

# CARE in *Action*

Spring 2014

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CNUCOP Takes Part in Legislative Day



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SB493: Pharmacists as Providers



CAMPUS-WIDE HEALTH FAIR



SEED GRANT PROGRAM

## A MESSAGE FROM

# Dean Shane Desselle

It is with great pleasure that we provide all our faculty, staff, students, alumni, preceptors, partners, and friends this issue of California Northstate University College of Pharmacy's (CNUCOP's) *Care in Action*. Having published the first couple issues to help our readers get to know us a little better, we continue to spotlight some of our faculty, preceptors, and alumni, as well as cue you in on some of our students' most recent accomplishments. That said, this issue also provides you with information on salient issues and opportunities arising amidst changes in the healthcare system and advances in technology.

The passage of California Senate Bill (SB) 493 is a landmark victory for pharmacy, and most importantly, for the patients that pharmacists serve. The evolution of this expanded scope of practice in a state that is the world's 8<sup>th</sup> largest economy was monitored closely by healthcare professionals and policymakers worldwide. This legislation allows for more seamless integration of pharmacists into interdisciplinary healthcare teams. It is not intended to carve out a unique niche in competition nor is it incongruent with the roles of other healthcare professionals.

California's pharmacists, academic pharmacy institutions, and professional pharmacy organizations must answer the bell. There is much work to be done to leverage the passage of SB 493 in conjunction with the Patient Protection and Affordable Care Act and other health reform measures. CNUCOP is happy to be working with the California Society of Health Systems Pharmacists (CSHP), the California Pharmacists Association (CPhA), and others to help seize the opportunities afforded our profession. While we already have a curriculum aimed to prepare students for the future of pharmacy practice, the College is incorporating specific components of these key pieces of legislation as updates into courses on management, health systems, and pharmacotherapeutics.

Another important phenomenon guiding the future of patient care is that of pharmacogenomics. Thought to be fantasy only a few years ago, pharmacogenomics' breakthroughs are already impacting practice. Further study and application will indeed provide the opportunity for medication therapy to be tailored to individual needs based upon disease severity, comorbidities, drug sensitivities, patient demographics, and other factors. This issue of *Care In Action* describes challenges and opportunities ensuing from pharmacogenomics.

Also featured is a description of the research being conducted by the winners of the College's second annual seed grant competition. Winning faculty was selected on the basis of recommendations from external reviewers. Their work on the impact of direct-to-consumer advertising of prescription drugs, risks of impaired healing and osteomyelitis associated with drugs aimed to reduce loss of bone mass, and the toxicity of certain common plants will surely make indelible impacts in the field and be beneficial to patients. We hope that you will enjoy reading about these phenomena and everything else featured in this issue of *Care in Action*.



**Shane P. Desselle, RPh, PhD, FAPhA**  
**Dean and Professor**

# SB 493

## Pharmacists Take Bold New Step as Providers in the ACA Era

By James Palmieri, PharmD

With great fanfare Governor Jerry Brown signed California Senate Bill 493 (“pharmacist provider legislation”) on October 1, 2013. The bill became a law effective January 1, 2014. The swiftness and ease in which this bill passed through the legislature was a pleasant surprise to many of us in pharmacy. The challenge before us now is to ensure that the infrastructure is in place to make effective use of our newly anointed status as “providers” of patient care. Solutions to issues such as credentialing, reimbursement, coordination and regulation have yet to be detailed. In many ways, the journey to providership that we as California pharmacists have embarked upon has only just begun.

An initial awareness of the bill came in a February 26, 2013 email blast from the California Society of Health-System Pharmacists with the headline, “Product of CSHP’s & CPhA’s Providership Joint Task Force Takes Shape.” The email ended with the promise and prompt, “Final language will be released in a month. Get ready to do your part!”

And do our part, we did. Once amended to mollify organizational opposition from various provider and pharmaceutical manufacturer groups, the bill breezed through the legislative process, culminating in unanimous votes in both the State Assembly and Senate. Success was due in no small part to the countless pharmacists (and friends of pharmacy) who sent letters, emails, and made appointments with our legislators to make the case that pharmacists’ advanced training makes us eminently qualified to provide direct care to the many Californians who require medications to support

their health. Special thanks go to California State Senator Ed Hernandez, who not only sponsored the bill, but spoke out loudly and forcefully on its behalf.

The entire process, from introduction of the bill to signing, took just over seven months. CNUCOP leveraged its geographic location in California’s capitol city and its ethos of civic engagement to work closely with CPhA and CSHP, as well as key legislators such as Dr. Richard Pan, to help in any way that it could to ensure the bill’s passage.



James Palmieri, PharmD

### Gearing Up for the Future

A key stimulus for the bill’s passage into law is the expanding need for primary care providers prompted by the federal Patient Protection Affordable Care Act (ACA). According to a June 2009 report from the California Healthcare Foundation, “only 16 of California’s 58 counties fall within the needed supply estimate for primary care physicians, and in eight counties the supply is less than half this range.” With

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# SB493: Pharmacists As Providers

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the 2014 implementation of the ACA's health insurance mandate, this shortage will only be made more acute. SB 493's specifics will allow pharmacists to step into this void. The opportunity is there; however, it will take more than opportunity to deliver on the promise that pharmacists – among the nation's most trusted professionals – can satisfy the public's demand.

The promise and challenges that lie ahead can be seen through an educator's lens. Over at least the past 20 years, curricular revisions stimulated by the Accreditation Council for Pharmacy Education have increasingly focused colleges and schools of pharmacy on training students to be adept at assessing patient histories, utilizing critical thinking skills, using effective communication, functioning as part of a healthcare team and applying population health principles to engage in evidence-based, patient-centered care. Graduates of credentialed pharmacy programs are prepared as never before to fulfill the role that has been carved out by both the ACA and SB 493.

Whether current and future California pharmacists will maximize the potential created by these pieces of legislature depends on what is done next. There are many hurdles yet to overcome:

- ❖ The State Board of Pharmacy (BOP) must establish statewide protocols to govern the newly granted authority of pharmacists to furnish self-administered hormonal contraceptives and nicotine replacement products without a physician's order.
- ❖ The BOP must establish the mechanism by which pharmacists are recognized as Advanced Practice Pharmacists, with the attendant rights and responsibilities that go with that recognition.
- ❖ With the declaration that pharmacists in California are healthcare providers that have the authority to provide healthcare services, the Department of Healthcare Services, the Center for Medicare and Medicaid Services, and private insurers all must incorporate pharmacists as recognized providers within their billing structure and create mechanisms for payment (whether capitated, pay-for-performance, or other) for these services.
- ❖ Pharmacists, particularly in the community setting, must forge linkages with physicians and healthcare systems, such as in the Patient-Centered Medical

Home and Accountable Care Organization models, to review patients' medical records, perform patient assessments, and order and interpret tests in coordination with each patient's primary care provider or diagnosing prescriber.

One key aspect linking pharmacists with the rest of the healthcare system that requires further development is that of health information exchanges (HIE), particularly interoperability (i.e., the functional exchange and use of health information between systems). Despite government meaningful use incentives, lack of health system adoption of HIE remains a barrier to effective communication, patient coordination, and improved care quality.

Not all pharmacists may choose to step into the role of provider. SB 493 only offers the opportunity. And for those that want to, some, unlike our nascent BOP-sanctioned, increasingly residency-trained, mostly millennial-generation colleagues, may feel it is prudent to brush up on the knowledge, skills and frame of mind required to serve patients in this capacity. For readers in that latter category, two words: Do It. Our professional organizations are gearing up to help you.

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## PRECEPTOR SPOTLIGHT

# *Trisha Rick, PharmD*

Dr. Trisha Rick is currently the Pharmacy Director at Sutter Roseville Medical Center and has worked in the Sutter Health System for the past 25 years. She graduated from University of the Pacific School of Pharmacy. She was among the few of her peers who did not have a relative in the pharmacy or medical profession but became enthusiastic about a potential pharmacy career when school ambassadors shared their love of the profession.

After graduating from pharmacy school, Dr. Rick felt confident that she wanted to work in the hospital setting, but first wanted to get more experience in clinical and administrative areas. She felt that a residency afforded the opportunity to learn more before looking for a full-time job, so she completed



a one-year residency at California Pacific Medical Center in San Francisco. Dr. Rick gained additional experience and confidence after her one-year residency and soon after secured a position as a graveyard pharmacist, learning the operations inside and out on the night shift.

After working for two years in the city, a great opportunity became available to work in Sacramento where she started her career with Sutter Health. During her years with Sutter, Dr. Rick has grown and learned through the many advances in the pharmacy profession. For example, pharmacists no longer fill out manual paper patient profiles to manage unit dose medications, but instead use paperless systems like automated dispensing machines and carousels to help provide the safest and most efficient care to their patients.

Dr. Rick has developed two passions in pharmacy: mentoring pharmacy students and patient safety. She has been a pharmacy preceptor to students since graduating from pharmacy school and enjoys mentoring and working with students from both CNUCOP and University of the Pacific. Dr. Rick learns just as much from the students as they learn from their experiences at Sutter Roseville Medical Center. Students bring fresh eyes and enthusiasm about the profession; Dr. Rick loves to see the students “connect the dots” from their didactic background to their experience at the practice site. She also takes patient and medication safety extremely seriously, putting patients first and getting the right medication to the right patient at the right time as top priorities because she feels improving processes and hard-wiring steps to alleviate medication errors are essential to providing the best possible care for patients.

