrads also work in the lab.  
**What is your proudest achievement?** Seeing what I taught was truly comprehended and mastered.  
**The one thing you should know about me is...** I hate to waste time.

### Dr. Robert Matts

**Job:** Professor  
**What I do:** Drug discovery, identification and characterization of inhibitors of Hsp90.  
**What is the most exciting aspect of your research?** The chance to identify new drugs for the treatment of cancer and neurodegenerative diseases.  
**Who works in your lab?** Four grad students and one undergraduate student.  
**What is your proudest achievement?** Seeing the graduate students who receive their degrees in my lab succeed when they leave.  
**The one thing you should know about me is...** I love to talk science.
2009-2010 Seminars

Fall Semester

Dr. Glenn Zhang, Oklahoma State University. “Potential of host defense peptides in disease control and prevention”

Dr. Michael Rosen, University of Texas Southwestern Medical Center. “Hierarchical regulation of WASP/WAVE proteins”

Dr. Manyuan Long, University of Chicago. “Evolution and phenotypic effects of new genes”

Dr. Siva P. Kumpatla, Dow AgroSciences LLC. “Tools for crop improvement in molecular era”

Dr. Liang Tang, University of Kansas. “Viruses as genome packaging and injection machines: Structural virology by means of X-ray crystallography and electron cryo-microscopy”

Dr. Keith Murphy, Clemson University. “Genetics of hereditary nephropathy and the Merle phenotype of the domestic dog”

Dr. Oliver Kerscher, College of William and Mary. “Search & destroy: A function for SUMO in proteolytic targeting”

Dr. Aron Fenton, University of Kansas Medical Center. “Allosteric regulation of pyruvate kinase”

Sirny Endowed Professorship Lecture

Dr. Lynn Zechiedrich, Baylor College of Medicine. “A new non-viral, non-toxic DNA minivector for basic and clinical research: How basic research opened doors for gene therapy”

Dr. Haochu Huang, University of Chicago. “Tolerance defects in a mouse model of rheumatoid arthritis”

Dr. Yan Xiang, University of Texas Health Science Center at San Antonio. “Poxviruses immune evasion mechanisms”

Dr. Ann West, University of Oklahoma. “Signal transduction in yeast involving a His-to-Asp phosphorelay system”

Dr. Kenton Swartz, National Institutes of Health: National Institute of Neurological Disorders and Stroke. “Structural basis of voltage sensor function and pharmacology in voltage-activated ion channels”

Dr. Patricia Ayoubi, Oklahoma State University. “Increasing the accessibility of plant biomass polysaccharides for conversion to bioethanol”

Spring Semester

Dr. Jose Soulages, Oklahoma State University. “Triglyceride metabolism, glycolysis and glyceroneogenesis in adipocytes: Their roles in the development and treatment of type 2 diabetes”

Dr. Anuj Kumar, University of Michigan. “Large scale analysis of yeast filamentous growth…and other potentially fun things”

Dr. David Amberg, SUNY Upstate Medical University. “Whole genome complex haploinsufficiency screening identifies a large actin-related gene network”

Dr. Omar Skalli, Louisiana State University Health Sciences Center. “Intermediate filament protein synemin influences signaling pathways involved in astrocytoma cells migration and proliferation”

Dr. William Schneider, USD-ARS, Fort Detrick, MD. “Broad range diagnostics technologies for plant pathogens”

Dr. Huazhong Shi, Texas Tech University. “Plant stress tolerance: genes and functions”

Chang-An Yu Eminent Scholar Seminar

Dr. Denis L. Rousseau, Albert Einstein College of Medicine. “Unraveling the catalytic mechanism of cytochrome c oxidase, the terminal electron transfer complex”

Dr. Wim Hol, University of Washington. “Structural biology and unraveling the mysteries of export of cholera toxin by the type 2 secretion system”

Dr. Hao Wu, Cornell University. “Structural and functional studies in apoptotic and inflammatory signaling”

Dr. Hong Li, Florida State University. “Making ribosomes and spliceosomes: Structural perspectives”

Dr. Million Tadege, Oklahoma State University. “Regulation of dicot leaf lamina development by a homeobox gene STENOFOLIA”

Dr. Michael Kanost, Kansas State University. “Biochemistry of blue blood: insect immune responses”

