From the Chair

Continuing on the tradition begun by Dr. Jindrich (Henry) Kopecek during his tenure as Department Chair, I welcome you to the 6th issue of our Newsletter. As you may recall, after five years of strong leadership of our department, Henry has returned to full time research and teaching. He is currently spending some well-earned sabbatical time planning new research efforts for his laboratory to continue well into the future. We are grateful to Henry for his leadership as the chair. Under his guidance, we significantly strengthened the department faculty group, increased our graduate student population and helped institute changes in curriculum, organization, and department operation that will serve us well as we transition to new department leadership. The Department is in a strong position to continue the reputation of excellence in research, education, and service for which we are internationally known.

After consultation with the department faculty, Dean John Mauger asked me to serve as Interim Chair of the Department as we begin to search for a new Chair who will lead us in our next era. I accepted this opportunity to help in the transition and I am greatly supported in this effort by all the department faculty and College of Pharmacy administration. As Henry mentioned in last year’s newsletter, we do have a great team here in the department.

To aid in our recruitment for a new Chair, we are fortunate to have received an endowment for the George S. and Dolores Dore Eccles Presidential Endowed Chair in Pharmacetics. This is the first endowed chair within the College of Pharmacy and we are grateful to the Eccles Foundation for their investment. This endowed chair will help

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us to attract a top-quality pharmaceutical scientist as Chair and continue our progress in faculty recruitment that strengthens our future and helps to maintain our leadership position in our core areas of research.

We have also received an endowment from Dr. Dinesh and Mrs. Kalpana Patel for student fellowships within the department. This gift enables us to provide a stipend for first year graduate students and provides the students with an opportunity to explore different areas of research before committing to the specific laboratory group with whom they will pursue their thesis research. These funds are critical to our success because they allow us to compete for the best graduate student applicants. We are grateful for their continued support.

In addition, through the kindness and generosity of all of you, we were able to offer our first Alumni and Friends Student Fellowship for a first year department graduate student. This fellowship was made available by your contributions and from gifts to the department by your employers and organizations that have supported us from outside the University. Thank you for your assistance and please continue to help support this effort in any way that you can.

Through this transition, the department continues to move forward in advancing our basic areas of research and developing new areas that emerge in what is currently an era of Translational Research. This emphasis from the National Institutes of Health promotes the rapid progression of basic science results to the benefit of patient care and is extremely well suited to the research for which we are known. Our faculty have active collaborations with many departments throughout the Health Sciences Campus including new and ongoing collaborations with the Department of Bioengineering, Oncological Sciences at the Huntsman Cancer Institute, the Departments of Radiology, Obstetrics and Gynecology, Internal Medicine, Pediatrics, Pathology, and Anesthesiology among others. These collaborations provide academically rich experiences for our students and help to build teams of researchers that can solve challenging scientific problems in our field. While extending out to collaborate with other disciplines and fields, we firmly retain a fundamental training experience in pharmaceutical sciences that we believe is important for all our students to master as graduates of our program.

We continue to benefit from your interactions with the department, and we hope that you do also! In the future, we would like to continue the academic and industrial interaction opportunities that you have created with us on campus as we feel this benefits all who participate. If your organization would be interested in partnering with us for educational opportunities, please let me know and I would be happy to work with you on structuring these opportunities. In the past, we have had industrial partners as guest lecturers, had students participate in summer internships, and have had mini-courses taught to our students by our industrial and academic colleagues.

On behalf of the faculty, staff, and students in the Department of Pharmaceutics, we wish you the best for this Holiday Season with hope for a Happy New Year. Please visit if your travels bring you to Utah.

With best regards,

Steven E. Kern
Assistant Professor and Interim Chair
DONOR HIGHLIGHTS

The generosity of our donors helps to sustain and expand the excellence of our graduate program. We are grateful for your continuing support. THANK YOU ALL!!!

FELLOWSHIPS for first year graduate students allow students to rotate in several laboratories before they decide on their mentor and dissertation topic. Thanks to all Fellowship sponsors!

