

PERSONAL INFORMATION



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Date of birth 24 January 1997 | **Nationality** Ecuadorian

EDUCATION AND TRAINING

2021–2023 **Erasmus Mundus Joint Master Degree in Environmental Contamination and Toxicology (ECT+ EMJMD)**

Université de Bordeaux, Bordeaux, France

Universidade do Porto, Porto, Portugal

Euskal Herriko Unibertsitatea, Euskal Autonomia Erkidegoa, Spain

- The main goal of the ECT+ EMJMD programme is the formation of post-graduates in the knowledge developed in toxicology, ecotoxicology and chemistry for generating high-level technologists and scientists devoted to the scientifically based protection of the environment. By addressing emerging One-Health concepts and paradigms, the programme provide the scientific basis required for covering the goals of the new European policies.

2021 **ISO 9001, ISO 14001 AND ISO 45001 Integrated Management Systems Internal Auditor**

Ministerio del Trabajo, Quito, Ecuador

- Planning, organization and implementation of Quality, Environmental and Occupational Health and Safety Management Systems based on ISO 45001:2015 through internal audits, as well as to check the effectiveness of the management system.

2015–2020 **5-years Bachelor of Science in Chemistry (Graduated with honors)**

Yachay Tech University, Urcuquí, Ecuador

- Focused on training in organic, inorganic, physical-chemical, environmental chemistry, theoretical chemistry, analytical chemistry, including the management of advanced synthesis, characterization, and analysis techniques.
- Thesis: Comparison of concentration levels of nitrogen dioxide and tropospheric ozone in Ecuador and other latitudes.

WORK EXPERIENCE

January 2023 – July 2023

Master thesis student researcher

Environmental Sciences Institute (ICAM), University of Castilla-La Mancha, Toledo, Spain

- Master thesis project based on the Development of a new chemical analytical method based on magnetic nano-sorbents for the determination, isolation, and preconcentration of antibiotics in water samples.
- General objective: To develop and validate analytical methods for extraction and preconcentration of pollutants in samples of environmental interest using magnetic nano sorbent based on Stir Bar Sorptive Extraction (SBSE). The subsequent analytical determination will be quantitative and qualitative, using spectroscopic and chromatographic techniques.
- **Skills:** Antibiotics · High-performance liquid chromatography · Ultraviolet-visible spectroscopy · Stir Bar Sorptive Extraction (SBSE) · Environmental chemistry · Magnetic Nanoparticles Synthesis · R (Programming language) · Dynamic Light Scattering

August 2020 – July 2023 Researcher

Research Group Science For Kichwa, Ecuador

- The research group, "Science For Kichwa", has as its primary objective to break the barriers in scientific development and maintain the knowledge of indigenous peoples by promoting the Kichwa writing and supporting the improvement of the bilingual intercultural education system in Ecuador in compliance with the Objective number 4 of Sustainable Development of the 2030 Agenda of the United Nations Organization (Guarantee inclusive, equitable and quality education and promote learning opportunities)

September 2022 – January 2023 Master student researcher

Research Centre for Experimental Marine Biology and Biotechnology (PiE), University of the Basque Country, Plentzia, Spain

- Internship project about technology development for quality medical cannabis production in tropical climates. Project was based on the isolation and study of secondary metabolites of different varieties of Cannabis plants for medical purposes.
- **Skills:** Metabolomics · Cannabis · Sample preparation · Laboratory skills · Good laboratory practices · Research Aptitudes

February 2022 – June 2022 Master student researcher

Faculdade de Ciências Instituto de Ciências Médicas Abel Salazar(ICBAS), Universidade do Porto, Porto, Portugal

- Internship project about the synthesizing lipid nano-particles (LN) based on physiological lipids for the encapsulation of the insecticide lambda-cyhalothrin (LC) and evaluating their safety on different aquatic non-target species, such as plants Lemna minor and algae Raphi- docelis subcapitata using standard protocols. LN were synthesized under eco-friendly meth- ods (organic solvent-free).
- **Skills:** Nano-particle synthesis · R (Programming language) · Dynamic Light Scattering · Factorial Experimental Design · Safety Assessment

July 2020 – October 2020 Scientific consultant

Public Research Company CENTRO, Ibarra, Ecuador

- Technical assistance for the management of industrial hemp projects.
- Develop protocols for the extraction of cannabidiol and the production of bioplastics from industrial hemp.

