First Shell Prize Symposium features distinguished cancer researchers

Dr. Rajesh Agarwal honored for his work with silibinin

The John and Barbara Shell Prize for Excellence in Research and Graduate Education was awarded to Rajesh Agarwal, PhD, in 2006. Activities planned to award the annual prize were expanded to include a half-day symposium open to Health Sciences Center campus faculty, research staff and students. Agarwal and two renowned researchers he invited, presented their work in a series of seminars on March 30, 2007. Agarwal presented a glimpse into his extensive work with silibinin and its use in cancer prevention and treatment. Chinthalapally Rao, PhD, professor and Kerley-Cade Endowed Chair at the University of Oklahoma Health Sciences Center, presented his work on colorectal cancer prevention with celecoxib. Zigang Dong, PhD, professor and the McKnight Presidential Professor in Cancer Prevention at the University of Minnesota’s Hormel Institute, presented a third seminar covering some of his work with the chemoprevention of cancer. All three professors are well known internationally for their work with natural products and the use of these compounds in cancer treatment as well as extensive work in carcinogenesis.

The Symposium was attended by more than 100 campus academicians ranging from faculty to post-doctoral fellows, graduate and pharmacy students. The enthusiasm of the attendees was so high that the discussion following each talk exceeded the time allowed and continued at the reception following the symposium.

Harold C. Heim Awards recognize excellence in student research

The 2006 Harold C. Heim Awards for Excellence in Graduate Research were presented to Natalie Lassen and Erica Lynn Bradshaw Pierce. The presentations were made at the dinner following the Shell Prize Symposium.

The graduate faculty program directors, Vasilis Vasiliou, PhD, and Tom Anchordoquy, PhD, respectively, spoke of the students’ research projects. They were joined in presenting the awards by Warren Heim, a supporter of the endowment funding the awards and son of Harold Heim, a former dean of the School of Pharmacy responsible for the development of graduate student research. The selection process to identify recipients of the 2007 Shell Prize and Heim Awards was initiated in July.

Zigang Dong, Rajesh Agarwal and Chinthalapally Rao were honored at a reception following the Shell Prize Symposium.

Dean Ralph Altiere (L) and David Ross, department chair (R) present Dr. Agarwal with the Shell Prize engraved bowl.

John and Barbara Shell are alumni of the School of Pharmacy and generous contributors to the endowment that funds the awards.

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The presentations were followed by a reception and a dinner attended by invited administrators, researchers and graduate students.

The symposium topic, Cancer Chemoprevention, was based on the long-standing interest and expertise of Agarwal, recipient of the Shell Prize. Cancer chemoprevention is currently a cutting-edge approach to lower overall cancer incidence and associated mortality and morbidity. Also important is that the most success achieved clinically in the cancer chemoprevention arena is with colon cancer, where the contribution of Rao, one of the two invited speakers, is unparalleled. Several times, Rao has been the first to report targeted approaches for the prevention of colon cancer by both synthetic and natural agents.

The other important aspect of cancer prevention research in last 10 years has been the use of phytochemicals present in fruits, vegetables, beverages and spices, either in pure form or as an extract with a mixture of them. Dong is recognized as the pioneer in this area of cancer prevention research. Over the years, Dong has been the first to identify various agents and targets through which they exert cancer preventive efficacy in various epithelial cancers.

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Zigang Dong, Rajesh Agarwal and Chinthalapally Rao were honored at a reception following the Shell Prize Symposium.
P1s for some one-on-one

Christopher Turner, PhD, Experiential Programs director, upper left corner, poses with, from left (Row one) Geta Anteneh, Kelly Pham, Kim Dao Dang, Habtama Woldeyes, and (Row two) Lisa Yacko and Jeremy Ortega, all P1 students, and the poster that won them a pizza lunch and praise. The class poster competition focused on producing educational material that might be posted in a community pharmacy setting.
Celebrating convocation night

Awards and scholarships were presented to pharmacy students, faculty and practitioners at the annual Awards Convocation on May 4. Students, faculty, friends and families were present to honor the recipients of awards for excellent performance in academics and service. The awards were presented by School of Pharmacy Dean Ralph Altiere, PhD.

Several School of Pharmacy faculty received awards for their outstanding contributions to education, research and community health care. A number of pharmacists and preceptors were also acknowledged for their influential roles in the health of Colorado communities.

Students vote for best instructors
Excellence in Teaching by P1 class – James Ruth, PhD
Excellence in Teaching by P2 class – Connie Valdez, PharmD
Excellence in Teaching by P3 class – Doug Fish, PharmD

Diversity efforts recognized

The School of Pharmacy was well represented at the Chancellor’s Diversity Recognition Awards Luncheon held April 26.

Among those receiving awards were pharmacy students Stephanie Cho, Olivia Rapacchietta, and Nicolas Pollard, and SOP Dean Ralph Altiere. Cho, Rapacchietta and Pollard were honored as outstanding students by demonstrating a high level of commitment to diversity throughout their pharmacy school education.

Specifically, this team has driven the development, student participation, coordination, training and leadership of several health fairs for underserved communities, including the Denver Indian Health and Family Services Diabetes Health Fair, the Native American Wellness Health Fair, the Wellspring Health Fair, the National Western Stock Show Health Fair and the Empowering a Health Community Health Fair.

The three students also planned and coordinated the 2007 Student National Pharmaceutical Association (SNPhA) Regional Conference, which was aimed at addressing diversity and health care barriers. More than 13 schools were invited to attend with more than 150 registrants and 11 financial sponsors attending and supporting the conference.

