

Alexa D. Pérez-Torres
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EDUCATION

BS (Biology), University of Puerto Rico at Cayey (GPA 3.70) August 2015 - June 2019

AWARDS AND HONORS

Medal to Graduating Student with Highest GPA in Biology Major June 2019
ABRCMS Student Travel Awardee November 2018
PSRAP Summer Internship Travel Awardee June 2015 – August 2015
Best Oral Presentation at the Pre-College Winter Symposium December 2014

RESEARCH EXPERIENCE

NIH-Funded PREP Scholar at Johns Hopkins School of Medicine July 2019 – Present

Mentor: Dr. Loyal Goff

Cell Cycle Kinetics Influence on Progenitor Competence of the Developing Mammalian Cortex

There is evidence that different cell cycle times affect the nature of divisions in neural progenitors. I am developing a single-cell sequence-based assay to study how changes of cell cycle length in progenitor populations of the developing mouse cortex influence cell fate and layer specification.

Summer Research Internship at CIB, Spanish National Research Council June 2018 - August 2018

Mentor: Dr. Maria Cristina Vega

Production and Chemical Inactivation of the Immune-evasive Factor GAPDH from Gram+ Pathogens

I expressed and purified Glyceraldehyde 3-phosphate dehydrogenase (GAPDH) from 3 gram-positive pathogenic bacteria to resolve the protein's interaction with Complement component 5a (C5a). It has been demonstrated that this protein has the capacity to sequester C5a and interrupt the human immune response, conferring the bacteria immune evasion.

PSRAP Summer Internship at University of Texas at El Paso June 2015 - August 2015

Mentor: Dr. Russell Chianelli

Anti-proliferative effects of Mayan Pigments on Breast Cancer and Colon Cancer Cell Lines

The lab had previously demonstrated that ancient Mayan pigments could drastically affect cancer cell viability in a dose-dependent fashion. To support this idea, I assayed decrease of growth and proliferation of cancer cells in response to timed exposures to ancient Mayan Thioindigo.

PROFESSIONAL PRESENTATIONS AND SEMINARS ATTENDED

Society for Neuroscience, Chicago, Illinois (2019)

Pérez-Torres, A., Goff, L.A. (2019) Cell Cycle Kinetics Influence on Progenitor Competence of the Developing Mammalian Cortex. The Johns Hopkins Univ. School of Medicine, Baltimore, MD. *Chalk talk*

Pérez-Torres, A., Goff, L.A. (2019) Cell Cycle Kinetics Influence on Progenitor Competence of the Developing Mammalian Cortex. The Johns Hopkins Univ. School of Medicine, Baltimore, MD. *Chalk talk*

Pérez-Torres, A., Vega M.C. (2018) Production and Chemical Inactivation of the Immune-evasive Factor Glyceraldehyde 3-Phosphate Dehydrogenase of Gram + Pathogens. Annual Biomedical Research Conference for Minority Students (ABRCMS), Indianapolis, IN. *Poster*

Pérez-Torres, A., Vázquez E. (2017) Isolation and Characterization of Bacteriophages Reyvirux, PiccoNuvvo and NosilaM from Soils of Puerto Rico: Structural and Functional Annotation of Bacteriophage Nosilam; and Independent Research Projects. HHMI Science Education Alliance-Phage Hunters Advancing Genomics and Evolutionary Science (HHMI SEA-PHAGES) Symposium, Cayey, PR. *Oral*

Pérez-Torres, A., Chianelli R. (2015) Use of Thioindigo Mayan Pigment as Treatment Against Proliferation of Breast Cancer Cells and Colon Cancer Cells. AGMUS Research Symposium for Undergraduate and Graduate Students, San Juan, PR. *Poster*

Pérez-Torres, A., Santiago N. (2014) Analysis and Susceptibility of the HFE Gene Regarding Hemochromatosis. AGMUS Winter 2014 Pre-college Research Symposium, San Juan, PR. *Oral*