

# HSCI UPDATE



Volume 18, Issue 1

School of Health Science

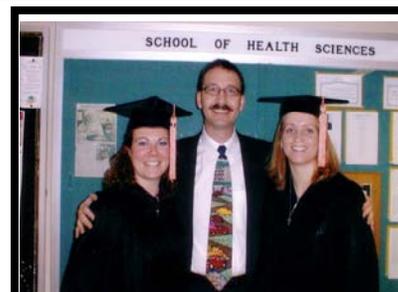
Fall 2005

## FROM THE HEAD...

This fall begins with many new faces in the School. We recruited two faculty, Dr. Shuang Liu and Dr. Keith Stantz, who joined July 1 and are now in the classroom providing our students excellent instruction in diagnostic and molecular imaging. Mrs. Carolyn Gery is on special assignment to the School from the Office of Development. Carolyn has over 33 years with Purdue and she spent a substantial portion of that time creating, directing and growing the President's Council which now has over 16,000 members. The membership has donated hundreds of millions of dollars to Purdue over the years. Our new development officer, Mary Ellen Gillespie joins us from North American Interfraternity Conference (NIC) in Indianapolis, which is the umbrella group for 64 men's fraternities. Our new student advisor, Carol Powell was previously in Education and Office of Student Services Secretary, Kim Muldoon joined us after working at Eli Lilly. Read on for their biographies in this issue.

This is the School's 5th straight year of increasing undergraduate enrollment and our official number of students in the School is 651, a 41% increase over the 462 registered in Fall 2000. More importantly we have seen the very encouraging trend of our undergraduates choosing the radiological (80 students), occupational (34 students) and environmental (16 students) health science majors. There are many employment opportunities in these professional fields and the high starting salaries are consistent with the great demand for educated graduates. This year we became the largest undergraduate Radiological Health program in the nation both in terms of numbers of students and B.S. degree graduates. It also appears that our students are graduating faster with the degrees conferred increasing 44% from 2000 to 2004.

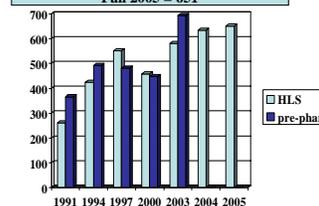
Our graduate student program is also thriving with 39 students registered in Fall 2005 compared to 21 in 2000. This is a dramatic increase, almost a doubling, but more pleasing to me is the demographic change that 76% of our thesis-based students are Ph.D. compared to only 46% in 2000. This reflects the dramatic increase in research success of our faculty over the past 5 years in terms of journal article publication rates and research funding attracted. We now have 11 post-doctoral researchers and research associates in the School compared to only 1 in 2000, and a funding rate of over \$200,000 per faculty member to date in 2005, far exceeding the Purdue average and approximately 4 times that for 2000.



Dr. George Sandison, Head and Professor, School of Health Sciences with Fall 2004 Graduates Maureen Pappas on the left, and Ashley Duke on the right.

### Undergraduate Enrollment by Year

Goal Metric: Maintain HLS body at 600  
Fall 2005 = 651



The ~700 pre-pharmacy students now counted in the Pharmacy School enrollment numbers

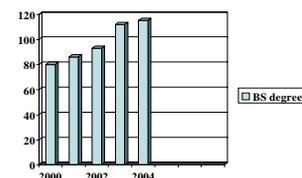
### Undergraduate Enrollment Trends

Goal Metric: 17 students in RH, OH & EH per faculty member  
Current: 13.0, Overall: 65.1

2004-5 Purdue: 17.4 students per tenured faculty member

Year/ Major	2000 Fall	2001 Fall	2002 Fall	2003 Fall	2004 Fall	2005 Fall
RH	4	3	13	51	67	80
OH	26	29	25	19	27	34
EH	3	2	6	6	3	16
GHS	365	408	409	404	419	391
MT	59	66	82	77	78	84
Undec	5	5	21	27	36	46
<b>Total</b>	<b>462</b>	<b>513</b>	<b>556</b>	<b>581</b>	<b>630</b>	<b>651</b>

### Undergraduate Degrees Awarded



School BS degrees conferred per faculty = 14.3  
Purdue BS degrees conferred per faculty = 7.5

BS degrees conferred increase 2000-2004 = 115/80 i.e. 44%

From the Head...  
(continued from the front page)

In this issue we have acknowledged alumni, friends and organizations who have supported the rejuvenation of the School in 2005 through their generous donations. Total gifts to the School reached \$640,000 last year and our goal is to raise \$1 million this year. We are focusing our campaign on the two new named professorship endowments for which we received a major gift of \$450,000.00 from Dr. Dennis Paustenbach, the largest single gift in the School's history. These named professorships are in honor of Dr. John Christian and Dr. Paul Ziemer for their outstanding student mentoring, devoted service to the School and eminence in their scientific fields. The School has succeeded in reaching many of the 5-year goals set in 2001 due to the devotion of the faculty and staff and the generosity of alumni and friends. However we have a long way to go and I encourage you all to help the School and our students succeed. We need modern equipment for teaching and research. Efforts are being directed toward developing gifts-in-kind from industry to help us revitalize our laboratories and other facilities.