In her spare time, Dr. Rick enjoys being a Girl Scout leader and spending time with her family outdoors, boating, hiking and camping. She is married with three children, one in college and two in high school, but has not yet been able to convince any of them to become a pharmacist!

## RESEARCH AT CNUCOP

# Evaluating Health Information Technology to Improve Patient Safety

By Ana Hincapie, MSc, PhD

Approximately 1.5 million adverse drug events occur annually in hospital, long-term, and ambulatory care settings. An adverse drug event is any injury due to medication and is a serious type of medication error. The humanistic and economic burdens of these events have been widely documented and include life-threatening consequences. Although some adverse drug events are unavoidable, at least 30% are considered preventable, and more than half of them occur during the medication prescription process. The most common preventable events are allergic reactions and drug-drug interactions.

Health information technologies (HIT) such as clinical decision support, electronic health records and electronic prescribing systems might improve patient safety by preventing adverse drug events. Additionally, these technologies are recognized as key elements to provide coordination and continuity of care. The Federal government has supported HIT implementation and use with substantial financial incentives, exceeding \$27 billion. Despite these advantages, there are limitations associated with the use of health information technologies.

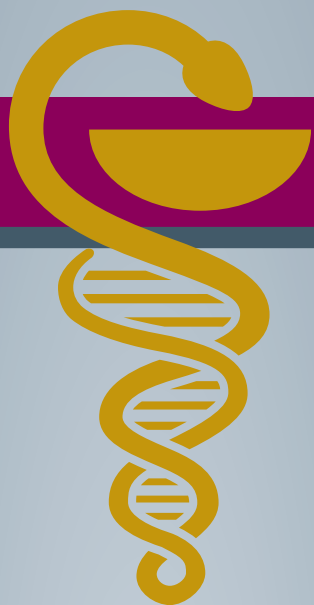
The quality of design and human-computer interaction characteristics are among the most important factors determining the effect of technologies on care and patient safety by influencing the adoption and routine use by providers. Inadequately designed systems may be disruptive and provide marginally relevant guidance that is ignored or obstruct the clinical workflow rather than improve the quality and safety of care. Existing evidence indicates that poor user-interface design leads to unintended consequences, ultimately weakening the safeguards that these technologies can provide against errors.

Dr. Ana Hincapie's research seeks to describe and analyze the relationship between optimal interface design characteristics on HIT and the extent to which unintended HIT consequences affect the activities and quality of care delivered by providers. Dr. Hincapie's work involves the use of different methods traditionally employed to monitor drug safety, such as the analysis of self-reported events, mining of large databases or observational studies, and methods used in other areas of social and administrative pharmacy such as qualitative research.

Using these methods presents many challenges. For example, the report of a medication error due to an electronic prescribing-prescriber interaction would require the person reporting the error to identify the effect, link it to the medication and the system, and then report it. Given the complex practice settings for pharmacists and prescribers, it is likely that significant under-reporting occurs. Thus, it is necessary to use a mixed-methods approach in research (e.g., quantitative such as database mining or survey questionnaire and qualitative, such as interviews or focus groups) to evaluate HIT and its impact on patient safety and care quality.

As healthcare becomes more integrated, HIT will be more widely embedded in the next generation of pharmacists' daily routines. For example, telehealth technologies will be integrated to current medication therapy management (MTM) models, and consumer health informatics applications designed to empower patients on healthy living and preventive medicine will be used more frequently. Dr. Hincapie hopes that her research will inform best practices for pharmacy so as to realize HIT's full potential and, at the same time, prevent the unintended consequences of these technologies when not used optimally.





# PHARMACOGENOMICS

## Importance to Patients and Practice

By David Pearson, PharmD

In this modern age of advanced medicine, one often hears how treatment will become tailored to each patient. This phenomenon is moving past hearsay or whimsy and on the definitive horizon.

Individualized drug treatment is based on the developing science of pharmacogenomics.

Pharmacogenomics studies how specific genes and mutations within those genes affect a patient's response to certain drugs. It is a relatively new and rapidly developing scientific discipline that combines certain aspects of pharmacology (the science of drugs and their mechanism of action) and genomics (the study of DNA, genes and their specific functions) to develop effective, safe medications and doses that can be tailored precisely to a

person's unique genetic makeup.

Many of today's drugs currently available are typically thought of as "one size fits all," but

they do not necessarily work the same way with similar potency or have the same side effects for everyone. Whether a drug works well for you or causes serious side effects

depends, to a certain extent, on the genes that were passed along to you. Interestingly, this variability also applies to something as simple as whether or not grapefruit juice interferes with a common drug class like statins.

It sometimes can be difficult to predict which patient will benefit from a medication, which patient will not respond at all, and which will experience negative side effects or adverse drug

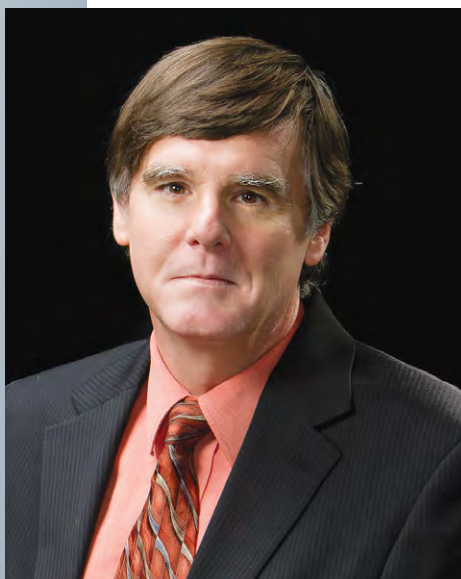
reactions. For example, some of these differences between patients' responses to a specific medication have been observed among individuals of different racial backgrounds. Adverse drug reactions are a significant cause of hospitalizations and deaths in the United States. This is where the pharmacist plays such a critical role in overseeing patients' medications.

With the knowledge gained from the completion of the Human Genome Project, scientists are learning how inherited differences in a specific gene affect the body's response to a particular medication. These genetic differences will be used to predict whether a medication will be effective for a specific person and to help prevent adverse drug reactions. Currently, there are genetic testing kits available for individuals to determine what mutations they have in genes

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**It is a relatively new and rapidly developing scientific discipline that combines certain aspects of pharmacology ... and genomics ... to develop effective, safe medications and doses that can be tailored precisely to a person's unique genetic makeup.**

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David Pearson, PharmD

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## RESIDENT SPOTLIGHT

# Jennifer Graham, PharmD

Dr. Jennifer Graham is one of the CNSU PGY-1 2013-2014 residents, performing a rotation at Sutter General Hospital in Sacramento with a focus on inpatient acute care and ICU/critical care medicine. She hopes to pursue a PGY-2 residency in critical care following the completion of her PGY-1 residency.

Dr. Graham attended the University of the Pacific (UOP) for her undergraduate education, earning a B.S. in Biology. Following UOP, she attended Touro University where she earned her Masters in Public Health and PharmD degrees. Dr. Graham worked as a pharmacy technician at a Rite-Aid pharmacy for five years, which was the driving force behind her pursuit of a career in pharmacy. She also taught numerous pharmacy technician training courses for Boston Reed College and Mt. Diablo Adult Education, which fueled her desire to pursue a career in academia and education as well.

Dr. Graham grew up in Clovis, California and moved to Brentwood in the Bay Area with her family when she was 15. She lived in Stockton and Vallejo while attending college. She currently lives in Sacramento with her five dogs (yes, 5 dogs): Pixie, GoGo, Abbey, Winston, and Chester. They are her children and her pride and joy. Dr. Graham looks forward to having a house with a lot of acreage so that she can have even more dogs. In her free time, which is severely limited, Dr. Graham enjoys playing with her dogs, reading, watching television, scary movies and baking. She is currently trying to cope with the end of her favorite show, *Dexter*, while attempting to keep up with *The Big Bang Theory*, *Criminal Minds*, and *Eastbound and Down*. Dr. Graham looks forward to traveling in the future, and hopes to get the opportunity to visit Australia, Bora Bora and England, among other places.



## Pharmacogenomics

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involving metabolizing specific drugs. One problem with the kits is the overwhelming quantity of data for the layperson. Too much data/information can lead to frustration when attempting to figure out its meaning. However, once genetic testing becomes more routine, health professionals, such as pharmacists, will be able to interpret the data and apply it to the patient's care.

The field of pharmacogenomics is still somewhat in its infancy. Its use is currently quite limited; however, new approaches are under study in clinical trials. In the future, pharmacogenomics will allow the development of specific

drugs to treat a wide range of health problems, including cardiovascular disease, neurological diseases, cancer, and HIV/AIDS, to name a few. With medicine taking a more molecular approach to disease and treatment, it is critical that pharmacists stay up-to-date on the latest genetic results testing and analysis. Fledgling pharmacy students sometimes question the importance of learning about genetics and mutations. As educators, our responsibility is to guide pharmacy students as they navigate new frontiers in molecular medicine and pharmacogenomics to provide the best treatment plan for their patients.

