

CARE in *Action*

Inaugural Issue

Fall 2012



CALIFORNIA NORTHSTATE
UNIVERSITY



COLLEGE of
PHARMACY



A MESSAGE FROM

Dean Shane Desselle

IT IS WITH GREAT ENTHUSIASM and excitement that I join California Northstate University's College of Pharmacy (CNUCOP) as Dean. The College has established a framework for an innovative student experience, going the "extra mile" beyond active learning environments now permeating classrooms nationwide, to actuate a team-based learning curriculum that offers a host of benefits to future health care professionals.

This curriculum employs both individual- and team-based learning activities and assessments, thus preparing student pharmacists to think independently but also to be sensitive to their environments, with a greater appreciation that some challenges require the collective wisdom of many. This innovative curriculum is one of many things that factored into my decision to humbly accept this opportunity. Additionally, I became extremely enamored with the leadership qualities of our students and the dedication of a highly qualified faculty and staff. I also fell in love with the Sacramento area during my initial interview for the position.

I am originally from a very small town in Southern Louisiana, so I am of "Cajun" heritage. I can speak a number of Cajun-French colloquialisms and can cook a number of tasty Creole dishes, but don't ask me to carry on a conversation with a Parisian! In spite of being from a small town and being very proud of my heritage, I always have been drawn to somewhat larger cities. This is why I loved Pittsburgh, Pennsylvania so much, where I served as a faculty member at Duquesne University. And while their topographies and cultures are different, I actually find quite a bit of similarity in Sacramento and Pittsburgh, such as their size, breadth of activities, entertainment opportunities, diversity, and genuine warmth and kindness of their constituent residents. In between Pittsburgh and Sacramento, I had a stop in Tulsa, Oklahoma where I had the opportunity to gain the administrative experience necessary to take on this job. I enjoyed my time there, as I have my other adventures. However, the offer of becoming the chief academic officer at such an innovative program while basking in Northern California's high quality of life made for an easy decision for me to move.

While there are many things about the College about which I would like to boast, I feel compelled to mention the richness of our service, both to the profession of Pharmacy, as well as to the at-risk populations in the Sacramento area. We have several faculty members who have recently or who are currently occupying positions on the Board of the Academy of Pharmacy Educators in California, Chair of the Academy of Health-System Pharmacy for California, Vice-President for Clinical Services of the California Pharmacists Association, President of the Sacramento Valley Pharmacists Association, and the Board of Trustees of the American Association of Colleges of Pharmacy. Our faculty members leverage these opportunities to help realize our Vision to improve the health of Californians, and beyond. This imbues in our faculty the sense of collaboration with other practitioners and policymakers, which is necessary in contemporary health settings. Moreover, their involvement inspires our students into leadership roles, assuming the highest level of ethics and citizenship. For example, our students have partnered with the American Heart Association to conduct blood pressure screening in senior centers and in churches; they have worked with leaders in the Sacramento community on Script Your Future, which aims to improve medication adherence and overall well-being of Californians; and they also have worked with the Sacramento Food Bank to provide immunizations and health-related education to their clients. To that end, our thrust to help those in need is underscored by myriad activities, all under the leadership of our dynamic students and mentors.

I hope that you enjoy reading the inaugural issue of the CNUCOP Magazine. I would like to thank everyone, including our faculty, students, first class of alumni, staff, preceptors, health care organizations, foundations, local businesses, area politicians, and all others who have helped to make our College so special.



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

TABLE OF

Contents

A Message from Dean Shane Desselle.....	1
A Message from President Alvin Cheung.....	3
Community Service	4
Faculty Spotlight: Dr. Pratima Patel.....	5
Team-Based Learning.....	6
Expansion of the Pharmacy	
Simulation Laboratory	8
Faculty Spotlight: Dr. Rachel Lowe	9
Pharmacists Take Front Line	
in Emergency Departments.....	10
Staff Spotlight: Michele Padgett	10
Preceptor Spotlight: Dr. Zahra Parsafar	11
Research at CNUCOP	12
Alumni Spotlight: Dr. Gary Takher	13
Staff Spotlight: Kimberly Reed	13
The Research Laboratory at CNUCOP	14
Clinical and Economic Outcomes of a	
Prospective Antimicrobial Stewardship	
Program	15
NSAIDs In the Treatment and/or	
Prevention of Neurological Disorders.....	16
Faculty Spotlight: Dr. Michael J. Negrete	17
CNUCOP/Sutter Health Care PGY-1	
Residency Training Program.....	18
Resident Spotlight: Dr. Simon Pence.....	19
Resident Spotlight: Dr. Tanakorn Sapon	19
Faculty Accomplishments.....	20
Student Accomplishments.....	23
Student Spotlight: Pejman Ahmadi	24

Published by: California Northstate
University College of Pharmacy

Editorial Staff: Dinorah Feliciano, Imani
Grant, Janette Kragen, Shannon Presidio,
Erica Shima-Ribardiere, and Karen Sproates.

Design and Production: Right Angle
Productions, Rocklin, CA

Printing: Print Infinite, Roseville, CA



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.

A MESSAGE FROM

President Alvin Cheung

IN ESTABLISHING THE CALIFORNIA NORTHSTATE COLLEGE OF PHARMACY, I wished to address a very complex problem confronting the profession: that is, how to advance pharmacy while also serving and benefitting society. Advancing the profession had long been my passion even well before actuating the College in 2006.

I have enjoyed a very fulfilling career, having spent 30 years at Kaiser Permanente Pharmacy Operations, progressing from senior management to executive levels. At the same time, I also taught pharmacology for 27 years at American River College. My experience through many years of recruiting pharmacists, pharmacy managers, and pharmacy directors, and the additional effort of training and developing these talented people, caused me to reflect and consider how we might best educate pharmacists for the future. Further, what mix of education and training would make program graduates ideal candidates for hire? How does a pharmacy school best exemplify and reinforce professionalism in its students and graduates? How does a pharmacy school advance its curriculum to stay true to the evolving changes of the pharmacy practice?

Teaching is a sacred profession, especially in health sciences education. Its sanctity lies in the faculty's truthful modeling of professionalism for future healthcare practitioners both within and outside the campus. As an instructor, I used to ask students every semester on the first day of class, "What is your biggest fear after graduation?" Many response echoed concerns in regard to being "stuck" working night shifts or weekends, not finding a job right away, or working in a different city from home. Upon further consideration, a student would finally, but almost invariably offer that his or her greatest fear was making a mistake that harms or kills a patient. That is when I would unveil my perspective, which was that the biggest fear is when you find out you are ill-prepared to take care of the patient in front of you. The students' eyes and faces would then transition to visible concern. We would then exchange the mutual commitment of teaching and learning.

My experiences at Kaiser Permanente also played a part in shaping my vision to begin our fine pharmacy college. The amount of effort required for me to launch the first accredited pharmacy residency program for Kaiser in Northern California could not be adequately captured just by those four, 3-inch binders. The ten years that I spent as the Residency Program Director had given me a deep insight into pharmacy education. I had first-hand experience in providing advanced training to graduates from many pharmacy schools across the country.

Healthcare and education share the commonality of being highly regulated. The high hurdle to enter into these two domains is necessary for the protection of the public. Success in both healthcare and education requires that one must possess the passion for excellence and uphold extremely high standards of quality. The education domain also demands unwavering commitment to effective teaching and dedication to student learning.

In January of 2007, a coalition of pharmacists and physicians, coupled with financial sponsors who shared a mutual passion to establish the eighth pharmacy program in California, began the complex task of building this institution of higher learning. Their collective desire to impart the highest ideals to the future of the pharmacy profession became the founding principle of its formation. It is with great pride that we are now witnessing the first wave of our graduates entering the pharmacy profession and health care field. We have the utmost confidence that our graduates will continue to advance themselves by being lifelong learners; to promote their practice by expanding their roles to providing extraordinary care and services to patients; to advance the profession by precepting students, undertaking research, and joining professional associations in maturing our esteemed profession; and to continue to be a source of pride to those of us who embarked on this mission six years ago.