***Congratulations to the School of Health  
Sciences 2004 –2005 M.S. and Ph.D. Graduates***

<b><u>Graduates Name</u></b>	<b><u>Degree</u></b>	<b><u>Topic</u></b>	<b><u>Major Professor</u></b>
Jeremy Blauser	M.S.	Synthesis of Carbon –11 Acetylene as a Radiolabeling Intermediate for Positron Emission Tomography Radiopharmaceuticals	Degrado/Sandison
Geraldine Mesoloras	M.S.	Neutron Scattered Dose Equivalent to a Fetus from Proton Radiotherapy of the Mother.	Sandison
William Rautzen	M.S.	Coursework-based	Cember
Delal Dink	M.S.	Coursework-based	Sandison
Timothy Greist	M.S.	Coursework-based	Stewart
Robert Kover	M.S.	Coursework-based	Sandison
Colleen Des Rosiers	Ph.D.	An Evaluation of Very High-Energy Electrons (up to 250 MeV) in Radiation Therapy	Papiez/Sandison
Tae Kyu Lee	Ph.D.	Computer Simulation Dose Studies in Heterogeneous Media for Electron and Proton Radiotherapy of Static and Moving Targets.	Sandison
Zhichang "Lewis" Shi	Ph.D.	Establishment of an In Vitro Blood-Cerebrospinal Fluid Barrier Model to Study the Mechanism of Lead-induced Brain Barrier Damage.	Zheng

## *Jason T. Harris Receives Several Excellence in Teaching Honors*

Jason T. Harris, Ph.D. Candidate in Health Physics, was awarded the Purdue University Graduate School Excellence in Teaching Award at the 2005 Celebration of Graduate Student Teaching held April 28<sup>th</sup>. The award was presented to only four graduate students, each of whom were previous or are current Committee for the Education of Teaching Assistants (CETA) Teaching Award Winners. The award included an inscribed plaque and \$500. Jason received this award in part due to his exceptional teaching evaluations from the several courses that he has taught in Health Sciences. Jason was also inducted as an

Associate Fellow into the Purdue University Teaching Academy on October 24.

The mission of the Teaching Academy is to provide leadership and serve as a catalyst to enhance and strengthen the quality of undergraduate, graduate, and outreach teaching and learning. A maximum of 5 Associate Fellows are inducted into the Academy each fall. These individuals have distinguished themselves in teaching and instruction and underwent an extensive nomination and application process.



Dr. John Contreni, Dean of the Graduate School, awarding Jason Harris the Graduate School Excellence in Teaching Award



## *Congratulations to the Spring 2005 School of Health Sciences Bachelor of Science Graduates*

Sarah Adams  
Jessica Bailey  
Natalie Bennett  
Samriawit Berhanu  
Nathan Brandley  
Laura Butler  
Jamie Chaffee  
Maneesha Chigurupati  
Steven Cochard  
Jeannette Daniels  
Adam Darnell  
Rohini Dhand  
Nicholas Doyen  
Steven Dunphy  
Kathryn Dyhdalo  
Chinweokwu Ekwuribe  
Evaleen Fleck  
Sarah Franz  
Megan Fuller  
Marissa Fusco  
Abbi Garringer  
Shannon Gentene

Robin Goodwin  
Blake Grider  
Jason Grundstrom  
Christa Hallowell  
Cameron Hasser  
Nicole Hassett  
Scott Hewitt  
Jered Hudnall  
Kelly Hyland  
Huimin Jiang  
Andrea Kanatova  
Marie Kayser  
Abigayle Kite  
Sarah Kolb  
Rachel Kromkowski  
Joseph Ladalski  
Donald Lair  
Khanh-Van Lam  
Rebecca Leser  
Katharine Linhart  
Erika Lukac  
Erin Lunsford

Lindsay Manley  
Jennifer Maves  
Carly Meyer  
Chad Moore  
Allison Morris  
Cami O'Connor  
Frances Ortega  
Vai Paye  
Kimberly Pulmano  
Kathleen Ramseyer  
Laura Rardin  
Gade Reddy  
Anne Rosswurm  
Kyla Sailer  
Devin Sandlin  
Amanda Scarbrough  
Sandra Schultz  
Anna Schwartz  
Christopher Shinneman  
Adia Smith  
Melissa Sorrell  
Jessica Stacy

Cherie Standefer  
Cindy Stark  
Nicole Taylor  
Julie Thompson  
Shena Timberlake  
Allen Tu  
Bethany VanStavern  
Eric Wagoner  
Anna Wahl  
Stephen Washburn  
Christopher Wybourn  
Laura Yakubec  
Harish Yalamanchili  
Ashli Zolman

## *New Faces in the School of Health Sciences*



***Dr. Keith Stantz***

*Assistant Professor*

Keith Stantz, Ph.D., is an assistant professor in Medical Physics of the Health Sciences Department at Purdue University. He was a research scientist in Imaging Sciences Division of Radiology at IUSOM and Optosonics, Inc.. He received his Ph.D. from Indiana University and an M.S. from Michigan State University in Physics. His research has been to develop photoacoustic and optical imaging equipment and techniques for preclinical research in tumor biology.



***Dr. Shuang Liu***

*Associate Professor of Industrial  
and Physical Pharmacy*

M. Sc. (1982 - 1985), School of Pharmacy, Shandong Medical University, P. R. China;  
Ph. D. (1987 - 1990), Memorial University of Newfoundland, Canada;  
Postdoc (1990 - 1993), the University of British Columbia, Canada

Research interests include receptor-based target-specific radiopharmaceuticals for early diagnosis and radiotherapy of cancer of different origin, new bifunctional chelators, development of new techniques for the radiolabeling of small biomolecules, design/synthesis/evaluation of cationic metal complexes as radiopharmaceuticals or MRI contrast agents for myocardial perfusion imaging, and coordination chemistry of metallopharmaceuticals.

Dr. Liu is married, and has a daughter, Cynthia Liu, now a junior in West Lafayette High School.



***Carolyn Gery***

*Special Assistant for Senior  
Vice President for Advancement*

Carolyn Gery has been with Purdue since 1972 when she joined the newly formed office of University Development. She has served in numerous positions most recently as Associate Vice President of University Development and Executive Director, President's Council. Carolyn has begun voluntary partial retirement and is now Special Assistant to Senior Vice President for Advancement. She has been assigned to the School of Health Sciences to develop a full development program. She works Monday and Tuesday, and Wednesday mornings.

Carolyn is married to Mike Gery and they have three sons and six grandchildren. Besides visiting her grand children she enjoys politics, travel, gardening, entertaining, reading, knitting, her Yorkshire terrier and African Grey parrot.



