Peter Zhang, PharmD, MBA

Healthcare Strategy & Artificial Intelligence Hospital Pharmacist Board Director e. petercm.zhang@mail.utoronto.ca ln. peterczhang w. peterczhang.com

Education

```
2023 – Present | Doctor of Philosophy
Leslie Dan Faculty of Pharmacy, University of Toronto

2020 – 2022 | Master of Business Administration
Rotman School of Management, University of Toronto

2017 – 2021 | Doctor of Pharmacy with Honours
Leslie Dan Faculty of Pharmacy, University of Toronto

2013 – 2017 | Honours Bachelor of Science with High Distinction
Faculty of Arts & Science, University of Toronto
```

Professional Experience

```
2025 – Present | Senior Business Acceleration Partner & Value Delivery Lead 2023 – 2025 | Business Acceleration Partner

ODAIA

2023 – 2023 | Marketing Manager | Cardiovascular & Metabolism 2023 – 2023 | Marketing Associate | Cardiovascular & Metabolism 2022 – 2023 | Marketing Associate | Neuroscience 2021 – 2021 | Marketing Associate Intern | Dermatology

Johnson & Johnson Innovative Medicine

2021 – Present | Clinical Pharmacist 2018 – 2018 | System Technician Intern

Southlake Regional Health Centre

2020 – 2020 | Co-Founder

3DPPE GTHA
```

Publications

- 1. Ng, K.K.Y., Matsuba, I., & **Zhang, P.C**. (2024). RAG in health care: A novel framework for improving communication and decision-making by addressing LLM limitations. NEJM AI, 2(1). https://doi.org/10.1056/AIra2400380
- 2. **Zhang, P.C.**, Matinnia, C., & Austin, Z. (2024). To maximise impact, hospital pharmacists need to increase visibility. European Journal of Hospital Pharmacy, 31(3), 185-186. https://doi.org/10.1136/ejhpharm-2024-004137

- 3. Ng, K.K.Y., **Zhang, P.C.** (2023). Advancing medical affair capabilities and insight generation through machine learning techniques. Journal of Pharmaceutical Policy and Practice, 165(16). https://doi.org/10.1186/s40545-023-00670-w
- 4. **Zhang, P.C.**, Austin, Z. (2023). To succeed as health care innovators, pharmacists need to cultivate an entrepreneurial mindset. Canadian Pharmacists Journal / Revue Des Pharmaciens Du Canada, 156(3), 100-111. doi:10.1177/17151635231164622
- Ho, C., Zhang, P.C. (2022). Patient Safety from a Pharmacy Perspective. In: Encyclopedia of Evidence in Pharmaceutical Public Health and Health Services Research in Pharmacy. Springer, Cham. https://doi.org/10.1007/978-3-030-50247-8_72-1
- Daud, A., Hussein, I.M., Zhang, P.C., Ahmed, Y., Trac, J., Vujovic, N., Rizvi, S. F., & Kuzyk, P. R. (2021). 3D-Printed personal protective face shields during the covid-19 pandemic: A survey of Canadian frontline workers. Cureus. https://doi.org/10.7759/cureus.18141
- 7. **Zhang, P.C.** (2021). The future of pharmacy is intertwined with digital health innovation. Canadian Pharmacists Journal / Revue Des Pharmaciens Du Canada. https://doi.org/10.1177/17151635211044474
- 8. Bellatin, A., Hyder, A., Rao, S., **Zhang, P.C.**, & McGahan, A.M. (2021). Overcoming vaccine deployment challenges among the hardest to reach: Lessons from polio elimination in India. BMJ Global Health, 6(4), e005125. https://doi.org/10.1136/bmjgh-2021-005125
- 9. **Zhang, P.C.**, Ahmed, Y., Hussein, I.M. et al (2020). Optimization of community-led 3D printing for the production of protective face shields. 3D Print Med 6, 35. https://doi.org/10.1186/s41205-020-00089-y

Teaching Experience

Lecturer

2024 - Present University of Toronto PHM327 "Entrepreneurship"
2024 - Present University of Toronto BTC2030 "AI in the Pharmaceutical Industry"
2023 - Present University of Toronto PHM310 "Change Management"
2022 - Present University of Toronto PHM215 "Introduction to Financial Literacy"
2021 - Present University of Toronto HMB312 "Microbiology in the Clinical Setting"
2018 - 2023 University of Toronto NEW116 "Antimicrobial Stewardship"
2017 - 2023 University of Toronto NEW106 "Vaccinations and Autism"

