

## Alejandro CABEZAS-CRUZ



### Affiliation

French National Research Institute for Agriculture, Food and Environment (INRAE)

### Position

microbioTick Lab, head

### Current address

ANSES - Laboratoire de Santé Animale,  
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### Summary of CV

- Publications in peer-reviewed journals: 246
- Book Chapters: 8 hard copy books & 8 e-Books
- Citations: 6756, h-index 43
- Patents: 2
- Declarations of Invention (DIRVs): 6
- Start-ups (founder): 1 ([www.microxspace.com](http://www.microxspace.com))
- Direction of PhD thesis: 8
- Verified peer-reviews (WoS): 440

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### Professional websites

**Website (microbioTick):** [www.microbiotick.com](http://www.microbiotick.com)

**Web of Science Researcher ID:** [P-2755-2017](#)

**ORCID:** [0000-0002-8660-730X](#)

**ResearchGate:** [https://www.researchgate.net/profile/Alejandro\\_Cabezas-Cruz](https://www.researchgate.net/profile/Alejandro_Cabezas-Cruz)

**Web of Science Reviews:** <https://publons.com/researcher/449403/alejandro-cabezas-cruz/>

**Google scholar:** <https://scholar.google.com/citations?user=S1rBBboAAAAJ&hl=en>

**Frontiers Loop profile:** [181573](#)

### Scientific leadership

**Selected as 'TickExpert':** <https://www.expertscape.com/ex/ticks>

**Selected as 'World's Top 2% Scientists':** <https://www.mdpi.com/journal/pathogens/announcements/4792>

### Entrepreneurship

Founder and chief scientific officer (CSO), microXpace: [www.microxspace.com](http://www.microxspace.com)

## PROFESSIONAL EXPERIENCE

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**February 2017-present:** Chargé de Recherche de 1<sup>ère</sup> classe (CRCN, Civil Servant), Institut National de la Recherche Agronomique (INRAE), Maisons-Alfort, France

**October 2016-2017:** Faculty of Science, University of South Bohemia, České Budějovice, Czech Republic

Function: Assistant professor

**October 2016-2017:** Institute of Parasitology, České Budějovice, Czech Republic

Function: PI

**2011:** Charité - Universitätsmedizin Berlin, Berlin, Germany

Function: Internship in the laboratory of Dr. Sophie Van Linthout

Topic: Cell culture and molecular biology

**2010:** University of Oxford, UK

Function: Visiting Scientist in the laboratory of Prof. Pat Nuttall

Topic: Functional characterization of tick molecules with immune modulator effect

**2006 – 2010:** Center for Genetic Engineering and Biotechnology (CIGB), Cuba

Function: Researcher

Topic: Development of recombinant vaccines against the cattle tick *Rhipicephalus microplus*

**2001 – 2006:** Centre of Molecular immunology (CIM), Cuba

Function: Internship in the laboratory of Dr. Enrique Montero

Topic: Immunology and animal models

## EDUCATION

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**10.2013 –09.9.2016:** PhD in molecular and cellular aspects of biology

University of Lille 2, Institut Pasteur de Lille, Lille, France. “Très honorable avec félicitations” Degree

Dr. Raymond Pierce

**01.2014 – 10.10.2014:** PhD in basic and applied research in natural resources

University of Castilla-La Mancha (UCLM), Ciudad Real, Spain. Honors Degree (Summa Cum Laude)

Prof. José de la Fuente

**04.2012 – 09.2013:** Master in Parasitology, MSc

University of South Bohemia, České Budějovice, Czech Republic. Honors Degree

Prof. Libor Grubhoffer

**09.2001 – 06.2006:** Doctor of Veterinary Medicine, DVM

Agricultural University of Havana (UNAH), Havana, Cuba. Honors Degree

Dr. Dasha Fuentes Morales

## OTHER DIPLOMAS

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**12.01.2018:** ‘Habilitation à Diriger des Recherches’ (HDR). Maisons Alfort, France.

**20.03.2017 – 31.03.2017:** Regulatory Course on Animal Experimentation. Institut Pasteur, Paris, France.

**10.2008 – 02. 2009:** Biochemical Methods, College of Biological Sciences, University of Havana, Cuba.

**06.2008 – 10.2008:** Enzymology, College of Biological Sciences, University of Havana, Cuba.

**03.2008 – 06.2008:** Bio-molecules, College of Biological Sciences, University of Havana, Cuba.

## TEACHING EXPERIENCE

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Alejandro Cabezas-Cruz, an accomplished researcher and lecturer, has significant experience teaching. In particular, he designed and coordinated a comprehensive course on arthropod-microbe interactions (ID: EN - KMB609), which was conducted in English at the University of South Bohemia, Czech Republic, over two consecutive years (2021 and 2022). This teaching experience has significantly honed his pedagogical skills and reinforced his commitment to delivering top-notch education.

The primary objective of the course was to furnish students with a profound understanding of arthropod-microbe interactions, underscoring their paramount importance in both natural ecosystems and biological systems. The course structure comprised ten lectures and two workshops, each meticulously tailored to delve into specific facets of this intricate field. The technical skills covered by this course encompass a broad spectrum, including Bioinformatics, Artificial Intelligence, Statistical Analysis, and Network Analysis. On the scientific front, it covered aspects of Parasitology, Microbiology, Arthropod Biology, Molecular Biology, and Ecosystem Ecology.

## PUBLICATIONS

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### 2024

1. Skičková S, Svobodová K, Maitre A, Wu-Chuang A, Abuin-Denis L, Piloto-Sardiñas E, Obregon D, Majláth I, Majláthová V, Krejčí A, Cabezas-Cruz A. Differential impact of *Paenibacillus* infection on the microbiota of *Varroa destructor* and *Apis mellifera*. *Heliyon*. 10 (22): e39384.
2. Aželytė J, Maitre A, Abuin-Denis L, Wu-Chuang A, Žiegytė R, Mateos-Hernandez L, Obregon D, Palinauskas V, Cabezas-Cruz A. Nested patterns of commensals and endosymbionts in microbial communities of mosquito vectors. *BMC Microbiol*. 2024;24(1):434.
3. Maitre A, Mateos-Hernandez L, Azagi T, Foucault-Simonin A, Rakotobe S, Zajac Z, Banović P, Porcelli S, Heckmann A, Galon C, Sprong H, Moutailler S, Cabezas-Cruz A, and Fogaca AC. *Rickettsia helvetica* in C3H/HeN mice: a model for studying pathogen- host interactions. *Heliyon*. 10 (18): e37931.
4. Maitre A, Kratou M, Corona-Guerrero I, Abuin-Denis L, Mateos-Hernández L, Mosqueda J, Almazan C, Said MB, Piloto-Sardiñas E, Obregon D, Cabezas-Cruz A. Differential interactions of *Rickettsia* species with tick microbiota in *Rh. sanguineus* and *Rh. turanicus*. *Scientific Reports*. 14, 20674.
5. Zeb J, Song B, Khan MA, Senbill H, Aziz MU, Hussain S, Sánchez AAD, Cabezas-Cruz A, Alzahrani A, Alshehri M, Alghamdi RM, Sparagano OA. Genetic diversity of tick-borne zoonotic pathogens in ixodid ticks collected from small ruminants in Northern Pakistan. *MEEGID*. 105663.
6. Kratou M, Maitre A, Abuin-Denis L, Piloto-Sardiñas E, Corona-Guerrero I, Cano-Argüelles AL, Wu-Chuang A, Bambose T, Almazan C, Mosqueda J, Obregón D, Mateos-Hernández L, Said MB, Cabezas-Cruz A. Disruption of bacterial interactions and community assembly in *Babesia*-infected *Haemaphysalis longicornis* following antibiotic treatment. *BMC Microbiology*. 24(1):322.
7. Skičková S, Kratou M, Svobodová K, Maitre A, Abuin-Denis L, Wu-Chuang A, Obregón D, Ben Said M, Majláthová V, Krejčí A, Cabezas-Cruz A. Functional redundancy and niche specialization in honeybee and Varroa microbiomes. *International Microbiology*. doi: 10.1007/s10123-024-00582-y.

