

**PAOLA ANDREA BARATO GÓMEZ**

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**CURRICULUM VITAE**

Dr. Paola Barato is a veterinary pathologist and Doctor in Biotechnology at the National University of Colombia. She is a specialist in aquaculture at the University of Los Llanos in Colombia. She has received training in veterinary pathology at the National University of Colombia, UC Davis, Purdue University, Virginia Tech, and the University of Georgia (USA) to be qualified for Certifying Examination at the American College of Veterinary Pathologist (Phase I completed). She is a founding partner and scientific and executive director of CORPAVET, MolecularVet SAS, and MolecularVet US LLC, its science-based companies in Colombia and the United States. She is a consultant for FAO, APEC, UNIDO, industry (MSD, Vecol, Hipra, Vaxxinova, Spring Genetics, Regal Springs, PNY, Troutlodge, Ziegler, Vimifos, Itacol, etc.), governments, and universities on freshwater fish health, biosafety, and pathology. She has developed her professional and scientific career to understand the first interactions between microorganisms and hosts to propose strategies for the prevention and control of infectious diseases. She is co-author of the patent on "Streptococcus adhesion glyco-inhibitors in fish." She is the Regional Director for Latin America and the Caribbean for the World Aquatic Veterinary Medical Association (WAVMA) (2022-2024), she was the Director of the Latin American and Caribbean Chapter (LACC) of the World Aquaculture Society (WAS) (2021-2024) and the Past President of LCPG (Latin Comparative Pathology Group) of Davis-Thompson Foundation (2020-2022).

<https://www.linkedin.com/in/paola-barato-279a702a/>

**EDUCATION**

AMERICAN COLLEGE OF VETERINARY PATHOLOGIST (ACVP) Phase I ACVP Board Certification. April, 2019	Chicago, IL, US
UNIVERSIDAD NACIONAL DE COLOMBIA PhD in Biotechnology, 2015 <i>Research Project:</i> "Detection of carbohydrates involved in adherence of <i>Streptococcus agalactiae</i> to the intestinal epithelium of tilapias ( <i>Oreochromis sp.</i> ), <i>in vitro</i> model". <i>Supervisor:</i> Dr. Carlos Iregui Summa Cum Laude	Bogotá D.C., Colombia
UNIVERSIDAD DE LOS LLANOS Specialization in Aquaculture, 2008	Villavicencio, Colombia
UNIVERSIDAD NACIONAL DE COLOMBIA Veterinary Medicine, 2004.	Bogotá D.C., Colombia

**LANGUAGES**

Spanish (native), English (fluent – TOEFL iBT 85), and Portuguese (fluent)

**PROFESSIONAL TRAINING**

Veterinary Anatomic Pathology	UCDavis CAHFS (USA): March – June 2024 – Tutor: Dr. Francisco Uzal <i>DVM, PhD, DACVP</i> Sept - Dec 2016 – Tutor: Dr. Santiago Diab <i>DVM, DACVP</i> Jan – April 2012 – Tutor: Dr. Francisco Uzal <i>DVM, PhD, DACVP</i>
	University of Georgia (USA): Dec 2016 – Jan 2017 Tutor: Dr. Uriel Blas-Machado <i>DVM, PhD, DACVP</i>
	Purdue University (USA): April – May 2012 Tutor: Dra. Margaret (Peg) Miller <i>DVM, PhD, DACVP</i>
	Universidad Nacional de Colombia: April 2001 - October 2017 Tutor: Dr. Carlos Iregui <i>DMV, Esp, DVM</i>
Molecular Biology	Universidade de Lisboa (Portugal), Instituto de Medicina Molecular: May – Dec 2012 Tutors: Dr. Mário Ramírez and Dr. Elisabete Martins <i>PhD</i>
Fish Diseases	National Fisheries University – Shimonoseki, Japan May – August 2006 Tutor: Dr. Katsuhiko Harada <i>PhD</i>