Alvin Cheung, PharmD, MHSA
President

A Cornerstone of Our Success

By Soña Frausto,
PharmD, MA

CNUCOP attempts to advance the art and science of pharmacy. It also endeavors to improve medication therapy outcomes of Californians, and beyond. These two pillars establish a foundation for a culture of service to our profession and to our community; and these values are modeled by our faculty and willingly taken up by our students. CNUCOP has a proud history of taking actions that underscore these values. Our students have been actively engaged in community service activities throughout the Sacramento Region. Together with faculty, preceptors and local pharmacy associations, CNUCOP pharmacy students have shown the leadership to develop key relationships that enable our College to collaborate and stay engaged with Sacramento-area residents. Our ability to partner with the American Heart Association, American Diabetes Association, California Pharmacist Association, California Society of Health Systems Pharmacists, and a variety of church and social service venues have given our students valuable learning opportunities and a sense of goodwill. The ability to reach out into this community and provide much needed educational support, counseling and valuable recommendations that surround safe medication use and preventative care are cornerstones to our students' success. Moreover, our view of community engagement is one of permanency. All

when the funds run out. Whichever social ill they were addressing received but a mere bandage. Our actions are guided by the idea that we will maintain long-lasting relationships and will leverage those to address the root of the problem.

Blood pressure screenings, patient education seminars, immunization clinics and medication assessment events are but a few of many service activities in which we have participated in the previous few months. Each of these events has occurred in a multitude of locations such as local senior center establishments, various

churches throughout our community, and food or service distribution sites. We consult the literature and key stakeholders in the area, such as clergy, to determine THEIR needs, rather than us dictating to them what those needs are. We then take a more holistic approach to our service, considering myriad factors such as health literacy, in the design and coordination of our service. We are currently involved in a national campaign, Script



CNUCOP students assisted participants with blood pressure screenings at the American Diabetes Association's Walk to Stop Diabetes.

Your Future, sponsored by the National Consumer League, which sees us provide medication adherence awareness counseling and information to a wide variety of patient populations. Additionally, students have supported other initiatives such as Diabetes Awareness, Ovarian Cancer Education, Childhood Obesity, and Stroke Prevention to name a few notable causes that expand our ability to penetrate a variety of populations who have been affected by these diseases.

Besides providing health care screening and educational services, students at CNUCOP are involved in philanthropic endeavors. They have raised considerable monies to support the American Heart and American Diabetes Associations; created walking teams in support of heart disease, diabetes, and cancer; and collected toys and food for area families. Besides supporting these

Continued on page 5



Aph-ASP student representatives preparing for the Sacramento Heart Walk.

too often, various organizations, particularly academic ones, perform service that is funded through a grant mechanism, only to leave when the project is completed or

FACULTY SPOTLIGHT

Pratima Patel, PharmD

Dr. Pratima Patel got her start as a candy-striper hospital volunteer in high school. She had some work study experience in college in a

chemistry lab. She then worked as a clerk in a retail pharmacy during her 5 years of college. Her externship was a rotation through several sites in San Diego and internship/residency after graduation was in Primary Care and

Teaching. Dr. Patel's first job as a registered pharmacist after passing



the California Boards was as a hospital pharmacist. She spent 9 years as an inpatient pharmacist on a Telemetry/Cardiology floor

providing clinical services and precepting. The hospital was located five miles from the Mexican border. Because of the location, she had to help coordinate care for the most critically ill and saw many medical emergencies, including major heart attacks and surgical injuries.

Pratima grew up in Merced, CA. After a short time in Pasadena and

years soaking up the scenery and sun in San Diego, she has circled back to Northern California. The changing field of pharmacy and its many new opportunities brought Pratima to CNUCOP and Elk Grove; she is the new Associate Director of Advanced Experiential Education. She loves to be around other educated, passionate people, and is happy to be joining our administrative team.

Pratima recently got married, and she is looking forward to spending a week visiting Hawaii and its amazing geographic wonders—canyons, mountains, scenic coasts, sea caves, and active volcanoes—for her honeymoon. Her idea of time well spent, other than many hours at the gym, is traveling to see wonders of nature, such as Iguazu Falls, Bariloche Lake, and Perito Moreno Glacier.

Community Service

Continued from page 4

health-related organizations, students have stepped up to visit children at Shiner's Children's Hospital, are working with Habitat for Humanity to build homes for area families, and have tutored students at area high schools in math and science. A leading example of student support and partnership is with the Sacramento Blood Bank. One student organization, Student National Pharmaceutical Association, has led the charge to organize an annual blood collection site on our campus that is open to all faculty, staff, and students as well as local businesses in the Rancho Cordova area.

Each encounter a student has with a local resident at these events helps drive home the importance of community involvement and support. Students develop important skills through this experience that help solidify



A glimpse of the inaugural CNUCOP annual campus-wide health fair.

the concepts learned in our pharmacy program and keep them connected to the community. CNUCOP is committed to supporting these events, as they provide a testament to our mission and vision as well as strengthen our bond with the residents of the Sacramento region.

Team-Based Learning

By Lane Brunner, RPh, PhD

We are pioneers at CNUCOP. Four short years ago we enrolled the first class *ever* to be admitted into a professional degree program that uses team-based learning (TBL) throughout the curriculum. Our inaugural class has just graduated and now is entering the world of healthcare as a new generation of pharmacists who are dedicated to think more critically and communicate more clearly. We believe that TBL has a lot to do with their growth and development as students, leading them to be life-long learners and practitioners of the highest caliber.

TBL is a particular method of teaching where students come to class prepared to engage in problem-solving activities. During class, students work collaboratively in 5-7 member teams. Instructors spend their time facilitating discussion and student learning rather than giving endless hours of lectures.

TBL is delivered in three phases: pre-class preparation, readiness assurance, and application.

Phase 1:

Students are given pre-class learning material with clear objectives. The students study and learn the fundamental concepts *prior* to the start of class so they can *actively* participate with their teams during class. The students may receive a textbook chapter, instructor-prepared guided readings, literature articles, videos, or any of a number of different kinds of materials to use as part of the preparation.

Phase 2:

At the start of class, students take an individual Readiness Assessment Test (iRAT) and when finished, the team takes the same test (tRAT). The team discussion of the test questions builds a stronger

Continued on page 7



Team-Based Learning

Continued from page 6

understanding of the fundamental concepts through the use of peer education. This is very similar to what students already do when they go over examination questions with their friends and study groups. The instructor then discusses the test with the class and adds supplemental content as appropriate through a “mini-lecture.” This is a rich, interactive period where instructors shape and direct the students’ learning.

Phase 3:

Once the instructor believes the student teams understand the foundational concepts, teams are given problems to solve where they build on these concepts to broaden their understanding of the material. Instructors work with student teams and facilitate learning for the entire class. This type of instructor-team interaction is far more personal and meaningful than answering a lone question in a lecture hall.

One of the most powerful features of TBL is how often student learning is assessed. Rather than waiting weeks following a lecture to test student learning, in TBL students are tested nearly each class session. Comprehension of fundamental concepts is evaluated

with the readiness assessment tests (iRAT/tRAT) at the start of each learning module. The student’s ability to apply concepts and think critically are assessed by the application exercises. CNUCOP then adds other major formative and summative assessments like midterms and finals. We also use annual milestone exams so our faculty has a set of excellent tools to know how well our students are learning.

Numerous papers in healthcare education report that TBL improves student engagement, communication,

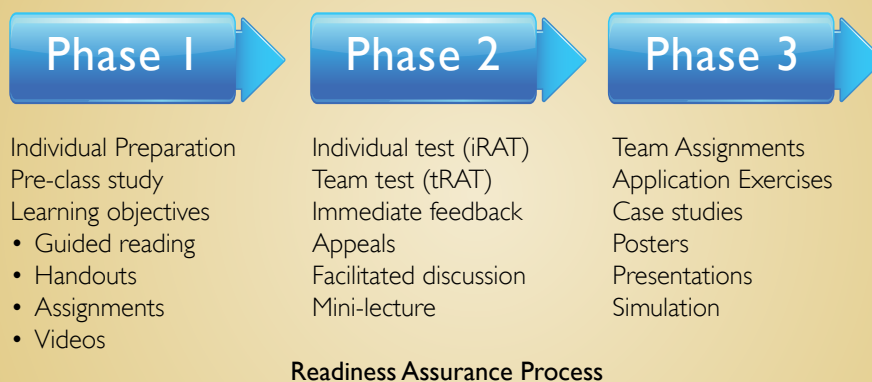
critical thinking, team-building, and content knowledge. Students also learn how to assess the contribution and performance of their team members. TBL is particularly beneficial for students who struggle with learning on their own and benefit from peer interactions.

