

# ARASH NABBI

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## EDUCATION

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### Degrees

09/2010 - 01/2017 **PhD.** Medical Science, Cancer Biology  
University of Calgary, Cumming school of Medicine, Calgary, AB  
Supervisor: Karl T. Riabowol, PhD  
*Thesis: "The role of the ING3 epigenetic regulator in prostate cancer"*

01/2004 - 12/2009 **PharmD.** Pharmacy  
Azad University of pharmaceutical sciences, Tehran, Iran  
Supervisor: Nahid Rahbar, PhD  
*Thesis: "The study of Noscapine-induced apoptosis in Lymphoblasts derived from patients with leukemia"*

### Post-graduate Training

09/2017 - 09/2022 **Post-Doctoral Fellow, Translational Genomics**  
University Health Network  
Princess Margaret Cancer Center, Toronto, ON  
Supervisor: Trevor J. Pugh, PhD, FACMG

### Certifications and Licenses

03/2021 **Certificate. First Aid**  
Standard First Aid - CPR/AED Level C

03/2018 **Pharmacy License**  
Ontario College of Pharmacists (#625769)

02/2017 **Certificate. Injection**  
Injectable Medication and Vaccine Administration Training Program

12/2016 **Certificate. Pharmacy**  
Pharmacy Examination Board of Canada (#42298)

## EMPLOYEMENT

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08/2022-Present **Scientific Associate I.**  
Princess Margaret Cancer Centre  
University Health Network, Toronto, ON

05/2021-Present **Clinical Pharmacist.**  
Shoppers Drug Mart, Toronto, ON

01/2017- 08/2017 **Pharmacy Intern.**  
Sandstone Enhanced Care Solutions, Calgary, AB

## TEACHING

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09/2014 – 04/2016 **Graduate Teaching Assistant.**

## PUBLICATIONS

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### *Manuscripts in revision/preparation*

1. Immunogenomic profiling of circulating T cells in pediatric cancer patients over the course of standard-of-care.  
**Nabbi A**, Lou P, Jiang Y, Espin-Garcia O, Pedersen S, Wellum J, Vernau L, Perazzelli J, Barrett D, Pugh T.J. *In preparation.*

