

# Ignacio Alcántara

Associate Professor

**Curriculum Vitae**  
Abr. 2025

📍 Biostatistics Unit, Public Health Department, Faculty of Veterinary, Universidad de la República  
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## Interests

- Data Sciences
- Bioestistics and spatial analysis
- Pharmacoepidemiology
- Environmental sciences
- Statistics for Process Control

## Education

### Degrees

- 2021 (in progress) **PhD in Animal Production** Faculty of Veterinary Medicine, UdelaR  
Montevideo, Uruguay
- Thesis title: Pharmacoeconomics and pharmacoepidemiology of acaricide consumption habits in Uruguayan agricultural systems
  - Advisor: Dr. Gonzalo Suárez
- 2015 - 2019 **Master's in Geosciences** Faculty of Sciences - PEDECIBA, UdelaR  
Montevideo, Uruguay
- Thesis title: Risk levels of exposure to Cyanobacterial blooms in the Uruguay River; environmental forcings and prediction models
  - Advisors: Dr. Carla Kruk, Dr. Claudia Piccini, Dr. Madeleine Renom
- 2009 - 2015 **Bachelor's in Biological Sciences (Ecology option)** Faculty of Sciences, UdelaR  
Montevideo, Uruguay
- Thesis title: Effects of environmental variability on the presence, community structure, and blooms of Microcystis aeruginosa Complex
  - Advisors: Dr. Carla Kruk, Dr. Claudia Piccini

### Latest relevant courses

- 2023 **Second School on Data Science and Machine Learning** NCC-UNESP - ICTP - SAIIR, São Paulo, Brazil  
Coordinators: Raphael Cobe, Sergio F. Novaes, Thiago Tomei (NCC-UNESP/AI2, Brazil)
- Keywords: Machine Learning | Neural Networks | Generative Models | Natural Language Processing
- 2023 **Monitoring outbreaks for disease surveillance in a data science context** MOOD project European Union's  
Horizon 2020 No. 874850  
Coordinators: Tomislav Hengl (Open GeoHub, Netherlands), Elena Arsevska (CIRAD, France)
- Keywords: One Health | Geospatial | Epidemiology | Machine Learning
- 2023 **Big Data and digital tools applied to livestock production** National agricultural research institute (INIA - Uruguay)  
Coordinators: Dr. Guilherme Rosa (University of Wisconsin-Madison), Dr. Joao Dorea (University of Wisconsin-Madison), Dr. Daniel Gianola (INIA - Uruguay)
- Keywords: Machine Learning | Precision livestock | High dimensional data
- 2022 **Analytical Statistics: logistic regression and introduction to mixed models** Graduate School Faculty of Dentistry,  
UdelaR - Montevideo, Uruguay  
Coordinators: Dr. Natalia Cernicchiaro (Kansas State University, USA)
- Keywords: Logistic Regression | Epidemiology | GLMM Models
- 2020 **Time Series Analysis Tools** CURE, UdelaR - Rocha, Uruguay  
Coordinators: Dr. Gonzalo Perera
- Keywords: ARMA, ARIMA, and SARIMA | Parameter Estimation | Spectral Analysis

- 2020 **The CODATA-RDA Research Data Science Summer School** ICTP (Trieste, Italy) - Virtual Edition  
Coordinators: Dr. Robert Quick (Indiana University, USA), Dr. Hugh Shanahan (Royal Holloway University, United Kingdom)  
➤ Keywords: Data Science | Reproducibility | Data Governance
- 2019 **Extreme Data Statistics** CURE, Udelar - Rocha, Uruguay  
Coordinators: Dr. Gonzalo Perera  
➤ Keywords: Extreme Distributions | POT
- 2019 **Spatial Statistical Analysis in R** Faculty of Agronomy, Udelar - Montevideo, Uruguay  
Coordinators: Dr. Paul Harris (Rothamsted Research, United Kingdom), Dr. Alexis Comber (Leeds University, United Kingdom)  
➤ Keywords: Spatial Data | Multi-scale Geographical Regressions | Statistical Maps
- 2018 **The CODATA-RDA Research Data Science** ICTP- SAIIR - São Paulo, Brazil  
Coordinators: Dr. Marcela Alfaro Córdoba (University of Costa Rica, Costa Rica), Dr. Robert Quick (Indiana University, USA)  
➤ Keywords: Data Science | Open Source Software | Statistics and Visualization | Data Reproducibility
- 2017 **Summer School in Advanced Statistical Methods in Ecology and Evolution** CURE, Udelar - Maldonado, Uruguay  
Coordinators: Dr. Pablo Inchausti  
➤ Keywords: R Language | GLMM | GAM