Pfizer Fellowship
Novartis Fellowship
Dinesh and Kalpana Patel Fellowship
Roy Kuramoto Fellowship
Alumni and Friends Fellowship

INDIVIDUAL DONORS

The contributions from individual donors – our alumni and friends – helped to establish the new ALUMNI AND FRIENDS FELLOWSHIP. Thanks for your support!

Dinesh and Kalpana Patel
Ping Yeh
American Association of Pharmaceutical Scientists
Sandra Sims
Harvey Jacobs
Pharmacia Foundation (matching Dr. Sims’ donation)

More contributions are needed for a full one-year fellowship. We appreciate your donations.

OTHER DONATION NEEDS

Does your organization have scientific research equipment that you plan to retire that needs a new home? Consider donating your retired laboratory equipment to us. If the equipment is still functional and maintainable but your organization is replacing it, we would welcome the opportunity to obtain it if it fits a departmental need. We are currently seeking to replace the UV spectro-photometer and the dynamic light scattering instruments that have served us well in Research Park. If your organization has one of these instruments that is no longer needed that you could consider donating to us, please contact Steve Kern (Steven.Kern@hsc.utah.edu).

SYMPOSIUM ON RECENT ADVANCES IN DRUG DELIVERY SYSTEMS

We are pleased to announce the TWELFTH INTERNATIONAL SYMPOSIUM ON RECENT ADVANCES IN DRUG DELIVERY SYSTEMS to be held at the Grand America Hotel, Salt Lake City, UT, February 21-24, 2005. This symposium will bring together multidisciplinary researchers in the areas of pharmaceutics, polymer science, cell and molecular biology and medicine. The topics include: Gene and RNA Delivery, Protein, Vaccine and Cell Delivery, Biohybrid Systems, Scaffolds and Biomaterials, Colloidal Drug Delivery Systems and Fast-Melting Tablets, Macromolecular Therapeutics, Transvascular Drug Delivery Systems, Biomaterials and Macromolecular Therapy. See our website www.pharmaceutics.utah.edu/cccd for the scientific program. Please consider participating and joining us in February.

NEW STUDENTS

The following students joined our Department in the Fall Semester of 2003:

Julie Jay: Julie graduated from Mesa State College in 1997 with a B.S. in Chemistry.
Since then she has been working in industry. She is the recipient of the IGERT Fellowship. Julie enjoys speed skating and mountain biking.

**Todd Kaneshiro:** Todd graduated from Easter Oregon University in 2004 with a B.S. in Biochemistry. He is the recipient of the College of Pharmacy’s Eccles Fellowship and is a member of Dr. Zheng-Rong Lu’s lab. Todd enjoys canoeing.

**Venkatareddy Nadithe:** Venkat graduated from Kakatiya University, India, in 1998 with a B.S. in Pharmacy. In 2003 he received a M.S. in Pharmaceutical Sciences from the University of Alberta. He is the recipient of the Patel Fellowship. Venkat enjoys reading, swimming, and traveling.

**Scott Pendley:** Scott graduated from Utah State University in 2000 with a B.S. in Cellular Molecular Biology. He is a member of Dr. Tom Cheatham’s group. Scott enjoys fencing, soccer, hiking, and Linux programming.

**Sreevalli Sikharam:** Sreevalli graduated from Osmania University, Hyderabad, India in 2003 with a B.S. in Pharmacy. She is currently a member of Dr. Steve Kern’s group. Sreevalli enjoys reading and music.

**Rongzuo Xu:** Rongzuo graduated from Shanghai Medical College of Fudan University in 2002 with a B.S. in Medicine. In 2004 he received a M.S. in Basic Medical Sciences from Purdue University. He is the recipient of the Pfizer Fellowship. Rongzuo enjoys badminton, tennis, and skiing.

**RECENT GRADUATES**

**Liz Bikram:** Liz was a student of Dr. Sung Wan Kim. Her Ph.D. dissertation is entitled, “Biodegradable Multiblock Copolymers for Gene Delivery.” She accepted a postdoctoral position at Rice University.

**Suna Choi:** Suna was a student of Dr. Sung Wan Kim. Her Ph.D. dissertation is entitled, “Glucagon-like Peptide-1 Delivery for Treatment of Type 2 Diabetes.” She accepted a postdoctoral position at The University of Michigan.

