Outwitting Cancer: College of Pharmacy researchers pioneer a new era of anticancer research
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As we look back at the 2014–2015 year in this edition of the BEAVERx, I am once again very proud of the accomplishments of our faculty, students and alumni, and the reflection these successes have on the College of Pharmacy.

There is little doubt the opening of the Collaborative Life Sciences Building (CLSB) on the OHSU campus last July was the event of the year. Now that we have been in the CLSB for a year the impact of these breathtaking facilities on faculty and student satisfaction and retention could not be any clearer. We hope many of you will attend one of the myriad events held in the building throughout the year and experience this remarkable space for yourself. With the adjacent Tilikum Crossing bridge and Tri-Met light rail line opening in September, construction on a new OHSU cancer research building starting in 2016, and new food carts and apartments opening between CLSB and the tram, the South Waterfront continues to become an even more vibrant neighborhood.

I’m sure many readers of BEAVERx are aware the Oregon legislature passed two key pieces of legislation in 2015 that will have transformational changes for pharmacists practicing in the state. The passing of House Bill 2028 established provider status for Oregon pharmacists – enabling them to more fully apply their expertise to increase patient access to quality, cost-effective health care throughout the state. Oregon joins California and Washington in recognizing that pharmacists can be reimbursed directly by private and public health insurers for the clinical services they provide. House Bill 2879, signed by Governor Brown in early July, gives pharmacists prescribing authority for hormonal contraceptives after a woman completes a self-administered risk-screening test. The intent is to improve access to birth control while maintaining professional oversight. Oregon joins California as the only states that allow women to acquire hormonal contraceptives through their pharmacist without a physician’s prescription.

I’m pleased to announce Dr. Theresa Filtz has been appointed the new Chair of the Department of Pharmaceutical Sciences. Dr. Filtz joined the faculty in 1998 as a member of the pharmacology group and leads a research program engaged in signal transduction and transcriptional regulation studies. She has a long history of committed service to the College including occupying key roles in advancing the graduate studies program and leading the ongoing redesign of the PharmD curriculum. Dr. Filtz takes over from Dr. Gary DeLander who served as Chair since 2000. The Department experienced incredible growth during Dr. DeLander’s time as Chair and his leadership has been instrumental in shaping a very strong and productive Department. Dr. DeLander, who also serves as Executive Associate Dean, will now be able to devote greater effort to overseeing the PharmD program.

It’s a pleasure each year to recognize several outstanding alumni and friends of the College with the Icon of Pharmacy Award for their exceptional careers and contributions to pharmacy. Our 2015 honorees are Kathy Hahn (Hon. ’12), a Pharmacy Manager with Bi-Mart and an authority, and national leader in pain management, and Shelton Louie (’78), founder and CEO of GSL Solutions – an industry leader in pharmacy accuracy and efficiency. We also recognized Amy Valdez (’99), Clinical Division Lead with Albertsons-Safeway, with the annual Outstanding Young Alumni Award (see pages 22 and 24).

Finally, as part of Homecoming week last October, the University and the OSU Foundation formally celebrated reaching the $1 billion goal of the Campaign for OSU. By the end of December an astonishing $1.14 billion had been raised during OSU’s historic first capital development campaign. The College of Pharmacy surpassed our target by over 20% and raised over $12M in new scholarships, faculty support, and private research grants. Our thanks go out to the amazing alumni and stakeholders who so generously support the students and faculty.

I hope you enjoy reading this edition of BEAVERx and, as always, please feel free to contact us with ideas, stories or events to feature in upcoming issues.

Sincerely,

Mark Zabriskie, PhD
Dean
**Join the world of ORANGE for the evening!**

Join us for the

**OSU Alumni & Friends Reception**

at the OSPA Annual Convention

Friday, October 9th
6:30pm-7:30pm
DoubleTree by Hilton Portland
1000 NE Multnomah St
Portland, OR 97232

Be our guest!
Enjoy wine, hors d'oeuvres, and door prizes.
Visit with other OSU pharmacists & friends!

Also join us for the

**APhA Alumni Reception**

SAVE THE DATE!

March 4, 2016 in Baltimore, MD
Hello Alumni!

You are joined by another great group of OSU College of Pharmacy graduates this year. Our 2015 graduates include leaders, clinicians, researchers and business-educated pharmacy professionals. Every one is an excellent, capable, patient-focused pharmacist ready to join our professional ranks. See page 14 to read more about the remarkable Class of 2015.

Many of you continue to engage with the college in fun and interesting ways. Our recently formed, OSU Women in Pharmacy group has accomplished several of their goals (page 20) and gathered for the annual luncheon in May. To kick off the school year, our Entrepreneurial Academy again hosts the annual Pharmacy and Football EA Showcase in the Reser Stadium Fan Cave, which fundsraise for the academy’s projects. Tickets are on sale now! (See page 12)

The College continues to develop online Continuing Education programming for you, including the new Patient Safety and Medication Error Reduction 18 hour ACPE accredited course (see page 7). Also, a robust online CE module to onboard pharmacists into Oregon’s newly established Pharmacist Prescribed Birth Control law is nearly complete. You can pre-register now at pharmacy.oregonstate.edu. This course opens November 1, 2015 in anticipation of the January 1, 2016 activation of the new law.

Many of our legacy families, with generations of OSU pharmacists, continue to support the student-led Apothecary Ball, held each March. If you haven’t yet come, please join us! This has become the pharmacy social event of the year and you don’t want to miss it (page 27). Every year the Apothecary Ball boasts a fun theme, dancing, music, great food, and unsurpassed networking.

Our new Young Alumni Leaders group, chaired by Abby Floeter (’13), will be reaching out to our recent graduates and young alumni to join their effort to create fun new projects for the College. Look for more information in September! If you are interested in joining the group, please send me an email.

We have a great HOMECOMING schedule of activities and Class Reunions for the Classes of 2010, 2005, 1995, 1985 (and ’86), 1975 and 1965 happening during Homecoming on October 24, 2015 (see page 26). If you have yet to receive your invitation, email me at Paige.Clark@oregonstate.edu. If your class wants to start planning your future reunion now, call my office!

There are more than 30 activities, events and opportunities throughout the year for you to connect with the College, the students, and your colleagues and classmates (see the calendar on the inside back cover). Also, don’t miss the Alumni Updates (page 24) and please email me to ensure you receive the monthly electronic newsletter from the College with invitations and news for you. Don’t miss out on the fun, networking, and professional development the College offers!

Finally, if there is anything I can do for you, please don’t hesitate to call or email me. Connecting you to colleagues, the College, students, or business associates, is my goal. Celebrating your successes is a top priority as well. Please keep in touch! As our 2014 graduating class said, we are “pharmily”, family bound by our OSU pharmacy education here at OSU.

Go Beavs!

Paige Clark, RPh (’86)
Director of Alumni Relations and Professional Development
Let us introduce the

The College of Pharmacy faculty is an outstanding group of individuals dedicated to transforming the lives of individuals and our communities. Skill sets that range across all aspects of education, practice and service are a requirement in the preparation of today’s professionals. The College of Pharmacy at Oregon State University falls into a top tier of institutions that accepts the additional responsibility of asking faculty to also engage in significant scholarship and research, creating new knowledge and understanding. Success is fueled by focused research collaborations and, as noted below, many of our faculty have joined together to find solutions to our most vexing challenges in healthcare.

**Drug Use and Public Policy**
Faculty members of the Drug Use & Public Policy research core quantify use patterns of prescription drugs in real world populations, evaluate drug-use policies, and implement interventions to improve drug usage, including pharmacist-delivered interventions and educational approaches.

- Daniel Hartung, Associate Professor
- Dean Haxby, Associate Professor

**Cardiovascular Disease**
Faculty members of the Cardiovascular Disease research core are primarily focused on therapeutic management of patients suffering from lipid disorders, atherosclerosis and congestive heart failure, as well as chronic disease management and prevention.

- Harleen Singh, Associate Professor
- Craig Williams, Professor

**Gene Regulation and Disease**
Faculty members of the Gene Regulation & Disease research core are studying the mechanistic basis for control of gene expression by transcriptional regulatory proteins in developmental and pathological contexts. These studies typically require a multidisciplinary approach involving the fields of biochemistry, cell biology, epigenetics, and molecular, systems, network, and developmental biology. The core has also created numerous genetically modified mouse lines that serve as models for human disease.