### *Peer-Reviewed Articles (\*: co-first author)*

1. Transcriptional immunogenomic analysis reveals distinct immunological clusters in paediatric nervous system tumours.  
**Nabbi A\***, Beck P\*, Delaidelli A, Oldridge DA, Sudhaman S, Zhu K, Yang SYC, Mulder DT, Bruce JP, Paulson JN, Raman P, Zhu Y, Resnick AC, Sorensen PH, Sill M, Brabetz S, Lambo S, Malkin D, Johann PD, Kool M, Jones DTW, Pfister SM, Jäger N, Pugh TJ.  
*Genome Med.* 2023 Sep 7;15(1):67. doi: 10.1186/s13073-023-01219-x.
2. Multimodal immunogenomic biomarker analysis of tumors from pediatric patients enrolled to a phase 1-2 study of single-agent atezolizumab.  
**Nabbi A**, Danesh A, Espin-Garcia O, Pedersen S, Wellum J, Fu LH, Paulson JN, Geoerger B, Marshall LV, Trippett T, Rossato G, Pugh TJ, Hutchinson KE.  
*Nat Cancer.* 2023 Apr;4(4):502-515. doi: 10.1038/s43018-023-00534-x.
3. The genomic landscape of pediatric renal cell carcinomas.  
Beck P, Selle B, Madenach L, Jones DTW, Vokuhl C, Gopisetty A, **Nabbi A**, Brecht IB, Ebinger M, Wegert J, Graf N, Gessler M, Pfister SM, Jäger N.  
*iScience.* 2022 Mar 26;25(4):104167. doi: 10.1016/j.isci.2022.104167.
4. Genomic predictors of response to PD-1 inhibition in children with germline DNA replication repair deficiency.  
Das A, Sudhaman S, Morgenstern D, Coblenz A, Chung J, Stone SC, Alsafwani N, Liu ZA, Karsaneh OAA, Soleimani S, Ladany H, Chen D, Zatzman M, Cabric V, Nobre L, Bianchi V, Edwards M, Sambira Nahum LC, Ercan AB, **Nabbi A**, Constantini S, Dvir R, Yalon-Oren M, Campino GA, Caspi S, Larouche V, Reddy A, Osborn M, Mason G, Lindhorst S, Bronsema A, Magimairajan V, Opocher E, De Mola RL, Sabel M, Frojd C, Sumerauer D, Samuel D, Cole K, Chiaravalli S, Massimino M, Tomboc P, Ziegler DS, George B, Van Damme A, Hijiya N, Gass D, McGee RB, Mordechai O, Bowers DC, Laetsch TW, Lossos A, Blumenthal DT, Sarosiek T, Yen LY, Knipstein J, Bendel A, Hoffman LM, Luna-Fineman S, Zimmermann S, Scheers I, Nichols KE, Zapotocky M, Hansford JR, Maris JM, Dirks P, Taylor MD, Kulkarni AV, Shroff M, Tsang DS, Villani A, Xu W, Aronson M, Durno C, Shlien A, Malkin D, Getz G, Maruvka YE, Ohashi PS, Hawkins C, Pugh TJ, Bouffet E, Tabori U.  
*Nat Med.* 2022 Jan;28(1):125-135. doi: 10.1038/s41591-021-01581-6.
5. Loss of Ing3 Expression Results in Growth Retardation and Embryonic Death.  
Fink D, Yau T, **Nabbi A**, Wagner B, Wagner C, Hu SM, Lang V, Handschuh S, Riabowol K, Rülcke T.  
*Cancers (Basel).* 2019 Dec 29;12(1):80. doi: 10.3390/cancers12010080.
6. Molecular mechanism of the TP53-MDM2-AR-AKT signalling network regulation by USP12.  
McClurg UL, Chit NCTH, Azizyan M, Edwards J, **Nabbi A**, Riabowol KT, Nakjang S, McCracken SR, Robson CN.  
*Oncogene.* 2018 Aug;37(34):4679-4691. doi: 10.1038/s41388-018-0283-3.
7. Human ex vivo prostate tissue model system identifies ING3 as an oncoprotein.  
McClurg UL\*, **Nabbi A\***, Ricordel C, Korolchuk S, McCracken S, Heer R, Wilson L, Butler LM, Irving-Hooper BK, Pedoux R, Robson CN, Riabowol KT, Binda O.  
*Br J Cancer.* 2018 Mar 6;118(5):713-726. doi: 10.1038/bjc.2017.447.
8. ING5 activity in self-renewal of glioblastoma stem cells via calcium and follicle stimulating

hormone pathways.

Wang F, Wang AY, Chesnelong C, Yang Y, **Nabbi A**, Thalappilly S, Alekseev V, Riabowol K. *Oncogene*. 2018 Jan 18;37(3):286-301. doi: 10.1038/onc.2017.324.

9. ING3 promotes prostate cancer growth by activating the androgen receptor.  
**Nabbi A**, McClurg UL, Thalappilly S, Almami A, Mobahat M, Bismar TA, Binda O, Riabowol KT.  
*BMC Med*. 2017 May 16;15(1):103. doi: 10.1186/s12916-017-0854-0.
10. ING3 is associated with increased cell invasion and lethal outcome in ERG-negative prostate cancer patients.  
Almami A, Hegazy SA, **Nabbi A**, Alshalalfa M, Salman A, Abou-Ouf H, Riabowol K, Bismar TA.  
*Tumour Biol*. 2016 Jul;37(7):9731-8. doi: 10.1007/s13277-016-4802-y.
11. Ubiquitin-specific protease 12 interacting partners Uaf-1 and WDR20 are potential therapeutic targets in prostate cancer.  
McClurg UL, Harle VJ, **Nabbi A**, Batalha-Pereira A, Walker S, Coffey K, Gaughan L, McCracken SR, Robson CN.  
*Oncotarget*. 2015 Nov 10;6(35):37724-36. doi: 10.18632/oncotarget.6075.
12. Stromal ING1 expression induces a secretory phenotype and correlates with breast cancer patient survival.  
Thakur S, **Nabbi A**, Klimowicz A, Riabowol K.  
*Mol Cancer*. 2015 Aug 27;14:164. doi: 10.1186/s12943-015-0434-x.
13. ING3 protein expression profiling in normal human tissues suggest its role in cellular growth and self-renewal.  
**Nabbi A**, Almami A, Thakur S, Suzuki K, Boland D, Bismar TA, Riabowol K.  
*Eur J Cell Biol*. 2015 May;94(5):214-22. doi: 10.1016/j.ejcb.2015.03.002.

