

JARED BLAKE COLLINS

BIOINFORMATICS ENGINEER, DANA FARBER CANCER INSTITUTE

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Cambridge, MA 02139

EDUCATION

MS Georgia Institute of Technology, Biomedical Sciences May 2023
Thesis: [Mecanisms of CFTR-mediated ICF secretion](#)
[bioRxiv preprint doi: <https://doi.org/10.1101/2023.05.15.541111>; this version posted May 15, 2023. The copyright holder for this preprint \(which was not certified by peer review\) is the author/funder, who has granted bioRxiv a license to display the preprint in perpetuity. It is made available under aCC-BY-NC-ND 4.0 International license.](#)
Advisor: Dr. George Gbureck
Committee: Dr. John Lacaille, Dr. John Yarbrough
Cumulative GPA: 4.0

BS Georgia Institute of Technology, Biomedical Sciences May 2022
Graduated with Highest Honors
Certificate of Biological Sciences and Biomedical Sciences
Cumulative GPA: 3.83

HONORS AND AWARDS

Graduation with Highest Honors 2022
Georgia Institute of Technology

Terrill Graduate Fellowship 2022
Graduate Fellowship awarded based on academic achievement

Randy Rhoads Memorial Scholarship 2021
Awarded to the top student in the College of Arts and Sciences

Zell Miller Scholarship 2018-2022
Merit-based scholarship awarded to the top student in the College of Arts and Sciences

RESEARCH EXPERIENCE

Dana Farber Cancer Institute, Boston, MA 2023-Present
Bioinformatics Engineer, Broad Institute of MIT and Harvard Lab

- Conducted research on the role of the CFTR protein in the regulation of ion transport and cellular signaling in the pancreas.
- Developed a data analysis pipeline to identify differentially expressed genes in pancreatic cancer cells.

- Analyzed the expression of RNA-Seq data from GBM and normal brain tissue using R and Bioconductor.
- Performed single-cell RNA-Seq analysis using 10x Genomics technology and analyzed the data using Seurat and t-SNE.

Georgia Institute of Technology, Atlanta, GA 2022 - 2023
Student Researcher, Genomics Lab

- Conducted single-cell RNA-Seq analysis of PBMCs and identified differentially expressed genes using Seurat and DESeq2.
- Analyzed ChIP-Seq data for SLE and identified binding sites for transcription factors using ChIP-seq and BEDTools.

Thesis, Georgia Institute of Technology, Atlanta, GA 2023
Advisor: Genomics Lab

- Utilized single-cell RNA-Seq to study the heterogeneity of cancer cells and identified potential therapeutic targets.

Lucid Scientific, Atlanta, GA 2022
Biologist Intern Researcher

- Analyzed single-cell RNA-Seq data from PSCs and identified differentially expressed genes using Seurat and DESeq2.
- Conducted ChIP-Seq analysis for RESIPHER and identified binding sites for transcription factors.
- Analyzed ChIP-Seq data for TCE and identified binding sites for transcription factors.

Georgia Institute of Technology, Atlanta, GA 2020 - 2021
Undergraduate Researcher, Yenching Institute of Medicine Lab

- Developed a new method for analyzing single-cell RNA-Seq data and applied it to study cancer cells.
- Conducted ChIP-Seq analysis for a transcription factor and identified binding sites.
- Analyzed ChIP-Seq data for a transcription factor and identified binding sites.

TEACHING EXPERIENCE

Georgia Institute of Technology, Atlanta, GA 2021 - 2023
Undergraduate/Graduate Teaching Assistant, Science

BIOS 1107 Lecture TA 2022 - 2023

- Co-edited a textbook for BIOS 1107 and taught the course for 80+ students.
- Developed lecture notes and lab exercises for BIOS 1107 and taught the course for 30+ students.
- Taught the course for 30+ students and received positive feedback from students.
- Graded assignments and exams for BIOS 1107 and provided feedback to students.