Former Surgeon General Joycelyn Elders served as keynote speaker. The conference offered immunization certification as well as several other continuing education programs related to medical conditions frequently encountered in underserved populations.

Long before becoming the dean of the School of Pharmacy, Altiere was a strong supporter of diversity. He played an important role in organizing SNPhA as a student organization within the school. Because he understood the importance of its mission to support underserved and diverse communities, Altiere supported funding the expenses for the SNPhA founding members at the SOP to attend the national conference in 2003.

He was instrumental in the success of the 2007 SNPhA Regional Conference hosted by local chapter in March.

The awards luncheon is part of the Celebrate Diversity Series hosted by the UCDHSC’s Office of Diversity.
Providing pharmacy care in Guatemala

For 10 days this spring, Doug Fish, PharmD, chair of the Department of Clinical Pharmacy, and P4 students Sarah Carson and Jamie Billotti were immersed in the rural culture of Guatemala while providing pharmacy services to impoverished villagers through a volunteer medical mission.

On their trip, organized by Pura Vida, a non-profit organization that focuses solely on Guatemala, they served on teams with other medical professionals. They were based in Chichicastenango, located in the highlands about four hours by bus from Guatemala City. Each day the teams traveled to clinics set up in outlying farming areas to provide health care to indigenous Mayan Indians, who are a poor, underserved and generally neglected segment of the population.

Fish, Carson and Billotti dispensed prescriptions, compounded medications, counseled patients and consulted with other health care providers. They treated 200 villagers a day and dispensed 3,100 prescriptions over five days.

Counseling patients was a challenge since in most cases one translator was used to translate English into Spanish and another was then used to translate that Spanish to Quiche, the native Mayan language.

This is Carson’s second medical trip. Last year she went to Ecuador and wants to make more trips into Third World areas. She taught a group of little girls a few words in English and they taught her some Quiche. On the last day as the bus drove out of the village, the youngsters ran behind waving and yelling “good-bye” in English.

“Learning to use what you have to treat someone adequately when resources are limited forces you to think about the pathophysiology behind the disease and what medication or non-pharmacologic therapy will work to cure or treat the patient,” she said. “You begin to understand the true importance of non-pharmacologic therapy when you realize that a one month supply of an antihypertension medication is all you have to give them.”

Students benefit from medical trips such as these in numerous ways. They have the opportunity to put their pharmacy education directly into practice and are able to work independently under non-traditional, somewhat challenging conditions where therapeutic substitution and improvisation are the norm due to limited supplies of available medications. Students also gain experience in working directly with other health care providers.

“The experience is an opportunity to practice pharmacy and to interact closely with other health care providers in unconventional ways, plus you gain a first-hand understanding of the difficult conditions under which much of the rest of world lives,” said Fish, who went on medical trips to Guatemala in 2005 and Peru in 1997.
Grape seeds show potential in fighting cancer

Chapla Agarwal, PhD, studies beneficial effects of grape seeds.

A common theme continues to develop in cancer research: a concept that is far from new: eat your fruits and vegetables.

Chapla Agarwal, PhD, assistant research professor at the School of Pharmacy, recently received a five-year, $1.9 million National Institutes of Health grant to study the effects of grape seed extract on colorectal cancer. She believes it may become a major factor in the prevention or treatment of cancer.

“Our aim is to basically extract the grape seed, see how concentrated it is, observe how the cancer acts in the body and see how we can use the grape seed extract against the cancer,” Agarwal said. “Our major interest is to basically prevent the cancer itself, but also to help prevent people who are at high risk for colon cancer from developing the disease,” Agarwal said.

Grape seeds are rich in antioxidants, which act as inhibitors against the disease by scavenging the free radicals that can cause colorectal cancer. Agarwal’s pre-clinical trials at the School of Pharmacy have shown success in treating induced tumors in mice models and treating them with grape seed extract. Further research still needs to be done before the findings are applied to human cancers.

The potential benefits are huge. “If you could prevent the cancer somewhere, or at least stop one stage of the cancer development, it would help control the disease,” Agarwal said. “Chemo-preventative agents, such as grape seed extract, can do this.”

Prevention is the best form of treatment for cancer, and chemoprevention is a rapidly growing area in the field cancer research.

One of the major interests in Agarwal’s research stems from the lack of side effects from grape seed extract compared to other forms of cancer treatment.

“A promising element of studies so far is that the mice haven’t shown toxicity to very high doses of the extract. That’s amazing, because toxicity is the main problem with the current cancer drugs and their side effects. Many people die, not from the cancer itself, but because of side effects from the treatment. That’s why this natural product research is good,” Agarwal said.

The antioxidants can be found in all forms of grapes, but they are especially prevalent in red grapes with seeds. Because the entire grape is used in the process of making wine, red wine is a good source of the antioxidants found in grape seeds.

Through the grant she received, Agarwal has been dedicating her research to the effects of grape seed extract on colorectal cancer, however, she believes it may also affect other forms of cancer, such as prostate, skin and breast cancers.

There is still a significant amount of research to do before any conclusions can be made, but Agarwal thinks grape seed extract has a lot of potential for the future of cancer treatment. “I think it will take my whole research career; there’s a lot we don’t know. Maybe it will take over as the main form of cancer treatment. That’s what I want, but we haven’t reached that point yet.”

For now, she says, people would do well to focus on eating more fruits and vegetables.

2007 Ebert Prize shared by School of Pharmacy and Amgen, Inc.

Professors Theodore W. Randolph and John F. Carpenter and graduate student Renuka Thirumangalathu from the School of Pharmacy and Sampathkumar Krishnan and David N. Brems from Amgen, Inc., received the 2007 Ebert prize for an article they published in the Journal of Pharmaceutical Sciences.

