



# RITA VAZ RODRIGUES

Veterinary Researcher - Immunoparasitology & Multi-omics

## EDUCATION

### PhD - Biomedical Sciences

IREC - University of Castilla-La Mancha, CR (Spain)

2022 - 2025

Final grade: **Excellent Cum Laude**. PhD Thesis: Identification and characterization of tick salivary biomolecules and mechanisms associated with the immune response to alpha-Gal. Conducted under a **predoctoral research training contract**.

### MSc - Basic and Applied Wildlife Research

IREC - University of Castilla-La Mancha, CR (Spain)

2020 - 2021

Final grade: **9.4/10**. Awards: **2 academic excellence prizes** (regional & national levels).

### DVM | MSc - Veterinary Medicine

Faculty of Veterinary Medicine - University of Lisbon (Portugal)

2010 - 2016

Final grade: **17/20**. Awards: **merit-based scholarship** and *Ildefonso Borges Award* for the highest grade in Parasitology and Parasitic Diseases.

## WOS METRICS

- H-index: 7
- Publications: 26 (14 in Q1)
- Citations: 159

## CONTACT

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📞 +34 64 202 30 59

## SKILLS

R Programming	4+ yrs
Transcriptomics data	3+ yrs
Proteomics data	2+ yrs
Metagenomics data	1+ yrs
PCRs	5+ yrs
ELISAs	4+ yrs
In vivo models	3+ yrs
Statistical modeling	1+ yrs
Teaching	2+ yrs

## WORK EXPERIENCE

### Postdoctoral Researcher

IREC - University of Castilla-La Mancha, CR (Spain)

Oct 25 - Current

Expanding on my PhD research on tick salivary biomolecules linked to the alpha-Gal syndrome (AGS) and leading murine experiments employing probiotics with high  $\alpha$ -Gal content.

### Doctoral Researcher

IREC - University of Castilla-La Mancha, CR (Spain)

Mar 22 - Oct 25

Identification and characterization of tick salivary biomolecules in the AGS by integrating *in vitro* (RS-ATL8 cells) and *in vivo* (zebrafish and mouse) models and applying a multi-omics approach.

### Research Assistant

IREC - University of Castilla-La Mancha, CR (Spain)

Apr 21 - Feb 22

Technical and collaborative tasks for the project "Nonspecific immunity associated with inactivated mycobacteria (*MYCOTRAINING*)".

### Veterinarian & Store Manager

ZU - Sonae MC, Lisbon (Portugal)

Feb 20 - May 20

### Veterinarian & Store Manager

Ornimundo SA, Lisbon (Portugal)

Apr 17 - Nov 19

Main tasks: animal care, staff supervision, inventory management, and ensuring smooth daily store operations.

# ACHIEVEMENTS

## Animal experimentation

### Functions A, B and C

Qualified for work with fish and rodents with a certificate issued by Animalaria Formación y Gestión in 2024.

## Enrichment Analysis

### GO, KEGG and PPI

A certificate issued by BioCode to prove basic understanding of omics data analysis.

## Teaching experience

### Analysis of omics data

Taught classes and assisted with laboratory practicals in the MSc in Basic and Applied Wildlife Research at IREC - UCLM (22.5h/year, 2023-2025)

## Cambridge ESOL

### Advanced English

A certificate issued by the University of Cambridge in 2010, demonstrating C1-level English proficiency for non-native speakers.

## Spanish ELE

### C1.2 level

A certificate issued by the Language Center of the University of Castilla-La Mancha in 2021, grade 9.4/10.

## French

### Elémentaire 1

A certificate of course attendance (40 hours) issued by Alliance Française in 2016.

## Japanese

### Level I - N5

A certificate issued by the Language Center of the University of Castilla-La Mancha in 2022.