***Mary Ellen Gillespie***

*Director of Development*

Mary Ellen Gillespie joined the Purdue family on July 18, 2005 as the new Director of Development. Mary Ellen will split her time between Health Sciences and Nursing in order to advance both schools in their campaign efforts.

She comes to Purdue from the North American Interfraternity Conference (NIC) in Indianapolis, which is the umbrella group for 64 men's fraternities. While at the NIC for a little over 5 years, Mary Ellen managed the NIC Foundation, served as the meeting and events planner, and developed and delivered leadership training to undergraduates, alumni volunteers and boards. Mary Ellen also worked at the University of Iowa as the Assistant Director of Student Life and SUNY Plattsburgh as the Coordinator Greek Affairs and Off-Campus Concerns.

She holds an undergraduate degree in Communications and a graduate degree in College Counseling from SUNY Plattsburgh. Mary Ellen is a member of Alpha Phi Fraternity and serves on the fraternity's house corporation board at Butler University and also volunteers for Beta Theta Pi Fraternity, Chi Phi Fraternity, and the Indiana Sports Corporation.

A native of Long Island, New York, Mary Ellen is an avid sports fan and enjoys following the Indianapolis Colts, New York JETS, and the New York Yankees.



***Carol Powell***

*Academic Advisor in the Office  
Of Student Services*

Carol Powell recently joined the School of Health Sciences as an academic advisor. Carol has a B.A. (1973) and M.S. of Education (1981) from Purdue University. She previously was an advisor in the College of Education.

She is a lifetime resident of the Lafayette area and has been around Purdue since she was a young child. Carol has worked in service, clerical, and administrative positions at Purdue. She taught elementary school in six area school corporations, and has worked in sales, real estate, and customer service.

Quiet country walks, reading, home decorating, and horses are a few of her interests. She is the proud mother of two sons and lives with her family in rural Tippecanoe Co.



***Kim Muldoon***

*Secretary for the  
Office of Student Services*

Kim Muldoon has been at Purdue for over 5 years. She began as a secretary in the Food Science Department where she supported 5 Faculty members and 2 Administrative/Professional staff. She then became the Coordinator for the Center for Enhancing Foods To Protect Health with Dr. Bruce Watkins and then moved to the Biomedical Engineering Department where she was a secretary. Kim then left Purdue for a year to work at Eli Lilly as an Administrative Assistant at the Tippecanoe Labs.

Kim attended the Indiana University School of Music, then transferred to Indiana State University where she earned a BS in Music Merchandising.

Kim and her husband John have 3 children, Hannah, Daniel and Patrick & 1 Golden Retriever puppy Bailey. Kim sings in a quartet and the choir at her church, she enjoys doing puzzles and playing the piano. She loves to watch football, especially the Indianapolis Colts and the Pittsburgh Steelers.

# *Welcome to the New 2005 Health Sciences Graduate Students and Welcome Back to Those Continuing*

## New Graduate Students

Anthony Cagle, (M.S.)  
Ning Cao (Ph.D.)  
Sandra Cole (Ph.D.)  
Dallas Cowan (Ph.D.)  
Alina Goh (Ph.D.)  
Draik Hecksel (Ph.D.)  
Ying Jiang (Ph.D.)  
Erin Lambert (Ph.D.)  
John Lowden (M.S.)  
Ryan McMahon (Ph.D.)  
Geraldine Mesoloras (Ph.D.)  
Joo Han Park (Ph.D.)  
April Rademaker (M.S.)  
Michael Shaffer (Ph.D.)

Melissa Sorell (M.S.)  
Sheng Yi (M.S.)  
Zenn, Justin (M.S.)

## Continuing Graduate Students

Thomas Bonner  
Minsong Cao  
David Carlson  
Siew Kee Alina Goh  
Jason Harris  
Jill Harvilchuck  
Judy James  
Mark Knezovich  
Ganapathy Krishnamurthi  
Erin Lambert

Bo Liu  
Huajun Lu  
Mark Pflug  
Heather Pickett  
Thomas Schumacker  
Thad Jeffery Sharp  
Joseph Silvers  
Siarhei Spirydovich  
Michael Stringham  
Shirley Wang  
Jikun Wei  
Mark Wilson  
Fan Xu  
Li Zhao

**We have gotten word from five of our students that they have received notification of early admittance to IU Medical School.**

**Congratulations to: James Emerson  
Christopher Gordon, Troy Roberson, Kiran Ivaturi  
and Kelly Vogie**



## **December 2005 B.S. Degree Graduation Candidates**

### *Purdue Alumni Association*

**Are you a member of the Purdue Alumni Association? Being a part of PAA is the best ways to stay connected to Purdue. It's easy to join-just go to [www.purduealum.org](http://www.purduealum.org) and click on *How to Join*.**

Korey Bacon  
Sung Hee Choi  
Isaac Fehrenbacker  
Michelle Flora  
Hany Gabal  
Brian Heiwig  
James Huffman  
David Kinder  
Christopher Lacey  
Sean Lake  
David Likens  
Chelsea Mathews  
May Mc Nary  
Kathleen McConnell  
Benjamin Morkel

Clifton Moy  
Matthew Nicholson  
Denise Ortega (Degree Only)  
Sean Petty  
Floyd Price  
Michael Reger  
Carol Sims  
Justin Stillson  
Krishna Thakkar  
Jessica Warrick  
Joshua Williams  
Andrea Wilson  
Leah Wischmeier