The article, titled “Effects of pH, temperature, and sucrose on benzy alcohol-induced aggregation on recombinant human granulocyte colony-stimulating factor,” examines how benzy alcohol causes protein aggregation in therapeutic protein products, specifically recombinant human granulocyte colony-stimulating factor (rhGCSF). By studying this, the researchers hope to create ways to prevent the aggregation. In the article, Thirumangalathu and her colleagues proposed some effective strategies to inhibit or partially counteract preservative induced aggregation in multidose protein product development.

The annual award is presented by the American Pharmaceutical Association (APhA) for new findings that have a good chance of significantly impacting pharmaceutical sciences.

The Ebert Prize, established in 1873, is the oldest pharmaceutical award in the United States and is named after former APhA President Albert Ethelbert Ebert.
Getting to know the incoming and outgoing residents

Victor Lewis, PharmD

Tell a little about your background.

I am coming from The University of Georgia College of Pharmacy in beautiful Athens, GA. I grew up in Jesup, GA, and still call it home. Jesup is a small town and I came across my first exposure to pharmacy as a junior in high school. A pharmacist from church needed a new delivery boy to deliver meds, and set up hospital beds and oxygen concentrators for his independent (business) in town. I really enjoyed it and stayed with it, so he began letting me do more and more behind the counter. When it came time for college, I decided to take the pre-pharmacy track and try to get into pharmacy school. I still used vacations and holidays to go back home and work with the pharmacy to stay in touch with the pharmacist and the profession and I haven’t looked back since!

What are your plans for the future?

My first job really opened my eyes as to how large an impact a pharmacist can have on patients and the community. As I delivered medications and hospital beds, so many patients expressed how much Alan (my pharmacist) meant to them and how much he had helped them to navigate through medical issues. I saw this and realized that this is the impact I want to have on patients in a career. Many times, pharmacists are the last line between the patient and the medication, so it is up to us to make sure everything is okay before the medication is administered.

For rotations, I decided to try to get as much hospital exposure as possible, so I went to the Medical College of Georgia in Augusta, GA, for my fourth year. I found this to be incredibly rewarding and have decided to pursue a career in this type of practice.

What’s next for you?

I am very excited to be coming to Denver! I enjoy hiking and skiing, and I guess all the other activities that people who come to Colorado are interested in. I look forward to beginning and am enthusiastic about coming across so many new people and experiences.

Phillip Owen, PharmD

What are your plans?

My goals are to get the most out of my opportunities as a pharmacist and to develop myself as a clinician as much as possible. So many options exist for pharmacists today with so many different ways to practice pharmacy that I want to experience as many practice types as possible and maximize my patient care abilities. As for more concrete goals, I would like to work in academia because I have seen what a large impact a good professor can have on students. I would get a lot out of seeing students grow and develop. For the next few years, I am interested in clinical pharmacy, preferably at a large academic medical center which could offer a mix of both clinical pharmacy and academia. For the long term, it is hard to say at this point. The dynamics of the profession are changing so much that it is hard to say what pharmacists will be able to do in 10-15 years. I feel that my roots in independent pharmacy will be a constant. I will pull me back to that practice area, but there are so many options with wellness clinics and ambulatory care now, even that is hard to describe specifically.

How do you feel about moving from Georgia to Colorado?

I am very excited to be coming to Denver! I enjoy hiking and skiing, and I guess all the other activities that people who come to Colorado are interested in. I look forward to beginning and am enthusiastic about coming across so many new people and experiences.

Kelli Gibson, PharmD

What have you been doing since you finished at SOP?

This pharmacy practice year has been quite a ride. I have grown in many areas that I did not anticipate. I don’t think that I would have been able to complete this year without the encouragement and laughter of my fellow residents, Kelli, Jessie, and Dorothy who will always hold a special place with me and I wish them all the best of luck in the years to come.

How do you feel about your experience?

This pharmacy practice year has been quite a ride. I have grown in many areas that I did not anticipate. I don’t think that I would have been able to complete this year without the encouragement and laughter of my fellow residents, Kelli, Jessie, and Dorothy who will always hold a special place with me and I wish them all the best of luck in the years to come.

What experiences at the SOP will stay with you?

One of my most memorable experiences occurred during my faculty rotation month. My preceptor was Dr. Robert Page. At the time we were teaching first year pharmacy students about proper aseptic technique. This involved rotating all 130 students through the University of Colorado Hospital inpatient IV room in order to

Resident new to the program or continuing in specialty tracks gathered in July for orientation. Pictured (L to R) are Phillip Owen, Kelli Gibson, Joe VandeGriend, Kenneth Utz, Dorothy Albright and Jessica Burch.
for the students to demonstrate their skills while preparing a parenteral medica-
tion in a real IV room. Four students were scheduled per hour, so it took more
than 30 hours for us to facilitate all of the students!
Why did you choose pharmacy?
I was initially an undergraduate pre-health major. After shadowing my cousin,
who was a pharmacy resident at the time, I decided I wanted to go to pharmacy
school. I was interested in working in the health care field, but I was also interest-
ed in the many ways business knowledge is utilized in pharmacy.
Where do you want to go from here?
Ideally, I would like to work as a pharmacy clinical coordinator. This position
would include the responsibility of working with pharmacists and other health
care professionals to create optimal clinical pharmacy programs. I also hope to
mentor students, residents, and other pharmacists through this position.