8. Cano-Argüelles AL, Piloto-Sardiñas E, Maitre A, Mateos-Hernández L, Maye J, Wu-Chuang A, Abuin-Denis L, Obregón D, Bambose T, Oleaga A, Cabezas-Cruz A\*, Pérez-Sánchez R\*. Microbiota-driven vaccination in soft ticks: implications for survival, fitness and reproductive capabilities in *Ornithodoros moubata*. *Molecular Ecology*. e17506. \*joint corresponding authors.
9. Sándor Ad, Corduneanu A, Orlova M, Hornok S, Cabezas-Cruz A, Foucault-Simonin A, Kulisz J, Zajac Z, Borzan M. Diversity of bartonellae in mites (Acari: Mesostigmata: Macronyssidae and Spinturnicidae) of boreal forest bats: effect of host specificity of mites and habitat selection of hosts on vector potential. *Medical and Veterinary Entomology*. doi: 10.1111/mve.12757.
10. Banović P, Jakimovski D, Bogdan I, Simin V, Mijatović D, Bosilkovski M, Mateska S, Díaz-Sánchez AA, Foucault-Simonin A, Zajac Z, Kulisz J, Moutailler S, Cabezas-Cruz A. Tick-borne diseases at the crossroads of the Middle East and central Europe. *Infectious Diseases Now*. 54(6):104959.
11. Porcelli S, Heckmann A, Deshuillers P, Wu-Chuang A, Galon C, Mateos-Hernandez L, Rakotobe S, Canini L, Rego R, Šimo L, Lagré AC, **Cabezas-Cruz A**, Moutailler S. Co-infection dynamics of *B. afzelii* and TBEV in C3H mice: insights and implications for future research. *Infection and Immunity*. e0024924. doi: 10.1128/iai.00249-24.
12. Abuin-Denis L, Piloto-Sardiñas E, Maitre A, Wu-Chuang A, Mateos-Hernández L, Paulino PG, Bello Y, Bravo FL, Gutierrez AA, Fernández RR, Castillo AF, Mellor LM, Foucault-Simonin A, Obregon D, Estrada-García MP, Rodríguez-Mallon A, **Cabezas-Cruz A**. Differential nested patterns of *Anaplasma marginale* and *Coxiella*-like endosymbiont across *Rhipicephalus microplus* ontogeny. *Microbiol Res*. 2024; 286:127790. doi: 10.1016/j.micres.2024.127790.
13. Diakou A, Foucault-Simonin A, Antoniou G, **Cabezas-Cruz A**, Földvári G. Tick paralysis induced by *Ixodes gibbosus*: enigmatic cases in domestic mammals from Cyprus. *Frontiers in Veterinary Science*. 11:1416501.
14. Wu-Chuang A, Mateos-Hernandez L, Abuin-Denis L, Maitre A, Avellanet J, García A, Fuentes D, **Cabezas-Cruz A**. Exploring the impact of breast cancer on colonization resistance of mouse microbiota using network node manipulation. *Heliyon*. 10(10), e30914.
15. Kulisz J, Hoeks S, Kunc-Kozioł R, Woźniak A, Zajac Z, Schipper AM, **Cabezas-Cruz A**, Huijbregts MAJ. 2024. Spatiotemporal trends and covariates of Lyme borreliosis incidence in Poland, 2010-2019. *Scientific Reports*. 14, 10768. <https://doi.org/10.1038/s41598-024-61349-z>
16. Banović P, Foucault-Simonin A, Papić L, Savić S, Potkonjak A, Jurišić A, Radenković M, Mijatović D, Simin V, Bogdan I, Zajac Z, Kulisz J, Woźniak A, Hartmann D, Perner J, Wu-Chuang A, Mateos-Hernandez L, Moutailler S, **Cabezas-Cruz A**. 2024. One Health approach to study human health risks associated with *Dermanyssus gallinae* mites. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2024.e30539>
17. Abuin-Denis L, Piloto-Sardiñas E, Maître A, Wu-Chuang A, Mateos-Hernández L, Obregon D, Corona-González B, Fogaça A C, Palinauskas V, Aželytė J, Rodríguez-Mallon A, **Cabezas-Cruz, A**. 2024. Exploring the impact of *Anaplasma phagocytophilum* on colonization resistance of *Ixodes scapularis* microbiota using network node manipulation. *Current Research in Parasitology & Vector-Borne Diseases*. 5, 100177. <https://doi.org/10.1016/j.crpbd.2024.100177>
18. Grujić J, Budakov-Obradović Z, Klašnja J, Dinić R, Dolinaj V, **Cabezas-Cruz A**, Banović P. 2024. Blood Group Variations in COVID-19 Convalescent Plasma and Regular Blood Donors: A Comparative Analysis in the Serbian Population. *Microorganisms*. 12(5), 915.
19. Zajac Z, Kulisz J, Woźniak A, Obregon D, Foucault-Simonin A, Bartosik K, Moutailler S, **Cabezas-Cruz A**. 2024. Spatial distribution and pathogen profile of *Dermacentor reticulatus* ticks in southeastern Poland: a genetic and environmental analysis. *Transboundary and Emerging Diseases*. Article ID 5458278.