# 2005—2006 Health Science Ambassadors



Front Row: Tasha Metzger, Brittany Swartz, Meredith Turner, Ellen Wayman, Katie Aguglia, 2nd Row: Emily Lynch, Erin Berry, Kelly Coloumb, Kelly McGuire, Binal Gajjar, Jodi Stephens, Abby Ginther, 3rd Row: Fred Foster, Jack Schneider, Carrie Seifert, Amy Pajakowski, Shakeia Taylor, Lauren Sanchez, Megan Nieman, Katie Eberle, Lori Rosebrock, 4th Row: Sandeep Dhanjal, Matt Roberts, David Bond, Troy Roberson, Lindsay Robinson, Mike Degnan, Greg Zilligen, Dustin Lewis, Mike Talbott, Chris Kutanovski, Back Row: Diana Kolettis, Kim Dusich, Magda Gabriel, Veena Kalapatapu, Kelly Vogie, Ashley Elliott, Brian Daniels  
Not Shown: Mark Baker, Evan Harpenau, Lauren Fisher and Jake Eisterhold

The School of Health Sciences is very proud of its new group of Ambassadors for the 2005-2006 school year. This is the 6<sup>th</sup> year for our program. We have 25 Seniors and 18 Juniors in this year's group. These students represent all of the majors in our school. There are over 20 events in which the Ambassadors play a significant role in the recruitment of new students for the school. The average GPA of this year's group is 3.54.

Each Spring we hold a callout for new Ambassadors. In order to be selected one must meet these qualifications:

- Be a full time student in the School of Health Sciences
- Be classified as a 5 or higher
- Have at least two semesters remaining at Purdue.
- Have a minimum grade point average of 3.2/4.0

Applications must be completed and returned to the Office of Student Services. Each applicant is reviewed and eligibility is determined through a very selective process. Appointments are for one year with automatic renewal as long as the student maintains the high standards of the group and school. Probationary students are not eligible. For further information please contact Bob Walkup at [rcwalkup@purdue.edu](mailto:rcwalkup@purdue.edu).



## UPCOMING EVENTS:

Thanksgiving Break—November 23—26

Dead Week—December 5—9

Finals Week—December 12—17

Commencement—December 18

Classes Begin—January, 9th

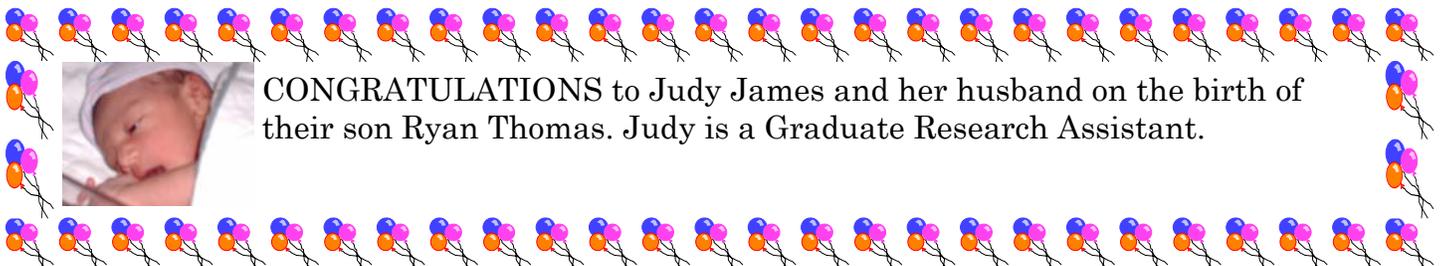
**Congratulations to Leah Wischmeier (General Health Sciences), a senior on the Women's Varsity Volleyball team and Erin Lawless (General Health Sciences), a junior on the Women's Varsity Basketball team for being pictured on their respective sports posters for 2005-06.**

## Freshman Scholars

The School of Health Sciences is proud to announce its Freshman Scholars for the 2005-2006 academic year. The program provides freshmen, selected competitively based on high school scholastic performance, the opportunity to work with a faculty preceptor in a field related to health and medicine. The students also participate in a seminar discussion course, and benefit from contact with peer mentors (upper class students who are previous Freshman Scholars) and guest speakers.

### 2005-2006 Freshman Scholars

Name	Hometown	Preceptor	Peer-mentor
Ben Deschner	Ft. Wayne, IN	Dr. David Sanders	Brian Daniels
Erica Frazier	New Albany, IN	Dr. Wei Zheng	Meredith Turner
Thomas Getreau	Peach Tree City, GA	Dr. Charles Babbs	Mark Baker
Melissa Handcock	Libertyville, IL	Dr. Stephen Hooser	Katie Aguglia
Lyndsay Langbehn	Munster, IN	Dr. Stephen Abel	Kelly Vogie
Tianyi Luo	Fort Wayne, IN	Dr. D. James Morre	Evan Harpeneau
Rachel Terpstra	Carmel, IN	Dr. Carol Boushey	Emily Thompson
Andrea Venditti	Lafayette, IN	Dr. Nancy Edwards	Emily Lynch
			David Bond—mentor at-large



**CONGRATULATIONS** to Judy James and her husband on the birth of their son Ryan Thomas. Judy is a Graduate Research Assistant.



Dr. Charles W. Coffey II receiving the 2005 Distinguished Alumnus award from Dr. George Sandison, Associate Dean, College of Pharmacy, Nursing and Health Sciences; Head, School of Health Science

## *School of Health Sciences 2005 Distinguished Alumnus*

BS, Physics, University of Kentucky, 1971  
MS, Medical Dosimetry, University of Kentucky, 1972  
PhD, Bionucleonics, Purdue University, 1975

This year's Distinguished Alumnus is Dr. Charles W. Coffey II. Upon graduation from Purdue, Dr. Coffey II, was employed as a clinical medical physicist in the Radiation Medicine Department at the University of Kentucky Medical Center. In 1977, he

became acting chief clinical physicist. He was also appointed as an assistant professor in the Radiation Medicine Department; in 1982, he was promoted to associate professor. Dr. Coffey was an active faculty member in the University of Kentucky MS Medical Physics Program.