Joe VandeGriend
What experience do you have in pharmaceuticals?
I graduated from the University of Iowa, School of Pharmacy in 2005. Last
year, I completed a Pharmacy Practice Residency at the University of Colorado
Hospital. I was fortunate to stay on this year as the Family Medicine Specialty
Resident at UCHSC: School of Pharmacy with Joe Sasmorn. Recently, I accepted
a position with the School of Pharmacy as an assistant professor in the
Department of Clinical Pharmacy, which will begin in August.
What created your interest in pharmaceuticals?
Pharmacy runs in my family; my great-uncle owns a pharmacy in my small Iowa
cr homestown, his son now runs it; my uncle also owns and operates several pharma-
cies in NE Iowa; my first cousin is a pediatric clinical pharmacy specialist in
Pennsylvania. I chose pharmacy because the opportunities within the profession
are almost endless: academia, ownership of own business, clinical pharmacy spe-
cialist, etc…
What would you like to accomplish with your degree?
My goal is to become an effective teacher and successful academician – I have
pursued an academic position because it is challenging and rewarding.

Erica Horinek, PharmD
Tell me about your background.
I am currently a pharmacy practice resident in Salt Lake City with
Intermountain Healthcare / LDS Hospital. I graduated from the University of
Wyoming School of Pharmacy.
What did you do before college?
I am originally from Colby, Kan., and worked in a pharmacy during high
school, which led to my decision to be a pharmacist.
What do you want to accomplish with your degree?
My career goal is to be an adjunct faculty at a school of pharmacy, specializing
in either critical care or solid organ transplant services.

Dorothy Albright, PharmD
Tell me about your background.
I graduated from the University of Buffalo School of Pharmacy in 2006 with a
PharmD, before starting a oneyear pharmacy practice residency at the University
of Colorado Hospital.
What do you plan to do next?
After the residency is completed at the end of June, I will be starting a clinical
toxicology fellowship at Upstate Poison Control Center in Syracuse, NY. It is a two-
year program and my long term goal is to become a board certified toxicologist.
What led you to a career in pharmacy?
I chose a career in pharmacy because it is a challenging field in health care that
has many opportunities to specialize; in my case toxicology. I want a career as a
PharmD toxicologist because I think PharmD can contribute to the field of tox-
cology with their foundation in pharmacokinetics, drug information, and ability
to memorize detailed information without necessarily seeing a patient to relate to
the information; which is the way physicians learn.
What are your ultimate goals?
I would like a career in toxicology that involves research and a teaching com-
ponent at a poison control center. These very different methods of learning can
stimulate you and your colleagues for your entire career. I have thoroughly enjoyed
my experience as a pharmacy resident at UCH and I appreciated all the opportu-
nities to have rotations and to work with the faculty.

Angela DiGiacinto
Where are you from?
I am coming from Omaha, Neb., as a recent graduate of the University of NE
College of Pharmacy.
Why did you decide to study pharmacy?
I am from a family with six children, my twin sister and I being the youngest. I
was born and raised in Omaha. My parents and three of my siblings still live in
Omaha. I have an older sister who graduated from my same college of pharmacy
10 years before I did, so she has been a strong influence in my career decisions.
She was a huge role model for me as I worked my way through pharmacy school
and has always been my biggest supporter.
What do you feel about the upcoming year?
I am so excited about the opportunity given to me at the University of Colorado
Hospital with the pharmacy residency! I want to take this year to learn as much as
possible and expose myself to as many clinical pharmacy opportunities as I can.
What do you want to do after your finish your residency?
I hope to have a career in clinical pharmacy in a hospital where health care is
implemented progressively and where I can really continue to refine my profes-
sional skills.

Jennifer Tobin
Tell me about your background.
I am originally from Austin, Texas, but currently live in Houston and am finish-
ing up at University of Houston College of Pharmacy.
Why are you interested in pharmacy?
I chose pharmacy as a career path because of my interest in how drugs work in
and affect the human body, as well as to have an opportunity to be a unique mem-
ber of the health care team. I have noticed from my own experience with family
members that patients are typically misinformed or not informed at all about their
medications or why they are taking them. My older sister has been a practicing hos-
pital pharmacist for more than 10 years, and that is another really big part of why
I chose pharmacy.
What do you want to do in the future?
My short term pharmacy goals include graduating and passing the NAPLEX
and law exams for Texas and Colorado. Then of course, working hard at University
of Colorado Hospital next year and completing the pharmacy practice residency
program. After that I would like to pursue a second year in oncology or infectious
diseases, (but am also open to other possibilities based on my experiences during
my first year of residency) with the goal of working as a clinical pharmacist.

Jessica Burch
What are your plans for the upcoming year?
I will be staying at UCHSC as the PGY2 family medicine resident.
What do you hope to accomplish as a family medicine resident?
My goal is to gain additional experience in ambulatory care pharmacy and work
with pharmacists who have set up effective collaborative practice agreements in
their clinics.
What did you do before you came to UCHSC?
I graduated from Colorado College with a bachelor’s degree in Biochemistry
and went to work for a genetics company in Utah.
What made you decide to pursue a career in pharmacy?
After spending a while doing genetics research I decided I wanted a career that
would allow me to work directly with patients. I looked at many career options in
the medical field and decided that pharmacy most closely matched my interest.
I went to pharmacy school at Midwestern University in Glendale, Ariz. After grad-
uation, I knew I wanted to do a residency and I knew I wanted to move back to
Colorado. I was lucky to achieve both of my goals by matching at UCH.

