

# Noushin Nabavi, PhD

ECONOMIST, BC MINISTRY OF HEALTH

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## Education

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Degree: **Bachelor of Applied Science (B.Sc.), Cum Laude distinction**

Field Of Study: Cellular and Molecular Biology

University of Toronto (2001 – 2005)

Degree: **Doctor of Philosophy (Ph.D.)**

Field Of Study: Cell and Systems Biology

University of Toronto (2006 – 2012)

Thesis: Mobilization of Procollagen and Lysosomes during Osteoblast Stimulation with Ascorbic Acid, UofT library, 2012.

### Certifications:

- Data Analytics using R, Data Camp and Coursera, Online, 2018-2021
- Project Management and Agile Transformation, Mitacs Inc., University of British Columbia, 2017-2019
- Teaching best practices, Yale Centre for Integration of Teaching and Learning, 2018
- Certificate Program in Advanced Teaching and Learning at University of British Columbia, 2018 - Business Administration for Academics, mini-MBA, University of British Columbia, 2018

## Professional Experiences

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1: **Economist** at Pharmaceutical Analytics Unit, Health System Information and Reporting

BC Ministry of Health, Victoria, BC, Canada, December 2020 - Present

- \* Develop product listing agreement rebates using SQL and R programming;
- \* Generate budget impact analysis for PharmaCare drug listings

2: **Canadian Mitacs Science Policy Fellow** at Research Branch, Partnership and Innovation Division

BC Ministry of Health, Victoria, BC, Canada, September 2019 - November 2020

- \* Link health administrative data to replicate and extend surgical quality outcome reporting;
- \* Enable program and policy evaluations through developing administrative data analytic workflows

3: **Canadian Mitacs Science Policy Fellow** at Digital Platforms and Data Division

BC Ministry of Citizens' Services, Victoria, BC, Canada, September 2018 - September 2019

Analyze and communicate complex administrative integrated data for evidence based policy making;

- \* Build and strengthen effective stakeholder relationships with ministry clients and contractors;
- \* Manage a data science project while developing and implementing timely methodologies and performance metrics

4: **Senior Research Fellow** at Department of Experimental Medicine and Urologic Sciences

University of British Columbia, Vancouver, BC, Canada, February 2015 - February 2018

- \* Assemble and lead an international consortium of scientists for a genomics project, published 5 manuscripts and presented the results in 3 international conferences and 2 local symposia
- \* Analyze and integrate genomics, transcriptomics, and proteomics datasets using R and proprietary softwares
- \* Wrote and secured a \$275K operating grant from BC Cancer Foundation for next generation sequencing tumor profiling of malignant peritoneal mesothelioma

5: **Postdoctoral Fellow** at Department of Cellular and Molecular Pharmacology

University of California, San Francisco, San Francisco, CA, USA, August 2013 - December 2014

- \* Design research project and conduct experiments related to liver disease with an expert team of scientists;
- \* Analyze experimental data and integrate results to generate presentations and publications;
- \* Contribute to securing a \$427K NIH grant

6: **Siebel Stem Cell Fellow** at Department of Nutritional Sciences & Toxicology

University of California, Berkeley, Berkeley, CA, USA, January 2012 - July 2013

- \* Implement a reproducible scientific workflow for a project related to aging: designed and carried out experiments

with animal models for aging, analyzed results;

\* Manage a research project with graduate students and undergraduate students towards publication in a peer-review journal

**7: Teaching Assistant and Research Co-Supervisor**, Cell and Systems Biology University of Toronto, Toronto, ON, Canada, September 2005 - December 2011

\* Rank the top 10% among departmental teaching assistants for 500+ hours of instruction in introductory biology laboratory, cellular molecular biology, and microbiology;

\* Create and deliver departmental lectures to 500+ students with satisfactory responses from students;

\* Co-supervise 10 undergraduate thesis students on successful thesis projects maintaining 100% retention rate (8 students secured successful science jobs, 2 pursued graduate studies)

## Awards and recognitions

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1: Canadian Mitacs Science Policy Fellowship at UVic/BC Ministry of Health, Victoria, BC, 2019-2020

2: Finalist team for BC Premier's Award in Evidence-Based Design for Children and Youth Mental Health Integrated data project at BC Ministry of Citizens' Services, Victoria, BC, 2019

3: Third place for designing prosthetic hand tools at Health and Regenerative Medicine Hackathon (donation of award to Victoria Hand Project) at University of Victoria, Victoria, BC, 2019

4: People's choice leadership award for Victoria Code.Hack health hackathon at Island Health at Vancouver Island Hospital, Victoria, BC, 2019

5: Canadian Mitacs Science Policy Fellowship at UVic/BC Ministry of Citizens' Services, Victoria, BC 2018-2019

6: Travel award to participate and lead an analytics team for hackseq hackathon at University of British Columbia, Vancouver, BC, 2018-2019

7: Travel award to participate at UBC's career panel discussing role of postdocs in industry at University of British Columbia, Vancouver, BC, 2018