Although we are the first to use TBL throughout a professional degree

program, we did not invent TBL. In fact, TBL has been around for over 30 years, but in the last decade or so has become increasingly popular in healthcare education. We are thrilled to be on the forefront of this teaching platform in pharmacy education.



Phases of TBL





EXPANSION OF THE Pharmacy Simulation Laboratory

Lab Meets Needs of Contemporary Practice and Education

By James Palmieri, PharmD, and
Soña Frausto, PharmD, MA



The finishing touches are being placed on redesign of the pharmacy simulation laboratory classrooms, located on the first floor of the main campus building. The highly anticipated changes will bring improved and expanded educational opportunities for our students.

The former lab space was itself developed in response to the growth and change of the College. Relocated to its current location in the summer of 2010 to make room for the incoming P3 class of 2012, it was largely used as a space to simulate consultations for the OTC (now Self-Care) course.

Square footage in this space was limited. When completed, it was approximately 1,000 square feet and accommodated both a simulated outpatient pharmacy, complete with automated dispensing and patient profile software and OTC products, one chemo containment hood and two laminar flow hoods for simulated compounding.

The Pharmacy Practice Laboratory Committee, consisting of Drs. Sonya Frausto, Heather Schumann,

Norman Fong, Dave Carroll, Paul Nguyen and Will Ofstad, along with Chair James Palmieri, met several times beginning this spring to plan the expansion. With the assistance of outside consultant Dr. Bill Callan of UC Davis Medical Center, an expert in inpatient and outpatient pharmacy operations, the plans were finalized. Facilities Manager Jim Bunse and his crew began construction on the space this past summer. Now completed, the construction work nearly doubled the Laboratory space to 1,990 square feet.

The re-design includes improved workflow and upgraded equipment and a second room carved out from previously unused office space. The additional room was added to simulate a hospital environment and will be equipped with an observation ante-room and cameras with audio to facilitate inconspicuous viewing of students' performance by their evaluators, as well as a mock waiting room and patient consultation area.

Continued on page 9

FACULTY SPOTLIGHT

Rachel Lowe, PharmD

Dr. Rachel Lowe, originally from Miami, Florida, completed her bachelor's degree in biochemistry at Indiana University and received her Doctor of Pharmacy degree from the University of Colorado Skaggs School of Pharmacy and Pharmaceutical Sciences. Dr. Lowe completed her PGY-1 pharmacy practice residency at the Michael E. DeBakey Veterans Affairs Medical Center in Houston, TX. To focus on her goals and interests, she returned to the University of Colorado and completed a PGY-2 ambulatory care/family medicine residency with a focus in academia. During her PGY-2 residency experience, she obtained her board certification in pharmacotherapy (BCPS).

Currently, Dr. Lowe is an Assistant Professor at CNUCOP and is practicing at the Sacramento County Primary Care Clinic. She pursued a position in academia in order to give back to the profession. To that end, she will be working as a Clinical Pharmacy Specialist in a clinic providing direct patient care for chronic medical conditions such as diabetes. She informs patients about nutrition, monitoring their blood sugar levels, proper foot care, the importance of adherence to diabetes medications, and any and all possible interactions among their medications with food, alcohol, medical procedures/labs, and other treatments, including even over-the-counter and homeopathic remedies. The clinic is pharmacist-led but operates in complete collaboration and consultation from physicians and other health care professionals. Dr. Lowe works with physicians to tailor the right doses of insulin and other drugs for each diabetes patient, providing another example of our faculty working well with area physicians. Dr. Lowe aims to help expand the clinic's current array of services to include education and management of hypertension and high lipids levels. During this time, she also will precept fourth-year pharmacy students. She enjoys working with students in the classroom, as well as in the clinical setting. Her area of expertise involves cardiovascular primary prevention in the ambulatory setting.

Outside of work, Dr. Lowe enjoys swimming, biking, traveling, and spending time with family and friends. Despite being across the country, she still fully supports and enjoys watching Florida sports teams, especially the Miami Heat and Miami Dolphins. Dr. Lowe is enjoying Sacramento and is excited to experience all that California has to offer.



Expansion of the Pharmacy Simulation Laboratory

Continued from page 8

Plans are underway to incorporate the lab space into all of the Therapeutics courses as well as the Self-Care course. The course coordinators are putting together their 'wish' lists for instructional materials. Additionally, faculty instructors of other courses, including electives, are devising strategies to make use of this increasingly functional facility to even better prepare our student pharmacists for real-world experiences commensurate with contemporary pharmacy practice in a variety of settings.

Pharmacists Take Front Line in **EMERGENCY DEPARTMENTS**

By Grant D. Lackey, PharmD,
CSPI, FASCP, FCSHP

As emergency rooms and departments see increases in patient demands, some California hospitals are taking steps to ensure the best possible care for their clients. Emergency Department Pharmacists are an integral part of the health care team and play an essential role in patient care management.

“Many hospitals are finding ways to incorporate pharmacists in non-traditional roles to ensure the best in patient safety and medication management, including emergency departments,” said Dr. Christine Antczak, President of the California Society of Health-System Pharmacists. “Patients receive better care when pharmacists are involved in medication decisions.”

The responsibilities of these pharmacists include medication evaluation, consultation,

development of guidelines, responding to codes, education of other healthcare providers and improving the safety of medication management. The demand of these services within the emergency department setting, as well as others, has created an opportunity to place pharmacists in those roles.

“The emergency department is a fast-paced environment where medical decisions must be made rapidly and safely. Being in the emergency department allows me to assist with clinical decisions and prevent medication errors. It is a very rewarding field to work in and every day is different,” said Dr. Jennifer Mai, a pharmacist in the emergency department of Scripps Mercy Hospital in San Diego, CA.

One of our CNUCOP faculty, Dr. Grant Lackey, is well versed on the

contributions of pharmacists in the Emergency Department and other areas within the health system. He utilizes his experience in health systems currently as a Toxicology Management Specialist at the California Poison Control System at the University of California Davis Medical Center, which allows him to work closely with pharmacists and physicians in emergency departments all over California consulting on difficult toxicologic cases to improve patient care. This experience is directly translated to the benefit of our students, as he offers an elective course in Introductory Clinical Toxicology as well as Introductory Pharmacy Practice Experiences and Advanced Pharmacy Practice Experiences at the California Poison Control System in Sacramento and select locations in California.



STAFF SPOTLIGHT

Michele Padgett

Michele Padgett was born and raised in Miami and Homestead Florida, respectively. Upon graduating from high school, she moved to Santa Rosa, California to be closer to her family. She started her career in retail shoe sales, and ten years later started in the accounting field. She married in 1987 and has one son named Dustin, who is now 25 years old. Her family moved to Sacramento 20 years ago, and she has called it home ever since. For the last decade she has been working for local private and public schools as the staff accountant. She is extremely happy to be back in an educational environment and hopes to help CNUCOP grow and thrive. She enjoys reading, television, hiking and especially caring for her dogs, who include Major, a 13-year old Golden Retriever, and Coyote, a 6-year old Alaskan Malamute. Michele looks forward to meeting and working with all the staff and faculty at CNUCOP.

PRECEPTOR SPOTLIGHT

Zahra Parsafar, PharmD

Dr. Zahra Parsafar was born and raised in Tehran, Iran, the first of seven children. She was the first and only child of her parents to go to college. In her junior year, she met her husband, got married, and the following year had a daughter. Having a family did not stop her from finishing college. She received a B.A. degree in education and upon graduating she became a junior high school teacher. In 1984, after two years of teaching, Zahra's husband decided to pursue his doctorate degree in the U.S. from Yale University. During this time, Zahra taught courses at the adult education center. She also had two other daughters.



