



Department of Biochemistry

2006/2007 Annual Report

Department Head Message

Greetings from the Department of Biochemistry! It has been another exciting year and we hope that you find interesting news and information within these pages. Several of our faculty members received impressive awards this spring. The Board of Trustees appointed Clint Chapple a Distinguished Professor of Biochemistry in recognition of his research in plant metabolism and strong commitment to classroom education. The National Science Foundation awarded W. Andy Tao a Faculty Early Career Development Program (CAREER) grant that provides five years of support for the best teacher-scholars in the nation. In addition, Jim Clemens was named an Alfred P. Sloan Fellow. This competition spans seven diverse fields from economics to physics to neurobiology (Clemens' area) and is dominated by faculty at the premier research universities in the nation. These awards highlight a few of our talented faculty and project tremendous potential for the future. Our undergraduate enrollment continues to surpass initial projections. More than 80 students have pursued biochemistry degrees over the past two years and we anticipate over 90 in the 07-08 academic year. It is gratifying to see increased interest in Purdue's biochemistry program at a time when our nation's global competitiveness requires more science graduates than ever.

Finally, I want to thank our alumni and friends who continuously help the department in so many ways. Some of you donate your time to speak with students and faculty, others keep us informed of internship opportunities, and of course, many of you provide financial gifts. This year we have highlighted a few fundraising projects and the key individuals who supported them. Although our short-term needs continue to benefit from unrestricted funds, I am convinced that the long-term goals of the department can best be achieved through endowed accounts. These funds are managed by the university and generate income each year. Examples include the Axelrod Lectureship, the Beach Family Lecture and the Mertz scholarship. For those who have the means, establishing an endowed account is a wonderful investment in future generations. If you are interested in establishing a new account or contributing to one of our existing endowments please contact me. I would be happy to discuss the options for supporting the students and faculty of Purdue.



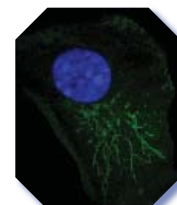
Best Regards,
Jim Forney
Department Head
forney@purdue.edu

Inside this Issue

Faculty News	2-5
Development	6
Honors/Recognitions	7-8
Seminars	9-10
Graduate Student News	11-13
Undergraduate Student News	14-19
Outreach	20
Alumni Update	21-22
In Memoriam	23
Publications	24-25
Grants	25
Donors	26

About the Cover

This confocal fluorescence micrograph shows the localization of protein kinase R (PKR) in HeLa cells. PKR is the primary cellular sensor that is activated upon virus infection. **Steve Broyles'** laboratory is studying poxvirus proteins that inhibit this enzyme protecting the virus from host defenses. Some members of the poxvirus family, such as smallpox, are potential bioterrorist agents. Work by Dr. Broyles focuses on understanding the fundamental biochemical changes in the host cell after infection. The ultimate goal is better methods for treatment and prevention of disease. The light green stain identifies protein kinase R, and the blue stain is the cell nucleus.



Faculty News

Faculty Promotion

In April 2007 **Sandra Rossie** was promoted to Professor of Biochemistry. Dr. Rossie has been a leader in the analysis of protein phosphatase 5, a molecule involved in signal transduction pathways that are implicated in tumor cell proliferation and neurodegenerative disease. Dr. Rossie received her B.A. in Natural Science from Johns Hopkins University and her Ph.D. in Pharmacology from the University of Chicago. She worked at the University of Washington, Department of Pharmacology as a postdoctoral fellow, then as a research associate. Before joining the Purdue faculty Dr. Rossie was an assistant professor in the Department of Pharmacology and Toxicology at the University of Arizona.



Sandra S. Rossie

Board of Trustees Honor BCHM Faculty Member

Clint Chapple was appointed Distinguished Professor of Biochemistry by the University's Board of Trustees on April 13. Designated professorships honor individuals whose academic achievements have been internationally recognized or who have made contributions to the university through scholarship, research, teaching or leadership functions.

Dr. Chapple's research focuses on understanding and manipulating a polymer in plant cell walls known as lignin, which contributes to plants' structural strength, but hinders the utilization of plant material in agriculture and industry. His research already has laid the groundwork for improved processing techniques for producing pulp for paper. Dr. Chapple is currently working on additional ways to alter lignin so that cellulose from plants can be used more efficiently for biofuel production.



Clint Chapple

Dr. Chapple, who joined the Purdue faculty in 1993, is a fellow of the American Association for the Advancement of Science and has served as President of the Phytochemical Society of North America. He received his bachelor's and master's degrees in botany, and his doctoral degree in chemistry, all from the University of Guelph, Ontario, Canada.

Biochemistry Research Retreat

The Biochemistry department held its research retreat in September 2006 at the Wright Forestry Center in West Lafayette. Approximately 60 faculty, staff and students attended the event which included eight scientific lecture presentations and 21 posters. Awards for the top three posters went to **Ying Wang** (Charbonneau's lab), **Michelle Drennan** (Hall's lab) and **Hema Jayachandran** (Rossie's lab).



Biochemistry Research Retreat at Wright Forestry Center

Faculty News

Faculty Awards

Outstanding Teacher, Counselor and Graduate Educator

Three Department of Biochemistry faculty were honored for their outstanding work with students. The Biochemistry nominees for the College of Agriculture faculty awards included **Clint Chapple** for the Outstanding Undergraduate Teacher, **Mark Hermodson** the Outstanding Undergraduate Counselor and **Henry Weiner** for the Outstanding Graduate Educator. All three were recognized at the College of Agriculture Spring Awards Reception on April 15, 2007.



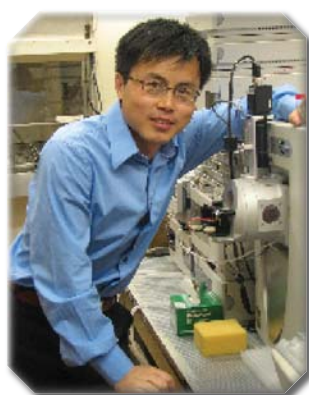
Clint Chapple



Mark Hermodson



Henry Weiner



Andy Tao

NSF Early Career and ASMS Research

Andy Tao won a National Science Foundation Early Career Development Award for his proposal entitled, "Soluble nanopolymers for targeted proteomics *in vitro* and in living cells." The Faculty Early Career Development Program, established in 1994, is a foundation-wide activity offering NSF's prestigious awards in support of early career-development activities. These awards are given to teachers and scholars who most effectively integrate research and education within the context of their organization's mission.

Andy was also presented the American Society for Mass Spectrometry Research Award for his project entitled, "Identification of drug targets based on dendrimer nanoprobe and mass spectrometry." The award was presented at the 2006 ASMS Conference in Seattle, Washington.

Sloan Fellowship Research

Jim Clemens was selected as a 2007 Alfred P. Sloan Research Fellow. Recipients were selected from nominations of early career scientists across the United States and Canada in the fields of chemistry, physics, mathematics, neuroscience, economics, computer science and computational and evolutionary molecular biology. Jim was selected in the neuroscience category and received a 2-year award. The selection procedures for the Sloan Research Fellowships are designed to identify those who show outstanding promise of making fundamental contributions to new knowledge.