# MAIN PUBLICATIONS

Complement system activation in wild boar (*Sus scrofa*) following parenteral administration of heat-inactivated *Mycobacterium bovis*  
*Frontiers in Veterinary Science Vol 12, 2025*

Q1 - IF 2.9

Transcriptomics insights into the functional role of tick *Ixodes ricinus* midgut proteins metalloprotease and antigen p23  
*PLoS One Vol 20, Issue 11, 2025*

Q2 - IF 2.6

Allergic reactions associated with tsetse fly bites  
*Annals of Medicine Vol 57, Issue 1, 2025*

Q1 - IF 4.3

Public perspectives on tick bite exposure, health-care visits and associated allergies in iberia  
*Annals of Medicine Vol 57, Issue 1, 2025*

Q1 - IF 4.3

Is Zebrafish a Good Model for the Alpha-Gal Syndrome?  
*FASEB Journal Vol 39, Issue 9, 2025*

Q1 - IF 4.2

Tick salivary proteins metalloprotease and allergen-like p23 are associated with response to glycan  $\alpha$ -Gal and mycobacterium infection  
*Scientific Reports Vol 15, Issue 1, 2025*

Q1 - IF 3.9

Immunological mechanisms involved in the protection against development of pulmonary tuberculosis in naturally infected goats  
*Veterinary Microbiology Vol 300, 2025*

Q1 - IF 2.7

Tick salivary proteome and lipidome with low glycan content correlate with allergic type reactions in the zebrafish model

*International Journal for Parasitology Vol 54, Issue 12, 2024*

Q1 - IF 3.2

Zebrafish gut microbiota composition in response to tick saliva biomolecules correlates with allergic reactions to mammalian meat consumption  
*Microbiological Research Vol 285, 2024*

Q1 - IF 6.9

Multi-omics analysis of zebrafish response to tick saliva reveals biological processes associated with alpha-Gal syndrome

*Biomedicine & Pharmacotherapy Vol 168, 2023*

Q1 - IF 7.5

Allergic reactions to tick saliva components in zebrafish model

*Parasites & Vectors Vol 16, Issue 1, 2023*

Q1 - IF 3.5

Nonspecific protection of heat-inactivated *Mycobacterium bovis* against *Salmonella Choleraesuis* infection in pigs

*Veterinary Research Vol 53, Issue 1, 2022*

Q1 - IF 3.5

## R&D PROJECTS

### ABIOVAC

National plan, Spain - 182.342€

2025-28

Artificial intelligence and bioinformatics for the development of vaccines to advance the prevention and control of tick-borne infectious diseases (PID2024-155561OB-I00). Pl: J. de la Fuente.

### PROBIOHEALTH

Regional plan, Spain - 118.992€

2024-27

Characterization of the molecular mechanisms underlying the response to probiotics with high alpha-Gal content (SBPLY/23/180225/000086). Pls: M. Villar & J. de la Fuente.

### BIOGAL

National plan, Spain - 258.940€

2021-24

Identification and characterization of tick salivary biomolecules and mechanisms associated with the immune response to alpha-Gal (PID2020-116761GB-I00). Pl: J. de la Fuente.

### MYCOTRAINING

Regional plan, Spain - 168.064€

2020-22

Nonspecific immunity induced by inactivated mycobacteria (SBPLY/19/180501/000174). Pls: C. Gortázar & M.A. Risalde.

## CONFERENCES

### 17th Young Science Symposium

Faculty of Chemical Sciences and Technologies -  
UCLM, CR, Spain

Jul 2023

Oral presentation: "Unlocking systems biology: the power of multi-omics analysis".

### XXXIII Meeting of the Spanish Society of Veterinary Pathological Anatomy

Lugo, Galicia, Spain

Jun 2022

Oral presentation: "Nonspecific protection of heat-inactivated *Mycobacterium bovis* against *Salmonella Choleraesuis* infection in pigs".

## FELLOWSHIPS

### Doctoral Stay

Institute for Parasitology and Tropical Veterinary Medicine - Freie Universität Berlin, Germany

Apr 24 - Jun 24

Doctoral internship to carry out RNAi experiments using *Ixodes ricinus* colonies maintained in the laboratory. PI supervisor: Ard M Nijhof.

## EXTRACURRICULAR

- **Soft skills:** fast learner, curious mind, efficient, independent, organized and detail-oriented.
- **About me:** I enjoy scientific writing and am mainly self-taught in the omics field. I am passionate about fitness and prioritize a good work-life balance.