Jonathan B. Busquets

Curriculum Vitae

The University of Texas at Austin
Austin, TX
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239-887-0962

EDUCATION

The University of Texas at Austin, Austin, TX — Aug 2020 - Present
Ph.D. Nutritional Sciences

Rice University, Houston, TX — May 2020
B.S. Biochemistry and Cell Biology | **GPA**: 3.73/4.00

RELEVENT SKILLS

- **Research Methods**: Molecular Biology & Cloning, Cell Culture, Confocal Microscopy
- **Programming**: MATLAB, R, Python
- **Languages**: Native proficiency in Spanish

RESEARCH EXPERIENCE

Rice University — August 2018 – May 2020
Undergraduate Researcher
Advisor: Aryeh Warmflash

- Explored the signaling dynamics responsible for anterior-posterior patterning of the developing neural tube using a novel *in vitro* hESC platform
- Established a fluorescent neural crest fate reporter line for real-time hESC imaging experiments
- Helped develop a light-sensitive biosensor that controls endogenous levels of BMP to study the effects of morphogen gradients in cultured hESCs

University of Illinois, Chicago — June 2019 – August 2019
Carnegie Fellow
Advisor: Owen Tamplin

- Established a photoactivable GFP to track emergence of alternate-fate hematopoietic stem cells in live zebrafish embryos
- Injected, raised, and imaged transgenic zebrafish to confirm viability of the system

MD Anderson Cancer Center — June 2018 – August 2018
CPRTP Trainee
Advisor: Carrie Daniel-McDougall

- Conducted a literature review to evaluate the biological significance of diet-microbiome relationships identified in a cohort of healthy individuals
- Statistically analyzed primary 16S rDNA and whole-genome shotgun sequencing data to illustrate experimental trends

Rice University — August 2016 – December 2017
Undergraduate Researcher
Advisor: Janet Braam

- Cloned constructs to introduce mutations to *Arabidopsis* peroxisomal membrane transport proteins
- Grew mutant plants and exposed them to different environmental stressors to see the effect of mutations on plant defense mechanisms

FELLOWSHIPS AND AWARDS

- Dean's Strategic Fellowship, University of Texas, Austin 2020
- Graeme Carnegie Research Fellowship, University of Illinois, Chicago 2019
- NCI R25E Cancer Prevention Research Training Program, MD Anderson Cancer Center 2018

PROFESSIONAL AND TEACHING EXPERIENCE

- Weight Room Supervisor, Gibbs Recreation Center, Rice University April 2018 – April 2020
- Discussion Group Leader, Introductory Biology, Rice University August 2017 – January 2018

ACTIVITIES AND SOCIETIES

- Questbridge Alumni Network, Member May 2020 - Present
- Rice Health Advisor, Will Rice College, Rice University August 2018 – May 2020
- Secretary, Will Rice College, Rice University March 2018 – March 2019

PRESENTATIONS

Busquets, J., Hoffman, K., Kook, J. H., Petrosino, J. F., Schembre, S. M., Vannucci, M., Daniel, C. R. Characterizing the influence of dietary factors on the gut and oral microbiome of healthy adults (2018, Aug). CPRTP Summer Exposition.

Zheng, J., Hoffman, K., Shivappa, N., **Busquets, J.**, Chen, J., Hanash, S.,Schembre, S. M., Hebert, J., Petrosino, J. F., Wei, P., Daniel, C. R. Inflammatory potential of diet in relation to the gut microbiome among persons at varied risk of colorectal neoplasia (2019, July). AACR.