Benjamin Gaudio

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Harvard Medical School
444 Warren Alpert Building
200 Longwood Ave.
Boston, MA 02115

Education

Harvard University Extension School — Jan 2019 – Present
CANDIDATE FOR MASTER OF LIBERAL ARTS IN BIOLOGICAL SCIENCES — Cambridge, MA

Northeastern University — Sep 2013 – Dec 2017
BACHELOR OF SCIENCE IN BIOLOGY — Boston, MA

Research Experience

HARVARD MEDICAL SCHOOL — Mar 2018 – Present
RESEARCH TECHNICIAN — Boston, MA

- Conducted high-throughput small molecule screens to produce data for the NIH LINCS project.
- Worked to develop a detection test for SARS-COV-2 (COVID-19).
- Characterized the functions of genes involved in cancer and cellular metabolism.
- Manage and maintain a tissue culture facility for the Laboratory of Systems Pharmacology.

PFIZER Inc. — Jan 2017 – Feb 2018
CO-OP RESEARCH ASSISTANT - NEURODEGENERATION II UNIT — Cambridge, MA

- Engineered cell lines with CRISPR and performed functional assays to investigate the role of microglia in Alzheimer's disease.
- Designed a CRISPR library screen to identify genes interacting with the transferrin receptor.
- Identified receptor ligands through immunoprecipitation assays.

NORTHEASTERN UNIVERSITY — Jan 2016 – Sep 2016
UNDERGRADUATE RESEARCH ASSISTANT - CENTER FOR DRUG DISCOVERY — Boston, MA

- Investigated the function of the TAAR1 receptor through the use of basic molecular biology techniques.
- Maintained mammalian cell lines, performed antibiotic kill curve assays, and presented data.

REPLIGEN CORPORATION — Jul 2015 – Jan 2016
CO-OP RESEARCH ASSISTANT - UPSTREAM BIOPROCESSING — Waltham, MA

- Set up and maintained perfusion bioreactors to test novel filtration systems under development.
- Recorded, interpreted, and presented data from collected samples.
- Maintained a clean and orderly lab environment and was responsible for ordering supplies.

GENERAL DIGITAL — May 2013 – Sep 2013
DATA ENTRY CLERK — South Windsor, CT

- Organized files for safety critical software and assisted in organizing inventory.

Teaching Experience

NORTHEASTERN UNIVERSITY
TEACHING ASSISTANT FOR GENERAL BIOLOGY II LAB – BIOLOGY DEPARTMENT

Sep 2016 – Dec 2016
Boston, MA

- Taught course material for the laboratory portion of Gen. Bio. II, including dissection demonstrations.
- Created and graded exam materials.
- Held office hours and proctored exams.

Skills and Techniques

- CRISPR gene editing
- Mammalian cell culture
- Fluorescence Activated Cell Sorting (FACS)
- Plasmid cloning (Gibson Assembly, Endonuclease, etc.)
- Lentivirus generation and transduction
- Transfection (Electroporation and lipid-based)
- Nucleic Acid purification and reverse transcription
- RT-qPCR and PCR based assays (e.g. Surveyor)
- Western Blot
- Immunoprecipitation Assay
- Tissue Staining
- High content imaging and image analysis
- R programming
- Graphpad Prism
- Image J / FIJI

Publications

Multiplexed and reproducible high content screening of live and fixed cells using the Dye Drop method

Mills, C. E., Subramanian, K., Hafner, M., Niepel, M., Gerosa, L., Chung, M., Victor, C., Gaudio, B., Yapp, C., & Sorger, P. K. (2021). Multiplexed and reproducible high content screening of live and fixed cells using the Dye drop method. Preprint. https://doi.org/10.1101/2021.08.27.457854

Proteomic profiling of breast cancer cell lines and models

Kalocsay, M., Berberich, M., Everley, R., Nariya, M., Chung, M., Gaudio, B., Victor, C., Bradshaw, G., Hafner, M., Sorger, P. K., Mills, C., &; Subramanian, K. (2020). Proteomic profiling of breast cancer cell lines and models. Preprint. https://doi.org/10.1101/2020.12.15.422823

An enhanced isothermal amplification assay for viral detection

Qian, J., Boswell, S. A., Chidley, C., Lu, Z.-xiang, Pettit, M. E., Gaudio, B. L., Fajnzylber, J. M., Ingram, R. T., Ward, R. H., Li, J. Z., & Springer, M. (2020). An enhanced isothermal amplification assay for viral detection. Nature Communications, 11(1). https://doi.org/10.1038/s41467-020-19258-y

A Multi-center Study on the Reproducibility of Drug-Response Assays in Mammalian Cell Lines

Niepel, M., Hafner, M., Mills, C. E., Subramanian, K., Williams, E. H., Chung, M., Gaudio, B., Barrette, A. M., Stern, A. D., Hu, B., Korkola, J. E., Gray, J. W., Birtwistle, M. R., Heiser, L. M., Sorger, P. K., Shamu, C. E., Jayaraman, G., Azeloglu, E. U., Iyengar, R., … Devlin, K. (2019). A multi-center study on the reproducibility of drug-response assays in mammalian cell lines. Cell Systems, 9(1). https://doi.org/10.1016/j.cels.2019.06.005