

Suraj Bansal

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EDUCATION

University of Ottawa, Medical Doctor (M.D.) Candidate

Ottawa, ON | Expected Graduation May 2028

Professional Development: ASE 5909 Applied Point-of-Care Ultrasound (POCUS) and Anatomy, Stop the Bleed

Select Preclinical Electives (5 /13): Cardiac Anesthesia, Cardiac CCU, Pediatric Heme-Onc, Adult Hematology, Emergency Medicine

McMaster University, Bachelor of Health Sciences (BHSc) 3.96/4.00 GPA

Hamilton, ON | Class of 2024

PROFESSIONAL EXPERIENCE

Autonomy Bio, Computational Biology Consultant

San Francisco, CA | December 2025 – Present

- Applied multi-omics analyses to produce data-driven feasibility assessments and pressure tests for new longevity hypotheses

John Dick Lab, Princess Margaret Cancer Centre, UHN, Research Student

Toronto, ON | September 2020 – Present

- Architected ATLAS-AML, a cloud-powered bioinformatics pipeline for automated transcriptomic meta-analysis of 30 normal and leukemic transcriptomic datasets to inform preclinical drug development; currently used in 11 collaborations in 9 labs
- Re-analyzed 95 preclinical studies with gene expression deconvolution to quantify drug-induced changes in leukemic cell-state composition and establish a functional roadmap for prioritizing candidate therapies in preclinical decision-making
- Performed single-cell transcriptomic analysis of the tumor microenvironment in MC38 mouse models of colorectal cancer treated with immune checkpoint blockade, in collaboration with clinician-scientists at the German Cancer Research Centre
- Major Conference Presentations:
 - 2023 ISEH Annual Scientific Meeting (New York, USA): Poster Presentation
 - 2023 ISMB/ECCB Student Council Symposium (Lyon, France): Oral Presentation
 - 2023 Till & McCulloch Meeting (Toronto, Canada): Poster Presentation
 - 2024 ASH Annual Meeting and Exposition (San Diego, USA): Poster Presentation, Abstract Achievement Award

Hamilton Social Medicine Response Team (HAMsMART), Research Student

Hamilton, ON | September 2022 – Present

- Led a mixed-methods study examining emergency shelter service restrictions; presented findings to shelter operators and municipal stakeholders, informing policy discussions and modifications of shelter service restriction practices in Hamilton
- Conducted patient recruitment, chart review, and reflexive thematic analysis for a primary-care embedded safe supply program prescribing pharmaceutical-grade opioid alternatives for individuals with treatment-refractory opioid use disorder
- Major Conference Presentations:
 - 2025 CSAM-SMCA Scientific Conference (Montreal, Canada): Poster Presentation, Abstract Achievement Award
 - 2024 Ontario Public Health Convention (Canada): Oral Presentation

Center for Addiction and Mental Health (CAMH), Youth Consultant

Toronto, ON | September 2022 – Present

- Longitudinally advised the development of 22 national mental health and substance use policies and services
- Co-developed a trauma-informed tool to evaluate patient and public engagement in health sciences research in Canada

LEADERSHIP AND VOLUNTEERING EXPERIENCE

Ontario Medical Student Association, Chair of Policy, Response, and Implementation

Ontario | August 2025 – Present

- Steered the submission and editorial process for student-led, evidence-informed policy briefs to promote stakeholder outreach
- Coordinated a rapid-response advocacy team to translate policy recommendations into student-led action (e.g. open letters)
- Led a storytelling project to amplify lived experiences of incarcerated people and facilitate correctional health policy reform

University of Ottawa AI in Medicine Interest Group, Founding Co-Chair

Ottawa, ON | September 2025 – Present

- Launched an educational curricula to build foundational AI literacy for medical students (speaker series, hands-on workshop)
- Partnered with 6 hospital departments to deliver tailored introductory AI workshops for resident and staff physicians
- Spearheaded HackRx, an innovation sprint for medical students to apply AI frameworks to case-based clinical problems

ACP-ON Provincial Internal Medicine Committee, University of Ottawa Representative

Ontario | June 2025 – Present

- Represented the perspectives of 3,500+ medical students in provincial discussions on internal medicine education
- Coordinated province-wide professional development events (internal medicine program director panel, clerkship tutorials)

The Hamilton Homelessness Mortality Project, Project Co-Lead

Hamilton, ON | September 2022 – Present

- Co-led a mortality surveillance project to characterize deaths of people experiencing homelessness in Hamilton via quarterly statistical analysis of data collected from community reporting surveys and local hospital EMRs (featured in *Globe and Mail*)

The Meducator Undergraduate Health Sciences Journal, Editor-in-Chief Hamilton, ON | September 2021 – May 2024

- Managed a \$10,000 budget and oversaw 7 subteams (90 members) to lead bi-annual publication efforts (\approx 1,000 print copies)
- Steered a council of 15+ student-led Canadian journals, establishing inter-journal collaboration and shared editorial workflow
- Grew an academic writing mentorship program for 50 students with professor-run workshops and end-stage publication

RESEARCH PUBLICATIONS

Published Manuscripts (* indicates equal contribution)

Suraj Bansal, Stephanie Di Pelino, ... Claire Bodkin. Nowhere to Go: a qualitative study examining the health of people who experience emergency shelter service restrictions. *BMJ Public Health*. DOI: 10.1136/bmjjph-2025-002639.