**Charu Kanwal:** Charu was a student of Dr. Carol Lim. Her Ph.D. dissertation is entitled, “Progesterone Receptor Nucleocytoplasmic Trafficking and Applications in Drug Delivery.” She is currently living in New Jersey.

**Anurag Maheshwari:** Anurag was a student of Dr. Sung Wan Kim. His Ph.D. dissertation is entitled, “Soluble Biodegradable Polymer Based Interleukin-12 Gene Delivery to Solid Tumors.” He accepted a postdoctoral position at the Massachusetts Institute of Technology.

**Guang Yan:** Guang was a student of Dr. William Higuchi. His Ph.D. dissertation is entitled, “Mechanistic Study of Alternating Current Iontophoresis and Evaluation of Internal Standard in Iontophoretic Monitoring.” He accepted a postdoctoral position in Dr. William Higuchi’s lab.

**SUMMER UNDERGRADUATE RESEARCH FELLOWSHIP PROGRAM**

Bruce Yu, Ph.D., Assistant Professor

The year 2004 marked the 10th anniversary of the Department’s Summer Undergraduate Research Fellowship Program (SURFP).

This year we received over 33 applications, of which 19 were complete. With funding
from the Department and participating faculty, 6 were accepted into the program. Two additional students, already working in Drs. Lu and Yu’s laboratories, also took part in the program. The majority of participants were from Utah. The average GPA of the trainees was 3.62.

The 10-week program began June 7th and ended August 13th. A mid-term luncheon was held on July 8th to introduce the students to the larger community of the Department and to provide career consultation. A final oral/poster presentation session was held August 12th with more than 30 attendees, including the summer students, graduate students, postdoctoral fellows as well as faculty from the Department. The students reported their research results at the oral/poster session and in a written report.

In addition to lab research, enrichment activities, both professional and social, were organized for the students. Specifically, the students, together with Bruce Yu, toured Myriad Genetics, a local pharmaceutical company. The purpose of the professional-oriented tour was to familiarize the students with local biomedical learning, teaching, research and working environment. Based on positive feedback from previous years, these tours reinforce the appeal of our graduate and professional programs to prospective students. Career development consultation was also provided to the trainees. Articles published in recent scientific journals related to professional training were distributed to the students for reference. Throughout the program, participating faculty and senior graduate students provided career-related advice to the trainees on an individual basis as well. At the mid-term luncheon, Bruce Yu explained various graduate programs available at the University of Utah, including Ph.D., Ph.D./Pharm.D. and Ph.D./M.D. programs. Finally, Ajay Taluja of the Student Advisory Committee (SAC) organized social
events for the students. Special thanks to Ajay for arranging cards night and bowling.

The program continues to serve as a recruiting tool for our graduate program. This year, Todd Kaneshiro, a participant from 2002, joined our department as a graduate student.

We are looking forward to making next year’s program more successful based on this year’s experience. Finally, we thank all participating members (faculty, postdoctoral fellows and graduate students) for their efforts.

**STUDENT ACTIVITIES**

**Visions and Goals**

In August this year, a new student advisory committee (SAC) was elected for 2004-2005. It is always a dream for the SAC to create unity and friendship among the students in the department. There are a few challenges to this desired path. First, we draw students from many cultures, we are separated into three different buildings, and Ph.D. work tends to focus students inward. These factors challenge building a strong community. To strengthen the unity and bring harmony among the graduate students are our ultimate goals. Activities such as hiking, camping, parties, or sport, permit us to make friends more easily and to get to know each other better. Moreover, there are many new comers every year. Thus, a gap between senior students and new students is created. To fill this gap, another project called the “mentor program” was initiated in addition to other student activities. The program encourages seniors to watch over and help the first-year students settle down during their start in our department. The program has just started and we hope to see continued success of this program.

