Justin Paluba

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EDUCATION

University of Vermont **Burlington, VT**
PhD in Cellular, Molecular and Biomedical Sciences *expected 2026*

University of Vermont **Burlington, VT**
MS in Material Science *2018*

University of Vermont **Burlington, VT**
BA in Applied Mathematics, Chemistry Minor *2012*

EXPERIENCE

University of Vermont, Ma/Berger Labs **Burlington, VT**
Graduate Research Assistant *2022 - present*
- Developed computational protein structure prediction tools for analyzing intrinsically disordered proteins.
- Utilized FRET and NMR data to make improved predictions of the structure of the intrinsically disordered protein tau and its isoforms.

University of California Berkeley, Nelson Lab **Berkeley, CA**
Laboratory Technician *2020 - 2021*
- Performs RNA extraction and RT-qPCR of local wastewater to test for the presence of coronavirus
- Oversees automation efforts to streamline protocols and increase testing capabilities.

University of California Berkeley, Cox Lab **Berkeley, CA**
Research Associate II *2018 - 2020*
- Performed computational biology tasks to assist in the analysis of the labs RNAseq and genome assembly data.

University of Vermont, White Lab **Burlington, VT**
Graduate Research Assistant *2016 - 2018*
- Designing and fabricating organic electronics using various deposition and coating methods. Developed charge-transfer based solar cells and organic light emitting diodes. Gained extensive clean room and fabrication processing experience.
- Wrote and won an internal University grant for research in charge-transfer crystal solar cells.

University of Vermont, Department of Physics **Burlington, VT**
Graduate Teaching Assistant *2016 - 2018*
- Taught the laboratory section of general physics.

Boston College, Burgess Lab **Chestnut Hill, MA**
Research Associate *2014 – 2015*
- Trained graduate students in PCR, site-directed mutagenesis and microscopy skills.
- Created Matlab image-analysis software for fluorescence microscopy imaging.

Boston University, Bullitt Lab **Boston, MA**
Laboratory Technician *2012 – 2014*
- Optimized protocols for protein expression and purification to prepare protein for cryo-electron tomography, x-ray crystallography and electron microscopy.
- Learned extensive image analysis and biophysical computational techniques.

PUBLICATIONS

- Operationalizing a routine wastewater monitoring laboratory for SARS-CoV-2. RS Kantor ... JM Paluba, KL Nelson.MedRxiv 2021 doi.org/10.1101/2021.06.06.21258431
- Nonlinear impedance spectroscopy of organic MIS capacitors and planar heterojunction diodes A Larsen, E Dahal, J Paluba, ... - Organic Electronics, 2018
- Genome sequence of Mycobacterium avium subsp. hominissuis smooth transparent clinical isolate from an AIDS patient Budzik,J.M., Paluba,J.M., Jacobs,W.R. Jr. and Cox,J.S. (Genome available on NCBI, Relevant journal publication pending)
- Ceragenins and antimicrobial peptides kill bacteria through distinct mechanisms Gabriel Mitchell, Melanie R. Silvis, KC. Talkington, JM. Budzik, CE. Dodd, Justin M. Paluba, ... Michael A. Marletta, Jeffery S. Cox bioRxiv 2020.10.20.346411; doi.org/10.1101/2020.10.20.346411