## **PROFESSIONAL EXPERIENCE (Last ten years)**

- March 2021 – Present. **Founder partner, CEO and Scientific Director.** MolecularVet US LLC. Davie, Florida, US.
- January, 2016 – Present. **Founding partner, CEO and Scientist.** MolecularVet SAS. Bogotá D.C., Colombia.
- December, 2007 – Present. **Founding partner, CEO and Scientific Director.** Corporación Patología Veterinaria CORPAVET ([www.corpavet.com](http://www.corpavet.com)). Bogotá D.C., Colombia.
- February 2021 – December 2021. Current at honorem. **FAO Expert.** Coordinator of training activities for surveillance, antimicrobial resistance, health, and biosecurity for freshwater fish diseases. Support the writing of National Action Plans for TiLV with governments. Organizer team and speaker in these webinars:
  - December 1, 2 and 3, 2021. Tilapia Health: quo vadis?
  - June 22 and 23, 2021. Aquaculture Biosecurity Virtual Seminar Series.
  - June 16 and 17, 2021. Use of Antimicrobials and Antimicrobial Resistance in Aquaculture for Latin America
  - March 9 to 25, 2021. A 12-point checklist for surveillance of diseases of aquatic organisms: a novel approach to assist multidisciplinary teams in developing countries / TiLV surveillance for Latin America  
[https://www.fao.org/fileadmin/user\\_upload/faoweb/FI/news/VirtualCourseCapacity/default.htm](https://www.fao.org/fileadmin/user_upload/faoweb/FI/news/VirtualCourseCapacity/default.htm)
- September 2020 - Present. **Worldwide Expert Group** on the *Streptococcus agalactiae* CC283 in a One Health context. FAO. <https://www.fao.org/documents/card/en/c/cb5067en/>
- July 5, 2019. **Legal expert concept.** Fiscalía General de la Nación, Animal abuse case. Bogotá D.C., Colombia.
- November, 2017. **International expert of fish health.** FAO. Regional meeting of experts "Use of antimicrobials in aquaculture in Latin America: Challenges and future perspectives", Lima, Perú.  
<https://www.fao.org/3/cb3565es/cb3565es.pdf>
- June, 2017. **Legal expert concept.** Fiscalía General de la Nación, Animal abuse case. Bogotá D.C., Colombia.
- May, 2016. **Legal expert concept.** Fiscalía General de la Nación, Environmental crime case. Bogotá D.C., Colombia.
- January 2015 – October 2016. **Veterinary Pathologist.** National Authority of Animal Health (Instituto Colombiano Agropecuario – ICA).

## **INDUSTRY, GOVERNMENT AND MULTILATERAL ORGANIZATIONS CONSULTANT**

- June 2024 – Present. Global consultant for **Regal Springs** Honduras, Mexico, and Indonesia.
- January 2022 - Present. Health and Biosecurity for tilapia culture. **Spring Genetics**, Miami, US
- August 2021 – Present. Health and Biosecurity for tilapia culture for Mexico and Central America. **MSD Animal Health**, (México, Honduras, Indonesia).
- November 2022 – October 2024. Development of a guide for the implementation of biosecurity in aquaculture under ICA Resolution 20186/2016. **United Nations Industrial Development Organization UNIDO**
- January 2023 – July 2023. Strengthening of the physical training infrastructure for the sanitary diagnostic laboratories for freshwater fish of the aquaculture stations of the CENDEPESCA of the MAG. **CENDEPESCA, Ministerio de Agricultura de El Salvador.**
- May 2022 – July 2022. Guidebook on Biosecurity and Good Aquaculture Policies and Practices for small farmers of tilapia (*Oreochromis* sp.) and rainbow trout (*Oncorhynchus mykiss*), **Asia-Pacific Economic Cooperation APEC**, Peru, Singapore.
- April 2021 - March 2022. Health and Biosecurity for tilapia and trout culture. **SANIPES**, Peru Government.
  - May to July 26, 2022: APEC biosecurity and BAP in tilapia and trout farmers.
  - April 26, 27 and 28, 2021: Virtual and face-to-face training "Biosafety, Sanitation and Good Aquaculture Practices in rainbow trout farming" for producers and official personnel of SANIPES, Puno, Peru.
  - June 28, 2021: Virtual training "Aquaculture sustainability: application of animal welfare criteria for rainbow trout farming" for producers, PNUD, Peru.
  - July 15 and 16, 2021: Virtual and face-to-face training "Assessment of water quality for salmonids" for producers and official personnel of SANIPES, Puno, Peru.
  - December 15, 2021 to February 15, 2022: Construction of the "Health control plan for Tilapia Lake Virus (TiLV)" San Martín, Peru.
- July, 2019 - 2023, Health and Biosecurity for tilapia culture. **Ziegler, Los Belenes**, Mexico.
- September 2019 – April 2020; March 2021 – March 2022. Health and Biosecurity for aquaculture. **Bioara SAS**, Guaduas, Cundinamarca

## **POSTGRADUATE AND COLLEGE PROFESSOR**

- August 2019 – August 2020; October - November 2021; Present. **Professor**, Specialization in Health Fish and Aquaculture. Universidad CORHUILA, Neiva, Colombia.
- March, 2017 – March 2019. **Professor**, Master of Veterinary Sciences. Universidad Pedagógica y Tecnológica de Colombia UPTC. Tunja, Boyacá.
- August, 2013 – February 2014. **Lecturer** of General Pathology in Faculty of Veterinary Medicine at Universidad Nacional de Colombia.