In 2003 our department was fortunate to have the American Association of Pharmaceutical Scientists (AAPS) conference held here in Salt Lake City. Because of this, the number of the AAPS members including graduate students and postdoctoral fellows has increased dramatically. This significant increase in the number of members has allowed us to become well recognized by the AAPS. In order to shed light on some other pharmaceutical areas, the SAC has collaborated with the AAPS student outreach team to invite speakers who have had experience in both academic and industrial areas to come and lecture here on campus. The long term project that we have with AAPS is to develop a student joint conference among the universities in our region such as Colorado, Idaho, Wyoming, Nevada, Arizona, Washington, and California. This project is projected to occur somewhere around 2006 or 2007.

**Current Activities**

Right after the SAC election in August, we hosted the first activity, which was the annual department picnic and T-shirt fundraising drive. At the start of the semester, the mentor program began for the new students. In early October, we had the department hike at Lake Blanche. In November, we worked with the AAPS to continue our student chapter resulting in a $1500 grant for our student chapter activities in 2004-2005. In that same month, we participated in the AAPS student chair meeting in Baltimore and initiated the student activity with AAPS, for instance AAPS' Visiting Scientist Program, which will begin in early 2005. At this time, the holiday season has begun and the Christmas party is another big activity coming in mid December. Since we have been in office, there have been monthly faculty meetings, and at that time we speak for the students and become a
bridge between the faculty and students. It has been fun and quite an experience. We have enjoyed our work so far and we look forward to the next upcoming activity, which will take place toward the end of our term in Summer 2005. The future activities that we have been working on are a student retreat, sport-day, camping, and hiking. We hope you enjoy hearing about the SAC activities that help create a great Ph.D. student experience here in the department.

Kongnara Papangkorn (On behalf of the student advisory committee)

ALUMNI NEWS

Alumni and Friends Breakfast

The Alumni and Friends Breakfast took place during the annual American Association of Pharmaceutical Scientists meeting in Baltimore, MD. Many people once associated with the Department had the opportunity to reunite and socialize. About 40 people were in attendance.

Alumni Highlights

Darin Furgeson: Hello from North Carolina and home of the Duke Blue Devils! The past year and a half at Duke University have been difficult but exciting. As a post-doc in the lab of Ashutosh Chilkoti in the Dept. of Biomedical Engineering at Duke University, my projects involve the use of genetically engineered, thermoresponsive biopolymers called elastin-like polypeptides (ELP). These carriers are monodisperse and may be produced in large amounts. The thermoresponsive behavior of ELP also allows for thermal targeting of the macromolecular carrier. Currently, I am working on drug delivery applications of ELP with pH-sensitive linkers between ELP and small chemical therapeutics, radiolabeling of the ELP for biodistribution and conjugation of radiotherapeutics, and the insertion of photoresponsive groups to further control the release of conjugated and physically entrapped drugs. I have also collaborated with other groups in the use of ELP as a tissue engineering matrix for cartilage and meniscus repair. For those of you wondering about whether to pursue a post-doc, I highly recommend it. Although it has been difficult in some ways, I have appreciated the chance to learn about new areas of research in addition to meeting people with whom I can collaborate.

Next summer my family and I will be moving to Madison, Wisconsin where I have accepted a position as an Assistant Professor (tenure-track) in the Department of Pharmaceutical Sciences. The University of Wisconsin-Madison provides a superb academic setting with a number of strong interdisciplinary departments. Initially, I plan to
focus my research on hyperthermic targeting of thermosensitive biopolymer gene carriers but I also hope to move into the development of other biomaterials for drug delivery and tissue engineering. I am extremely grateful for this wonderful opportunity and I owe a lot of thanks to Dr. Sung Wan Kim for his tutelage and Dr. Henry Kopeček for his stewardship of the department while I was there. Dr. Chilkoti has given invaluable advice on beginning a lab as an assistant professor and I look forward to a long, productive relationship with him in the future.

In September, I had the pleasure of seeing some of my friends from Utah at the Gordon Research Conference in Big Sky, Montana, an excellent conference co-chaired by Henry. It was a tremendous opportunity to meet with leaders in the field of drug delivery and I look forward to the next conference. Since moving from Utah, I’ve been trying to get myself back into shape by running. Last month I completed the Baltimore half-marathon under my goal time of two hours. I’m planning on running the Myrtle Beach half-marathon in February and my first marathon sometime next year.