20. Piloto-Sardiñas E, Abuin-Denis L, Maitre A, Foucault-Simonin A, Corona-González B, Díaz-Corona C, Roblejo-Arias L, Mateos-Hernández L, Marrero-Perera R, Obregon D, Svobodová K, Wu-Chuang A, **Cabezas-Cruz A**. 2024. Dynamic nesting of *Anaplasma marginale* in the microbial communities of *Rhipicephalus microplus*. *Ecology and Evolution*. 14(4):e11228.
21. Torres-Maravilla E, Parra M, Maisey K, Vargas R, **Cabezas-Cruz A**, Gonzalez A, Tello M, Bermudez-Humaran L. 2024. Importance of Probiotics and Fish Immunology in Aquaculture: Towards the Identification and Design of Novel Probiotics. *Microorganisms*. 2024, 12(3), 626.
22. Wu-Chuang A, Rojas A, Bernal C, Cardozo F, Valenzuela A, Romero C, Mateos-Hernández L, **Cabezas-Cruz A**. 2024. Influence of host microbiota-driven natural antibodies on dengue transmission. *Frontiers in Immunology*. doi: 10.3389/fimmu.2024.1368599.
23. Antúnez MP, Montesinos JCM, Corduneanu A, Obregón D, Moutailler S, **Cabezas-Cruz A**. 2024. Tick-borne viruses and their risk to public health in the Caribbean: spotlight on bats as reservoirs in Cuba. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2024.e26118>.
24. Banović P, Mijatović D, Simin V, Stankov S, Vranješ N, Meletis E, Kostoulas P, Obregon D, **Cabezas-Cruz A**. 2024. Real-world evidence of rabies post-exposure prophylaxis in Serbia: Nation-wide observational study (2017-2019). *Travel Medicine and Infectious Disease*. <https://doi.org/10.1016/j.tmaid.2024.102697>.
25. Hussain S, Hussain A, Aziz MU, Song B, Zeb J, Moutailler S, Foucault-Simonin A, Smith RL, **Cabezas-Cruz A**, George D, Sparagano O. 2024. Exploring the co-infection and genetic diversity of multiple tick-borne pathogens in livestock population of Punjab, Pakistan. *Transboundary and Emerging Diseases*. 2024. <https://doi.org/10.1155/2024/9958535>.
26. Aželytė J, Maître A, Abuin-Denis L, Piloto-Sardiñas E, Wu-Chuang A, Žiegytė R, Mateos-Hernandez L, Obregon D, **Cabezas-Cruz A**, Palinauskas V. 2024. Impact of *Plasmodium relictum* infection on the colonization resistance of bird gut microbiota: A preliminary study. *Pathogens*. 13(1), 91.
27. Díaz-Corona C, Roblejo-Arias L, Piloto-Sardiñas E, Díaz-Sánchez AA, Angélique Foucault-Simonin2, Galon C, Wu-Chuang A, Mateos-Hernández L, Zajac Z, Kulisz J, Wozniak A, Castro-Montes de Oca MK, Lobo-Rivero E, Obregón D, Moutailler S, Corona-González B, **Cabezas-Cruz A**. 2024. Microfluidic PCR and network analysis reveals complex tick-borne pathogen interactions in the tropics. *Parasites & Vectors*. 17(1):5. doi: 10.1186/s13071-023-06098-0.
28. **Cabezas-Cruz A**, Bermudez-Humaran L. 2023. Exploring the relationship between *Faecalibacterium duncaniae* and *Escherichia coli* in inflammatory bowel disease (IBD): insights and implications. *Computational and Structural Biotechnology Journal*. 23:1-9. doi: 10.1016/j.csbj.2023.11.027.

## 2023

29. Pavanelo DB, Piloto-Sardiñas E, Maitre A, Abuin-Denis L, Kopáček P, **Cabezas-Cruz A**, Fogaca AC. 2023. Arthropod microbiota: shaping pathogen establishment and enabling control. *Front. Arachn. Sci.* 2:1297733. doi: 10.3389/frchs.2023.1297733.
30. Paulino PG, Abuin-Denis L, Maitre A, Piloto-Sardiñas E, Obregon D, Santos HA, **Cabezas-Cruz A**. 2023. Dissecting the impact of *Anaplasma phagocytophilum* infection on functional networks, and community stability of the tick microbiome. *International Microbiology*. doi: 10.1007/s10123-023-00473-8
31. Banovic P, Mijatović D, Bogdan I, Simin V, Meletis E, Kostoulas P, Rus KR, Knap N, Korva M, Zupanc TA, **Cabezas-Cruz A**. 2023. Evidence of tick-borne encephalitis virus neutralizing antibodies in Serbian individuals exposed to tick bites. *Frontiers in Microbiology*. 14:1314538.

32. Roblejo-Arias L, Díaz-Corona C, Piloto-Sardiñas E, Díaz-Sánchez AA, Zajac Z, Kulisz J, Woźniak A, Moutailler S, Obregon D, Foucault-Simonin A, Corona-González B, **Cabezas-Cruz A**. 2023. First molecular characterization of *Dirofilaria immitis* in Cuba. **BMC Veterinary Research**. 19, 239.
33. Mateos-Hernández L, Maitre A, Abuin-Denis L, Obregon D, Edwige M, Patricia L, Maye J, Wu-Chuang A, Valiente-Moro C, **Cabezas-Cruz A**. 2023. Hierarchical shift of the *Aedes albopictus* microbiota caused by anti-microbiota vaccine increases fecundity and egg hatching rate in female mosquitoes. **FEMS Microbiology Ecology**. fiad140. doi: 10.1093/femsec/fiad140.
34. Ghafar A, **Cabezas-Cruz A**. 2023. Ticking off the Tick Vectors: *Rhipicephalus microplus* Fails to Transmit *Theileria orientalis*. **Pathogens**. 12(11):1311. doi: 10.3390/pathogens12111311.
35. Wu-Chuang A, Mateos-Hernandez L, Maitre A, Rego ROM, Šíma R, Porcelli S, Rakotobe S, Foucault-Simonin A, Moutailler S, Palinauskas V, Aželytė J, Šímo L, Obregon D, **Cabezas-Cruz A**. 2023. Microbiota perturbation by anti-microbiota vaccine reduces the colonization of *Borrelia afzelii* in *Ixodes ricinus*. **Microbiome**. DOI: 10.1186/s40168-023-01599-7.
36. Maitre A, Wu-Chuang A, Mateos-Hernández L, Piloto-Sardiñas E, Foucault-Simonin A, Ciculli V, Moutailler S, Paoli JP, Falchi A, Obregón D, **Cabezas-Cruz A**. 2023. Rickettsial pathogens drive microbiota assembly in *Hyalomma marginatum* and *Rhipicephalus bursa* ticks. **Molecular Ecology**. DOI: 10.1111/mec.17058.
37. Jakimovski D, Grozdanovski K, Pavleva V, Banovic V, **Cabezas-Cruz A**, Spasovska K. 2023. Emergence of Crimean-Congo Hemorrhagic Fever in North Macedonia, July 2023. **Eurosurveillance**. 28(34):pii=2300409.
38. Corduneanu A, Zajac Z, Kulisz J, Wozniak A, Foucault-Simonin A, Moutailler S, Wu-Chuang A, Peter A, Sándor AD, **Cabezas-Cruz A**. 2023. Detection of bacterial and protozoan pathogens in individual bats and their ectoparasites using high throughput microfluidic real-time PCR. **Microbiology Spectrum**. DOI: 10.1128/spectrum.01531-23.
39. Wu-Chuang A, Hartmann D, Maitre A, Mateos-Hernández L, Frantová H, Urbanová V, Obregon D, **Cabezas-Cruz A**, Perner J. 2023. Low microbial community complexity in adult stages and female midguts of *Dermanyssus gallinae*. **Microbial Ecol**. DOI: 10.1007/s00248-023-02244-4.
40. Maye J, and **Cabezas-Cruz A**. 2023. Alternative and Complementary Approaches to Consider for Effective Babesia Vaccine Development. **Pathogens**. 12(9), 1166.
41. Thorel M, Obregon D, Mulot B, Maitre A, Mateos-Hernandez L, Moalic PY, Wu-Chuang A, **Cabezas-Cruz A**, Leclerc A. 2023. Conserved core microbiota in managed and free-ranging *Loxodonta africana* elephants. **Frontiers Microbiol**. 14. DOI: 10.3389/fmicb.2023.1247719.
42. Zajac Z, Kulisz J, Woźniak A, Bartosik K, Foucault-Simonin A, Moutailler S, Cabezas-Cruz A. Tick Activity, Host Range, and Tick-Borne Pathogen Prevalence in Mountain Habitats of the Western Carpathians, Poland. **Pathogens**. 12(9), 1186.
43. Mansour H, **Cabezas-Cruz A**, Peucelle V, Farce A, Salomé-Desnoulez S, Metatla I, Guerrera IC, Hollin T, Khalife J. Characterization of GEXP15 as a potential regulator of Protein Phosphatase 1 and partner of ribosomal complex in *Plasmodium falciparum*. **International Journal of Molecular Sciences**. 24(16), 12647.
44. de la Fournière S, Guillemi EC, Paoletta MS, Pérez A, Obregón D, Cabezas-Cruz A, Sarmiento NF, Farber MD. Transovarial transmission of *Anaplasma marginale* in *Rhipicephalus microplus* ticks results in a bottleneck for strain diversity. **Pathogens**. 2023. 12(8), 1010.
45. Piloto-Sardiñas E, Foucault-Simonin A, Wu-Chuang A, Mateos-Hernández L, Marrero-Perera R, Abuin-Denis L, Roblejo-Arias L, Díaz-Corona C, Zajac Z, Kulisz J, Wozniak A, Moutailler S, Corona-González B, **Cabezas-Cruz A**. 2023. Dynamics of infections in cattle and *Rhipicephalus microplus*: A Preliminary Study. **Pathogens**. 12(8), 998.