Dr. Liang Tong, Columbia University. “Structural studies of fatty acid metabolism and relevance to the obesity epidemic”

Dr. Dean Dawson, Oklahoma Medical Research Foundation. “Pairing of non-homologous and homologous centromeres in meiosis: New explanations for old observations”

Roger E. Koepp Endowed Lecture

Dr. John Brosnan, Memorial University of Newfoundland. “New insights into creatine synthesis and function”

Visit http://biochemistry.okstate.edu for the Fall 2010 - Spring 2011 seminar schedules
Award Winning BMB Students

More than 2,000 students from around the globe put their names in the hat for 150 internships available at Pfizer Inc. this past summer. Randilea Nichols, a Biochemistry and Molecular Biology Junior, was awarded one of the internships. Randilea works with switchgrass in Dr. Ramamurthy Mahalingam’s lab. At Pfizer, she modeled protein and surfactant adsorption on filter membranes during the drug manufacturing process. Surfactants are used in biopharmaceutical products to aid in stabilization of the protein. It is vital to understand how much of these surfactants are binding to the filters during the manufacturing process. Loss of surfactant can lead to a loss in stabilization of the protein. This internship with Pfizer provided experience in both industry and academia, which will give her insight into making future decisions. Randilea’s future plans include attending graduate school to earn a Ph.D. degree in molecular biology.

TeeCie Brown was selected from over 700 applicants across the United States to be one of 35 participants in the National Security Analysis and Intelligence Summer Seminar. The NSAISS was a two-week symposium and program held in Washington, DC. The symposium involved lectures and presentations by professionals from federal agencies, including the FBI, CIA, and DIA, to introduce students to the field of intelligence analysis. The students participated in simulation exercises, analyzing situations from the intelligence perspective. They also toured several intelligence agency headquarters, such as the FBI and CIA, the National Geospatial Agency (NGA), and the National Security Agency (NSA). Students met with representatives from the various organizations to discuss career options in the field during a recruitment session that culminated the seminar.

Nazia Tabassum (pictured on the far right) was awarded the 2010 Phoenix Award as the OSU Outstanding Master’s Student. The award recognizes exemplary achievement in leadership, scholarship, professional involvement, and university and community service. It is the highest honor presented to graduate students by Oklahoma State University’s Graduate and Professional Student Government Association (GPSGA) and the OSU Graduate College.
Undergraduate Scholarships and Awards

Outstanding Biochemistry Senior
Valentin Sluch

OSU Barry M. Goldwater Scholar
& Anne Clark McHale Scholarship
Lydia Meador

OSU Senior of Significance
Ana Gessel

Native American Research Summer Fellowship at OUHSC
& Rebecca Going Scholarship
Brady Selig

OSU Outstanding Senior
Jared Crain

Wentz Scholars
Sarah Fry
Zachary Hager

Wentz Projects
Christie Backoulou
John Cloud
Lauren Colom
Eric Lee
Braxton Nottingham
Sarah Oppel
Valentin Sluch

Niblack Scholars
Joshua Damron
Jacob Keeling
Lydia Meador
Randliea Nichols
Erin Roberts

Paul F. Kruse Award & Merck Index Award
Valentin Sluch

V.G. Heller Award
Lauren Colom

Grace Knox Award
Chelsea Aldridge
Zachary Hager

James E. Webster Award
Excellence in Academics for Freshman Year (2008-2009)
Whitney Anderson
Whitney Burch
Devin Carney
Jared Pembrook
Will Schrauner
Brady Selig
Natalia Soulages

2010 Spring Graduates
Over the years the Biochemistry and Molecular Biology Graduate Student Association (BMBGSA) has grown in leaps and bounds. Our main goal is to develop and hone professional skills like cooperation and leadership by supporting graduate student events. The association is active in departmental decisions and provides campus wide input by regular attendance at Graduate and Professional Student Government Association meetings. BMBGSA has continued organizing journal club, which has been successful in providing an opportunity for all graduate students to have critical scientific discussion with each other.

Delta Nu Alpha members have taken several field trips to the Science Museum of Oklahoma, the Tulsa and Oklahoma City Zoos, and the Jenks Aquarium. Delta Nu Alpha likes to show their appreciation for the efforts and hard work of the faculty and staff by providing them with food and drinks once each semester. In the 2010 Fall semester, Delta Nu Alpha will organize the first “Biochemistry Undergraduate Research Poster Session” to be held during the BMBGSA Annual Graduate Research in the Biological Sciences Symposium.