Katherine and the kids are doing well. They miss our family and friends back in Utah, but we’ve had a couple of visits from family here that has helped. It’s hard to believe how fast children grow up, but in the fall, Duncan started 2nd grade and Isabelle started Kindergarten. Samuel, our youngest, keeps Katherine company at home during the day and is fascinated with anything having to do with Star Wars!

Best wishes to you and yours this holiday season and I look forward to seeing you all again sometime soon.

Monica Tijerina received her Ph.D. in Pharmaceutical Chemistry in 2002 evaluat-
ing HPMA copolymer drug conjugates for the treatment of ovarian cancer. Upon graduation, she accepted a position with Novartis developing macromolecular and small molecule solid dosage formulations. Presently, Monica is employed at Merck in West Point, PA evaluating drug delivery systems in Pharmaceutical Research. She resides in Doylestown, PA with her husband, Brian, another Merck employee.

**Kevin S. Warner** received his Ph.D. from the Department of Pharmaceutics and Pharmaceutical Chemistry, University of Utah in 2003. He worked with Dr. William I. Higuchi to examine the mechanism of action of chemical skin permeation enhancers. After graduation, Kevin chose to stay close to home and accepted a scientist position with a small pharmaceutical company in Salt Lake City called ZARS, Inc. where he works with Dr. Jie Zhang (a former postdoc in Dr. Kris Knutson’s lab in the late 1980s). In addition to Kevin’s work at ZARS, he continues to maintain some association with the department as an adjunct faculty member presenting a few lectures each year in the Physical Pharmacy class taught primarily to the Pharm.D. students.

After joining ZARS as a scientist Kevin was assigned to lead the formulation group in identifying lead drug candidates and developing novel transdermal dosage forms which can be utilized with the company’s patented heat or phase-changing cream technologies. Since joining the company Kevin has had the opportunity to take two compounds from candidate selection, formulation development, pre-clinical animal studies, and into Phase I clinical trials. After spending one year as a scientist, Kevin accepted his current position of Manager of Scientific Affairs. “In a small company I have the opportunity to wear many hats, not only do I get an opportunity to conduct research, but I am involved in several aspects related to obtaining FDA approval for our products. Aside from the research and development work, I am a part of an internal scientific advisory board that evaluates potential collaborations and/or joint development opportunities with other companies.”

Kevin and his wife, Heather, are the proud parents of three children: Courtney, Kelsey, and a third child due in March.

**Career Development Website**

An AAPS website exists for career development. Just go to [http://www.aapspharmaceutica.com/inside/sections/pdd/index.asp](http://www.aapspharmaceutica.com/inside/sections/pdd/index.asp), then click under Career Development and choose from General, Academia, Industry, etc. Dr. Carol Lim was instrumental in designing this website. There is also a section on scientist profiles, one of which includes our own Dr. S.W. Kim.

**AWARDS AND HONORS 2003–2004**

**Faculty**

**Sung Wan Kim** was awarded the Research Achievement Award from Pharm Sciences, World Congress, Kyoto.

**Bruce Yu** was awarded the Kimmel Scholar Award of 2004 from the Sidney Kimmel Foundation for Cancer Research.

**Students**

**Liz Bikram** – Jeffrey L. Fox Memorial Award

**Pad Chivukula** – AFPE Pre-doctoral Fellowship
Kosalaram Goteti receives the AAIPS Award at the American Association of Pharmaceutical Scientists

Kosalaram Goteti – AAIPS Award

Julie Jay – NSF/IGERT Fellowship

Todd Kaneshiro – College of Pharmacy Eccles Fellowship

Aaron Mohs – International Society for Magnetic Resonance in Medicine Student Stipend Award

Aaron Mohs – PhRMA Fellowship

Venkatareddy Nadithe – Dinesh and Kalpana Patel Fellowship

Aparna Nori – Jeffrey L. Fox Memorial Award

Sivakumar Ramachandran – University of Utah Graduate Research Fellowship

Rongzuo Xu – Pfizer Fellowship

PEER-REVIEWED GRANTS

You Han Bae

NIH Grant 1R01 CA101850; Engineered Intelligent Micelle for Tumor pH Targeting; Y.-H. Bae, PI.
Tom Cheatham

American Chemical Society Petroleum Research Fund; ACS-PRF Summer School on Computation, Simulation, and Theory in Chemistry, Biological Chemistry, and Materials Chemistry; J. Simons, PI; T. Cheatham, Co-PI.

