

Thadryan Sweeney

Technologist, Instructor

I am a Computational Biologist and Scientific Software Developer interested in applying statistical and computational techniques to the study of systems large and small.

Research Positions

- 2020- **Research Technologist**, *Mass General/Harvard Medical School*, Boston, MA.
- 2018 **Bioinformatics & Data Science Contractor**, *bluebird bio*, Cambridge, MA.

Education

- 2019 **Master of Science**, *Northeastern University*, Boston, MA.
- 2013 **Bachelor of Science**, *American International College*, Springfield, MA.
- 2011 **Associate of Arts**, *Greenfield Community College*, Greenfield, MA.

Teaching

- 2022 **Bioinformatics Methods I (spring)**, *Northeastern University*.
- 2021 **Bioinformatics Methods I (fall)**, *Northeastern University*.
- 2021 **Bioinformatics Methods I (spring)**, *Northeastern University*.
- 2020 **Bioinformatics Methods I (fall)**, *Northeastern University*.
- 2020 **Bioinformatics Methods I (spring)**, *Northeastern University*.

Published Software

- 2020 An interactive Bayesian Ttool for SARS-CoV2-Antibody test interpretation. Manuscript supplement, <https://covid.omics.kitchen/>
- 2020 ContrApption: interactive visualization of RNA-Seq style datasets from a single function call. (beta) <https://github.com/omics-kitchen/ContrApption>

Publications

Published

- 2022 **Increased levels of the synaptic proteins PSD-95, SNAP-25, and neurogranin in the cerebrospinal fluid of patients with Alzheimer's disease**, *Alzheimer's Research & Therapy*.
- 2022 **Distinct stress-dependent signatures of cellular and extracellular tRNA-derived small RNAs (tDRs)**, *Advanced Science*.
- 2022 **A novel tissue atlas and online tool for the interrogation of small RNA expression in human tissues and biofluids**, *Frontiers in Cell and Developmental Biology*, supplement: <https://data.omics.kitchen/miRNAatlas/>.
- 2021 **Evaluation of serological lateral flow assays for severe acute respiratory syndrome coronavirus-2**, *BMC Infectious Diseases*, supplement: <https://covid.omics.kitchen/>.

In Revision

- 2022 **Elevation of Neuronal Injury Markers in Patients with Neurologic Sequelae after Hospitalization for SARS-CoV-2 Infection**.

Submitted

- 2022 **Plasma biomarkers for diagnosis of Alzheimer's disease and prediction of cognitive decline in individuals with mild cognitive impairment**.

In preparation

- TBD **miRNAs in canine mitral valve disorders**.
- TBD **ContrApption: interactive visualization of RNA-Seq style datasets from a single function call**.

Volunteer Work & "Hacktivism"

- 2020-Present **Volunteer at RagTag** (<https://ragtag.org/>), Core developer on *The National Survivor Financial Security Policy Map and Scorecard* (<https://mapandscorecard.freefrom.org/>), a tool for evaluating how different states in the US promote the financial wellness of Survivors of intimate partner violence..
- 2008-2014 **Volunteer Firefighter/EMT: Orange Fire-Rescue-EMS**.

Media

- 2020 COVID-19 LFA Research. <https://www.wcvb.com/article/boston-researchers-assess-performance-of-covid-19-antibody-tests/33625088>

Pre-academic work

Antibody Technician - New England Peptide

(Now 'Vivitide')

Sept. '15 - Sept. '17

- . Ran day-to-day operations of antibody production lab as sole technician.
- . Self-taught Python programming to automate bioinformatics tasks, saving weeks of effort and dozens of errors.
- . Studied and practiced antigen design under an industry leader.

Chemical Operator, Vinegar Plant - Pilgrim Foods

Mar. '15 - Sept. '15

- . Inoculated, monitored, and maintained live cultures of Acetobacter for fermentation of ethanol to acetic acid.
- . Redefined instrument calibration procedure by observing logarithmic trends in data previously modeled as linear.
- . Formulated batches of mash to alcohol, acidity, stock, and water specifications.

Asst. Manager, Peer Counselor - The Bridge of Central Mass

(Now 'Open Sky Community Services')

Nov. '13 - Mar. '15

- . Counseled individuals aged 18-25 in their recovery from mental illness and trauma.
- . Provided quality assurance for medication administration and financial tracking.
- . Supervised nine employees during shifts and on call from home for crisis management.

Firefighter/EMT - Orange Fire Rescue EMS

Jun. '08 - Sept. '14

- . Engaged in fire/rescue activities, structural and wildland firefighting, search operations, and trauma management.
- . Responded to medical emergencies, performed CPR/Basic life support, and administered medication.
- . Participated in search and rescue operations and trainings, including ice rescue training and boat operations.

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