July 2018 – August 2018 Environmental control area assistant

Department of Environmental Management of City Council, Pujilí, Ecuador

- Creation, development and evaluation of municipal ordinances related to environmental care.
 - Municipal ordinance for the implementation of good environmental practices.
 - Municipal ordinance for control and animal protection.
 - Municipal ordinance regulating outdoor advertising.
- Environmental control inspections at urban and rural areas.

January 2017 – March 2017 Research assistant

National Autonomous University of Mexico (UNAM), Mexico City, Mexico

- Development of the project and research article "Ice-nucleating particles in a coastal tropical site".
- Laboratory and field work to obtain the concentrations of atmospheric gases at the UNAM campus at Sisal, Yucatan.
- Training on meteorology and atmospheric systems courses at the Center of Atmospheric Sciences at the UNAM campus in Mexico City.
- Equipment handling for the determination of concentration and distribution of aerosols, INP, and analysis of atmospheric data (MOUDI-DFT, Condensation particle counter, LasAir Opti- cal particle counter, Biostage impactor).

October 2016 – December 2016 Research assistant

Yachay Tech University, Urcuquí, Ecuador

- Development of the project and research article "Comparison of tropospheric ozone and nitrogen dioxide concentration levels in Ecuador and other latitudes"
- Collection, analysis, and interpretation of atmospheric data

ADDITIONAL TRAINING**October 2020 Epidemiology for Public Health - Specialized Program**

Imperial College London – Coursera

- Calculation and appropriate interpretation measures to describe disease frequency, association, and attributable risk for given scenarios.
- Comparison and contrast of different epidemiological study designs to describe their strengths and weaknesses.
- Identification of different types of biases that may occur in epidemiological studies to apply strategies to reduce such biases.

October 2020 Validity and Bias in Epidemiology

Imperial College London – Coursera

- Study of causality in epidemiology and use of tools for exploration, identification, and control methods.
- Study of guidance factors on how to deal with bias in epidemiological research.

September 2020 Study Designs in Epidemiology

Imperial College London – Coursera

- Study of epidemiological designs, including cross-sectional and ecological studies, case-control and cohort studies.

September 2020 Measuring Disease in Epidemiology

Imperial College London – Coursera

- Use of epidemiology tools to conduct studies to describe the frequency of a disease or health-related condition.
- Application of strategies for prevention, identification strengths, and weaknesses of diagnostic tests.

September 2020 Medicinal Chemistry: The Molecular Basis of Drug Discovery

Davidson College – Coursera

- Measurement of the activity of enzymes and receptors.
- Application of approaches for optimizing a molecule into a safe and effective drug and techniques for discovering molecules with desired biological activity.

September 2020 Astrobiology and the Search for Extraterrestrial Life

University of Edinburgh – Coursera

- Study of the origin and evolution of life and the search for life beyond the Earth.

September 2020 Whole genome sequencing of bacterial genomes - tools and applications

Technical University of Denmark (DTU) – Coursera

- Study of chemicals in the environment and in the bodies and how they impact health.
- Study of policies and practices related to chemicals, exposures, toxicology, bio-monitoring, and their impact on health.

September 2020 **Chemicals and Health**

Johns Hopkins University – Coursera

- Study of chemicals in the environment and in the bodies and how they impact in health.
- Analysis of policies and practices related to chemicals, particularly related to exposures, toxicology, bio-monitoring, and their impact on health.

September 2020 **Drug Development**

University of California San Diego – Coursera

- Study and determination of how the new drug works in humans, its safety profile, and prediction of its dosage range.
- Study and determination of the phases involved in drug's development: early-stage clinical trial, proof of Concept (POC), and late-stage clinical phase.

August 2020 **DNA Decoded**

McMaster University – Coursera

- Use of practical techniques to use to analyze genetic risks.
- DNA manipulation, and development of new treatments for a range of different diseases.

