

December 2005

To: Worldwide members of the OSU Biochemistry and Biophysics Community
From: P. Shing Ho, Chairman

Dear Friends and Colleagues:

Season's Greetings from Corvallis, OR. Once again, it was a busy year, and it is my pleasure to share with you the news from the Department and the University. First, I am constantly reminded of how fortunate we are to be able to live and work here in the Mid-Willamette Valley—Corvallis is consistently ranked among the best places to live in the United States, including being named one of the top 10 cities of any size in the 2004 edition of the book "Cities Ranked and Rated". However, before, we become too self-congratulatory, I am also reminded of the many challenges that we face as a community and as a University.

OSU and Department News

The new Kelley Engineering Building opened just down the road from us this summer. Although BB is not involved in this enterprise, it is always heartening to see the campus rejuvenated by the construction of new facilities to promote research. OSU named Sabah Randhawa as Provost of the University and welcomed Dr. John Cassady from the Ohio State University as the new Vice President for Research. President Ray now has a fully staffed Administration to run the University.

As many of you know, the Department went through a review of its undergraduate and graduate programs this year (a special thanks to all those who participated, especially alumni who returned our surveys). The graduate review went very well, with the report identifying BB as one of the strongest programs on campus (we all knew this to be true, but it was satisfying to have it recognized at the highest levels of the University). The review of the undergraduate program was deemed to be incomplete and, therefore, the review will be continued during the Winter term of 2006.

The Faculty

We were fortunate to have recruited **Dr. Michael Freitag** as an Assistant Professor in the Department—he is one of four new faculty recruited to OSU through the Provost's Initiative in Computational and Genome Biology. Michael comes from Eric Selker's laboratory at the University of Oregon (his loyalties to watergoing fowl or rodent will be tested this year), and will bring with him projects that focus on gene regulation in *Neurospora* (a fungus that is a useful eukaryotic model organism). **Balz Frei** received one of the two Discovery Awards from the Medical Research Foundation of Oregon. He was honored for his work in nutrition education and health, particularly in the areas of atherosclerosis, the role of antioxidants in endothelial function, and in elucidating mechanisms of oxidation of low-density lipoproteins. He is the 7th member of the OSU faculty and the 5th from the BB faculty to have received this award since its inception in 1984. **Kevin Ahern** received the University's Dar Reese Award for Advising, and has gained funding to offer *General Biochemistry* (BB450/550 and 451/551) on-line as Web-based courses. **Andrew Karplus** was named the *Researcher of the Year* by the OSU chapter of Sigma Xi for his "floodgate" model for the role of peroxiredoxins in peroxide signaling and for his contributions to structural studies on redox proteins. In addition, his recent collaborative studies with Prof. Lynda Ciuffetti (Botany and Plant Pathology) on the structure and function of the protein ToxA from the fungus *Prenophora tritici-repentis* received significant national exposure as the first protein that can penetrate a plant cell wall without disrupting its integrity. **Phil McFadden** continues to study the living colors of animals and has delved this year into the remarkably beautiful iridescent cells of cephalopods. Through collaborations at Woods Hole and the University of California at Santa Barbara, he is studying how squid and cuttlefish hide from predators and communicate with each other by shaping the intensity, color and polarization of reflected sunlight. **Elisar Barbar's**

research on dynein and motor proteins continues, and now includes crystallography (in collaboration with **Andy Karplus**) as well as NMR. **Joe Beckman** has successfully recovered from a stomach surgery, just in time to work on the resubmission of the grant that funds the Environmental Health Sciences Center at OSU. Joe was, once again, named one of the "Most Cited Scientists" this year by the ISI Web of Knowledge. Construction on the transgenic animal facility is finally underway, thanks to the efforts of **Joe Beckman, Chrissa Kioussi, and Michael Gross**. **Jeffrey Greenwood** will be reviewed this year for promotion to Associate Professor with indefinite tenure (how do you spell "stress"?). **Gary Merrill** led a seven-day float down the Middle Fork of the Salmon River with his wife Chris, Joe Beckman, Rich Holdren (Research Office), the Barofskys, and a few students—all lived to tell the tale. Unfortunately, the same could not be said of the faculty who played indoor soccer. **Merrill, Frei, and Karplus** were all sidelined (at least temporarily) due to injuries, leaving only Beckman to represent BB on the field of valor. The hard work by the Graduate Committee (**Merrill, Hagen, Greenwood, and Kioussi**) helped the Department recruit 8 Ph.D. and one M.S. graduate students this year. **Sonia Anderson** remains active in her research and continues to teach several courses, including the highly regarded Physical Techniques course. **Victor Hsu** is currently on a sabbatical leave, visiting the laboratory of Robert Kaptein at Utrecht University in the Netherlands. **Indira Rajagopal** (former postdoc with Mathews and currently a Senior Instructor in the Biology Program) was elected to the Faculty Senate. I "forced" my family to spend another summer in Strasbourg, France, under the auspices of a Fulbright grant. Although this trip was not as scientifically fruitful as last year, we renewed some friendships overseas and watched Lance Armstrong zip by in his last Tour de France. Our group did, however, publish a paper in the *Proceedings of the National Academy of Sciences* that describes a crystallographic map of DNA structure through all possible trinucleotide sequences (the authorship on this paper included undergraduate and graduate students, postdocs, and two former high school students).