## **DIRECTION OF MASTER AND PhD STUDENTS**

- Agosto 2023 – Present. **Master's Student Director**, Universidad de los Llanos, Villavicencio, Meta, Colombia.  
*Yadira Fuquen*, "Caracterización clínica y patobiológica de la infección experimental con *S. agalactiae* la2021 ST7 en alevinos de tilapia (*Oreochromis* sp.)", 2023-2025

- January 2019 – Present. **Doctoral's Student Director**, Doctor of Science of Agro-science. Universidad de La Salle, Bogotá D.C. Colombia  
*Ricardo Piñeros*, "Epidemiological and economic characterization of Edwardsiellosis in tilapia farms in Colombia with One Health approximation", 2019-2023
- April 2018 – Present. **Master's Student Director**, Universidad Nacional de Colombia, Bogotá D.C., Colombia.  
*Hernán Vela*, "Use of *Erythrina edulis* in diets as a source of lectins to inhibit adherence of *Streptococcus agalactiae* to intestine of tilapia (*Oreochromis sp.*)", 2019-2023
- April 2018 – July 2021. **Master's Student Director**, Universidad Nacional de Colombia, Bogotá D.C., Colombia.  
*Jesed Gutierrez*, "Intestinal microbioma and its relationship with tilapia intestine health cultured in biofloc and recirculation systems", 2018-2020
- January 2018 – December 2020. **Master's Student Director**, Master of Science in Tropical Microbiology, Universidad de Córdoba, Montería, Colombia.  
*Jaime Hernández*, "Clinical, pathological and productive characterization of infection by *Edwardsiella tarda* and *Edwardsiella anguillarum* in tilapia alevins (*Oreochromis sp.*)", 2018-2020
- June 2018 – January 2020. **Master's Student Director**. Master of Science in Epidemiology and Public Health, Universidad Internacional de Valencia, Valencia, Spain.  
*Sandra Ariza*, "Comparison between two molecular techniques to detect Tilapia lake virus (TiLV) and epidemiological analysis of TiLV infection in Colombia", 2018-2020