- Theresa Filtz, Associate Professor
- Arup Indra, Associate Professor
- Gitali Indra, Associate Professor (Sr. Res)
- Chrissa Kioussi, Professor
- Mark Leid, Professor and Associate Dean for Research
- Andriy Morgun, Assistant Professor

**Pharmacoepidemiology**
Faculty members of the Pharmacoepidemiology research core apply the principles of epidemiology and clinical pharmacology to evaluate therapeutic outcomes and medication adverse effects in patients at the population level, understand variation in treatment effects, and identify methods to improve appropriate and effective medication use. Current areas of interest include: antibiotic utilization, multidrug-resistant bacteria and healthcare-associated infections, medication use at the end of life, epidemiologic methods, healthcare delivery, and drug-induced cognitive impairment and loss of muscle mass in the geriatric population.

- Jon Furuno, Associate Professor
- David Lee, Assistant Professor
- Jessina McGregor, Associate Professor

Pictured (Left to Right)
Oregon State University
College of Pharmacy Faculty

Pharmacokinetic Modeling
Faculty members of the Pharmacokinetic Modeling core provide information into the pharmacokinetic (PK) study design, develop a mathematical model to predict biological concentrations of drug/new molecules, and PK data interpretation for both human and veterinary studies. The purpose of the core is to assist researchers and scientists with tools that guide optimization of dosing regimen for existing drugs and refine PK studies for further development of drug candidates.

- J. Mark Christensen, Professor
- Myrna Munar, Associate Professor

Targeted Drug Delivery
Faculty members of the Targeted Drug Delivery research core are developing novel, nanoparticle-based systems for the tumor-selective delivery of cancer chemotherapeutic agents. These delivery systems are designed to silence key, cancer-driving genes in the tumors, as well as directly induce tumor cell death via induction of heat within the tumor mass.

- Adam Alani, Assistant Professor
- Oleh Taratula, Assistant Professor
- Olena Taratula, Assistant Professor (Sr. Res.)
- Guarav Sahay, Assistant Professor
- Conroy Sun, Assistant Professor

Drug Discovery
Faculty members of the Drug Discover research core are interested in bioorganic and natural product chemistry; biosynthesis of microbial secondary metabolites; and work at the interface of molecular genetics, enzymology, and chemistry toward the goal of creating and developing novel, pharmaceutically active compounds useful in the treatment of infectious disease and cancer. Structurally complex natural products are isolated from biological organisms living in marine and terrestrial ecosystems.

- Jane Ishmael, Associate Professor
- Taifo Mahmud, Professor
- Kerry McPhail, Associate Professor
- Benjamin Philmus, Assistant Professor
- Phil Proteau, Associate Professor
- Aleksandra Sikora, Assistant Professor
- Fred Stevens, Professor
- Xihou Yin, Assistant Professor (Sr. Res.)
- Mark Zabriskie, Professor and Dean
- Ryszard Zielke, Assistant Professor (Sr. Res.)

Teaching Faculty
Along with our research body, a number of faculty members dedicate their entire career to creating and preparing tomorrow’s pharmacists. These faculty members are crucial to continuing OSU College of Pharmacy’s tradition of developing capable, patient-focused healthcare providers.

- Lorinda Anderson
- Emily Ashjian
- David Bearden
- John Block
- Robert Boyce
- Natalea Braden-Suchy
- Scott Coon
- Gary DeLandier
- Adriane Irwin
- Kathleen Ketchum
- Wayne Kradjan
- Roberto Linares
- Ali Olyaei
- Juancho Ramirez
- Stacy Ramirez
- William Simonson
- Shannon Starwalt
- Lindsey Watts Kinsella
- Ted Williams
- Ann Zweber

Promotions and Tenure

JJ Furuno: Indefinite Tenure
Chrissa Kioussi and Fred Stevens: Full Professor of Pharmaceutical Sciences
Ann Zweber: Sr. Instructor II
Theresa Filtz: Chair, Department of Pharmaceutical Sciences

pharmacy.oregonstate.edu
View from the Department of Pharmaceutical Sciences

By Dr. Theresa M. Filtz, Chair, Department of Pharmaceutical Sciences

The Department of Pharmaceutical Sciences is in the midst of several transitions. In June, I began serving the College as the new departmental Chair after previously serving as Director of the Graduate Program and Chair of the Curriculum Committee. I am honored by this opportunity to help our faculty further the College’s goals in education and research.

I step into the role of Dr. Gary DeLander, who, as the first chair to a new department, guided and served for the last 15 years. Having long served in a dual role, Gary is now able to focus fully on his position as Executive Associate Dean in the College of Pharmacy, and on his many activities in service to the pharmacy profession at local, state, and national levels. As Chair, I know I will benefit from Gary’s guidance and expertise.

In past years, this column was titled “View from Corvallis.” The changed title reflects another transition: we are a multi-city department now, with faculty spread across four buildings in two cities. Although the Pharmacy building in Corvallis is still our home base, four talented young faculty members from Pharmaceutics are now based in the new Collaborative Life Sciences Building (CLSB) in Portland. The CLSB, a state-of-the-art, LEED platinum-certified research center, provides space for students and researchers from OHSU, OSU and PSU, enabling diverse collaborative projects in education and clinical research.

More collaborative opportunities are afoot in Corvallis. We have faculty based in the new Linus Pauling Science Center, affording close proximity to colleagues with a common interest in disease prevention. Here in the Pharmacy building, we’ve been joined by the southern branch of the Oregon Translational Research and Development Initiative (OTRADI), a state-sponsored bioscience research support center and business incubator. The Medicinal Chemistry group has moved into newly renovated spaces in Weniger Hall.

These exciting new developments all serve to enhance the important work we do in education and clinically focused research.

View from the Department of Pharmacy Practice

By David Bearden, Chair, Department of Pharmacy Practice

It has been one year since the College’s Portland Campus moved to the Collaborative Life Sciences Building on the South Waterfront. The transition has brought amazing upgrades to the main classroom and increased office, research, and small group teaching space. Additionally, the new OHSU Simulation Center has allowed for enriched training opportunities – the entire P2 class completed their hands-on Pharmacy Practice closeout exams at the Center this year.

The new building also serves to highlight the growing educational collaborations across the many healthcare training programs it serves – pharmacy, medicine, dentistry, physician assistant program, radiation therapy, and the nursing trainees on the broader OHSU campus. Our students joined with more than 500 students from these programs and completed a required course focusing on Interprofessional Collaboration and Patient Safety – a program to enhance the safe and effective care of patients in a collaborative environment. Second year pharmacy students participated in these small group sessions led by a variety of professors across healthcare fields. The pharmacy faculty also taught beyond this course to provide both classroom and clinical training to learners in the schools of medicine and nursing.

The spirit of collaborative learning was celebrated in June with the graduating P4 class participating in the OHSU Convocation for the first time. The College of Pharmacy joined OHSU’s Schools of Dentistry, Medicine, and Nursing for this momentous occasion that will become an annual event for our graduates.

The College’s footprint continues to expand in Portland beyond the South Waterfront. This summer, new faculty will join the College, who are partnering with Central City Concerns and the Richmond Clinic to enhance patient care and student and resident education in growing ambulatory care medical home models in the community. Together, all of these advances from our new hub continue to provide the College with an outstanding training environment for our learners, a rich collaborative research enterprise, and improved healthcare for our patients.
Pharmacists Prescribing Hormonal Birth Control

On January 1, 2016, women’s access to oral and trans-dermal contraceptives will expand in the state of Oregon by allowing pharmacists to write prescriptions. Coming in November 2015, Pharmacists Prescribing Hormonal Birth Control, a 5-credit-hour (0.5 CEUs) online course, will be available. The course, developed by Oregon State University College of Pharmacy faculty with guidance from the Oregon Board of Pharmacy, the Oregon Health Authority, and others, will prepare pharmacists to take on this new duty of prescribing hormonal birth control in Oregon. To pre-register for this course, visit: pharmacy.oregonstate.edu/online_ce

Patient Safety and Medication Error Reduction for Pharmacists

Developed collaboratively by OSU’s College of Pharmacy faculty and the Oregon Patient Safety Commission, this 18-credit-hour (1.8 CEUs) course contains an introduction by the Institute for Safe Medication Practices and provides pharmacists with the tools to identify problems, reduce risk, and improve communication. Patient Safety and Medication Error Reduction for Pharmacists is designed to increase patient safety within the pharmacy environment.

