

THE PIPELINE

A publication for graduate alumni, faculty and students of the VCU School of Pharmacy
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Gopichand Gottipati has found personal and career mentoring to be of value as he pursues his Ph.D. in pharmaceutical sciences.

New program's goal: Graduate the brightest and the BEST

Nearly three years ago, VCU School of Pharmacy's Pharmaceutical Sciences Graduate Programs and its Graduate Advisory Board decided to look beyond the classroom.

Conventional wisdom gave rise to the idea that graduate students would be even more successful if they had access to mentors and leadership training on the personal and professional levels. The results – designed and supported by the Graduate Advisory Board – were the Professional and Personal Development Program and the Career Mentoring Network.

The PPDP was initiated as a two-year pilot open to Pharm.D. and graduate students. "It's very innovative for graduate education," said Susanna Wu-Pong, director of the Pharmaceutical Sciences Graduate Programs. "It's been going really well. Anonymous evaluations by students have been really favorable."

Non-anonymous evaluations have been favorable, too. Ph.D. student Gopichand Gottipati found the PPDP "extremely valuable. I had no clue what to expect, but I did want to know my strengths and weaknesses."

A great deal of credit, he said, goes to his assigned mentor, Nikhil Parekh. Parekh, senior director for global research and development at Pfizer Consumer Healthcare, is a member of the school's Graduate Advisory Board.

"He's amazing," said Gottipati. "I had good conversations with him." Parekh, he said, noted the importance of factors the students might not ordinarily have considered, such as extracurricular activities.

"We created a personal mission statement and an IDP – an individual development plan – and looked over my CV," Gottipati added. "It was exceptionally useful in finding out what I wanted to do and how to proceed."

Gottipati also credits the Career Mentoring Network for professional development. He worked with School of Pharmacy alumna Angela Men (Ph.D. '04), a member of the Graduate Advisory Board who serves as clinical pharmacology team leader for neurology drugs at the FDA.

So far, the career mentors all have been GAB members, but the board hopes to expand the network to include other alumni.

Tony Coniglio (Pharm.D. '86), founder and principal of OPUS Pharma Consulting, has enjoyed mentoring Pharm.D. student Tehra James. "She's quite impressive," he said. "She's been dedicated to furthering her education for over a decade and is enthusiastic about doing a fellowship or residency."

"I encourage people to volunteer. You can invest as much or as little time as makes sense for you."

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Honoring our outstanding faculty

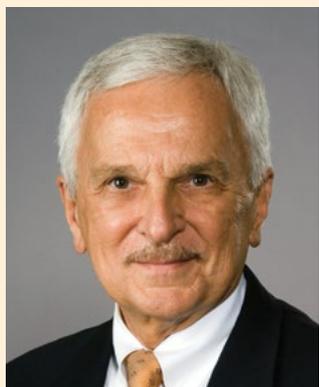
VCU School of Pharmacy faculty brought in more than \$8 million in research funding in the 2012-13 fiscal year.

The new fiscal year is off to a great start, as well: Edwin van den Oord, director of the school's Center for Biomarker Research and Personalized Medicine, is principal investigator on a new \$3 million, five-year National Institute of Mental Health grant to study key molecular markers found in DNA that predict chronic depression. To learn more about departmental research activities, visit the school's website at www.pharmacy.vcu.edu.

Congratulations to faculty who also have been recognized by professional organizations as well as the university. Here are just a few of the awards and positions recently garnered by graduate faculty:

- During VCU's 31st Opening Faculty Address and Convocation, two School of Pharmacy faculty received highest awards for having distinguished themselves and the university: Professor **Umesh Desai**, Department of Medicinal Chemistry, received the 2013 Distinguished Scholarship Award; and Professor **Jürgen Venitz**, Department of Pharmaceutics, received the university's 2013 Distinguished Teaching Award.
- Professor **Don Brophy**, chairman of the Department of Pharmacotherapy and Outcomes Science, was named the first recipient of the school's Nancy and Ronald McFarlane Professorship. He also was inducted into the National Academies of Practice as a Distinguished Scholar and Fellow.
- **Jeffrey Delafuente**, associate dean for academic affairs, was installed as 2013-14 president of the American Society of Consultant Pharmacists.
- **Monty Kier**, Department of Medicinal Chemistry professor emeritus, received the American Association of Nurse Anesthesia's 2013 Didactic Instructor of the Year Award.
- **Gary Matzke**, director of pharmacy practice transformation initiatives, was named treasurer for the American College of Clinical Pharmacy's Political Action Committee.
- **Ben Van Tassell**, assistant professor with the Department of Pharmacotherapy and Outcomes Science, received the American College of Clinical Pharmacy's 2013 New Investigator Award for making a significant impact on an aspect of clinical pharmaceutical science. His ACCP talk was titled "Interleukin-1 Blockage in Cardiovascular Disease."

From the dean



As I write my message to you, we are two weeks away from the Thanksgiving holiday and a little more than a month away from the Christmas season and the end of the year. I mention this because it was my intention to retire on Jan. 1, 2014, and I am amazed at how quickly this year has gone.

I have modified my retirement date to be effective June 30, 2014, so that there will be time to provide continuity and a smooth transition. As I end my career in pharmacy and, in particular, my career as dean of VCU School of Pharmacy, I can't help but reflect on the significant progress the school has made in both its graduate and research programs.

When I became dean in 1996, we had approximately 30 students enrolled in the graduate program, and we were bringing in approximately \$1 million in research grants. Today, we have nearly 90 graduate students, and our faculty brought in nearly \$9 million in research funding this past year.