# A Proactive Approach TO ADDRESS A Serious COMMUNITY Health Problem

By Sonya Frausto, PharmD, and Jennifer Courtney, BS, PharmD Candidate



Sonya Frausto, PharmD



Jennifer Courtney, BS, PharmD Candidate

Prescription medications can provide extraordinary benefits to patients when used properly. However, prescription medications are now among the most abused substances and are the second leading cause of accidental death in the United States. The risk of prescription drug abuse is increasing in America's youth and young adults, especially among high school and college students. The American Pharmacists Association Academy of Student Pharmacists (APhA-ASP) chapter at CNUCOP recognized the importance of this health issue and has implemented a new outreach program, Generation Rx.

The term "Generation Rx" has been used to describe the American society because medication use is at unprecedented high rates at every age. The goal of Generation Rx is to educate targeted populations about the misuse and abuse of prescription medications by effectively implementing a prescription medication abuse prevention program in the community.

At the mid-regional meeting (MRM) for APhA last year, APhA-ASP officers were introduced to the Generation Rx program through a short film titled *Parent 360*. The film illustrated how five teens and their loved ones had been affected by prescription drug abuse. The video opened APhA-ASP students' eyes and touched their hearts, inspiring them to take an active role in educating the Sacramento community about this increasingly pernicious health issue.

To increase awareness within the community, the APhA-ASP student chapter held their first Generation Rx breakfast seminar in April 2013 and invited key stakeholders from the local community to attend. The diverse group of attendees included: nurses from Sacramento and Placer counties, pre-pharmacy students from California State University Sacramento (CSUS) and the University of California Davis, Placer County health educators, representatives from the Youth Association and Substance Abuse Prevention Program, the Executive Director of the California Product Stewardship Council, and a number of local pharmacists.

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## Generation Rx

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During the seminar, attendees were provided statistics on prescription drug abuse and were educated on the types of medications commonly misused and abused, techniques to ensure safe medication administration practices, resources on proper disposal of medications, and how to recognize and address the physical, behavioral and psychological signs and symptoms of drug abuse. The speaker panel included representatives from the Sacramento Sheriff's Department-Youth Services Unit, a toxicology expert from the California Poison Control Center, and an area pharmacist who shared his own experiences about recovery from substance abuse. Each of the speakers discussed their experiences and perspectives surrounding prescription drug abuse in the community. The attendees were very responsive to this growing health issue and many of them were inspired to partner with the Generation Rx program for future events.

Since the first Generation Rx seminar, APhA-ASP has been working diligently to expand this program and outreach into the community. Students have been involved in many events and have conducted local seminars to increase awareness. At the Community Health and Wellness Fair at CSUS, APhA-ASP operated a Generation Rx booth and provided prescription drug abuse information to attendees. Furthermore, APhA-ASP was invited to the quarterly Placer County Nurses Association meeting. At this event, CNUCOP students educated these nurses, shared resources and created an opportunity to partner with them in the future to inform parents and other school officials.

APhA-ASP just completed its biggest seminar to date, partnering with the pharmacist-in-charge at CSUS to educate the campus community. Non-medical use of prescription drugs by college students has doubled in the last two decades, and approximately half of all college students will have the opportunity to abuse a prescription drug by their sophomore year. APhA-ASP took an opportunity to educate a wide spectrum of professionals at the university, including: physicians, registered nurses and nurse practitioners, medical assistants, pharmacy staff, clinical psychologists, peer health educators, administrative assistants and health center administrators, and campus police. This seminar included a heartfelt and eye-opening story from a mother whose son had died from prescription drug abuse. The

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## Testimonial from a Supporter of Generation Rx

Tragically in 2012, my 24-year-old son, Jeff, died from complications due to opiate addiction. The awareness of prescription drug misuse and abuse is so important to me and the community, especially for our youth. There is a resurgence of more young people taking opiates for pain management, which can lead to IV opiate use and, eventually, heroin.

If someone had put forth effective public service announcements before my son's dentist prescribed Vicodin for his broken jaw at age 14, I would have said "no thanks" and had him take Motrin or Tylenol first. My son secretly took opiates for five years before we had any idea that he was addicted or why he was pulling away and isolating himself. Jeff took opiates from our medicine cabinet, his friend's parents' medicine cabinets, and eventually found people who worked at pain clinics who stole Vicodin from their employers.

I can only hope the loss of my son draws awareness to the risks of use of certain prescription drugs among teenagers. This is a call to action, because I believe we need stricter oversight when prescribing opiate medication, structured education and monitoring programs for persons on pain medication to prevent misuse, and defined follow-up after an adolescent is given pain medication.

I believe Jeff was in emotional pain because he didn't know how to deal with being an assault victim. My son was never prescribed medication for depression, although we asked for help from his doctor and even asked for a drug test. Even medical professionals instructed me at the time that this could lead to mistrust. I counted on these persons and others to take my concerns seriously. While some indeed did so, the network as a whole lacked strength, and now my son is dead from opiate addiction.

Losing Jeff is the most painful experience I will ever have to face, and I want to use my pain to warn other parents that misuse of opiates can lead to serious, even fatal, outcomes. I am so grateful that the CNUCOP students have taken on this very significant cause and initiated this important public outreach.

## RESIDENT SPOTLIGHT

# Marcus Wong, PharmD

Dr. Marcus Wong was born and raised in Southern California where he graduated from the University of California, Riverside with a Bachelor of Science in Biology. His drive to become a pharmacist came from his mother who is a pharmacist. He was always fascinated with her knowledge of medications as a child, so much so that he wanted to procure that knowledge for himself.

Dr. Wong recently received his PharmD from CNUCOP and returned to pursue his PGY-1 Pharmacy Practice Residency in their program with Sutter Health Systems. During his four years at CNUCOP, his professors' passion for teaching had the greatest impact on him.



Dr. Wong looks forward to working with faculty and preceptors during his residency to become a competent clinical pharmacist as well as an effective teacher. Being an alumnus of CNUCOP, he hopes to add his own unique experience as a recent graduate of the program to develop effective teaching strategies using the team-based learning format and to ensure the students of CNUCOP will be armed with the knowledge necessary to become competent practicing pharmacists.

As a recent CNUCOP alumnus, Dr. Wong advises new students to strive for more knowledge instead of being content doing the bare minimum, and to resolve to go further and learn more than what was addressed in class, because pharmacy is not a static profession. He believes it is up to each person to continue to learn, even as pharmacists, since new data and guidelines are constantly being generated, and that it is the responsibility of healthcare providers to stay up to date.

Dr. Wong's areas of interest are in ambulatory care and in infectious diseases. In the future, he hopes to practice as an ambulatory care pharmacist working in clinics or as an infectious disease pharmacist working in a hospital.

In his spare time, Dr. Wong likes to work out, read, catch up on television shows (especially *Breaking Bad*) and learn new recipes to expand his cooking repertoire beyond ramen noodles. After a long day, he unwinds by listening to jazz or rock on his Grado headphones. Dr. Wong is a big Generation-One Transformers fan; his favorites are Optimus Prime and Starscream.

## Generation Rx

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seminar was a great success and is the start of a great partnership with CSUS to educate more college students about the consequences of drug abuse and misuse.

APhA-ASP plans on continued expansion of the program. They are building partnerships with several church and school board groups. Bringing awareness to families of middle school, high school and college

students will empower them to open the lines of communication, identify prescription drug abuse, and seek appropriate help. If readers of *Care in Action* are interested in getting involved in the Generation Rx program, or looking for assistance from our College, please contact APhA-ASP@cnsu.edu.



## STAFF SPOTLIGHT

### *Melissa Dean, MS*

Melissa Dean joins CNU as the new Program Registrar. Ms. Dean comes to us from the California Community College system where she worked in Admissions & Records for over five-and-a-half years.

Ms. Dean completed her Bachelor of Arts at CSU Sacramento in International Relations and quickly realized she wanted to continue working in education. She received her Master of Science in the Higher Education program at Drexel University Sacramento in March of 2013. Ms. Dean advocates her Gallup Strengths Finders' top strength of "learner," which the Gallup organization defines as being "energized by the steady and deliberate journey from ignorance to competence," and is now actively pursuing her Doctorate of Education in Educational Leadership and Management at Drexel University Sacramento.

Ms. Dean's educational passion revolves around student success. She focuses on global and international education, working closely with international students. Recently Ms. Dean joined 15 classmates on a study abroad trip to Beijing and Hangzhou, China. One of her greatest joys in life was taking the toboggan ride back down after climbing to the top of the Great Wall of China. She hopes to return to China in the future to learn more about Chinese culture

and education while visiting many of the friends she has met.

Ms. Dean spends most of her spare time with Remy, her beloved one-and-a-half year old rescued cattle dog mix who is quite possibly the most joyful pup on the planet. Ms. Dean also has two cats who do not appreciate Remy's company as much as she does. As a former Sacramento

County Animal Services volunteer, Ms. Dean is passionate about animals and would rescue every homeless animal she meets if only she had a large enough house.



## STAFF SPOTLIGHT

### *Polly Robertson, MPA*

Polly Robertson is CNUCOP's Career Services Coordinator for the Office of Student Affairs and Admissions. In this role, she hosts and coordinates career fairs and various career development workshops. Ms. Robertson's favorite aspects of her job are event planning and meeting new people. She also enjoys working with student clubs and organizations as the Interim Student Affairs Coordinator.



