



# RITA VAZ RODRIGUES

Veterinary Researcher - Immunoparasitology & Multi-omics

## WOS METRICS

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

## CONTACT

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## 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

## 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.

## 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

2025-28

National plan, Spain - 182.342€

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

### PROBIOHEALTH

2024-27

Regional plan, Spain - 118.992€

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

### BIOGAL

2021-24

National plan, Spain - 258.940€

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

### MYCOTRAINING

2020-22

Regional plan, Spain - 168.064€

Nonspecific immunity induced by inactivated mycobacteria (SB-PLY/19/180501/000174). PIs: C. Gortázar & M.A. Risalde.

## CONFERENCES

### 17th Young Science Symposium

Jul 2023

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

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

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

Jun 2022

Lugo, Galicia, Spain

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

## FELLOWSHIPS

### Doctoral Stay

Apr 24 - Jun 24

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

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.