I attribute this success to our ability to attract and retain outstanding scientists and academicians as well as outstanding and dedicated graduate students.

Our research efforts have not only grown in the basic pharmaceutical sciences but have expanded to include research in outcomes, assessment and experimental therapeutics. I am confident that the person who sits in my chair next year will continue to advance our research agenda as well as our graduate programs.

We also have been very successful in expanding our research programs to include collaboration with other departments and schools within the university. By doing so, our graduate students are able to understand the importance of collaborative research that will allow them to be successful scientists in the future.

In closing, I want to express my thanks to all of you for the continued support that you have given not only to the School of Pharmacy but to me, personally. I have been very fortunate and privileged to serve as your dean for the past 18 years and am confident you will continue to support our next dean.

My sincere thanks to all of you.

Victor A. Yanchick, Ph.D.
Dean and Archie O. McCalley Chair

Today, we have nearly 90 graduate students, and our faculty brought in nearly \$9 million in research funding this past year.

New program's goal: Graduate the brightest and the BEST

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Gottipati's mentor, Parekh, said that his students truly committed themselves to the program.

"Trying to bring leadership and professional development into the graduate program has exceeded our best expectations," said Wu-Pong. That's partly why – and how – the Professional and Personal Development Program and the Career Mentoring Network have evolved into and inspired a larger effort, VCU BEST, which stands for Broadening Experiences in Scientific Training.

The BEST program should benefit from the fact that this is the first time VCU has written professional and graduate students into its Quality Enhancement Plan, a detailed action plan to enhance student learning or the student learning environment that is required by the Southern Association of Colleges and Schools-Commission on Colleges for university accreditation.

VCU BEST has been written into the School of Pharmacy's strategic plan, and it's Wu-Pong's hope that it will be codified into VCU's infrastructure. Graduate students and postdoctoral fellows university-wide are being invited to enroll in the BEST program, which debuts this spring.

Students may choose to participate in any or all components of the program, including the PPDP (aka GRAD611) as a one-semester course this spring; seminars on nontraditional career paths in fall 2014; interdisciplinary projects in spring 2015; and career skills in fall 2015. An optional 6- to 8-credit curriculum spanning two years would result in a certificate of completion.

"We've had a good response from schools across both campuses," said Wu-Pong, "as well as the alumni association and others." The goal is to enroll 20 to 25 students in the beginning, then increase participation to 50.

Concurrently, the NIH has been on the lookout for programs that encourage career development and training in career paths other than the traditional research and academe. During the November Graduate Advisory Board meeting, Wu-Pong noted that VCU BEST had submitted a proposal for funding. It has not yet been funded externally but, said Wu-Pong, "Regardless of funding, we are moving forward and feel this should be instituted."

SOP alumnus Eric Edwards (Ph.D. '11), founder and chief scientific officer for Intelliject Inc., said that identifying alternative career paths is a challenge all schools are facing. "We need to find internal champions within each school."

To that end, VCU BEST contacts now include Aron Lichtman, Joyce Lloyd and Suzanne Barbour (School of Medicine); Rosalyn Hargraves (Schools of Education and Engineering); Victoria Shiviy (College of Humanities and Sciences); Bill Korzun (School of Allied Health Professions); Ann Nichols-Casebolt (Office of Research); Mark Schaefermeyer (Graduate School); and Joe Testani (University Career Center).

"These programs expand students' skills no matter what the path," noted Coniglio.

Alumna Patty Slattum (Pharm.D./Ph.D. '92), is a School of Pharmacy professor. "We have a lot of international graduate students wanting to live in this country," she said. "What I appreciate [from these programs] is that students are getting more and broader information that is helping them to focus and become better at reaching out and networking."

Seina Lee (Pharm.D./M.S. '06), associate director of health economics for Worldwide Market Access, Johnson and Johnson, agreed. "These are skills that will make or break your career."

From the director



We've had yet another great year in the Pharmaceutical Sciences Graduate Programs. Our students and alumni continue to make us proud. I hope you'll join me in staying apprised of our successes by reading The Pipeline and visiting our website and Facebook pages.

The PSGP is continuing to improve, as well, due in large part to our Graduate Advisory Board. If you are in contact with any of these dedicated alumni and friends of the PSGP, please thank them for their dedication and hard work!

The programs that were conceived and supported through the work of the board, namely the Career Mentor Network and the Professional and Personal

Development Program, are expanding into a larger VCU career and professional development program called VCU BEST – Broadening Experiences for Scientific Training. We are so excited that the vision of the board is expanding across VCU, and Pharmacy will continue to lead the way! (For more on that, please see page 1.)

I hope you'll participate in VCU BEST, as we need career mentors and shadowing sites for participating students, especially if you are working in a nontraditional (non-research or non-academic) position. In addition, we hope to give our students and postdoctorals real-world experience through service learning. If you could use a young biomedical scientist to help with a non-research project, please contact me at swupong@vcu.edu and/or go to the BEST website for more information: www.pharmacy.vcu.edu/programs/graduate/vcu_best.

Thank you for all your support to our program and students. I'm looking forward to another great year!

Susanna Wu-Pong, Ph.D.
Director, Pharmaceutical Sciences Graduate Programs

We are so excited that the vision of the board is expanding across VCU, and Pharmacy will continue to lead the way!