Ms. Robertson moved to the Sacramento area in 2003 to pursue her Bachelor's degree in Sociology and Social Work at California State University, Sacramento. During her undergraduate career, she worked as a crisis line counselor and sexual assault response team advocate for WEAVE, Inc., a local domestic violence and sexual assault resource center. As a counselor and advocate, Ms. Robertson provided emotional support and crisis intervention to survivors. She advocated for sexual assault survivors during evidentiary exams and law enforcement interviews.

After completing her Bachelor's, Ms. Robertson worked briefly as a Police Dispatcher before returning to school. She received a Masters in Public Administration from the University of San Francisco while serving on a full-time student appointment for the U.S. Dept. of Interior, Bureau of Land Management in Human Resources.

Ms. Robertson is a military spouse and enjoys spending time with her husband when he is not deployed. They live in Elk Grove with their dog, Maggie, and will have had their first child in February 2014! She is excited about starting a new chapter in her life as a mom.





## Benchmark Set for Scholarly Community Service

By Ruth Vinall, PhD

California Northstate University Cancer Awareness, Research, and Education Society (CNUCARES) is one of 15 student-run CNU organizations active in our local community. The passion and dedication students in these organizations display through outreach projects, in addition to the sheer number of projects in which they are involved, underscores their commitment and civic-mindedness. It is noteworthy that in 2013 CNU student organizations participated in over 70 community events!

Co-presidents Tri Anh Tran and Hang Nguyen founded CNUCARES in early 2011 under the guidance of Drs. Paul Nguyen and John Inciardi as a chapter of VN-CARES (Vietnamese Cancer Awareness, Research, and Education Society). Its mission is to provide culturally- and linguistically-appropriate healthcare services that focus on preventive care education, cancer awareness, referral for screenings, and social support for the underserved communities. They are doing a terrific job meeting this mission; since 2011, CNUCARES has received four external grants to fund their community outreach projects (total of \$13,500), participated in over

20 health fairs, hosted two symposia focused on raising cancer awareness, and published two cancer awareness articles in local Vietnamese magazines.

Perhaps the most exciting community project in which CNUCARES is currently involved is a joint venture with the UC Davis Comprehensive Cancer Center. CNUCARES students are working with UC Davis healthcare professionals to help educate Asian American cancer patients about the benefits of clinical trials and biospecimen donation and to encourage them to participate in ongoing studies. This research project is supported by the National Cancer Institute-funded National Center for Reducing Asian American Cancer Health Disparities. Dr. Moon Chen, the principal investigator for the study and Associate Director for Population Research and Cancer Disparities at UC Davis, has been quite impressed by CNUCARES students.

"I am so delighted to have CNU students play a central role in our new Asian American Cancer Education Studies program", says Dr. Chen. "I don't think we could have found a more qualified group of students because our patients will benefit not only from having navigators fluent in their own Asian language or dialect, but also from their interactions with PharmD students who know the value of medications and other therapies that are being studied."

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## ALUMNUS SPOTLIGHT

# *Kevin Tse, PharmD*

After graduation, Dr. Kevin Tse completed a PGY-1 Managed Care Residency with OptumRx, a Pharmacy Benefits Manager (PBM) in Irvine, CA. Through the one-year residency program, Dr. Tse gained practical experiences in formulary management and operations, clinical programs, national Pharmacy and Therapeutics presentations, pipeline monitoring and assessment, contract negotiations with pharmaceutical manufacturers, and client management. During his residency, Dr. Tse was appointed to serve on the AMCP Special Projects Committee. The experiences Kevin gained during that year strengthened his knowledge of payment channels in the U.S. prescription distribution model.

Upon the completion of his residency, Dr. Tse returned to Northern California to serve as Pharmacy Services Manager for Chinese Community Health Plan in San Francisco. In this capacity, he is responsible for ensuring the proper implementation of prescription benefits for Medicare Part D, the Health Care Exchange and various commercial plans. Dr. Tse collaborates with providers to encourage cost-effective prescribing patterns and manages relationships with third-party vendors. He also consults with Independent Practice Association groups to identify deficiencies in PBM contracts, and meets with pharmaceutical manufacturers regarding formulary placement and price concessions. Dr. Tse builds and maintains disease registries and serves as the primary pharmacy contact for federal and state auditing bodies.

During his time at CNUCOP, Dr. Tse found it extremely valuable to receive inspiration from pharmacists with non-traditional careers. He plans to precept students with the goal of encouraging them to develop a diverse set of skills. Dr. Tse's long-term goal is to serve in a role where he can optimize international market access for both managed care organizations and pharmaceutical companies.

In his spare time, Dr. Tse enjoys traveling and biking. Most recently, he visited Prague, Berlin and Amsterdam. His next goal is to backpack Thailand and regions of South America, and he looks forward to another San Francisco Giants World Series Championship.



## CNUCARES

Continued from page 12

Prior to participating in this project, CNUCARES students were involved in another UC Davis-led study in which they volunteered at hepatitis screening events in the local community – hepatitis being a major risk factor for liver cancer. Their participation directly contributed to 46 participants getting screened for hepatitis B and C. Seven of these patients tested positive for hepatitis and as a result were able to receive appropriate medical attention.

CNUCARES currently has 130 members and is extraordinarily active. What makes CNUCARES so successful and such a great organization? Undoubtedly, the leadership provided by current president Dai Nguyen,

past presidents Khoa Truong, Kieu Nguyen and Trinh Tran, as well as their executive boards, and others in the organization, has played a key role. Of course the fact that the members of this organization are a fun group and cook great food also contributes to their success!

CNUCARES is making an indelible impact for our College and in our community. It's a win-win situation for everyone; our community members receive services that they might not otherwise receive, CNU students get to participate in activities that enhance their professional development, and the important role that pharmacists play in healthcare is highlighted. We are all very fortunate to have these selfless student leaders!



# CNUCOP 2013 COMMUNITY Health



## Bigger and Better

American Pharmacists Month in October celebrates the pharmacy profession and provides pharmacists and student pharmacists the opportunity to advocate for their profession and to serve the public through community outreach.





# h Fair

## ter Than Ever!

By Beshoy Gerges,  
President, Student Body  
Council

Sonya Frausto, PharmD,  
MA, Community Health  
Fair Advisor

In October 2013 the students at CNUCOP planned and coordinated multiple events throughout the month, such as residency seminars, flu clinics, senior education presentations, fundraisers, community volunteer projects, specialty information sessions, a pharmacists appreciation dinner, community service screenings, health awareness walks, and so much more!

The Student Organization Leadership Council, the umbrella CNUCOP student organization, collaborated with each constituent organization to develop activities and events geared toward the community, students and local pharmacists in honor of American Pharmacists Month. The passion and dedication demonstrated by our students during the entire month of October showcased the College's commitment to education through community outreach.

In addition to planning multiple events for all of October, the students came together to host the Second Annual Community Health Fair, a highly successful event to conclude American Pharmacists Month. For the profession of pharmacy, health fair events provide many significant opportunities to educate the public about the role that our profession plays in patient care, from performing point-of-care testing and interpreting test results, to



providing education about the effects of medications and the benefits of lifestyle changes to improve health.

The health fair served hundreds of clients in the Sacramento area. Its success was made possible by the collaboration and selflessness of many different people, including: Dr. Sonya Frausto, CNUCOP's American Pharmacists Month advisor; the student body council; faculty; staff; preceptors; and a wide range of community partners. Each student organization participated by either presenting educational information or providing health care screenings aimed to improve the health of our community. Walgreens graciously provided influenza vaccine to immunize our patients and were a cornerstone in the success of this program. Through our inter-professional relationship with Sacramento State University's School of

Nursing, their students took part in our health fair by providing blood pressure screenings as well as fun activities alongside the University of California, Davis and Sacramento State Pre-Pharmacy students.

The financial support we received from our healthcare partners at Target, Inc. was instrumental in allowing the College to expand the scope of CNUCOP's Community Health Fair. All of the hard work the students and community organizations dedicated to this event is deeply appreciated. A special thanks goes to Lowe's, our neighbor in Rancho Cordova who provided their parking lot for the fair.

The October Month Planning Committee looks forward to an exciting year of planning the Third Annual Community Health Fair for October 2014.



## Faculty Spotlight

# Ana Hincapie, MSc, PhD

Prior to her arrival in the United States, Dr. Ana Hincapie worked as a pharmacist in several hospitals in her hometown, Bogota, Colombia. She moved to the US to pursue her graduate studies. Dr. Hincapie holds MSc and PhD degrees in Pharmacoeconomics, Policy, and Health Outcomes from the University of Arizona, as well as a BS in Pharmacy from the National University of Colombia.



Before joining CNUCOP, Dr. Hincapie was a graduate research associate at the University of Arizona. Additionally, in 2011, Dr. Hincapie collaborated within the patient safety department at the World Health Organization in Geneva, where she gained experience on patient safety initiatives from a public health perspective and established professional collaborations within and across disciplines. In 2012, Dr. Hincapie participated in the National Academy of Science Policy Fellowship in Washington D.C, where she provided research support to the committee in charge of elaborating the report *Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis*, and experienced how scientific knowledge is translated into policies.