Chris Mathews graduated two of his last three Ph.D. students. He is combining research with pleasure and took trips to South Africa, Brazil, and a Christmas trip to Costa Rica. The second edition of the *Principles of Physical Biochemistry* textbook, authored by **Ken van Holde, Curtis Johnson, and me**, came out in print this past Spring. Ken and I are also planning to team-teach a new graduate level course on Biology at the Single-Molecule Level this Winter. **Bob Becker** continues to work on anti-smoking initiatives and put significant effort into raising the issue of the dismal state of faculty salaries at Oregon State Universities. **George Pearson** continues to contribute to the Department by teaching Introductory Molecular Biology and serving as an undergraduate advisor, but he and Margot will fully retire this June. **Wil Gamble** continues his research on bears, and comes into the Department every day to impart his wisdom and wit. **Henry Schaup** and Jamie live at Little Whale Cove on the Oregon Coast and have a new place at Eagle Crest. **Derek Baisted** and Elizabeth maintain their residence in Corvallis, and continue to golf their way around the USA and the world. On a less cheerful note, **Dave Loomis** has been diagnosed with Alzheimer's disease, while **Don MacDonald** was diagnosed with amyotrophic lateral sclerosis (ALS, or Lou Gehrig's Disease). Our thoughts and our hearts go out to both Dave and MacD, and to Jane and Elizabeth.

David Barnes (former Professor) moved from the American Type Culture Commission to join the Jackson Laboratory in Bar Harbor, Maine. **Bill Gerwick** recently left OSU to take a position at the Scripps Oceanographic Institute at UCSD. **Steve Gould** is taking a walk on his creative side by becoming a professional photographer, and regularly exhibits his work in the San Diego area.

Recognition of Current Undergraduate and Graduate Class

Kristine Robinson (4th year Ph.D. student with Beckman) received the 2005 Young Investigator Award for her poster at the 12th Annual Society for Free Radical Biology and Medicine Meeting in Austin, TX.

Edmond O'Donnell (senior undergrad) received a Goldwater Scholarship (I note that OSU has had 3 Goldwater Scholars in the past 3 years, all were BB majors) and **Anvi Bonn** (senior undergrad) was named a Gates Millennium Scholar by the Bill and Melinda Gates Foundation. **Daniel J. Albershardt** (BS, 2005, Baird lab) won the prestigious AACR Thomas J. Bardos Award from the American Association for Cancer Research and presented his research findings in a poster at the AACR national meeting last Spring. BB undergraduate majors were also well represented at the All University Awards banquet at OSU. These included *Drucilla Smith 4.0 GPA Awards* earned by **Sarah Jean, Tari Tan, Daniel Bai, Heather Bolstad**, and **Jeremy Gregory** (BS, 2005), *Waldo Cummings Awards* to **Tari Tan, Gautam Mankaney, Jessica Page**, and **Edmond O'Donnell, III** (honorable mention), and the *MacVicar Exceptional Service* and *Mortar Board Jameson Awards* to **Jeremy Gregory** (BS, 2005). **Heather Bolstad** (senior) is a finalist for a Marshall scholarship, **Nancy Lee** (senior) had a summer internship at the University of Texas Southwestern, and **Crystal Hammer** (senior) was elected President of the OSU Mortar Board.

Undergraduate and Graduate Class of 2005

We congratulate all of the students who earned their Biochemistry and Biophysics degrees this year. Three students earned the degree of Ph.D. in Biochemistry and Biophysics: **JuHuyn Kim** (Ph.D. Mathews) returned to his duties as an officer in the Korean Army, **Franklin Hays** (Ph.D. Ho) is a postdoc. with Robert Stroud at the University of California in San Francisco, and **Josh Hicks** (Ph.D. Hsu) is a postdoc with Astrid Gräslund at Stockholm University in Sweden. **Shiwei Song** received his Ph.D. from the Molecular and Cellular Biology Program with Chris Mathews, and is currently a postdoc at the NIH.

Bachelor's of Science degrees were conferred to 15 undergraduates this June, and included **Dan Albershardt** (medical student at Dartmouth), **Nihal Gooneratne**, **Jeremy Gregory** (teaching math in Pendelton and interviewing at medical schools), **Jenna Hawkins** (working at OHSU and applying for medical school), **Jessica Hewitt** (graduate student in Horticulture), **Brandon James**, **Katie Meyers**, **Laura Miller** (dental school at Pacific University), **Nima Motamedi** (applying to medical school), **Brett Palama** (research technician at OSU, applying to medical school), **James Proestos** (graduate student in biochemistry/molecular biology at Washington State University, and plans to pursue his thesis research with another former Beaver **Mick Smerdon**, Ph.D., Isenberg, 1976), **Cynthia Santos**, **Matt Scott** (medical student at the University of Minnesota), **Tam Vuong**, and **Derek Youngblood** (at AVI Biopharma, applying to dental school).

