

ALEJANDRA ZARATE-POTES

Biology

Type of address: Visiting address.

St Helens Road

BioSciences

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Ormskirk

United Kingdom

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Biography

CAREER STEPS

02.2024-present

Lecturer in Biomedical Science. Edge Hill University, UK.

Main activities:

- Research and teaching academic permanent position.

02.2020-01.2024 Senior Research Associate. Lancaster University, UK.

Main activities:

- Research on a BBSRC-funded grant to study **integrated multiomics (dual-transcriptomics, proteomics, and targeted metabolomics) of host-bacteria interactions during *C. elegans* gut infections.**

- Research laboratory management and UG/MSc student supervision.

- Voluntary teaching of skills and statistics workshops for graduate students.

- Service representing staff researchers in Faculty Committees for Research and Equality, Diversity, and Inclusion.

- Facilitation of the writing group organised by the Women's Staff Network.

Supervisor: Dr. Alexandre Benedetto

05.2018-01.2020 Postdoctoral Research Associate. Christian-Albrechts University Kiel, Germany.

Main activities:

- Research on a DFG-funded grant towards the **identification of molecular mechanisms of high immune specificity in *C. elegans*.** Data analysis, presentation at scientific conferences, divulgation of research findings to boarder public, preparation of scientific manuscripts and research bid applications.

- Organisation of the departmental seminar, UG/MSc teaching in Genetics, Ecology and Immunology courses, and student research project supervision.

Supervisors: Dr. Katja Dierking and Prof. Dr. Hinrich Schulenburg

01.2014-05.2018 Doctoral candidate-PhD in Natural Sciences (magna cum laude). Max Planck Institute for Evolutionary Biology Plön, Germany/Christian-Albrechts University Kiel, Germany

Main activities

- Research towards writing the dissertation titled: **"High specificity in *C. elegans* innate immune responses"**.

- Supervision of practical students, bachelor theses and assistance with basic and advanced ecology, evolution, and immunity courses.

Supervisors: Dr. Katja Dierking and Prof. Dr. Hinrich Schulenburg

01.2011-12.2013 MSc in Biology (Emphasis in Genetics). Universidad Nacional de Colombia.

Main activities

- Research towards writing the dissertation titled: **"Transcriptomic response of the hydrozoan *Hydractinia symbiolongicarpus* after a bacterial challenge"**.

- Lab management and purchase orders.

- Supervision of practical students.

Supervisor: Prof. Dr. Luis F. Cadavid

01.2011-12.2012 University teaching assistant (assistant professor scholarship). Universidad Nacional de Colombia.

Main activities:

-Teaching undergraduate level genetics and ecology courses.

01.2007-12.2010 Undergraduate teaching assistant (Undergraduate scholarship). Universidad Nacional de Colombia.

Main activities:

-Support with teaching undergraduate level genetics and ecology courses and with ecology field work.

08.2006-12.2010 BSc in Biology (first of class). Universidad Nacional de Colombia.

Qualifications

Natural Sciences, PhD, "High specificity in *C. elegans* innate immune responses"., Max-Planck-Gesellschaft

1 Jan 2014 → 15 May 2018

Award Date: 15 May 2018

Employment

Lecturer in Biomedical Science

Biology

Edge Hill University

1 Feb 2024 → present

Visiting Researcher

Lancaster University

United Kingdom

1 Feb 2024 → 31 Jul 2025

Research outputs

Meta-Analysis of *Caenorhabditis elegans* Transcriptomics Implicates Hedgehog-Like Signaling in Host-Microbe Interactions

Zárate-Potes, A., Ali, I., Ribeiro Camacho, M., Brownless, H. & Benedetto, A., 10 May 2022, In: *Frontiers in Microbiology*. 13, p. 1-17 17 p.

High-Throughput Screening of Microbial Isolates with Impact on *Caenorhabditis elegans* Health

Ali, I., Martin, J., Zárate-Potes, A. & Benedetto, A., 28 Apr 2022, In: *Journal of Visualized Experiments*. 2022, 182, e63860.

Guard proteins keep watch at epithelial walls

Zarate-Potes, A. & Dierking, K., 13 Jul 2021, In: *Immunity*. p. 1-3 3 p.

The effects of nested miRNAs and their host genes on immune defense against *Bacillus thuringiensis* infection in *Caenorhabditis elegans*.

Zarate-Potes, A., Yang, W., Andresen, B., Nakad, R., Haase, D., Rosenstiel, P., Dierking, K. & Schulenburg, H., 27 May 2021, In: *Developmental and Comparative Immunology*. 123, p. 1-8 8 p.

Effector and regulator: Diverse functions of *C. elegans* C-type lectin-like domain proteins

Pees, B., Yang, W., Kloock, A., Petersen, C., Peters, L., Fan, L., Friedrichsen, M., Butze, S., Zárate-Potes, A., Schulenburg, H. & Dierking, K., 1 Apr 2021, In: *PLoS Pathogens*. p. 1-25 25 p.

The *C. elegans* GATA transcription factor *elt-2* mediates distinct transcriptional responses and opposite infection outcomes towards different *Bacillus thuringiensis* strains

Zárate-Potes, A., Yang, W., Pees, B., Schalkowski, R., Segler, P., Andresen, B., Haase, D., Nakad, R., Rosenstiel, P., Tetreau, G., Colletier, J-P., Schulenburg, H. & Dierking, K., 24 Sept 2020, In: *PLoS Pathogens*. p. 1-32 32 p.

The putative immune recognition repertoire of the model cnidarian *Hydractinia symbiolongicarpus* is large and diverse.

Zárate-Potes, A., Ocampo, I. D. & Cadavid, L. F., 5 Feb 2019, In: *Gene*. p. 104-117 14 p.

High Innate Immune Specificity through Diversified C-Type Lectin-Like Domain Proteins in Invertebrates

Pees, B., Yang, W., Zárate-Potes, A., Schulenburg, H. & Dierking, K., 19 Nov 2015, In: *Journal of Innate Immunity*. 8, 2, p. 129-142 14 p.

The immunotranscriptome of the Caribbean reef-building coral *Pseudodiploria strigosa*.

Ocampo, I. D., Zárate-Potes, A., Pizarro, V., Rojas, C. A., Vera, N. E. & Cadavid, L. F., 1 Jul 2015, In: *Immunogenetics*. 67, p. 515-530 16 p.

Transcriptomics of the immune system of hydrozoan *Hydractinia symbiolongicarpus* using high throughput sequencing methods

Zárate-Potes, A. & Cadavid, L. F., 1 Jan 2014, *Advances in Computational Biology - Proceedings of the 2nd Colombian Congress on Computational Biology and Bioinformatics CCBCOL 2013*. Springer Verlag, p. 239-245 7 p. (Advances in Intelligent Systems and Computing; vol. 232).

Activities

Lancaster University

ALEJANDRA ZARATE-POTES (Visiting researcher)

1 Feb 2024 → 31 Jul 2025

Podcast Episode 100 Years 100 Objects 55. Nursing Notebook

ALEJANDRA ZARATE-POTES (Participant)

11 Jul 2023

Frontiers in Microbiology (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2022

Genetics (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2022

Journal of Visualized Experiments (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2022

Ecology and Evolution (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2021

Environmental Microbiology (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2021

FEBS Open Bio (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2021

Gut Microbes (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2021

PLoS Pathogens (Journal)

ALEJANDRA ZARATE-POTES (Reviewer)

1 Jan 2021