Jim Clemens

Seed for Success

Three Biochemistry faculty were recognized in the Seed for Success Program hosted by the Provost and Office of the Vice President for Research: **Scott Briggs** (NIH grant entitled, "The role of Set1-mediated methylation in chromatin function"); **Clint Chapple** (DOE grant entitled, "Manipulation of lignin biosynthesis to maximize ethanol production from Populus feedstocks") and **Andy Tao** (NIH grant entitled, "Syk and associated proteins in breast cancer"). Established in 2003, the program recognizes faculty members who receive a sponsored research grant of one million dollars or more. Each award recipient receives a bronze acorn engraved with his or her name.



Scott Briggs



Clint Chapple



Andy Tao

Faculty News

In the "Spotlight"

The JBC "Classics" series featured the work of **Jack Dixon**, BCHM faculty member (1973-1991) in the December 22, 2006 issue. The lead paper on protein tyrosine phosphatases is from work conducted at Purdue. **Kun-Liang Guan** (Ph.D. 1989, Weiner) and postdoctoral research associate (1989-1991, Dixon) is the lead author on the paper. Kun-Liang received the Purdue 2006 Agricultural Distinguished Alumni Award and is currently a named professor at the University of Michigan.

Clint Chapple was profiled in the journal *Science*, (315: 786, 2007) for his research using genetic tools to design trees that can readily and inexpensively yield the sugars needed to produce alternative transportation fuels. His research focuses on a polymer in cell walls called lignin, which contributes to the plants' structural strength, but hinders the conversion of cellulose to glucose required to make the alternative fuel ethanol. The Department of Energy's Office of Biological and Environmental Research is funding a \$1.4 million, three-year study by Purdue Agriculture faculty **Clint Chapple**, Richard Meilan (Associate Professor, Department of Forestry and Natural Resources) and Michael Ladisch (Distinguished Professor, Department of Agricultural and Biological Engineering).



Clint Chapple (left) and Richard Meilan

Cancer Center Annual Scientific Retreat

Xiaoqi Liu presented his research paper entitled, "Functional studies of polo-like kinase1 (Plk1) in mammalian cells" at the 2006 Cancer Center Scientific Retreat held in West Lafayette. Xiaoqi also presented a poster at the retreat with **Jiabin Tang** (postdoctoral research associate). Other poster presentations were given by **Ann Kirchmaier** and her graduate student, **Bo Yang** as well as **Scott Briggs** along with his graduate student, **Doug Mersman** and postdoctoral research associate, **Ian Fingerman**.



Xiaoqi Liu

Current Biochemistry Faculty

Front row (left to right): Xiaoqi Liu, Scott Briggs, Ann Kirchmaier, Andy Tao and Barbara Golden.

Middle row (left to right): Jim Forney, Karl Brandt, Lee Weith, Mark Hermodson, Sandra Rossie and Harry Charbonneau.

Back row (left to right): Jim Clemens, Mark Hall, Henry Weiner, Steve Broyles, Clint Chapple, Fred Gimble and Joe Ogas.



Faculty News

Karl Brandt Retires after 41 Years

Karl Brandt gave his farewells to the Department of Biochemistry and College of Agriculture on Thursday, May 24, 2007. Over 100 guests lined up to give their best wishes. Jim Forney presented Karl with a hand-crafted wooden desk chair personalized with his name and years of service. In addition, a monetary donation was given in Dr. Brandt's name to "Nothing But Nets" through the UN Foundation for the purchase of mosquito nets to help fight malaria in Africa.

Dr. Brandt started his career in the Department of Biochemistry in 1966. He was promoted to Associate Professor in 1969 and Professor in 1975. In 1981 he became Assistant Dean of the Graduate School. In 1984 he was appointed Associate Dean and Director of Academic Programs in the School of Agriculture. He also served as the School's Acting Dean in 1986. Dr. Brandt returned to the Department of Biochemistry full time in 2002.

Dr. Brandt's list of accomplishments is extensive. He was Biochemistry's nominee for the Outstanding Teaching Award six times, Outstanding Counselor Award five consecutive years and in 1991 earned the Purdue Student Government Award for Advisor Excellence. In 2003, he was awarded the Purdue's Book of Great Teachers Award, the College of Agriculture's Outstanding Undergraduate Teacher Award and Purdue's Charles B. Murphy Outstanding Undergraduate Teaching Award. He was a previous winner of the Agriculture Team Award (Study Abroad Team).

Dr. Brandt is remembered for quotes he hoped would inspire his students: "It is not the answer that enlightens, but the question," (Eugene Ionesco, Decouvertes). "Science...urges on us a delicate balance between no-holds-barred openness to new ideas, however heretical, and the most rigorous skeptical scrutiny of everything -- new ideas and established wisdom," (Carl Sagan, The Demon Haunted World).



Karl Brandt



Development

Parents of Biochemistry Student Support Undergraduate Research



Leslie, Megan and Susan West
(Megan West, daughter of Leslie and Susan,
will be a senior in the Department of Biochemistry.)

Independent research under the supervision of a faculty member can be a transformational experience for students. The exceptional growth in our undergraduate enrollment creates new challenges as we seek to expand these opportunities. Thanks to Purdue alumni **Leslie** (M.S. 1974; Ph.D. 1977 School of Pharmacy) and **Susan West** (B.S. 1975 School of Pharmacy; M.S. 1977 School of Health Sciences; M.S. 1978 School of Management) of Glencoe, Illinois, an endowment has been established to support undergraduate student research in the Department of Biochemistry. Major support from the Wests and recent gifts from Biochemistry alumni have brought the fund to nearly \$30,000. It is our hope that this endowment will continue to grow and enhance the creativity of students and faculty to explore new areas of research independent of faculty grants.

David Schroeder Establishes Memorial Scholarship

The Department of Biochemistry hopes that talented students can pursue a biochemistry degree regardless of their financial resources. Scholarships are an important mechanism to achieve this goal by providing funds to offset tuition and fees. **Ray Fuller** (Ph.D. 1961, Mertz) was raised on a remote farm in southern Illinois and as a young boy did not expect to attend high school. Not only did he attend high school, he later earned a B.A. in Chemistry from Southern Illinois University and a Ph.D. in Biochemistry from Purdue. For 33 years he conducted research at Eli Lilly and Company in Indianapolis and became one of the three co-discoverers of Prozac, a selective serotonin reuptake inhibitor that revolutionized the treatment of depression. **Dr. David Schroeder** (B.S. 1962, M.S. 1966, Ph.D. 1968, Axelrod) has established the Ray W. Fuller Memorial Scholarship in Biochemistry to help biochemistry undergraduate students with strong academic credentials and financial need. Dr. Schroeder remembers Fuller as both a great scientist and a thoughtful graduate teaching assistant who made a special effort to help him during his undergraduate studies. We are grateful to David Schroeder for sharing our vision of an undergraduate program that supports all those who are capable and excited about biochemistry.