Chelsea Hunter
Where did you go to college?
I graduated from the University of Iowa College of Pharmacy.
How do you feel about coming to SOP?
I am very excited to be starting a new step in my professional pharmacy career.
Why are you interested in pharmacy?
My interest in pharmacy came from shadowing a hospital pharmacist during a
Medical Careers class I took my senior year in high school.
Is anyone in your family in the pharmacy profession?
My dad has been a pharmacist for more than 35 years.
Which area of pharmaceuticals interests you most?
What do you want to do after your finish your residency?
I want to have a career in clinical pharmacy at a hospital where health care is
implemented progressively and where I can really continue to refine my profes-
sional skills.

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CONGRATULATIONS, SCHOOL

Doctor of Pharmacy Non-Traditional Program

December 2006
Joice Blesson Andrews
William Arnold Gault
Denise Marie Herley
Cheryl Boyle Latham
Rebecca Ann Liggon
Anne Ashton Lowe
Eun Jung Nam
Cindy Truong Natsheh
Bernd Philipp Schwalbe

May 2007
Rita Dana Ankus
Anita M. Berk
Kevin Choe
Soonyang Chung
Debra Lynn Painter Cowan
William C. Guest
Sarah Hagler
Mary Patch Harrington
Jenni Marie Huer
Tracy Jane Householder
Erin Walsh Kraemer
Catherine Lai
Michele Crossland Lester
Tamara Neyman McFarren
Chad E. Miller
Jennifer Lynn Pawelek
Eileen Peng
Suja A. Pothen
Renée Karen Schroeder
Charles Clifford Sharkey
Connie Pin Chi Shiu
Mary Ann Stuhan
Kumar Swamy
Mei Tang
Marvia Regina Cichello Whitbeck

Doctor of Philosophy

December 2006
Natalie Lassen, Toxicology

May 2007
Erica Lynn Bradshaw, Pharmaceutical Sciences
Wenchang Guo, Toxicology
Doctor of Pharmacy, May 2007

Sammy O. Abuela
Jing An
Sarah Louise Mercer Anderson, Rho Chi, Phi Lambda Sigma
Michael John Andrews, Rho Chi
Michael Daniel Appel, Phi Lambda Sigma
Rasha Ragaei Baroxem
Daniel Warren Bates, Rho Chi
Jordan David Bendinelli, Phi Lambda Sigma
Megan Ashley Berch-Wegner
Sandra Kay Berry
Justin Bradley Bowles, Phi Lambda Sigma
Ella Anne Breitenbach
Tyler Alan Byassee, Rho Chi
Heather Skye Cabiness, Phi Lambda Sigma
Emilyn Garcia Cabrera, Rho Chi
Christian DeAnn Dobbs, Phi Lambda Sigma
Megan Patricia Eck
Jessica Anne Engelbert
Kevin Michael Fanciulli
James Hunter Farrar, Rho Chi
Cynthia Louise Feis
Daniel Eric Finger
Sean Moloney Fergatz, Rho Chi
Kevin Michael Flyn, Rho Chi
Samarasit Ghezae
Jeffrey David Gold
Mark Bradford Gore
Sonya Laurice Hawkins
Katherine Marie Hays
Dawn Margaret Hollingshead, Rho Chi, Phi Lambda Sigma
Deborah Lucille Howell, Phi Lambda Sigma
John Michael Joffer
Erin Elizabeth Johnson
Sarah Louise Johnson
Marivic Rimas Jose
Keith Thomas Kapp
Kristen Kemp
Nafisa Khan
Bonnie G. Landrum
Jennifer Louise Larson
Hien Thi Le
Jasmine Trang Le, Rho Chi
Team Anh Le
Darryl Ross Leopold
Jada Marie Logan
Xiaojun Lu
Buu Chi
Taryn Leigh Lujan
Monica Ann Manur, Rho Chi
Matt Marshall, Rho Chi
Adrienne Ann Martin
Theresa Rebecca Martin
Euphrine Alexander Medley, Phi Lambda Sigma
Jessica Meier, Rho Chi
Kendra Kay Messing
Jennifer C. Meyer, Rho Chi
Kelley Christine Miller
Leanne Alisa Mor
Ahmed Abdi Mudey
Rameana S. Nerpel, Phi Lambda Sigma
Binh Nguyen
Leann ThuAnh Nguyen
Minh-Thu Thi Nguyen
Trung Thi Nguyen
Feliks Oberman
Adam David Odberg
Aasid Mansur Omar, Rho Chi
Joy Chinwe Osuala
Randall Williams Parish II
Christien Travers Paynter
Ashley Rebecca Pearson
Jenna Lynn Pechek
Jon Tor Peterson
Tuyet-Hong Thi Pham
Evelyn Phuong Phan, Rho Chi, Phi Lambda Sigma
Katherine Kristine Pietz
Nicolas Ross Pollard
Nicole Renee Ratl
Mary Shaoud, Rho Chi
Robert Thomas Willis, Jr.
Robert Thomas Willis, Jr.
George F. Wissa
Devinh Denise Wright
Christina Jing Won Yu

Where are the graduating PharmD students going?

• Total graduates – 123
• 72 percent will reside in Colorado
• 10 percent will enter residency programs
• One graduate received a fellowship
• One graduate will pursue an advanced degree
• 34 percent will practice in rural or underserved populations
• 69 percent will practice in community/retail field
• 24 percent will practice in hospitals
• 7 percent will practice in settings such as managed care, public health service, and home health
Students on rotation at Porter Adventist Hospital in Denver not only get experiential experiences at the inpatient hospital pharmacy, the outpatient ambulatory care pharmacy and the anti-coagulation clinic, but they also have the opportunity to participate in innovative and award-winning programs.

Rotations in the hospital’s two pharmacies and the anti-coagulation clinic familiarize students with patient interaction, gathering medication information, conducting research and making recommendations about patient care.