At Yale University housing, where many international families lived, the wives would take care of the children while the husbands went to school. Zahra always wanted to go back to school and to study medicine. In 1990, after her husband finished his studies, they moved to California. He started teaching at Yuba College. At this time, the thought of going to medical school with 3 children seemed too long of a time investment and too expensive. Still, she could not stop thinking about her dream. It was then that she decided to go to pharmacy school. Zahra chose pharmacy because it was a medical field that would allow her to help people and required a shorter time investment, which she felt she needed since her primary job was to raise a family. After finishing the prerequisites, she applied to University of the Pacific. She was admitted and started pharmacy school in 1998.

During pharmacy school, Zahra lived in Davis and commuted 75 miles each way to Stockton before coming home to take care of her family. In addition to attending class and being a full time mother, she interned at Longs Drugs Pharmacy. Upon graduating in 2001, she was hired by Walgreens, where she worked for 6 years while at the same time being on call for Kaiser Permanente. Needing a change, in 2006 she began working for Pharmerica's (formerly Kindred) long-term care pharmacy. At Pharmerica, she was responsible for monitoring and dosing of IV antibiotic therapy for skilled nursing facilities.

Zahra really enjoys having interns involved with these pharmacist duties. There is always something different and challenging to teach them, as well as to learn from them. Other than working, Zahra enjoys spending time with her family and friends. Her daughters are now all adults and working on their respective professional careers. Her eldest daughter is a pharmacist. Zahra and her husband have always emphasized the importance of education, hard work and perseverance in their family.

Zahra is grateful for the health and happiness of the people in her life, for the wonderful career goals that she has achieved, and for the many opportunities to teach and inspire the newcomers to this profession.

RESEARCH AT CNUCOP

Significant Strides Toward Discovery and Translation That Will Directly Benefit Society

By Ruth Vinall, PhD

In 2012, Dr. Ruth Vinall was one of 18 pharmacy school faculty members from across the nation to receive an American Association of Colleges of Pharmacy (AACP) New Investigator Award (NIA). This prestigious award provides funding for promising junior faculty members to develop research projects that have the potential to advance pharmacy science and improve healthcare. The long-term goal of Dr. Vinall's project is to increase survival rates for patients with muscle invasive bladder cancer (MI-BC). The current 5-year survival rate for MI-BC patients is only approximately 35%, so clearly improved treatment options are needed. Standard of care treatment for MI-BC patients is chemotherapy followed by cystectomy. Response rates are low because cystectomy often fails to remove all of the cancer cells, and many of the remaining cancer cells develop resistance to chemotherapy. Dr. Vinall will use cell line models of MI-BC to determine whether targeting components of molecular pathways associated with resistance to chemotherapy can decrease the likelihood of cancer cell survival following treatment. If successful, a next step will be to perform *in vivo* testing and then hopefully translate these findings into a clinical setting. Dr. Vinall will present the findings of her project at the Annual AACP meeting in Chicago in July 2013.

Dr. Vinall's accomplishment highlights one of the many fruitful endeavors undertaken by faculty at CNUCOP. In the College's Mission to advance the science and art of pharmacy and our Vision to offer health care solutions addressing the needs of Californians and beyond, our faculty are conducting meaningful research that not only advances the profession of pharmacy, but also serves our citizenry. This is not research just for the sake of research, but with an eye toward a more comprehensive view of scholarly translation. Our research is varied yet unified around the tenet of advancing health, regardless of whether we speak of the work we are undertaking to improve patients' understanding of diabetes, identifying the benefits of various herbs and botanicals in the prevention and treatment of cancer, creating mechanisms to improve access and adherence to medication, or providing coping strategies to those with histories of mental illness..

The year 2012 marks the third consecutive year that the College has forwarded an application to the above-named NIA process; and in this year alone, proposals were submitted from 3 of our faculty, putting us on par in this regard with many major university programs. Additionally, the College has begun an internal Seed Grant program to help fund the most promising of our junior scientists and practitioners. We have several faculty currently working with or seeking monies from sources like the American Cancer Society and the National Institutes of Health. Our publication rate in esteemed peer-reviewed journals continues to skyrocket upward. These are all signs of our positive trajectory and grasp of the interconnection between our teaching, our research, and our service to the public.



ALUMNI SPOTLIGHT

Gary Takher, PharmD



As a member of CNUCOP's inaugural graduating class, Gary Takher, PharmD, MBA, evidences the early successes of our distinguished pharmacy program. Dr. Takher is currently a Visiting Scientist Fellow at Eli Lilly and Company, based in Indianapolis, Indiana. During his time at CNUCOP,

Gary was involved with chartering a variety of organizations in parallel with his educational pursuit in both pharmacy and business school.

He is currently undertaking investigative work in Lilly's Clinical Open Innovation initiative, which utilizes knowledge from crowd participation to provide better insights in clinical development. His team's philosophy follows the principles of Henry Chesbrough's work on Open Innovation, which is based on the following approaches: external ideas and technology can reduce costs and time spent in research and development (outside in approach) while making unused innovations more accessible to the external crowd (inside out approach). Within this context, the crowd refers to patients, patient advocates, developers, researchers, and everyone else who has the ability to contribute knowledge to the drug development process. He hopes to help revolutionize the way drugs are developed so that they meet the needs of patients more quickly. Gary is also actively engaged in posting blogs at the team's lillycoi.com site and Tweeting @Lilly COI. In the Spring 2013 semester, Gary will also be teaching a course on pharmaceutical compound selection at Butler University as an adjunct faculty member.

Gary has found Indianapolis to be rich with social activities and a great place to raise a family. He currently lives on the outskirts of Indianapolis, where communities are surrounded by cornfields, reminding him of the rich agricultural environment of the Sacramento Valley and his upbringing on his family-owned farm. He credits his achievements to his faith, support of his loving family, his wife Sureena and son Saaven.

STAFF SPOTLIGHT

Kimberly Reed

Kimberly is CNUCOP's first Director of Student Financial Aid. In this role, she continually collaborates with applicable University departments in an effort to develop and implement policies and procedures necessary for the University's upcoming participation in Federal Student Aid programs. In addition, Kimberly spearheads the University's commitment to bring a comprehensive array of educationally-related financial services to its students.

Kimberly began working with CNUCOP in August of 2011, and brought with her over 15 years of experience in the

financial aid industry. Her financial aid skills were honed by actively participating in financial aid roles and activities at two proprietary schools in the Sacramento area; and most recently, by serving EdFund, California's former student loan guarantee agency. Kimberly's rich history of superior customer service and dedication to students will benefit CNUCOP as it continues on its current path of growth.

When Kimberly is not analyzing federal regulations, processing loans for CNUCOP's students, or counseling students on financial aid matters, she loves to spend time with her three young boys: Jack (8), Keegan (5), and Mikey (1). Her three sons are lively and inquisitive, keeping her busy chasing bugs for the family lizards, jumping on their 12' trampoline, reading books, playing Wii games, swimming, and any other activity they can talk her into doing.

With all the above going on, you might think Kimberly has very little time to herself; however, her passion for creating art pushes her to make time to draw, paint, write poetry, or follow other creative notions that develop. Kimberly says, "Often times my boys will find me hiding because I am trying to doodle or complete a crossword puzzle without interruption." The College certainly benefits in many ways from Kimberly's dedication, attention to detail, and creativity.





THE RESEARCH LABORATORY AT CNUCOP

Utilizing Modern Equipment to Find Contemporary Solutions to Age- Old Questions

By Indiran Pather, DPharm

CNUCOP's Research Center, located on Sanders Drive, fewer than 2 miles from the main campus in Rancho Cordova, consists of 2500 sq. ft. of lab space, and an office area of approximately the same size. This facility is used for different types of pharmacy-related research in which faculty and student volunteers are active.

A medicinal chemistry lab is used mainly to isolate crude extracts from plants. These extracts can be tested using cell cultures as described below. Extracts showing a desirable effect can be further purified to isolate individual compounds that have a medicinal effect. Extracts also can be incorporated into pharmaceutical formulations. For example, a novel sunscreen has been developed and a patent application has been submitted. A variety of analytical techniques, including high pressure liquid chromatography and thin layer chromatography, are used to test the potency of extracts.