Axelrod Lecture Endowment Reaches Funding Goal

In 1984 friends and colleagues of **Barney Axelrod** established an endowed lectureship to honor his leadership and scientific contributions to the Department of Biochemistry. From 1964 to 1975 Barney served as Department Head and guided a period of major growth and expansion of the research and graduate programs in biochemistry. In 2004 the Department made a commitment to raise \$70,000 to fully fund the Axelrod Endowment and assure the long-term financial viability of this valuable lecture series. We are pleased to announce that our goal has been reached. Approximately 100 individuals provided funding for this endowment and the Department is grateful for each gift. A few individuals provided exceptional support. Gene Axelrod, **Joe Villafranca** (Ph.D. 1969, Axelrod) and **Paul Hung** (Ph.D. 1960, Axelrod) each made major gifts that together provided more than \$50,000 to the campaign. Judy (Axelrod) Weitzman provided financial support, offered counsel and assumed a leadership role in the fundraising effort. We are grateful for her guidance, time and energy. The Axelrod Lectures are open to all alumni. Please visit our website (www.biochem.purdue.edu) for information regarding future lectures.



Former Department Heads: Mark Hermodson (1981-2001), Barney Axelrod (1964-1975), Don Carlson (1975-1981) and Jim Forney (2001-present) at the 2007 Axelrod Seminar

Honors and Recognitions

Administrative/Professional Staff Promotions and Recognitions



Andrew Miller and Karyn Rodkey

Andrew Miller (Research Associate in Ann Kirchmaier's lab) and **Karyn Rodkey** (Manager of Research Services) were promoted in the College of Agriculture Administrative/Professional Advancement system for their excellent performance. Since receiving his M.S. from Biochemistry in 2003, Andy has been working with Dr. Kirchmaier. Karyn has been with Purdue since 1989 and the department since 2001.

Two staff members were honored for their years of service to Purdue.



Anna Wilson

Anna Wilson (Coordinator of Teaching Laboratories) was recognized for her 35 year commitment to Purdue University including 32 years in the Department of Biochemistry.

Kristi Trimble (Administrative Assistant and Technical Coordinator) was recognized for 25 years of service. Kristi has been with the Department since 2003.



Kristi Trimble

Distinguished Agricultural Alumni

Dr. Colleen Jonsson (Ph.D. 1990, Herrmann) was one of eight recipients honored with the 2007 Distinguished Agricultural Alumni Award.



Colleen Jonsson

Dr. Jonsson is a senior research scientist and program leader for emerging infectious disease research at the Southern Research Institute in Birmingham, Alabama. She also holds an adjunct faculty position in the Department of Biochemistry and Molecular Genetics at the University of Alabama. Dr. Jonsson's team researches hantavirus, avian flu, RSV, SARS, and other infectious diseases. Their studies integrate molecular biology with information on land use, climate and the environment to predict virus outbreaks and potential treatments.

During her visit, Dr. Jonsson presented a seminar entitled, "*In Vitro and In Vivo Approaches Toward the Discovery of New Therapeutics for Emerging Viruses.*"

The Distinguished Agricultural Alumni Award is designed to identify and recognize mid-career Purdue Agriculture graduates who have made significant contributions to their profession and communities. The nominees represent the full spectrum of the food, agriculture and natural resource system.



Honors and Recognitions

Anna Wilson Retires after 35 Years



Anna Wilson

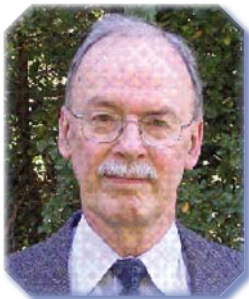
The Department honored **Anna Wilson** (Coordinator of Teaching Laboratories) with a retirement reception on May 31. Anna started her employment at Purdue on July 1, 1971 in the freshman chemistry prep lab. She was hired by Barney Axelrod in August 1975 as the first Coordinator of the Teaching Labs in Biochemistry. Anna's enthusiasm for teaching and student interactions took her beyond the lab responsibilities. She was involved in many outreach activities during her career including Springfest, the Indiana State Fair, elementary education, FFA (Future Farmers of America) conventions, local and international science fairs and the Biochemistry Club. She has held offices and organized professional meetings for the American Chemical Society and the Association for Biology Laboratory Education. Over time, Anna's personal love for photography encompassed the department and earned her the title of Resident Photographer. The department extends best wishes for a happy retirement.



Seminars

The Beach Family Biochemistry Lectureship

Dr. Chris Somerville, Director of the Carnegie Institution Department of Plant Biology and a professor in the Department of Biological Sciences at Stanford University, presented the Beach Lecture Series in September 2006. Dr. Somerville delivered two seminars, "Genetic Dissection of Cell Wall Structure and Function" and "Scientific Issues Associated with the Development of Biofuels."



Chris Somerville

Dr. Somerville has published more than 200 scientific papers and has been issued patents in plant and microbial genetics, genomics, biochemistry and biotechnology. His current research interests are focused on the characterization of proteins, such as cellulose synthase, implicated in plant cell wall synthesis and modification. He is a member of the senior editorial committee of *Science* magazine and a member of the National Academy of Sciences, The Royal Society of London and the Royal Society of Canada.

The Beach Family Biochemistry Lectureship was established in 1990 by David W. Beach. Inspired by his son's enthusiasm for science, he chose to share his good fortune by supporting this biochemistry graduate program. This long-term support is intended to promote intellectual curiosity, a commitment to excellence, and an appreciation of science in all those involved.



Bernard Axelrod Lectureship

Dr. Olke Uhlenbeck, Professor at Northwestern University, presented two Axelrod lectures, "Tuning tRNAs for Translation" and "Less Isn't Always More: The Hammerhead Ribozyme." Dr. Uhlenbeck received his B.S. in Biophysics from the University of Michigan and his Ph.D. in Biophysics from Harvard University before pursuing postdoctoral research at the University of California, Berkeley with Professor Ignacio Tinoco, Jr.



Olke Uhlenbeck

Dr. Uhlenbeck established his first independent laboratory in the Department of Chemistry at the University of Illinois followed by positions as Biochemistry Division Head of the Department of Chemistry and Biochemistry at the University of Colorado, Boulder and now the Board of Trustees' Professor of Chemistry and Biochemistry, Molecular Biology and Cell Biology at Northwestern University. He has been honored by a NIH Career Development Award, a NIH-MERIT Award, election to the National Academy of Sciences and a Lifetime Service Award from the RNA Society.

The Axelrod Lectureship was established by colleagues and friends of Dr. Bernard Axelrod to honor his many contributions to the field of biochemistry and its community of scientists. Dr. Axelrod served as Head of the Department from 1964 to 1975. During that time, he hired 12 faculty members, created a vibrant intellectual atmosphere and was instrumental in elevating the reputation of basic biochemical research at Purdue.



Seminar Series

The Department seminar series featured many guest speakers along with those invited to give the Axelrod, the Beach Family and the Distinguished Agricultural Alumni Lectureships.