Management and HR Skills for Pharmacists

Better navigate the challenges of an increasingly complex, fast-paced, and outcomes-oriented workplace. Developed jointly by the OSU College of Pharmacy and College of Business, Management and HR Skills for Pharmacists, an 18-credit-hours (1.8 CEUs) online course, will:

• Improve your leadership, staffing, and decision-making skills.
• Help you enhance your team’s performance through better coaching, motivation, and feedback.
• Ensure you are managing to the highest standards and complying with employment law.

Stress Management for Pharmacists

Stress Management for Pharmacists is an online, unique, and directly applicable 5-credit-hour (0.5 CEUs) course that explores particular stressors impacting pharmacists in various practice settings and offers practical solutions to working effectively and safely in stressful situations.

Cultural Competence and Health Disparities

Coming in 2016, this 2-credit-hour (0.2 CEUs) online course, will help health care professionals become more inclusive and provide the best care possible in a diverse population. Cultural Competence and Health Disparities looks at current health care issues among different groups and cultures, and suggests ways to improve communication and interactions with these populations.

pharmacy.oregonstate.edu/online_ce
541-222-0409 | osuinfo@apolloidon.com

Pricing varies by course and group discounts are available. Call 541-222-0409 for more information. Be sure to check with your employer to see if they will reimburse you for any of these continuing education certificate program expenses.

Accredited by ACPE

These programs have been planned and implemented in accordance with the policies of the Accreditation Council on Pharmacy Education (ACPE) through the sponsorship of Oregon State University College of Pharmacy. Oregon State University College of Pharmacy is accredited by the ACPE as a provider of continuing pharmacy education.
College of Pharmacy researchers Drs. Oleh Taratula, Adam Alani, Gaurav Sahay, and Conroy Sun in the Collaborative Life Sciences Building are the faces of a new nanomedicine dream team at the College of Pharmacy. Working with OHSU and the Knight Cancer Institute, they target tumors intravenously via nanoparticles loaded with drugs.

Meanwhile, in her lab on campus in Corvallis, Dr. Jane Ishmael’s research targets brain cancer with promising new cancer killing compounds isolated by the College’s natural products chemists, Drs. Kerry McPhail and Taifo Mahmud.

Together these College of Pharmacy researchers are pioneering a new era of cancer research working to outwit a very cunning disease.

“Cancer,” observes Assistant Professor Oleh Taratula, “is a very smart disease.”

To outwit this cunning foe, is Taratula’s single-minded focus during countless late-night hours in his new lab in the Collaborative Life Sciences Building on Portland’s South Waterfront. As he experiments with nanotechnologies for targeting deadly tumors and investigates light and heat as treatment tools, he thinks of the nearly 600,000 people who succumb to cancer each year in the United States alone. His fierce drive to give hope to those who face devastating diagnoses fills his body with kinetic energy as he talks. “Every family has some history of cancer,” he says. “It is very difficult for families when there’s nothing that can be done. I want to change that.”

Dr. Taratula, a biochemist, came to the College of Pharmacy to be part of a new interdisciplinary team of four researchers whose collective expertise in nanomedicine and other next-generation technologies for drug delivery has been honed at Rutgers, MIT, Stanford, the University of Wisconsin, the University of Washington’s Department of Neurosurgery, Seattle Children’s Hospital and other academic settings around the country. The team’s mission: develop nanotechnologies for delivering anticancer drugs directly to a tumor, thus avoiding chemotherapy’s indiscriminate, whole-body barrage of chemicals.

“Those chemo drugs go to every organ, every tissue,” says Taratula. “They’re very toxic — they cause terrible side effects like nausea, weight loss, hair loss and even heart problems.”

He and his teammates Drs. Adam Alani, Gaurav Sahay and Conroy Sun — who were among the first researchers to set up labs in the $295 million Collaborative Life Sciences Building last summer — are in the early design stages of new nano-tools that can carry cancer-fighting drugs through the bloodstream right to the site of a tumor. The team is experimenting with nanomaterials such as organic polymers (chemically related to plastics, but water soluble and biodegradable) that can carry the drugs, as well as guide them, to their target. To do this, the researchers encode the polymer carrier with specific chemicals that are drawn to the cancer cells, Assistant Professor Adam Alani explains. This active targeting uses the cancer’s characteristic fingerprint against it by “decorating” the nanoparticles with “zip codes” — usually ligands (molecules that bind to other, usually larger, molecules) that have an affinity for compounds in the cancer cells.
Once it arrives at the tumor, the nano-packet needs to slip past the protective proteins that shield the cancer cells. In theory, the extreme thinness of the drug-loaded nanoparticles should let them pass through the defensive wall, as the network of blood vessels feeding the cancer is vulnerable to penetration by particles as big as 200 nanometers. But through a process called endocytosis, the cancer cells can engulf foreign invaders (such as nanoparticles loaded with drugs) inside fatty pouches called lipid bubbles and recycle them before they can enter the tumor. So far, the secret to dodging the lipid bubbles has eluded scientists. “This is one of the huge challenges facing the field,” Assistant Professor Gaurav Sahay says.

Another huge challenge: finding and killing the stray cancer cells that surgeons inevitably leave behind after removing the visible mass. These microtumors, which form an invisible periphery of malignancy, often seed recurring cancers. Doctors can better detect the boundaries of tumors by using fluorescent dyes that cause errant cells to glow under optical imaging, says Assistant Professor Conroy Sun, a bioengineer whose vita includes post-doctoral research in imaging technologies at Stanford’s Department of Radiation Oncology.

Losing her uncle to a “cruel” disease, an inoperable glioblastoma in his brain, altered Associate Professor Jane Ishmael’s course as a researcher in the College of Pharmacy, focusing her knowledge of pharmacology (the study of how drugs work in the body) toward drug discovery (the active search for novel compounds that heal). “The progression of these cancers is often very rapid,” says Ishmael. “Really, the prognosis for these aggressive brain tumors hasn’t changed much at all. We’ve not improved patient outcomes.”

In 2008, when Associate Professor Kerry McPhail, a medicinal chemist, cracked the complex molecular structure of a rare marine organism she had discovered in Panama, Ishmael became captivated by its powerful cytotoxic (anticancer) action. She teamed up with the university’s natural products team — scientists including College of Pharmacy researchers McPhail and Professor Taifo Mahmud, who brave some of the world’s hardest-to-get-to ecosystems in search of promising new drugs.

In 2014, Ishmael’s finding that “coibamide A” (the substance from the cyanobacteria McPhail had collected in Panama) induces death in human glioblastoma cells won her a $50,000 Discovery Grant from the American Brain Tumor Association. “The cellular machinery has to be working very well in a cancer cell because it’s got this massive demand to grow and proliferate at a faster rate than a normal cell,” she says. “We’re trying to target that aspect of its physiology. Coibamide A seems to be able to shut off some of the proteins that are required for the formation of new blood vessels via a potentially novel mechanism.”

To read more from the article Cancer: Unraveling the tangled threads of a stealthy disease by Lee Sherman, visit oregonstate.edu/terra/

College leadership in cancer research was recently expanded with the appointment of Associate Professor Arup Indra as co-director in the development of a new OHSU/OSU Cancer Prevention and Control Initiative. The collaboration is aimed at capitalizing on the diverse strengths in cancer research at both institutions that spans the cancer prevention and control research spectrum. Supported by funds from OSU and OHSU, the initiative will support clinical, basic, or population-based inter-institutional research teams with the generation of preliminary data leading to peer-reviewed national funding such as Program Projects and Center Grants.
Marijuana: How legalization impacts Oregon pharmacists
By Dr. Jane Ishmael, PhD, Associate Professor

Although marijuana remains a Schedule 1 substance under federal law, Oregon is one of 23 states, plus Washington D.C., that allow the use of marijuana for specific medical conditions. As of July 1, 2015, Oregon became the fourth state to legalize recreational use and possession of marijuana for adults 21 years and older. With widespread media coverage, public awareness of marijuana is high and professional opinions are very much divided with respect to the risk versus benefits of medicinal marijuana for certain chronic conditions.