8: Health and Regenerative Medicine Hackathon in kind value in mentorship award at University of Victoria, Victoria, BC, 2018

9: Honorable mention for Brief Policy Pitch for Indigenous reconciliation at Institute of Public Administration, Victoria, BC, 2018

10: Certificate of distinction for completing Summer Institute for Evidence-Based STEM Teaching from The CIRTL Network, on-line, 2018

11: Entrepreneurship@UBC venture building phase 1 at University of British Columbia, Vancouver, BC, March-May 2018

12: Mitacs Accelerate Postdoctoral Fellowship Award at University of British Columbia, Vancouver, BC, 2015-2018

13: Mini-MBA award, Partnership with Graduate Management Consulting Association at University of British Columbia, Vancouver, BC, 2018

14: Rare Genomics Institute's BeHEARD Technology Prize in partnership with Addgene at University of British Columbia, Vancouver, BC, 2017-2018

15: Travel award to attend the American Association of Cancer Research conference at Washington DC, USA, 2017

16: Amazon Web Services Cloud Research Grant at University of British Columbia, Vancouver, BC, 2016-2017

17: Science Teaching Fellowship for the American Society for Microbiology, on-line, 2014-2015

18: Siebel Stem Cell Postdoctoral Fellowship, University of California Berkeley, California, USA, 2012-2013

19: Graduate Student Research Award at University of Toronto, July 2010

20: Travel Award from 15th Canadian Connective Tissue Conference, Calgary, AB, July 2009

21: Natural Sciences and Engineering Research Council (NSERC)-CGS at University of Toronto, Toronto, ON, May 2009-2012

22: Ontario Textbook and Technology Grant at University of Toronto, Toronto, ON, December 2008

23: General Motors Women in Science and Mathematics Award at University of Toronto, Toronto, ON, April 2008

24: Travel Award from 14th Canadian Connective Tissue Conference at McGill University, Montreal, QC, June 5-7, 2008

25: Travel Award from the American Society for Cell Biology, 47th annual meeting, San Diego, CA, USA, December 2007

26: Queen Elizabeth II Aiming for the Top Tuition Scholarship at University of Toronto, Toronto, ON, September 2001

1. Mirzaei, S., Gholami, M. H., Mahabady, M. K., Nabavi, N., Zabolian, A., Banihashemi, S. M., Haddadi, A., Entezari, M., Hushmandi, K., Makvandi, P., & others. (2021). Pre-clinical investigation of STAT3 pathway in bladder cancer: Paving the way for clinical translation [na.character]. *Biomedicine & Pharmacotherapy*, 133(na.character), 111077.
2. Ashrafizaveh, S., Ashrafizadeh, M., Zarrabi, A., Husmandi, K., Zabolian, A., Shahinozzaman, M., Aref, A. R., Hamblin, M. R., Nabavi, N., Crea, F., & others. (2021). Long non-coding RNA in the doxorubicin resistance of cancer cells [na.character]. *Cancer Letters.na.character(na.character).na.character*.
3. Mirzaei, S., Mohammadi, A. T., Gholami, M. H., Hashemi, F., Zarrabi, A., Zabolian, A., Hushmandi, K., Makvandi, P., Samec, M., Liskova, A., & others. (2021). Nrf2 signaling pathway in cisplatin chemotherapy: Potential involvement in organ protection and chemoresistance [na.character]. *Pharmacological Research.na.character(na.character)*, 105575.
4. Mather, R. L., Parolia, A., Carson, S. E., Venalainen, E., Roig-Carles, D., Jaber, M., Chu, S.-C., Alborelli, I., Wu, R., Lin, D., & others. (2021). The evolutionarily conserved long non-coding RNA LINC00261 drives neuroendocrine prostate cancer proliferation and metastasis via distinct nuclear and cytoplasmic mechanisms [na.character]. *Molecular Oncology.na.character(na.character).na.character*.
5. Ashrafizadeh, M., Zarrabi, A., Orouei, S., Zabolian, A., Saleki, H., Azami, N., Bejandi, A. K., Mirzaei, S., Janaghard, M. N., Hushmandi, K., & others. (2021). Interplay between SOX9 transcription factor and microRNAs in cancer [na.character]. *International Journal of Biological Macromolecules.na.character(na.character).na.character*.
6. Ashrafizadeh, M., Mirzaei, S., Gholami, M. H., Hashemi, F., Zabolian, A., Raei, M., Hushmandi, K., Zarrabi, A., Voelcker, N. H., Aref, A. R., & others. (2021). Hyaluronic acid-based nanoplateforms for doxorubicin: A review of stimuli-responsive carriers, co-delivery and resistance suppression [na.character]. *Carbohydrate Polymers.na.character(na.character)*, 118491.
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8. Ashrafizadeh, M., Zarrabi, A., Mirzaei, S., Hashemi, F., Samarghandian, S., Zabolian, A., Hushmandi, K., Ang, H. L., Sethi, G., Kumar, A. P., & others. (2021). Use of gallic acid for cancer treatment: Molecular mechanisms and improvement of efficacy by nanoformulations [na.character]. *Food and Chemical Toxicology.na.character(na.character)*, 112576.
9. Ashrafizadeh, M., Zarrabi, A., Mirzaei, S., Hashemi, F., Samarghandian, S., Zabolian, A., Hushmandi, K., Ang, H., Sethi, G., Kumar, A., & others. (2021). Gallic acid for cancer therapy: Molecular mechanisms and boosting efficacy by nanoscopic delivery. [na.character]. *Food and Chemical Toxicology: An International Journal Published for the British Industrial Biological Research Association*, 157(na.character), 112576–112576.
10. Shrestha, R., Nabavi, N., Volik, S., Anderson, S., Haegert, A., McConeghy, B., Sar, F., Brahmbhatt, S., Bell, R., Le Bihan, S., & others. (2020). Well-differentiated papillary mesothelioma of the peritoneum is genetically distinct from malignant mesothelioma [na.character]. *Cancers*, 12(6), 1568.
11. Ashrafizadeh, M., Hushmandi, K., Rahmani Moghadam, E., Zarrin, V., Hosseinzadeh Kashani, S., Bokaie, S., Najafi, M., Tavakol, S., Mohammadinejad, R., Nabavi, N., & others. (2020). Progress in delivery of siRNA-based therapeutics employing nano-vehicles for treatment of prostate cancer [na.character]. *Bioengineering*, 7(3), 91.
12. Shawn McGuirk, A. R. W., Stefanie Sultmanis. (2020). The frontiers of DNA regulation: Developing a national policy framework encouraging transparency, security, and cost-efficiency of genetic technology and data [na.character]. *Journal of Science Policy & Governance*, 16(1).na.character.
13. Noushin Nabavi Shawn McGuirk, A. R. W., Stefanie Sultmanis. (2020). Boosting the volume and speed of genetic sequencing comes with challenges [na.character]. *iPolitics.na.character(na.character).na.character*.
14. Global analysis of human SARS-CoV-2 infection and host-virus interaction. (2020). [na.character]. *BioHack-rXiv.na.character(na.character).na.character*.
15. Nabavi, N. (2020). Healthwiser: Monitoring and evaluation of surgical outcomes (sep 2019 - nov 2020) [na.character]. *Health and Human Services Library, BC Ministry of Health.na.character(na.character)*, electronic-resource.