46. Almazán C, de Luna GR, Tinoco L, González-Álvarez VH, Zajac Z, Kulisz J, Woźniak A, **Cabezas-Cruz A**, Mosqueda J. 2023. Morphological and molecular identification of the brown dog tick in Mexico. *Veterinary Parasitology: Regional Studies and Reports*. 100908. DOI: 10.1016/j.vprsr.2023.100908.
47. Contreras M , Vaz-Rodrigues R, Villar M, Mazuecos L, Artigas-Jerónimo S, González-García A, Shilova NM, Bovin NV, Díaz-Sánchez S, Ferreras-Colino E, Pacheco I, Chmelař J, Kopáček P, **Cabezas-Cruz A**, Gortázar C, de la Fuente J. 2023. Allergic reactions to tick saliva components in zebrafish model. *Parasites & Vectors*. 16, 242.
48. Jakimovski D, Mateska S, Dimitrova E, Bosilkovski E, Mijatović D, Simin V, Bogdan I, Grujić J, Obradović ZB, Meletis E, Kostoulas P, **Cabezas-Cruz A**, Banović P. Tick-borne encephalitis virus and *Borrelia burgdorferi* seroprevalence in Balkan tick-infested individuals: a two-centre study. *Pathogens*. 12(7), 922.
49. Zbigniew Z, Obregon D, Foucault-Simonin A, Wu-Chuang A, Moutailler S, Galon C, Kulisz J, Woźniak A, Bartosik K, **Cabezas-Cruz A**. 2023. Disparate dynamics of pathogen prevalence in *Ixodes ricinus* and *Dermacentor reticulatus* ticks occurring sympatrically in diverse habitats. *Scientific Reports*. 13(1):10645.
50. **Cabezas-Cruz A**. Grand Challenges in Arachnid Microbiota and Diseases. 2023. *Front. Arachn. Sci.* DOI: 10.3389/frachs.2023.1215831
51. Svobodová K, Maitre A, Obregón D, Wu-Chuang A, Thaduri S, Locke B, de Miranda JR, Mateos-Hernández L, Krejčí AB, **Cabezas-Cruz A**. 2023. Gut microbiota assembly of Gotland varroa-surviving honey bees excludes major viral pathogens. *Microbiol. Res.* 274: 127418.
52. Fernández-Ruiz N, Pinecki-Socias S, Estrada-Peña A, Wu-Chuang A, Maitre A, Obregon D, **Cabezas-Cruz A**, de Blas I, Nijhof AM. Decontamination protocols affect the internal microbiota of ticks. 2023. *Parasites & Vectors*. 16(1):189.
53. Piloto-Sardiñas E, Cano-Argüelles AL, Maitre A, Wu-Chuang A, Mateos-Hernandez L, Corduneanu A, Obregon D, Oleaga A, Pérez-Sánchez R, **Cabezas-Cruz A**. 2023. Comparison of salivary gland and midgut microbiome in the soft ticks *Ornithodoros erraticus* and *Ornithodoros moubata*. *Frontiers in Microbiology*. 14:1173609.
54. Mazuecos L, Alberdi P, Hernández-Jarguín A, Contreras M, Villar M, **Cabezas-Cruz A**, Simo L, González-García A, Díaz-Sánchez S, Neelakanta G, Bonnet SI, Fikrig E, de la Fuente J. 2023. Frankenbacteriosis targeting interactions between pathogen and symbiont to control infection in the tick vector. *iScience*. 26(5):106697.
55. Hussain S, Hussain A, Aziz MU, Song B, Zeb J, Hasib FMY, Li J, Almendros A, **Cabezas-Cruz A**, George D, Sparagano O. First molecular confirmation of multiple zoonotic vector-borne diseases in pet dogs and cats of Hong Kong SAR. *Ticks Tick Borne Dis.* 14(4):102191.
56. Corduneanu A, Wu-Chuang A, Maitre A, Obregon D, Sándor AD, **Cabezas-Cruz A**. 2023. Structural differences in the gut microbiome of bats using terrestrial vs. aquatic feeding resources. *BMC Microbiology*. 23: 93.
57. Rego ROM, Lopez JE, Cabezas-Cruz A. 2023. Editorial: Biological Drivers of Vector–Pathogen Interactions – Vol II. *Front Cell Infect Microbiol*. 13:1170834.
58. Aželytė J, Wu-Chuang A, Maître A, Žiegytė R, Mateos-Hernandez L, Obregon D, Palinauskas V, **Cabezas-Cruz A**. 2023. Avian malaria parasites modulate gut microbiome assembly in canaries. *Microorganisms*. 11(3), 563.
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228. de la Fuente J, Estrada-Peña A, **Cabezas-Cruz A**, Brey R. 2015. Flying ticks: Anciently evolved associations that constitute a risk of infectious disease spread. *Parasit Vectors.* 8:538.
229. de la Fuente J, Diez I, Contreras M, Vicente J, **Cabezas-Cruz A**, Tobes R, Manrique M, López V, Romero B, Bezos J, Dominguez L, Sevilla IA, Garrido JM, Juste R, Madico G, Jones-López E, Gortazar C. 2015. Comparative genomics of field isolates of *Mycobacterium bovis* and *M. caprae* provides evidence for possible correlates with bacterial viability and virulence. *PLoS Negl Trop Dis.* 9(11):e0004232.

## 2014

230. **Cabezas-Cruz A**, Valdés J, de la Fuente J. 2014. Cancer research meets tick vectors for infectious diseases. *Lancet Infect Dis.* 14(10): 916-917.
231. **Cabezas-Cruz A** and Valdés J J. 2014. Are ticks venomous animals? *Front Zool.* 11: 47.  
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ScienceNewsBlog: <https://www.sciencenews.org/blog/wild-things/yet-another-reason-hate-ticks>  
ScienceBlogs: <http://scienceblogs.com/lifelines/2014/07/06/venomous-ticks/>
232. **Cabezas-Cruz A**, Valdés JJ, de la Fuente J. 2014. The glycoprotein TRP36 of *Ehrlichia* sp. UFMG-EV and related cattle pathogen *Ehrlichia* sp. UFMT-BV evolved from a highly variable clade of *E. canis* under adaptive diversifying selection. *Parasit Vectors.* 7:584.