Dr. Hincapie's career has been driven by her desire to improve the quality of healthcare delivery. She coauthored several articles and two book chapters relating to care quality and health information technologies. In addition to this primary research area, Dr. Hincapie is interested in innovating how healthcare quality and patient safety is taught to future healthcare professionals. She envisions herself participating in projects that address the mechanisms and extent to which patients can and prefer to take roles in health safety improvement.

Dr. Hincapie also wishes to contribute to the development of health sciences research in Latin America. Since 2008, she has been actively involved in the International Society of Pharmacoeconomics and Outcomes Research Latin American consortium and has delivered presentations, workshops and guest lectures in regional conferences.

Having lived in the Grand Canyon State for over five years, Dr. Hincapie enjoys outdoor activities. She loves spending her free time hiking and biking. Dr. Hincapie and her husband also enjoy discovering new music, films, books and places around the world.

## SB493: Pharmacists As Providers

Continued from page 3

These barriers and still others must be overcome for pharmacists to master the transition to pharmacist providers. With so many stakeholders activated and mobilized pharmacy is well on its way. Both advocacy and policy support is being organized at the state level by the California Pharmacists' Association (CPhA), California Society of Health-System Pharmacists (CSHP) and other stakeholder interest groups. And the Colleges/Schools of Pharmacy, including CNUCOP, are helping to prepare for the future. Our own faculty, among them Drs. Will Ofstad and Justin Bouw, have

volunteered and been accepted to CPhA's Institute for Advanced Pharmacy Practice to assist in developing the standards for advanced practice in our state.

Change is often good, and nearly always abrupt, no matter how long you wait for it. Embrace the change. For further information on how you can help, or get yourself prepared for this new era of pharmacy practice, visit the CSHP or CPhA websites. Likewise, please do not hesitate to contact any of several faculty at the College, especially Dr. Palmieri at [jpalmieri@cnsu.edu](mailto:jpalmieri@cnsu.edu).



# A Debt of Gratitude to CNUCOP's Terrific Preceptors

By Yvette Crockell, MHA, RPh

The role of the preceptor is pivotal to supporting student pharmacists' transition into practice. Experiential education is a critical part of the CNUCOP Doctor of Pharmacy curriculum. The College is grateful for the many dedicated and talented healthcare professionals who serve as preceptors for our Introductory and Advanced Pharmacy Practice Experiences (IPPEs and APPEs). A large portion of the student's education occurs during these experiential rotations, under the direct supervision of a preceptor. Without experiential preceptors, the student's clinical learning could not be advanced, and the evolutionary process of becoming a practicing pharmacist would be restrained.

Preceptors are integral to the program in many ways. They serve as role models for our students. They are key to practice setting introduction and in helping students integrate their foundational knowledge into clinical practice, all while providing continuous feedback for the student's professional growth. Students pay close attention to how their preceptors communicate and to their actions in the workplace. They focus on how preceptors make daily decisions, how they interact with patients and staff, how they deal with difficult healthcare decisions, and numerous other aspects of being a pharmacist.



Yvette Crockell, MHA, RPh

Preceptors are ultimately responsible for the actions of their students. There is a balance that must be met between allowing students enough leeway to practice, and thus learn with minimal oversight, while not allowing too much independence, placing students too far outside their permissible role. Being a preceptor introduces many additional responsibilities, with the greatest challenge most often cited as time constraints. However, being able to give back to the profession and influence the development of future pharmacists is the benefit most frequently cited.

Preceptors should be prepared for the responsibilities they take on and should also be supported during the process. Assuring a quality learning environment is not just the responsibility of the preceptor, their manager, and staff, but is also the responsibility of the CNUCOP program, faculty, and students. CNUCOP offers continuing education programs and workshops centered on preceptor training as well as clinical topics that may be tailored to the preceptor's practice setting and teaching experience. Faculty also may provide workload relief in the form of a project, joint publication, and student co-precepting support. Preceptors have access

to library and drug information resources, which serve to further support their practice as well as enhance their ability to provide the students with an enriched experience.

Preceptor contributions to the student's experiential education are highly valued and are recognized in numerous ways. CNUCOP preceptors are appointed adjunct faculty status and have the opportunity to participate in the student admissions process, serve on faculty committees, and participate in community service events. Preceptors are invited to participate in professional organization events, and their service is also acknowledged during the CNUCOP annual preceptor recognition dinner. As part of this event, CNUCOP recognizes the IPPE Preceptor of the year for community, hospital, and specialty rotations as well as the APPE preceptors of the year. An additional distinguished service award is offered to a practitioner that might not be serving as a preceptor directly, but who supports the ongoing precepting process.

CNUCOP recognizes that preceptors are not only essential to the pharmacy profession, but also to opening the door to the experiential learning process, and for all that we are eminently thankful.

# SECOND ANNUAL SEED GRANT

## Program Yields Promising Research Endeavors

By Dean Shane Deselle, RPh, PhD, FAPhA

Last year, CNUCOP introduced a Seed Grant program to help actuate successful streams of scholarship from some of our most promising faculty. While internal, the program is highly competitive and incorporates reviews and feedback from noted scholars outside the College, even outside of pharmacy, to inform the selection of funded projects.

Last year's grant recipients, Drs. Leanne Coyne, Becky Jayakumar, and Parto Khansari, have completed data collection and are in the midst of developing manuscripts for submission to peer-reviewed journals as well as seeking to leverage the insight gained from these projects to compete for extramural funds.

The trio oversaw this year's Seed Grant program, which produced award funding to Drs. Nilesh Bhutada, Xiaodong Feng, and Tibebe Woldemariam. Their projects aim to have an indelible impact on patient health/welfare, education, and future research. Their three grant awards – direct-to-consumer advertising of prescription drugs, risks of certain anti-osteoporosis drugs, and potential anti-cancer activity of selected plants – are detailed on the next few pages.



NILESH BHUTADA, PhD, B.Pharm

## *Impact of Endorser Testimonials in Direct-to-Consumer Advertising*

Advertising of prescription drugs (a.k.a. direct-to-consumer advertising (DTCA)) has continued to become a more important part of U.S. pharmaceutical manufacturers' marketing arsenal ever since the Food and Drug Administration (FDA) relaxed the restrictions on broadcast advertising in 1997.

Almost every adult American has seen or heard an advertisement for a prescription drug on television, in magazines and newspapers, on the radio, in a doctor's office or on the internet.



Because of growing competition in the marketplace, formulary restrictions, introduction of generic equivalents and other factors, pharmaceutical manufacturers must use a variety of marketing techniques such as “advertising apples” to attract the attention of prescribers and end-users. For example, celebrity endorsers are being used in product-specific (e.g., Sally Field for Boniva®) and disease-specific ads (e.g., Shane Victorino for ADHD). Similarly, pharmaceutical marketers also are using endorser testimonials in disease-specific DTCA (e.g., Danica Patrick and Austin Dillon for the “Drive 4 COPD” campaign) and product-specific DTCA (e.g., Lipitor®).

DTCA impacts the dynamics of the healthcare environment. Studies indicate that patients exert pressure on their physicians to prescribe the advertised drug that in some cases might not be appropriate for them. Furthermore, consumers see the advertised drug as a panacea, or potential cure-all, for what ails them. This is a significant public health issue given the likelihood of consumers making wrong and harmful healthcare decisions, even in spite of guidance from a “learned intermediary” like a physician-prescriber or a pharmacist. Therefore, it is important to understand the relationship between consumers' processing of different ad components and the resulting attitudes and behavior change.

The goal of Dr. Bhutada's research is to investigate the influence of advertising appeals such as endorser testimonials along with consumers' level of disease state involvement on their attitudes and behaviors toward DTCA. Specifically, Dr. Bhutada's research will examine whether DTC ads with testimonials generate more favorable consumer attitudes toward the advertised product, whether patients' attitudes and behaviors are influenced by these testimonials similarly across product-specific and disease-specific DTC ads and different types of endorsers (e.g., celebrity vs. expert vs. non-celebrity), and how consumers' level of disease state involvement impacts these processes.

Prior research indicates that celebrity endorsers can attract consumers' attention to the ad and generate positive attitudes toward the ad and the brand, and ultimately affect their intention to purchase the product (or request a prescription) in the future. It has been suggested that celebrity endorsers who have used the product and look similar to the targeted consumers might even be more effective in marketing; however, this has not yet been tested. The results of Dr. Bhutada's research can provide policymakers with a foundation from which to build future regulatory guidelines.

XIAODONG FENG, PhD, PharmD

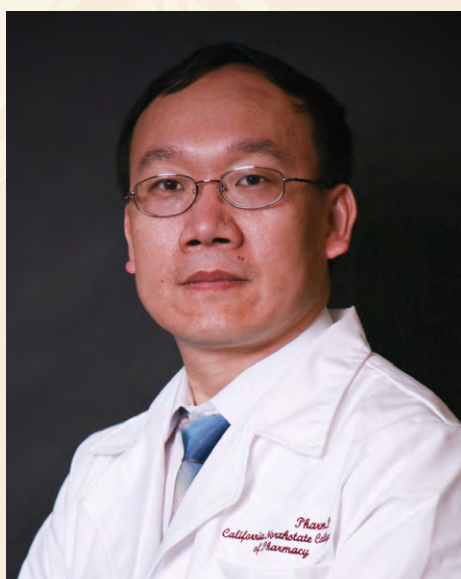
*Assessing the Risks of Impaired Healing  
and Osteomyelitis Associated with  
Bisphosphonates and Non-Bisphosphonates  
Anti-Osteoporosis Drugs*

Along with environmental and genetic risk factors, drugs play an important role in delayed wound healing and infection. Every year, thousands of drug-related adverse events are reported to the Food and Drug Administration Adverse Event Reporting System (FAERS). FAERS is a public media platform for consumers and clinicians to address their concerns of drug safety by reporting these events. This reporting plays an important role in post-marketing drug safety surveillance.