September 2018 **Introductory L^AT_EX Course**

Yachay Tech University, Urcuquí, Ecuador

- Creation of L^AT_EX documents, management of citations and references with bibliographies styles.
- Use of mathematical equations, algorithms, number graphics, tables, and sections in L^AT_EX documents.

PUBLICATIONS

- [1] **Manuel A. Andino-Enríquez**, Sandra P. Hidalgo-Bonilla and Luis A. Ladino. "Comparison of tropospheric ozone and nitrogen dioxide concentration levels in Ecuador and other latitudes." In: *Latin American Journal of Biotechnology and Life Sciences* (2018). DOI: <http://dx.doi.org/10.21931/RB/2018.03.02.5>
- [2] Luis A. Ladino, Graciela B. Raga, Harry Alvarez-Ospina, **Manuel A. Andino-Enríquez** et al. "Ice-nucleating particles in a coastal tropical site". In: *Atmospheric Chemistry and Physics* (2019). DOI: 10.5194/acp-19-6147-2019
- [3] Luis A. Ladino, Graciela B. Raga, Harry Alvarez-Ospina, **Manuel A. Andino-Enríquez**, Irma Rosas, Eva Salinas, Leticia Martínez, Javier Miranda, Zyanya Ramírez-Díaz, Bernardo Figueroa et al. "The Importance of Biological Particles to the Ice Nucleating Particle Concentration in a Coastal Tropical Site". In: *Atmospheric Chemistry and Physics* (2018). DOI: 10.5194/acp-2018-1215
- [4] Jose E. Andino-Enríquez, **Manuel A. Andino-Enríquez**, Francis E. Hidalgo-Báez, Sisa P. Chalán-Gualán, Santiago D. Gualapuro-Gualapuro, Simone Belli, Michelle B. Chicaiza-Lema. "Adaptation of the Periodic Table to Kichwa: An Ecuadorian Native Language". In: *Journal of Chemical Education* (2022). DOI: 10.1021/acs.jchemed.1c00383

PROJECT

Adaptation of the periodic table to Kichwa - an Ecuadorian native language

Yachay Tech University (Ecuador), Complutense University of Madrid (Spain), Ohio State University (USA)

- Creation and development of the periodic table to Kichwa language.
- Develop of chemistry lab practices in Kichwa language.
- Study, analysis, and development of proposed names for chemical elements in the different Kichwa language variants.

HONOURS AND AWARDS

September 2021 – August 2023

Erasmus Mundus Scholarship Holder

Erasmus+ Programme of the European Union

October 2014 – May 2020

IFTH 2014 Scholarship Holder

Institute for the Promotion of Human Talent (IFTH), Quito, Ecuador

April 2020

Academic Merit Recognition "Cum Laude"

Yachay Tech University, Urcuquí, Ecuador

February 2019

Certificate of Academic Excellence for High Performance in 8th semester

Yachay Tech University, Urcuquí, Ecuador

August 2018

Certificate of Scientific Merit for achieving

Yachay Tech University, Urcuquí, Ecuador

- Award given in recognition of the published article "Comparison of Tropospheric Ozone and Nitrogen Dioxide Concentration Levels in Ecuador and other Latitudes" as first author.

August 2018

Certificate of Academic Excellence for High Performance in 7th semester

Yachay Tech University, Urcuquí, Ecuador

September 2018

Award to the Best Poster Presentation

Yachay Tech University, Urcuquí, Ecuador

- Best presentation in poster mode for the work titled "Comparison of Tropospheric Ozone and Nitrogen Dioxide Concentration Levels in Ecuador and other Latitudes" within the framework of CHEM WORKSHOP2: Summer Research of Our Students.

September 2017

Award to Poster Presentation

VI Colombian Congress and International Conference on Air Quality and Public Health, Cali, Colombia

- Third place in the undergraduate category for the poster presentation of the work "Comparison of Tropospheric Ozone and Nitrogen Dioxide Concentration Levels in Ecuador and other Latitudes".