External Speakers



Doug Chalker
Department of Biology
Washington University in St. Louis
*Genome Surveillance: RNA-Guided DNA
Rearrangement in Tetrahymena*



Melanie Feany
Department of Pathology
Harvard Medical School
Modeling Alzheimer's Disease in Drosophila



Svend Fretag
Radiation Oncology Research
Henry Ford Health System
*A Gene Therapy Strategy to Improve the
Effectiveness of Radiation Therapy: Moving an Idea
from the Bench to Bedside*



Anne-Claude Gingras
Department of Medical Genetics and Microbiology
University of Toronto
Proteomics Analysis of PP2A Phosphatases



Michael Hampsey
Department of Biochemistry
UMDNJ- Robert Wood Johnson Medical School
DNA Loops and RNA Polymerase II Transcription



Colleen Jonsson
Biochemistry and Molecular Biology
Southern Research Institute
(see Distinguished Agricultural Alumni Award article)



Peter Roach
Department of Biochemistry and Molecular Biology
Indiana School of Medicine
*Role of Muscle Glycogen in Exercise and
Glucose Homeostasis*



Chris Somerville
Department of Plant Biology
Stanford University
(see Beach Family Biochemistry Lectureship article)



Jonathon Staley
Department of Molecular Genetics and Cell Biology
University of Chicago
*Motors and Switches that Regulate the Specificity
and Activity of the Spliceosome*



Olke Uhlenbeck
Department of Biochemistry, Molecular Biology
and Cell Biology
Northwestern University
(see Bernard Axelrod Lectureship article)

Purdue Speakers



Jiri Adamec
Bindley Bioscience Center
*Mitochondria, Oxidative Stress and Diseases:
Friedreich Ataxia Model*



Steve Broyles
Department of Biochemistry
*Poxvirus Transcriptional Regulation and Pathology:
Why a Cell Can be its Own Worst Enemy*



Harry Charbonneau
Department of Biochemistry
*Regulating the Yeast Centrosome Cycle
by Protein Phosphorylation*



Jue Chen
Department of Biological Sciences
Structural Studies of SopA, a Bacterial Ubiquitin Ligase



Fred Gimble
Department of Biochemistry
*Adding New Value to Old Proteins: Directed Evolution of
Homing Endonucleases to Create Novel Enzymes*



Mark Hall
Department of Biochemistry
A Novel Regulator of the Anaphase-Promoting Complex



Tony Hazbun
Department of Medicinal Chemistry
and Molecular Pharmacology
Functional Genomics of Mitosis



Amy Lossie
Department of Animal Sciences
*Sequence Conservation at Odz4: An Evolutionary
Mechanism of Gene Diversity?*



David Sanders
Department of Biological Sciences
*Surviving Starvation--Lessons from a Processive Exopoly-
phosphatase with a Novel Regulatory GTPase Mechanism*



Kavita Shah
Department of Chemistry
*Chemical Genetic Approaches for Dissecting
Signaling Cascades*

Graduate Student News

New Students

Five new graduate students joined the department in the fall of 2006. **Anton Iliuk** received his M.S. in 2006 from Eastern New Mexico University-Portales. **Florenta Segá** received her M.S. from Purdue's Animal Sciences department in 2006. **Nadeeka (Naomi) Jayasuriya** received her B.S. in 2005 from Oberlin College in Ohio. **Paul South** received his B.S. in 2004 from Ursuline College in Ohio. **Stephanie Mowery** worked as an undergraduate in the Forney lab and received her B.S. in Biochemistry from Purdue in 2006.



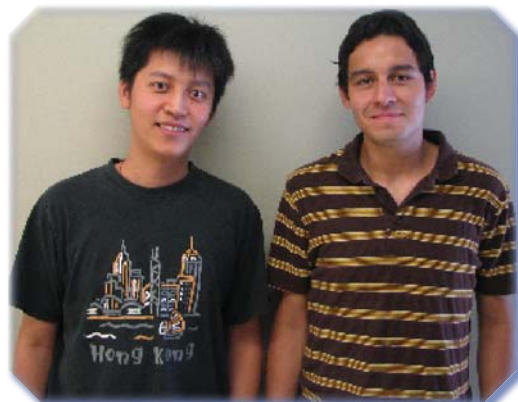
Left to right: Anton Iliuk, Florenta Segá, Naomi Jayasuriya, Paul South and Stephanie Mowery

David W. Beach Travel Grant

Jing-Ke Weng (Chapple lab) and **Juan Martinez** (Hall lab) were recipients of 2007 David W. Beach Travel Grants.

Jing-Ke used his award in January 2007 to travel to the Plant and Animal Genome XV Conference in San Diego, California where he presented a poster and talk entitled, "The Lycophyte *Selaginella moellendorffii*: An Emerging Plant Model for Studying Comparative Genomics and the Evolution of Phenylpropanoid Metabolism."

Juan attended the 11th Biannual International Meeting on Yeast Cell Biology at the Cold Spring Harbor Laboratory in New York in August 2007. He presented a talk entitled, "Identification and Regulation of Acm1, a Novel Inhibitor of the Yeast Anaphase-Promoting Complex" describing the results of research performed in Mark Hall's lab.



Jin-Ke Weng and Juan Martinez

The Beach Family endowment provides annual travel grants to assist graduate students attending scientific meetings.

Bilsland Dissertation Fellowship Funding

Bruce Knutson (Broyles lab) was awarded a Bilsland Dissertation Fellowship for Spring 2007. This competitive fellowship is awarded to Purdue Ph.D. candidates who have completed all degree requirements and are writing their dissertation. Bruce graduated in May 2007 and is now working as a postdoctoral research associate studying the mechanism of eukaryotic transcription activation in Dr. Steven Hahn's laboratory at the Fred Hutchinson Cancer Research Center (FHRC) in Seattle, Washington.



Bruce Knutson

Graduate Student News

Degrees Awarded - Summer/Fall 2006

Jingwei Li
PULSe, M.S.
(Tao)

*"Identification of Proteolytic Cleavage Sites
by Novel Proteomic Approaches"*



Jingwei Li

Christopher Fraser
PGP, Ph.D.
(Chapple)

*"Genetic and Biochemical Analysis of Serine
Carboxypeptidase-like Proteins in Arabidopsis thaliana"*

Younghoon Oh
BMB, Ph.D.
(Charbonneau)

*"Role of CDK-Mediated Phosphorylation in the Regulation
of the Spindle Pole Body Duplication in Budding Yeast"*

Degrees Awarded - Spring 2007

Yu Han
PBP, M.S.
(Chapple)

*"The Arabidopsis ref5 Mutant is a New Allele of
CYP83B1 and Exhibits Both Phenylpropanoid
and Glucosinolate Phenotypes"*



Yu Han

I-Mei Yu
BCHM, Ph.D.
(Jue Chen-Biology)

*"The Assembly of Enveloped Positive-
Strand RNA Viruses"*



I-Mei Yu

Bruce Knutson
BMB, Ph.D.
(Broyles)

*"Regulation of Vaccinia Virus Post-
Replicative Gene Expression"*



Bruce Knutson

PGSG Elect New Officers

Anindya Chatterjee (Rossie lab) was named the new PGSG (Purdue Graduate Student Government) president for 2007-2008. Anindya was chosen to represent approximately 7,000 graduate and professional students at Purdue. He served the PGSG as Treasurer in 2006-2007 and as Senate representative for the department in 2005-2006.