This changing landscape, and the move to non-illicit status, has a direct impact on pharmacists in Oregon. It is anticipated that pharmacists will be increasingly asked to counsel patients that are using medical and/or recreational marijuana, and field general questions as individuals become more comfortable revealing their drug use. When appropriate, pharmacists will also be in a position to inquire directly about marijuana when gathering a patient’s full history. Here we provide some facts and figures about marijuana use and plan to bring you updates on this rapidly evolving topic in subsequent editions of BEAVERx.

As of July 1, 2015 there are over 300 Medical Marijuana Dispensaries registered with the Oregon Health Authority and 71,094 Oregon Medical Marijuana Program (OMMP) patients. Although there are 10 distinct medical conditions for which medicinal marijuana is approved in Oregon, 95% of OMMP patients have pain as the qualifying medical condition. There are no safe levels of marijuana use (recreational or medicinal) during pregnancy. Cannabinoids are lipophilic substances that have the potential to interfere with normal visual and brain development.

Natural products from the Cannabis plant are neuromodulators, they act presynaptically to inhibit release of other neurotransmitters. Δ9-tetrahydrocannabinol (THC) binds both subtypes of cannabinoid receptor (CB1 and CB2) with nM affinity. Δ9THC is the main psychoactive substance in the Cannabis plant and therefore recreational users desire strains with high Δ9THC content. Some plant-derived cannabinoids, such as cannabidiol, have medicinal properties without any psychoactive effects.

New Space in Weniger Hall

Last fall several researchers moved their labs from the Pharmacy Building and Oak Creek Laboratory to Weniger Hall on OSU’s campus in Corvallis. The move gave these labs more space and brought them closer together for increased collaboration between researchers.

Sikora Lab:
Dr. Aleksandra Sikora and her team work to develop a vaccine against gonorrhea, a project funded by National Institute of Health, and identify new antibacterial compounds.

McPhail Lab:
The lab of Dr. Kerry McPhail seeks to discover new natural products from under-explored sources of biological diversity.

Philmus Lab:
Dr. BJ Philmus and lab members look for new ways to identify and produce natural products that are useful for curing diseases.
The curriculum at the College of Pharmacy provides students with a strong clinical foundation through a combination of classroom and hands-on experiences. PharmD students graduate ready to practice in the interdisciplinary healthcare environment.

In their third year, Pharmacy Practice brings active learning into the classroom. Dr. Craig Williams, OSU/OHSU Clinical Professor, and Dr. Megan Herink, OSU/OHSU Clinical Assistant Professor, expose students to the exceptional work environment of clinical rotations at OHSU Hospital. Here they work closely with other providers and current pharmacy residents that form a strong, interdisciplinary healthcare system. “Everyone is interested in learning, so there is always a new opportunity, like journal club, for the students to participate in,” says Dr. Henrink.

The foundation of the Pharmacy Practice course is case-based learning and small group, active learning. This style of teaching helps develop critically thinking through complicated patient cases. In Dr. Herink’s words, the biggest benefit of this method is it “[...] teaches students to see the bigger picture as they learn how to approach a patient as a whole, instead of in individual pieces of a case.”

Preparation for residency is another important arena for building clinical skills and Dr. Harleen Singh, OSU/OHSU Clinical Associate Professor, is a resource for many students considering post-graduate training opportunities. Dr. Singh provides several different opportunities for our students to build the skills they need to be leaders in the profession of pharmacy. One example is research projects where students learn the intricacies of collecting and measuring data. Students will be presenting two posters at the next ACCP meeting, which is a joint session with The American College of Clinical Pharmacy (ACCP) and Global Health. Dr. Singh also offers opportunities for students to volunteer with the Central City Concerns Clinic, a clinic in the Portland Metro area serving the homeless population, and at Veterans Clinic at the Portland VA.

“Being involved in direct patient care helps to solidify what we learn in class,” says P4 Matthew Glaus.

Further, Dr. Singh elaborates, these opportunities create an advantage for our students in that “our program is not only competitive within the state of Oregon, but nationally. Our education provides a lot of hands-on experience, which builds students whom are well prepared for residency and have a better understanding of what they want. We give them the tools to make an informed decision.”

Each fall, OSU|OHSU hosts the annual American Society of Health-System Pharmacists Clinical Skills Competition (ASHP CSC). The CSC is comprised of a 2-hour written assessment followed by oral presentations. Fourteen teams representing the Corvallis and Portland campuses participated in the CSC this past year. The top five teams from the written portion advanced to the oral presentation round. The winning team, P4s Brandy Wimer and Amanda Masog, received complimentary registration to attend the 49th ASHP Midyear Clinical Meeting & Exhibition in Anaheim, CA where they competed in the national clinical skills competition. This competition is a fantastic opportunity for students to put their clinical skills into practice. It also welcomes OSU alums and current residents to partner with students to help prepare them for competition.

P4 student, Kayla Grzybowski (Ruhl), examines a patient during a clinical outreach program.
**White Coat Ceremony**

The Class of 2018 was officially inducted into the College of Pharmacy at the White Coat Ceremony held on Thursday, October 9, 2014. Eighty-six new students were “coated” by faculty before taking the Pledge of Professionalism. Special guests at the White Coat Ceremony included alumna, Kristy Butler (BPharm ’96, PharmD ’98) and Steve Keen, RPh, from Albertsons Sav-On, who generously sponsored the event. The 2015 White Coat Ceremony will be held on Tuesday, September 29, at 5:00pm at the CH2M Hill Alumni Center on the Corvallis Campus.

**Scholarship Benefactors Reception**

The 2014 Scholarship Benefactors Reception was held at Langdon Farms Golf Course on October 14. Students who received a scholarship for the 2014-2015 academic year gathered at the reception to thank the College’s supporters and their individual scholarship donors. For the fourth year in a row, among colleges at OSU, the College of Pharmacy holds the distinction of having the highest percentage of its alumni give back to the school. More than 34% of alumni “pay it forward” with donations to the College. This year, 134 scholarships were awarded, totaling more than $200,000 in scholarship support to pharmacy students. If you are interested in becoming a scholarship donor, please contact the college at (541) 737-3424 or email Lori Brown at Lori.Brown@oregonstate.edu.

**Career Days**

On January 21-22, 2015 the P1 and P2 classes filled Memorial Union for the 2015 Career Days Informational Fair and Internship Interviews. Approximately 500 interviews were performed during the two days, giving more than 160 students the opportunity to network and connect with multiple companies. In total, 13 companies performed interviews to fill their internship programs. Career Days follows P4 Interview Day, held in December, when companies interview P4 students for employment after graduation. The next P4 Interview Day will be held on December 4, 2015; Career Days will take place on January 20–21, 2016.
Apothecary Ball
The 10th annual Apothecary Ball transported students, alumni, and friends of the College to the Kentucky Derby at the March 7th event held at the Collaborative Life Sciences Building. Portland’s very own Kansas City Rhythm Kings kept guests moving on the dance floor between derby races, games of croquet, and a silent auction. Proceeds from the event benefit student outreaches and educational activities. Thank you to attendees and sponsors for making the event a success! We look forward to seeing you at the 11th annual Apothecary Ball on March 12, 2016 at the Collaborative Life Sciences Building on the Portland Campus. Photo Credit: Shelley Marie Photo

Student Recognition Banquet
On June 3rd, 2015, students were acknowledged in front of peers and faculty for their hard work over the past year at the annual Student Recognition Banquet. Students also provided fabulous entertainment for the evening in the form of a musical group, The Nightshades, and a Chinese Lion Dance set to traditional drums. During the banquet, each class presented videos and slideshows of the 2014-15 academic year. Individuals from each class also submitted videos for a Lip Syncing Competition. Next year’s Student Recognition Banquet will be held on June 1, 2016 at the CH2M Hill Alumni Center on the Corvallis Campus.

PEPP
Throughout the school year, the PharmD Enrichment and Professional Program (PEPP) brings in speakers from various practice settings to talk to students about the many opportunities available in pharmacy. This year, PEPP brought in eight speakers from a variety of backgrounds and experiences including: Tony Secor (‘10), Gary Keil (‘96), Tara Pfund (‘09), Jeffrey Delafuente, Heidi Ecker, and Steven Hall. Speakers are already being scheduled for the 2015-2016 Academic Year. If you are interested in participating as a PEPP presenter, please contact Paige Clark at Paige.Clark@oregonstate.edu.

