## NIKITA TELKAR

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EDUCATION

PhD in Medical Genetics 2019 –

University of British Columbia (UBC), Canada

MSc Genetics of Human Disease: Inherited Diseases 2017 – 2018

University College London (UCL), United Kingdom

BSc Biomedical Genetics (Honours) 2014 – 2017

Newcastle University (NCL), United Kingdom

RESEARCH EXPERIENCE

PhD Candidate August 2019 –

University of British Columbia - Canada

Co-Supervisors: Dr. Wendy Robinson (BC Children's Hospital Research) & Dr. Wan Lam (BC Cancer Research Centre) Project: Characterizing Small Non-Coding RNAs (sncRNA) in the human placenta and placental cell types, and investigating the biological (sex, ancestry), clinical (depression status, smoking) and technical variables driving variation.

Data: RNA-seq, DNA methylation; Software: R/Shiny; Techniques: RNA extraction, sample processing, and optimization Recent Publications / Awards:

- Oral Presentation European Society of Human Genetics (ESHG) 2023 Conference
- Small Non-Coding RNAs in the Human Placenta: Regulatory Roles and Clinical Utility Telkar N et al., 2022
- Overall Excellence Award, UBC Department of Medical Genetics The James Miller Memorial Prize 2022
- RStudio Diversity Scholarship 2022
- University of British Columbia 4 Year Doctoral Fellowship (4YF) Award

Master's Student January – August 2018

UCL Genetics Institute and The Wellcome Sanger Institute – United Kingdom (Supervisor: Dr. Karoline Kuchenbäcker)

Master's dissertation project in statistical genetics investigating the heritability, trans-ethic genetic correlation, and association of lipid variants—biomarkers across several diverse populations

Software: UNIX, R, PLINK, GEMMA, Popcorn

Second-author publication in Nature Communications. Polygenic Risk Scores available on EMBL-EBI's PGS Catalog

#### **Final Year Undergraduate Student**

January – March 2017

Newcastle University Campus for Ageing and Vitality – Newcastle upon Tyne, United Kingdom

Undergraduate Honors project validating candidate genes affecting oxygen concentration in *Drosophila melanogaster*. *Techniques*: qPCR, western blot, BN-PAGE, high resolution respirometry.

## **Summer Undergraduate Researcher**

July – September 2016

Institute of Genetic Medicine – Newcastle upon Tyne, United Kingdom (Supervisor: Professor Susan Lindsay)

Received the UK-wide competitive Genetics Society Summer Studentship Award 2016

Project involved tracking the expression of the WNT5A protein in human embryonic tissue via immunohistochemistry *Software*: Linux, MAPaint, Amira

Expression results available on MRC-Wellcome Trust HDBR database. Report featured, and poster won awards

#### PROFESSIONAL EXPERIENCE

# Biomedical Data Analyst - BenchSci, Toronto, Canada

April 2022 –

Labelling biomedical data for the platform's machine learning training model (>100k labels till date)

Annotating scientific publication figures for image to text (vision) training

Contributing to the platform's UX design as part of the internal Discovery and Validation team

# BioInnovation Scientist Trainee - adMare BioInnovations, Canada

May - June 2023

Hands-on training about the Canadian life sciences industry, scaling small molecule and biologics discovery, preclinical and clinical development, and therapeutics commercialization

Biostatistics Expert - BC Children's Hospital Research Institute, Vancouver, Canada

January - April 2021

Created beginner-to-intermediate biostatistics videos with a hands-on R tutorial for the Summer Student Research Program

#### **Teaching Assistant** – University of British Columbia

September – December 2020

Instrumental in restructuring the course and assignments, assisting course instructors, and holding tutorial sessions. Named "the best TA he's ever worked with" by the Head of the Medical Genetics Graduate Program.

Name and Section to Section with the section of the Medical Condition Character Figure 1.

"Nikita always responded promptly and thoughtfully to requests for advice. Her input and assistance helped guide the

learning process. She did everything I think a good teacher should, and went above and beyond the time and effort I would expect from a TA. She was the best part of the course."

Visiting Scholar - MIT-ADT School of Bioengineering Sciences and Research, India

March – July 2019

Visiting Lecturer in Genetics for first year undergraduate Bachelor of Technology Bioengineering (B.Tech) students

#### **COMMUNITY SERVICE**

Co-Chair - Trainee 'Omics Group, BC Children's Hospital Research Institute

December 2020 -

A graduate trainee-led bioinformatics and data analysis support group

Established intra- and inter-UBC outreach, with a ~200% increase in registrations with monthly workshop collaborations Partnered with Databinge (Digital Alliance of Canada's Data Champions) to provide increased support to our members Developed the UBC-wide Precision Health Bootcamp, and have created and taught genomic analysis workshops Numerous one-on-one project consultations UBC-wide, with 2 (and counting) full collaborations