Dr. Feng's project analyzes the FAERS database to study the risk of impaired healing and bone infection (osteomyelitis) associated with the drug class of bisphosphonates (such as Fosamax®, Actonel®, Boniva®, Reclast®), the most commonly prescribed medications for osteoporosis prevention and treatment.

Bisphosphonates are relatively safe and effective; however, recent uncommon adverse effects associated with the use of bisphosphonates have been emerging. The FDA issued a warning of osteonecrosis of the jaw (ONJ) associated with pharmacotherapy of bisphosphonates. That being said, the risks of impaired healing and osteomyelitis associated with bisphosphonates pharmacotherapy are currently under debate.

Dr. Feng's research will assess the risks of impaired healing and osteomyelitis associated with bisphosphonates and non-bisphosphonates anti-osteoporosis drugs based on the plethora of case reports of adverse events submitted to FAERS. His preliminary results suggest that among total 14,493 reported events of impaired healing in FAERS, 49% of the cases were associated with the use of bisphosphonates.



The results of Dr. Feng's project will play a critical role to raise clinical and public awareness of the potential risks of impaired healing and osteomyelitis associated with bisphosphonates, especially for their long-term use and high dosage treatment. His study also will guide future large-scale pharmacoepidemiologic studies and provide directions for clinical trials.



TIBEBE WOLDEMARIAM, PhD

## *Evaluation of the Cytotoxic Activity of Selected Plants*



Cancer is the second leading cause of death worldwide. In 2008, cancer was responsible for approximately 500,000 deaths in the U.S. alone. In spite of many advances in the treatment of certain types of cancers, these cancers are still responsible for 13% of all deaths worldwide, and the annual deaths attributable to them is expected to rise to 13.1 million by 2030.

Throughout medical history, plant products have been shown to be valuable sources of novel anti-cancer drugs. While there has been progress in the field of cancer research, there is a need to discover and develop anti-cancer therapeutic agents with better activity and fewer adverse effects.

The primary objectives of this project are to discover new natural product anti-cancer agents from botanical dietary supplements and edible plants, develop new drug leads toward human trials for the treatment of cancer, and accelerate the development of drug candidates that might address the unmet medical need of cancer patients. For this reason, Dr. Woldemariam has implemented a medium-scale project to test compounds isolated from locally available medicinal plants. The species are selected on the basis of a potentially useful phytochemical composition by searching ethnopharmacological, chemosystemic, and ecological data.

In Dr. Woldemariam's previous studies, a library of compounds derived from commonly used herbs and spices was generated and assessed. These compounds showed *in vitro* cytotoxic activity against a panel of lymphoma cell lines and non-small cell lung cancer cell lines. Some of the extracts and isolated pure compounds demonstrated apparent cell death *in vitro* using lung (A549) and pancreatic (PANC-1) cancer cells.

Dr. Woldemariam is currently investigating the mechanism of cell death and the *in vitro* structural activity relationship of the active compounds using normal and a wide range of tumor cell lines. These findings highlight the importance of the use of herbs and plants as potential lead sources for prevention and treatment of cancer.

Dr. Woldemariam's research will involve studying whether pairing a common chemotherapy drug with compounds isolated from the aforementioned plant extracts make the drugs more effective and less toxic. This study may also suggest the possibility of using the isolated active compounds as a new combination drug with other anti-cancer drugs in treating bladder and lung cancer.

The innovations and strategies investigated in these studies ultimately improve our capacity to discover and identify a variety of class of compounds from plants, soil organisms and marine microorganisms. Furthermore, the project provides CNUCOP students with educational opportunities in potential post-graduate scientific programs and careers in applied drug discovery research.

## STAFF SPOTLIGHT

# *Mario Villanueva, BS EE*

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Mario Villanueva graduated with a degree in electrical engineering from Adamson University, Manila, Philippines, where he was born and raised. Early in his career, he realized he wanted a better life for himself and thought it might be found in a move to the United States.

Mr. Villanueva arrived in Southern California in 1981 and parked cars as an attendant for \$3.35 an hour. His next few jobs saw better pay and working conditions, but he still found himself engaged primarily in manual labor. Despite his electrical engineering degree, he essentially was relegated to a “gofer” in these jobs.

In 1983 Mr. Villanueva moved to Silicon Valley to work as a test operator for a computer chip manufacturer. With the advent of personal computers and the Internet, he renewed his interest in computer technology. For the next nine years, he practiced the well-known doctrine of “hard work pays off” and performed various jobs until finally getting an opportunity in 1992 to begin his career in information technology (IT) support. This was his first exposure to the American corporate culture. He quickly learned that it was a “different world,” but he successfully adapted to it.

Currently, Mr. Villanueva is CNUCOP's IT Specialist and takes care of hardware and software maintenance in addition to helpdesk support. Even in his attempts to be proactive, invariably an IT specialist will be involved in “putting out fires” on a frequent basis, making sure that files are backed up and that PCs, printers, and servers are running smoothly. Mr. Villanueva is also responsible for new hire setups, ID badges, telephone systems and audio-video equipment.

With all the challenges he endured to reach the level he has attained, Mr. Villanueva still considers the time he's spent in the U.S. to be highly rewarding. Now that he is in a position to enjoy his work, he would like to take up new IT projects and explore different avenues within IT support and security. He plans to focus on and excel in the area of IT infrastructures.



Time and again, Mr. Villanueva has seized all the opportunities afforded him. He has successfully taken his traditional Asian upbringing and applied its virtues to his new American life. After 32 years in the U.S., he still feels just a bit out of place sometimes, but he embraces all that this country has to offer, including his quiet neighbors. Mr. Villanueva does not make a lot of noise himself, except when he plays his piano at home. He has a lovely wife, Bernadette, and two grown kids – Mayette, who finished college at CSUS, and Miles, a junior at CSUS following in his dad's footsteps.



## FACULTY SPOTLIGHT

# Andy Nauli, PhD

Dr. Andy Nauli was born and raised in Indonesia and came to the United States in 1996. He attended Fullerton College in California, and obtained his undergraduate degree in biomedical sciences from the University of South Alabama. He received his Ph.D. degree from the University of Cincinnati College of Medicine, and was awarded two prestigious fellowships by the American Heart Association, the predoctoral and the postdoctoral fellowships. After obtaining his research degree, he moved back to California to complete his postdoctoral fellowship at The Scripps Research Institute.

Dr. Nauli is CNUCOP's Assistant Professor of Pharmaceutical and Biomedical Sciences. He enjoys both teaching and research. His area of expertise is dietary fat absorption. Dr. Nauli's current research projects examine the gastrointestinal aspect of red meat allergy and the intestinal lipoprotein (lipid particle) formation and secretion.

Dr. Nauli is an Executive Editor of *Journal of Biosafety & Health Education*, in addition to serving as an editorial board member of *Journal of Pancreatic Disorders & Therapy*. He has served as an *ad hoc* reviewer for a number of prestigious journals, including *Journal of Biological Chemistry*, *Metabolism*, and *Advances in Experimental Medicine and Biology*. Dr. Nauli's work has received more than 300 citations.

Prior to joining CNUCOP, Dr. Nauli held an Assistant Professor position at East Tennessee State University. He has trained more than 10 students in his research laboratory. Some of his research students are now pursuing their advanced degree in science (Ph.D.), medicine (M.D./D.O.), and biomedical engineering (Ph.D.). Seeing his students becoming successful in their professional careers is, in his opinion, the ultimate reward.

Dr. Nauli's future aspirations include mastering one or two more languages and learning how to swim.

"If you come from a country that has more than ten thousand islands and yet you don't know how to swim, well . . . that just does not sound so good," says Dr. Nauli.

Perhaps he had too much influence from his childhood, having been frequently in the company of orangutans. Experts claim that orangutans, native to Indonesia and Malaysia, do not swim instinctively.



## FACULTY SPOTLIGHT

# *Velliyur Viswesh, PharmD*

Dr. Velliyur Viswesh is an Assistant Professor of Clinical & Administrative Sciences. He attended the University of Arizona where he first completed his bachelor degree, double-majoring in biochemistry and molecular cellular biology. During this time he worked in a medicinal chemistry research lab investigating the mechanism of action of a novel cytotoxic agent. In search of more direct patient and provider interaction, he decided to pursue pharmacy school and graduated with his PharmD in 2011. Dr. Viswesh further broadened his clinical expertise and interests in acute-care hospital pharmacy practice by completing a PGY-1 residency followed by a PGY-2 residency in infectious diseases pharmacotherapy at the University of Arizona Medical Center-University Campus.



