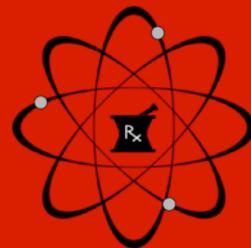


The Nuclear Monthly Missive



CAUTION:
RADIOACTIVIST
AREA



Brought to you by the
APhA-APPM Nuclear Pharmacy Practice SIG New Practitioners Committee

January 2014

The Educator



“How did you get to where you are today?” It’s a typical interview question. “I dropped out of college; it interfered with my social life too much.” Whoa, whoa, whoa. I was confused, so naturally, I did what anyone else in this situation would do: I

quickly checked my phone to ensure I had dialed the right number. It *was* the correct number, and it *was* Professor Kristina Wittstrom I was listening to on the other end. It just wasn’t the response I was expecting from someone who has been so instrumental to the profession of nuclear pharmacy.

She returned to school at UCLA, but when a drug-related error put her grandmother in a state of overdose, she discovered a new interest in the profession of pharmacy. Kristina enrolled in pharmacy school at the University of New Mexico, but it was in her second shift at a local retail pharmacy that she also learned that community pharmacy was not for her. Luckily, Norm Levit (former Radiopharmacy Program Director) had recently given a brief overview of nuclear pharmacy, and this short talk took her down an entirely new career path.

Professor Wittstrom finished her Bachelor of Science in Pharmacy in 1979, where she began her radiopharmacy career as the manager with Nuclear Pharmacy of California in Van Nuys. A large-scale pharmacy for its time, she produced over 30 curies on the first batch of the day, providing technetium-based isotopes for a 250-mile radius. “It was a fun time in the early ‘80s,” she tells me as she continues to describe how the hepatobiliary agents were all Investigational New Drugs (INDs), how their pharmacy was one of the first to radiolabel white blood cells, and how different research was “before the FDA changed the rules.” Dr. Wittstrom

also expresses the creativity that was required to be successful in those days. Her answer to any

“Radiopharmacists are very innovative; they come across unique problems and find creative solutions.”

physician’s question was, “Sure, we can do that!” Even when she had no clue where to begin, she tells me that she would eventually figure it out. She adds, “radiopharmacists are very innovative; they come across unique problems and find creative solutions.” In a time where “looking it up” didn’t mean performing a quick PubMed search or (gasp!) Googling it, she insisted upon finding answers. Kristina quickly reminds me that this was before the Internet, so “‘looking it up’ meant ‘get in the car, drive 45 minutes to UCLA, and pull



Connect with us on Facebook: APhA Nuclear Pharmacy New Practitioners

Suggestions for next month’s newsletter? Contact Ashley Mishoe at AshleyMishoe@me.com.

journals.” And I thought research was hard before I discovered the PubMed app for my iPhone.

In the early 1990s, as Cardiolite was coming to market and as Nuclear Pharmacy of California merged with Syncor International, a position became available that would allow Dr. Wittstrom to focus more on educating physicians and pharmacists on the newer agents. When the company wouldn't allow a pharmacy manager to take on the role of Clinical Cardiology Specialist, she and her staff pharmacist switched roles. “I knew this would be more fun,” she tells me as she happily gave up her title as manager and assumed her new position of providing in-service presentations and seminars to the cardiology community. When she wasn't educating the nuclear medicine community, Kristina was in the pharmacy validating an extended shelf life and maximum concentration for the Cardiolite kits. (Remember: the Package Insert only allows for a maximum of 150 mCi Tc-99m per vial, with a six-hour expiration.)

The more she was able to provide answers to colleagues and inquisitive minds, the more she realized her true calling as an educator. At the time, Syncor International had developed an Authorized User (AU) program, and Dr. Wittstrom moved from the lab to the corporate office where she coordinated

“The biggest reward comes from helping others grow and develop.”

and taught aspiring newbie nuclear pharmacists. Also while there, she continued fielding clinical questions from

pharmacists and physicians, using the National Library of Medicine's (NLM) software program, Grateful Med. Here's how it worked: you paid for a subscription, dedicated a phone line to their system, and were able to search NLM's database as you are today. Well kind of. The search only provided citations and abstracts, meaning you still had to physically acquire the journal and hope the abstract was everything you hoped it would be. Stacks on stacks on stacks of journals piled in her office, she describes the difference between searching for something then versus the ease of how it is done

today. Kristina tells me the story of her first day using the Internet. It's the day before Thanksgiving in 1993, the IT group has finally set up her computer, and she makes her way to the NLM's website. Click, click, click, and up pops a full-text article. She started



these clicks at 9 in the morning, and the next time she looked away from her computer, it was dark outside. *That's* how exciting this was. As in, 'kid in a candy store' doesn't even begin to describe it. Needing additional information on polyglycoprotein multi-drug resistance? She's your lifeline. And it's not that she *knew* all the information. She just knew how to find it and had a passion for spreading this knowledge to others.

Dr. Wittstrom continued investigating clinical issues, providing drug information, and coordinating Syncor's AU program until 2000, when an opportunity arose to move back to New Mexico and develop UNM's online curriculum. “I had no idea what I was doing . . . from an educational standpoint,” she tells me. She describes the challenges of online education and how different it is from the live classroom setting. In the classroom, you can see that a student is confused - or he or she can tell you what is confusing. Transforming the courses into an online curriculum wasn't just about putting a syllabus and presentations on a website; it was ensuring that the quality of the information could be translated into a self-guided format.