A cell culture lab houses an incubator, extreme freezer, aseptic hood, video microscope and ancillary equipment to grow and study cancer cells. Cancer cells have the ability to continue dividing

and growing forever, whereas normal cells die after a time. The ability of various drugs and plant extracts to attenuate this growth can be studied using cell culture of cancer cells. A plate reader is used to study chemical reactions in multiple biological samples simultaneously. A newly-acquired research lab imager takes pictures of DNA gels, Western blots etc. to determine the amount of DNA and proteins in tissue samples. This can be used, for example, to determine over- or under-production of specific proteins in disease states, thus allowing for easier detection and treatment.

A patch clamp with related electronics, microscope, and video equipment is used to study reactions of individual nerve cells to various stimuli, including drugs. Stem cells from an embryo have the capacity to develop into any type of cell in the body. In the lab, these cells can be "encouraged" to develop

into nerve cells by modifying the conditions under which they grow. This very complex process is of interest to CNUCOP faculty researchers who aim to demonstrate that the cultured nerve cells are fully functional. Nerve cells developed in this way might eventually be implanted into patients with disorders of the nervous system, such as Parkinson's disease.

The pharmaceuticals lab has a set of Franz diffusion cells to study drug

permeation through biological membranes like linings of the mouth and skin. Using this equipment with the lining of the mouth from pigs, our faculty can predict which drugs will be absorbed

by this biological membrane in humans and can compare the rates of permeation of a series of new drugs. This lab also has equipment to test how much drug is in a tablet or



Continued on page 15

Clinical and Economic Outcomes of a Prospective Antimicrobial Stewardship Program

By Michael Nowak, PharmD, BCPS

A study on the use of a systematic mechanism to curb nosocomial (hospital-acquired) infections was published by Dr. Michael Nowak, assistant professor of clinical and administrative sciences, in the September issue of



the *American Journal of Health-Systems Pharmacy (AJHP)*. The article, "Clinical and Economic Outcomes of a Prospective Antimicrobial Stewardship Program," will be seen by many, as *AJHP* has a circulation of nearly 40,000 and is one of the most widely recognized and respected clinical pharmacy journals worldwide.

Antimicrobial resistance threatens all aspects of healthcare, and unfortunately this burden has been coupled with a severe deficiency in effective medications reaching the market. The study by Dr. Nowak and his group adds to the accumulating

evidence which suggests patients can often be treated with shorter, more focused treatments without compromising morbidity and mortality.

In the study, rates of nosocomial infections significantly declined after the implementation of a pharmacist and physician collaboration designed to combat antimicrobial resistance. Likewise, it shows that healthcare systems can considerably reduce their costs at the same time. This is commensurate with the *Get Smart for Healthcare* campaign launched by the Centers for Disease Control and Prevention (CDC) in Atlanta, GA. According to the CDC, antimicrobial stewardship interventions have been proven to improve individual patient outcomes, reduce the overall burden of antibiotic resistance, and save healthcare dollars. They further contend that implementation of an antimicrobial stewardship program in a healthcare facility will help ensure that hospitalized patients receive the right antibiotic, at the right dose, at the right time, and for the right duration. Dr. Nowak's work complements that of widely renowned epidemiologists throughout the nation and further evidences the work that our faculty are undertaking to try and improve the medication therapy-related outcomes of our citizenry.

The Research Laboratory at CNUCOP

Continued from page 14

capsule and to test how fast the drug will be released from the dosage form. A microfluidizer converts emulsions into nano-emulsions, and a nano-sizer is used to determine the size of the emulsion droplets. Very small droplets (a human hair is about 500 times thicker) often penetrate tissues better, and this is a way to deliver drugs that may not be well absorbed by other means. A recent acquisition is a machine to seal liquids into 2-piece hard gelatin capsules. Filled capsules and other dosage forms can be placed into a stability chamber, which is,

basically, an oven that accurately maintains an elevated temperature and humidity. Products stored in this way are subjected to harsher conditions than products in normal use. Depending on how long the medicine survives this treatment, our researchers can make predictions about how long it will be stable in regular use by patients.

A section of the lab is set aside for student use. First-year students are accommodated in three sessions (about 35 students at a time) for basic

instruction in compounding and for pharmaceuticals experiments. Some instructors also have taken students for Introductory Pharmacy Practice Experience rotations, and a few students have completed Advanced Pharmacy Practice Experience rotations in the lab.



In the Treatment and/or Prevention of Neurological Disorders

By Leanne Coyne, PhD, and Parto Khansari, PhD

IN JULY 2011, Dr. Parto Khansari was invited to be the guest editor of a special edition of the *Journal of Inflammapharmacology*. This special edition was to focus on the role of inflammation in acute and chronic neurological and psychological diseases. This special issue showcased articles that reviewed the mechanism of inflammation and potential treatment including novel approaches in acute neurological diseases (e.g. stroke and traumatic brain injury), chronic neurological diseases (e.g. Alzheimer disease, Parkinson disease, Multiple Sclerosis, Epilepsy) and psychiatric diseases (e.g. depression, anxiety, schizophrenia). One of the review articles was authored by Dr. Parto Khansari and Dr. Leanne Coyne, entitled “NSAIDs in the Treatment and/or Prevention of Neurological Disorders.”

This paper reviewed the actions of non-steroidal anti-inflammatory drugs (NSAIDs) on signaling molecules, receptors and ion channels and discussed the potential benefits of NSAIDs in the management of stroke, amyotrophic lateral sclerosis, Alzheimer’s disease and Parkinson’s disease. NSAIDs have been used extensively in the treatment of inflammatory disorders and pain, but emerging data suggests that there are additional pharmacological properties to their well-established cyclooxygenase inhibition. Despite promising experimental data, most or all clinical trials of NSAIDs in these neurological diseases are essentially negative, even when epidemiological studies suggest there may be a benefit. This failure in clinical outcomes may arise from various factors such as inappropriate treatment strategies, inadequate management of neuroinflammation, and/or unsuitable trial duration and onset of treatment. Nevertheless, the long-established anti-inflammatory effect of NSAIDs combined with their emerging diverse pharmacological activity warrants further clinical investigation. In fact, thanks to research on the pharmacological effects of NSAIDs, a new generation of potential drugs for Alzheimer’s disease treatment is currently being investigated, highlighting the importance of looking beyond the clinical trials.



Leanne Coyne, PhD



Parto Khansari, PhD

FACULTY SPOTLIGHT

Michael J. Negrete, PharmD

Michael Negrete, PharmD, possesses more than 10 years of experience working with patients, providers, payers and policymakers on the development and implementation of novel programs to improve community health through strategies that leverage what he believes are the pharmacy profession's two greatest strengths: the pharmacist's unique medication-related expertise, and the community pharmacy's unparalleled access to patients.

Dr. Negrete currently applies this expertise in a variety of roles including as the Chief Pharmacy Officer of Aprexis Health Solutions, as the Vice President of Clinical Programs of the California Pharmacists Association, and as an Adjunct Professor of California Northstate University College of Pharmacy, where he teaches the course on *Pharmacy and the Healthcare System*.

Dr. Negrete is also a recognized author, speaker and expert in the field of safe and effective medication use. He routinely writes articles for the *California Pharmacist* and has been published in various national pharmacy and health marketing journals. Dr. Negrete has been quoted in numerous newspapers including USA Today, the New York Times and the LA Times; and has appeared on many television newscasts and shows including CBS's *The Doctors*.

From 2007-2011, Dr. Negrete served as the Chief Executive Officer of the Pharmacy Foundation of California (PFC), a 501(c)(3) public-benefit corporation focused on improving and promoting public health through the performance of pharmacy-related education, research and information dissemination. Prior to his employment with PFC, Dr. Negrete served as the Chief Executive Officer of Premier Pharmacists Networks (PPN). PPN was established in 2004 by the California Pharmacists Association to create, manage, support and market networks of pharmacists and pharmacies that provide specialized medication therapy management services.

In 2001, Dr. Negrete completed a specialty residency in Managed Care Pharmacy Systems which he helped establish at Blue Shield of California. In 2000, Dr. Negrete completed a first-year residency in Primary Care Pharmacy Practice at the VA Northern California Health Care System where he worked in a variety of pharmacist-run disease management clinics.

Dr. Negrete earned his Doctor of Pharmacy degree from the University of California at San Francisco (UCSF) and his Bachelor of Science degree in biology from the Massachusetts Institute of Technology (MIT).