### **Review Articles**

1. Molecular characteristics and therapeutic vulnerabilities across paediatric solid tumours.  
Jones DTW, Banito A, Grünewald TGP, Haber M, Jäger N, Kool M, Milde T, Molenaar JJ, **Nabbi A**, Pugh TJ, Schleiermacher G, Smith MA, Westermann F, Pfister SM.  
*Nat Rev Cancer*. 2019 Aug;19(8):420-438. doi: 10.1038/s41568-019-0169-x.
2. Biological Functions of the ING Proteins.  
Dantas A, Al Shueili B, Yang Y, **Nabbi A**, Fink D, Riabowol K.  
*Cancers (Basel)*. 2019 Nov 19;11(11):1817. doi: 10.3390/cancers11111817.
3. Regulation of chromatin regulators: post-translational modification of the ING family of epigenetic regulators.  
Satpathy S, **Nabbi A**, Riabowol K.  
*Biochem J*. 2013 Mar 15;450(3):433-42. doi: 10.1042/BJ20121632.
4. Demethylating agents as epigenetic anticancer therapeutics.  
**Nabbi A**, Satpathy Sh, Riabowol K.  
*Curr Can Ther Rev*. 2013; 9: 24-33.

### **Book Chapters**

1. Isolation of Nuclei  
**Nabbi A**, Riabowol K.  
*Cold Spring Harb Protoc*. 2015 Aug 3;2015(8):731-4. doi: 10.1101/pdb.top074583.
2. Isolation of Pure Nuclei Using a Sucrose Method.  
**Nabbi A**, Riabowol K.  
*Cold Spring Harb Protoc*. 2015 Aug 3;2015(8):773-6. doi: 10.1101/pdb.prot083741.
3. Rapid Isolation of Nuclei from Cells In Vitro.  
**Nabbi A**, Riabowol K.  
*Cold Spring Harb Protoc*. 2015 Aug 3;2015(8):769-72. doi: 10.1101/pdb.prot083733.

## **Preprints**

1. Transcriptional immunogenomic analysis reveals distinct immunological clusters in pediatric nervous system tumours.  
**Nabbi, A.\***, Beck, P.\*, Delaidelli, A., Oldridge, D. A., Sudhaman, S., Zhu, K., Yang, S. Y. C., Mulder, D. T., Bruce, J. P., Paulson, J. N., Raman, P., Zhu, Y., Resnick, A. C., Sorensen, P. H., Sill, M., Brabetz, S., Lambo, S., Malkin, D., Johann, P. D., Kool, M., Jones, D. T. W., Pfister, S. M., Jäger, N. & Pugh, T. J.  
Preprint. doi: 10.1101/2022.09.20.508719