As a Board Certified Pharmacotherapy Specialist, his areas of interest include antimicrobial stewardship, pharmacokinetics/pharmacodynamics of antimicrobials, management of infections in immuno-compromised patients, mechanisms of bacterial resistance, and HIV pharmacotherapy. His research interests involve practice-based research in hospital settings to: 1) Optimize the appropriate selection and dosing of antimicrobials, and 2) Utilize molecular diagnostics and foster collaboration with microbiology and infection control personnel to enhance antimicrobial prescribing to ultimately minimize the spread of multi-drug resistant organisms, improve patient outcomes, and minimize healthcare costs.

Dr. Viswesh brings with him an immense passion for teaching. He believes in anticipating the needs of current students to prepare them to become the high-level practitioners needed to carry the pharmacy profession forward in a rapidly evolving

healthcare landscape. He aims to devote his teaching to ensure his students enter clinical practice prepared to be self-sufficient, intellectual practitioners.

Dr. Viswesh upbringing and history prior to arriving in the United States involved growing up in five cities, across three countries spanning two continents. His cultural background and diversity have constantly reminded him to see situations from different points of view and to keep an open mind. These qualities have made him an excellent advocate for his patients and students, as he makes it a point of emphasis to remember what each of them is going through.

Although Dr. Viswesh has many hobbies and interests, the two that best define him are travel and the outdoors. His cultural background has engrained a passion for travel and new experiences. Additionally, he is a strong advocate of physical activity and ensures he always has time to get out of the house. He has been on numerous trips to camp, hike, backpack, rock-climb, kayak, and canyoneer. One such trip even included a near-death experience in the Everglades National Park, which he says has played a momentous role in defining his approach to always live life to the fullest and to maintain a positive attitude. Having recently moved to the Sacramento area, he is incredibly excited to take as many opportunities as possible to explore Tahoe, the Sierra Nevadas, and of course, Yosemite National Park.



# FACULTY ACCOMPLISHMENTS

March 3, 2013 –  
December 31, 2013

## Grants/Contracts/Patents

Rodriguez-Torres A (PI), Huerta A (Co-I), **Desselle SP** (Consultant). Raising diabetes awareness in the California Central Valley Latino community. \$10,000 request to the Donald A. Strauss Foundation funded in full.

**Feng X.** Administration of an antagonist of  $\alpha 5$ -1 for anti-angiogenesis and cancer treatment. Published U.S. Patent (WO2013096335 A1; US20130165380; US20130225495).

**Frausto S, Shima E.** CNUCOP Annual Community Health Fair. \$2000 awarded from Target.

**Nguyen P** (PI), **Frausto S** (Co-PI), **Palmieri J** (Co-PI), **Hincapie A** (Co-PI). E-Partners in E-Promoting: Safer Use of EHRs for Better Care,” in collaboration with UCSF researchers and other area institutions. \$20,000 request from the Federal-State Health Information Exchange Cooperative Agreement Program funded in full.

Davar N, Kavalakatt P, **Pather I**, Ghosh S. Polyethylene glycol-coated sodium carbonate as a pharmaceutical excipient and compositions produced from the same. Published Patent Application US Publication No. 20130122099.

## Books/Book Chapters

**Bhutada N.** Direct-to-consumer advertising. In: Rollins B and Perri III M. *Pharmaceutical Marketing*, 1st ed. Jones and Bartlett Learning, 2013, pp.183-203.

## Peer-Reviewed Publications

**Bhutada NS**, Deshpande AD, Menon AM, and Perri M. Consumers' evaluation of brief summary formats of print direct-to-consumer advertisements. *International Journal of Pharmaceutical and Healthcare Marketing*. 2013;7:296-312.

Harrington AR, **Desselle SP**, Apgar DA, et al. Pharmacy students' opinions of direct-to-consumer advertising. *Res Social Adm Pharm*. 2013;9:458-466.

Condren ME, **Desselle SP**. The fate of pediatric prescriptions in community pharmacies. *J Patient Safety*. doi: 10.1097/PTS.0b013e3182948a7d.

**Feng X**, Tonnesen M, Shaker A. Mousa A. and Clark R. Fibrin and collagen differentially but synergistically regulate sprout angiogenesis of human dermal microvascular endothelial cells in 3-dimensional matrix. *Int J Cell Biology*. 2013 (2013):1-11.

**Feng X**, Cai A, Dong K, Chaing W, Feng M, **Bhutada NS**, **Inciardi J**, and **Woldemariam T**. Assessing pancreatic cancer risk associated with dipeptidyl peptidase 4-inhibitors: Data mining of the FDA adverse event reporting system (FAERS). *J Pharmacovigilance*. 2013;1:110.

**Feng X.** Cell based immunotherapy for cancer. *US Pharmacist*. 2013;38(Oncology suppl):8-11.

**Viswesh V**, Radosevich JJ, Green MR. Inclusion and Recommendation of (1->3)-[beta]-D-Glucan testing in the International Guidelines for Management of Severe Sepsis and Septic Shock. *Crit Care Med*. 2013;41(12):e487-e488.

Nix DE, **Viswesh VV**, Ghazvini P. Gonorrhea, syphilis, and herpes simplex. In: Katz MD, Matthias KR, Chisholm-Burns MA, (eds). *Pharmacotherapy Principles & Practice Study Guide: A Case Based Care Plan Approach*, 3rd ed. New York: McGraw-Hill Co. 2013.

## Poster and Podium Presentations

Halliwell R, **Coyne L**, Cao W, Livesey, J. Stem cells as therapies for the neurosciences and tools for pharmacology and toxicology. Festival of Neuroscience, London, U.K., April 9, 2013.

**Desselle SP**, Gaither CA, Plake KL. Achieving work-life balance: Lessons learned from scholarship and living it. AACP Annual Conference, Chicago, IL, July 15, 2013.

**Desselle SP.** Success in publishing and reviewing. University of Houston College of Pharmacy, Oct. 4, 2013.

Continued on page 26

# Faculty Accomplishments

Continued from page 25

**Desselle SP.** Pharmacists as public health guardians and healers. UC Davis Pre-Health Student Alliance 11<sup>th</sup> Annual Pre-Medical and Pre-Health National Conference. Davis, CA, October 12, 2013.

**Hincapie A,** Warholak T, Boesen KP. Understanding reasons for nonadherence to medications in a Medicare Part D beneficiary sample: A pilot study. AMCP Nexus 2013, San Antonio, TX, October 10, 2013.

Khatchatourian L, Yu M, **Hincapie A, Nowak M.** Clostridium difficile disease mortality: Performance of two prediction score tools in patients receiving metronidazole or vancomycin. 48<sup>th</sup> ASHP Midyear Clinical Meeting, Orlando, FL, December 8, 2013.

**Khansari PS, Coyne L, Frausto S, McClendon K.** Assessment of student learning outcomes in team-based learning in pharmacy education. AACP Annual Conference, Chicago, IL, July 16, 2013.

**Ofstad W,** Brady D, **Schumann H,** Munteanu J, Allen P, **Keel R, Brunner L.** Integrating team-based learning and high fidelity simulation for interprofessional education. AACP Annual Conference, Chicago, IL, July 13, 2013.

**Ofstad W.** Optimizing student engagement with novel TBL techniques that get students moving. Roundtable Facilitator, AACP Annual Conference, Chicago, IL, July 16, 2013.

Brunner L, **Ofstad W,** Johnson JL, Lloyd A. Team-based learning: Windfalls and pitfalls. AACP Annual Conference, Chicago, IL, July 16, 2013.

**Palmieri J.** Strategies for securing clinical practice sites for faculty in a new market. Roundtable Facilitator, AACP Annual Conference, Chicago, IL, July 14, 2013.

**Pauli M, Bouw J, Hubbard J, Gupta V, Nguyen P, Mente W.** Experiential education: Incorporating active learning therapeutic topics in APPE rotations. AACP Annual Conference, Chicago, IL, July 14, 2013.

**Porter-Fraser C,** et al. Developing a collaborative leadership program. AACP Annual Conference, Chicago, IL, July 16, 2013.

**Vinall R,** Phan K, Ghosh P, deVere White R. Combining Bel-2 inhibition with miR-34a treatment to improve bladder cancer outcomes. AACP Annual Conference, Chicago, IL, July 14, 2013.

**Woldemariam TZ,** Choi SE, Dean C, Tabib Z, Abdulwadud M, and **Pearson D.** Evaluation of the cytotoxic activity of rosmarinus officinalis. 52nd Annual Meeting of the Phytochemical Society of North America, Oregon State University, Corvallis, Oregon, August 4, 2013.

## Awards, Certificates & Other Recognition

**Bhutada N.** CNUCOP 2012-2013 Faculty Research and Scholarship Award.

**Bhutada N.** Manuscript Reviewer: *Research in Social & Administrative Pharmacy. International Journal of Advertising. International Journal of Pharmaceutical and Healthcare Marketing. Journal of the American Pharmacists Association.*

**Bhutada N.** Book Proposal Reviewer: John Wiley & Sons, Inc.

**CNUCOP** received designation as a partner of TEDMED.

**Coyne L.** Manuscript Reviewer: *Neurochemical Research.*

**Coyne L.** Appointed to the AACP Evaluation of Teaching Committee.

**Coyne L.** External Program Reviewer: Columbia College Hollywood, October 23, 2013.

**Desselle SP.** AACP Task Force on Community Engagement.

**Desselle SP.** Chair, CSHP-CPhA-CPTA Joint Task Force on Pharmacy Technician Workforce.

**Desselle SP.** External Advisory Council, University of Manchester (U.K) School of Pharmacy.

**Feng X.** Book reviewer: Mosby's Drug Reference for Health Professions.

Continued on page 27



# Faculty Accomplishments

Continued from page 26

**Feng X.** Manuscript reviewer: *J Pharmacovigilance. Research in Social & Administrative Pharmacy.*

**Frausto S.** CNUCOP 2012-2013 Faculty Service Award.

**Gupta V.** Board Certification in Ambulatory Care Pharmacy.

**Hincapie A.** Appointed to the AACP Task Force to Enhance Development of Successful Consortia and Collaborations.

**Hincapie A.** Designated as a Dr. Hincapie TEDMED online event conference (Sept 26, 2013) focus group participant to explore reasons why medical errors are underreported and how patients can help.