Hemalatha
Jayachandran

Hemalatha Jayachandran (Rossie lab) replaced Anindya as the 2007-2008 Biochemistry PGSG Senator. She is currently serving as co-chair of the Student Affairs Committee of PGSG. The Purdue Graduate Student Senate (PGSS) is the representative body for graduate students at Purdue and the legislative arm of the PGSG which is composed of members from each department within the university.



Anindya
Chatterjee

Going the Extra Mile

Hema Jayachandran traveled to Aspen, Colorado to present a poster at the 2006 FASEB Summer Research Conference on Protein Phosphatases. (July 2006)

Ayesha Elias and **Hema Jayachandran** traveled to Richland, Washington to perform experiments at the Pacific Northwest National Laboratories for their thesis projects. (September 2006)

Jui-Hui Chen and **Hajeong Kim** traveled to Mt. Sterling, Ohio to attend the Rustbelt RNA Conference. (October 2006)

Jessica Schoenherr traveled to Allendale, Michigan to present a talk at the American Society of Biochemistry and Molecular Biology Club meeting. (October 2006)

Jui-Hui Chen traveled to Illinois for research at the Argonne Laboratory. (November 2006)

Hajeong Kim, **Jui-Hui Chen** and **Barbara Golden** traveled to Mitchell, Indiana to attend the Structural Biology Retreat at Spring Mill State Park. (February 2007)

Ayesha Elias and **Hema Jayachandran** traveled to Illinois where Hema presented a poster at the 2007 Chicago Signal Transduction Symposium. (May 2007)

Jacob Galan, **Minjie Guo**, **Hema Jayachandran** and **Isabella Zhang** traveled to Indianapolis, Indiana to present posters at the American Society for Mass Spectrometry (ASMS) Conference. **Juan Martinez**, **Eunyoung Choi**, **Mary Jeong**, **Mark Hall**, **Jim Henderson**, **Anton Iliuk**, and **Andy Tao** also attended the conference. (June 2007)

Graduate Student News

A.K. Balls Award



I-Mei Yu and Jim Forney

I-Mei Yu was the 2007 A.K. Balls Award recipient. I-Mei graduated from the National Taiwan University with a B.S. in Agricultural Chemistry. Her research in Dr. Jue Chen's lab (Biological Sciences) focuses on the SARS coronavirus nucleocapsid protein and aspects of flavivirus maturation. I-Mei was also awarded the 2006 H.E. Umbarger Award for outstanding graduate student in research from the Department of Biological Sciences. She received her Ph.D. in Biochemistry in May 2007.

The A.K. Balls award is given annually to an outstanding graduate student who exhibits unusual potential for significant contributions to biochemical research and who is approaching completion of their doctoral program.

Hickory Stick Award

Eunyoung Choi (Hall lab) was the 2007 Hickory Stick Award recipient. Eunyoung entered the Biochemistry and Molecular Biology Ph.D. program in August 2001. She was selected for her service as a teaching assistant in BCHM 309 (Biochemistry Lab) for four semesters. Enthusiastic student evaluations included comments on her strong speaking skills, patience and approachability.

As the Hickory Stick recipient Eunyoung was recognized at the Celebration for Graduate Student Teaching banquet for her outstanding teaching and dedication to Purdue students. The Celebration is an annual banquet sponsored by the Committee for Education of Teaching Assistants, the Teaching Academy, and the Office of the Provost to honor graduate students who have demonstrated excellence in teaching and mentoring at the undergraduate and/or graduate level.



Eunyoung Choi and Jim Forney

The Hickory Stick award is given annually for outstanding performance by a graduate teaching assistant who is recognized for the qualities which are essential for future success in teaching and research.

Undergraduate Student News

May 2007 Graduates



Andrew Balicki



Kenneth Clark



Kevin Donohue



Albert Felten



Michael Hanlon



Bo Hu

ABE and BCHM Dual Majors:



Michael Kalwat



John Kronberg



Siqi Liu



Kyle Mohler



Jessica Lobo



Amber
MacCombie

Edwin T. Mertz Memorial Scholarship

Jacob Adler (Haubstadt, Indiana), **Christina Velasquez** (Dyer, Indiana) and **Brent Goodman** (Lafayette, Indiana) are the 2007-2008 recipients of the Edwin T. Mertz Memorial Scholarship. Each winner will receive \$1,500 toward tuition. Biochemistry undergraduate students compete for this award by completing an application and writing an essay describing their motivations and goals for studying biochemistry.

Jacob (Junior) serves as a Resident Hall Assistant and has developed close relationships with both students and faculty. He is involved with the College of Agriculture's Leadership Program and enjoys sharing his knowledge of Purdue and biochemistry with fellow students. This summer he worked as a chemist for Cargill in Dayton, Ohio.

Brent (Junior) credits the Department of Biochemistry, especially Karl Brandt and Jim Forney for his decision to pursue a career in medicine. He traveled to Haiti this summer. He would like to work in the medical field as a missionary in a developing nation.

Christina (Sophomore) was recognized as the Outstanding Sophomore in Biochemistry and an Indiana Resident Top Scholar. She has maintained a 4.00 for four semesters. Over the past two years Christina has been involved in Raising AIM (Awareness in International Medicine), the Purdue Student Pugwash Organization and the Timmy Foundation. Over the summer she continued her research in Scott Briggs' lab. Her goal is to have an impact in international medicine by helping alleviate the disease burden in developing countries. Her future plans are to attend medical school specializing in infectious diseases.



Jacob Adler, Christina Velasquez and Brent Goodman

Dr. Edwin T. Mertz was a Professor of Biochemistry at Purdue from 1946-1976. He was recognized globally for his co-discovery of high-lysine corn. He received honorary degrees from Purdue and the University of Montana. In 1975 he was elected to the National Academy of Sciences. Dr. Ronald E. Chance, who had a distinguished career at Eli Lilly and Company, is the founding donor of the Edwin T. Mertz Memorial Scholarship.

Undergraduate Student News

Student Awards

Biochemistry Outstanding Students

Biochemistry student **Erin Kishchuk** was selected from all departmental nominees as the College of Agriculture's Outstanding Freshman. Erin was also chosen as Biochemistry's Outstanding Student along with **Christina Velasquez** (Sophomore), **Megan West** (Junior) and **Kyle Mohler** (Senior). These students were honored at the 2007 College of Agriculture Spring Awards reception. Winners were selected based on their GPAs, the difficulty of their plans of study, extra-curricular activities, leadership in the department and research experience.



Left to right: **Christina Velasquez**, **Erin Kishchuk**, **Megan West** and **Kyle Mohler**

Patrick C. Matchette Scholarship



Hana Tewoldemedhin and **Megan West**

Hana Tewoldemedhin (Freshman) and **Megan West** (Junior) were recipients of The Patrick C. Matchette Scholarship. Hana has served as a tutor for the Ethiopian community and was a member of Mayor Richard Daily's book club. She is currently a member of the Biochemistry Club. Hana plans to become a physician, specializing in surgery.

During Maymester 2006, Megan studied abroad in Costa Rica and was employed as a National Science Foundation research undergraduate at the Chicago Botanic Garden during the summer. Megan volunteers at Habitat for Humanity and is currently president of the Biochemistry Club.