16. Christine Gibb, Q. K., Noushin Nabavi. (2020). Limiting the negative impact of the COVID-19 pandemic on canadian postdoctoral scholars [na.character]. *Canadian Science Policy Centre, Editorial.na.character*(na.character), electronic-resource.
17. Nabavi, N. (2020). Coronavirus shining a spotlight on homo sapiens [na.character]. *Canadian Science Policy Centre, Covid19 Editorial.na.character*(electronic resource).na.character.
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21. Nabavi, N., Wei, J., Lin, D., Collins, C. C., Gout, P. W., & Wang, Y. (2018). Pre-clinical models for malignant mesothelioma research: From chemical-induced to patient-derived cancer xenografts [na.character]. *Frontiers in Genetics*, 9(na.character), 232.
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24. Shrestha, R., Nabavi, N., Lin, Y.-Y., Mo, F., Anderson, S., Volik, S., Adomat, H. H., Lin, D., Xue, H., Dong, X., & others. (2018). Integrated multi-omics molecular subtyping predicts therapeutic vulnerability in malignant peritoneal mesothelioma [na.character]. *bioRxiv.na.character*(na.character), 243477.
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26. Shrestha, R. (2018). Computational prioritization of cancer driver genes for precision oncology [PhD thesis]. In *na.character: Vol.na.character* (Issue.na.character, p.na.character). University of British Columbia.
27. Lin, D., Ettinger, S. L., Qu, S., Xue, H., Nabavi, N., Choi, S. Y. C., Bell, R. H., Mo, F., Haegert, A. M., Gout, P. W., & others. (2017). Metabolic heterogeneity signature of primary treatment-naïve prostate cancer [na.character]. *Oncotarget*, 8(16), 25928.
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34. Nabavi, N. (2015). Organelles enter the game of aging related aggregation and retention of misfolded proteins [na.character]. *Journal of Postdoctoral Research February*, 31(na.character), 32.
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38. Nabavi, N. (2014). Can aging be reversed? [na.character]. *Journal of Postdoctoral Research*, 28(na.character), 32.
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42. Shin, J., He, M., Liu, Y., Paredes, S., Villanova, L., Brown, K., Qiu, X., Nabavi, N., Mohrin, M., Wojnoonski, K., & others. (2013). SIRT7 represses myc activity to suppress ER stress and prevent fatty liver disease [na.character]. *Cell Reports*, 5(3), 654–665.
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49. Pustynnik, S., Nabavi, no, & Harrison, R. (2011). Role the microtubule (+)-end binding protein EB1 in differentiating osteoblasts. [na.character]. *MOLECULAR BIOLOGY OF THE CELL*, 22(na.character).na.character.
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