NSF Grant CHE-0326027; ITR: Development of a Web-based Grid-computing Environment for Research and Education in Computational Science and Engineering; T. Truong, PI; T. Cheatham, Co-PI.

NIH Grant EB002880; Molecular Docking and Imaging Devices for Drug Delivery; B. Yu, PI; T. Cheatham, Co-PI.

NSF Grant CHE-0218739; Multiscale Simulation of Biomolecular Assemblies on a Computational Grid; G. Voth, PI; T. Cheatham, Co-PI.

James Herron

NIH Grant R43 GM066439-01; High-Throughput Fluorescent Protein Kinase Assays; D. Blumenthal, PI; J. Herron Co-PI.

William Higuchi

NIH Grant DE06569; Quantitation of Enamel Demineralization Mechanisms; W.I. Higuchi, PI.

NIH Grant RO1 GM063559-01A2; Methods to Control Transdermal Iontophoresis Variability; S. Kevin Li, PI; W.I. Higuchi, Co-PI.

Steven Kern

NIH Grant 5R01HL067646; Prevention of Hemodialysis Vascular Access Stenosis; A. Cheung, PI; S. Kern, Co-PI.

NIH Grant R21 DA018258; Impact of Gender Differences in Morphine Metabolites; S. Kern, PI.

Sung Wan Kim

NIH Grant DK65739; Functional Biomaterials for Antisense Delivery to Islet; S.W. Kim, PI.

NIH Grant CA10707; RGD-Polymer Targeting Plasmid to Angiogenic Endothelium; S.W. Kim, PI.

NIH Grant HL071541; Polymer Carrier for Ischemia-Inducible Gene Therapy; D. Bull, PI; S.W. Kim, Co-PI.

Jindřich Kopeček

NIH Grant CA51578; Polymeric Drug Delivery System for Cancer Therapy; J. Kopeček, PI.

NIH Grant CA88047; Targeting to Lymphocytes Mediated by Synthetic Epitopes; J. Kopeček, PI.

NIH Grant GM069847; Bone Targeted Delivery of Anabolic Agents; J. Kopeček, PI.

CDMRP; Double-Targeted Macromolecular Therapeutics for the Treatment of Ovarian Cancer; J. Kopeček, PI.
Biomeasure; HPMA Copolymer Bioconjugates; J. Kopeček, PI.

Carol Lim

University of Utah Funding Incentive Seed Grant; Active Compartment Delivery of Bcr-Abl for CML Therapy; C. Lim, PI.

Zheng-Rong Lu

NIH Grant R21 CA095873; Biodegradable Macromolecular MRI Contrast Agents; Z.-R. Lu, PI.

NIH Grant R33 CA095873; Biodegradable Macromolecular MRI Contrast Agents; Z.-R. Lu, PI.

NIH Grant R01 EB000498; Biodegradable Macromolecular Blood Pool Contrast Agents; Z.-R. Lu, PI.

NIH Grant R01 CA097465; Polymer Chelate Conjugates for Diagnostic Cancer Imaging; Z.-R. Lu, PI.

Bruce Yu

The Sidney Kimmel Foundation for Cancer Research; An Integrated Docking/Imaging Device for Cancer Radioimmunotherapy; B. Yu, PI.

Pharmaceutical Research and Manufacturers of America Foundation Grant; Design, Synthesis and Characterization of a Peptide Ligand/Anti-Ligand Pair for Cancer Radiotherapy; B. Yu, PI.

NIH Grant EB002880; Molecular Docking and Imaging Devices for Drug Delivery; B. Yu, PI.

NIH Grant R01EB004416; Engineering Peptide-based Biomaterials; B. Yu, PI.