It was in the waiting room at her daughter's dentist appointment that she stumbled upon a brochure for the University's extension program, a program designed for adult education. Think: pottery making, Spanish, introductory computer courses. It also offered a few classes in instructional design, instructional technology, and other basic classes on

curriculum development. So she enrolled. Not challenged by these introductory classes, she sought a deeper knowledge of the art of education.

“Around that time, my daughter got her driver’s license, and I was free.” So she enrolled in the University’s Masters of Education program with an emphasis in distance education. And after finishing this, she furthered her studies with a PhD in Education, finishing in 2012.

Currently, Dr. Wittstrom sports multiple hats with the University of New Mexico. She is the Director of Curriculum for Professional Education for their Doctor of Pharmacy program, the Director of the Continuing Pharmacy Education (CPE) program, as well as a course lecturer. As the Director of the CPE program, Kristina ensures that the radiopharmacy courses continue to meet the needs of nuclear pharmacists across the nation and reflect some of the latest topics affecting the practice. Did you know that these online courses qualify an individual for BCNP recertification? It’s true. And let’s be honest, nobody wants to take that test twice!

Professor Wittstrom also manages the University’s online program, where she teaches nuclear pharmacy technicians, cardiologists, radiology oncologists, nuclear medicine residents, and nuclear pharmacists. This online program began as an Authorized Nuclear Pharmacist (ANP) program approximately twelve years ago. At the time, several other pharmacy schools also offered an ANP program, but this one had an advantage in that it required zero travel. Quite the perk for a pharmacist trying to make the professional switcheroo. Because of the high demand of multiple professions seeking the NRC’s Authorized User (AU) status, Dr. Wittstrom is able to customize the course load to meet the needs of an array of fields. Looking to become a nuclear pharmacy technician? No problem. Physician in Switzerland needing an emphasis on alpha emitters? Got you covered. Pharmacy student searching for an online introductory nuclear pharmacy course? Done and done!

Oh, and did I mention she also works in the nuclear

pharmacy at UNM? The radiopharmacy has a state RAM license, but doesn’t serve customers like a regional nuclear pharmacy would. Because it primarily specializes in IND preparations for the National Cancer Institute and other research companies, Kristina refers to this new addition as a boutique pharmacy.

Because of her dedication to students, it is not surprising when she tells me that her “biggest reward comes from helping others grow and develop.” Even while she was pursuing her own degrees, she found time to teach radiopharmacy courses, precept pharmacy students, and promote the profession on multiple levels. On a state level, Dr. Wittstrom serves on both the Pharmacy Practice Advisory Committee and chairs the Sterile Preparations Committee with the New Mexico State Board of Pharmacy. Kristina tells me that when she was preparing for UNM’s new radiopharmacy, she recognized that the state’s regulations on sterile compounding were in desperate need of an update. And when she contacted the Executive Director to tell him how outdated and in need of clarification these regulations were, he agreed, telling her, “we need to rewrite them; I’ll help you!” Not what she was expecting to be tasked with, but clearly the Director was confident in her capabilities. And, thus, was the beginning of her tenure as Chair of the new Sterile Preparations Committee.

On a national level, Kristina has been involved with APhA, American Association of Colleges of Pharmacy (AACCP), SNMMI, and the Board of Pharmaceutical Specialties (BPS). With APhA, not only has she served as a moderator for educational programming, but also she serves on various committees within the APhA-APPM Nuclear Pharmacy Practice SIG. She also was instrumental in developing the Guideline for Nuclear Pharmacy Technician Training, which was published in 2002.

“That’s one of the best things about nuclear -- you can make it anything you want it to be!”

With the BPS, she serves as an item writer for the Nuclear Pharmacy Specialty Certification, and she has hosted several item-writing workshops. Because of her outstanding commitment to the profession, she was honored as a Fellow of APhA in 2010, and she received the prestigious APhA-APPM William H. Briner Distinguished Achievement Award in Nuclear Pharmacy Practice in 2011. When asked about these recognitions, she describes how humbled she felt and how shocked she was when she heard the news. Dr. Wittstrom says her first response to the telephone call from APhA was “Are you sure you have the right number?” APhA was sure, and she was a very deserving candidate.

The future of our profession is hopeful, according to Dr. Wittstrom. She foresees more targeted receptor imaging, but likely different than what we see now. As an educator, herself, she believes that as new targeted therapies evolve and as more complex imaging is created, that radiopharmacists will become more involved in educating the healthcare team in patient preparation, patient-specific dosing, and counseling. Will the days of “I need to order three bone scans for tomorrow” be gone? Possibly. But this is only the beginning of us. . . yes, us. . . becoming more engaged in patient care and being recognized as healthcare providers. More sophisticated agents and more involvement with patients and physicians? Sign me up!

As a recent PhD graduate, she finally has time to catch back up on her personal life. Gardening, reading, and needlepoint are some of her favorite pastimes. Needlepoint is a hobby she has carried with her from childhood and is something she still enjoys today. Another stress reliever? Baking. It’s not hard for her coworkers to figure out when she’s

having a bad day, or even worse, a bad week. The following day, she will waltz into work boasting brownies, a cake, or some other Kristina Koncoction.



Although she freely admits that she is a homebody by nature, Professor Wittstrom encourages students and new practitioners to explore the world around them. She adds, “don’t be afraid to try something new.” Because the outcomes of this are usually two-fold: 1) you might learn something, and 2) your newfound knowledge might take you down a path you hadn’t planned. Get involved, and be willing to participate on any level. Her participation has never been lacking, and her willingness to serve the nuclear pharmacy community has ultimately led to a successful career. When reflecting on the winding path throughout her career, I can hear the excitement in her voice as she reminds me, “that’s one of the best things about nuclear -- you can make it anything you want it to be!”

Until next time,

Ashley Mishoe