## RESEARCH PROJECTS

- June 2011 – Present. Head of Research Group CORPAVET (MinCiencias Category C, 2022). Corporación Patología Veterinaria CORPAVET/MOLECULARVET.
  - Strengthening of the sanitary and biosecurity status of tilapia (*Oreochromis sp.*) production as a contribution to epidemiological surveillance and aquaculture national and international competitiveness in the Department of Huila. SGR 14-2021/SIGP BPIN2021000100314. October 2022 – April 2025.
  - Application of bacteriophages in the egg production chain to increase the sustainability of the business and improve food safety in the department of Cundinamarca. SGR 14-2021/SIGP BPIN2021000100317. September 2022 – September 2025.
  - Implementation of strategies aimed at determining the health status and strengthening health safety of trout (*Oncorhynchus mykiss*) production in different Departments of Colombia, as a tool for knowledge and improvement of the competitiveness of the sector. AUNAP-ICA-CORPAVET Convenio No. 361/2022, Colombia.
  - SCSC 07 2020 - Strengthening the Management of Aquaculture Diseases to Promote Commercial Exchange and Food Production Sustainability, for Small Enterprises. APEC. March 2022 – Oct 2024.
  - Specific prevalence of infection and disease by Tilapia lake virus (TiLV) with growth phase of tilapia (*Oreochromis sp* and *Oreochromis niloticus*) in the Betania dam in Department of Huila, Colombia. AUNAP-ICA-CORPAVET Convenio No. 414/2021
  - Use of *Erythrina edulis* in diets as a source of *Streptococcus agalactiae* adhesion inhibitor lectins to the intestine of tilapia (*Oreochromis niloticus*). Convenio específico de cooperación UTC-DEB 001-2020. Septiembre 30, 2020
  - Evaluation of bacteriophages as a strategy for the reduction of antibiotic use in the control of Weissellosis in trout in the departments of Huila and Cundinamarca. Convenio de investigación. CORHUILA-CORPAVET-MOLECULARVET-UNIVERSIDAD DE LOS ANDES-FEDEACUA-SCIPHAGE-TRUCHAS DEL ÁRTICO-SURALÁ, Agosto 2020
  - Fish Health Status of tilapia culture in Departments of Huila, Meta, Valle and Córdoba (Colombia). Research and Technological Cooperation Agreement, National Authority of Fisheries AUNAP – CORPAVET Convenio No. 313/2019
  - Characterization of biosecurity and health programs in tilapia and trout farms in Department of Huila (Colombia). CORHUILA-CORPAVET, Acta No 408, July 29, 2019.
  - In vitro and in vivo antimicrobial and immunomodulatory effects of phytochemical compounds in Nile Tilapia (*Oreochromis niloticus*). University of Gothengurg-CORPAVET-Universidad Nacional de Colombia. 2017 – 2020.
  - Characterization of new strains caused Edwardsiellosis in tilapia. UCDavis-CORPAVET. 2017 - 2019
  - Retrospective and prospective analysis of molecular, bacteriological and histopathological evaluation of mortality in fish and experimental use of interferon as immunomodulator in tilapia. Fish farmers-CORPAVET, 2017 – 2018.
  - Descriptive study to reproductive diseases in intensive swine production in Antioquia – Colombia Conv. ULS-CORPAVET-APA
  - Molecular Diagnosis of Canine Diseases with Health Public implications in Colombia. COLCIENCIAS No. 0344, 2013 – 2016.
- 1998 – 2017. Member of Research Group of Veterinary Pathobiology at Universidad Nacional de Colombia.
  - Design, chemical synthesis and characterization of peptides derived of lactoferricin and evaluation of its anticancer activity COLCIENCIAS 41370-2014 – 2019.
  - Detection of carbohydrates involved in adherence of *Streptococcus agalactiae* to intestinal epithelium to tilapias (*Oreochromis sp.*), *in vitro* model Project No. 14357 DIB-Universidad Nacional de Colombia. 2009 – 2014.

- First epidemiologic map of ornamental fish diseases in Colombia. Project No. 2007-4448-387 IICA-MADR-UN. 2007-2012.