Event and Fundraising Coordinators
Event and fundraising coordinators, P2 students Victoria Li and Julie Cha had a record-breaking year coordinating numerous student events and fundraisers throughout this last year. Their preparations prior to students arriving on campus allowed them to start off strong welcoming students with the annual Luau. During Homecoming, they led the construction of the Homecoming Float as a way to involve new students and encourage involvement in a fun way. Their biggest success was the 10th annual Apothecary Ball. The Kentucky Derby theme was a huge hit among guests. They were able to not only meet their fundraising goals for the year but also surpass them. The year ended with the Student Recognition Banquet showcasing student talent and highlighting the hard work of fellow students and faculty. Vikki and Julie were relentless in their efforts to provide exceptional student events, and their exceptional leadership and coordination talents were showcased all year.

Photo Credit: Shelley Marie Photo
Graduation

Four years ago the Class of 2015 was welcomed to the College of Pharmacy and inducted into the profession at their White Coat Ceremony. On June 12th, these same individuals graduated from OSU/OHSU College of Pharmacy ready to begin their careers as pharmacists.

At this year’s ceremony, OSU/OHSU College of Pharmacy conferred 84 Doctor of Pharmacy degrees, 5 Doctor of Philosophy degrees, and 1 Master of Science degree. Additionally, 3 current students and 2 alumni were awarded their Master of Business Administration from the OSU College of Business. Notably, 82 percent of the 2015 graduates are resident Oregonians and 28 graduates will continue their professional development through postgraduate training in a pharmacy residency.

Class President Cassandra Dotson addressed the graduates during the ceremony reminding them of the important steps they have taken to reach this point and encouraging them to continue to strive to reach their goals in this next chapter in their careers. Oregon State University President, Dr. Edward Ray, and College of Business Dean, Dr. Ilene Kleinsorge, honored the graduates with motivating speeches. Dr. Ray described the opportunity graduates have to be leaders and equal partners in a diverse, multi-disciplinary healthcare team. Dr. Kleinsorge emphasized the important relationship between the College of Pharmacy and the College of Business striving together provide the highest level of education to students. Oregon Health and Science
University Provost and Executive Vice President, Dr. Jeanette Mladenovic, was unable to attend the ceremony, but sent her profound congratulations to the graduates.

During the ceremony, a few exceptional students were recognized for their outstanding work over the last four years. Drs. Dave Bearden, Mark Leid (’90), and Theresa Filtz presented 11 students with 8 distinguished awards for the work they have accomplished in the classroom, clinics, and community. These awardees are: Lincoln Alexander, Matt Atkinson, Craig Brauer, Keri Crumby, Steve Lam, Linda Nguyen, Mac Ovenell, Erin Vodka, Kaitlyn Wilson, Janae Winden, and Bethany Withycombe.

Following the ceremony, graduates reunited with their friends and families outside LaSells Stewart Center for a dessert reception sponsored by long-standing OSU Pharmacy Partner, Fred Meyer.

**Convocation**

On Friday, June 5th, graduates participated in the OHSU Convocation, an event that included students, faculty, and administrators from OSU/OSHU College of Pharmacy and OSHU’s School of Dentistry, School of Medicine, and School of Nursing. This celebratory occasion highlighted the growing collaboration of the multi-disciplinary healthcare team that has come together under one roof in the new Collaborative Life Sciences Building in Portland this last year. The ceremony included remarks from the OHSU Provost, Dr. Jeanette Mladenovic, Chairman of the Board of Directors, Jay Waldron, and the 2014-2015 OHSU All-Hill Student Council Vice President, Monica Luttrell. This year’s keynote speaker was OHSU President, Dr. Joseph Robertson.
On Saturday, May 30th, 2015, students and alumni gathered for the annual College of Pharmacy Professional Day. This event allows pharmacy students to network with pharmacists from various practice settings and talk about the many opportunities available in the pharmacy profession.

The day began with the Entrepreneurial Academy’s Business Case Competition, which engages students in the business aspects of pharmacy. Teams had several months to prepare a business plan for a true-to-life case prepared by faculty members and distinguished alumni. The final two teams presented their business plans to our panel of judges: Michele Belcher (’86), Adriane Irwin, Kate James (’01), Penny Reher (’82), and Vince Whiting (Hon.).

Upon deliberation, judges determined that both teams put forth winning business plans. The proposal from Team 1 did an exceptional job of highlighting the present needs of pharmacy, while Team 2 did an excellent job anticipating needs of the future. Team 1, including P1 students Kayla Burnette, Katie LaRue, Amber Meier, and P2 students Austin Pliska, and Victor Tran, presented the “Beaver Family Health Center – CCO Incentives” business plan. Team 2, including P2 students Gechi Erinne, YoungTae Kim, Michelle Lei, Dan Muongpack, and Blane Yimesgen, presented “The Affordable Health Service and Clinical Service Initiative” business proposal.

Following the Business Case Competition, students were given the opportunity to ask questions during an interactive Discussion Panel, including managed care, long-term care, hospital, and retail pharmacists. Alumni, pharmacy partners, and friends of the college answered questions and gave career advice to the students in attendance. We were honored to be joined by Amy Burns (’11), Dennis Choi (’14), Kathy Ketchum (’82), Dave Lewis (’81), Nick Lewis (’14), Steve Logan (’80), Michelle Murray (’85), Bill Pennington (’91), Jerry Smead (’89), and Jake Thompson.

The final event of the day, Quick Conversations, gave students and alumni multiple 10-minute segments to converse about the profession. The purpose of Quick Conversations is to provide students with a look at many options available in the pharmacy profession. They are able to network with alumni and providers from numerous backgrounds and professional areas within pharmacy practice. At the 2015 Quick Conversations event, the 10 pharmacists that took part in the Discussion Panel, as well as the 5 judges of the Business Case Competition, spoke with groups of students who rotated between the pharmacist presenters.

The second annual Professional Day was hugely successful for all involved and we invite you to join us for the third annual Professional Day on Saturday, May 21, 2016.
OSU College of Pharmacy students manage more than sixteen different patient care focused committees and provide leadership at nearly 50 healthcare outreach events across the state. These impact the health and wellness of thousands of Oregonians each year.

Beavers Diabetes Awareness Day

The second annual Beavers Diabetes Awareness Day took place on November 1, 2014. This health fair provided screenings and diabetes awareness education to the public free of charge. Students partnered with alum, Cory Huot ('97) along with several healthcare partners, including the American Diabetes Association, Legacy Health, Novo Nordisk, Moda Health, OSU College of Pharmacy, PacificSource Health Plans, Safeway, and Samaritan Health Services. More than 200 blood pressure and blood glucose screenings were provided to attendees and many more were educated on diabetes awareness.

Marcus Dupree, a retired pro-football star, was present to share his story about living as a diabetic after being diagnosed with Type-2 Diabetes in 2009.

OSU Pharmacy Students Lending a Helping Hand for University of Oregon’s Mass Meningitis Vaccination

During the week of March 2–5, 2015, the University of Oregon in Eugene and Albertsons-Safeway hosted a vaccination effort to protect the college population from spreading and contracting meningitis. More than forty OSU pharmacy students volunteered to assist in administering the vaccine at the Matthew Knight Arena on the UO campus. This event offered a unique opportunity to partner with the University of Oregon and work with other members of the Eugene medical community. OSU College of Pharmacy student volunteers were joined by Albertsons-Safeway Representatives, Amy Valdez ('99) and Kevin Russell ('93).

OSU College of Pharmacy 2014-2015 Student Leaders

Student Executive Council
President & Treasurer: Matthew Thomas ('17)
Secretary: Jack Barker ('17)
Fundraiser: Julie Cha ('17)
OHSU All Hill Representative: Megan Carroll ('16)
Phi Chi President: Amanda Tobias ('16)
Phi Lambda Sigma President: Phi Vu ('16)

Phi Delta Chi Worthy Chief Counselor: Susan Fedler ('17)
P1 Class President: Ian Wood ('18)
P2 Class President: Theresa Le Diem Pham ('17)
P3 Class President: Michele Wofford ('16) and Eugenia Su ('16)
P4 Class President: Cassandra Dotson ('15)
The 2014-2015 academic year kicked off with a return to the Reser Stadium Fan Cave box for the annual Pharmacy and Football EA Showcase. The 2014 event featured business case presentations from the top two teams of the Professional Day Business Case Competition before the big game. This year’s EA Showcase event is scheduled for Saturday, September 19th when the Beavers take on the San Jose State Spartans (See above invitation for information on reserving tickets).