The Patrick C. Matchette Scholarship was established in 2000 to support undergraduates from counties in northern Illinois majoring in Biochemistry. Candidates are evaluated on academic performance and potential for future achievement.

400 Club

The 400 Club was initiated by the Agricultural Council to recognize those students with a 4.00 graduation index. Freshman **Erin Kischuk**; Sophomores **Christina Velasquez** and **Emily Sturm**; Juniors **Brenton Goodman** and **Megan West**; and Senior **Julie Chaney** were given special recognition by the 400 Club for their outstanding accomplishments.



Erin Kischuk



Christina Velasquez



Emily Sturm



Brenton Goodman



Megan West



Julie Chaney

Undergraduate Student News

Student Leadership

LeAnn Hall (Sophomore) was chosen to represent the college as one of Purdue's Ag Ambassadors. The Ambassadors are student volunteers who lead campus



LeAnn Hall

tours, represent the College at information and career fairs and host alumni and dignitaries at college and university events.

Sarah Batta (Junior) continues her role as an Ambassador.



Sarah Batta

Adam Henry (Sophomore) was appointed to the 2007-08 Student Advisory Council for the Dean's Scholars Program in the College of Agriculture. The program provides stimulating academic courses, research and enrichment activities for highly qualified undergraduate students.



Adam Henry

Noah Shields (Junior) was among 14 students selected to serve a 2-year term for the Agricultural Council. The Council serves as liaison between students and faculty/staff in the College of Agriculture.



Noah Shields

Undergraduates in Research Labs

Biochemistry students, **Jacob Adler** (Tao), **Tara Breen** (Weith), **Julie Chaney** (Hall), **Adam Henry** (Briggs), **Stacey Huppenthal** (Weith), **Mike Rauscher** (Broyles), **Lei Shi** (Rossie), **Emily Sturm** (Forney), and **Christina Velasquez** (Briggs) were among seventeen undergraduates who spent the summer of 2007 working in Biochemistry research laboratories.



Jacob Adler



Tara Breen



Julie Chaney



Adam Henry



Stacey Huppenthal



Mike Rauscher



Lei Shi



Emily Sturm



Christina Velasquez

Internships and Studies Abroad

Sarah Batta (Junior) traveled to Kenya to take a wildlife management course during the summer of 2006. Sarah reported that her study abroad was both enjoyable and educational as she assisted in planting trees with local high school students and traveled on the country's beautiful scenic roads. Sarah volunteers as an Ambassador for Purdue's College of Agriculture and serves as a tour guide coordinator for Windsor Hall. She is also a member of the Pre-Vet Club and a Boiler Gold Rush team leader.



Sarah Batta in Kenya

Noah Shields (Junior) traveled to Italy with a group for Study Abroad in 2006 where he visited Milan, Parma, Bologna, Florence and Rome. Some of the highlights of the trip were the University of Bologna, the Roman Coliseum, the Vatican, the Sistine Chapel and the Uffizi Museum. Noah said he returned from the trip with a new outlook and described the trip as the best experience of his life. He recommends at least one study abroad experience during a college career.



Noah Shields at the Roman Coliseum

Brent Goodman (Junior) participated in the Frederik and Lena Meijer Student Internship Program at Van Andel Research Institute (VARI) during the summer of 2006. The program is a 10-week internship designed to develop student research skills in their field of interest. VARI is



Brent Goodman at Van Andel Institute in Grand Rapids, Michigan.

a biomedical research facility located in Grand Rapids, Michigan with a focus on cancer and Parkinson's disease and an emphasis on translating scientific research results into clinical applications. Brent's experience involved working in the Bioinformatics Department to determine the relationship between chromosomal loss and tumorigenesis in kidney cancer.

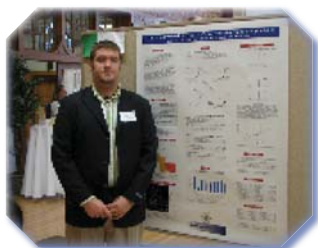
Undergraduate Student News

Spring Research and Poster Symposium

The Colleges of Science, Agriculture, Engineering, and Technology, along with the College of Science Student Council hosted the 2007 Undergraduate Research and Poster Symposium. This event is open to all undergraduate students and helps to recognize those students doing research and raise awareness about Purdue's undergraduate research programs. Ninety-five posters from approximately 130 students from the various colleges showcased research and design work. Biochemistry faculty member **Mark Hall** served as a judge at the symposium. Biochemistry students participating in the symposium were **Julie Chaney** (Hall), **Kevin Donohue** (Chapple), **Bo Hu** (Weith), **Siqi Liu** (Weith), **Michael Kalwat** (Forney), **Kyle Mohler**, (Peter Goldsbrough, Botany and Plant Pathology) and **Kam To** (Tao).



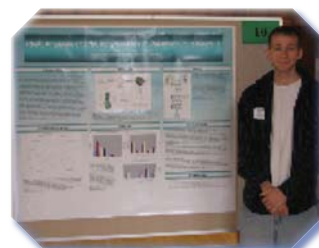
Julie Chaney



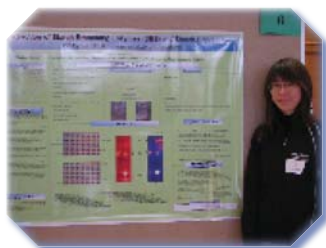
Kevin Donohue



Bo Hu



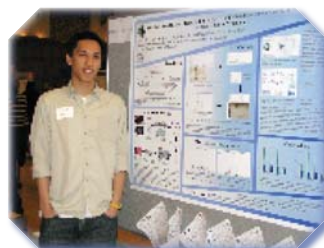
Michael Kalwat



Siqi Liu



Kyle Mohler



Kam To

BCHM Club in Action

Megan West, Ben Rains, Andrew Bandy, Kara Levell, Bill Hoffmeyer, Erin Kischuk, Bella Siangonya and Andrew Riebe participated in Purdue's 2007 Spring Fest, an annual event intended to provide a link between Purdue and the local community. The event is a great opportunity for students of all ages to learn about animals, art, astronomy and much more in two full days of hands-on activities. The theme for Biochemistry's participation this year was "Macromolecules." Club members demonstrated properties of large molecules as shown in biochemistry labs: lipids, gelatin and DNA. Among other demonstrations, the properties of gelatin molecules were demonstrated by placing "Peeps" into acetone, acetic acid, hydrochloric acid and water.



Bill Hoffmeyer, Kara Levell,
Andrew Riebe and Megan West



2006-2007 BCHM Club officers were **Andrew Riebe** (President), **Bella Siangonya** (Vice-President), **Kyle Kyburz** (Secretary), **Ben Rains** (Treasurer) and **Jeanette Britton** (Elementary Outreach).