## PAPERS

- Villamizar S.H., Bonilla J.A., Jaramillo A.H., Piñeros R., Ripoll A., Fonseca L., Riveros K., Vives M.J., **Barato P.**, Clavijo V. SalmoFree® phage additive proves its safety for Laying Hens. 2024. *Phage (New Rochelle)*, 5(3):143-152. DOI: [10.1089/phage.2024.0010](https://doi.org/10.1089/phage.2024.0010)
- **Barato P.** Estreptocosis emergente en tilapia, situación actual y manejo en Colombia y en el ámbito mundial. Conferencia magistral. Memorias XXIX Jornada de Acuicultura IALL, 2023. ISSN: 2389-959X <https://geducar.unillanos.edu.co/educacion-detalle/369/>
- Garnier J., Savic S. Cediel N., **Barato P.**, Boriani E., Bagnol B., Kock R.A. Mainstreaming Gender-Responsive One Health: Now is the Time. 2022. *Frontiers in Public Health*. <https://doi.org/10.3389/fpubh.2022.845866>
- **Barato P.** Sanidad y enfermedades emergentes en la producción piscícola colombiana. Conferencia magistral. 2022 Memorias X Congreso Colombiano de Acuicultura. ISBN: 2954-6591 [https://www.asociacionacua.com/files/ugd/eb0447\\_7e76383e95db4985a4cb3d97211e9b95.pdf](https://www.asociacionacua.com/files/ugd/eb0447_7e76383e95db4985a4cb3d97211e9b95.pdf)
- **Barato P.**, Montufar M., Carroza D., Mardones F., Surachetpong W., Valdivida W., Ariza S., Piñeros R., Palomares J., Bacca N., Zúñiga J., Castillo E., Hernandez J., Sheoran D., Molina-Luque R., Iregui C. Epidemiological assessment and Motif Fingerprint-based Genomic Characterization of Tilapia Lake Virus (TiLV) infection and co-infections in Colombia. 2022. Submitted Transboundary and Emerging Diseases. Authorea. May 02, 2022. DOI: 10.22541/au.165150598.81254746/v1
- Bonilla-Aldana D.K., Quintero-Rada K., Montoya-Posada J.P., Soler-Tovar D., **Barato P.**, Arteaga-Livias K., Zambrano L., Faccini-Martinez A., Rodrigue-Morales A.J. Bovine Ehrlichiosis Prevalence: A Systematic Review and Meta-Analysis of Molecular Studies. 2021. *World Vet J.* 11(1):01-15. [http://www.science-line.com/attachments/article/64/WVJ%2011\(1\)%201-15.%20Mar%2025.%202021.pdf?fbclid=IwAR2OrLd8ph75UjKe8TDV\\_68a5bD-9Na3tfneh99JgQpubRmt8-9yaOKBw6k](http://www.science-line.com/attachments/article/64/WVJ%2011(1)%201-15.%20Mar%2025.%202021.pdf?fbclid=IwAR2OrLd8ph75UjKe8TDV_68a5bD-9Na3tfneh99JgQpubRmt8-9yaOKBw6k)
- Bonilla-Aldana D.K., Holguin-Rivera Y., Perez-Vargas S., Trejos-Mendoza A.E., Balbin-Ramon G.J., Dhama K., **Barato P.**, Lujan-Vega C., Rodriguez-Morales A. Importance of the One Health approach to study the SARS-CoV-2 in Latin America. *One Health*. 2020. <https://doi.org/10.1016/j.onehlt.2020.100147>
- Martínez D., **Barato P.**, Iregui C., Rosas J. DMBΑ-Induced Oral Carcinoma in Syrian Hamster: Increased Carcinogenic Effect by Dexamethasone Coexposition. *BioMed Res Intern.* 2020. <https://doi.org/10.1155/2020/1470868>
- Duque-Valencia J., Forero-Muñoz N., Diaz FJ, Martins, E., **Barato P.**, Ruiz-Saenz J. Phylogenetic evidence of the intercontinental circulation of a Canine distemper virus lineage in the Americas. *Sci Rep.*, 2019, Oct 31, 9(1): 15747, doi: 10.1038/s41598-019-52345-9.
- Cepeda A., Lotta-Arévalo I., Pinto-Osorio D.F., Macías-Zacipa J., Valkiunas G., **Barato P.**, Matta N.E. The experimental characterization of complete life cycle of *Haemoproteus columbae*, with description of natural host-parasite system to study this infection. *Int J Parasitol.* 2019, IJPara19\_185R1. Accepted for publication
- Vásquez-Machado G., **Barato P.**, Iregui C. Morphological characterization of the adherence and invasion of *Streptococcus agalactiae* to the intestinal mucosa of tilapia *Oreochromis* sp.: An in vitro model. *J Fish Dis.* 2019, <https://doi.org/10.1111/jfd.13042>
- Palacios A., Piñeros R., **Barato P.**, Suárez F. Reporte de caso: Blastomycosis esplénica canina. *Rev Inv Vet Perú*, 2019; 30(2)
- Bernal X.E., Rojas B., Pinto-E M.A., Mendoza-Henao A.M., Herrera-Montes A., Herrera-Montes M.A., Cáceres-Franco A.P...**Barato P.**, and other 254 signatories. Empowering Latina Scientists, *Science*, 2019. Feb, 363 (6429):825-826.
- Roa G., Suarez J., **Barato P.**, Verjan N. Lack of association between Epstein-Barr Virus and mammary tumors in dogs. *J Vet Res*, 2018, 10:62 (3):309-315
- Ramos A., Muñoz M., Cortés-Vecino JA., **Barato P.** Patarroyo MA. A novel loop-mediated isothermal amplification-based test for detecting *Neospora caninum* DNA. *Parasites & Vectors*, 2017, 10:590-598
- **Barato P.**, Martins E., Vasquez G., Ramirez M., Melo-Cristino J., Martinez N., Iregui C. Capsule impairs efficient adherence of *Streptococcus agalactiae* to intestinal epithelium in tilapia *Oreochromis* sp. *Microbial Pathogenesis*, 2016 Sep 2;100:30-36. doi: 10.1016/j.micpath.2016.08.040.
- **Barato P.**, Martins E., Melo-Cristino J., Iregui C., Ramirez M. Persistence of a single clone of *Streptococcus agalactiae* causing disease in tilapia (*Oreochromis* sp.) cultured in Colombia over 8 years. *J Fish Dis*, 2015 Dec;38(12):1083-7. doi: 10.1111/jfd.12337.
- Penagos G., **Barato P.** Sistema Inmune y vacunación en peces. *Acta biológica Colombiana*, 14(1):3-24, 2009.
- Rondon I., Ramirez W., **Barato P.**, Eslava P. “Importancia del ciclo biogeoquímico del aluminio con relación con acidez de los suelos en la producción piscícola y la salud pública. Cual sería el caso de la Orinoquia?” in *Orinoquia*. ISSN: 0121-3809, 11(2):81-94, 2007.
- Calderon MN., Alfonso R., **Barato P.**, Giraldo D., Pinto M.L.. “*Mycobacterium tuberculosis* ESAT-6 antigen immunogenicity in Owl Monkeys” in *NOVA* 4 (5): 14 – 26, 2006.
- Angel D., Alfonso R., Faizal M., Ricaurte O., Baez JA, Rojas A, **Barato P.**, Patarroyo ME and Patarroyo MA. “Cutaneous tuberculosis diagnosis in an inhospitable Amazonian region by means of Telemedicine and Molecular Biology” in *Journal of the American Academy of Dermatology* 52 (5Suppl): S66-S68, 2005
- Castillo F., Guerrero C., Trujillo E., Delgado G., Martinez P., Salazar LM., **Barato P.**, Patarroyo ME., Parra-Lopez C. “Identifying and structurally characterizing CD1b in *Aotus nancymae* owl monkeys” in *Immunogenetics* 56 (7):480-489, 2004.