Departmental Student Organizations

Delta Nu Alpha (Biochemistry Club) is a social club that provides undergraduate students in the department opportunities to explore and enrich their experiences in the biochemistry degree program as well as meet other biochemistry undergraduates. The organization participates in various activities throughout the year, including philanthropic activities such as Into the Streets and Harvest Carnival. Members also provide service to the community as volunteers at the Humane Society of Stillwater and the Stillwater Medical Center.

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Last September BMBGSA organized and conducted the 6th annual Graduate Research in Biological Sciences Symposium that was held at the Noble Research Center. The symposium featured 22 oral and 27 poster presentations by students from the entire Oklahoma State University system. The participation in this symposium was almost double that of previous years. Keynote speaker Dr. Manyuan Long from University of Chicago, and closing speaker Dr. Siva Kumpatla from Dow Agro Science LLC gave engaging talks highlighting two major career options for graduate students. This was the first time that we invited a speaker from industry to talk and interact with students, which was welcomed by all. In addition, the BMBGSA will have something new for the 7th symposium this fall; for the first time undergraduate students will join us in poster presentations! We are proud of our past and look forward to continuing to improve our future.

7th Annual Graduate Research in Biological Sciences Symposium
Noble Research Center - September 23-24
Supported by: BMB, DASNR, College of Veterinary Medicine, GPSGA, VPR&TT, VPSA
Class of 2009 - 2010

Graduating Seniors

The following graduates earned a Bachelor of Science Degree in Biochemistry or Biochemistry and Molecular Biology. Congratulations and may your hard work and determination let you accomplish all of your goals.

Chelsea Aldridge
David Bailey
Cordaro Baldwin
Grant Barron
Heath Burchfield
Jacob Cary
Steven Castleberry
Stephanie Chester
Bee Chim
Lindsay Clingenpeel*
John Cloud
Lauren Colom
Brian Erickson
Caitlin Freeny
Ana Gessel
Zachary Hager
Helen Harris
Melanie Harrison*
Amy Hoffman
Rebecca Hoffman*
Christopher Hoover*
Sarah Horne
Thomas Hudson
Christopher Hutchinson
Nathan John
Alexandra Kondos
Eric Lee
Breann Lindsey
Gregory Lytle
William McGrath
Krista McGuire
Rynesha Minor
Braxton Nottingham
Lance Pate
Ross Riddle
Tracy Roberts
Ashley Salwierak
Emily Sharpe
Valentin Sluch
Matthew Smart
Erin Stewart
Raagini Subramaniam
Nathan Traylor
Daniel Trobare
Edward Van Matre
Jeremy Wilkinson
Jenny Winters
Joshua Wolfe

*Honor's College Degree

Doctoral Degree

Alisha Howard, Ph.D.
Jessica Matts, Ph.D.
Soreiyu Umezu, Ph.D.
Fei Zhou*
Lila Peal*

Masters Degree

Wenjun Liu
Ning Song
Nazia Tabassum
Li Zhang

*Completing degrees in Fall 2010
Phillip Verghese (Ph.D. 2007) is a postdoctoral research associate with David M. Holtzman at the Washington University School of Medicine in St. Louis, MO. Phillip has been awarded funding through the American Health Assistance Foundation for his Alzheimer’s Disease research and Abeta Metabolism. He writes, “While I was in the department, Dr. Steve Hartson advised and encouraged me to apply for post-doc fellowships and provided a lot of grant writing materials. I am very thankful to several faculty in the department, particularly Dr. Jose Soulages, Dr. Estela Arrese and Dr. Steve Hartson.”

Lance Harrell (M.S. 2002) is the Director of Science for a new biofuels company located in Costa Rica. He is responsible for developing what will be the most advanced biofuels research center in Central America, focusing on the molecular breeding, genetics, hydroponics and germplasm collection of several oil bearing plant species. In addition, he will oversee plantation development that will exceed 400,000 hectares in the next three years. Lance is dedicated to “making sure that it’s done in an environmentally, socially and economically sustainable way.”

