

# Marco David Santillán Pazmiño

PhD Candidate in Biomedicine, Immunology and Molecular Biology / Biotechnology Engineer / Allbiotech Leader 2021 / #MITCOVID19Challenge mentor / Volunteer in the Network of Young Ambassadors of Ecuador

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# **ABOUT ME**

Marco Santillán is a graduate of the Biotechnology Engineering career at UDLA, Quito - Ecuador. Lover for science and social activist, he carries out innovative projects, is friendly to the environment, seeking to impact on a social and ecological level. He was part of a research group of Iván Moya, where he studied the role of Hippo pathway in cancer, regeneration, and organ growth. He currently has a doctoral fellowship to study the molecular and immunological pathways associated with chronic rejection in solid organs (liver and intestine) in humans and rats.

### **EDUCATION**

- PhD Candidate in Biomedicine, Immunology and Molecular Biology (2023 now)
  - Universidad de Buenos Aires Argentina
- Degree in Biotechnology Engineering (2021)

Universidad de las Américas - Ecuador

Young Ambassador – Democracy, Leadership and Civic Education (2013)

University of Delaware and the U.S. Department of State

### **SKILLS**

**Techniques:** Excel, Word, PowerPoint, NCBI: Primer Blast (Primer Design and Analysis), IDT Oligoanalycer Tool, Nebcutter, PDB; Uniprot; SPSS; SnapGene; ImageJ; BioRender; Nucleic Acid Extraction; qPCR; Cáncer; Immunostaining, Pathways. Chronic rejection.

**Personal:** Leadership, proactivity, teamwork, responsibility, Networking.

#### **EXPERIENCIA PROFESIONAL**

# Young Leader in Biotechnology of Latin America and the Caribbean

ALLBIOTECH 10/2020 - present

An active, outstanding, committed, and passionate person for proposing solutions, acting, and contributing to the improvement of my environment. Through my leadership, teamwork, and Ecuadorian identity, I constantly transform the community through Biotechnology and bioeconomy, always seeking collaboration and the common good.

#### Researcher / Thesis student in the Research laboratory UDLA - Biomedicine Area

University of the Americas aliado con la USFQ, ESPE y KU LEUVEN, Bélgica 02/2019 – 02/2021

"Roles of Hippo and CAR signaling pathways in liver growth, homeostasis and disease". Our strategy was to use the murine liver as a study model to investigate the genetic regeneration, growth, and cancer programs triggered by the activation of Hippo-YAP / TAZ. Skills: Handling and caring for mice - Intraperitoneal and hydrodynamic injection, Immunostaining, immunofluorescence, and qPCR

#### Passant at the Molecular Biology and Genetic Engineering Laboratory

University of the Americas 06/2018 - 05/2019

Activities: Electronic inventory of supplies and reagents; preparation of solutions: buffers, reagents, culture media, etc. Performing molecular biology techniques: extraction, visualization and quantification of DNA and detection by PCR. Preparation of high efficient competent cells (E. coli) "Hanahan method". Transformation of bacteria with the pUC19 vector.

# Researcher student and Passant at the UDLA Research Laboratory - Plant Biotechnology Area

University of the Americas 02/2018 – 09/2018

Activities: Reagent preparation - Assistance in nucleic acid extraction - Nucleic acid quantification (Nanodrop) - End-time PCR - Assay maintenance and data collection - Assistance in writing a book chapter

#### **Passant at the Clinical Laboratory - Biochemist**

SEABIO - Dr. Henry Merino 02/2018

Biochemical Analysis Services, Hematology, Enzymes, Blood Tests, Phlebotomy ... etc. Equipment maintenance. Extraction and Handling of biological samples, inventory management and primary waste management.

#### Monitor in Biomedicine, Genetic Engineering, Molecular and Plant Biology.

Academic Counseling - Autonomous 06/2019 - present

I collaborate in external advice on different branches of biotechnology, such as biomedicine, genetic engineering, and other subjects, to students of related careers in various universities in Ecuador, such as University San Francisco of Quito, University International of Ecuador, University Pontifical Catholic of Ecuador, University Equinoctial Technological, among others.

# **VOLUNTEERING**

#### National Volunteer as Young Ambassador - Ecuador

Network of Young Ambassadors of Ecuador 10/2013 - Present

Increase skills and abilities in social work. Seek to consolidate leadership through planning, execution, and evaluation of projects that respond to the needs of the most vulnerable sectors, strengthening their development and positive transformation.

#### **MENTOR**

MIT COVID-19 Challenge 06/2020

Mentor for the MIT Latin America vs. COVID-19 Challenge (Hackathon), with over 1,500 attendees.