In 1993, he became the chief clinical medical physicist and associate professor in the Department of Radiation Oncology at Vanderbilt University Medical Center; he was promoted to professor rank in 2001. He assumed additional duties as director of the Radiotherapy Medical Physics Residency Program in 1996 and director of the MS Medical Physics Graduate Program in 1998. These programs are now both accredited by the Commission of Accreditation of Medical Physics Education Programs. Dr. Coffey also has served on various committees at Vanderbilt University, including The Radiation Safety Committee, Department of Radiation Oncology Quality Assurance Committee and the Medical Physics Education Committee. He is also active in professional societies. He is a member of the American college of Medical Physics and the Health Physics Society. In 1992, he was named a Physics Fellow of the American College of Radiology, and in 1999 he was named a Fellow of the American Association of Physicists in Medicine (AAPM).

Dr. Coffey served on the board of directors of the AAPM from 1987 to 1989 and served as the secretary from 1994 to 1996. Ultimately, he was president –elect of the AAPM in 2000, president in 2001, and chairman of the board in 2002. He has served as a reviewer for the International Journal of Radiation Oncology Biology and Physics and Medical Physics. Additionally, he has been involved in committee work on the AAPM Radiation Therapy Committee Task Group #60—Intravascular Brachytherapy Physics as well as Task Group #61—A protocol for Kilovoltage X-Ray Beam Dosimetry in Radiotherapy.

He has more than 40 publications in scientific and professional journals on topics such as dosimetry, radiotherapy, and quality assurance. He has also authored nearly 60 abstracts and proceedings and written five book chapters. Other activities include a number of book reviews and invited presentations. Dr. Coffey also holds a patent entitled “Quality Control Phantom for Use in Computed Tomographic Imaging Instruments and Method of Use.”

Dr. Coffey is married to Susan Hagaman Coffey, and they have a son (Morgan, age 23) and a daughter (Ellen, age 18). They reside in Brentwood, Tennessee. He is active in his local church and presently serves as deacon. Dr. Coffey enjoys softball, running and “gentlemen” farming.



## **The John Christian Distinguished Professorship in Environment Risk Management and the Paul Ziemer Professorship in Radiation Science**

Thanks to a generous pledge of \$450,000 by distinguished alumnus Dennis Paustenbach, Ph. D. (1982) a fund raising campaign has been established to endow two named professorships honoring the School's founder, Dr. John Christian, and his successor, Dr. Paul Ziemer. The campaign goal is to raise \$1 million for each professorship in 5 years in order for the endowment to take place.

These named professorships will help us attract and retain additional outstanding faculty members to help us move forward with our strategic initiatives in radiation science and environmental risk management.

The school's faculty expertise is presently focused on human health and its maintenance. The primary areas include occupational exposures from radiation and chemical hazards and the treatment of human diseases and ailments caused by these hazards. A growing interest is the effect of acute environmental exposures to such hazards in accidents or from terrorist activity and associated forensic analysis. Most industrial, public, military, and criminal activity carries some risk of detriment to the health of individual groups, or society. Therefore a named professorship in risk management complements the focus of the present faculty and allows growth in this field.

Radiation science is a traditional strength of the School and a field that unites many scientific disciplines across Purdue University. Some examples of these connections include the Purdue Cancer Center, Biomedical Engineering, Veterinary Medicine, and Discovery Park, the recently established major Purdue organization comprising 10 new Centers. A strong presence by the University in radiation science is a perfect match to Discovery Park's promotion of multi-principal investigator and multi-departmental initiatives and its discovery, learning and engagement missions.



Dennis Paustenbach, Ph.D.,  
C.I.H., DABT, President and  
Founder of ChemRisk, Inc.

### **CALL FOR NOMINATIONS...**

#### **Robert R. Landolt Award for Excellence in Teaching School of Health Sciences, 2006**

The School of Health Sciences is pleased to request nominations for the 2006 Robert R. Landolt Award for Excellence in Teaching. All faculty and staff who teach Health Sciences courses are eligible for the award. Letters of nominations can be sent to Dr. Frank S. Rosenthal, chair, School of Health Sciences Award Committee. Any student, faculty member or alumnus can submit a nomination or an additional letter of support. Letters of nomination or support can be submitted at any time, but should be received no later than February 16 2004. For further information please contact: Dr. Frank S. Rosenthal, Room 1273 CIVL, 765-494-0812, email: frank@purdue.edu

### **UPDATE ON THE LANDOLT SCHOLARSHIP ENDOWMENT**

As of this date, the Robert R. Landolt Scholarship Endowment donations have reached \$16,645 i.e. 83% of the required \$20,000.



## *Purdue Day at the State Fair*

August 17<sup>th</sup> was Purdue Day at the Indiana State Fair and it was the university's largest and most dramatic exhibit ever at the state's annual event. The day brought thousands of alumni and their families to the Indiana State Fairgrounds to see and learn of Purdue's many advancements. Fair attendees were able to get a closer look at the university's schools,

departments and achievements through visiting more than 50 tents and exhibits.

Health Sciences was represented by graduate students Mark Knezovich, Joey Silvers, and Bo Lu. Visitors to the Health Sciences tent were able to receive information on the School's programs of study, test their grip strength, and get a look at the nerves and tendons linked to Carpel Tunnel Syndrome by way of a hand model.

Purdue Day at the Fair is a great way to bring the University closer to Indiana citizens and was an enormous success this year.



Joey Silvers manning this years Health Sciences tent at Purdue Day at the State Fair

## *Health Science Advisory Board*

The School of Health Sciences has formed a new Advisory Board to help support and advance the mission of the School. Members are selected based on their ability and willingness to provide leadership, assist with fundraising, and provide necessary linkages with other alumni and friends who are able to engage in leadership and support of the School of Health Sciences. Advisory Board members will advise and counsel the Head and faculty regarding strategic directions for the School, and will act as advocates for School programs.

The Advisory Board weekend began with a reception that included faculty and staff of Health Sciences. Members enjoyed some informal time meeting faculty, talking about research, and getting to know each other. The Board met all day Friday, October 7<sup>th</sup> and attended the John Christian Distinguished Alumnus Luncheon and the President's Council Dinner. Saturday's agenda included the President's Council Brunch and the football game before folks headed home. It was a very successful weekend for the first Advisory Board meeting and the next meeting will be scheduled for April, 2006 by which time more members will have been appointed.