Speaking Engagements & Guest Lectures

```
2024 | "The AI Revolution in Healthcare" | Pharmacy Changemakers at the University of Toronto 2024 | "COVID-19 Vaccine Update" | British Columbia Pharmacy Association 2024 | "3D Printing Face Shields" | CAPSI Professional Development Week 2024 | "Designing & Evaluating Impact" | The AFS Youth Assembly
```

Instructional & Leadership Roles

```
2021 – 2022 | Clinical Instructor
2018 – 2021 | Pharmacy Lab Teaching Assistant
```

2020 – 2020 | Scholarship of Teaching and Learning Research Assistant

Leslie Dan Faculty of Pharmacy

2021 – 2021 | Scholar | Managing Consumer Value

Rotman School of Management

2020 – 2020 | Lead Residence Don

2017 – 2020 | Residence Don

New College, University of Toronto

2016 – 2017 | Senior Peer Mentor

2014 – 2016 | Peer Mentor

First Year Learning Communities, University of Toronto

2016 – 2016 | General Planning Executive

2015 – 2015 | Director of Training & Scheduling

2014 – 2014 | Orientation Leader

New College Orientation, University of Toronto

2012 – 2017 | Program Instructor

City of Markham

Research Experience

2018 –2020 | **The Reach Alliance** | Researcher

Conducted a qualitative study in India on polio elimination in Uttar Pradesh and Bihar to understand the strategies deployed to overcome vaccine hesitancy.

2019 – 2020 | Leslie Dan Faculty of Pharmacy | Project Researcher

2018 – 2019 | Leslie Dan Faculty of Pharmacy | Lab Assistant

Investigated the role of JMJD6, RBM39 in alternative splicing pathways mediated by the glucocorticoid receptor and the ARGLU1 protein.

2017 – 2017 | **University of York** | Project Researcher

Conducted laboratory techniques such as cell staining, flow cytometry, and RNA extraction to investigate monocyte activation in the context of leishmaniasis.

2016 – 2017 | **Temerty Faculty of Medicine** | Undergraduate Researcher

Conducted laboratory techniques including qPCR, genotyping, ELISA, bone marrow harvesting, and RNA extraction to investigate dendritic cell differentiation in the context of Crohn's disease.

2014 – 2015 | Ontario Institute for Studies in Education | Undergraduate Researcher

Administrated psychometric tests to elementary school students to investigate language acquisition differences between bilingual and multilingual learners.

Media

Publications

1. Pitkis, A., Tami, P., Zhang, P. "The importance of health-system navigators". Healthy Debate. Published January 28, 2025.