## Advisory Committee Member - Department of Medical Genetics, UBC

2019 –

Recruiting the new Head of Department of Medical Genetics under the Advisory Search Committee
Single-handedly redesigned and updated the department website using WordPress with CSS and HTML coding

#### Research Mentor - NCL and UBC

2015 - 2016 / 2020 -

BCCHR Summer Student (1<sup>st</sup> Year undergraduate) – placental epigenetics 3<sup>rd</sup> Year undergraduate – oncofetal microRNAs in renal cancer Masters' student – nasopharyngeal carcinoma

#### Geneskool Volunteer - Genome British Columbia

October 2019 - October 2020

Conducting interactive activities at local schools to educate students about genetics and its applications Committee Member at the Girls and Steam Symposium 2019 hosted by BC Science World

#### Events Chair – UBC Medical Genetics Graduate Student Association

January 2021 -

Assisting the board with executive decisions for this departmental social and outreach association Varied roles fulfilled - Recruited panelists and moderated the Alumni Panel at the annual welcome event (received public acknowledgment), directed a fundraiser (raised ~\$300), designed the website, and populated all content

## PUBLICATIONS (in order of publication)

- 1. Kuchenbaecker K, **Telkar N**, Reiker T, Walters RG, Lin K, Eriksson A et al (2019). *The transferability of lipid loci across African, Asian and European cohorts*. Nature Communications, 10: 4330.
- 2. Marshall EA, **Telkar N**, Lam WL (2021). Functional role of the cancer microbiome in the solid tumour niche. Current Research in Immunology; 2: 1–6
- Cohn DE\*, Barros-Filho MC\*, Minatel BC, Pewarchuk ME, Marshall EA, Vucic EA, Sage AP, Telkar N, Stewart GL, Jurisica I, Reis PP, Robinson WP, Lam WL (2021). Reactivation of multiple fetal miRNAs in lung adenocarcinoma. Cancers; 13, 2686.
- 4. Martinez VD\*, Cohn DE\*, **Telkar N**, Minatel BC, Pewarchuk ME, Marshall EA, Price ME, Robinson WP, Lam WL (2021). *Profiling the Small Non-Coding RNA Transcriptome of the Human Placenta*. Sci Data; 8, 166
- 5. Rees WD, **Telkar N**, Lin D, Peloni C, Fathi A, Kobor M, Zachos NC, Steiner TS (2022). *An in vitro chronic damage model impairs inflammatory and regenerative responses in human colonoid monolayers*. Cell Reports; 38(3)
- 6. **Telkar N**, Stewart GL, Pewarchuk ME, Cohn DE, Robinson WP, Lam WL (2022). *Small Non-Coding RNAs in the Human Placenta: Regulatory Roles and Clinical Utility*. Frontiers in Genetics; 13.
- 7. Minatel BC\*, Cohn DE\*, Pewarchuk ME, Barros-Filho MC, Sage AP, Stewart GL, Marshall EA, **Telkar N**, Reis PP, Robinson WP, Lam WL (2022). *Genetic and Epigenetic Mechanisms Deregulate the CRL2pVHL Complex in Hepatocellular Carcinoma*. Frontiers in Genetics; 13.
- 8. Forder A, Stewart GL, **Telkar N**, Lam WL, Garnis C (2022). *New insights into the tumour immune microenvironment of nasopharyngeal carcinoma*. Current Research in Immunology; 3: 222–227.
- 9. Forder A, Zhuang R, Souza VGP, Brockley LJ, Pewarchuk ME, **Telkar N**, Stewart GL, Benard K, Marshall EA, Reis PP, Lam WL (2023). *Mechanisms Contributing to the Comorbidity of COPD and Lung Cancer*. International Journal of Molecular Sciences; 24(3):2859.
- Brockley LJ\*, Souza VGP\*, Forder A, Pewarchuk ME, Erkan M, Telkar N, Benard KH, Trejo J, Stewart MD, Stewart GL, Reis PP, Lam WL, Martinez VD (2023). Sequence-Based Platforms for Discovering Biomarkers in Liquid Biopsy of Non-Small-Cell Lung Cancer. Cancers; 15(8), 2275.
- 11. Souza VGP\*, Forder A, Brockley LJ\*, Pewarchuk ME, Telkar N, de Araújo RP, Trejo J, Benard KH, Seneda AL, Minutentag IW, Erkan M, Stewart GL, Hasimoto EN, Garnis C, Lam WL, Martinez VD, Reis PP (2023). Liquid Biopsy in Lung Cancer: Biomarkers for the Management of Recurrence and Metastasis. International Journal of Molecular Sciences; 24(10):8894.