PERSONAL SKILLS

Mother tongue Spanish

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
German	A1	A1	A1	A1	A1
French	A1	A1	A1	A1	A1
Portuguese	A1	A1	A1	A1	A1

Common European Framework of Reference

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user

[Common European Framework of Reference for Languages](#)

Communication skills

- Team work: I have worked in various research groups inside and outside the country. For two years I coached a women's soccer group at my university.
- Communicative competences: Skills acquired through my academic training, especially in international congresses, seminars, and internships with people from different countries.
- Intercultural skills: Experienced acquired working as a Spanish language professor to German students through a language exchange program offered by the German Club from Yachay Tech.

Teamwork skills

- Teamwork with people from different areas (Ph.D. in Environmental sciences, biology, quantum chemistry). Competence acquired in the participation of the environmental science research group at the Atmosphere Sciences Center at UNAM at Mexico, and the Quantum chemistry research group at Yachay Tech at Ecuador.

Digital skills

- Competent with: R-Studio, ChemBioDraw, Avogadro, QuteMol, \LaTeX Software, Overleaf, OriginPro, Mendeley, Mercury, Python, Olex2, Microsoft Office
- Experience with: SeeSar, VESTA

Other skills Mountain biking. Third place in the competition organized by the Ecuadorian Ministry of the Environment in 2014. Participation in the competition SierraLoma MTB in 2016.

VOLUNTEERING

November 2020 – January 2021 **Spanish instructor for German students interested in learning a new language.**

Yachay Tech German Club, Urcuquí, Ecuador

March 2019 – June 2019 **Instructor trainer to prepare senior-year high school students for admission to university exams "Ser Bachiller"**

Víctor Manuel Guzmán High School, Ibarra, Ecuador

July 2017 – August 2017 **Volunteer in the event "Max Planck Science Tunnel"**

Max Planck Society, Quito, Ecuador

April 2017 – August 2017 **Volunteer in the project "Awareness of solar radiation and its risks to the communities surrounding Yachay Tech University"**

Yachay Tech, Urcuquí, Ecuador

September 2017 – December 2017 **Volunteer in the Project "Participate in talks and workshops on the use and dissemination of technology"**

Public Company Yachay, Urcuquí, Ecuador

CONFERENCES AND SEMINARS

- July 2019 **Air Pollution Conference Brazil and 4th CMAS South America**
Federal University of Minas Gerais, Belo Horizonte, Brazil
– Poster presentation of the research titled "Comparison of Tropospheric Ozone and Nitrogen Dioxide Concentration Levels in Ecuador and other Latitudes".
- February 2019 **Breaking paradigms: Towards a Multi-, Inter- and Transdisciplinary Science**
Alexander von Humboldt Foundation, Ibarra, Ecuador
– Speaker in poster presentation of the research "Comparison of tropospheric ozone and nitrogen dioxide concentration levels in Ecuador and other latitudes".
- November 2018 **V Latin American Congress of Chemistry Students and III Ecuadorian Congress of Chemical Sciences**
Universidad Central, Quito, Ecuador
– Participation as an attendee at the international congress.
- November 2018 **EXPERT CONFERENCE: Synthesis of Monomers for Intrinsically Conducting Polymers**
Yachay Tech University, Urcuquí, Ecuador
– Participation as an attendee at the seminar.
- May 2018 **EXPERT CONFERENCE: Advanced Materials Based on Carbon**
Yachay Tech University, Urcuquí, Ecuador
– Participation as an attendee at the seminar.
- September 2018 **CHEM WORKSHOP 2: Summer Research of Our Students**
Yachay Tech University, Urcuquí, Ecuador
– Speaker in poster presentation of the research titled "Comparison of Tropospheric Ozone and Nitrogen Dioxide Concentration Levels in Ecuador and other Latitudes".
- April 2018 **CHEM WORKSHOP I**
Yachay Tech University, Urcuquí, Ecuador
– Participation as an attendee at the seminar.
- September 2017 **VI Colombian Congress and International Conference on Air Quality and Public Health**
University of Valle, Cali, Colombia
– Speaker in poster presentation of the research titled "Comparison of tropospheric ozone and nitrogen dioxide concentration levels in Ecuador and other latitudes"

REFERENCES

- [1] **Ph.D. Rosa Carmen Rodríguez Martín-Doimeadios**
Full Professor in Analytical Chemistry
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- [2] **Ph.D. Francisco Javier Guzmán Bernardo**
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