- 2. Tian, J.L.H., Shafaqat, A., Yaseen, S. & Zhang, P. "5 Ways to Propel Inclusive Climate Action". **Mastercard**. Published September 17, 2024.
- 3. Seladurai, M & Zhang, P. "Cybersecurity attacks highlight the need for patients to keep their medication records accessible". **Healthy Debate**. Published September 15, 2024.
- 4. Tian, J.L.H., Shafaqat, A., Yaseen, S. & Zhang, P. "Climate Resilience at the Margins: Five Key Lessons from Last Mile Populations". **Global Policy Journal**. Published July 29, 2024.
- 5. Sivanthan, L., Pitkis, A. & Zhang, P. "British Columbia found the key to attracting more family doctors, Ontario should do the same". **Toronto Star**. Published May 5, 2024.
- Ng, K.K.Y. & Zhang, P. "AI Disruption is Coming. Are Healthcare Professionals Ready?". MedCity News. Published April 1, 2024.
- 7. Peters, C. & Zhang, P. "Governments should pay the high price of gene therapy". **Healthy Debate**. Published February 26, 2024.
- 8. Zhang, P. "Canadian pharmacists have an important role this RSV season". **Canadian Healthcare Network**. Published December 19, 2023.
- 9. Battey, J. & Zhang, P. "Prescribing community for mental health lessons from Australia". **Healthy Debate**. Published December 3, 2023
- 10. Shafaqat, A., Tan, D., & Zhang, P. "Canada must invest in global leadership programs within higher education institutions". **The Hill Times**. Published November 6, 2023
- 11. Verhage, S., Tian, J., & Zhang, P. "Untapped potential: Young leaders have the tools to help address health-care challenges". **Healthy Debate**. Published October 23, 2023
- 12. Younis, M., & Zhang, P. "Pharmacist prescribers fill important gaps in the Canadian healthcare system". **Healthy Debate**. Published September 24, 2023
- 13. Ahmed, A., Yang, D. & Zhang, P. "Naloxone kits in TTC stations a necessary tool to address overdoses". **Toronto Star**. Published August 5, 2023.
- 14. Philbert, N. & Zhang, P. "Free menstrual hygiene products are on the way, if you work at a bank, an airline or the public service". **Toronto Star**. Published June 4, 2023.
- 15. Mathew, L. & Zhang, P. "Preventative health care: Why privately funded programs are reluctant to fund it". **Toronto Star**. Published May 6, 2023.
- 16. Zhang, P. "Synthetic data may revolutionize clinical trials and save lives". **Healthy Debate**. Published April 3, 2023.
- 17. Zhang, P. & Daud, A. "Modernized home care can help stabilize health costs". **Globe and Mail**. Published March 22, 2023.
- 18. Pitkis A. & Zhang, P. "The benefits of giving include tax credits". **Toronto Star**. Published March 20, 2023.

- 19. Pandey, A. & Zhang, P. "Overcoming language barriers key to providing health-care". **Toronto Star**. Published March 5, 2023.
- 20. Zhang, P. "Ask a pharmacist before you split tablets for your children". **Toronto Star**. Published November 21, 2022.
- 21. Yang, J., Ahmed, A. & Zhang, P. "Internet-based mental health care deserves a boost". **Ottawa Citizen**. Published November 21, 2022.
- 22. Yang, J., Ahmed, A. & Zhang, P. "Vaccine hesitancy is reviving long dead diseases". **Healthy Debate & National Post**. Published September 12, 2022.
- 23. Zhang, P. & Tadrous, M. "How pharmacist prescribing can alleviate health-care system pressures". **Policy Options**. Published May 31, 2022.
- 24. Daud, A. & Zhang, P. "Elon Musk, social media giants, must prioritize mental health and well-being". **Toronto Star**. Published May 2, 2022.
- 25. Zhang, P. "Bleeding disorders in women need more attention". **The Hamilton Spectator**. Published February 8, 2022.
- 26. Zhang, P. "Despite a place on pharmacy shelves, homeopathy has no role in patient care". **Toronto Star**. Published December 31, 2021.
- 27. Ahmed, A. & Zhang, P. "The dangers of antimicrobial drug resistance must not be ignored". **Healthy Debate & National Post**. Published November 15, 2021.
- 28. Ahmed, A. & Zhang, P. "As election day looms, voters have the chance to be heard on the federal funding of health care". **Toronto Star**. Published September 10, 2021.
- 29. Garland, M., Ahmed, A. & Zhang, P. "Communication must become an essential component of the science education curriculum". **Healthy Debate**. Published August 18, 2021.
- 30. Ahmed, A. & Zhang, P. "To move beyond the pandemic, Canada needs to look globally". **The Hill Times**. Published July 29, 2021.
- 31. Yao, A., Zhang, P. & Ho, C. "When COVID-19 meets allergy season". **Hospital News**. Published May 27, 2021
- 32. Zhang, P. & Daud, A. "Rigorous scrutiny of COVID-19 vaccines should bolster, nor erode, confidence in immunization safety". **Toronto Star**. Published May 3, 2021
- 33. Tang, J. & Zhang, P. "Should more of our foods be fortified with vitamin D". **The Hamilton Spectator**. Published April 19, 2021.
- 34. Ahmed, Y., Daud, A. & Zhang, P. "COVID-19 and insomnia: Pills are not the answer". **Healthy Debate**. Published April 16, 2021.
- 35. Zhang, P. "Prioritize one-shot COVID-19 vaccines for the hard to reach". **Toronto Star**. Published April 7, 2021.

