TROPIMUNDO 2

ERASMUS MUNDUS JOINT MASTER IN TROPICAL BIODIVERSITY AND ECOSYSTEMS

Hector Fabio Rivera Gutierrez, Universidad de Antioquia Local Coordinator

Since 2013, I have been a faculty member at the Universidad de Antioquia, where I have taught and conducted research in bioacoustics, ornithology, evolutionary ecology, and animal communication. My academic trajectory has consistently centered on understanding how communication signals—especially bird song—mediate ecological and evolutionary processes.

Throughout my career, I have developed a research profile that integrates evolutionary ecology, behavioural ecology, sexual selection, and the effects of environmental gradients. Birds have served as both the subject and the model system through which I explore these questions, using bioacoustics as a key methodological tool. I am particularly interested in how song learning and signal development influence, and are influenced by, evolutionary dynamics and environmental constraints.

More recently, my research has expanded into the study of avian malaria. I investigate the ecological factors shaping host-parasite interactions, the consequences of parasitism on sexually selected traits, and the macroecological patterns of disease prevalence and distribution. This line of work reflects my broader goal of understanding how complex biotic interactions shape evolutionary trajectories and biodiversity patterns across scales.

Looking ahead, I aim to further integrate my research on animal communication and parasitism, using comparative and experimental approaches to explore how host-parasite dynamics affect signal evolution. I would also wanto to perform a comparative approach between European and Neotropical birds to study how climate change and urbanization affect the evolution of host-parasite interactions, focusing on avian malaria.Finally, I also plan to foster international collaborations, expand my use of computational tools and phylogenetic methods, and contribute to training the next generation of ecologists in Latin America and beyond.

1	**Family name**	Rivera Gutierrez	
2	**First name**	Hector Fabio	
3	**Place and Date of birth**	Cali, Colombia 29704/1976	
4	**Nationality**	Colombian	
5	**E-mail**	Fabio.rivera@udea.edu.co	
6	**Education / Professional studies**		
	Dates (from-to)	Institution	Degree/diploma
	2007-2011	Universiteit Antwerpen	PhD Biology
	2005-2007	Vrije Universiteit, Amsterdam	Research Master in Ecology
	1995-2003	Universidad del Valle, Cali, Colombia	BSc in Biology with emphasis in zoology

7	**Language skills** Grade skill 1-5 (1 = basic, 5 = excellent, * = mother tongue)			
	Language	Speaking	Reading	Writing
	Spanish	5	5	5
	English	4	5	4
8	**Membership of professional bodies**			
	Colombian Society of Ornithology			
9	**Other Skills**			
10	**Name of organisation currently working for and Present position in the organisation**		Universidad de Antioquia, Medellín, Colombia, Associate Professor	
11	**Years with the organisation**		11	
12	**Long-term experience in selected countries/territories**			
	Country	Date	Details	
	Belgium	2011-2012	Postdoctoral Research Fellow, Behavioural Ecology Research Group, University of Antwerp, Belgium	
	Belgium	2007-2011	PhD, University of Antwerp, Belgium	
	The Netherlands	2005-2007	Research Master	
13	**Professional experience record**			
	Location	Date	Organisation	
1	Medellín-Colombia	2013-	Universidad de Antioquia	
	Position	Professor		
	Responsibilities			
2	Barranquilla – Colombia	2012 – 2013	Universidad del Atlántico	
	Position	Professor		
	Responsibilities			
14	**Publications**			
	Number of publications in peer-reviewed journals			
	32			
	10 publications that are most representative in the field of tropical biodiversity and ecosystems			

	1. Tamayo-Quintero, J., Martínez-de la Puente, J., Matta, N.., Pacheco, M. A., Rivera-Gutierrez, H. F. (2025). "Imprudent use of MalAvi names biases the estimation of parasite diversity of avian haemosporidians." PLOS Pathogens 21(2): e1012911. 2. Tamayo-Quintero, J., San-José, M., Martínez-de la Puente, J., González-Quevedo, C., Rivera-Gutierrez, H. F. (2025). "It's all about scale: The landscape effect on avian haemosporidians." Science of The Total Environment 962: 178426. 3. Sedano-Cruz R., Pérez-Amaya N., Rivera-Gutiérrez H.F. 2024. Vocal and genetic var between a land-bridge island and mainland populations of the Black-crowned Ants (Thamnophilus atrinucha). Behavioral Ecology and Sociobiology 78(3), 42. (doi:10.1007/s00265-024-03455-6). 4. López-Murillo C., Hinestroza-Morales S., Henny P., Toledo J., Cardona-Gómez G.P., Rivera-Gutiérrez H., Posada-Duque R. 2024. Differences in vocal brain areas and astrocytes between the house wren and the rufous-tailed hummingbird. Frontiers Neuroanatomy 18. (doi:10.3389/fnana.2024.1339308). 5. Cruz-Bernate L., Espinosa-Bravo C., Rivera-Gutiérrez H.F. 2023 Does cryptic dichromatism exist in the Saffron Finch (Sicalis flaveola)? Colorimetric variables an avian visual model. *Avian Research* **14**, 100127. (doi:https://doi.org/10.1016/j.avrs.2023.100127). 6. Tamayo-Quintero, J., Martínez-de la Puente, J.; San-José, M.; González-Quevedo, C Rivera-Gutiérrez, HF. (2023). "Bird community effects on avian malaria infections." Scientific Reports 13(1): 11681. 7. Reyes P., Bates J., Naka L., Miller M., Caballero I., Gonzalez-Quevedo C., Parra J.L, R Gutierrez H. F., Bonaccorso E. and Tello J. (2023). Phylogenetic relationships and biogeography of the ancient genus Onychorhynchus (Aves: Onychorhynchidae) sug cryptic Amazonian diversity. Journal of Avian Biology, 2023: e03159; doi: doi: 10.1111/jav.03159 8. Rivera-Gutiérrez, H. F., et al. (2023). "Does learning matter? Birdsong-learning prog determines coping strategies for living in urban noisy environments." Behavioral Ec and Sociobiology 77(2): 22. 9. Idárraga-Piedrahíta, Á., González-Caro, S., Duque, Á. J., Jiménez-Montoya, J., Gonza M, R., Parra, J. L., & Rivera-Gutiérrez, H. F. (2022). Drivers of beta diversity along a precipitation gradient in tropical forests of the Cauca River Canyon in Colombia. *Jo of Vegetation Science*, *33*(2), e13110. 10. Gonzalez-Quevedo C., Pabón A., Rivera-Gutierrez H.F. (2016). Prevalence of haemosporidians in a Neotropical endemic bird area. Avian Conservation and Ecology 11(1). (doi:10.5751/ACE-00834-110107).
15	**Number of conference presentations (between brackets invited contributions)**
16	**Most important awards**

	Award	Award date	Issuing oranisation
1	*Award for Outreach in the Field of Exact Sciences*	2021	Universidad de Antioquia