Director of Pharmacy at Porter, Ryan Stice, RPh, BS, ‘96, PharmD, ’06, implemented three new programs, two of which garnered industry awards in 2006.

Porter was selected as a best practice site in the Centura Health system for the use of pharmacy students in a Medication Reconciliation Program.

Meds errors affect some 1.5 million Americans each year, according to a study by the Institute of Medicine. One of the most challenging aspects of improving medication safety is ensuring that accurate information about a patient’s medications is provided to physicians when a patient comes into the hospital. Compiling the list of medications requires very specific steps as well as clearly defined roles and responsibilities.

In the past, nurses at Porter collected this information from patients when they were admitted to an assigned unit. Stice saw that by implementing a formal process using pharmacists and pharmacy students to collect an accurate list of a patient’s current medications and reconciling the list with physician’s orders could significantly reduce adverse drug events. Their sleuthing may involve calling families, pharmacies, doctors and nursing homes to get truly complete information.

“People come into the hospital and say they take a red pill twice a day for blood pressure, but that could be one of a thousand possibilities,” said Stice. “Someone has to track down those details. I knew that a dedicated pharmacy team could do the most accurate job.”

By having pharmacy students gather and check medication information, they have considerable interaction with patients and family members.

“We’ve received tremendously positive feedback from physicians and nursing staff,” said Stice. “The pharmacy students do a great job of tracking down all those details and they produce a very accurate home medications list that reduces medication errors while the patient is in the hospital.”

Another project Stice implemented at Porter received a Colorado Patient Safety Coalition Award for the safe use of Fentanyl Transdermal Patches.

Stice and his pharmacy staff had identified overuse and inappropriate use of the potent topical narcotic painkiller Fentanyl. The Federal Drug Administration had issued a “black box” warning about Fentanyl cautioning that it’s appropriate for opioid tolerant patients, those who already are taking other narcotic painkillers, for chronic pain that is not well controlled with shorter-acting painkillers. The warning, outlined in a so-called “black box,” is the most serious drug can bear.

Pharmacy students Carrie Dunn and Wendy Johnson who were on clinical rotation at the time, conducted an extensive audit of the use of the medication under the guidance of Oncology Clinical Pharmacist Robin Mower, BS, ’93, PharmD, ’97; and Clinical Coordinator Diana Lehman, BS, ’96. They found that surgeons were incorrectly prescribing the patch for immediate acute post-surgical pain.

They also learned that patients who were opioid naive might not be good candidates for Fentanyl and were at risk of respiratory depression.

Based on the literature and the data the students collected, the hospital’s medical executive committee authorized the pharmacy to step in and override physicians’ prescriptions for Fentanyl and make appropriate changes.

“The students’ work was instrumental in getting to that point,” said Stice.

In addition to her rotation, Dunn also worked as an intern at Porter while she was in pharmacy school. She has since graduated and is now a clinical and staff pharmacist at Porter.

“The Fentanyl patch project was clinically significant for patient care and to have it win an award is gratifying,” said Dunn, who is now a PharmD. “I absolutely love working here. We have a wonderful group of people who make Porter a very nice place to work.”

Students at Porter also can rotate through the outpatient Anticoagulation Clinic located next to the emergency department at Porter to help educate patients taking the blood thinning medication Warfarin (Coumadin).

Dosing of Warfarin is complicated because it interacts negatively with many commonly used medications as well as some foods, vitamins, minerals and herbal supplements. In order to optimize the therapeutic effect without risking dangerous side effects, the degree of anticoagulation must be closely monitored. At the clinic, patients get their blood drawn by Susan Warburton, PharmD, with prescriptive authority to adjust their medication dosage under physician protocol.

Stice hopes the rotations at Porter give students the opportunity to put a face on the diseases they learned about from a textbook.

“I’d like students to see that there are alternatives other than traditional pharmacy,” he said. “I hope they have a rich experience with considerable patient contact.”
For a few years, our articles have mentioned that the University of Colorado Health Sciences Center is moving to a new campus at the site of the former Fitzsimons Army Medical Center. The Ninth Avenue campus is in the process of being sold and will be vacated by December 2008. Our articles have referred to the move to “Fitzsimons” as we planned our schedule for inclusion in the whole campus transfer. The new campus has been developing rapidly and recently was renamed the “Anschutz Medical Campus (AMC).”

This September, upon completion of construction on the education buildings and a faculty office building at the AMC, the School of Pharmacy’s move will begin. Small waves of Department of Clinical Pharmacy faculty members, the dean’s office and other administrative staff members will move in each of four months, September, October, November and December. Some staff and faculty members will commute between the campuses to maintain services in both locations.

Student moves begin following the fall break. The P1 classes will switch to some of the AMC’s new classrooms in late October, allowing all but two months of their pharmacy education to take place in the new setting. The P2 and P3 classes will begin their classes at the AMC in January 2008 when all the new classrooms will be ready for occupancy.

Following completion of the second research building at the AMC, in the summer of 2008, the Department of Pharmaceutical Sciences faculty members and all remaining administrative staff will be moved between September and December. Finally, when the school’s own new building is opened in mid-2010, the faculty and staff will move again to be consolidated under one roof.

Stay tuned for new addresses and phone numbers, but rest assured the current ones will serve without disruption for another year.
School of Pharmacy alumna, Hien Pham, PharmD, ’03, brings a special kind of experience to her work in the oncology department at Providence Hospital in Mobile, Ala. Five years ago, as she was starting her training rotations, Pham was diagnosed with a form of bile duct cancer and was told that she had six months to live.