Alumni News

Clint Spiegel (B.S., 1999) completed his Ph.D. degree at the University of Washington at the Fred Hutchinson Cancer Research Center and **Jill Mooney** (B.S., 2000) will be defending her Ph.D. thesis at the University of Texas Southwestern on January 13, 2006. **Tom Sharpton** has passed his qualifying exams towards his Ph.D. in Environmental Science at Berkeley. **Kurt Roeder** (BS, 1990) tells us that he is down in Duck Country working at Molecular Probes (now part of Invitrogen). **Christophe Champ** (BS, 2004) is currently a graduate student in bioinformatics at the Danmarks Tekniske Universitet in Lyngby, Denmark.

Woojin An (Ph.D. van Holde) is currently an Assistant Professor in the Department of Biochemistry and Molecular Biology at the USC/Norris Comprehensive Cancer Center. **Brandt Eichman** (Ph.D. Ho, Assistant Professor Vanderbilt), wife Jessica, and son Charles added a new member (James) to their growing family (and now they are four). **Geoffrey Fuller** (Ph.D., Gould, currently a member of the faculty at Mt. Vernon Nazarene University) received the Distinguished Service Award from the Lakeholm Church of the Nazarene. **Stephen Hendricks** (Ph.D. Mathews) joined Applied Biosystems in Foster City, CA as Group Leader of the Enzyme Characterization group. **Donald Jacobsen** (Ph.D., '67,

Wang, currently Director of the Laboratory for Homocysteine & B12 Research at the Cleveland Clinic) tells us that his lab "keeps on growing". **Timothy Kingan** (Ph. D., '80, Newburgh) is the Academic Coordinator in the Core Instrumentation Facility at the University of California at Riverside. **Sanford Leuba** (Ph.D., van Holde) published a paper with **Jordanka Zlatanova** (Research Professor, van Holde) and Ken in the *PNAS* on the application of single-molecule methods to study conformational fluctuations in nucleosomes. **Stella Martomo** (Ph.D. Mathews) is a postdoc at the NIH, and had a recent senior author paper in the *PNAS*. **Nancy Ray** (Ph.D., Mathews) is a Research Assistant Professor at the University of Iowa Medical School and working in the area of immunology. **Ed Schmidt** (Ph.D., Merrill) was promoted to Associate Professor of Veterinary Molecular Biology at Montana State University. In February, Ed and his wife Karen had twins - Dawkin Granite and Tucker Slate - who join 3-yr old brother Gregor "Gravel Pit" and sisters Courtney and Lindsey. **Duncan Taylor** (Ph.D., '77, Newburgh) is now director of Strategic Research Assessment at Biovail Technologies Ltd., and tells me he enjoys reading the annual newsletter and "catching up [with] the faculty from my time there". **Christian Ungermann** (Ph.D., Mathews) is now a Professor in the Biology Department at the University of Osnabrück in Germany. **Jeff Watson** (Postdoc, Ho) and his wife Christi welcomed Benjamin McKinley as the addition to the family. **Wayne Zhou** (Ph.D., Ho) is currently an Associate Professor at Louisiana State University, and tells me that he and his family survived Hurricanes Katrina and Rita by going to higher ground. Sadly, we learned this year that **Larry Compton** (Ph.D., '88, Johnson) has passed away.

Allan Bruner (former BB graduate student) was named Oregon's 2006 Teacher of the Year. He teaches advanced math, calculus, statistics, chemistry, psychology, anatomy, physiology, choir and jazz at Colton High School in Colton, OR, and was characterized as "one of the driving forces in making Colton High School the academic powerhouse that [it] is today". **Andrea Mahr**, one of the many successful exchange students from Germany who studied in the Department over the years, has decided to pursue a Ph.D. at the German Cancer Research Center in Heidelberg.

Development Efforts in the Department of Biochemistry and Biophysics

The Department received very generous gifts towards undergraduate scholarships this year from two long-time supporters of the Department of Biochemistry and Biophysics. Frances Cripps has established the Ray, Frances, and Dale Cripps Student Support Endowment to support the education of students majoring in the biological sciences, including Biochemistry and Biophysics. The numbers of BB majors who receive Cripps Memorial scholarships have been growing each year (10 in 2005 alone). Carol Woodstock has established the Woodstock Scholarship endowment to support BB majors. Finally, a special "Thank-you" once again to all those who have contributed so generously to the Department this year. Your gifts help to support, among many things, the undergraduate BB Club, graduate student recruitment, and the department seminar series.

In closing, on behalf of the faculty, staff and students in the Department, I would like to extend to you and yours a wonderful Holiday Season, and best wishes for the New Year. As always, our doors are open to welcome your visit, and our ears attentive to news of your well being, wherever you may reside.

Yours warmly,

P. Shing Ho

P.S., As always, I would like to thank Chris Mathews, Robert Becker, Kevin Ahern, and Barbara Hanson for their help in assembling information and providing editorial help with the writing of this letter.