Dr. Negrete was raised near Fresno, California and currently lives in Natomas with his wife Beth and daughters Keira (6) and Corinne (3). In his scarcely existent free time he enjoys world travel, nature travel, and photography.



PGY-I Residency Training Program

By Grant D. Lackey, PharmD, CSPI, FASCP, FCSHP

Upon completion of a Doctor of Pharmacy degree, graduates can pursue further training with either a clinical focused residency, or a research focused fellowship.

Residency training is divided into two postgraduate years. Postgraduate year one (PGY-1) offers more generalized training, providing residents exposure to a broad range of clinical scenarios. Postgraduate year two (PGY-2) emphasizes a specific area of interest, such as Ambulatory Care, Cardiology, Critical Care, Drug Information, Emergency Medicine, Geriatrics, or Infectious Disease and helps lead to specialization in that field. After residency training, many practitioners choose to further distinguish themselves through board certification.



CNUCOP long had a desire to establish a PGY-1 residency program, as part of its Mission. Through the vision of President Cheung and the diligent work of many faculty and staff at CNUCOP, as well as pharmacists and administrators within the Sutter Healthcare Sacramento Sierra Region hospitals, the California Northstate University College of Pharmacy / Sutter Healthcare Sacramento Sierra Region (CNUCOP/SHSSR) PGY-1 Residency Program accepted its first residents in July 2011.

The goals of CNUCOP/SHSSR's program are to provide a preparatory foundation of academic teaching, to advance the clinical skills of the resident in a variety of practice settings, and to enhance the resident's knowledge of pharmacy managed care systems, including designing and implementation of both pharmaceutical care and pharmacy management programs. Inherent is the aim to train residents to become leaders committed to providing quality pharmaceutical education and quality pharmaceutical care to the public, all while advancing the profession of pharmacy.

The College's first residency year saw the selection of two very qualified candidates, Shadi Doroudgar, PharmD, and Mario Listiawan, PharmD. They both successfully completed their residency requirements and were awarded teaching certificates for their accomplishments as budding pharmacy educators. Dr. Doroudgar obtained a PGY-2 specialty residency in Psychiatry at St Helena Behavioral Hospital with Touro University. Dr. Listiawan obtained a PGY-2 specialty residency in Oncology with Kaiser Inland Empire.

The staff, faculty, and administration at both CNUCOP and Sutter Healthcare Sacramento Sierra Region hospitals are working diligently to achieve American Society of Health System Pharmacists (ASHP) accreditation, sometime after the site team visit in Fall 2012.

In 2012, CNUCOP again struck gold with its selection of two outstanding pharmacists, Tan Sopon, PharmD, and Simon Pence, PharmD, into the residency program. Dr. Pence has initiated his residency research project on the clinical treatment of ethylene glycol (antifreeze) exposures. Dr. Sopon is completing his research project on the use of the newer diagnostic criteria for acute kidney injury to identify nephrotoxicity.

During a residency program, pharmacists are able to develop skills and competence in providing care to a variety of patients in various settings. A residency can accelerate one's personal and professional growth well beyond entry-level experiences. As trends in health systems have become increasingly competitive, residency training can give a strong advantage in the job market. Further, most organizations require residency training for clinical positions. In addition, many networking opportunities are available. Most importantly, completing a residency allows the resident an ability to better define their career goals for a long and satisfying pharmacy career. By being involved with a variety of practice areas, residents can gain a better perspective on which area of pharmaceutical care best fits their personal needs.

Resident Spotlight: Simon Pence

Dr. Simon Pence grew up in a small town in northern Utah working on farms and playing soccer. He attended Brigham Young University in Provo, where he received a B.S. degree in exercise science and a minor in chemistry. He met and married his wife while at BYU. He then moved to Columbus, Ohio where he attended The Ohio State University College of Pharmacy. While in Ohio his two daughters were born. Simon was very involved in school, serving on the APhA-ASP executive committee as well as chairing the Prescription for a Smile project, a therapeutic clowning group which uses humor as a way to connect with and uplift patients. He was a member of multiple pharmacy organizations and graduated from pharmacy school Summa Cum Laude. He also was the recipient of the Merck Award, which recognizes graduating pharmacy students who have demonstrated outstanding scholastic achievement.

Dr. Pence is very excited about having a residency and plans to pursue a second year residency in Oncology. His interest in oncology comes after having great mentors demonstrate the impact pharmacists can have on patient care in the oncology setting. He also enjoys that oncology is a continually changing field with many new drugs being introduced on a regular basis. Dr. Pence is interested in a career in academia. He taught an organic chemistry lab during his undergraduate training, and has written several articles, one of which was published in The Ohio Pharmacist and another that is currently submitted to the Annals of Pharmacotherapy. When Dr. Pence is not immersed in his residency, you might find him camping with his family, playing the piano, mountain biking, or relaxing to a classic Dick Van Dyke show.



Resident Spotlight: Tanakorn Sapon

Dr. Tanakorn Sapon is one of the current PGY-1 pharmacy practice residents. He attended the University of California, Riverside, where he earned a Bachelor of Science degree in Biochemistry. He received a Doctor of Pharmacy degree magna cum laude from Midwestern University Chicago College of Pharmacy. He has a variety of interests in the practice of pharmacy, which include infectious diseases, critical care, internal medicine, cardiology, and academia. He is especially interested in infectious diseases and plans to complete a PGY-2 infectious diseases residency. He also plans to become board-certified in pharmacotherapy and is currently open to a variety of career choices. He chose to do a teaching-focused residency not only because academia is his passion, but also because he would like to make a difference by shaping the next generation of pharmacists.

The residency experience has been extremely rewarding to him, as he enjoys teaching students in the classroom setting as well as precepting students on advanced clinical rotations. So far, his favorite rotation is ambulatory care at the Sacramento County Clinic, where he makes a direct impact on patient care by managing patients with diabetes with other chronic conditions as well as educating patients about how to manage their conditions. He also looks forward to his upcoming infectious disease rotation.

In his free time, Dr. Sapon enjoys surfing and jet-skiing. He recently took surfing lessons in San Diego. He is excited to be in back in California and looks forward to surfing in Santa Cruz. He also enjoys snowboarding and is eager for the upcoming skiing season in Lake Tahoe.



FACULTY ACCOMPLISHMENTS

January 1, 2012 –
September 30, 2012

Grants/Contracts/ Patents

Hogg LD (PI), **Desselle SP** (Co-I), O'Neal (Co-I). Provider, Patient, and Caregiver Perspectives on Establishing a Cystic Fibrosis-Related Diabetes. \$1500 funded in full from Cystic Fibrosis Foundation.

Feng X. Combined administration of integrin receptor antagonists for anti-angiogenic therapy. Publication number: US 2011/0319335 A1.

Singh N, **Pather SI.** Methods of treating middle-of-the-night insomnia. U. S. Patent 8,242,131; issued August 14, 2012 (Orange book patent for product, Intermezzo®).

Vinall RL. American Association of Colleges of Pharmacy New Investigator Award. 'Combining Bcl-2 inhibition with MiRNA-34a Treatment To Improve Bladder Cancer Outcomes.' Awarded \$7,170 for supplies for 1 year, 2012-2013.

Books/Book Chapters

Desselle SP, Zgarrick DP, Alston GL. *Pharmacy Practice Management: Essentials for All Settings, 3rd Ed.* New York, NY: McGraw-Hill, 2012.

Desselle SP. The "management" in medication therapy management. In: Desselle SP, Zgarrick DP, Alston GL (eds). *Pharmacy Practice Management: Essentials for All Settings, 3rd Ed.* New York, NY: McGraw-Hill, 2012, pp. 3-17.

Desselle SP. Performance appraisal systems. In: Desselle SP, Zgarrick

DP, Alston GL (eds). *Pharmacy Practice Management: Essentials for All Settings, 3rd Ed.* New York, NY: McGraw-Hill, 2012, pp. 265-286.

Desselle SP. Treating mentoring programs as a scholarly endeavor. *Am J Pharm Educ* 2012;76:Article 102.

Desselle SP. (Co-editor). Remington: The Science and Practice of Pharmacy, 22nd ed, 2013; Pharmaceutical Press, Philadelphia, PA.