2013 Altria fellows announced

VCU School of Pharmacy recently presented its second round of competitive Altria Group Tobacco Products Regulatory Science Fellowships to Morse Faria, Christine Farthing and Kunal Saxena. The 2012 inaugural fellowship went to Poonam Delvadia.

Richmond-based Altria Client Services Inc. awarded the school \$100,000 last year to fund the new fellowship, renewed in 2013 for another \$100,000. One-year, \$50,000 stipends are available to train selected scientists who have completed at least two years of Ph.D. study and who are conducting or plan to conduct research in the area of tobacco regulatory science. The purpose of this fellowship is to raise awareness and create a growing research interest in the area of tobacco regulatory science among students and faculty.

As part of the fellowship program, each recipient is invited to present a brief overview of his or her research to Altria scientists. Delvadia made the first presentation last year on a "Biorelevant System for Release Testing of Oral Transmucosal Smokeless Tobacco Products."

"Although substantial research has been going on in this area for several decades, now with FDA regulation there is a need to develop research in tobacco product regulatory science."

"The biorelevant apparatus we developed is a promising quality control and research tool for tobacco as well as pharmaceutical products," she reports.

Since receiving her Ph.D. in pharmaceutical sciences in May, Delvadia has been employed by the FDA as an Oak Ridge Institute of Science and Education fellow. Her team, she said, basically works for policy development that would aid in regulation of generic

pharmaceutical products.

"I enjoyed working in collaboration with Altria," she said. "It was a great opportunity to learn about tobacco products and how pharmaceutical principles can be applied to regulate tobacco products. I gained great experience from tobacco research, which helped me gain my current position at FDA."

H. Thomas Karnes, the pharmaceuticals professor who served as her faculty advisor, agrees with Delvadia's assessment. "The fellowship is working out great so far."

Karnes, who chaired the School of Pharmacy committee that worked with Altria to establish and form the fellowship, said Altria's contribution has freed up funds that can be used to support additional students and that will help the graduate program grow. "The research that has been supported by Altria," he added, "has generated new knowledge in the area of tobacco regulation that will likely affect the efficiency and accuracy of tobacco product testing."

Based on the 2009 Family Smoking Prevention and Tobacco Control Act mandate, the need for specialized training in these areas was noted by the National Institutes of Health and the U.S. Food and Drug Administration. The 2009 act empowered the FDA to review and regulate products with the intention of reducing "risks or exposures associated with tobacco products [and] to review any advertising and labeling for such products."



From left: Morse Faria, Christine Farthing and Kunal Saxena

"The idea was grown by alumni who have come through our program and now work as scientists there," said Dean Victor Yanchick, who also was part of the School of Pharmacy-Altria committee along with Ellen Carfagno, director of development. "We're very appreciative to Altria for supporting our research initiatives."

Mohamadi Sarkar, who received his Ph.D. in pharmaceutical sciences from the School of Pharmacy in 1990, helped facilitate the fellowship. He is director, health and behavior assessment, for Altria Client Services Inc., and an affiliate professor at the school.

"I am delighted that the Altria fellowship is providing the necessary stimulus to raise awareness in the area of tobacco regulatory science," he said. "Although substantial research has been going on in this area for several decades, now with FDA regulation there is a need to develop research in tobacco product regulatory science."

"The field of regulatory science is defined as 'the science of developing new tools, standards and approaches

to assess the safety, efficacy, quality and performance of all FDA-regulated products.' I would encourage students and faculty to

consider this as an opportunity to expand their research interests in the 'nontraditional' area.

"There are numerous funding opportunities," Sarkar added, "e.g., last month FDA and NIH awarded \$53 million to establish 14 Tobacco Centers of Regulatory Science (TCORS) for tobacco-related research. VCU is one of the institutions to receive a grant to establish such a center."

School of Pharmacy faculty advisors for current Altria fellowship recipients are H. Thomas Karnes, professor: Morse Faria; Douglas Sweet, associate professor: Christine Farthing; and David Holdford, professor: Kunal Saxena.



Poonam Delvadia

Graduate alumni news: Send us your updates!

Please send your news updates to pharmacyalum@vcu.edu. The School of Pharmacy and your former classmates and professors are interested in what you are doing, both professionally and personally. Here are a few class notes we've compiled.

Eugenio Cefali (Pharm.D./Ph.D. '87) and **Anthony Coniglio** (Pharm.D. '86) accepted invitations to join the VCU chapter of Phi Kappa Phi national honor society. Both are past chairmen of the School of Pharmacy's Pharmaceutical Sciences Graduate Advisory Board.

Graduate student **Gopichand Gottipati** reports having run into several Department of Pharmaceutics alumni while presenting his research at the American Society

for Clinical Pharmacology and Therapeutics 2013 Annual Meeting in Indianapolis: **Pravin Jadhav** (Ph.D. '06) of Merck, **Michelle Rudek** (Ph.D. '01) of Johns Hopkins University, independent pharmaceuticals professional **Rose Kovelesky** (Ph.D. '98) and **Vijay Ramchandani** (Ph.D. '96) of the National Institute on Alcohol Abuse and Alcoholism.

Susan Learned (Pharm.D./Ph.D. '97) was named

the School of Pharmacy's 2013 VCU Alumni Star. She is vice president, medicines development leader and care area lead for psoriasis and atopic dermatitis at Stiefel, a GlaxoSmithKline company. The Alumni Stars program was created to honor outstanding alumni for their humanitarian and/or professional achievement and community and/or university service. To read more about her recent award, visit www.pharmacy.vcu.edu, click on News Center, then "Kudos to Susan Learned,

(continued on page 5)

Students benefit from ever-evolving Research and Career Day

The School of Pharmacy's 16th Annual Research and Career Day was nothing if not exciting. Two postdoctoral poster awards made their debut ... a career forum offered the opportunity for even more student-alumni interaction ... a recordbreaking 120 people attended ... and just as the poster judges were finalizing their decisions, the Larrick Student Center was evacuated.