## **FAO AND APEC DOCUMENTS**

- Guidebook on Biosecurity and Good Aquaculture Policies and Practices for small-scale farmers of tilapia (*Oreochromis* sp.) and rainbow trout (*Oncorhynchus mykiss*). APEC expert, 2023. [https://www.apec.org/publications/2023/04/guidebook-on-biosecurity-and-good-aquaculture-policies-and-practices-for-small-scale-farmers-of-tilapia-\(oreochromis-sp\)-and-rainbow-trout-\(oncorhynchus-mykiss\)](https://www.apec.org/publications/2023/04/guidebook-on-biosecurity-and-good-aquaculture-policies-and-practices-for-small-scale-farmers-of-tilapia-(oreochromis-sp)-and-rainbow-trout-(oncorhynchus-mykiss))
- Risk profile Group B *Streptococcus* (GBS) *Streptococcus agalactiae* sequence type (ST) 283 in freshwater fish. FAO Expert, 2021. <http://www.fao.org/3/cb5067en/cb5067en.pdf>
- Reunión regional de la FAO sobre el uso de antimicrobianos en la acuicultura en América Latina: Desafíos y Perspectivas Futuras, FAO Expert, 2017. <https://www.fao.org/publications/card/en/c/CB3565ES>

## **BOOKS**

- Vidal-Martinez V., Olvera-Novoa M.A., Morales V., Cuéllar-Anjel J., Riofrio A., Morales R., Chávez M., Garcia O., Montoya L, **Barato P.** Manual de Buenas Prácticas de Manejo para la Piscicultura en Agua Dulce. OIRSA-OSPESCA, p.p. 145, 2017. ISBN: 978-9962-8500-9-0
- **Barato P.**, Penagos G, Iregui C, Figueroa J. Mapa epidemiológico de las enfermedades de los peces ornamentales en Colombia. Unibiblos, pag. 140, 2012. ISBN 978-958-761-241-7.

## **CHAPTERS IN BOOKS**

- **Barato P.** Principales enfermedades de los peces de cultivo en Colombia. En: Fundamentos de Acuicultura Continental, Tercera Edición, Tomo 3. AUNAP, Colombia, 2021. [https://drive.google.com/file/d/1iUc\\_6gUrX8TEFKeWulnxsLtsOtp1SU4/view](https://drive.google.com/file/d/1iUc_6gUrX8TEFKeWulnxsLtsOtp1SU4/view)
- Iregui C., **Barato P.**, Rey A., Vasquez G., Verján N. Epidemiology of *Streptococcus agalactiae* and streptococcosis in tilapia (*Oreochromis* sp), in: Epidemiology - Theory, Research and Practice. Paper ID 13071203432755, 2014. ISBN 978-1-922227-331