BIOS 1108 Lab TA

A 2021 Ma 2022

- Led e ab a ca e f24 de ec ea de e e ac a
a e fb ca ce ce
- Me ed de ce c e, a a a d , a d a ca a a
- G aded a c e a de c -TA

Roswell High School, R e , GA

A 2017 Ma 2018

Teac A a , Ja a e e

- W e a d c d c e d a be f e c e e f a ad a ced Ja a e e c a
- Sc ed a d f e d e e de f eac c e be eac ea
- He d da e e add e a d ea - e de e

PUBLICATIONS

Journal Papers in Review

D E c M , D S , D Ge e A b , M Je D G ac , M S e
Ba ad , M B a aa C a da a a , D P e be P e , M Ma a e C c , M Da a
N , M R be J e , M Ja e V e a , M C B , Se Ma , M
J Jea , M Ja ed C , M Se ee O , D H e Je , M A Ca e , M
Pa c Rec e , M A e a De e , M Ka e a M e a , Mea a M e , D
Lee A bac e , D S a Ra , D C e a T b , D E Ha d , D
P S e e , P fe Fe Sa , D Kee Ka Ye , D T R e be , S a C ,
D Ka e W , M S e e Hebe , D S d e Pec , D A be P cca , D Va e
La c e , D Sa e e Re , D Te Ba e , D A S , D Me d T a , D Nada
Jabad , P fe E c S. F c e , D M c ae Ec , D L a Ba d , P fe O af W ,
D C a da Ke a , D Q a -De N e , D Sa da A e a d e c , D Da d J e , D
Ke L , P a Ba d ad a a . Ad e e a d ca e f FGFR a e a a d c -
a def e e e a e c a e e ed a c - ade a , S b ed T :
Nature Communications.

PRESENTATIONS

Oral Presentations

Third Annual DFCI and Everest Retreat on Paediatric Low-Grade Gliomas

C a a A ac e f S a a O c Da a
Se 2024

Revolutionizing GBM Therapy TeamLab Seminar

Se a B U c e A -G ba a Re e N E de b S e Sa
A 2024

Georgia Institute of Technology Public Thesis Defense

Mec a f C e e ce a d I c e e ce
be ee GWAS a d S e-Ce e QTL Effec C D ea e
A 2023

Poster Presentations

Broad Institute Retreat

H S ec f c T e A c ec e a d Ce -Ce C ca LGG a d GNT
Dec 2024

Broad Institute Cancer Program Retreat

S a a T a c c U e T e A c ec e He e e e ac LGG a d GNT
N 2024

21st International Symposium on Pediatric Neuro Oncology

E ace a a e de e ea -ce a f a ec a
Ada a a C a a a
J e 2024

International Symposium on Pediatric Neuro-Oncology

E a d a c f MEK b e a d e a ce d ff e d e
a
J e 2024

Georgia Tech Undergraduate Capstone Poster Session

S c a A a f IFN- 1 I f D De e e f SLE
A 2022

PROFESSIONAL AFFILIATIONS

Dana Farber Cancer Institute, 2023-P e e

B f a c E ee

Broad Institute of MIT and Harvard, 2023-P e e

Aff a ed Re ea c e

Lucid Scientific, 2022

B /Re ea c e

- Ve f ed e ce e f RESIPHER e ea c b de a d c d c
de ce a ca e a d e ab c ac a a
- Pe f ed d c e ea c a d de e e c e e c e
e ab e a d e e ed ec e \$100,000 f a e a e
- C d c ed a e ca e da a a a de ce e f a ce f a c a d
a , f a a e f e e a fac ce e

City of Atlanta Department of Watershed Management, 2021

- Pe f ed ab a e e e a c e ca a e f ca f 1.2
c e
- De ed e a ce f b de ada f c a c d a e
e e

COMMUNITY SERVICE

Cambridge Community Learning Center

Tutor/Volunteer, Cambridge MA, Sep 2024 - Present

Broad Discovery Center

Medical Science Volunteer, Cambridge, MA, Dec 2023 - Present

Cambridge Science Festival

Science Outreach Volunteer, Cambridge, MA, Sep 2024

Atlanta Mission Homeless Shelter

Volunteer, Atlanta, GA, Jan 2022-Mar 2023

LANGUAGES AND SKILLS

English: Native Language

Japanese: Nihongo Level 1, Nihongo Speaking, Intermediate Reading and Writing

Programming: Python, R, Bash, C#, Java, JavaScript, WDL

REFERENCES

Dr. Pratiti Bandopadhyay, Associate Professor of Pediatrics

Department of Medical Science, Pediatrics

Harvard Medical School

Email: Pratib_Bandopadhyay@dfc.harvard.edu

Dr. Rameen Beroukhim, Associate Professor of Medicine

Department of Medical Science, Medicine

Harvard Medical School

Email: Rameen_Beroukhim@dfc.harvard.edu

Dr. Greg Gibson, Professor and Director

Center for Innovative Genetic

Genetics and Infectious Disease

Email: greg.gibson@broad.harvard.edu