Loud alarms sent Research and Career Day attendees out onto the sidewalks and across the street on Nov. 8 as five Richmond firetrucks, a multitude of firefighters and their battalion commander arrived on the scene. It seemed more than 15 minutes – perhaps due to the brisk fall breezes – but within about a quarter of an hour of the false alarm, R&C Day was back in full swing.

The annual event allows Pharm.D. and graduate students and postdoctoral fellows the chance to sharpen their job-hunting skills as well as to meet and interact with School of Pharmacy alumni and other scientists who currently work in government, academia and the pharmaceutical industry.

This year's keynote speaker, Yuen-Sum "Vincent" Lau, discussed "Strategic Initiatives and Projects of AACP on Research and Graduate Education." Lau, who is the American Association of Colleges of Pharmacy's vice president for research and graduate affairs, urged students to contact him anytime for career advice and information.

Three Ph.D. students made podium presentations: Jeremy Chojnacki, Department of Medicinal Chemistry, on "Glyburide Analogs as Novel Inhibitors of the NLRP3 Inflammasome"; Morse Faria, Department of Pharmaceutics, on "Quantitative Mass Spectrometric Evaluation of Human Osteopontin, an Inflammation



Alumni Dwight Flammia and Angela Men (both facing forward) meeting with students

more common in the industry – with alumna Jody Allen (Pharm.D. '81), vice president, clinical account management, health plans for Express Scripts; Peter Byron, chairman of the Department of Pharmaceutics; Jonathan Humphrey, a senior research and development scientist with Pfizer Consumer Healthcare; and alumnus Michael Peoples (Ph.D. '08), a senior scientist at Pfizer.

Students also participated in informal group meetings with experts in the field, including alumnus Gene Cefali (Pharm.D./Ph.D. '87), senior vice president of E.A. Cefali

This year's poster session attracted nearly 50 student posters, which were judged by Cefali and School of Pharmacy faculty members Annie Cheang and Mary Jayne Kennedy, Pharmacotherapy and Outcomes Science; Phil Gerik, Pharmaceutics; and Richard A. Glennon and Rong Huang, Medicinal Chemistry.

Dean Victor Yanchick announced the 2013 poster session winners:

- Pharm.D.: Katie Schwienteck (Matthew Banks, advisor); honorable mention: Kimberly Hayashi (Masahiro Sakagami, advisor)
- Ph.D.: Bassem Mohammed (Don Brophy, advisor); honorable mention: Kavita Iyer (Malgorzata Dukat, advisor)
- Postdoctoral: Hardik Parikh (Glen Kellogg, advisor); honorable mention: Aurijit Sarkar (Umesh Desai, advisor)

In addition, the dean presented the Jyotsna and Maviji Thakker Award to Mengyao Li (Jürgen Venitz, advisor) and the Joseph Schwartz Graduate Student Travel Award to Xiangyin Wei (Peter Byron, advisor) and Meng Wang (Phil Gerik, advisor).

The panel discussion, "Career Forum: The Expanding Reach of Pharmaceutically Trained Scientists," offered students the chance to hear from pharmacy leaders in a variety of areas. (See the 2013-14 Graduate Advisory Board report, page 5, for participants' names.)

"It's been another fantastic Research and Career Day," commented Susanna Wu-Pong, director of the Pharmaceutical Sciences Graduate Programs. "You can see its growth in the students, the posters and the presentations."

She thanked the 2013 R&C Day Planning Committee – Cheang, Gerik, Huang and Kennedy – for their hard work, as well as Sha-Kim Jackson, graduate education coordinator, and Brittany Pearce, student assistant.

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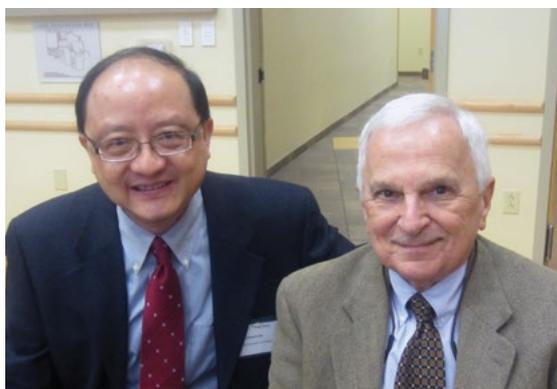
Biomarker Protein Using a Biologically Relevant Tryptic Signature Peptide"; and Akul Mehta, Department of Medicinal Chemistry, on "Targeting the GPIIb Binding Site of Thrombin for Dual Anticoagulant and Antiplatelet Activity."

Mock interviews gave students the opportunity to practice behavioral interviewing – which is becoming

Pharmaceutical Consulting; alumnus Tony Coniglio (Pharm.D. '86), founder and principal of OPUS Pharma Consulting; alumna Angela Men (Ph.D. '04), clinical pharmacology team leader for neurology drugs, Food and Drug Administration; Nikhil Parekh, senior director for global research and development at Pfizer; and Jim Saunders, a senior scientist with Pfizer.