233. Cabezas-Cruz A, Lancelot J, Caby S, Oliveira G, Pierce RJ. 2014. Epigenetic control of gene function in schistosomes: a source of therapeutic targets? *Front Genet*. 5:317.
234. Schwarz A\*, Cabezas-Cruz A\*, Kopecký J, Valdés JJ. 2014. Understanding the evolutionary structural variability and target specificity of tick salivary peptides using next generation transcriptome data. *BMC Evol Biol*. 14:4.
- \*Joint first authors.
235. Zweygarth E, Cabezas-Cruz A, Josemans AI, Oosthuizen MC, Matjila PT, Lis K, Broniszewska M, Schöl H, Ferrolho J, Grubhoffer L, Passos LM. 2014. In vitro culture and structural differences in the major immunoreactive protein gp36 of geographically distant *Ehrlichia canis* isolates. *Ticks Tick Borne Dis*. 5(4): 423–431.
236. Mutshembele AM, Cabezas-Cruz A, Mtshali MS, Thekisoe OM, Galindo RC, de la Fuente J. 2014. Epidemiology and evolution of genetic variability of *Anaplasma marginale* in South Africa. *Ticks Tick Borne Dis*. 5(6): 624-631.
237. Tonk M, Cabezas-Cruz A, Valdés JJ, Rego RO, Rudenko N, Golovchenko M, Bell-Sakyi L, de la Fuente J, Grubhoffer L. 2014. Identification and partial characterisation of new members of the *Ixodes ricinus* defensin family. *Gene*. 540 (2): 146–152.
238. Silva J B, Cabezas-Cruz A, Fonseca AH, Barbosa JD, de la Fuente J. 2014. Infection of water buffalo in Rio de Janeiro Brazil with *Anaplasma marginale* strains also reported in cattle. *Vet Parasitol*. 205 (2014): 730–734.
239. Tonk M, Cabezas-Cruz A, Valdés JJ, Rego RO, Chrudimská T, Strnad M, Šíma R, Bell-Sakyi L, Franta Z, Vilcinskas A, Grubhoffer L, Rahnamaeian M. 2014. Defensins from the tick *Ixodes scapularis* are effective against phytopathogenic fungi and the human bacterial pathogen *Listeria grayi*. *Parasit Vectors*. 7: 554.
240. Silva JB, Fonseca AH, Barbosa JD, Cabezas-Cruz A, de la Fuente J. 2014. Low genetic diversity associated with low prevalence of *Anaplasma marginale* in water buffaloes in Marajó Island, Brazil. *Ticks Tick Borne Dis*. 5(6): 801-804.

## 2013

241. Cabezas-Cruz A, Passos LM, Lis K, Kenneil R, Valdés JJ, Ferrolho J, Tonk M, Pohl AE, Grubhoffer L, Zweygarth E, Shkap V, Ribeiro MF, Estrada-Peña A, Kocan KM, de la Fuente J. 2013. Functional and Immunological Relevance of *Anaplasma marginale* Major Surface Protein 1a Sequence and Structural Analysis. *PLoS ONE*. 8(6): e65243.
242. Cabezas-Cruz A, Vancová M, Zweygarth E, Ribeiro MF, Grubhoffer L, Passos LM. 2013. Ultrastructure of *Ehrlichia mineirensis*, a new member of the *Ehrlichia* genus. *Vet Microbiol*. 167(3–4): 455–458.
243. Pohl AE, Cabezas-Cruz A, Ribeiro MF, Silveira JA, Silaghi C, Pfister K, Passos LM. 2013. Detection of genetic diversity of *Anaplasma marginale* isolates in Minas Gerais, Brazil. *Rev Bras Parasitol Vet*. 22(1):129–135.
244. Zweygarth E, Schöl H, Lis K, Cabezas-Cruz A, Thiel C, Silaghi C, Ribeiro MF, Passos LM. 2013. In vitro culture of a novel genotype of *Ehrlichia* sp. from Brazil. *Transbound Emerg Dis*. 60 (Suppl. 2) 86–92.
245. Preston SG, Majtán J, Kouremenou C, Rysnik O, Burger LF, Cabezas-Cruz A, Chiong Guzman M, Nunn MA, Paesen GC, Nuttall PA, Austyn JM. 2013. Novel immunomodulators from hard ticks selectively reprogramme human dendritic cell responses. *PLoS Pathogens*. 9(6): e1003450.

## 2012

246. Cabezas-Cruz A, Zweygarth E, Ribeiro MF, da Silveira JA, de la Fuente J, Grubhoffer L, Valdés JJ, Passos LM. 2012. New species of *Ehrlichia* isolated from *Rhipicephalus (Boophilus) microplus* shows an ortholog of the *E. canis* major immunogenic glycoprotein gp36 with a new sequence of tandem repeats. *Parasit Vectors*. 5: 291.