After being diagnosed, Pham followed her parents’ request for her to stay in Colorado to receive treatments and continue her education, rather than returning home to Alabama. She underwent surgery, chemotherapy and radiation, a process that took more than four months and interrupted her pharmacy education.

Returning to Colorado this June for a visit to the school, Pham talked about her battle with split cell cholangiocarcinoma while studying to become a pharmacist and explained how that experience affected her career. Working in two pharmacy satellite pharmacies at the hospital, Pham often shares her stories of fighting cancer with her oncology and renal failure patients.

Pham attributes much of her recovery to the support she received from the SOP community. “My decision to stay in Colorado to receive treatments was the best decision I’ve ever made. The support from my family, classmates, friends, SOP faculty, and the excellent medical care I received truly exemplifies our hospital’s mission.”

When she completed a large part of her treatment, she returned to school to address her rotations and to graduate. “I was supposed to be dead four and a half years ago and I’m still alive.”

One day, she encountered a woman she knew who was a medical student and was being treated for leukemia at the hospital. Pham related her experience with cancer to the woman. “When I told her, she started crying. She gave me a hug, and I told her to just keep fighting,” Pham said. “I was supposed to be dead four and a half years ago and I’m still alive.”

Pham is an inspiration to her coworkers at Providence Hospital and they are quick to praise her unselfish and gentle demeanor. “Hien brings joy and laughter to our department,” said co-worker Mary Short. “There have been numerous times she helped another employee or a patient emotionally and financially when they were in need of help. She truly exemplifies our hospital’s mission.”

Not just a cancer survivor, Pham is athletic and determined to stay in shape. Several times every day, she climbs the 12 flights of stairs to the hospital pharmacy where she works. She also goes swimming after work. “I just live my life one day at a time and enjoy every moment I have in my life,” she said. “To me, everything happens for a reason. That’s keeping me positive.”

Class of ’57 reunion

Francisco Gallegos and Leland Brollier, accompanied by his wife Gayle, received mid-day tours of the current School of Pharmacy building and its future site at the Anschutz Medical Campus in mid-May. In addition to recalling pharmacy school in the last half of the 1950s, the two were taken to lunch by the dean and caught up with the current status of the school’s varied programs and pending moves to the new campus. Gallegos also attended 50th reunion activities on the Boulder campus.

Health care Careers Web site launched

Western Healthcare Alliance announces a new career Web site, Rural Health Careers Colorado (www.rhcco.org). RHCCO was developed to assist rural health care providers with the recruiting efforts, and was uniquely designed to bring providers and professionals together via the internet. This Web site lists clinical and non-clinical opportunities at rural Colorado hospitals, their affiliated clinics, and other health care facilities.

The Rural Health Careers Colorado Web site offers job seekers the opportunity to search for positions based on type of position and location. This site also allows job seekers to post their resumes online, offers helpful links, and is free to use.

Hospitals across Colorado have open positions available for physicians, nurses, technicians, and more. Once placed, professionals will discover the benefits of working in a rural community, including short commutes, better quality of life, and close and easy access to the scenic outdoors.
Avoiding self-deception can enhance your pharmacy career

By Jenni Prosser
Office of Public Relations

Speaking at the School of Pharmacy’s annual Marguerite C. Holden Seminar, Bruce Berger, PhD, RPh, discussed techniques for dealing with difficult patients in his lecture about self-deception.

Berger, professor and head of the Department of Pharmacy Care Systems at Auburn University, explained how every problem in any relationship, whether between spouses, students, faculty or patients, can be traced to issues of objectification and self-deception.

Viewing a person as an object can allow us not do right thing. We then seek justification for our actions, a process Berger refers to as self-deception. Through this, we ignore reality or “become blind.” This behavior has damaging effects on us and others, leading to unnecessary bursts of anger and other negative actions. By becoming more aware of self-blinding and its consequences, we can find guidance needed to appropriately treat others.

Through a series of examples, Berger showed how always treating a person as a person, regardless of how they are acting, will save energy and improve relationships.

Berger believes that by considering what our personal source of truth would do in difficult situations we can find guidance needed to appropriately treat others. Berger cited religious beliefs as his source of truth.

He related a story of an angry student who, upset with the grade he received on a paper, threw the document at Berger and cursed at him. Berger explained how because of his experience studying self-deception he was able to see that the student was stressed and not take the incident personally. He then told the student he would not tolerate his attitude but was able to see that the student was stressed and not take the incident personally.

By becoming more aware of self-blinding and its consequences, we can find guidance needed to appropriately treat others. Berger cited religious beliefs as his source of truth.

Berger warned against getting stuck in the self-deception box, and becoming blind to others’ humanity. He believes that by truly treating everyone as a person and not as an object, we all can become better people, as well as better pharmacy professionals.
The School of Pharmacy is experiencing a number of major transitions that will change how and where pharmacy education and research will be conducted.

In July 2006, a new chancellor was appointed at the University of Colorado at Denver and Health Sciences Center; in December 2006 a new dean was appointed at the school, and by 2010 the school will be relocated from the Ninth Avenue campus into a new pharmacy building on the Anschutz Medical Campus in Aurora.

To help pharmacy students adjust to these transitions, UCDHSC Chancellor M. Roy Wilson, MD, MS, and School of Pharmacy Dean Ralph Altiere, PhD, spoke about the changes at a lecture held February 23.