Palmieri J, Crockell YJ. Pharmacists and disease management. In: Remington--The Science and Practice of Pharmacy, 22nd ed. Philadelphia, PA: Pharmaceutical Press; 2012:2497-2504.

Feng X, et al. Pharmacogenomic biomarkers for toxicities associated with cancer therapy. *US Pharmacist.* (Hematology and Oncology suppl):2012;37:2-7.

Peer-Reviewed Publications

Bhutada NS, Menon AM, Deshpande AD and Perri III M. Impact of celebrity pitch in direct-to-consumer advertising of prescription drugs. *Health Marketing Quarterly*; 2012;29:35-48.

Desselle SP. Treating mentoring as a scholarly endeavor. *Am J Pharm Educ.* 2012;76:Article 108.

Holmes ER, **Desselle SP.** The use of speech disfluency as an indicant of paradigm development in pharmacy's academic subdisciplines. *Res Social Adm Pharm.* 2012;8:443-454.

Peirce GL, **Desselle SP,** Draugalis JR, Spies AR, Davis TS, Bolino M. Identifying psychological contract breaches to guide improvements in faculty recruitment, retention, and development. *Am J Pharm Educ* 2012;76:Article 108.

Keel RA, Crandon JL, Nicolau DP. Comparative efficacy of human simulated exposures of torezolid and linezolid against *Staphylococcus Aureus* in the murine thigh model. *Antimicrob Agents Chemother.* 2012;56:4403-4407.

Keel RA, Crandon JL, Nicolau DP. Pharmacokinetics and pulmonary disposition of torezolid and linezolid in three murine models. *Antimicrob Agents Chemother.* 2012;56:3420-3422.

Tessier PR, **Keel RA,** Hagihara M, Crandon JL, Nicolau DP. Comparative in vivo efficacy of epithelial lining fluid exposures of tedizolid, linezolid, and vancomycin for methicillin-resistant *Staphylococcus aureus* in a mouse pneumonia model. *Antimicrob Agents Chemother.* 2012; 56:2342-2346.

Housman ST, **Keel RA,** Crandon JL, Nicolau DP. Efficacy of human simulated exposures of ceftaroline against phenotypically diverse *Enterobacteriaceae* isolates. *Antimicrob Agents Chemother.* 2012;56:2576-2580.

Rich BS, **Keel R,** Pomp A, Dakin GF, Ho VP, Turbendian H, Afaneh C, Nicolau DP, Barie PS. Cefepime dosing in the morbidly obese patient population. *Obes Surg.* 2012;22:465-471.

Continued on page 21

Faculty Accomplishments

Continued from page 20

Bulik CC, Tessier PR, **Keel RA**, Sutherland CA, Nicolau DP. *In vivo* comparison of CXA-101 (FR264205) with and without tazobactam versus piperacillin-tazobactam using human simulated exposures against phenotypically diverse gram-negative organisms. *Antimicrob Agents Chemother*. 2012;56:544-549.

Khansari PS, Coyne L. NSAIDs in the treatment and/or prevention of neurological disorders. *Inflammopharmacology*. 2012;20:159-167.

Khansari PS, Sperlagh B. Inflammation in neurological and psychiatric diseases. *Inflammopharmacology*. 2012;20:103-107.

Lackey GD, Alsop JA, Marquardt K, **Inciardi J**, Albertson TE. Pregabalin: A 48-month review of acute pediatric ingestions < 6 years old, J Toxicol Clin Toxicol. 2011;49:542-548.

Nowak MA, Winner JS, Beilke MA. Prolonged oral antibiotic suppression in osteomyelitis and associated outcomes in a veterans' population. *J Health Sys Pharm Res*. 2012;1:Article 1.

Nowak MA, Nelson RE, Breidenbach JL, Thompson PA, Carson PJ. Clinical and economic outcomes of a prospective antimicrobial stewardship program. *Am J Health Syst Pharm*. 2012;69:1500-1508.

Senel S, Rathbone MJ, Cansız M, **Pather I**. Recent developments in buccal and sublingual delivery systems. *Expert Opinion on Drug Delivery*. 2012;9:615-628.

Vinall, RL., Chen J, Hubbard N, Sulaimon S, deVere White R, Borowsky A. Evidence for an alternate molecular progression in prostate cancer. *Disease Models & Mechanisms*. Epub ahead of print, PMID: 22563073.

Poster and Podium Presentations

Rollins BE, **Bhutada NS**. Use of celebrity endorsement in prescription pharmaceutical advertisements: Effect on consumer response when a brand name is not involved. American Pharmacists Association Annual Meeting & Exposition, New Orleans, LA, March 10, 2012.

Condren ME, **Desselle SP**. Community pharmacist behaviors regarding pediatric prescriptions. Pediatric Pharmacy Advocacy Group Annual Meeting. Houston, TX, April 20, 2012.

Desselle SP, Peirce GL, Butler S, Johnson JL, Lloyd A, Planas LG, Spies AR, Tohlen S, Truong T. An examination of pharmacy students' attitudes, perceived benefits, barriers, and knowledge about participation in research. American Association of College of Pharmacy Annual Meeting. Kissimmee, FL, July 14, 2012.

Desselle SP, Peirce GL, Truong T, Tohlen S, Spies AR, Planas LG, Lloyd A, Johnson JL, Butler S. A qualitative exploration of pharmacy students' participation in professional organizations. American Association of College of Pharmacy Annual Meeting. Kissimmee, FL, July 14, 2012.

Desselle SP. Primer on survey research: Design, implementation, and data analysis. California Northstate College of Pharmacy, California Northstate University, College of Pharmacy, Sacramento, CA, August 24, 2012.

Feng X. Incorporation of high fidelity simulation learning experiences within a didactic and experiential curriculum. American Association of College of Pharmacy Annual Conference, Kissimmee, FL, July 14, 2012.

Frausto S. Pharmacists' participation in an influenza immunization clinic targeting the Latino population, 1st National Immunization Conference Online, CDC, March 28, 2012.

Bhalodi AA, **Keel RA**, Quintiliani R, Lodise TP, Nicolau DP, Kuti JL. Comparative pharmacokinetics of doripenem in infected patients treated in- and outside the intensive care unit. 52nd Annual Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC), San Francisco, CA, September 10, 2012.

Keel RA, Crandon JL, Nicolau DP. Comparative efficacy of human simulated exposures of tedizolid and linezolid against *Staphylococcus Aureus* in the murine thigh infection model. 15th Annual International Congress of Infectious Diseases Conference, Bangkok, Thailand, June 14, 2012.

Matzen G. New laws in pharmacy. California Pharmacists Association, July 2012 and August 2012 in Oakland and Irvine, CA, respectively.

Continued on page 22

Faculty Accomplishments

Continued from page 21

Vinall RL, Z Ripoll A, Gandour-Edwards R, Durbin-Johnson B, deVere White R. MiRNA as biomarkers to predict de novo chemoresistance to neoadjuvant chemotherapy in patients with muscle invasive bladder cancer. American Association for Cancer Research Annual Meeting, McCormick Place in Chicago, IL, April 2, 2012.

Vinall RL. Combining Bcl-2 inhibition with MiRNA-34a treatment to improve bladder cancer outcomes. VA Northern California Health Care System (Mather), Sacramento, CA, July 6, 2012.

Vinall RL, Khansari P. NIH grant training workshop. California Northstate University College of Pharmacy, Sacramento, CA, April 2, 2012.

Woldemariam TZ. Identification, quantification and permeation studies of rosmarinic acid in plant extracts. Poster Presentation at the 53rd Annual Meeting of the American Society of Pharmacognosy, New York, NY, July 31, 2012.

Woldemariam TZ. Wageih H, Pearson D. Pharmacogenetics: Would it be a reason for the lack of potency and intrinsic toxicity of several natural medicines? Poster Presentation at the 2nd International Conference on Proteomics & Bioinformatics, Las Vegas, NV, July 2, 2012.

Awards, Certificates and Recognition

Bhutada N. Editorial board member for *Health Marketing Quarterly*.

Brunner L. Past-Chair, Pharmacokinetics, Pharmacodynamics, and Drug Metabolism Section, American Association of Pharmaceutical Scientists

Brunner L. Steering Committee, American Association of Pharmaceutical Scientists, Pharmacokinetics, Pharmacodynamics, and Drug Metabolism Section

Brunner L. Editorial Board Member: Team-Based Learning Consortium (Founding Member).