Student Xiaolei Pan and interviewer Jonathan Humphrey



AACP's Vincent Lau and the SOP's Victor Yanchick

Graduate Program Advisory Board: Growth continues, 2013-14



Thanks to Seina Lee for providing the following update on the activities of the School of Pharmacy's Graduate Advisory Board:

Many thanks to Eugenio Cefali (inaugural chairman) and Tony Coniglio

(second chairman) for their leadership and continuous commitment to sustain the growth of the Pharmaceutical Sciences Graduate Advisory Board.

Year after year, the Graduate Advisory Board is striving to advance.

At the spring meeting in May, the inaugural, past and current chairs of GAB met with the departments' graduate student association presidents to gain their perspective on what works well and what more they would like to see from the school. During the fall meeting in November, based on student feedback, a two-themed approach discussion resulted in the following initiatives: CONNECT and SUPPORT.

First is to CONNECT. Connect with alumni and students. The Graduate Advisory Board's new LinkedIn page, a subgroup of VCU School of Pharmacy, has been created to connect with the board members as well as to sustain membership and to promote the connection of peer alumni. It will be a useful tool to connect with both students and alumni.

Second is to SUPPORT. The GAB will explore ways to secure funding to support travel grants and, ultimately, to secure endowments to support travel funds that will provide more opportunities for students to present their work, network and connect with professional

organizations. The GAB also will explore existing internship opportunities for students and connection opportunities with students in a timely manner.

The GAB also will support the formation of an advisory board for the VCU BEST (Broadening Experiences in Scientific Training) program, which is modeled after the PPDP (Professional and Personal Development Program). More information on the VCU BEST program can be found on page 1.

The GAB welcomed three new members in 2013: Eric S. Edwards (Ph.D. '11), co-founder and chief scientific officer of Intelliject Inc.; Dwight Flammia (Ph.D. '99), state public health toxicologist, Virginia Department of Health; and Todd Miano (Pharm.D. '06), pharmacy clinical specialist at Hospital of the University of Pennsylvania. In addition, we thank for their continuous support our two past chairs: Gene Cefali and Tony Coniglio.

The day after the fall meeting, GAB members participated in the school's Research and Career Day. (For more on that, see page 4.)

At the 16th Annual Pharmaceutical Sciences Research and Career Day, a career forum was hosted by alumni members. Jody Allen (Pharm.D. '81), Eugenio Cefali (Pharm.D./Ph.D. '87), Anthony Coniglio (Pharm.D. '86), Angela Men (Ph.D. '04), Dwight Flammia (Ph.D. '99) and "honorary alumnus" Patrick Noonan participated as panel members. The career forum was moderated by the current GAB chair, Seina Lee (Pharm.D./M.S. '06).

Panel members shared their career paths and the various career opportunities that are available with the Pharm.D., Pharm.D./M.S. and Pharm.D./Ph.D. educational background in various disciplines within the pharmaceutical sciences.

The pearls that they shared with the students include:

1. Be the subject-matter expert of your own field.
2. Be open to new ideas and be flexible to embrace new career opportunities. Do not be afraid to take risks.
3. Do the best that you can.
4. Think about what you can learn, and be flexible.
5. Be curious and expand your "horizons."
6. Expand your "network."

Each panel member emphasized the value of networking – it is not about just making connections but building genuine relationships with people. The panel also emphasized the importance of interpersonal skills, communications and emotional intelligence.

Our continuous goal is to further expand the network of membership, particularly with external alumni who would like to get involved with the school and students. Various leadership opportunities are available to connect with the board and serve in different capacities. If you have any questions about the program and how you can get involved, please reach out to Susanna Wu-Pong, director of the Pharmaceutical Sciences Graduate Programs.

If you or someone you know is interested in and qualified to serve on the Pharmaceutical Sciences Graduate Advisory Board, please provide nomination information (letter of intent and CV) to Susanna Wu-Pong at swupong@vcu.edu. Active advisory board members are granted online VCU library privileges upon request.

Graduate alumni news (continued from page 3)

SOP's 2013 Alumni Star." In March, she co-hosted with Dean Victor Yanchick a cocktail reception for Research Triangle area alums.

Seina Lee (Pharm.D./M.S. '06) is associate director of health economics for Worldwide Market Access, Johnson and Johnson. She currently heads the School of Pharmacy's Pharmaceutical Sciences Graduate Advisory Board.

Pravin Jadhav (Ph.D. '06) is director of modeling and simulation at Merck in North Wales, Pa. Previously, he served as team leader and expert regulatory scientist in the Division of Pharmacometrics in the FDA's Office of Clinical Pharmacology. He is a fellow of the American College of Clinical Pharmacology and holds an adjunct faculty appointment at the University of Florida College of Pharmacy.

Michael Peoples (Ph.D. '08) is an R&D manager with Pfizer Consumer Healthcare in Richmond. Currently focusing on OTC development, he provides technical leadership in product development areas including analytical and formulation and has a strong interest in consumer research, prototype development and

innovation. He recently was a panelist for "Career Pathways for Scientists," a VCU Squared event for graduate and postdoctoral researchers.

Urvi Desai (Ph.D. '11) received a Best Podium Research Presentation award for "Medical, Drug and Work-Loss Costs of Diabetic Foot Ulcers" at the 18th Annual International Meeting of the International Society for Pharmacoeconomics and Outcomes Research.

Eric Edwards (Ph.D. '11) completed his M.D. degree at VCU School of Medicine in 2012. He and his twin brother Evan, their company Intelliject Inc. and their invention, the Auvi-Q, were featured in May on CNN's "The Human Factor." To view the video, visit www.cnn.com and search "Evan and Eric Edwards."