PUBLICATIONS OF OUR FACULTY IN 2004

You Han Bae


W.J. Sung, K. Na and Y.H. Bae, “Biocompatibility and Interference Eliminating Property of Pullulan Acetate/PEG/heparin Membrane for the Outer Layer of an Amperometric Glucose Sen-


**Tom Cheatham**


**James Herron**


William Higuchi


Steven Kern


Sung Wan Kim

S.Y. Chae, Y.Y. Kim, S.W. Kim, Y.H. Bae,


Jindřich Kopecěk


**Carol Lim**


**Zheng-Rong Lu**


**John Mauger**


**Bruce Yu**


**Faculty Travel and Lectures**

**You Han Bae**

Dr. Bae has been on road five times this year: two international travels and three domestic trips. The first travel was from Feb. 14 to 22 to attend 'Yonsei Biomedical Symposium 2004 on Current Perspectives in Cell Based Therapy,' Seoul, Korea as an invited speaker and to visit Youl Chon Chemical Inc. to discuss a research project. In March (March 29-30), he traveled to Washington D.C. to attend an NIH workshop, ‘Drug incorporated implants, NIDDK, NIBIB and JDRFI Workshop of Immunobarriers for Pancreatic Transplantation,’ as an invited speaker. He visited Korea again (May 8-18) to organize two Ph.D. defense meetings of his former K-JIST graduate students, Jong-Ho Kim and Eun Sung Kim who had spent 1.5 years in our department to finish their Ph.D. research work at Dr. Bae's research lab. He also gave a seminar at the DukSung University during this visit. A meeting with Youl Chon Chem. was made to finalize the discussion about a multi-team research project. The project started from July 1, 2004. Another trip was to Honolulu, Hawaii as an invited speaker for 31st Annual Meeting of Controlled Release Society. He also traveled to D.C. to join an NIH special emphasis review panel for ‘Bench to bedside diabetes’ as an ad hoc reviewer. His last trip this year will be in mid December for a meeting with other research teams to report and discuss the progress of the Youl Chon Project.

**Tom Cheatham**

In order to better focus our research efforts, travel was cut-back significantly this year, although Cheatham did still travel enough—even with the new and more restrictive Delta mile qualification rules—to obtain Medallion(r) status (which, as you may remember, was one of my goals last year). The highlight, beyond travel to NSF Computer time review panels four times per year to random locations throughout the states (including this year Phoenix, St. Louis and at NSF in Arlington Virginia) and virtual review panels on the internet or (shudder) via conference call, was travel to Europe to attend the combined IQSBP/ABC meeting on Lake Como in Italy. What is ISQBP you ask? Why it's the "International Society of Quantum Biology and Pharmacology" and it is an eclectic group of theoretical folk interested in bio- and pharm-related problems. Cheatham attended the President's Meeting and also took part in the ABC (Ascona B-DNA consortium) sub-meeting of wacky theoreticians interested in subtle dynamics of DNA at the atomic level as exposed by simulation; a large number of these people worked together to produce that latest Biophys. J. paper listed (Beveridge et al. 2004). The whole family attended, and we visited Cheatham's colleagues in Barcelona, went overnight by train to Paris and Strasbourg, onto Switzerland and then Italy for the conference. Our two girls had the most fun--not visiting Cathedrals or seeing old buildings or art museums or riding trains or boats, but by--chasing pigeons while mommy (Dr. Lim) and daddy sat sipping drinks at the cafes. Ahhhhh. Other than this travel, Cheatham gave seminars at UNC in Chapel Hill, at the Sanibel symposia in Florida and at the AMBER Developers meeting on Long Island at Stony Brook University.

**James Herron**

In February 2004, Prof. Herron traveled to Gaithersburg, MD to participate in an NIH special emphasis review panel in the areas of vaccines, adjuvants, therapeutics, immunotherapeutics and diagnostics for biodefense...
Sung Wan Kim

Among the many travels of Dr. Sung Wan Kim, he presented the John Wagner Lecture at the University of Michigan, in March, 2004. In May, he attended the WBC in Sydney, Australia, as an invited speaker. Later in the year, Dr. Kim presented at the Macromolecular Symposium, University of Michigan. During November, he traveled to Tokyo, Japan, to attend the ASBC. He also presented a Distinguished Lecture at the University of Tokyo and received the Research Achievement Award, Pharm Science at the World Congress in Kyoto.