From Left to Right: Brent Murphy, George Sandison, Dick Vetter, Lynne Fairoubent, Mary Ellen Gillespie and Paul Ziemer.

# Health Sciences Club News

(cont. on next page)

## *Pre-Dental Club* by Mike Talbott

The Pre-Dental Club is one of the smaller clubs on campus with a current roster of 49 members. We are really excited this year, though, because students' interest in the dental field has grown and so has our club. The goals of the club are to give a general knowledge of the different fields and interest areas of dentistry. The Pre-Dental Club tries to bring in local dentists and other professors to speak about



dentistry. We also hold sessions each year that discuss questions asked in interviews and what we need to know about the long application process. Each year we take a group of interested students

down to the IU School of Dentistry for their "Dental Days". We are trying to make our club into an organized group and help Purdue students who show interest in the field of dentistry, get excited for the future. We would like to see the Purdue Pre-dental club be a well recognized club on campus now and in the future.

## *Lambda Tau* by Ryan Goetz

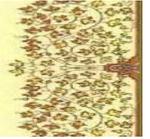
Lambda Tau, Purdue's medical technology honor society, has been busy at work this fall, as many medical technology students are applying and interviewing for their clinical year. In addition to our callout on September 6<sup>th</sup>, our annual clinical fair was held on September 12<sup>th</sup>. Students received vast amounts of information regarding laboratory science and the clinical year, and also had the chance to talk with

each program director. Our mock interview session was held on October 4<sup>th</sup> with Dave Tate, and was attended by a variety of pre-professional students preparing for admittance interviews for their respective schools. We have other exciting events planned for the rest of the semester, including current clinical students coming in to talk to us in November about the clinical year and all that we should expect. Our officers for the 2005-

2006 year include: President – Ryan Goetz, Vice President – Brandi Conklin, Secretary/Treasurer – Amanda Whitsura, and Historian – Kim Mobley. As always, our meetings are open to anyone with an interest in medical technology, and any interest in Lambda Tau may be directed to Ryan Goetz (rjgoetz@purdue.edu).

## *Timmy Foundation* by Ike Fehrenbacher

Purdue's Timmy Foundation Club is entering its second year as an official club on campus, and its members are eagerly preparing for the spring break medical mission trip to Quito Ecuador. The twenty students that will be traveling this year have already been selected. In addition to this, the ten member team of professionals that will be leading the clinics has also been determined for the spring 2006 trip. Building off of the stable foundation set last year, the club is looking to expand in all areas. Extra focus this year is being placed upon acquiring hygiene items, as well as raising money to help offset the cost of the trip. While a great deal of supplies was gathered last year, the club is still looking to increase its effort, to better serve the people of Quito. The club is already working towards these goals by organizing fundraisers with local retailers, scheduling members to volunteer in the Purdue Memorial Union, as well as hosting a comedy show with The Crazy Monkeys to benefit the club. In addition to these goals, the club is looking strongly to expand its member base. While the roots of the club originate with students interested in the healthcare arena, the officers realize that everyone, regardless of major, can appreciate and get involved with the Timmy Foundation Club. For more information, please visit the club's website – <http://web.ics.purdue.edu/~timmy>



## *Health Science Student Council* by Jillian Jweinat

The Health Science Student Council is a newly enlivened organization devoted to making a positive impact on the rest of the Purdue University student and faculty community. Through our members and coordination with other clubs, many goals have already been laid out for the Fall semester. Some of the goals are as follows: foster a more general understanding of the School of Health Sciences and its inner organizations, community service projects that may be called our own, have speakers who will help students learn vital skills that will assist them in their future endeavors, enhance leadership potential within the student council positions and raise enough money to match events and still have a surplus for next semester's activities. Anyone is welcome to join at any time throughout the semester.

## *Occupational/Physical Therapy Club*

by Katie Aguglia and Ellen Wayman

The OT/PT Club has started off the Fall of 2005 with a bang. Our first three meetings thus far have consisted of, the callout, a speaker from the graduate admissions office at the University of Indianapolis, and two professional speakers. One is a practicing OT at Home Hospital and the other is a PT who works with athletes and students here at Purdue. On the agenda, the club will be trick-or-treating

once again with the residents at George Davis Manor and a speaker from the IUPUI OT and PT programs will be visiting.

We would like to thank all our members for their enthusiasm and attendance at our events. Also we would like to thank all the officers who have been working so hard to make the club a success. Thank you to Andy Wilson and Sadie Cooper for planning exciting

meetings, Anna Brewer and Audra Sanders for keeping us informed, Abby Haffner and Becky Lewis for being organized, and a special thanks to Rosie Ricci for her support. We look forward to more fun social events and community service with our club members.

## *PIHSA* by Katie Eberle

The Purdue Industrial Hygiene Student Association has been off to a good start so far this year. The first officers meeting included the creation of new goals for PIHSA as well as the clean up of our club's Adopt-a-Spot located in Downtown Lafayette. The callout for PIHSA back in September was a success with many new faces in attendance. Many students who had an internship over the summer in an IH related field spoke about their summer as well as the great career opportunities that graduating with a degree in IH presents to our students. We have also discussed locations of possible field trips that will provide us with the ability to learn more about IH in an actual setting.

We are looking forward to making a trip down to our parent chapter of the American Industrial Hygiene Association (AIHA) located in Indianapolis. These meetings are held once a month and are focused around a discussion about different industrial hygiene related topics. These meetings should prove to be very beneficial to our group and we are excited to attend.

We have also gotten very lucky with the location of the annual AIHce Conference. In May, 2006 the AIHce Conference will be held in Chicago, IL. This is very exciting as it provides the chance for many of the IH students to attend. PIHSA is looking forward to the opportunity to volunteer as well as participate at this conference.