Findings on antibiotics' effect on international normalized ratio for patients on warfarin, by **Parinaz Ghaswalla** (Ph.D. '11), **Patricia Slattum** (Pharm.D./Ph.D. '92) and co-authors, were published in U.S. Medicine: The Voice of Federal Medicine.

Amit Somani (Ph.D. '12) is a postdoctoral research associate with Drs. Larry Lesko and Stephan Schmidt

at the Center for Pharmacometrics and Systems Pharmacology at University of Florida, Lake Nona Medical City in Orlando.

Christopher Arnatt (Ph.D. '13) is a National Research Council Postdoctoral Fellow with the National Institute of Standards and Technology, based in Gaithersburg, Md.

Chenxiao Da (Ph.D. '13) is a postdoctoral research associate at University of North Carolina at Chapel Hill, working with the Center for Integrative Chemical Biology and Drug Discovery.

Poonam Delvadia (Ph.D. '13) is a research scholar with the science team at the FDA's Office of Generic Drugs in Rockville, Md. "A lot to learn at FDA," she writes, "and enjoying work."

Apurvasena Parikh (Ph.D. '13) is a senior clinical pharmacokineticist with AbbVie's Division of Clinical Pharmacokinetics and Pharmacodynamics in North Chicago. "I am getting accustomed to the windy weather this side," she writes, "but of course, my first (real) winter is yet to come!"

GRADUATE NEWS

2012-13 graduates join alumni ranks

Congratulations to the following graduate students who completed their degrees in the past year.

Ph.D. in pharmaceutical sciences

(name followed by dissertation title and advisor):

Genevieve Alley-Sirles: "Alpha2-Adrenoceptor and 5-HT3 Serotonin Receptor Ligand as Potential Analgesic Adjuvants" (Malgorzata Dukat)

May Abdel Aziz: "Kinetic and Thermodynamic Studies of Thrombin Inhibitors" (Umesh Desai)

Amal Akour: "The Role of Megalin in the Transport of Aminoglycosides Across Human Placenta" (Mary Jayne Kennedy)

Abdulkhalq Jassem Alsaman: "Development of Psychometric Evaluation of the Assessment of Opioid Taking Behavior and Adherence Scale (AOTBA) in Patients With Sickle Cell Disease: A Multi-Phase, Mixed Methods Study" (Wally Smith)

Maryam Alowayesh: "Acute Pharmacological Treatment Given to Older Adults With Acute Myocardial Infarction: A Nationwide Emergency Department Study, 1992-2010" (Spencer Harpe)

Christopher Arnatt: "Development of Antagonists Targeting Chemokine Receptor CCR5 and the Chemokine Receptor CCR5 -- Mu Opioid Receptor Heterodimer" (Yan Zhang)

Chenxiao Da: "The Development and Applications of the HINT Scoring Function: Exploring Colchicine-Site Anticancer Agents and Tautomerism" (Glen Kellogg)

Poonam Delvadia: "A Novel Biorelevant In Vitro System to Predict the In Vitro Performance of Oral Transmucosal Products" (Thomas Karnes)

Orgil Elbegdorj: "Design, Syntheses and Biological Evaluation of 14-N-Substituted Naltrexone Derivatives as Opioid Receptor Ligands" (Yan Zhang)

Timothy Inocencio: "The Economic Burden of Opioid Poisoning in the United States and Determinants of Increased Costs in Opioid Poisoning" (David Holdford)

Atul Jain: "Positive Allosteric Modulators of Alpha4Beta2 Neuronal Nicotinic Acetylcholine Receptors: Synthesis and In Vitro Studies" (Richard A. Glennon)

Gareth Kent Jennings: "Capture and Characterization of Dioxygen Reactive Intermediates in CYP51 Catalysis" (John Hackett)

Nantana Kaisaeng: "Costs and Use of Oral Anticancer Medications Among Senior Medicare Part D Beneficiaries" (Norman Carroll)

John H. Miller IV: "A New Approach to Dried Blood Spot Analysis for Newborn Screening Using High Resolution Liquid Chromatography Tandem Mass Spectrometry" (Thomas Karnes)

Megha Mohan: "Influence of Electrostatic Charge Upon the Deposition Behavior of Pharmaceutical Aerosols Within Cascade Impactors" (Peter Byron and Joanne Peart)

Aditi Mulgaonkar: "Assessment of the Role of Solute Carrier Drug Transporters in the Systemic Disposition of Floroquinolones: An In Vitro-In Vivo Comparison" (Douglas Sweet)

Apursavena Parikh: "In Vitro PK/PD Profiling and Modeling of the Anti-Sickling Agents, 5-Hydroxy Methyl Furfural (5-hmf) and Novel Synthetic Allosteric Effectors of Hemoglobin (AEH) in Human Whole Blood" (Jürgen Venitz)

Hardik Parikh: "Understanding Molecular Interactions: Applications of HINT-Based Tools in the Structural Modeling of Novel Anticancer and Antiviral Targets and in Protein-Protein Docking" (Glen Kellogg)

Arpamas Seetasith: "Impacts of Black Box Warning, National Coverage Determination and Risk Evaluation and Mitigation Strategies on the Inpatient On-Label and Off-Label Use of Erythropoiesis-Stimulating Agents" (David Holdford)

Osama Shoair: "Risk Factors for Postoperative Cognitive Dysfunction in Older Adults Undergoing Major Noncardiac Surgery" (Patricia Slattum)