Desselle SP. Editorial Advisory Board of *Remington: The Science and Practice of Pharmacy*.

Desselle SP. Founding Editor of *Research in Social and Administrative Pharmacy* (RSAP).

Desselle SP. American Association of Colleges of Pharmacy (AACP) Board of Trustees.

Desselle SP. Selected as external reviewer for University of Manchester's scholarly work under Great Britain's periodic Research Excellence Framework of Universities.

Feng X. Named to the Advisory Board for *Specialty Pharma Journal*.

Frausto S. Past-President of Sacramento Valley Pharmacist's Association (SVPhA) 2012;

President of Sacramento Valley Pharmacist's Association (SVPhA) 2009-2011; Secretary of Sacramento Valley Pharmacist's Association (SVPhA) 2008.

Keel RA. Elected Class of 2013 Teacher of the Year, California Northstate University College of Pharmacy.

Khansari PS. Guest editor for special issue of *Immunopharmacology. Inflammation in acute and chronic neurological and psychiatric diseases*. 2012; Vol. 20.

Palmieri J. Completed the 2012 Chairs and Academic Administrators Management Program (CAAMP) held at the Emory Conference Center in Atlanta, GA. July 19-22, 2012.

Palmieri J. Selected by CSHP-Sacramento Valley to serve as delegate to the 2012 CSHP House of Delegates at CSHP Seminar, Las Vegas, NV. October 2012.

Palmieri J. Board of Directors of California Society of Health-System Pharmacists (CSHP) Sacramento Valley Chapter, 2012.

Porter-Fraser C. American Association of Colleges of Pharmacy (AACP) PharmCAS Advisory Board Member 2009 - 2012.

West-Lackey J. Elected to Secretary for California Society of Health-System Pharmacists (CSHP) Sacramento Valley Chapter, 2012.

STUDENT ACCOMPLISHMENTS

- ❖ P3 student Wendy Chaing, President of the Phi Delta Chi chapter, secured a \$200 grant to promote childhood obesity awareness through the Cabot's Healthy Living Matching Grants Program.
- ❖ Phi Delta Chi was awarded 5th place nationally for the Ralph Saroyan Brotherhood Report Award.
- ❖ P3 student Wendy Chaing was awarded the Pharmacy Leadership & Education Institute's Leadership Development Seminar Award of \$300.
- ❖ P4 students Archibong Yellow-Duke and Cindy Chen won the California Society of Health-System Pharmacists (CSHP) clinical skills competition and will represent CNUCOP at the CSHP seminar.
- ❖ The CSHP student chapter was recognized in 2012 for the chapter achieving the greatest growth.
- ❖ The CSHP student chapter received CSHP's Diversity Award.
- ❖ Student members of CSHP placed 3rd in the Clinical Skills Competition.
- ❖ P3 students Tami Truong and John Adricula led the effort for the CSHP student chapter to receive a Grassroots Advocate Recognition Award.
- ❖ P2 student Michael Chiou received sponsorship from CSHP member, Virginia White, to attend the CSHP Seminar.
- ❖ P3 Dan Pham received the Natural Standard Research Collaboration Award for perpetuating multidisciplinary, evidence-based research practices and healthcare communications.
- ❖ P2 student Rachael Anne Olsufka, President of the Clinical Pharmacy Club, and P4 student Josephine Quach won the 2012 Travel Award of American College of Clinical Pharmacy (ACCP) to attend its annual conference.
- ❖ The American Society of Health-System Pharmacists (ASHP) student chapter achieved official ASHP-SSHP (Student Societies of Health-Systems Pharmacy) recognition for 2012-13.
- ❖ P4 students Archibong Yellow-Duke and Cindy Chen won 2nd place in the national Student National Pharmaceutical Association (SNPhA) clinical skills competition.
- ❖ SNPhA team members P4 Payal Patel, P4 Mariana Ashamalla, and P4 Paul Gerges placed 4th nationally in the national SNPhA/Target Business Plan Competition.
- ❖ SNPhA team members P3 Lyna Ly and P3 Hang Nguyen placed 3rd overall in the SNPhA Patient Counseling Competition.
- ❖ The Vietnamese Cancer Awareness, Research and Education Society (VNCARES) student chapter received a grant of \$2500 from the National Center for Reducing Asian American Cancer Health Disparities (AANCART) to raise liver cancer awareness.
- ❖ The Diverse Women in Pharmacy student chapter received a Walgreen's Diversity Scholarship of \$2000.
- ❖ The CNUCOP student pharmacist chapter of the American Pharmacists Association (APhA) joined the Sacramento Heart Walk and raised \$1,062 for the American Heart Association.
- ❖ P3 student Kristin Do is serving on the National Student Pharmacist Committee on behalf of the Academy of Managed Care Pharmacy.

STUDENT SPOTLIGHT: PEJMAN AHMADI

CNUCOP's class of 2013 Pejman Ahmadi was recently elected National President-Elect of the Student National Pharmaceutical Association (SNPhA) at the 2012 National Conference in Atlanta, Georgia this past summer. With lots of encouragement and support from family, friends, faculty and Kappa Psi brothers, Pejman was able to attain his goal.

SNPhA is an educational service association of pharmacy students who are concerned about pharmacy and healthcare related issues, and the poor minority representation in pharmacy and other health-related professions.

"We need to get there. Let's build a bridge together." This is the motto Pejman used in his run for office at the 2011 National Conference. During his speech, Pejman stated that one of his goals for the year was to increase membership and the number of current chapters, which he accomplished with the help of the Executive Board by increasing the number of chapters from 68 to 77 in less than two years. Additionally, he wanted to create a leadership training program, which is now implemented with the Rite Aid/SNPhA Leadership Academy and with huge success.

Finally, one of his goals was to bridge the gap between the chapters and the national office. With the help of technology and revamping the website, he reached his final goal and is now in the process of accomplishing even bigger and better things during his 2012-2013 Presidency.



Pejman would like to find a career in student recruiting for a pharmacy company in the near future. He loves to travel and to meet new people. He loves to promote our program, as he presents himself and our College on a national level as the National President for SNPhA. He challenges any CNUCOP student to take some calculated risks and run for national office and to identify possibilities outside local, into regional and even national levels. There are so many more opportunities to network and meet great leaders outside of our College as well. If students are interested in stepping up and reaching new heights during their

academic careers, then Pejman recommends that they network with faculty and do not hesitate to contact him on how to take the next steps. We Need to Get There. Let's Build a Bridge Together.



With us, it's personal.



More independent pharmacies. More independence for you.

Join the *Good Neighbor Pharmacy*® Network today.

Being a pharmacist in the *Good Neighbor Pharmacy* network means great service, great opportunities and great rewards. You become part of the community, a knowledgeable and caring resource committed to your patients and helping those who live and work in your neighborhood.

You'll have the opportunity to develop lasting one-on-one customer relations, practice your own brand of patient care and be a part of the nation's largest network of independently owned and operated pharmacies.

With more than 3,500 locations nationwide, a career as a pharmacist with *Good Neighbor Pharmacy* can take you anywhere you want to go.

Contact us today at
GoodNeighborPharmacy.com for more details.



GoodNeighborPharmacy.com



*Congratulations
Class of 2012!*



VALLEY
RELIEF
PHARMACISTS, Inc.

Serving California Pharmacists since 1991

ValleyRelief.com

Why not practice
healthcare in a
whole new way?

Innovation. Opportunity. Community. **FULFILLED**

There's a way. Our expanded services – like Take Care Health, Walgreens Infusion and Respiratory Services and the clinics we manage – mean that everyone from physical therapists to registered dietitians and nurses can experience a whole new way of providing community healthcare. And here, you'll enjoy a supportive environment along with the ongoing professional training we provide.

To apply, visit www.walgreens.jobs

Walgreens is an Equal Opportunity Employer and welcomes individuals of diverse talent and backgrounds. Walgreens promotes and supports a smoke-free and drug-free workplace.

Walgreens

There's a way™



10811 International Dr., Rancho Cordova, CA 95670

(916) 631-8108 | www.calpharm.org