Under the guidance of EA President, Gecchi Erinne ('17), Breakin’ Down the MU committee leaders Brittney Louie ('17), Courtney Louie ('17), and Susan Fedler ('17) led the redesign of the annual Breakin’ Down the MU event and reached out to dance clubs across campus to increase student awareness of the health-fair and dance showcase. In addition to complimentary health services and education provided by OSU College of Pharmacy, attendees were encouraged to get active by participating in free dance lessons offered by several of the dance groups. Breakin’ Down the MU, which takes place the last Friday in January, helps EA raise funds to support the Academy’s activities and projects.

The second annual Professional Day closed out the year (see page 16 for more details). 2014 Business Case Competition winners, Kristin Gafner ('16), Kayla Grzybowski ('16), and Eugenia Su ('16) have continued to work closely with Penny Reher ('82), Director of Pharmacy Services at Pharmacy Partner, Samaritan Health Services, to build their business plan.
HOMECOMING 2015
Celebrate OSU Homecoming with OSU College of Pharmacy
OCTOBER 23-24TH

Dean’s Coffee
4 Hours Pre Kick-Off
Pharmacy Building for coffee
Hosted by Dean Zabriskie

OSU vs. Colorado
Homecoming Football game!
Pharmacy group tickets available through college

Young Alumni Tailgate
3 Hours Before Kick-Off
Private tailgate fun to re-connect with your classmates!

Beavers Diabetes Awareness Day
2 Hours Before Kick-Off
Look for the white tent in front of Reser Stadium

Reunion Activities

Reunion Activities Include
- Reunion Dinner
  Friday October 23, 2015
- Social & Dean’s Coffee
  Saturday October 24, 2015
  Pharmacy Building
- Football Game
  OSU vs. Colorado
  Saturday October 24, 2015
  Reser Stadium

Reunion Packages
- Beavers Unite: $55 per couple
  Reunion Dinner, Social & Dean’s Coffee

- Beaver Believer: $100 per couple
  Reunion Dinner, Social & Dean’s Coffee,
  and Tickets to game: OSU vs. Colorado (in Pharmacy reserved area)

RSVP NOW!
Registration open now!
To RSVP contact Paige Clark
Paige.Clark@oregonstate.edu
541-736-6607
Under the guidance and leadership of Susan Poole (’69), this group of women has successfully completed their first project of creating and installing the OSU College of Pharmacy Women in Pharmacy Initiative Historical Display. The display, located in the Student Resource Room on the Corvallis campus, contains historical pharmacy pieces donated by Margaret (Fowler) Smith (’69).

This year’s luncheon brought together many remarkable OSU Pharmacy women on Friday, May 8th. Attendees ranged from a current student, to recent graduates, mid-career women, and retirees who enjoyed networking, connecting with old friends, and meeting new friends!

Dean Mark Zabriskie spoke to the group about developments in the College and profession, and shared a robust view of where the College is headed. He discussed the incredible cancer research and growing collaboration with OHSU, as well as the success of our students in all areas of the pharmacy profession upon graduation.

For their next project, the Women in Pharmacy group is creating and providing professional pharmacy license frames for future graduating classes.

All OSU College of Pharmacy women are invited to join this innovative group and the initiatives they put forth. If you are interested in participating, please contact Paige Clark (’86) at Paige.Clark@oregonstate.edu

Women in Pharmacy leader Susan Poole (’69) and Project H.E.R.

Susan Poole (’69) is passionate about issues effecting women, children, and families. It comes as no surprise she was a part of the initial team brought together to help expand the fundraising capabilities of Project H.E.R. (Health Enlightenment Resources). It was during this time the Puttin’ on the Pink Education Day concept was created to raise awareness of the risks of breast cancer and provide women with the tools to live a healthy life.

Project H.E.R. provides awareness, education, and support to all women in Benton, Linn, and Lincoln counties who have been diagnosed with breast cancer. Susan recruited Dr. Arup Indra (Associate Professor, OSU College of Pharmacy) to present at the Puttin’ on the Pink event.
Alumni Events

OSPA Reception/CLSB Open House

Alumni and students gathered for a fantastic evening at the new Collaborative Life Sciences Building in November. Each year, during the OSPA Convention, the College hosts an Alumni Reception, and this year had the added excitement of taking place at the new building in Portland.

Pharmacy students guided building tours to reception guests and showcased state-of-the-art features including the Patient Simulation Center and research labs. In gratitude to Rite Aid and Vincent and Amira Whiting and their generous support of the OSU College of Pharmacy, the two of first floor classrooms were dedicated with plaques in their honor.

Join us for the 2015 Alumni Reception at OSPA to be held at the Doubletree by Hilton Portland on Friday, October 9.

Homecoming

The Classes of the 4’s returned to campus during Homecoming for a weekend packed with reunions and activities celebrating University and College traditions with alumni, students and faculty.

The Class of ‘54 gathered on Friday for a 60-year reunion dinner! Alumni and their families mingled and reminisced about pharmacy school and professional journeys. Many had experiences in common, including working at Frank Nau Pharmacy downtown Portland after graduation. On Saturday, the Classes of ’64 ’74, ’84, and ’94 met for reunion socials. The annual Dean’s Coffee reception was held in the Pharmacy Building and students and alumni compared their pharmacy school experiences. Graduates from the Classes of ’09, ’10, ’11, ’12, ’13, and ’14 socialized before the big game against Cal at the Young Alumni Tailgater.

APhA Annual Meeting

In March, pharmacists across the country travelled to San Diego for the 2015 APhA Annual Meeting. The College hosted a reception at Edgewater Grill, bringing together OSU College of Pharmacy alumni, students, and faculty. Attendees enjoyed appetizers and drinks while mingling and enjoying a colorful sunset over the Pacific Ocean.

Make sure to attend the 2016 APhA Annual Meeting OSU Reception in Baltimore, MD. (See page 2 for event details.)
2015 Icons of Pharmacy

Recognition as an Oregon State University Icon of Pharmacy and induction into the Pharmacy Hall of Fame is an honor reserved for those who have demonstrated dedication to the College of Pharmacy and distinguished themselves through sustained, meritorious contributions to pharmacy throughout their careers. (2015 Outstanding Young Alumni on page 24)

Kathy Hahn (Hon. ‘12)

As a credentialed Pain Practitioner and Pain Educator, Kathy Hahn is a trailblazer in educating others about pain and advocating nationally, regionally, and locally for better pain management. Kathy saw a need for better pain management when working as a Pharmacy Manager for Bi-Mart. Kathy has had groundbreaking impact on pain management education by teaching students, faculty, practitioners, legislators, and patients about the complexities of managing pain. She designed and implemented a national-caliber clerkship focusing on pain management for students, and her influence has shaped young professionals.

Kathy, a pharmacist, was appointed Chair of the legislatively managed Oregon Pain Management Commission by the Governor, which she led for 10 years. As Chair, Kathy helped pass the legislation implementing Oregon’s Prescription Drug Monitoring Program (PDMP). Kathy has also served as an active member of local, regional, and national organizations including the Oregon Pain Society, the Western Pain Society, APhA, the American Academy of Pain Management, and the American Society of Pain Educators.

Kathy is a national expert on pain and has been recognized with awards such as the APhA One-to-One Patient Counseling Recognition Program, the Pain Society of Oregon Pioneer in Pain Award, and Bi-Mart Corporation Excellence in Clinical Services. In 2012, the College of Pharmacy bestowed honorary alumni status to Kathy.

Shelton Louie (’78)

An OSU College of Pharmacy 1978 graduate, Shelton Louie set his sites on pharmacy with the encouragement of his father, and followed in his sister Nancy’s footsteps. After graduating, he went to work for Fred Meyer where he stayed for 30 years. During this time he saw a need for patient safety and pharmacy efficiency, and was inspired to create a better prescription delivery system. What started as a concept was built into GSL Solutions, of which Shelton is Founder and CEO.