#### **CITIZEN AMBASSADOR AGENDA 2030**

Young Americas Business Trust 07/2018 - 12/2018

Agenda 2030 Citizen Ambassadors Program promoted by The Millennials Movement in strategic alliance with the Action Campaign for the United Nations Sustainable Development Goals, the Young Americas Business Trust. Activities of workshops, surveys, and educating students to promote the understanding and articulation of these SDGs with their daily lives.

#### **MENTOR**

IMPAQTO 05/2020

In collaboration with the Massachusetts Institute of Technology MIT, in this hackathon I will participate as a mentor, being a volunteer to direct or direct the projects of teams and participants, providing advice and prior knowledge about startups. In this case, a study was made of Participatory Design Mechanisms in an Emergency Situation Hack the Crisis: Migrants 2020.

# CONGRESSES, SEMINARS AND COURSES

First French-Argentine Workshop on Pancreatic Cancer Research – CONICET – Centre de Recherche en Cancérologie de Marseille - 2023

Biomedical Translational Research Conference: from the allowance to the patient Faculty of Exact Sciences - 2023

Annual Meeting of the Argentine Society of Immunology – speaker with the topic "ASSESSMENT OF IL33/ST2 AXIS IN HEPATIC CHRONIC REJECTION. INITIAL **RESULTS." - 2023** 

Spectral Flow Cytometry Conference. Institute of Immunology, Genetics and Metabolism (INIGEM, UBA-CONICET) - 2023

17th International Conference on Translational Research and Precision Medicine -2023

Global Summer School 2021: Biomedicine & Biotechnology. Instituto Politécnico Nacional - 15/07/2021

Third Summit Allbiotech 2021 Virtual. ALLBIOTECH - Rosario Argentina 04 -09/05/2021

Formulation & Delivery Europe: Online . Oxford Global Conferences 21/04/2021 Global Bioeconomy Summit 2020. BIOCOM AG 11/2020

Hippo Signalling in Development Disease and New Therapies Virtual Conference 2020. Peter MacCallum Cancer Centre 11/2020

Integrated organoid science: Stem cells, Enginnering, Medicine . RIKEN BDR 11/2020

International Seminar on Biotechnology and its Applications. University National of Asuncion 11/2020

9th edition of the International Congress of Biotechnology Quorum. Tecnológico de Monterrey 10/2020

Basics of CRISPR/Cas9; Cre-lox Technology in Mouse Modeling. The Jackson Laboratory 2020

MIT New York City Grand Hack to energize and connect the best minds across the health ecosystem to solve healthcare's biggest challenges and to teach healthcare entrepreneurship and digital strategies to scale medicine. Massachusetts Institute of Technology 11/2019

#### REFERENCES

#### Fabio Idrovo Espín. PhD

Member of the European Federation of Biotechnology Researcher, Plant Biotechnology Centro de Investigación Científica de Yucatán, CICY +593 984113785

#### **Zayda Morales** Moreira. PhD

University of Saskatchewan. Saskatoon – Canada. +1 3062605714. zpm118@mail.usask.ca

#### Iván Moya. PhD

Laboratory of Growth Control and Cancer Research Department of Molecular and Developmental Genetics – VIB11. K.U. Leuven - Belgium. **UDLA** - Ecuador ivan.mova.molina@udla.edu.ec

#### **ACADEMIC HONORS**

#### **Scholarship for Phd Candidate**

Universidad de Buenos Aires / Universidad Favaloro / FONCyT

# Young Leader in Biotechnology from Latin America and the Caribbean - 2021

#### **ALLBIOTECH**

I am among the 100 most outstanding people with leadership qualities in Biotechnology in the entire region.

#### **International Representative at** MIT NEW YORK CITY GRAND **HACK - 2019**

Massachusetts of Technology

MIT Hacking Medicine has a mission to energize and connect the best minds across the health ecosystem to solve healthcare's biggest challenges and to teach healthcare entrepreneurship and digital strategies to scale medicine.

#### **Wonderful Ideas 2018**

University of the Americas

Finalist in the academic event "Wonderful Ideas" with the project "Development of an intelligent product that raises the self-esteem of older adults" by competing against more than 500 projects throughout the University

#### "Day **First** place Biotechnology, Science and Life"

# University of the Americas

Obtaining first place with the topic "Evaluation of the enzymatic activity of peroxidase enzymes present in the leaves of" Mentha piperita "with future biotechnological applications" when competing with different research projects at the career level.

# **Academic Excellence Scholarship** for Undergraduate studies

University of the Americas For academic merits

#### Young Ambassador Ecuador 2013

US Embassy and the University of Delaware

Intercultural exchange between Ecuador and the United States.

#### **LANGUAGES**

Español

# **Gabriel Gondolesi. PhD**

Professor of Surgery, Director of Pediatric Liver Transplant, Associate Director of Intestinal Transplant. Georgetown Transplant Institute Universidad de Georgetown - USA gegondolesi@me.com