## Creation of Knowledge

### Academic Articles Published in Peer-Reviewed Journals

#### First Author

- 2025 **Assessing trends in ectoparasiticide drugs used to control ticks and flies in farm animals: A four-year analysis reveal differences between epidemiological zones at country level in Uruguay** Preventive Veterinary Medicine  
Alcántara I., Suárez G.  
➤ <https://doi.org/10.1016/j.prevetmed.2024.106412>
- 2022 **A reply to 'Relevant factors in the eutrophication of the Uruguay River and the Río Negro'** Science of Total Environment  
Alcántara I., Somma A., Chalar G., Fabre A., [...], García-Rodríguez F.  
➤ 10.1016/j.scitotenv.2021.151854
- 2018 **Improved biovolume estimation of Microcystis aeruginosa colonies: A statistical approach** Journal of microbiological methods  
Alcántara I., Piccini C., Segura A. M., Deus S., González C., Martínez de la Escalera G., Kruk, C  
➤ <https://doi.org/10.1016/j.mimet.2018.05.021>

#### Co - authoring

- 2023 **Relationship between strains of Holstein cows, feeding strategies and udder health** Agrociencia  
Morales-Piñeyrúa J.T., Bobadilla P., Alcántara I., De Torres E.  
➤ <https://doi.org/10.31285/agro.27.1150>
- 2022 **Caenorhabditis elegans as a valuable model for the study of anthelmintic pharmacodynamics and drug-drug interactions: The case of ivermectin and eprinomectin** Front. Pharmacol.  
Suárez, G., Alcántara I., Salinas G.  
➤ 10.3389/fphar.2022.984905
- 2021 **Benefits of Silvopastoral Systems for Keeping Beef Cattle** Animals  
Huertas S.M., Bobadilla P., Alcántara I., Akkermans E., van Eerdenburg F.  
➤ <https://doi.org/10.3390/ani11040992>

- 2020 **El Índice de Actividad Individual de los estudiantes en EVA y sus rendimientos académicos: el caso de Bioestadística Veterinaria** Inter-Cambios. Dilemas y Transiciones de la Educación Superior  
Bobadilla P., Alcántara I., Rosenstock N., Borlido C., Cabral P., Huertas S., Passarini J.  
➤ <https://doi.org/10.29156/INTER.7.2.15>
- 2019 **Floración excepcional de Cianobacterias tóxicas en la costa de Uruguay, verano 2019** Innotec  
Kruk C., Martínez A., Martínez de la Escalera G., Trinchin R., Manta G., Segura A. M., Piccini C., Brena B., Fabiano G., Pérez M., Gabito L., Alcántara I., Yannicelli B  
➤ <https://doi.org/10.26461/18.06>
- 2018 **Variabilidad y tendencia de la temperatura superficial de los grandes embalses del Río Negro** Innotec  
Manta G., Alcántara I.  
➤ <https://doi.org/10.26461/16.07>
- 2017 **A multilevel trait-based approach to the ecological performance of *Microcystis aeruginosa* complex from headwaters to the ocean** Harmful Algae  
Kruk C., Segura A. M., Nogueira L., Alcántara I., Calliari D., Martínez de la Escalera G., Carballo C., Cabrera C., Sarthou F., Scavone P., Piccini, C.  
➤ <https://doi.org/10.1016/j.hal.2017.10.004>
- 2017 **Increased sampled volume improves *Microcystis aeruginosa* complex (MAC) colonies detection and prediction using Random Forests** Ecological Indicators  
Segura A. M., Piccini C., Nogueira L., Alcántara I., Calliari D., Kruk C  
➤ <http://dx.doi.org/10.1016/j.ecolind.2017.04.047>
- 2017 **Dynamics of toxic genotypes of *Microcystis aeruginosa* complex (MAC) through a wide freshwater to marine environmental gradient** Harmful Algae  
Martínez de la Escalera G., Kruk C., Segura A. M., Nogueira L., Alcántara I., Piccini C.  
➤ <http://dx.doi.org/10.1016/j.hal.2016.11.012>
- 2015 **Herramientas para el monitoreo y sistema de alerta de floraciones de cianobacterias nocivas: Río Uruguay y Río de la Plata** Innotec  
Kruk C., Segura A., Nogueira L., Carballo C., Martínez de la Escalera G., Calliari D., Ferrari G., Simoens M., Cea J., Alcántara I., Vico P., Míguez D., Piccini C.  
➤ <http://ojs.latu.org.uy/index.php/INNOTEC/article/view/311>

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