ADRIANA N. MEJIA PITTA

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EDUCATION

B.S. in Biology — Jan 2015 – July 2020

Universidad Peruana Cayetano Heredia (UPCH), Lima, Peru
- GPA: 3.77/4.0 (15.79/20.00)
- Rank: 11th in a class of 250 students.
- B.S. Thesis defended with excellence*:* "Determination of the most favorable area of fusion of anti-EGFR VHHs on the surface of *Thermotoga Maritima's* encapsulin nanocompartments for drug delivery."
- *Relevant Coursework:* Bacterial Genetics, Cell Signaling, Statistics & Probability, Biostatistics in Research, Mathematics I & II (Calculus I & II), Physics I & II, Organic Chemistry, Intro to Computer Programming.

Special Student — Feb 2019 – May 2019

Massachusetts Institute of Technology (MIT), Cambridge, MA
- GPA: 5.0/5.0
- Successfully completed a full course-load quarter in the Biological Engineering Department.
- *Relevant Coursework*: Engineering the Immune System in Cancer and Beyond, Neurotechnology in Action, Molecular Basis of Infectious Disease.

RESEARCH EXPERIENCE

Full-time Research Assistant — Nov 2019 – Present

De la Fuente Lab – University of Pennsylvania, Philadelphia
Project: Development of an engineered probiotic for *in situ* gut microbiota remodeling
- Conceptualized and engineered a novel *E. coli Nissle* living therapeutic for efficient production and secretion of an antimicrobial peptide to specifically target gut bacteria strains.
- Explored strategies for antimicrobial peptide production in non-model probiotic strains which led to a first author review article (submitted).

Research Assistant — Jan 2018 – Sept 2019

Single-Molecule Biophysics Laboratory UPCH, Lima, Peru
Project: Development of whole-cell biosensor to analyze activity of *M. tuberculosis's* RNA polymerase *in vitro*.
- Carried out the DNA cloning workflow to construct the synthetic gene circuit in *E. coli*.
- Aided in primer design.

PEER-REVIEWED PUBLICATIONS

Mejía-Pitta, A. Broset, E. De la Fuente-Nunez, C (2020). Probiotic engineering strategies for heterologous production of antimicrobial peptides. Submitted to Annual Reviews Biomedical Engineering.

HONORS AND AWARDS

ABRCMS 2020 Winner — Nov 2020
Awarded for best poster presentation in the category "Engineering, Physics, and Mathematics".

AllBiotech 2021 Leader — Sept 2020
Selected as one of the 100 Latin American leaders in biotechnology to participate in the 2021 summit in Argentina to discuss challenges the bio-economy faces in the region to develop solutions and initiatives.

Excellence Award for B.S. Thesis Project — April 2020
Unanimous decision awarded by the thesis jury composed of three experts in the field of research.

Travel grant awarded by UPCH — Dec 2018
Funding awarded for semester abroad at MIT.

POSTERS & PRESENTATIONS

Mejía-Pitta. A*, Broset. E, De la Fuente-Nunez. C (2020). Development of an engineered probiotic for *in situ* gut microbiota remodeling (Poster). Annual Biomedical Research Conference of Minority Students (ABRCMS).

Mejía-Pitta. A*, Broset. E, De la Fuente-Nunez. C (2020). Development of an engineered probiotic for *in situ* gut microbiota remodeling (Poster). BioAcCES Conference – Rockefeller University.

Mejía-Pitta. A*, Peeters. T* (2019). Inquiry-based science education in metal polluted areas in Peru: Training teachers on how to teach science by the use of biosensors (oral presentation). Global Community BioSummit – MIT Media Lab. Cambridge, MA**.

Mejía-Pitta. A*, Padilla. P* (2018). Global Perspectives Panel: The Bridge Between Peruvian Society and Academia (oral presentation). Global Community BioSummit – MIT Media Lab – Cambridge, MA.

Mejía-Pitta. A* (2018). In Situ DIY Community Lab, Initiative Presentation (poster). Global Community BioSummit – MIT Media Lab, Cambridge, MA.

*Denotes presenting authors
**Aided in the consolidation of a collaborative project between UPCH and Erasmushogeschool Brussels.

LEADERSHIP & OUTREACH

FirstHand Philly – Mentor Oct 2020 – Spring 2021
-Conducted virtual laboratory tour for middle school students nationwide to explain pathogenic and commensal bacteria.
-Designed a BioArt program for middle school students from Philadelphia. To be held online in Spring 2021.

Catalysis: Community Science Education – Founder July 2020 – Present
- Educational project with the overarching goal of reaching the lowest-income populations in Peru and encouraging them to pursue careers in STEM by using DIY biology techniques, basic science education, and online learning.

Journal Club Peru – Mentor & Coordinator Aug 2018 - Present
- Initiative to boost the scientific development of STEM undergraduate students across several Peruvian universities.
- Mentored a group of five third-year biology students in effectively reading, analyzing and discussing scientific articles about biomedical engineering and synthetic biology.
- Coordinated and moderated scientific outreach talks with international senior researchers for online outreach.

In Situ DIY Community Lab – Board of Directors & Instructor Sept 2018 – Sept 2019
- Student-run organization that sought to offer accessible techniques to explore science regardless of access to a laboratory. Held self-created workshops in various parts of Peru.

CONFERENCES

- **ABRCMS 2020** (Poster, judge, and participant)
- **BioAcCES 2020** (Poster and participant)
- **Global Community BioSummit 2019** – MIT Media Lab (Speaker and participant)
- **Global Community BioSummit 2018** – MIT Media Lab (Speaker, instructor, participant)

SKILLS

Molecular Biology & Microbiology: Plasmid and primer design, bacterial culture (anaerobic & aerobic), DNA extraction, digestion and ligation of DNA fragments, bacterial transformation & electroporation, Gibson Assembly, gel electrophoresis, PCR, MIC, bacterial growth curves, CFU studies, western blot, mice model experiments and handling.
Programming & Software: Proficient in Stata, Snap Gene, Benchling, Graphpad Prism. Conversational in Python, MATLAB.
Languages: Native Spanish speaker. Advanced English (TOEFL iBT 113). Intermediate in French (DELF A1/B1)