## **PATENT**

- **Barato P.**, Iregui C. Glycoinhibitors of adherence of *Streptococcus* in fish. WO/2017/109587 <https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2017109587>
- **Barato P.**, Iregui C. Glicoinibidor que inibe a adesão da bactéria streptococcus que afeta o trato digestivo do peixe. Brazil, BR 112018012821-0 B1 [https://patentscope.wipo.int/search/pt/detail.jsf?jsessionid=77049802B31AAB373F590BD537A3A0C4.wapp2nA?docId=BR236245550&\\_cid=P20-KPJOA2-82321-20](https://patentscope.wipo.int/search/pt/detail.jsf?jsessionid=77049802B31AAB373F590BD537A3A0C4.wapp2nA?docId=BR236245550&_cid=P20-KPJOA2-82321-20)
- **Barato P.**, Iregui C. Glicoinhibidores de adherencia de *Streptococcus* en peces. Superintendencia de Industria y Comercio, Colombia. No. 15-303921

## **SPEAKER (Last year)**

- Biotechnological and health strategies to reduce the risk of spreading multi-resistance bacteria in aquaculture. I Simpósio Internacional de Resistência aos Antimicrobianos, SIRAM VetOneHealth. December 7 to 9, 2024
- Fish Medicine and Pathology in Latin America. WAVMA, Davis Thompson Foundation, Latin Comparative Pathology Group, Universidad Autónoma de México UNAM, Ciudad de México, México, November 21 and 22, 2024
- Morphology on fresh examination and cytology in imprints of tilapia tissues in health and disease. Workshop Post LACQUA24 "Health and biosecurity of tilapia production". Neiva, Huila, Colombia, September 1, October 1 and 2, 2024.
- Farm inspection, problem-oriented and risk analysis to address outbreaks of disease and mortality in aquaculture. Workshop Post LACQUA24 "Health and biosecurity of tilapia production". Neiva, Huila, Colombia, September 1, October 1 and 2, 2024.
- Anatomy and histology of tilapia. Workshop Post LACQUA24 "Health and biosecurity of tilapia production". Neiva, Huila, Colombia, September 1, October 1 and 2, 2024.
- Streptococcosis in tilapia in the Americas with emphasis in Mexico. Centro de Investigaciones Biológicas del Nordeste CIBNOR. Virtual, September 9, 2024.
- Latin-American Veterinary Training Mini-symposium in Fish Medicine and Pathology, WAVMA, Davis Thompson Foundation, Latin Comparative Pathology Group, Universidade Federal de Minas Gerais. Belo Horizonte, Minas Gerais, Brazil, September 3 and 4, 2024.
- Sanitary management of tilapia production in Latin America. 18th International Virtual Forum on Aquaculture FIACUI 2024. Virtual, August 20 and 21, 2024.
- Fish diseases. Aqua Expo 2024. Santo Domingo, Dominican Republic. August 1 and 2, 2024
- Comprehensive management of emerging tilapia diseases in the field. Global Tilapia Leaders. San Salvador, El Salvador, June 26 to 28, 2024
- Situation of the main emerging tilapia diseases in Latin America and how to deal with them. Aquaculture Symposium, Antigua, Guatemala, May 22 to 24, 2024
- Event manifestation, monitoring, and investigation. Case of emerging streptococcosis due to *Streptococcus agalactiae* la2021 in comorbidity with *S. agalactiae* Ib, TiLV, and other agents. USSEC, Neiva, Huila, Colombia, April 16, 2024
- Latin-American Veterinary Training Mini-symposium in Fish Medicine and Pathology, WAVMA, Davis Thompson Foundation, Latin Comparative Pathology Group, Universidad Veritas. San José, Costa Rica. Marzo 22 y 23, 2024.

- “Charting the horizon of fish health and biosecurity: knowledge, decisions and the future of the industry” AQUAEXPERT 2024, Neiva, Huila, Colombia, Marzo 8, 2024.
- “Case selection of emerging diseases of freshwater fish”. Virtual, Rondas de Histopatología LCPG – Davis Thompson Foundation, Diciembre 21, 2023
- “Challenges and relevance of scientific and technology-based companies in Colombia”. Virtual, Convención Anual Red Colombiana de Mujeres Científicas 2023, Noviembre 30, 2023
- “From lab coats to waders: Entrepreneurs Making a Splash in Fishy Pathology”. Virginia Tech, Student Chapter of American College of Veterinary Pathologist (SCACVP), Blacksburg, Virginia, US, November 6, 2023
- “Emerging Streptococcosis in Tilapia, Current Situation and Management in Colombia and Worldwide” XXIX Jornada de Acuicultura, Villavicencio, Meta, Noviembre 3, 2023
- “Health challenges and biotechnological development in animal health for the sustainable growth of global aquaculture” XVII Encuentro Nacional y X Internacional de Investigadores de las Ciencias Pecuarias. Medellín, Antioquia, 25 a 27 de Octubre, 2023