- 36. Zhang, P. & Hu, M. "Mobilizing pharmacists is key to immunization success". **The Hamilton Spectator**. Published March 5, 2021.
- 37. Zhang, P. & Ahmed, Y. "Cyberchondria: An unexpected side effect of digitizing medical information". **Toronto Star**. Published February 16, 2021.
- 38. Bala, S. & Zhang, P. "To win against COVID-19, we must put vaccine hesitancy behind us". **Ottawa Citizen**. Published January 4, 2021.
- 39. Daud, A. & Zhang, P. "Although alarming, mutated strains of COVID-19 are not a cause for panic". **Toronto Star**. Published January 3, 2021.
- 40. Zhang, P., Chan, C. & Ho, C. "Antimicrobial Stewardship in the face of COVID-19". **Hospital News**. Published October 28, 2020.
- 41. Zhang, P. "Naloxone needs to be in hands of as many people as possible". **The Windsor Star**. Published October 4, 2020.
- 42. Zhang, P. & Daud, A. "As pandemic forces change, it's a good time for Canadians to quit smoking". **Toronto Star**. Published September 9, 2020.
- 43. Zhang, P. "It's time to normalize suicide prevention training at the workplace". **Toronto Star**. Published August 27, 2020.
- 44. Zhang, P., Teo, V. & Khosravani, H. "When COVID-19 meets flu season". **Toronto Star**. Published July 14, 2020.

Interviews & Podcasts

- 1. Canadian Federation of Medical Students. "Collaborative Care: A Pharmacist's Insights on Research and Medicine with Peter Zhang." Published December 6, 2024.
- 2. Leslie Dan Faculty of Pharmacy, University of Toronto. "Why choose a PharmD-MBA at the Leslie Dan Faculty of Pharmacy?" Published September 24, 2021.

Awards & Recognition

Scholarships

- 2024 | Emerging Leader in Pharmacy Practice Award | Leslie Dan Faculty of Pharmacy
- 2021 | Rotman Scholar Award | Rotman School of Management
- 2021 | Student Engagement Award | University of Toronto
- 2021 | Joan E. Foley Quality of Student Experience Award | University of Toronto
- 2020 | Guy Genest Passion for Pharmacy Award | CAPSI
- 2020 | Future of Pharmacy Excellence Award | CAPSI
- 2020 | Frank Kwiecien Memorial Scholarship | Leslie Dan Faculty of Pharmacy
- 2020 | James D. Fleck Entrance Award | Rotman School of Management
- 2020 | COVID-19 Student Engagement Award | University of Toronto
- 2020 | CSHP External Affairs Student Writing Award | Undergraduate Pharmacy Society
- 2017 | New College Student Council Leadership Award | New College
- 2017 | Health Plus Pharmacy Award | Mackenzie Health Volunteer Association

- 2017 | Terry Buckland Memorial Award | University of Toronto
- 2017 | Gordon Cressy Student Leadership Award | University of Toronto
- 2017 | Queen Elizabeth II Diamond Jubilee Scholarship | Trinity College
- 2016 | New College Council In-Course Scholarship | New College
- 2016 | Ruth Reiffenstein Memorial Scholarship | New College
- 2016 | New College 50th Anniversary Award | New College

Recognition

- 2023 | Youth Assembly Delegate | AFS Intercultural Programs
- 2022 | 100 Best & Brightest MBAs: Class of 2022 | Poets & Quants
- 2020 | 3DPPE GTHA Printing Milestone of 20,000 Face Shields | Ontario Minister of Health

Community & Service

2022 - Present | Board of Directors

2021 - 2022 | Board Fellow

Hemophilia Ontario

2021 - 2022 | Columnist

Poets & Quants

2019 – 2020 | Membership Committee

2018 – 2019 | Communications Committee

Canadian Society of Hospital Pharmacists

2018 – 2019 | Webmaster

Undergraduate Pharmacy Society

2018 – 2019 | Curriculum and Assessment Committee

Leslie Dan Faculty of Pharmacy

2015 – 2016 | Board of Directors

University of Toronto Students' Union

2017 – 2018 | Speaker

2016 – 2017 | Graduating Year Representative

2015 – 2016 | Social Director

New College Student Council

2010 – 2017 | Information Desk Volunteer Supervisor

2015 – 2015 | Emergency Department Volunteer

Mackenzie Health Richmond Hill Hospital