

PERSONAL INFORMATION

Isabella Garcia Caffaro



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Sex Female | Date of birth 19/05/1994 | Nationality Guatemalan

WORK EXPERIENCE

November 2018 – to date

Co-founder

MayanBio <https://www.facebook.com/MayanBioGuate/>

- Group of young scientists that want to promote the biotechnology and bioeconomy in the country. We have four define lines of work: Science training for teachers, science for kids, strengthening the biotechnology field and bio-entrepreneurship with technology transfer. I am in charge of the latter do to my experience in the field and my job at the TTO.

January 2018 – to date

Technology Transfer Advisor

Universidad del Valle de Guatemala, Guatemala <https://www.uvg.edu.gt/>

- Facilitating transfer of R&D intensive products into scalable, replicable, sustainable social, economic as well as environmental impact
- Updating and diffusing university's intellectual property policies
- Workshops facilitation and accompanying new product development projects (up to the minimum viable product stage) for students, lecturers and researchers working on transforming their knowledge into commercially viable innovations. This includes work with indigenous communities in university's countryside facilities
- Carry out technological scouting activities within the university in order to keep the portfolio of projects and technologies based on R&D.
- Value technologies / ventures in early stages through the realization of Road Maps, market studies and intellectual property analysis.
- Search for technology partners for the execution of R&D projects with public or private financing.
- Organization of University-Company linking events.
- Execute R&D and technology transfer workshops organized by the OTT.
- Establish a legal structure to promote entrepreneurship within the University.

May 2016 – to date

Research fellow

Center of Biotechnology Studies, Universidad del Valle de Guatemala

<https://www.uvg.edu.gt/investigacion/ceb/>

Programa Moscamed de Guatemala <https://moscamed-guatemala.org.gt>

We are currently working with Moscamed on various R&D projects that focus on the increase of sterile fruit flies production using molecular biology techniques.

- Gene silencing (RNAi) in *Anastrepha ludens* and *Ceratitis capitata*.
Conduction and design of experiments to increase the efficiency of the mass production of sterile fly males by selecting male only progeny, lowering the production cost up-to a 50%.
- Microbial quality control in production
Design and implementation of microbial assays to determine the presence of pathogen microorganisms like *Klebsiella pneumoniae*, *Morganella morganii*, and other microbial strains.

EDUCATION

2018 - 2019 **Master of Science**
Universidad del Valle de Guatemala, Guatemala, CA.
▪ Project Design and Management

2013 - 2017 **BSc.**
Universidad del Valle de Guatemala, Guatemala, CA.
▪ Biochemistry and Microbiology

RESEARCH AND TEACHING EXPERIENCE

October 2016 – to date **Lecturer**
Universidad del Valle de Guatemala, Guatemala <https://www.uvg.edu.gt/>
▪ Workshops in Molecular Biology to students and industry
▪ Workshops of technology transfer and innovation to researchers, faculty members and students
▪ Teaching R&D management to Allbiotech organization

June 2019 **Research Internship**
Laboratory of Biology and Biotechnology at Pavia University, Italy
▪ Create a male-only progeny using gene silencing (RNAi) in *Anopheles albimanus* (conduction and design of experiments)

September 2017 **Research Internship**
Lawrence Berkeley National Laboratory, University of Berkeley California
▪ DNA extraction from environmental samples and data analysis of sequences obtained by Sanger and Illumina technologies.

June – November 2017 **Research Internship**
CENGICAÑA (Sugar Cane Center of Research and Skill training), Guatemala
▪ Creation of new variety of sugar cane (*Saccharum officinarum*) resistant to yellow leaf virus (SYLV). Using Gateway Cloning, PCR and bacterial transformation.

January – November 2017 **Teacher Assistant**
Universidad del Valle de Guatemala, Guatemala
▪ Laboratory Course of Microbial Physiology
▪ General Microbiology

June – November 2015 **Research Internship**
Laboratory of Molecular Entomology and Parasitology affiliated to the Center of Disease Control (CDC) of the Universidad del Valle de Guatemala, Guatemala
▪ Analysis of resistance to pyrethroid insecticides in Malaria vector, *Anopheles albimanus*. Using PCR techniques.

October – November 2011

Internship

Laboratory of the Institute of Energy Resources of the Universidad Galileo, Guatemala

- Production of biodiesel from microalgae.

PERSONAL SKILLS

Mother tongue(s) Spanish

Other language(s)

| | UNDERSTANDING | | SPEAKING | | WRITING |
|--|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C2 | C2 | C2 | C2 | C2 |
| Replace with name of language certificate. Enter level if known. | | | | | |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

- Great verbal communication skills in Spanish and English
- Great written communication skills in Spanish and English

Organisational / managerial skills

- Leadership and team work, gained through coordinating multidisciplinary teams from universities and industry in innovation and technology transfer and research projects.
- Team work, I have worked in various types of teams from research teams to entrepreneurship.
- Conflict Resolution, I gained this through being part of different government commissions like the technical commission of biotechnology and agricultural biosecurity technical committee.
- People skills, gained through working in MayanBio, my venture, working in various research projects in different laboratories from the world, and being part of Allbiotech, organization that gathers
- Critical thinking, I gained this by designing and analysing data from various experiments throughout my career.
- Organization, I gained this through organizing a series of hackathons, innovation competitions and workshops.

Job-related skills

- I am comfortable managing multidisciplinary groups to achieve a common goal.
- I am proficient in translating research outcomes into innovations.

Digital skills

| SELF-ASSESSMENT | | | | |
|------------------------|-----------------|------------------|-----------------|-----------------|
| Information processing | Communication | Content creation | Safety | Problem solving |
| Proficient user | Proficient user | Proficient user | Proficient user | Proficient user |

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

- Great command of Microsoft Office suite, Publisher and Google's (word processor, spread sheet, presentation software)
- Good command of R statistical tool software

ADDITIONAL INFORMATION

Publications

- Garcia, I., Farchi, D., Álvarez, C., & Kim, S. 2019. <<Comportamiento de Klebsiella pneumoniae en ambiente de microgravedad simulada a distintos pH y concentraciones de carbenicilina>>. *Revista de la Universidad del Valle de Guatemala*, (37):109–115.

Honours and awards

November 2018 ▪ Selected as one of 100 Young Latin America Leader in Biotechnology by Allbiotech

November 2017 ▪ Magna Cum Laude, in BS

Memberships ▪ Delegate in Technical Commission of Biotechnology (CTIB) of the National Science and Technology System
▪ Representative of the CTIB in Agricultural Biosecurity Technical Committee of Guatemala (CTBAG)
▪ Allbiotech,
▪ Project Management Institute