

## CURRICULUM VITAE

**Braulio Bonilla, PhD.**

Phone number: (412) 557-2940

e-mail: brualiobonilla@pitt.edu

### Current position:

**2021-current**

Postdoctoral Researcher. Department of Biological Sciences. University of Pittsburgh Kenneth P. Dietrich School of Arts and Sciences.

Pittsburgh, PA, U.S.

Project title: "Determining the role of eRNAs in gene expression regulation"

Advisor: Sarah J. Hainer, PhD.

### Education:

**2015-2020**

**Ph.D. Molecular Pharmacology Graduate Program,**

School of Medicine, University of Pittsburgh, Pittsburgh, PA, U.S.

Thesis title: "The Shu complex promotes error-free bypass of abasic sites and 3-methylcytosines"

Advisor: Kara Bernstein, PhD.

**2008-2013**

**Master's degree in Biological Sciences, Cell and Molecular Biology.**

School of Sciences, Universidad de la Republica, Uruguay.

Thesis title: "Experimental validation of the tumor suppressor CHD5 as a target of microRNAs regulation".

Advisor: Alfonso Cayota, PhD, MD. (cayota@pasteur.edu.uy).

Thesis laboratory: Functional Genomics Laboratory, Institut Pasteur of Montevideo.

**2004-2008**

**Bachelor's degree in Biological Sciences.**

School of Sciences, Universidad de la Republica, Uruguay.

Thesis title: "Genetic characterization of Canine Distemper Virus in Uruguay, through Hemagglutinin protein gen analysis".

Advisor: Yanina Panzera, PhD (ypanzera@fcien.edu.uy).

Thesis laboratory: Evolutionary Genetics Section, School of Sciences, Universidad de la Republica, Montevideo, Uruguay.

### Research positions:

**2011-2015** Research Technician at the Functional Genomics Laboratory, Institut Pasteur of Montevideo, concurrent with Master's degree

### Fellowships & Awards:

**2015-2017** Fulbright Grantee for Graduate Studies by Fulbright U.S. Student Program.

**2011-2013** National M.Sc. fellowship from "National Agency of Research and Innovation" (ANII) of Uruguay. Title: "miRNAs regulation of CHD5 and its effect on tumorigenesis".

**2010** Institut Pasteur of Montevideo Internal Congress, Best Poster.

### Publications and Reviews

- **Bonilla B\***, Hengel SR\*, Grundy MK, Bernstein KA. *RAD51 Gene Family Structure and Function. Annual Reviews of Genetics*, Jul 14, 2020. Online ahead of print. Vol. 54, 2020. \*Equal Contribution
- Rosenbaum JC\*, **Bonilla B\***, Hengel SR\*, Mertz TM, Herken BW, Kazemier HG, Pressimone CA, Ratterman TC, MacNary E, De Magis A, Godin SK, Van Houten B, Normolle DP, Sung P, Das SR, Paeschke K, Roberts SA, VanDemark AP, Bernstein KA. *The Rad51 paralogs facilitate a novel DNA strand specific damage tolerance pathway. Nature Communications*, 10(1): 3515. Ago 05, 2019. \*Equal Contribution
- Rojas JJ, Sampath P, **Bonilla B**, Ashley A, Hou W, Byrd D, Thorne SH. *Manipulating TLR Signaling Increases the Anti-tumor T Cell Response Induced by Viral Cancer Therapies. Cell Reports*, 15(2):264-73. Apr 12, 2016
- Tosar JP, Gámbaro F, Sanguinetti J, **Bonilla B**, Witwer K, Cayota A. *Assessment of small RNA sorting into different extracellular fractions revealed by high-throughput sequencing of breast cell lines. Nucleic Acids Research*, V.; 43 (11), p.: 5601-5616. May 4, 2015.
- Panzera Y, Calderón MG, Sarute N, Guasco S, Cardeillac A, **Bonilla B**, Hernández M, Francia L, Bedó G, La Torre J, Pérez R. *Evidence of two co-circulating genetic lineages of canine distemper virus in South America. Virus Research*, v.: 163(1), p.: 401-404, 2012.
- Sarute N, Pérez R, Francia L, Hernández M, Bedó G, **Bonilla B**, Guasco S, Cardeillac A, Panzera Y. *First molecular diagnostic and partial characterization of the nucleoprotein gene of Canine Distemper Virus in Uruguay. Veterinaria*, Vol. 47 N° 182, p.: 7-13, 2011.

- García-Silva MR, Tosar JP, Frugier M, Pantano S, **Bonilla B**, Esteban L, Serra E, Rovira C, Robello C, Cayota A. *Cloning, characterization and subcellular localization of a trypanosoma cruzi argonaute protein defining a new subfamily distinctive of trypanosomatids*. *Gene*, v.: 466 1-2, p.: 26 - 35, 2010.

### **In Preparation:**

**Bonilla B**, Mertz TM, Rapchak KS, Pressimone CA, MacNary E, Roberts SA, Bernstein KA. *The Shu complex promotes error-free bypass of 3methyl cytosines*, In preparation.

### **Invited Oral Presentation:**

**2020** Environmental Mutagenesis and Genomics Society Annual Meeting:  
Environmental Genomics: Mechanisms & Approaches For Genomic Integrity.  
September 12-19, 2020, virtual due to COVID-19. *The yeast Shu complex functions in the error-free bypass of DNA abasic sites*.

### **Teaching Activity:**

**2014-2015** Lecturer at the “Biochemistry” course of the Biotechnology course track. ORT University of Uruguay.

**2007** Teaching assistant at the “Genetics” course of the Biochemistry and Biology course tracks. School of Sciences, Universidad de la Republica.

### **Technical skills:**

- Molecular biology: DNA: isolation, cloning, PCR, electrophoresis, RFLP, site-directed mutagenesis, FISH. RNA: isolation, retro-transcription, northern blot. Protein: isolation, quantification, western blot, SDS-PAGE, staining, co-immunoprecipitation, nuclear and chromatin fractionation.
- Cell culture: cell line maintenance, transfection of nucleic acids, immunofluorescence, luciferase assay. Fluorescence microscopy.
- *Saccharomyces cerevisiae* model: Crossing, dissection, knock-out, genomic integration, transformation, mutagenesis assays, sensitivity assay, survival assay, recombination assay, spheroplasting, yeast-two-hybrids.

### **References:**

**1. Sarah J. Hainer**, Ph.D. (Postdoctoral advisor), Assistant Professor, Department of Biological Sciences. University of Pittsburgh Kenneth P. Dietrich School of Arts and Sciences. Pittsburgh, PA, U.S. [Sarah.Hainer@pitt.edu](mailto:Sarah.Hainer@pitt.edu), 412-383-3435

**2. Kara A. Bernstein**, Ph.D. (Ph.D. mentor), Associate Professor of Pharmacology and Chemical Biology University of Pittsburgh School of Medicine. Pittsburgh, PA, U.S. [karab@pitt.edu](mailto:karab@pitt.edu), 412-864-7742.

**3. Alfonso Cayota**, M.D, Ph.D. (M.S. mentor), Professor at the Basic Medicine Department, Hospital de Clinicas, School of Medicine, Universidad de la Republica. PI Functional Genomics Laboratory, Institut Pasteur of Montevideo. [cayota@pasteur.edu.uy](mailto:cayota@pasteur.edu.uy)