12. Zhao G, Zhang HM, Nasseri AR, Yip F, **Telkar N**, Chen YT, Aghakeshmiri S, Küper C, Zhao J, Lam WL, Yang W, McManus BM, Yang D (2022). *Conditional Heart-specific NFAT5 Knockout Suppresses Type I Interferon Signaling and Aggravates Coxsackievirus B3-induced Myocarditis*. [Submitted – Circulation Research]

# GRANTS AND AWARDS (n = 14, \$153,000 CAD)

4 Year Doctoral Fellowship (4YF) Award (2020-2024) - University of British Columbia; CAD \$113,000

The James Miller Memorial Prize 2022 – Department of Medical Genetics, University of British Columbia; CAD \$1,000

President's Academic Excellence Initiative PhD Award (2020-2024) – University of British Columbia; CAD \$6,000

International Tuition Award (2019-2024) - University of British Columbia; CAD \$16,000

4YF Stipend Award (2020-2024) - Department of Medical Genetics, University of British Columbia; CAD \$6,000

Genes and Development Summer Studentship 2016 - The Genetics Society UK; £2,350 / CAD \$4,700

Commendation Award – Newcastle University Research Scholarships and Expeditions Exhibition 2016; £200 / CAD \$400

RStudio Diversity Scholarship 2022 – RStudio PBC; USD \$2,500 / CAD \$3,370

Trainee Travel Grant 2022 – BC Children's Hospital Research Institute; CAD \$1,200

Registration Grant 2022 - Cold Spring Harbor Laboratory; CAD \$650

Registration Grant 2021 - EMBO-EMBL; CAD \$210

Virtual Knowledge Exchange Grant 2021 – BC Children's Hospital Research Institute; CAD \$250

Second Place Poster Award 2016 – Newcastle University Faculty of Medicine; £50 / CAD \$100

ncl+ Award – Newcastle University

Declined: Faculty of Medical Sciences Undergraduate Research Scholarship - Newcastle University; £2,000 / CAD \$4,000

#### **POSTERS**

Developmental Origins of Health and Disease (DOHaD) World Congress 2022 – Vancouver, Canada	August 2022
rstudio::conf(2022) – Washington D.C., USA	July 2022
Regulatory and Non-Coding RNAs 2022 - Cold Spring Harbor Laboratory, New York, USA	May 2022
Medical Genetics Research Day 2021 – Department of Medical Genetics, UBC, Canada	November 2021
EMBO–EMBL Symposium: The Non-Coding Genome – Virtual	October 2021
International Federation of Placental Research (IFPA) 2021 – Virtual	August 2021
Healthy Starts Research Day 2021 – BC Children's Hospital Research Institute, Canada	February 2021
Medical Genetics Research Day 2020 - Department of Medical Genetics, UBC, Canada	November 2020
British Columbia Cancer Summit 2019 – Vancouver, Canada	November 2019
Faculty of Medical Sciences Research Poster Presentation 2016 – Newcastle University, United Kingdom	November 2016
Student Research Scholarships and Expeditions Exhibition 2016 – Newcastle University, United Kingdom	November 2016

#### INVITED PRESENTATIONS

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European Society of Human Genetics (ESHG) 2023 Conference – Glasgow, United Kingdom	June 2023
University of Toronto Health Network (UHN) Seminar Series (Invited) – Virtual	January 2022
ONCO548: Knowledge Translation (Invited) - Interdisciplinary Oncology Program, UBC, Canada	October 2020

### **WORKSHOPS**

Instructional Skills Workshop - University of British Columbia

July 2020

A 24-hour professional development workshop to enhance teaching practices and application. Taught 3 short lessons with feedback from peers. "Nikita, your students will be lucky to have you, you make everything so easy to understand."

Building Production-Quality Shiny Applications – rstudio::conf(2022), Washington D.C., USA Chose this complimentary workshop awarded under RStudio's Diversity Scholarship

July 2022

Learnt best-practices to write user interface (UI) and server-side code for Shiny for R web application development

# EXTRA-CURRICULAR

Founder April 2019 – Present

Started two small, separate enterprises in Canada and India

SPIRITFUL - Selling original artwork, independently handling: procuring raw material, assembly, marketing, and shipping

- 60% profit margin, 25% of profits directed to the HelpAge India NGO (a non-profit focused on the elderly)

ScribblezbyNiki - Received multiple 5-star reviews on my custom-made genetics/science-themed merchandise on Etsy

## News Reporter - Health Science Inquiry

2019 - 2020

A News Reporter for the 2019-2020 academic year at this student-run science communication journal for graduate and post-doctoral students within Canada

Article published in their 2020 issue

Won the Judges' Choice Award in this medical case competition focused on solving a real-world problem

**FEATURES** 

The Genetics Society Newsletter Newcastle University Alumni Profile Science in Vancouver The Interview Portal