PIHSA is always looking for more members, IH major or not, so keep your eyes open for the date of the next meeting!



## Health Sciences Club News

### **SHOTS** *Student Helping Others Through Service by Joe Lach*

SHOTS (Students Helping Others Through Service) is a student service organization that helps the student volunteer in the Greater Lafayette Community. It is the premier volunteer organization of its kind in that it not only caters to the community but also uniquely caters to its' members. SHOTS is a volunteer based organization that stresses dedication and is a group committed to help out the community on a regular basis. The number of locations that our members volunteer at is limited so that the volunteering members may form a relationship with the people they are volunteering for and with. This will not only help bolster the community relations between Purdue University students and the general public, but will also help provide students an easy access to volunteering. We as the executive board customize the volunteer experience by forming groups of volunteers that want to help in common areas. We then schedule these groups to volunteer at a time that is available for all. SHOTS is comprised of seven board members and 80 general members this semester.

The locations of volunteering this semester are, Home Hospital, St. Elizabeth Hospital, YWCA Women's Shelter, Tippecanoe Humane Society, Head Start Community Center, Indiana Veterans Home and Hanna Community Center. Members receive the benefits of simplified volunteering, a central organization for tabulating volunteer hours, possible recommendation letters, certificates and awards for excellence in community service. We have also begun each semester with a group meet and greet where you will have a chance to meet with your volunteer group. Throughout each semester there will be a couple of social events set up in order to allow our members a chance to relax and share in there volunteer experiences. At the end of each Spring semester will be an awards banquet dedicated to honoring the most exemplary members and to congratulate each other on a successful year of service.

The current board members are: Joe Lach as President, Michelle Rothfuss as Vice President, Roochika Narula as Treasurer, Jalpa Patel as Secretary, Aparna Keshavan as Service Chair, Sherin Matthews and Erin Tao as Service Co-Chairs, Jordan Herring as Fund Raising Chair and Akshay Thomas as Fund Raising Co-Chair Directors. SHOTS welcomes any interest in our Organization, and always encourages community service at any level.



## ***Industrial Hygiene Program Turning 25!***

Industrial Hygiene will be celebrating its 25<sup>th</sup> Anniversary in the upcoming year. Plans are underway for an anniversary celebration in the fall of 2006 that will coincide with a home football game, Distinguished Alumnus Luncheon, and fall Advisory Board Meeting. Look for other events as part of our celebration at conferences and events. Stay connected via the Health Sciences website. ([www.healthsciences.purdue.edu](http://www.healthsciences.purdue.edu))

# Perspectives on Industrial Hygiene in Korea

*By Neil J. Zimmerman, PhD, PE, CIH  
Associate Professor of Industrial Hygiene*

Remember the lines from the old Jim Croce song, “Don’t tug on Superman’s cape/Don’t spit into the wind”? Well, after my recent trip to the Republic of Korea (South Korea), I can now add a third warning: “Don’t leave your chopsticks upright in your sticky rice.”

I traveled to Korea to present an industrial hygiene overview of welding processes, hazards, exposures and standards at an international neurotoxicology/neuropsychology conference. On the last day of my trip, I had the opportunity to visit with my Korean industrial hygiene colleagues in the Korean Occupational Safety & Health Agency (KOSHA). I was excited to be able to arrange this visit so that I could learn about the current similarities and differences between IH in the United States and IH in Korea—and yes, they do refer to it as industrial hygiene.

Korea is slightly smaller than the state of Indiana but has a population eight times larger (50 million). One of the world’s fastest growing free market democracies, it is a country of great beauty, with friendly and gracious people with a positive, can-do attitude and with an impressive economy.

I was most impressed, however, with the level of industrial hygiene commitment and excellence I observed, both within KOSHA and throughout the entire country. KOSHA’s motto says it all: “Healthy Korea.” Their goal is “a country free from accidents and occupational diseases.” KOSHA sponsors a country-wide “Occupational Safety & Health Week” each July. KOSHA also sponsors a certification program for industrial equipment that could pose a workplace hazard but which instead is designed with safety and health considerations. Certified equipment is given a “Safety Certification “S” Mark.”

## **Similarities and Differences**

At first glance, it appeared obvious that KOSHA was equivalent to our U.S. OSHA, while the Korean Occupational Safety and Health Research Institute (OSHRI) would be equivalent to our NIOSH. However, upon closer investigation, I learned that the Korean organization of IH activities was a bit more complex.

In fact, KOSHA is a quasi-governmental organization, established in 1989 by the Korean Occupational Safety and Health Agency Act of 1987, headed by a president and operated somewhat independently. With approximately 1,200 professional staff (including 240 IHs), KOSHA has three regional offices and 17 area offices throughout the country, and considers OSHRI as well as its Occupational Safety Training Institute as affiliate organizations. KOSHA’s Training Institute is similar to our OSHA Training Institutes, offering some 60 training courses.

While OSHRI’s seven research Centers are responsible for the bulk of KOSHA’s R&D programs, in fact, both KOSHA and OSHRI combined are really more equivalent to our NIOSH. KOSHA does not do actual workplace inspections; that is handled by the approximately 400 safety and health inspectors (including some 30 IHs) of the Ministry of Labor (MOL), a Korean government agency. However, the MOL does not maintain its own IH sampling equipment and relies on KOSHA for its instrumentation, laboratory analysis and training.

Korea’s version of our PELs are referred to as Occupational Exposure Standards (OESs). As best I could determine, they are primarily based on the 1968 TLVs, as are most of our PELs. Other regulations are also similar to U.S. OSHA standards.