Li Wang: "Assessment of the Drug-Drug Interaction Potential of Anionic Components in the Diet and Herbal Medicines on Organic Anion Transporters (SLC22 Family)" (Douglas Sweet)

Zhenian Zhang: "In Vitro Inhabitation and Phenycephrine by Phenotic Dietary Compounds" (Philip Gerck)

M.S. in pharmaceutical sciences

(name followed by thesis title and advisor):

Abdullah Ibrahim Al Tafif: "Prediction of Human Systemic, Biologically Relevant Pharmacokinetic Properties Based on Physicochemical Properties of Calcium Channel Blockers" (Jürgen Venitz)

Osama Alwassil: "Small Molecules as Negative Allosteric Modulators of Alpha7 nA-ChRs" (Malgorzata Dukat)

Malaika Argade: "Discovery and Biophysical Characterization of Allosteric Inhibitors of Factor XIa (FXIa)" (Umesh Desai)

Tanvi Deshpande: "Synthesis, Testing and Crystallographic Studies of Ester Nitrate Analogs of Allosteric Modifiers of Hemoglobin" (Martin Safo)

Deanna Flora: "Medication-Related Problems Experienced by Patients During Transitions to Assisted Living" (Patricia Slattum)

Sudha Korwar: "Preparation and Evaluation of Deconstruction Analogs of 7-Deoxykalafungin as AKT Inhibitors" (Keith Ellis)

Sayed Muhammad Mossadeq: "Kinetics and Mechanisms of Accumulation of Liposomal Ciprofloxacin Into Rat Alveolar Macrophages" (Masahiro Sakagami)

Pooja Ponnusamy: "Reverse-Phase Ion-Pairing Liquid Chromatography-Mass Spectrometry in Characterization and Fingerprinting of Diverse Sulfated Glycosaminoglycan Mimetics" (Umesh Desai)



Maryam Alowayesh



Arpamas Seetasith and advisor David Holdford



Sayed Mossadeq and advisor Masahiro Sakagami

GRADUATE NEWS

Della Varghese: "Prevalence of Antidiabetic and Antilipidemic Medications in Children and Adolescents Treated With Atypical Antipsychotics in a Virginia Medicaid Population" (Cindy Kirkwood and Mary Jayne Kennedy)

Rakesh Harsukhlal Vekariya: "Toward Understanding the Mechanism of Action of Abused Cathinones" (Richard A. Glennon)

Combined degree Certificate in Aging Studies:

William Coleman

Deanna Flora

Catherine Floroff

Osama Shoair

Rachel Seidman

Lesley Smith

Graduate student achievements recognized

Kudos to award-winning graduate students and/or organizations, a few of whom are listed as follows:

May Abdel Aziz: Charles T. Rector and Thomas W. Rorrer Jr. Dean's Award, established by Jacqueline V. Rorrer in memory of her late husband, Charles Rector, and in honor of her current husband, Thomas Rorrer (B.S. '52), for a graduate student who best demonstrates excellence in scholarship, research, teaching and service. Advisor: Umesh Desai.

Christopher Arnatt: J. Doyle Smith Award, given to the student in the Department of Medicinal Chemistry who has achieved the greatest distinction in scholarship, research, teaching and service. Advisor: Yan Zhang.

Poonam Delvadia: John Wood Award, given to the student in the Department of Pharmaceutics who has achieved the greatest distinction in scholarship, research, teaching and service. Advisor: Thomas Karnes. Delvadia also received the Pfizer Consumer Healthcare R&D Leading for Innovation Award.



First row, from left: Morse Faria, Christine Farthing, Kavita Iyer, May Abdel Aziz and Poonam Delvadia. Second row, from left: Osama Shoair and Christopher Arnatt

Kavita Iyer: Lowenthal Award, established to support Ph.D. students participating in hands-on research in genetically based neurological diseases. Advisor: Malgorzata Dukat.

Morse Faria, Christine Farthing and Kunal Saxena: Altria Tobacco Products Regulatory Sciences Fellowships. Advisors: Thomas Karnes, Douglas Sweet and David Holdford, respectively.

Osama Shoair: Victor A. Yanchick Award, given to the student in the Department of Pharmacotherapy and Outcomes Science who has achieved the greatest distinction in scholarship, research, teaching and service. Advisor: Patricia Slattum.

Mostafa Ahmed, Toni Coe, Morse Faria, Yaena Min and Akul Mehta: inducted into the Alpha Phi Chapter of Alpha Epsilon Lambda.

Poonam Delvadia, Tanvi Deshpande, Batul Electricwala, Timothy Inocencio, Sudha Korwar, Bassem Mohammed, Xiaolei Pan and Li Wang: inducted into the VCU Chapter of Phi Kappa Phi.

Poonam Delvadia, Bassem Mohammed and Farhana Sakloth: Phi Kappa Phi scholarships.

Abdul Alsalman was one of four students selected from among hundreds of applicants worldwide to present his research at the 18th Annual International Meeting of ISPOR's Student Research Showcase. He spoke on "Expanding Concepts of Opioid-Taking Behavior in Sickle Cell Disease: A Multi-Phase, Mixed Methods Study." Also during ISPOR in New Orleans, **Maryam Alowayesh** was a finalist in the Best Poster Presentation. Other poster presenters were **Nantana Kaisaeng, Matriyee Mohanty, Kunal Saxena, Arpamas Seetasith and Della Varghese.** VCU ISPOR Chapter President **Toni Coe** received an ISPOR Distinguished Service Award, and the chapter received third place in the Outstanding ISPOR Student Chapter of the Year competition.