**Lowe R.** Book Chapter Reviewer: Pharmacist's Guide to Lipid Management.

**Nauli A.** Manuscript reviewer: *Kidney and Blood Pressure Research.*

Do K, **Nowak M.** Do statins have an important role in the setting of sepsis? CSHP Sacramento Valley Newsletter. Dec. 2013: 6-7.

**Ofstad W.** CNUCOP 2012-2013 Faculty Teaching Award.

**Ofstad W.** Faculty advisor to Jessica Sheffler (P2), AACP Walmart Scholar.

**Palmieri J.** Panel member: Medication adherence and healthcare reform. Script Your Future's Annual Stakeholder Coalition Meeting, Sacramento, CA. June 11, 2013.

**Palmieri J.** Selected as CNUCOP's representative to attend the 2014 TEDMED Conference in Washington, DC.

**Palmieri J.** CSHP "Certification Program Task Force."

**Pauli M.** American Diabetes Association—Northern California Chapter Diabetes Month Committee.

**Pearson D.** Inaugural cohort member of AACP's Academic Research Fellows Program (ARFP).

**Woldemariam T.** Editorial Board, *Journal of Pharmacology & Clinical Toxicology.*

## Staff Highlights

**Dean M, Gonzalez A.** Attended the Pacific Association of Collegiate Registrars & Admissions Officers (PACRO) Conference, Las Vegas, Nevada, October 27-30, 2013.

**Gonzalez A, Grant I, Haslinger S, Kragen J, Kubat G, Padgett M, Robertson P, Sproates K.** How to Communicate with Tact and Professionalism. A two-day certified Fred Pryor seminar, Sacramento, California, July 9-10, 2013.

**Grant I, Haslinger S, Padgett M, Shima E, Sproates K.** Communication Skills for Women. A one-day certified Fred Pryor seminar, Sacramento, California, November 19, 2013.

**Haslinger S.** The Conference for Administrative Assistants. A one-day certified Fred Pryor seminar, Sacramento, California, Friday, November 1, 2013.

**Kragen J.** Appointed to Sacramento Metropolitan Chamber's Civic Amenities Committee.

**Padgett M.** Managing Conflict and Confrontation. A one-day certified Fred Pryor seminar, Sacramento, California, August 19, 2013.

**Padgett M.** Developing Emotional Intelligence. A one-day certified Fred Pryor seminar, Sacramento, California, November 4, 2013.

**Robertson P.** Appointed to Sacramento Metropolitan Chamber's Workforce & Education Committee.

# STUDENT ACCOMPLISHMENTS

**Gurai, Sukhleen (Sheena)** (P4) admitted as a Medical Communication/Medical Science Fellow with the Rutgers University/Genentech Pharmaceutical Industry Fellowship Program.

**Gurai, Sukhleen (Sheena)** (P4) named a recipient of the United States Public Health Service's Public Health Pharmacy Award for 2013.

**Silva Petrosyan** (P4) Overcoming chapter obstacles. *Student Pharmacist*. Sept/Oct 2013, p.4.

**Jessica Sheffler** (P2) named as a 2013 AACP Walmart Scholar (Faculty advisor: Dr. Will Ofstad).

**Jimmy Munteanu** (P4), **Silva Petrosyan** (P4), **Jessica Sheffler** (P2), **Tahir Ashraf** (P3), **Perri Ann Allen** (P3) and **Beshoy Gerges** (P3) interviewed on "Good Day Sacramento" October 13, 2013 to discuss American Pharmacists Month.

**John Adricula** (P3) and **Rachael Olsufka** (P3) won first place in the SNPhA local patient counseling competition 2014. **Cynthia Aung** (P2) and **Kim Ortega** (P2) placed second.

**Marisa Bauer** (P4) and **Dan Pham** (P4) won the 2013 CNUCOP CSHP Clinical Skills Competition.

**Daniel Yerekhman** (P4) and **Thuy Bui** (P4) won first place at the ACCP Clinical Skills Local Competition.

CNUCOP's Gamma Iota Chapter of Phi Delta Chi received the following national recognitions:

- ❖ **1ST PLACE—ALBERT B. PRESCOTT SCHOLARSHIP REPORT AWARD:** For programs promoting scholastic improvement/achievement, recognition of scholastic excellence, and outcomes of scholastic achievement by the chapter.
- ❖ **DALE W. DOERR ACHIEVEMENT AWARD:** For completing every objective set by the PDC National Office for the entire year.
- ❖ **5TH PLACE—JOHN D. GRABENSTEIN LEADERSHIP AWARD:** For programs promoting leadership development, chapter recognition, and outcomes of members in leadership positions.
- ❖ **5TH PLACE—WINDOW DISPLAY AWARD:** For creating a physical display that stresses communication of pharmacy and/or public service information to a lay audience.

- ❖ **6TH PLACE—EMORY W. THURSTON GRAND PRESIDENT AWARD:** Overall chapter activity designating the most prestigious of awards to PDC Chapters.

**Rachel Olsufka** (P3) selected to complete a PharmD Pharmaceutical Industry Internship at Vertex Pharmaceuticals.

SBC President **Beshoy Gerges** (P3) selected as 1 of 10 students nationwide for the Rite Aid Corporate Internship in Pennsylvania.

## CNUCOP students took first place in the CSHP Quiz Bowl.

**Perri Ann Allen** (P3), **Sonia Bains** (P2), **Sara Choi** (P3), **Julia Chung** (P3), **Kristen Dang** (P3), **Kimberly Han** (P2), **Maysa Odeh** (P2), **Arun Sethi** (P3), **Marlene Taporco** (P3), **Robert Wang** (P2) and **Jared Yoshizumi** (P3) selected for Target Pharmacy summer internships.

**Rachel Olsufka** (P3) and **Jenny Chau** (P3) awarded Sacramento Valley Pharmacists Association scholarships.

CNUCARES earned a sub-contract from NCI-funded *Enhancing Participation of Asian American Cancer Patients in Clinical Trials and Biospecimen Donations* study. Faculty advisor: Dr. Ruth Vinall. \$10,000 subcontract.

**Caroline Bett** (P3) won the APhA-ASP CNUCOP Patient Counseling Competition and will represent the College at the 2014 APhA National Patient Counseling Competition. Other top 10 finishers: **Jennifer Courtney** (P3), **Bin Deng** (P4), **Sasha Gould** (P2), **Tatyana Levko** (P3), **Kristina Pedersen** (P2), **James Sanchez** (P3), **Jessica Sheffler** (P2), **Karamjeet Sheikhon** (P3), **An Tran** (P1) and **Diem Chi Tran** (P1).

**Jessica Sheffler** (P2) A Qualitative Study of a Proposal to Accredited Community Pharmacies. CHSP Seminar in Anaheim, CA in November 2013.

**Wendy Chaing** (P4) Metformin Decreases Pancreatic Cancer Risk Associated with Dipeptidyl Peptidase IV Inhibitors: Assessing FDA Adverse Event Reporting System Database. CSHP Seminar in Anaheim, CA in November 2013.



# Our Mission

To advance the science and art of pharmacy

# Our Vision

To utilize innovative active learning strategies in educating students and practitioners, advance the practice of pharmacy, and improve the health of Californians and beyond

# Our Values

**Advancing** our college, our goals, and our discipline

**Caring** about our students, our staff, our faculty, and our profession

**Teamwork** in teaching, learning, research, scholarship, and service

# Our Goals

The following goals will help us accomplish our mission:

- ❖ An academic program that fosters critical thinking, problem-solving, clinical reasoning, and self-directed learning skills
- ❖ An experiential program that progressively develops student skills, attitudes, values, judgment, professional behavior, and expertise in patient-centered care
- ❖ Graduates who attain effective oral and written communication skills
- ❖ Graduates who use technology to support life-long learning, research, and practice
- ❖ A research infrastructure that promotes collaboration, innovation, and discovery
- ❖ A faculty engaged in discipline-related research and other scholarly activities
- ❖ A faculty development program that nurtures and supports a learning-centered curriculum and the scholarship of teaching
- ❖ Faculty engaged in professional and community activities
- ❖ A continuing education program responsive to the needs of alumni, pharmacy practitioners, and other health care professionals
- ❖ Student participation in professional organizations and community projects to learn skills needed to be an advocate for the profession



*Care In Action* editorial staff (back row, left to right): Shannon Presidio, Aubrey Gonzalez, Karen Sproates, Imani Grant, Shannon Haslinger, (front row, left to right) Janette Kragen, Erica Shima-Ribardiere, Dinorah Feliciano

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