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### **“A Grand Association”**

The Korean Society of Occupational and Environmental Hygiene (KSOEH) has 350 full and 900 affiliate members, while the Korean Society of Industrial Hygiene (KSIH) has a membership consisting of 800 industry IHs. KSOEH publishes the Journal of the Korean Society of Occupational and Environmental Hygiene three times per year and holds biannual summer and winter conferences. The Korean Society for Indoor Environment (KOSIE) was formed most recently, in 2003. There are plans for a “grand association” of all Korean IH societies to occur, they hope, sometime this year

It appeared from my short visit that Industrial Hygiene in Korea, literally initiated by Dr. Nam Won Paik, the “Grandfather of Korean IH,” has developed into a powerful, world-class IH presence in two generations of IHs—his students and his students’ students.

(If you’re wondering about the chopstick warning that I mentioned, it is because those upright chopsticks would appear similar to incense sticks at a funeral and are not considered appropriate to portray during dining.)

## **INDUSTRIAL HYGIENE NEWS**

From Dr. Neil Zimmerman

One of the most important ways to learn about your major field of study is to get some type of work experience. A good way to do this is with a summer internship - and, that’s exactly what a number of undergraduate Industrial Hygiene students did last summer! Not only does this give you a chance to gain valuable practical experience, apply what you have learned in class, not to mention, earn some cash, but it also “looks good on the resume”. If you’d like more information, talk to your counselor or one of the IH faculty, keep your eyes and ears open for job announcements throughout the school year, and, do some of your own job searching. Also, if you are an OHS, RHS or EHS major, don’t forget to submit your resume to PIHSA’s online resume book (for internships OR full time positions).

### **AIHce News Report**

**The 2005 American Industrial Hygiene Conference and Exposition (AIHce) held last May in Anaheim was a big success from many standpoints. In attendance were Drs. McGlothlin, and Zimmerman, as well as 5 graduate students. In addition, about 20 Purdue IH alumni who are now practicing Industrial Hygienists were there.**

**Drs. McGlothlin and Zimmerman, along with current or former graduate students Hernando Perez, Valerie Perez, Fan Xu, Alina Goh, Tom Bonner, Mark Knezovich and Hubert Lu, presented papers or posters. All of their presentations were excellent and received many positive compliments. Congratulations to all the presenters for their hard work.**

***Even more exciting: start planning early so that you can be included in all the fun and excitement of the AIHce next May 14-19, 2006, in Chicago! Student members of PIHSA can take advantage of yearly donations received by regional AIHA Sections to support their travel to the Conference. And, the big news for next year’s Conference is that we will be celebrating the 25<sup>th</sup> Anniversary of the Industrial Hygiene (Occupational Health Science) program at Purdue.***

# FORENSIC UPDATE

from

David Tate, Director of Clinical and Forensic Sciences

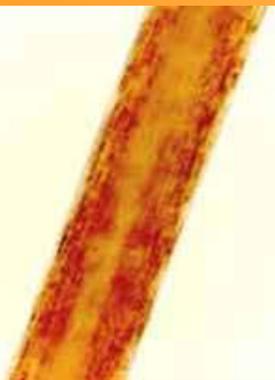
Since our last update we've been able to offer summer workshops for high schools, the public and law enforcement personnel. The high school workshops were focused on two groups, Project Upward Bound out of Purdue Calumet and proctored by Joe Flores. This was a really fun group to work with as the students had been here on campus for several weeks being introduced to several career areas and learning projects. The second group was in cooperation with the Gifted Education Resource Institute and the 21<sup>st</sup> Century Scholars. In both cases the students participated in a wide range of forensic related activities and learned about the various career options available through Purdue. Since the latter part of the spring term and up to now, the Three Amigos, Dr. Ralph Williams, Patrick Jones, our forensic laboratory manager and a retired Cook County Investigator and I have put on over 16 workshops and presentations related to what we are doing here at Purdue. The presentations include high schools, Purdue alumni organizations, private corporations, county libraries in conjunction with reading programs, several professional organizations which include the Indiana Histology Society and workshops on bioterrorism for several Indiana Department of Homeland Security regions. We've also been involved in the most recent Purdue Homeland Security Institute Measured Response and currently a bioterrorism exercise in conjunction with the Department of Homeland Security and the Muscatatuck Urban Warfare Training Center we continue to participate as deputy coroners in death investigation courses and training put on by the Indiana Coroners Board with the most recent being with Roy Hazelwood, FBI, who developed their Behavioral Science Unit and was the basis for the movie Silence of the Lambs.



An important aspect of forensics is that the field is interdisciplinary. New collaborative effort has added several dimensions to courses that can be offered to students interested in some form of forensics, security or technology. These new areas include access to the world's only Bioinformation laboratory run by Dr. Steven Elliott. Dr. Elliott's efforts have focused on both digital facial recognition patterns and digital fingerprints. Dr. Kari Clas, who is in charge of the Biotechnology courses and program located in Discovery Park at the Nanotechnology Center will allow our students to have access to courses that offer techniques in PCR and DNA extraction and identification. One other collaborative effort brings Lt. Col. (retired) Kathy Sweet and her security analysis courses, through Aviation Technology, available to our students.

Our enrollment continues to stay steady with 480 in the introductory course with the spring courses, HSCI 318 and the laboratory HSCI 319 being oversubscribed. Due to the need for more laboratory space, I've been able to grab a large bay in the Service Building for our field work which affords us more space and flexibility in designing case studies and laboratory exercises.

Our students this past summer accepted internships with the DuPage County, Illinois Sheriff's Office, the South Carolina Law Enforcement Center, the Knoxville, Tennessee Police Department, the Illinois State Police, the Culver City, California Police Department, and the coroners offices in Fort Wayne and Indianapolis. Additionally, we've now had two students be accepted and graduate from graduate programs in forensic sciences and several now in graduate programs including one, Kate Dyhdalo, in medical school at Ohio State to study pathology. All in all, a good year for forensic sciences at Purdue.



Can you tell if this is

- a) from a dog
- b) from a person of Caucasian extraction
- c) from a person African extraction
- d) from a cat

Answer: b as Caucasian hair has less pigment and the medulla or central canal has larger pigment granules and is reddish in appearance.

# *2005 Donor Roll for the School of Health Sciences*

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