Join, bond, connect ... link now!

The School of Pharmacy has established a central group page on LinkedIn, the world's largest online professional network.

The School of Pharmacy page is open to alumni, faculty, students, friends and donors, anyone who's interested in connecting with the school. Just visit www.linkedin.com and search VCU School of Pharmacy.

Now three subgroups also are available!

- Pharmaceutical Sciences Graduate Programs
- Postbaccalaureate Pharm.D. Alumni
- Graduate Advisory Board

All subgroups are accessible from the central group page. Just scroll down the page, and you'll see "Subgroups" on the right. Click and go!

The newest subgroup, Graduate Advisory Board, was created to serve as a springboard for connections with graduate alumni from all School of Pharmacy graduate programs. Seina Lee, who heads the Graduate Advisory Board, says, "Let's all get linked in!"

You might also enjoy visiting www.pharmacy.vcu.edu to see the School of Pharmacy's recent website redesign. It's a work in progress; we hope you'll

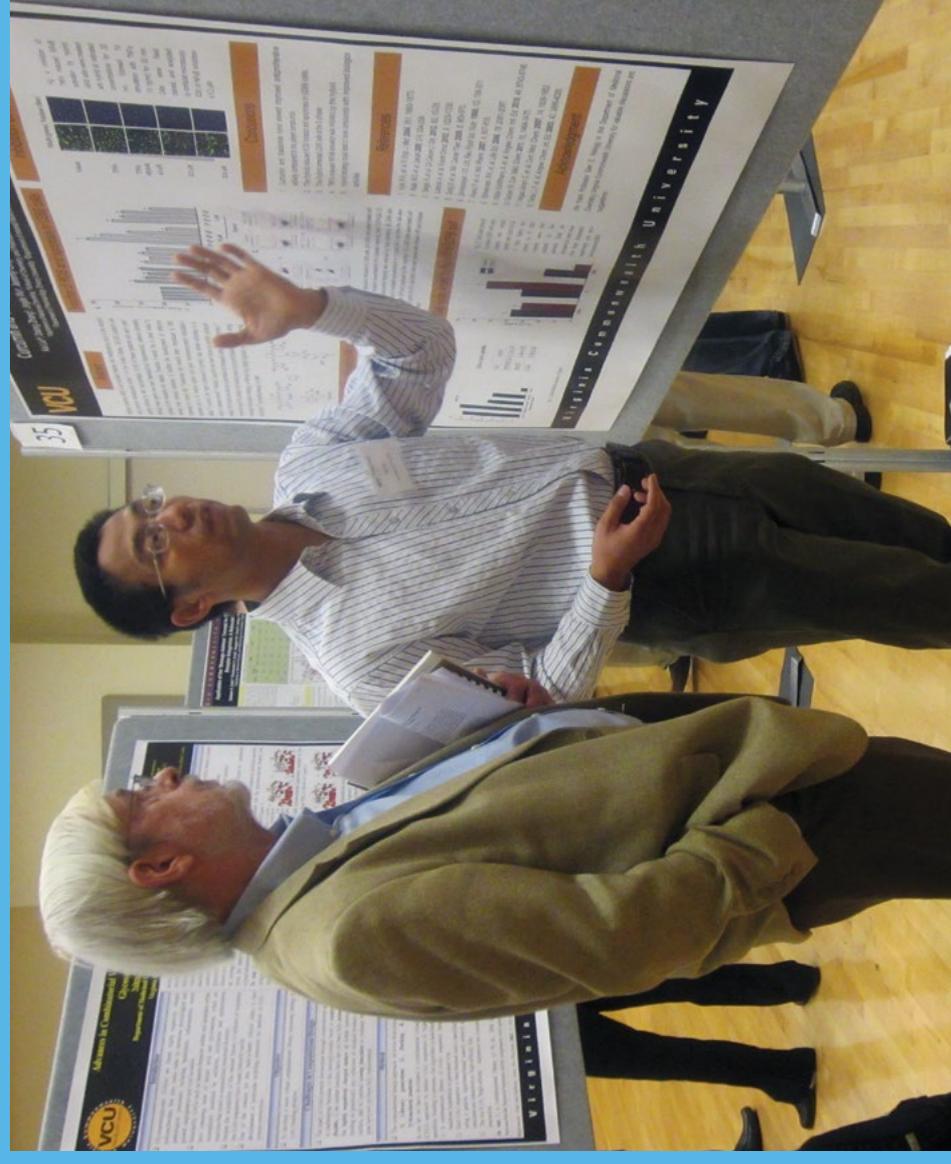
like what you see. While you're on the website home page, you also can access LinkedIn

directly by scrolling down the website home page to "Social Media" and clicking on "in."



THE PIPELINE

A publication for graduate alumni, faculty and students of the VCU School of Pharmacy
Volume 5 • Fall 2013



Richard A. Glennon, chairman of the Department of Medicinal Chemistry, examines a Research and Career Day poster by postdoctoral fellow Kai Liu. Glennon was a judge for the poster session. Liu's advisor (not pictured) is Shijun Zhang. For more on the School of Pharmacy's 16th Annual R&C Day, see page 4.

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The Pipeline is a publication of VCU School of Pharmacy. Readers are encouraged to submit comments or questions to Cynthia McMullen by calling (804) 828-6470 or e-mailing chcmullen@vcu.edu.

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Got news?

Please e-mail any alumni updates to pharmacyalum@vcu.edu