## BOOK CHAPTERS AND E-BOOKS

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1. Sanches, G. S., Bechara, G. H., **Cabezas-Cruz, A.**, & de la Fuente, J. 2024. Capítulo 17: Estudos genômicos de carrapatos. In D. M. Barros-Battesti, R. Z. Machado, & M. R. André (Eds.), Ectoparasito fauna brasileira de importância veterinária: Volume 3. Acarofauna de importância veterinária: Parasitiformes - Ixodida, Parte II (pp. [407-422]). Colégio Brasileiro de Parasitologia Veterinária. ISBN: 978-65-84598-93-5.
2. **Cabezas-Cruz, A.**, Obregon, D., Contreras, M., Alberdi, P., Bard, E., Villar, M., de la Fuente, J. 2024. *Anaplasma*. In: Molecular Medical Microbiology (3rd edition). doi: 10.1016/B978-0-12-818619-0.00028-9.
3. **Cabezas-Cruz A.** 2021. Can the impact of climate change on the tick microbiome bring a new epidemiological landscape of tick-borne diseases? In: Climate, Ticks and Disease. Ed. Pat Nuttall. CABI Climate changes series <https://www.cabi.org/bookshop/book/9781789249637/>
4. Espinosa PJ, Alberdi P, Villar M, **Cabezas-Cruz A**, de la Fuente. 2018. Heat shock proteins in vector-pathogen interactions: the *Anaplasma phagocytophilum* model. In: Heat Shock Proteins in Veterinary. **Springer**. 12:375-398. Online ISBN: 978-3-319-73377-7
5. **Cabezas-Cruz A**, Pollet T, Estrada-Peña A, Allain E, Bonnet SI, Moutailler S. 2018. Handling the microbial complexity associated to ticks. In: Ticks and Tick-Borne Diseases, Editor Dr. Muhammad Abubakar. **InTechOpen**. Online ISBN 978-953-51-6499-9.
6. Kocan KM, de la Fuente J, **Cabezas-Cruz A.** 2015. The genus *Anaplasma*: New challenges after reorganization. In **Revue Scientifique et technique (International Office of Epizootics)**. 34(2):577-586.
7. Estrada-Peña A, de la Fuente J, Cabezas-Cruz A. 2018. Functional Redundancy and Ecological Innovation Shape the circulation of Tick-Transmitted Pathogens. In Tick-Host-Pathogen Interactions. Editors: Bonnet SI, Nijhof AM, de La Fuente J. Lausanne: Frontiers Media. doi: 10.3389/978-2-88945-542-3
8. Cabezas-Cruz A, Espinosa PJ, Obregón DA, Alberdi P, de la Fuente J. 2018. *Ixodes scapularis* tick cells control *Anaplasma phagocytophilum* infection by increasing the synthesis of phosphoenolpyruvate from tyrosine. In Tick-Host-Pathogen Interactions. Editors: Bonnet SI, Nijhof AM, de La Fuente J. Lausanne: Frontiers Media. doi: 10.3389/978-2-88945-542-3
9. Contreras M, Alberdi P, Mateos-Hernández L, de Mera IGF, García-Pérez AL, Vancová M, Villar M, Ayllón N, Cabezas-Cruz A, Valdés JJ, Stuen S, Gortazar C, de la Fuente J. 2018. *Anaplasma phagocytophilum* MSP4 and HSP70 proteins are involved in interactions with host cells during pathogen infection. In Tick-Host-Pathogen Interactions. Editors : Bonnet SI, Nijhof AM, de La Fuente J. Lausanne : Frontiers Media. doi: 10.3389/978-2-88945-542-3
10. Cabezas-Cruz A, Alberdi P, Valdés JJ, Villar M, de la Fuente J. 2018. *Anaplasma phagocytophilum* infection subverts carbohydrate metabolic pathways in the tick vector, *Ixodes scapularis*. In Tick-Host-Pathogen Interactions. Editors : Bonnet SI, Nijhof AM, de La Fuente J. Lausanne : Frontiers Media. doi: 10.3389/978-2-88945-542-3
11. de la Fuente J, Antunes S, Bonnet S, Cabezas-Cruz A, Domingos AG, Estrada-Peña A, Johnson N, Kocan KM, Mansfield KL, Nijhof AM, Papa A, Rudenko N, Villar M, Alberdi P, Torina A, Ayllón N, Vancova M, Golovchenko M, Grubhoffer L, Caracappa S, Fooks AR, Gortazar C, Rego ROM. 2018. Tick-pathogen interactions and vector competence: identification of molecular drivers for tick-borne diseases. In Tick-Host-Pathogen Interactions. Editors : Bonnet SI, Nijhof AM, de La Fuente J. Lausanne : Frontiers Media. doi: 10.3389/978-2-88945-542-3
12. Cabezas-Cruz A, Estrada-Peña A, Rego ROM, de la Fuente J. 2018. Tick-pathogen ensembles: do molecular interactions lead ecological innovation? In Tick-Host-Pathogen Interactions. Editors : Bonnet SI, Nijhof AM, de La Fuente J. Lausanne : Frontiers Media. doi: 10.3389/978-2-88945-542-3
13. Artigas-Jerónimo S, Villar M, Cabezas-Cruz A, Valdés JJ, Estrada-Peña A, Alberdi P, de la Fuente J. 2020. Functional Evolution of Subolesin/Akirin. In Tick and Tick-Borne Pathogens: Molecular and Immune Targets for Control Strategies. Editors: Ali, A., Mulenga, A., Vaz, I. S. Jr. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88966-060-5E-Book
14. Artigas-Jerónimo S, Estrada-Peña A, Cabezas-Cruz A, Alberdi P, Villar M, de la Fuente J. 2020. Modeling Modulation of the Tick Regulome in Response to *Anaplasma phagocytophilum* for the Identification of New Control Targets. In Tick and Tick-Borne Pathogens: Molecular and Immune Targets for Control Strategies.

Editors: Ali, A., Mulenga, A., Vaz, I. S. Jr. Lausanne: Frontiers Media SA. doi: 10.3389/978-2-88966-060-5E-Book

## Patents

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-**NEW PEPTIDES WITH EFFICIENT ANTIFUNGAL AND ANTI-MYCOTOXIN ACTIVITY : TICK DEFENSIN GAMMA-CORE INHIBITS MYCOTOXIN PRODUCTION AND GROWTH OF FUSARIUM GRAMINEARUM.**

Inventors: **Alejandro Cabezas-Cruz**, Florence Forget and Vessela Atanasova.

Status : Patent (filed): No. dépôt France FR2004090.

-**THE PROBIOTIC BACTERIUM ESCHERICHIA COLI NISSLE 1917 DECREASES THE SEVERITY OF MAJOR INFECTIOUS DISEASES IN ANIMALS LACKING ENDOGENOUS CARBOHYDRATE ALPHA-GAL.**

Inventors: **Alejandro Cabezas-Cruz**, Luis Bermudez-Humaran, Lourdes Mateos-Hernández, Véronica Risco-Castillo, Astrid Holzer, Edgar Torres-Maravilla, José de la Fuente and Jacques Guillot.

Status : Patent (filed): No. dépôt EU: 20305597.5.

## Editorial activity and contribution as reviewer

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### Section Editor-in-Chief:

Section *Arachnid Microbiota and Diseases*, Frontiers in Arachnid Science

<https://www.frontiersin.org/journals/arachnid-science/sections/arachnid-microbiota-and-diseases>

### Section Editor-in-Chief:

Section *Ticks, Pathogens*

<https://www.mdpi.com/journal/pathogens/sections/Ticks>

### Guest Editor (Selected):

New Frontiers in Tick Research:

[https://www.mdpi.com/journal/pathogens/special\\_issues/New\\_Frontiers\\_in\\_Tick\\_Research](https://www.mdpi.com/journal/pathogens/special_issues/New_Frontiers_in_Tick_Research)

Biological Drivers Of Vector-Pathogen Interactions (I):

<https://www.frontiersin.org/research-topics/9511/biological-drivers-of-vector-pathogen-interactions>

Biological Drivers Of Vector-Pathogen Interactions (II):

<https://www.frontiersin.org/research-topics/27154/biological-drivers-of-vector-pathogen-interactions---vol-ii>

### Contribution as reviewer of peer-reviewed scientific articles

Verified reviews (Publons): 484

<https://publons.com/researcher/449403/alejandro-cabezas-cruz/>

### Contribution as reviewer of research grant agencies

The Czech Science Foundation (GACR)

Croatian Science Foundation (HRZZ)

National Center of Science and Technology Evaluation (NCSTE)

Science Fund of the Republic of Serbia (SFRS)

## Outreach

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de la Fuente, J., Cabezas-Cruz, A. 2019. Alpha-Gal syndrome. Trade-off between allergy and protection to infectious diseases. Research Outreach 110. <https://researchoutreach.org/articles/alpha-gal-syndrome-trade-off-between-allergy-protection-infectious-diseases/>

## INVITED PRESENTATIONS

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**2024:** Balkan Association for Vector Borne Diseases, Novi Sad, Serbia

2do. Congreso Nacional Impactos y Estrategias de Prevención y Control de la Caligidosis en la

Salmonicultura Chilena, Puerto Varas, Chile

Democritus University of Thrace, Greece

**2023:** Behaviour and Evolution Seminar, Bielefeld University, Germany, 24 May

V Congreso Internacional AGROCIENCIA 2023, Varadero, Cuba, June

Montpellier Ecology and Evolution Seminars (SEEM), Montpellier, France

**2022:** TTP10, \*Keynote speaker, Romania, 24-28 August

BioTick2022, \*Keynote speaker, Cuba, 27-31 March

Jornada de inmunología veterinaria, Symposium (online), Mexico, 31 August-1 September

University of São Paulo, Seminar (online), Brazil, 19 August

'International Symposium on Research and Postgraduate Studies in Natural Sciences', Symposium (online), Mexico, 20 May

**2021:** FéRI 2021, Journées d'Animation Scientifique, France, 5-6 July

Justus Liebig University Giessen, Giessen, Germany

Arthromint, virtual meeting, Brazil, 4-5 August

CVET 7029 –Epidemiology of Vector-Borne Diseases, virtual meeting, Brazil, 27 September-1 August

Arthropod vectors and vector-borne diseases: a One Health perspective, Webinar (online), 1 September