Undergraduate Student News

Undergraduate Scholarships Awarded

Purdue University Academic Success Award

Julie Chaney
Brenton Goodman
LeAnn Hall
Erin Kischuk
Michael Rauscher
Nicholas Van Dongen
Christina Velasquez

College of Agriculture Award of Excellence

Amanda Campbell
Cheng Chiang
Eric Detmer
Jennifer Henkle
William Hoffmeyer
Erin Kischuk
Donald Rexing
Amber Stroud

Sophomore Scholarship

Andrew Bandy
Janet Broughton
Nicole Mock
Nicole Sigurdson
Emily Sturm
Christina Velasquez
Anna Verseman
Megan West

Junior Scholarship

Jacob Adler
Sarah Batta
Brenton Goodman
Hu Bo
Siqi Liu
Andrew Riebe
Anthony Snyder

Senior Scholarship

Julie Chaney
Kyle Mohler

Indiana Resident Top Scholar Award

Brenton Goodman
Erin Kischuk
Michael Rauscher
Christina Velasquez

Annual Merit Scholarship

Erin Kischuk

Jack Atkinson Scholarship

Michael Hanlon

Alva R. Bryant Alumni Scholarship

Andrew Bandy
Brenton Goodman
Joshua Mall

Coca-Cola Purdue Opportunity Award

Anna Verseman

Edward and Clara Degeering Scholarship

Michael Rauscher

Floyd and Nellie Elliott Scholarship

Kara Levell

Gruel Memorial Scholarship

Jacob Adler
Andrew Bandy
Sarah Batta
Brenton Goodman
LeAnn Hall
Bo Hu
Siqi Liu
Nicole Mock
Andrew Riebe
Nicole Sigurdson
Anthony Snyder
Emily Sturm
Christina Velasquez
Anna Verseman
Megan West

Rex Hall Memorial Scholarship Fund

Julie Chaney
Kyle Mohler

Samuel D. and Minnie H. Kingsbery Scholarship

Brittany Kraft

Lafayette Savings Bank PMO Scholarship

Andrew Claxton

Charles M. Malott Scholarship

Michael Hanlon

Marquardt Alumni Scholarship

Andrew Riebe

Undergraduate Student News

Undergraduate Scholarships Awarded (cont'd)

Martin Agricultural Research Fund Scholarship

Julie Chaney
Kevin Donohue
Michael Kalwat

Patrick C. Matchette Scholarship

Megan West

Edwin T. Mertz Memorial Scholarship

Jacob Adler
Kyle Mohler

Milligan Agricultural Scholarship

Andrew Bandy
Brent Goodman
Nicole Sigurdson

William E. Morris Scholarship

Eric Detmer

J. Kelly and Margaret R. O'Neill Memorial Scholarship

Nicole Mock
Christina Velasquez

Pfendler Memorial Agriculture Scholarship

Sarah Batta

President's Leadership Class Scholarship

Erin Kischuk

Purdue Association of Hendricks County Scholarship

William Hoffmeyer

Purdue General Scholarship for POA

Amber Stroud

Purdue Merit Scholarship for Agriculture

Erin Kischuk
Michael Rauscher

Dean Harry J. Reed Memorial Scholarship

Michael Hanlon

Mr. and Mrs. Philip J. Reich Scholarship

Amber Stroud

Runkle Scholarships

Michael Hanlon
Emily Sturm
Anna Verseman

Seever Scholarship

Courtney Hinesley

Pearl W. Smith Scholarship

Michael Hanlon
Jennifer Henkle

Stanley Scholarship for Agriculture Study Abroad

Brandy Paul
Anna Verseman

Mary and R.B. Stuart PMO Scholarship

Andrew Claxton

Twenty-first Century Scholars

Andrew Bandy
Cheng Chiang
Kara Levell
Anna Verseman

Robert and Karen Thompson International Study Fund

Sarah Batta

USDA Cooperative State Research

Cheng Chiang

University Incentive Grant

Cheng Chiang
Eric Detmer
Michael Hanlon
Jennifer Henkle
Courtney Hinesley
Michael Kalwat
Brittany Kraft
Kara Levell
Nicole Mock
Noah Shields
Bella Siangonya
Hana Tewoldemedhin

Valedictorian Scholarship

Eric Detmer
Erin Kischuk

Outreach

Science and Engineering Fairs



Kevin Donohue



Kyle Mohler



Jennifer Henkle



Brandy Paul

Kevin Donohue, Jennifer Henkle, Kyle Mohler, and Brandy Paul acted as judges for the College of Agriculture at the 2007 State Science and Engineering Fair held at IUPUI campus in Indianapolis.

The 2007 Lafayette Regional Science Fair held on campus March 2 and 3 involved 350 students from 20 different area schools in grades five through twelve. There were 311 projects entered in fourteen different categories and the Department of Biochemistry was well represented with judges **Harry Charbonneau, Mark Hall, Sandra Rossie** (Faculty); **Anna Wilson** (Staff); graduate students **Ayesha Elias** (Rossie's lab), **Hema Jayachandran** (Rossie's lab) and **Doug Mersman** (Briggs' lab) and undergraduate students **Andrew Bandy, Kevin Donohue, Jennifer Henkle, Brandy Paul, Benjamin Rains** and **Andrew Riebe**.



Lafayette Regional Science Fair



Indiana State Fair



Anna Wilson

Anna Wilson (Coordinator of Teaching Labs) and Danica Kirkpatrick (Events Coordinator for the College of Agriculture) were among a number of volunteers helping Purdue's Cooperative Extension at the 2006 Indiana State Fair (August 9-20). The educational exhibits at the fair helped people, especially those from non-rural backgrounds, better understand how Purdue agriculture affects Indiana.

Anna also served as a Grand Award judge in the biochemistry division at the 2007 Intel International Science and Engineering Fair (Intel ISEF) held in Albuquerque, New Mexico (May 13-19). The Intel ISEF is the world's largest pre-college celebration of science. Held annually, the Intel ISEF brings together nearly 1,500 students from more than 40 nations to compete for scholarships, tuition grants, internships, scientific field trips and the grand prize \$50,000 college scholarship.

Purdue University Hosts ABLE Workshop

Purdue University West Lafayette campus was the location of the 2006 Association for Biology Laboratory Education Workshop Conference hosted by **Anna Wilson** and Sue Karcher (Assistant Professor, Biological Sciences). The Association is dedicated to promoting information exchange among university and college educators actively concerned with teaching biology in a laboratory setting. Participants came from university and college biology departments throughout the United States and Canada. The conference offered laboratory workshops, mini-workshops and poster presentations.



Steve Bremmer



Michelle Drennan



Jessica Schoenherr



Holly Courtney

Over one hundred and twenty attendees and presenters demonstrated experiments and discussed problems, procedures, and solutions with colleagues. Biochemistry graduate students **Steve Bremmer, Michelle Drennan** and **Jessica Schoenherr**, and undergraduate student **Holly Courtney** assisted in the event.

Alumni Update

1970s

Robert E. Parson (B.S. 1972) received his M.S. in Advanced Studies in the Leadership of Health Care Organizations from the University of California, San Diego in June 2005. He retired from Beckman Coulter as Senior Staff Biostatistician and is presently Director of Biostatistics, Medical and Clinical Affairs for Biosite, Inc. in San Diego, California.

1980s

Paula Ravnikar (Ph.D. 1985, Somerville) serves as a group leader of Molecular Biology for the PD-Direct Division at the Invitrogen Corporation in Frederick, Maryland.