## **PRESENTATIONS**

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### **Invited Talks**

- 10/2022 Transcriptional analysis identifies distinct immune clusters in pediatric nervous system tumors. The annual Children Brain Tumor Network (CBTN) scientific summit. Washington, DC.  
[https://www.youtube.com/watch?v=EauYUzwsXqw&ab\\_channel=Children%27sBrainTumorNetworkCBTN](https://www.youtube.com/watch?v=EauYUzwsXqw&ab_channel=Children%27sBrainTumorNetworkCBTN)
- 06/2022 Transcriptional analysis reveals distinct microenvironmental subgroups across pediatric nervous system tumors. The International Symposium on Pediatric Neuro-Oncology. Hamburg, Germany
- 05/2021 The immunogenomic landscape of pediatric primary solid tumors. The annual Children Brain Tumor Network (CBTN) investigator meeting. Virtual  
[https://www.youtube.com/watch?v=DDqc8mej\\_8M&ab\\_channel=Children%27sBrainTumorNetworkCBTN](https://www.youtube.com/watch?v=DDqc8mej_8M&ab_channel=Children%27sBrainTumorNetworkCBTN)
- 03/2021 The immunogenomic landscape of pediatric primary solid tumors. Roche IMCORE pediatric workshop. Virtual.
- 09/2019 The immunogenomic landscape of pediatric primary solid tumors. 2019 AACR Advances in Pediatric Cancer Research. Montreal, QC.
- 12/2018 Immunogenomic characterization of pediatric tumor microenvironment. Hopp Children's Cancer Centre (KiTZ). Heidelberg, Germany.
- 05/2017 ING3: A novel co-activator of Androgen Receptor. Pharmaceutical outcomes program, BC Children's hospital research institute. Vancouver, BC.
- 05/2015 Biomarker discovery: Lessons learned from prostate cancer study. Lung Cancer research group meeting. Calgary, AB.

### **Poster presentations**

- 10/2022 **Transcriptional immunogenomic analysis to identify inflamed immune microenvironment across pediatric solid tumors.** The Terry Fox Research Institute's 9th Scientific Meeting. Vancouver, BC.
- 03/2019 **Landscape of infiltrating immune repertoire in pediatric solid tumors.** American Association of Cancer Research (AACR) 2019 annual meeting. Atlanta, GA
- 12/2018 **Immunogenomic characterization of pediatric solid tumors.** Terry Fox Research Institute Ontario Node Research Symposium. Toronto, ON
- 11/2015 **The ING3 epigenetic regulator is a novel biomarker for prostate cancer.** Canadian cancer research conference 2015. Montreal, QC
- 01/2015 **ING3 modulates Androgen Receptor activity in prostate cancer.** Southern Alberta Cancer Research Institute (SACRI) Research Day. Calgary, AB
- 07/2014 **The effects of ING3 on prostate cancer cell survival and invasion.** 23<sup>rd</sup> European Association for Cancer Research, Munich, Germany.

- 11/2013                    **Deciphering role of ING3 on androgen receptor activity in prostate cancer cells.** Alberta Cancer Foundation (ACF) Conference, Banff, AB
- 05/2007                    **Noscapine induces apoptosis on lymphoblasts derived from childhood acute lymphoblastic leukemia patients.** The 7<sup>th</sup> International Symposium on Targeted Anticancer Therapies. Amsterdam, Netherlands

**University Lectures**

- 03/2016                    **Diuretics and the kidney.** Human Integrative Physiology. Bachelor of Health Sciences. Calgary, AB.
- 01/2016                    **Nonrespiratory functions of the lungs.** Human Integrative Physiology. Bachelor of Health Sciences. Calgary, AB.

**AWARDS & RECOGNITIONS**

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- 05/2021                    CBTN Pioneering Spirit Award
- 09/2019                    AACR Scholar-in-Training Award (250 USD).  
Advances in Pediatric Cancer Research, Montreal, QC
- 01/2018                    Princess Margaret Post-Doctoral Fellowship award (50,000 CAD).  
Princess Margaret Cancer Centre, Toronto, ON
- 09/2016                    Queen Elizabeth II scholarship (15,000 CAD).  
Faculty of Graduate Studies, University of Calgary, Calgary, AB
- 09/2015                    Queen Elizabeth II scholarship (15,000 CAD).  
Faculty of Graduate Studies, University of Calgary, Calgary, AB
- 06/2014                    MDSC Graduate Program travel award (1,500 CAD)  
University of Calgary, Calgary, AB
- 06/2014                    CIHR Training Program Travel Award-ACHRI (750 CAD)  
University of Calgary, Calgary, AB
- 01/2013                    Program Specific Award (PSA) For first author publication (500 CAD)  
Medical Science Graduate Program, University of Calgary, Calgary, AB
- 01/2012                    Program Specific Award (PSA) (2,550 CAD)  
Medical Science Graduate Program, University of Calgary, Calgary, AB

October 12, 2023