**2018:** ICOPA, \*Keynote speaker, South Korea, 19-24 August

Institut für Parasitologie, Wien, Austria

**2017:** Justus Liebig University Giessen, Giessen, Germany

Institute of Hygiene and Tropical Medicine, Lisbon, Portugal

Veterinary Research Institute, Brno, Czech Republic

South Bohemia University, České Budějovice, Czech Republic

**2016:** Federal Research Institute for Animal Health, Jena, Germany

**2015:** Institute of Hygiene and Tropical Medicine, Lisbon, Portugal

## COMPETITIVE FUNDING

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### 2023

2023-2025 - Carlos Chagas Filho Foundation for Research Support in the State of Rio de Janeiro (FAPERJ), grant Proc. E-26/210.149/2023 (SEI-260003/001754/2023 - APQ1). Blocking the transmission of *Theileria equi* by anti-microbiota vaccines. R\$ 755.394,00. Participant (Researcher) - Alejandro Cabezas-Cruz

### 2022

2022-2026: EU-funded COST Action, grant CA21170. Prevention, anticipation and mitigation of tick-borne disease risk applying the DAMA protocol (PRAGMATIC). ca. 500,000 €. Project coordinator: Dr. Gábor Földvári - participant Alejandro Cabezas-Cruz

2022-2025: Research Council of Lithuania, grant S-MIP-22-52. Natural anti- $\alpha$ -Gal antibodies and the protection against avian malaria. 149,994 €. Project PI: Dr. Vaidas Palinauskas, co-PI Alejandro Cabezas-Cruz

2022-2026: Austrian Science Fund (FWF), grant (Einzelprojekte) P 36130. The impact of the tick gut microbiome on *Ixodes ricinus* vector competence for *Borrelia afzelii*. 408,560.25 €. Project PI: Dr. Adnan Hodžić, Collaboration partner - Alejandro Cabezas-Cruz

2022-2023: Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), grant 402234/2022-7 (6748207135527005). Blocking the transmission of *Theileria equi* by anti-microbiota vaccines. R\$ 73,598. Project PI: Prof. Huarrisson Azevedo Santos, Collaboration partner - Alejandro Cabezas-Cruz.

## 2021

2021-2024: LabEx IBEID – Integrative Biology of Emerging Infectious Diseases, Pasteur Institute, Paris with contribution of ENVA and ANSES. New insights on tick-borne pathogen co-infections. 635,000 €, PIs - Sara Moutailler, Ladislav Simo and Alejandro Cabezas-Cruz

## 2019

2019-2021: Ministry of Education, Youth and Sports (MEYS) of the Czech Republic. (grant number CZ.02.2.69/0.0/0.0/17\_050/0008489). COEVOTICK: Experimental evolution of coinfections by tick-borne pathogens. 4,000,000 CZK (154,860 €), PI - Alejandro Cabezas-Cruz. Declined by PI

2019-2021: Consejería de Educación, Cultura y Deportes, JCCM, grant CCM17-PIC-036 (SBPLY/17/180501/000185). Characterization of the immune response to alpha-Gal and applications for the control of infectious diseases. Scientific coordinator: Jose de la Fuente (IREC, Spain). 154,000 €, Participant (Researcher) - Alejandro Cabezas-Cruz

## 2018

2018-2020: DIM1Health, Neural basis of tick-pathogen interactions, 103,600 €, PIs - Ladislav Simo and Alejandro Cabezas-Cruz

2018: INRA young researcher grant, Tick-borne pathogens coinfections, 10,000 €, PI -Alejandro Cabezas-Cruz

## AWARDS AND SCHOLARSHIPS

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**2023:** Cuban Academy of Sciences Award

**2020:** Cuban Academy of Sciences Award

**2019:** Prize, Ministry of Science, Technology and Environment of the Republic of Cuba (CITMA)

Outstanding Reviewer Award, Publons

Cuban Academy of Sciences Award

**2018:** Prize, Ministry of Science, Technology and Environment of the Republic of Cuba (CITMA)

Outstanding Reviewer Award, Publons

**2017:** Odile Bain Memorial Prize (OBMP)

Marie Skłodowska-Curie Actions Seal of Excellence.

Outstanding Reviewer Award, Publons

**2016:** Outstanding Reviewer Award, Publons

**2015:** Outstanding Reviewer Award, Ticks and Tick-borne Diseases

**2013 – 2016:** Doctoral Scholarship, University of Lille 2 (€ 46 800)

**2012:** Marie Skłodowska-Curie Scholarship (€ 81 022) (Early-Stage Researcher)

**2010:** Cuban Academy of Sciences Award

## THESIS DIRECTION AND SUPERVISION OF EXPERIENCED RESEARCHERS

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**2023 – Present:** Director of PhD Thesis of Lianet ABUIN-DENIS

**Institution:** University Paris-Est, France

**Thesis:** Pathogen manipulation of microbiota-mediated modulation of tick neurophysiology.

**2023 – Present:** Co-director of PhD Thesis of Eianne PILOTO-SARDIÑAS

**Institution:** University of Havana, Cuba

**Thesis:** Characterization of the tick microbiome as a strategy to identify key taxa whose manipulation modifies their vectorial capacity.

**2021 – Present:** Co-director of PhD Thesis of Justė AŽELYTĖ

**Institution:** The Nature Research Centre, Lithuania

**Thesis:** Anti-microbiota vaccines against avian malaria.

**2021 – Present:** Co-supervisor of PhD Thesis of Caina NING

**Institution:** EnvA, France

**Thesis:** Cholinomimetic-mediated activities of peptidergic neurons innervating the salivary glands of the tick *Ixodes ricinus*.

**2021 – 2024:** Director of PhD Thesis of Apolline MAÎTRE

**Institution:** EnvA, France

**Thesis:** Anti-microbiota vaccines for the control of tick-borne pathogens affecting livestock in Corsica.

**2021 – 2022:** Director of PhD Thesis of Alejandra WU-CHUANG

**Institution:** University Paris-Saclay, France

**Thesis:** Anti-tick microbiota vaccines: a novel approach for the control of tick-borne pathogens.

**2021:** Director of Master 2 Thesis of Lianet ABUIN DENIS

**Institution:** Sorbonne Université, France

**Thesis:** Tick-microbiota-pathogen interactions: opportunities for tick-borne pathogens control.

**2021:** Director of Master 2 Thesis of Mouna Naila AZZOUNI

**Institution:** Université de Paris-Est Creteil Val de Marne, France

**Thesis:** Modulation of anti- $\alpha$ -Gal immunity as a One Health approach for the control of infectious diseases.

**2020:** Director of Master 2 Thesis of Youman AL BAYDA

**Institution:** Université de Versailles Saint-Quentin-En-Yvelines, France

**Thesis:** Selection of specific aptamers for tick  $\alpha$ -Gal detection.

**2019 – 2022:** Co-director of PhD Thesis of Ivan Pacheco Carrillo

**Institution:** University of Castilla-La Mancha, Spain

**Thesis:** Characterization of the vector-host interaction for the control of infectious diseases.

**2018 – Present:** Co-supervisor of Postdoctoral fellow Lourdes Mateos-Hernández

**Institution:** INRAE-ANSES, France

**Project:** Alpha-Gal syndrome, trade-off between allergy and protection to infectious diseases.

**2019 – 2021:** Co-supervisor of Postdoctoral fellow Andrea Gomez-Chamorro

**Institution:** INRAE (France)-Oxford University (UK)

**Project:** Experimental evolution of coinfections by tick-borne pathogens.

**2017 – 2019:** Co-director of **PhD Thesis**. Pedro Jose Espinosa Prados

**Institution:** University of Castilla-La Mancha, Spain

**Thesis:** Host-pathogen interactions in *Anaplasma phagocytophilum*.

**2018:** Director of **Master Thesis** of Eléonore ALLAIN

**Institution:** University of Bordeaux, France

**Thesis:** Detection of pathogenic and non-pathogenic bacteria associated to ticks.

**2017:** Co-director of **Undergraduate Thesis** of Myriam Denoual\*

**Institution:** Nantes-Atlantic National College of Veterinary Medicine, Food Science and Engineering (Oniris Nantes), France