Maria Elberry Neil (Ph.D. 2008). “I married my best friend, Steve Neil, in September 2008, and we were blessed with a beautiful son, James Sharbel Neil, on November 4, 2009. After graduating, I accepted an offer as a postdoctorate at The Ohio State University Medical Center, where I spent a year and a half doing Cancer related research. I started reading more and doing research on nutrition/supplementation and cancer, which led me to USANA health sciences. I started working for USANA at the end of 2009. Earlier this summer, I found out that we are expecting our second child, so I continue to work from home with USANA, consulting with customers about health and wellness, and educating them on the importance of nutrition.”

Christopher Hoover (B.S. 2010), an Honor’s graduate, is working in Dr. Kenneth Miller’s lab at the Oklahoma Medical Research Foundation in Oklahoma City. The lab’s research focuses on transport, release and absorption/degradation of synaptic vesicles, dense core vesicles and neurotransmitters. Christopher is studying neuronal signaling pathways by forward genetics approaches.

Anu Penaganti (M.S. 2008) is working for Blue cross/Blue Shield in Chattanooga, TN. “Getting an MS from Dept of BMB laid the path for me, not only to shape my dreams but also to acheive them. I will be always thankful to all the Staff members and to my fellow graduate students for making my time in the department memorable and extremely useful. I am especially thankful to Dr.Andrew Mort for his constant support without which I wouldnt have been where I am today.”

Shawn Daley (Ph.D. 2010) is a postdoctoral research associate in the Department of Microbiology at Ohio State University in Columbus, OH. “I remember right after I passed my proposal, Dr. Mitchell said.....your proposal is the last chance we have to prove to you that you are not as smart as you think you are.”
Giving back to the Department of Biochemistry and Molecular Biology

The Department of Biochemistry and Molecular Biology encourages students to reach their full potential in every aspect of their education. The department recognizes how important our alumni and the contributions they make are to the success of our students. Financial contributions help the department provide a top-quality seminar series, educational and research opportunities, and a variety of scholarships and awards. A gift to the Biochemistry Department Fund will help support the Biochemistry and Molecular Biology Seminar Series.

**BMB Student Scholarship Fund**
- Roger E. and Norma L. Koepe Endowed Scholarship Fund
- The Finn Wold Family Biochemistry Endowed Fund

Please make your contributions payable to OSU Foundation and indicate your desired area of support. Also contact the department if you would like to endow a scholarship or seminar for specific individual recognition. For example, we currently have the Chang-An Yu Eminent Scholars Seminar and the Roger E. Koepe Endowed Lectureship.

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Oklahoma State University
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Alumni Spotlight

**Collis R. Geren, PhD ’72**
A 1972 PhD graduate from the Department, Dr. Collis Geren is the Dean of the Graduate School and Vice Provost for Research for the University of Arkansas and has announced his retirement, effective June 30, 2010. He previously served as Chair of the Chemistry and Biochemistry Department and interim chair for the Department of Biological Sciences at the U of A. He also serves as Coordinator of the Arkansas Biotechnology Center.

Dr. Geren was honored in the Who’s Who in Frontier Science and Technology Who’s Who in the Southwest. He received the NIH Research Career Development Award, the University’s Distinguished Alumni Award in Teaching in 1986, and is listed among American Men and Women of Science.

**Bill Weppner, PhD ’74**
Greetings to all members of the Department family, past and present, and especially all the Lipid Men out there! Remember me? I’m Bill Weppner, Ph.D., 1974. I retired from 3M Company in 2006, after a 26 year career in technical management that included products ranging from pharmaceuticals and medical devices to specialty chemicals used throughout industry. I now operate a consulting firm focused on hazard analysis and risk management primarily for persistent, toxic, bioaccumulative chemicals. Thirty five years after graduating from OSU with my doctorate, I am convinced that anything I have achieved professionally is the direct result of the education I received in the Department of Biochemistry and Molecular Biology and the thoughtful mentoring of Dr. Franklin Leach. Feel free to reach me at billsworld58@live.com.

Pride and tradition starts with our Alumni here at Oklahoma State University. That’s why we want to know all about you.

E-mail us at: biochemistry@okstate.edu

For updates join our Facebook group: “Biochemistry and Molecular Biology—OSU Alumni Chapter”