Shelton is a doer, an innovator, and a person who thinks far outside the box. He has filed patents on using Radio Frequency Identification Devices (RFID) in pharmacy workflow in order to improve accuracy and efficiency. To date, Shelton has been granted 17 patents. GSL Solutions storage units, known as the IntelliCab system, have been installed in all Army Medical Centers across the USA with Air Force and Navy fast following. In the retail channel, IntelliCabs have been installed in the top 10% of the busiest Safeway stores, proving labor savings, safety, and customer service. Most recently, GSL Solutions has been granted a national Kaiser Permanente contract.

Shelton was named an OSU Alumni Fellow in 2012. As a contributor to his communities, he is the Founder and Chairman of the annual St. Joseph Golf Classic, now in its 20th year, benefiting the school and sports programs of St. Joseph Catholic School in Vancouver, WA.
Recent Grad Spotlights

Linda Nguyen (‘15) worked as a bench researcher prior to pursuing a career in pharmacy. While at the OSU/OHSU College of Pharmacy she co-founded and helped develop the College of Pharmacy Ambassador Program to assist in the recruitment and support of incoming pharmacy students. A teammate of Steve Lam (‘15), she was also a Gold Medal recipient of the Baxter Leadership Excellence Awards in Pharmacy (LEAP). Linda will join Houston Methodist for two years as the Health System Pharmacy Administration Resident following graduation, while concurrently working on a Master of Science in Pharmacy Leadership and Administration at the University of Houston.

For Steve Lam (‘15), interest in pharmacy was sparked through his volunteer work with Volunteers in Medicine in Eugene, OR. Interacting with patients and assisting them in managing their medications gave him a sense of purpose and the drive to pursue a career in pharmacy. During pharmacy school he served as the American Pharmacist Association – Academy of Student Pharmacists and Oregon State Pharmacy Association Chapter President. Steve was also a Gold Medal recipient of the Baxter Leadership Excellence Awards in Pharmacy (LEAP). He is currently working as a PGY1 residency with Moda Health in Portland, OR.
OSU College of Pharmacy would like to extend a warm congratulations to our recent alum, Michael Daher ('13), who held the grand opening for his retail Pax Pharmacy on January 12th, 2015. Located in the Santa Teresita medical building in Duarte, CA, Pax Pharmacy specializes in convalescent home care, diabetic care including foot and skin care, durable medical equipment (DME), compounding, and providing all the elements of a traditional retail pharmacy.

He follows in the footsteps of his father, Albert Daher ('83), who independently owned and operated his own pharmacy for 30 years. His younger sister, Isabella Daher ('22) also started in OSU College of Pharmacy’s Early Admission Program (EAP) this year.

Advocating for community pharmacy on the local, state, and national level, Amy actively participates in immunization coalitions and is responsible for the implementation of the meningitis immunization program for college students in Oregon. She is a champion for changing state laws, with successes in both Oregon and Alaska.

Amy proudly serves as the first female National President of the Phi Delta Chi Pharmacy Fraternity since 1883, representing 97 chapters of colleges of pharmacy across the nation. She also serves as a board member for the fraternity foundation Pharmacy Leadership & Education Institute. Actively engaging with her Alma Mater, she is a preceptor to 4th year pharmacy students on clinical rotations, and coordinates a 10-week Summer Intern program for OSU pharmacy students.

Kayla McGahey ('13) recently became a Clinical Research Pharmacist with Cancer Treatment Centers of America (CTCA) in Goodyear, AZ.

In this role, Kayla performs medication reviews of patients consenting for clinical trials. She counsels patient regarding the study drug and goes over current medications in regards to interactions with the study drug. She is also the main contact for the medical oncologists, clinical coordinators, and RNs with questions regarding concomitant medications. “If a patient gets pneumonia while enrolled in a trial, I might get a call or email from the medical oncologist to make sure the antibiotic they want to prescribe is allowed per the study protocol and won’t interact with the study drug,” she explains.

A large part of her job also involves drug accountability and keeping records for all of the study drugs. She verifies and dispenses investigational drug orders and monitors patient lab results for toxicities prior to drug dispensing.

“Since starting my job here, I have grown tremendously regarding clinical research and investigational chemotherapy agents,” Kayla says. “I feel so grateful and excited to have this opportunity and am proud to represent OSU College of Pharmacy in my new role!”
Alumni Working Together to Create Change: Pharmacist Provider Status and Birth Control Prescribing

Many College of Pharmacy alumni and faculty have spent countless hours campaigning for legislative changes to better the pharmacy profession. In June their hard work paid off when the Oregon State Senate passed HS2028 granting provider status to pharmacists in Oregon.

Cory Huot ('97), Josh Bishop ('06), and Stacy Ramirez (Assistant Clinical Professor, OSU College of Pharmacy), along with numerous other alumni and pharmacists in Oregon spent the last three years testifying, campaigning, and educating about the importance of the bill and including pharmacists as a member of the healthcare team. The bill, signed by Governor Kate Brown on June 11, permits pharmacists to engage in practice of clinical pharmacy and provide patient care services to patients.

Additionally, on July 6, Governor Brown signed HB2879 giving pharmacists prescribing authority for some hormonal contraceptives after a woman completes a self-administered risk-screening test. The new law states pharmacists can prescribe hormonal contraceptives based on developed guidelines, following completion of continuing education prior to carrying out this new duty. Lorinda Anderson (Instructor at OSU College of Pharmacy) is working with the Oregon Board of Pharmacy to create an online training program for pharmacists. The training program will launch November 2015 in advance of the January 2016 date when the new law goes into effect.

Dr. Gary DeLander, OSPA President and Executive Associate Dean for the College of Pharmacy, says, "Having the legislature grant pharmacists prescriptive authority for hormonal birth control, and clarify provider status, are terrific affirmations of how today’s pharmacists are prepared to provide leadership in patient care."

Promotions, Appointments, Awards, and Past Presidents

Josh Bishop ('06): Vice President and Idaho Regional Director at PacificSource
Larry Cartier ('74): OSPA Bowl of Hygeia
Sarah Deines ('08): OSHP Pharmacy Practitioner of the Year
Gary DeLander: Oregon State Pharmacy Association Outgoing President
Roberto Linares ('91): 2015-2016 Oregon Board of Pharmacy President
Nasri Massaad ('99): Vice President of Pharmacy Operations, West Region at Albertsons-Safeway
Michelle Murray ('86): Oregon Society of Health-Systems Pharmacists Outgoing President
Douglas Pham ('04): OSPA Distinguished Young Pharmacist
Dan Rackham ('08): OSHP Board of Directors Award
Jerry Sachtjen ('76): OSPA Cardinal Generation Rx Champions
Nicole Schrankel ('99): OSPA Excellence in Innovation
Christie Stoneback ('03): Director of Pharmacy Operations, Portland Division at Albertsons-Safeway
Sean Sullivan ('83): APHA-APRS Research Achievement Award in the Pharmaceutical Sciences
Kenneth Wells ('72): OSPA Pharmacist of the Year
Bethany Withycombe ('15): ASHP New Practitioner’s Forum Career Development Advisory Committee Member
Katie Yabut ('11): OSHP Excellence in Education Award

Phil Darrah ('96): More than a Pharmacist

Phil Darrah ('96) recently made news headlines when he went above and beyond his role behind the counter and performed CPR on a customer in the parking lot of his pharmacy, Banks Pharmacy. Bill Hundley suffered a heart attack while his wife, Sharon, was inside picking up a prescription. Phil rushed to the man and performed CPR until EMS personnel arrived. His quick response saved Bill’s life and the Hundley family couldn’t be more grateful.

Phil purchased Banks Pharmacy from Marion Steinbach ('50) and her husband, Howard. The Steinbachs opened Banks Pharmacy in 1985 and operated it for 20 years before selling it to Phil in 2005. Story and Photo Credit: Dillon Pilorget, The Oregonian

If you are interested in being a part of this new group, please contact Paige Clark at Paige.Clark@oregonstate.edu
Four years ago, the College of Pharmacy teamed with the College of Business to provide a dual PharmD/MBA degree to eligible students who aspire to be leaders in the profession of pharmacy. The program also offers MBA courses to College of Pharmacy alumni who want to jumpstart their career and ascend to management and leadership positions.

