



HYESOO CHAE

Doctor of Pharmacy, Purdue University (2020); Master of Business Administration, Oregon State University (2022)

What have you been doing since the publication of your article in JPUR, volume 7?

After the publication of my article, I continued to stay involved in research—transitioning from basic to clinical and epidemiological research. With my interest in research and further didactic learning, I graduated from Purdue University with my doctor of pharmacy degree in 2020 and pursued a two-year health system pharmacy administration and leadership residency/MBA program with Providence/Oregon State University. I was able to not only further my clinical skills, but also to build on my business acumen. I will be starting as the system-wide pharmacy perioperative services manager at UCSF Health after the completion of my residency.

What are your career goals?

I have considered my commitment to increasing health care affordability and access to be my North Star. My hope is, in my career, to continuously grow as a problem solver, stay hungry for solutions to the complexity of our health care system, and be a positive influence on our patients and community. With these hopes and commitment, I hope to be able to play a part in our solution and lead a team to advance health care.

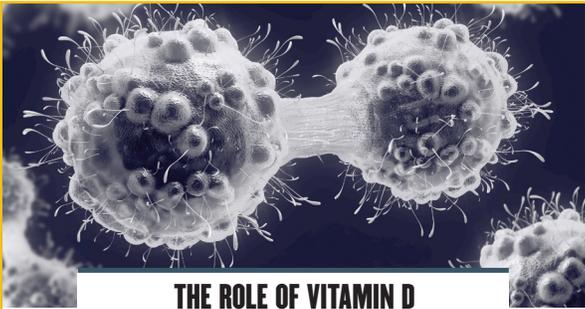
How did the research you did as an undergraduate at Purdue impact your current endeavors? What is the value of undergraduate research?

There is tremendous value in undergraduate research in terms of the guidance it provides in critical thinking, verbal and written communication, cross-cultural and cross-disciplinary collaboration, and independence. The hard and soft skills that you gain from completing the research process are transferrable beyond the research setting. The skills and perspectives I gained from undergraduate research have influenced my current endeavors in continuing to pursue research and collaborate with other researchers to apply innovative practices and methods, furthering positive advancements for society.

How did the faculty mentor relationship impact you during your time at Purdue?

I would argue that the opportunity to build relationships with incredible faculty mentors is one of the best aspects of being a student at Purdue. My faculty mentors have guided me through my highs and lows of professional and personal growth during my time at Purdue and beyond. Dr. Dorothy Teegarden, my research advisor, and Dr. Tomasz Wilmanski, my research mentor,

have both been integral to my growth as a critical thinker, scientist, and communicator. The wonderful professors from the Honors College—Dr. Megha Anwer, Dr. Natasha Duncan, and Dr. Anish Vanaik—have all encouraged me to question, explore, and be confident in the skills and identities every individual brings to our society. Professor Adam Bodony taught me the ways I can combine my passion for the arts in various aspects of my life. Last but certainly not least, Dr. Steve Abel has continued to teach me how to always find joy



THE ROLE OF VITAMIN D IN BREAST CANCER:
Investigating Potential Inhibition Through Matrix Metalloproteinase 2

Student Author

Hyesoo Chae is a professional student in the Purdue University College of Pharmacy. In the summer of 2015, she joined Dr. Dorothy Teegarden's laboratory through the Cancer Prevention Internship Program and has continued as a recipient of Purdue's Center for Cancer Research grant. She has worked as an intern at IU Health studying the clinical effect of vitamin K and warfarin on prothrombin time/international normalized ratio. Chae wishes to continue her studies in a clinical setting in both practice and research.

Mentors

Dorothy Teegarden is a professor in the Department of Nutrition Science, and she serves as the associate dean for Research and Graduate Programs for the college of Health and Human Sciences. Teegarden received her BS from Antioch College, PhD from University of Chicago, and completed postdoctoral studies in both biochemistry and nutrition science at Purdue. The major focus of her research is the effect of vitamin D in preventing breast cancer progression, from very

early stages of metastasis, in particular on regulation of energy and lipid metabolism. In addition, her laboratory investigates the mechanisms of how obesity impacts cancer development. Another research focus is the development of curricula to promote research skills in interdisciplinary research for both undergraduate and graduate students.

Tomasz Wilmanski obtained his BA degrees in psychology and philosophy from Tufts University, where he graduated with honors in 2011. After graduation, Wilmanski worked at the Block Medical Center for Integrative Cancer Treatment. During that time, he also obtained a post-baccalaureate certificate from Northwestern University. Wilmanski joined the Interdepartmental Nutrition Program at Purdue University in 2012, conducting research under the supervision of Dr. John Burgess and Dr. Dorothy Teegarden. Wilmanski graduated with a Doctor of Philosophy degree from Purdue University in August 2017.

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and inspiration. I am incredibly thankful for these faculty mentors, for without them, I would not be where I am today.

How did the experience of publishing an article in JPUR benefit you? What advice would you give to other undergraduates at Purdue who are interested in contributing to the journal?

Publishing in JPUR taught me all the steps that are needed to publish an article in a peer-reviewed journal in addition to providing a concrete benchmark in my growth. To undergraduate students at Purdue who are interested in contributing to the journal, I would encourage you to communicate with your research mentors and advisors about your interest and exploring how you want to display your research to the world.

What advice would you give to other undergraduates at Purdue who are interested in doing research?

What you may deem as failure, is not failure. I think it is inevitable that you will experience “failure” in research. But I have learned that every failure is accompanied by gained skills, perspectives, and questions that can further your research beyond the current state. Keep moving past your “failures” and you will be able to paint a picture that is more beautiful than you imagined at the start.

Chae, H. (2017). The role of vitamin D in breast cancer: Investigating potential inhibition through matrix metalloproteinase 2. *Journal of Purdue Undergraduate Research*, 7, 2–7. <https://doi.org/10.5703/1288284316391>