Jindřich Kopeček

Dr. Henry Kopecek traveled extensively this past year to participate in the following seminars, symposia, and meetings: Henry presented invited lectures at the 6th International Symposium on Polymer Therapeutics in Cardiff, UK in January; the Sarcoma Symposium at the Huntsman Cancer Institute, University of Utah; University of Illinois at Chicago; the Advances in Pharmaceutical Nanotechnology Conference, Mahidol University, Thailand; and at the Chiang-Mai University, Thailand; all in February; Texas A&M University in April; University of California at Los Angeles; Globalization

Dr. Kopeček and Dr. Hamid Ghandehari, alumnus, at the GPEN Professors Dinner.
Dr. Zheng-Rong Lu and his student, Aaron Mohs, in Kyoto, Japan.

of Pharmaceutical Education Conference in Kyoto, Japan; and Peking University, Beijing, China; all in May; 31st International Symposium on Controlled Release of Bioactive Materials, Honolulu in June; 40th IU-PAC World Polymer Congress, Paris, France in July; University of Utrecht, The Netherlands in October; and University of Pennsylvania in November. Henry also presented a plenary lecture at the Joint Meeting of the Pharmaceutical Societies of Germany, Austria, and the Czech Republic, in Regensburg, Germany in October, Co-Organized and Co-Chaired two scientific meetings – a Workshop on Genetic Engineering of Polymeric Biomaterials for Controlled Drug Delivery and Biomedical Applications, Honolulu, Hawaii in June (with H. Ghandehari); and the Gordon Research Conference on Drug Carriers in Medicine and Biology at Big Sky Resort, Montana in September (with P. Senter). Henry also chaired three meetings of the NIH Biomaterials and Biointerfaces Study Section in March, June, and October. In the Fall semester Henry is on sabbatical leave – partly on campus and partly at the Academy of Sciences of the Czech Republic in Prague.

Carol Lim

Dr. Lim attended the AAPS Meeting in Baltimore, MD in November.

Zheng-Rong Lu

Zheng-Rong began the year with a visit to the University of Pittsburg for a research collaboration in January. In May, he and his student Aaron Mohs attended the 12th
Scientific Meeting and Exhibition of International Society for Magnetic Resonance in Medicine in Kyoto, Japan. They also visited Dr. Shinji Sakuma, Associate Professor in the Faculty of Pharmaceutical Sciences, Setsunan University, Osaka. Zheng-Rong also presented a lecture there. In the following month, Zheng-Rong and his colleagues Yuda Zong and Xinghe Wang attended the 31st International Symposium on Controlled Release of Bioactive Materials, Honolulu, Hawaii. In September, Zheng-Rong was invited to speak at the Gordon Conference on Drug Carriers in Medicine and Biology, Big Sky, MT. He flew to St. Louis immediately after the Gordon Conference to attend Third Annual Meeting of the Society for Molecular Imaging. In October, he was invited to speak at the XVI Annual International Workshop on MRA, London, On, Canada. He winded up travel this year with a trip to the AAPS Annual Meeting and Exposition in Baltimore with his student Harvey Feng and to a meeting on imaging at the Watergate Hotel, Washington, DC, later in October.

Bruce Yu

From Oct. 28-29, Dr. Yu attended the First Annual NIBIB Bioengineering Grantee’s Meeting in Bethesda, Maryland. Then from Nov. 7-11, he attended the Annual AAPS Meeting in Baltimore, Maryland. Also in November, Bruce Yu visited the University of Pennsylvania to set up collaboration with Prof. R. Zhou. On Dec. 3rd, Dr. Yu visited the West Coast DSC Symposium and gave a lecture entitled “Using Differential Scanning Calorimetry to Dissect Protein Structural Stability”.

ANNUAL CONTRIBUTIONS

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Send to: University of Utah
Dept. of Pharmaceutics
College of Pharmacy
30 S. 2000 E. #301
Salt Lake City, UT 84112

Wishing you Happy Holidays and a peaceful and prosperous New Year!