**Thesis:** Molecular characterization of *Anaplasma ovis* from an anaplasmosis outbreak in goats from Corsica, France.

**\*Thesis proposed by the Academy of Veterinary Sciences of France (l'Académie Vétérinaire de France, AVF) to be awarded the prize Xavier Bernard.**

**2016 – 2018:** Director of **Undergraduate Thesis** of Sewmi Madu and Julia Gobl

**Institution:** University of South Bohemia, Czech Republic

**Thesis:** Role of Histone Modifying Enzymes in the embryogenesis of the soft tick *Ornithodoros moubata*.

#### **MEMBER OF THESIS COMMITTEE**

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**2023:** Hala Mansour,

**Institution:** University of Lille, France.

**Degree:** PhD

**Thesis:** Etude de la fonction de GEXP15, une protéine régulatrice de la protéine Phosphatase 1, dans le cycle de développement intraerythrocytaire de *Plasmodium falciparum*.

**Role:** Examinator

**2022:** Vincent Ciculli,

**Institution:** Università di Corsica Pasquale Paoli, France.

**Degree:** PhD

**Thesis:** HOLIS-Tick: Identification et maîtrise des maladies vectorielles transmises par les tiques en Corse.

**Role:** Rapporteur

**2022:** Valentin Leannec-Rialland,

**Institution:** University of Bordeaux, France.

**Degree:** PhD

**Thesis:** Tick defensin γ-core reduces *Fusarium graminearum* growth and abrogates mycotoxins production with high efficiency.

**Role:** Invitee

**2021:** Sara Artigas Jeronimo,

**Institution:** University of Castilla-La Mancha, Spain.

**Degree:** PhD

**Thesis:** Multi-Omics approaches to the study of cellular biological processes and vaccine development.

**Role:** Rapporteur

**2021:** Jorge Alonso Carné,

**Institution:** University of Zaragoza, Spain.

**Degree:** PhD

**Thesis:** Utilización de la teledetección para la modelización y control de presencia de garrapatas en un proceso de cambio climático. Validación de variables y relaciones fenológicas.

**Role:** Rapporteur

**2020:** Pavlína Věchtová,

**Institution:** University of South Bohemia, Czech Republic.

**Degree:** PhD

**Thesis:** Comparative transcriptomics of *Ixodes ricinus* tick life stages.

**Role:** Rapporteur

**2016:** Lisa Hain, Bachelor Thesis.

**Institution:** University of South Bohemia, Czech Republic.

**Degree:** Master

**Thesis:** Understanding the role of bb0454 during infection by *Borrelia afzelii*.

## CONFERENCE/WORKSHOP - PRESENTATIONS/POSTERS (Selected)

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**2024:** The Conference of Research Workers in Animal Diseases (CRWAD), Chicago, United States

16th European Bat Research Symposium (EBRS-2024), Tarragona, Spain

EMOP 2024 Wroclaw, Poland

Labex IBEID International Conference, Adapting to Change: Emerging Infectious Diseases in a Shifting Climate, Paris, France

**2023:** V Congreso Internacional de las Ciencias Agropecuarias AGROCIENCIAS, Varadero, Cuba

European Veterinary Parasitology College meeting (EVPC), Maisons-Alfort, France

Journées scientifiques et doctorales de l'Anses (JSDA), Maisons-Alfort, France

10th Conference of the Scandinavian-Baltic Society for Parasitology (CSBSP10), Tartu, Estonia

1st Simposion Internacional 'Garrapatas, vectores de interes veterinario e innovacion para su control', Queretaro, Mexico

Ondo 2023 Pharma Food Congress - Functional Food and Phytomedicines: Promoting Translational Research for Societal Impact, Ondo, Nigeria

15th International Symposium on Ticks and Tick-borne Diseases (ISTTBD-XV), Weimar, Germany

**2021:** 7th European Veterinary Immunology Workshop

**2020:** de la Fuente J, Urra JM, Ferreras-Colino E, Contreras M, Cabrera CM, de Mera IGF, Villar M, **Cabezas-Cruz A**, Gortázar C. 2020. Immunity to glycan alpha-Gal and COVID-19: possibilities for disease control and prevention. SciTech Central COVID-19. 11th International Virtual Seminar on COVID-19.

<https://www.scitechcentralconferences.com/accepteddetails/international-virtual-seminar-on-covid-19/1151>

**2019:** Organization of FCTM 1. Maisons-Alfort, France

<https://www.paru.cas.cz/novinky/novinka/5022-french-czech-tick-meeting-1-fctm-1-/>

<https://www.vet-alfort.fr/actualites-de-l-ecole/deux-jours-consacres-aux-tiques>

BioTick2019, Varadero, Cuba (ORAL PRESENTATION)

13th International Symposium on Ticks and Tick-borne Diseases 2019, Weimar, Germany (ORAL PRESENTATION)

**2018:** ICOPA, Daegu, South Korea (KEYNOTE SPEAKER)

Tick and Tick-Borne Pathogens Seminar Series, Ceske Budejovice, Czech Republic (ORAL PRESENTATION)

**2017:** IX International Conference on Ticks and Tick-borne Pathogens (TTP-9), Cairns, Australia (ORAL

PRESENTATION)

International Congress on Rickettsia and other Intracellular Bacteria (ESCCAR) 2017, Marseille, France  
(ORAL PRESENTATION)

Neglected Vectors and Vector-Borne Diseases (EurNegVec): COST Action TD1303, Crete, Greece (ORAL PRESENTATION)

ENVA research day, Maisons Alfort, France (ORAL PRESENTATION)

**2016:** Workshop on Arthropod-Borne Diseases, Jena, Germany (ORAL PRESENTATION)

**2015:** Molecular and Cellular Biology of Helminths IX, Hydra, Greece (POSTER)

**2014:** VIII International Conference on Ticks and Tick-borne Pathogens (TTP-8), Cape Town, South Africa  
(POSTER)

**2013:** II Tick-borne diseases workshop, Berlin, Germany (ORAL PRESENTATION)

International Symposium on Ectoparasites of Pets (ISEP) conference 2013, Munich, Germany (ORAL PRESENTATION)

XII. International Jena Symposium on Tick-Borne Diseases, Jena, Germany (POSTER)

**2012:** POSTICK immunology workshop, Research Center Borstel, Borstel, Germany (ORAL PRESENTATION)

Joint conference on emerging and remerging epidemics affecting global health, Orvieto, Italy (POSTER)

Euroscience Open Forum (ESOF) and Marie Curie Actions Conferences, Dublin, Ireland

I Tick-borne diseases workshop, Berlin, Germany (ORAL PRESENTATION)

POSTICK bioinformatics workshop, University of Glasgow Veterinary School, Glasgow, UK