1990s

Brian Law (Ph.D. 1996, Rossie) is an assistant professor at the University of Florida in Gainesville, Florida.

Jeffrey Skinner (Ph.D. 1998, Rossie) is currently employed with Johnson and Johnson Pharmaceutical. He resides in Princeton, New Jersey.

Cassandra Phillips (M.S. 1998, Rossie) is employed with the FBI (Federal Bureau of Investigation) Academy in Quantico, Virginia.

Ryan McCarthy (B.S. 1999, Herrmann) attended I.U. Medical School after graduating from Purdue. Having finished his residency, he is presently employed with Ameripath, where he is involved with microscopic anatomic pathology at St. Vincent's Hospital in Indianapolis, Indiana.

Christopher Sinclair (Ph.D. 1999, Rossie) is currently employed at Abbott Labs, Chicago, Illinois.

2000s

Rimple Bahl (M.S. 2001, Rossie) is currently working as an analytical chemist for Eli Lilly & Company in Indianapolis, Indiana.

Jee-Yeong Jeong (Ph.D. 2002, Rossie) is presently a research fellow at Harvard University School of Medicine in Boston, Massachusetts.

Xu Liu (Ph.D. 2002, Broyles) is employed as a researcher at the U.S. Patent and Trade Office in Alexandria, Virginia.

Michael Thompson (M.S. 2002, Chapple) is presently enrolled as a Ph.D. student in the Chemical Education program at Purdue University.

Stephanie (Doun) Leimgruber (M.S. 2004, Rodwell) is employed as a research specialist at the University of Pittsburgh Drug Discovery Institute in Pittsburgh, Pennsylvania.

Matt Hemm (Ph.D. 2004, Chapple) is a postdoctoral fellow at the NIH in Bethesda, Maryland.

Jaewook Oh (Ph.D. 2004, Broyles) is presently a postdoctoral fellow with the Department of Microbiology at the University of Pennsylvania School of Medicine in Philadelphia, Pennsylvania.

Amber Shirley (Ph.D. 2004, Chapple) is employed as a staff scientist at BASF Plant Science in Research Triangle Park, North Carolina.

Timothy Holzer (Ph.D. 2005, Forney) is working as a research associate with Eli Lilly and Company at both the corporate center in downtown Indianapolis and the research labs in Greenfield, Indiana.

Bradley Wilson (B.S. 2005) is currently working at Roche Diagnostics in Indianapolis, Indiana.

Amanda Burns (B.S. 2006) finished her first year at the University of Louisville School of Medicine.

Chris Fraser (Ph.D. 2006, Chapple) is enrolled in the Bioinformatics Program at the University of Chicago in Illinois.

Yoshiaki Hagiwara (B.S. 2006) is enrolled in Kobe University Graduate School in Kobe, Japan.

Taksina Sinlapadech (Ph.D. 2006, Chapple) is an assistant professor at Chulalongkorn University in Bangkok, Thailand.

We want to hear from our alumni. Please take a moment to tell us what is going on in your life....

Comments, suggestions and updates can be sent to bbarlow@purdue.edu. Include your name, address, email address, degree, major and year of graduation. You can also update by using our website (www.biochem.purdue.edu)

Alumni Update

The Department of Biochemistry welcome alumni to speak in classrooms and at seminars throughout the school year. Several participants shared their experiences and career opportunities available to them after graduation. Numerous success stories, in the business world and science, inspired the undergraduate and graduate students.



Andy Alpert

Andrew J. Alpert (Ph.D. 1980, Regnier) is President and Founder of PolyLC Inc. in Columbia, Maryland. PolyLC specializes in solutions to difficult protein and peptide separations and purifications, and manufactures chromatography columns and materials for such applications. Dr. Alpert introduced the technique of Hydrophilic Interaction Chromatography (HILIC) in 1990. His current interests include development of techniques for analysis of particularly difficult proteins, including pathogenic prion proteins and proteomics analysis of both membrane and non-membrane proteins. Andy returned to campus during a recent visit to the Lafayette area and presented a seminar entitled, "ERLIC: Gradient Chromatography Without the Gradient."

Barbara Sturm, M.D. (B.S. 1980) was invited to speak at the Biochemistry Club meeting in October 2006. Her topics included a comparison between medical school, graduate school, and working in industry, as well as her own work in the area of skin cancer. Dr. Sturm graduated from IU Medical School in 1986 and completed her residency in dermatology in 1991 at IU Medical Center. Dr. Sturm is involved in patient care and teaching of medical students and residents. She has her own private practice in Indianapolis, Indiana.



Barbara Sturm

Michael J. Beach (Ph.D. 1987, Rodwell) spoke to a group of biochemistry students in Karl Brandt's HONR 199 class as part of a lecture series, "Malaria: First World Science v. Third World Disease. What are Our Moral Responsibilities?" Dr. Beach talked about his experience with the challenges of working on infectious diseases in the developing countries, including his work on a lymphatic filariasis eradication project in Haiti. He also discussed CDC (Centers for Disease Control and Prevention) internships and career opportunities for undergraduate and graduate students. Dr. Beach works at the CDC's Division of Parasitic Diseases in Atlanta, Georgia.



Michael J. Beach

Collin Mitchell (B.S. 2000) was the featured speaker at the December GAC Pizza Gathering. He spoke about alternative career opportunities for Biochemistry majors and discussed his job as Molecular Sales Specialist for Abbott Laboratories. Collin is presently employed at Millipore Corporation as Regional Sales Manager for the Bioscience Drug Discovery Group. Millipore specializes in biomarkers in drug screening and protein studies. The Millipore Corporation is a leading provider of products and services that improve productivity in biopharmaceutical manufacturing and in clinical, analytical and research laboratories.



Collin Mitchell

In Memoriam

Dr. Forrest Quackenbush (1907-2007)

Forrest Quackenbush passed away May 21, 2007, three months short of his 100th birthday. Dr. Quackenbush was born Aug. 18, 1907 near Melrose, Wisconsin. He graduated from high school in West Salem and continued his education at the University of Wisconsin, Madison where he received his B.S. and Ph.D. After two years of post-doctoral work in Heidelberg, Germany, and Utrecht, The Netherlands he came to Purdue University in 1943 as Head of the Department of Agricultural Chemistry (which became the Department of Biochemistry in 1951). He was also appointed by the governor as Indiana State Chemist and Seed Commissioner. Teaching and research activities expanded greatly during his 22 year tenure. After leaving administration, he did research full-time on the study of lipids in atherosclerosis. Accounts of his and his students' studies were published in numerous scientific journals. He was also recognized internationally as an authority on the chemistry of carotenoids. Dr. Quackenbush was a 50-year member of the American Chemical Society and a long-time member of several scientific and professional societies. He was listed in *Who's Who in America* and *American Men of Science*. He was also a member of the Lafayette Rotary Club for more than 50 years.



Forrest Quackenbush

Dr. Quackenbush enjoyed gardening, fishing, kayaking and developing computerized stock market systems. In Dr. Quackenbush's honor, the Office of the Indiana State Chemist and the Department of Biochemistry will have a Hybrid Elm tree planted along Yeager Road near his home in West Lafayette.



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Grants

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