The inaugural dual degree students completed the program this year with three 2015 graduates earning their PharmD/MBA degrees upon graduation in June. Additionally, two College of Pharmacy alumni completed their MBA. Congratulations to Grace Berczel ('15), Sara Kelley ('13), Daniel McCain ('15), Thomas Nguyen ('15) and Kevin Russell ('93) on this impressive accomplishment. More alumni and dual degree students will soon join these first MBA graduates.

The College of Business recently announced the addition of a second MBA track for pharmacy professionals. In addition to the established MBA in Executive Leadership, interested students may now decide to pursue an MBA in Business Analytics. The new track is designed for professionals who are seeking to expand the use of data analytics within their organization, are charged with marshaling data for analytical processes, or are performing data analysis to support decision making, strategy formation, and operational improvements.

If you are interested in pursuing your MBA in Executive Leadership or Business Analytics, please contact Paige Clark at paige.clark@oregonstate.edu.

OSU Colleges of Business and Pharmacy
Bringing Pharmacy and Business Together

Oregon State University
MBA

Now offered in 2 tracks!
Executive Leadership or Business Analytics

† Accelerated: The 19 course MBA program can be completed on a part-time basis in as little as 21 months.

† Convenient: Hybrid classes blend online and face-to-face meetings to maximize learning and schedule flexibility. Most hybrid classes meet in person less than three times per quarter at the Collaborative Life Sciences Building in Portland.

† Affordable: The MBA degree program qualifies for federal financial aid. Contact the Financial Aid Office for information.
Leaving a legacy at this year’s 10th Annual Apothecary Ball

Thank you to all of the legacy families who were able to support this year’s 10th annual Apothecary Ball! Your support was instrumental in exceeding student fundraising goals.

We look forward to welcoming legacy families, alumni, and friends of the College March 12, 2016.

2015 Legacy Family Sponsors

- The Louie Family
- The Martin Family
- The Armstrong Family
- The Shrader Family
- The Murray Family
- The Lewis Family

SAVE THE DATE FOR THE 11TH ANNUAL College of Pharmacy Apothecary Ball AT THE COLLABORATIVE LIFE SCIENCES BUILDING MARCH 12, 2016 7PM-11PM Anchors Away FOR THIS YEARS APOTHECARY BALL Enjoy cocktails, hors d’oeuvres, dancing and entertainment while mingling with pharmacists, alumni and students!

$75 per guest. Tickets available online Dec. 1st pharmacy.oregonstate.edu/apoball

All proceeds benefit student outreachs & educational activities
Identifying the next generation of Outstanding Pharmacists
By Gary DeLander, Executive Associate Dean

While the quality of a professional pharmacy program is important, the quality of the individuals choosing to pursue a degree in pharmacy is equally important. We are exceptionally proud of the quality of candidates entering the professional program and have intentionally reached across the state to make prospective students aware of the advances in our profession. Our tradition of an evolving progressive curriculum, success in postgraduate placements, and exemplary alumni makes OSU a program of choice. At a time when applications have declined nationally, applications for admission to OSU College of Pharmacy have increased; but we need your help to maintain a pool of highly qualified applicants. You can help us and the profession in three ways:

1. Share your enthusiasm for the profession and your alma mater. OSU has a tradition of excellence, exemplified best in the successes of our alumni.
2. Share the observation that there are always jobs for good people. Emerging new roles and a ‘maturing’ workforce will support strong postgraduate placement.
3. Connect potential students or their parents with OSU College of Pharmacy. We understand the opportunities and challenges of professional education. Let us explain to great candidates how a career in pharmacy will change their lives.

With your help to identify the next generation of pharmacists, we promise your future colleagues will have the knowledge, skills, values and attitudes required in healthcare today.

To read more from Optimizing Professional Education in Pharmacy: Are the Ingredients as Important as the Recipe? visit pharmacy.oregonstate.edu

Director of Development’s Message
By Lori Jordan Brown, Director of Development

By now you have likely heard that on June 30, 2015, the OSU Foundation wrapped up its most successful fundraising year ever! This momentum follows on the heels of the close of the Campaign for OSU which raised a record-setting $1.14 billion for your university.

We have such gratitude for the many alumni, friends, and corporate partners who have stepped up to support the College of Pharmacy and the university as a whole during the campaign. While we celebrate the transformation of OSU and its distinction as an internationally recognized public research university, we remain mindful that our work is not done. As President Ray often says, “The best is yet to come for this university.”

As we look forward we will continue this drive toward advancing the institution’s areas of strength and impact, and in the College of Pharmacy this means turning out exceptional pharmacists, supporting faculty research, funding programs, and keeping an eye on the needs of the College into the future.

We love to share our story: past, present, and how we envision the future. You are a part of our legacy. Please join us at one of our many events throughout the year and reconnect with your college and OSU.
## 2015-2016 Calendar

**Save the Date for These Upcoming Events!**

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>9.19.15</td>
<td><strong>Pharmacy and Football Entrepreneurial Academy Showcase</strong> in the Reser Stadium Fan Cave!</td>
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<td>Support the Entrepreneurial Academy and cheer on the Beavs at this special event.</td>
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<tr>
<td>9.29.15</td>
<td><strong>White Coat Ceremony</strong> at the CH2M Hill Alumni Center</td>
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<td>Presentation of White Coats to incoming Class of 2019</td>
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<tr>
<td>10.9.15</td>
<td><strong>Alumni Reception at OSPA Annual Convention</strong> at Doubletree by Hilton Portland</td>
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<td>Wear orange and join us for our annual alumni reception</td>
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<tr>
<td>10.13.15</td>
<td><strong>Scholarship Benefactors Reception</strong> at Langdon Farms Golf Club</td>
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<td>Student scholarship recipient and sponsor social</td>
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<tr>
<td>10.24.15</td>
<td><strong>Homecoming and Reunions</strong> at Oregon State University</td>
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<td>See Page 19 for details on College of Pharmacy events</td>
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<tr>
<td>12.4.15</td>
<td><strong>P4 Interview Day</strong> at Collaborative Life Sciences Building</td>
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<td>Graduating students interview with companies for job placement post-graduation</td>
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<tr>
<td>1.20.16</td>
<td><strong>Career Days</strong> at Oregon State University MU (1.20-21)</td>
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<td>P1 and P2 students learn about pharmacy opportunities and interview for internship positions</td>
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<tr>
<td>2.4.16</td>
<td><strong>Breakin’ Down the MU 2016</strong> at historic Memorial Union</td>
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<td>Join us for a fun evening filled with health and wellness activities and a dance competition</td>
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<tr>
<td>3.12.16</td>
<td><strong>Apothecary Ball</strong> at the Collaborative Life Sciences Building</td>
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<tr>
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<td>Join us for an evening of music, food, and fun organized by our students</td>
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<tr>
<td>5.7.16</td>
<td><strong>Icons of Pharmacy</strong> at Portland City Grill</td>
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<td>Dinner and reception honoring the 2016 Icons of Pharmacy</td>
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<tr>
<td>5.13.16</td>
<td><strong>Women in Pharmacy Luncheon</strong> OSU Alumnae “Building the OSU Pharmacy Family Network”</td>
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<tr>
<td>5.21.16</td>
<td><strong>Professional Day</strong> at OSU College of Pharmacy</td>
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<tr>
<td></td>
<td>Connecting OSU College of Pharmacy students and alumni</td>
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<tr>
<td>6.10.16</td>
<td><strong>Graduation</strong> at LaSells Stewart Center</td>
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<td>Graduation of PharmD and PhD students</td>
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<tr>
<td>6.12.16</td>
<td><strong>Convocation</strong> at Portland Convention Center</td>
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<tr>
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<td>OHSU Convocation Ceremony with Schools of Dentistry, Medicine, and Nursing</td>
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</tbody>
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AbbeVie, Albertsons Sav-on Pharmacy, Bi-Mart Corporation, Boehringer-Ingelheim, CVS Corporation, Fred Meyer Corporation, NovoNordisk, Rite Aid Corporation, Samaritan Health Services, Target Corporation
In this issue

Marijuana: How legalization impacts Oregon pharmacists

Spotlight: Linda Nguyen ('15) and Steve Lam ('15)

Meet the OSU College of Pharmacy Faculty and researchers

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