Andy G.X. Zeng, **Suraj Bansal (2nd)**, ... John E. Dick. A cellular hierarchy framework for understanding heterogeneity and predicting drug response in Acute Myeloid Leukemia. *Nature Medicine*. DOI: 10.1038/s41591-022-01819-x.

- 2023 Till and McCulloch Paper of the Year Award (Translational Research).

Jessie JF Medeiros*, Andy G.X. Zeng*, **Suraj Bansal (2nd)**, ... Vikas Gupta. A Stem and Progenitor Cell-Derived Gene Expression Signature is Prognostic for Survival in Myelofibrosis. *Blood*. DOI: 10.1182/blood.2025030094.

Robert Vanner, **Suraj Bansal (2nd)**, ... John E. Dick. TET2-mutant Clonal Hematopoiesis Reprograms the Tumor Microenvironment to Promote Immunotherapy Response. *Cancer Research*. DOI: 10.1158/0008-5472.CAN-24-3329.

David Kealy*, Ruth Ellerington*, **Suraj Bansal (2nd)**, ... Katherine S. Bridge. JAK2V617F reprograms Hypoxia Inducible Factor-1 to induce a non-canonical hypoxia regulon in myeloproliferative neoplasms. *Leukemia*. DOI: 10.1038/s41375-025-02843-9.

Helena Boutzen, ... **Suraj Bansal (4th)**, ... John E. Dick. Identification of leukemia stem cell subsets with distinct transcriptional, epigenetic and functional properties. *Leukemia*. DOI: 10.1038/s41375-024-02358-9.

Andy G.X. Zeng, ... **Suraj Bansal (5th)**, ... John E. Dick. Single-cell transcriptional atlas of human hematopoiesis reveals genetic and hierarchy-based determinants of aberrant AML differentiation. *Blood Cancer Discovery*. DOI: 10.1158/2643-3230.BCD-24-0342.

- 2024-2025 Blood Cancer Discovery Outstanding Journal Award.

Joana Araújo, ... **Suraj Bansal (6th)**, ... John E. Dick. FLT3 is genetically essential for ITD-mutated leukemic stem cells but dispensable for human HSCs. *Blood*. DOI: 10.1182/blood.2024025886.

Stefano Comazzetto, ... **Suraj Bansal (8th)**, ... Sean J Morrison. Ascorbate deficiency increases quiescence and self-renewal in hematopoietic stem cells and multipotent progenitors. *Blood*. DOI: 10.1182/blood.2024024769.

Tianyi Ling, ... **Suraj Bansal (11th)**, ... Courtney L. Jones. Glutaredoxin 2 mediated protein deglutathionylation is essential for leukemia survival through mitochondrial permeability transition pore regulation. *Blood*. DOI: 10.1182/blood.2025028933.

Manuscripts Under Review

Grace Egan, ... **Suraj Bansal (12th)**, ... Aaron D. Schimmer. Ribosome biogenesis and its regulation by the exportin, CSE1L, are targetable vulnerabilities in childhood and young adult acute myeloid leukemia. *Nature Cancer*. (preprint on bioRxiv).

Amanda Tajik, ... **Suraj Bansal (17th)**, ... Kristin Hope. Stress Granules Underlie Acute Myeloid Leukemia Stem Cell Survival and Stress Adaptation. *Cancer Discovery*. (preprint on bioRxiv).

MAJOR HONOURS AND AWARDS

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| Recipient (1 of 1) , Dr. Jan Bormans Award for Residents in Hematology and Transfusion Medicine (\$1,600), Ottawa, ON | 2026 |
| Recipient (1 of 15) , American Society of Hematology HONORS Award (\$7,000), USA | 2025 |
| Recipient (1 of 1) , McMaster Chancellor's Gold Medal, Hamilton, ON | 2024 |
| Recipient , McMaster Partnered in Teaching and Learning Digital Seed Grant (\$4,000), Hamilton, ON | 2024 |
| Recipient (1 of 16) , UofT Molecular Genetics Undergraduate Research Opportunity Program (\$5,625), Toronto, ON | 2024 |
| 2x Recipient (1 of 1) , The Bachelor of Health Sciences Program Scholarship (\$2,500), Hamilton, ON | 2023, 2024 |
| Recipient (1 of 20) , UofT T-CAIREM AI in Medicine Summer Research Studentship (\$7,200), Toronto, ON | 2022 |
| Recipient (1 of 1) , York Region Portraits of Giving Young Adult Honoree (\$2,500), York Region, ON | 2022 |
| Recipient (1 of 1) , Ontario Public Schools' Association Jack A. MacDonald Award of Merit (\$500), ON | 2021 |
| Recipient (1 of 1) , Ontario Student Voice Award: Entrepreneurship Category (\$1,000), ON | 2021 |
| Recipient (1 of 1) , Richmond Hill Youth Volunteer Achievement Award, Richmond Hill, ON | 2021 |

SKILLS & INTERESTS

Languages and Libraries: Python, R, JavaScript, SQL, React, Keras, TensorFlow, ScanPy, Seurat, Shiny, Pandas, Scikit-learn

Interests: Specialty Coffee, Ice Hockey, Squash, Food Culture, Self-Driving Cars, Acoustic Guitar, Alpine Skiing, Interior Design