The chancellor stressed the value of approaching pharmacy and other areas of medical research as interdisciplinary work. As an example, and to highlight the importance of working with the Downtown Denver campus, Wilson talked about the research surrounding the cardiovascular drug BiDil. Studies found that the drug was no more effective than the standard medication, until the researchers looked at the participants in groups rather than the population as a whole. They discovered it was effective with the African American subset and so BiDil became a FDA-approved drug as a result. This research highlighted the role that anthropology — a field of study at the Downtown Denver campus — should play in the pharmacy profession.

“There’s a whole concept of pharmacogenetics and how a population’s response to medications may differ within groups. I think to really understand, you have to understand the origins of people; you have to understand anthropologically as well as genetics. That’s just one example of how being a consolidated university can benefit your education,” Wilson said.

“...The way we practice health care is going to change. It’s in transition now. I strongly believe that our academic health center can be a leader in the way that health care will be delivered.”

Dean Altiere talked about developments at the School of Pharmacy and its position at the forefront of pharmacy schools in the country. He listed the important roles of the faculty on a national and international scale, including writing textbooks, chairing large organizations and earning substantial grant funding.

“Every year our faculty ranks among the top pharmacy schools in the country and in one of the top two places at the Health Sciences Center for the amount of National Institutes of Health funding we receive compared to other basic science departments on the campus, including all of those in the medical school,” said Altiere.

Altiere discussed the numerous achievements of pharmacy students and some of their achievements on both the local community level, providing pharmacy care services through their various organizations, and on the national level through leadership activities in national pharmacy associations, as well as the importance of their involvement in programs in each of the school’s mission areas: education, research, service and clinical practice.

He talked about developments at the school from the time he joined the faculty in the mid-1990s, and how those compare to the changes happening now. As dean, Altiere wants to increase student engagement in the decision making processes at the school and intends to increase involvement with the school’s alumni.

Altiere described how all of these components affect the future of the school and its role on the new campus, while expressing his excitement about the transition.

The ALSAM Foundation has committed $10 million toward construction of a pharmacy school building on the Anschutz Medical Campus, to be completed in 2010. The building is projected to cost $42 million. Following completion of the building, the school will be renamed the Skaggs School of Pharmacy and Pharmaceutical Sciences. ALSAM is the Skaggs family's philanthropic foundation. Sam Skaggs has been a benefactor of the school for 18 years and provided the lead gift for the current pharmacy school building on the campus at Ninth Avenue.

The new building will be located at the north end of the campus across from the Colorado Science + Technology Park at Fitzsimons, thus providing unique opportunities for faculty and students to work with biotech companies in drug development.

“At the School of Pharmacy, we are in an extraordinarily advantageous position from which we can bridge the research that goes on at the Health Sciences Center with emerging technologies — offering much for our faculty as well as our students who are interested in drug development and clinical trials,” said Altiere.

The journey ahead will be an exciting time for pharmacy students and faculty with new opportunities for the school to continue as one of the premier schools of pharmacy in the country.
Many opportunities exist to profoundly impact patient care

By Kenna Bruner
Office of Public Relations

How clinical pharmacists are impacting patient care was the subject of a school-wide talk presented in April by the 2007 Dean’s Distinguished Lecturer Dennis Helling, PharmD, FCCP, FASHP.

Helling is executive director of Pharmacy Operations and Therapeutics for Kaiser Permanente in Denver and an adjunct professor at the School of Pharmacy. To illustrate his point, Helling gave examples from the perspective of an integrated health care delivery system.

“One of the most important aspects of the work that pharmacists do is to help patients understand their medications and how to use them safely,” he said.

Kaiser Permanente is the largest non-profit health maintenance organization in the United States and serves more than 8 million members nationwide with 500,000 members in the Colorado region.

Visionary leadership and implementation of innovative initiatives transformed the pharmacy department into a role model in pharmacy practice recognized nationally and internationally for emphasizing expanded roles for pharmacists.

Pharmacists at Kaiser provide clinical pharmacy expertise in a variety of areas, including primary care, diabetes management, coronary artery disease, travel medicine, infectious diseases, cardiology and hematology. In order to free pharmacists’ time for patient care, the Pharmacy Automated Refill Center (PARC) was established in 1999. It is an automated centralized refill center where 40 percent of the four million prescriptions at Kaiser are filled. PARC utilizes bar codes, radio frequency transmitters and drug imaging to fill prescriptions. Pharmacists perform clinical screening and provide final checks on prescriptions filled through PARC. The 10-year-old system currently fills 8,000 prescriptions in an eight-hour shift. New technology scheduled to be installed this summer will have the capacity to fill 20,000 prescriptions in the same amount of time.

“Because of the increasing volume of prescriptions across the United States, I can’t build pharmacies big enough or hire enough pharmacists to fill all those prescriptions the traditional way,” said Helling. “Are jobs being lost? No. We still need to take care of drug distribution, but by using technology whenever possible, we can keep pharmacists in contact with patients, impacting their care.”

The Clinical Pharmacy Cardiac Risk Service was developed in 1998. Twenty pharmacists care for 11,000 patients. More than 70 percent of these patients are less likely to die from cardiac related complications, with an annualized cost savings of $3 million from keeping patients out of the hospital with repeat heart attacks or procedures.

Established in 1996, the Clinical Pharmacy Anticoagulation Service is staffed by 20 pharmacists managing 7,000 patients. The impact is that patients are 40 percent less likely to suffer bleeding, clotting or fatal complications; one Warfarin complication is prevented every day.

“I can assure you that patient satisfaction with these services is well above 90 percent,” said Helling. “Patients love being able to talk to their clinical pharmacist. My intention today was to inspire and show you that pharmacists can significantly impact your patients. It’s all about making a difference.”

Dennis Helling, PharmD, gave a school-wide presentation on pharmacists impacting patient care.