### EVENTS PARTICIPATION (Last 3 years)

- Bedoya D., Muñoz L., **Barato P.** “Health approximation analysis of the impact of canines on the health of the tilapia production system *Oreochromis sp.* at the Betania dam, Huila”. LACQUA 2024 World Aquaculture Society, September 24 to 27, 2024. Medellín, Antioquia, Colombia. <https://was.org/Meeting/Code/LACQUA24/>
- Castillo A., Gil-Arias M.J., Valderrama-Amaya E., Alvis G., **Barato P.** Feed supplementation with a mixture of medium- and short-chain fatty acids to mitigate the impact of *Streptococcus agalactiae* la2021ST7 and serotype Ib on tilapia (*Oreochromis sp.*) production in Colombia. LACQUA 2024 World Aquaculture Society, September 24 to 27, 2024. Medellín, Antioquia, Colombia. <https://was.org/Meeting/Code/LACQUA24/>
- **Barato P.** “Approximation of the health status of the production of tilapia *Oreochromis sp.* in Mexico, Central America, the Caribbean, Peru and Ecuador, Period 2021-2024” LACQUA 2024 World Aquaculture Society, September 24 to 27, 2024. Medellín, Antioquia, Colombia. <https://was.org/Meeting/Code/LACQUA24/>
- Gómez-Díaz A., **Barato P.** “Manual for the transport and acclimatization of *Oreochromis sp.* tilapia fingerlings for resource-limited farmers”. LACQUA 2024 World Aquaculture Society, September 24 to 27, 2024. Medellín, Antioquia, Colombia. <https://was.org/Meeting/Code/LACQUA24/>
- Garcia-Orozco A.F., Montufar-Navarro M., Hernández-Romero D., Guerrero A., Damme M.S., Hernandez L.V., Castro H., Fonseca L., Gil-Arias M.J., Patarroyo S., Fuquen Y., Piñeros R., **Barato P.** “Sanitary Situation of the production of tilapia *Oreochromis sp.* and rainbow trout *Oncorhynchus mykiss* in Colombia in the year 2023” LACQUA 2024 World Aquaculture Society, September 24 to 27, 2024. Medellín, Antioquia, Colombia. <https://was.org/Meeting/Code/LACQUA24/>
- **Barato P.** “Health Challenges of Rainbow Trout (*Oncorhynchus mykiss*) Farming in Colombia” LACQUA 2023 World Aquaculture Society. April 18 to 21, 2023. Panamá. <https://www.was.org/Meeting/code/LACQUA23>
- **Barato P.**, Gorglione B., Venegas C. “Fostering Opportunities to Enhance Aquatic Veterinary Education” LACQUA 2023 World Aquaculture Society. April 18 to 21, 2023. Panamá. <https://www.was.org/Meeting/code/LACQUA23>
- Clavijo V, Hernández Z, Franco A, Holguin A, Farfán JC, Camacho LT, Vives MJ, **Barato P.** Advance in Phage Therapy to Control Weissellosis by *Weissella ceti* in Rainbow Trout (*Oncorhynchus mykiss*) in Colombia. ISAAH 9<sup>th</sup>. September 6, 2022. <https://www.isaah9.com/>
- Vela H., Muñoz A, Iregui C., **Barato P.** Acute Toxicity Evaluation of Practical Diets with *Erythrina edulis* as a source of adhesion glycooinhibitors for *Streptococcus agalactiae* in tilapia (*Oreochromis sp.*). ISAAH 9<sup>th</sup>. September 5, 2022. <https://www.isaah9.com/>
- Piñeros R., Palomares J., **Barato P.** Perception of Tilapia Farm Workers about Knowledge of Fish Diseases with a One Health Approach in Five Departments of Colombia during 2019. ISAAH 9<sup>th</sup>. September 5, 2022. <https://www.isaah9.com/>
- **Barato P.**, Moreno J., Bermudez G Antimicrobial in vitro activity of phytoextracts *Allium sativum*, *Origanum vulgare*, *Curcuma longa*, and *Cinnamomum verum* against *Streptococcus agalactiae* Ib isolated from tilapia (*Oreochromis sp.*) with streptococcosis. World Aquaculture 21, WAS 2022. May 25-27, 2022, Mérida, México.

### DISTINCTIONS

- 2024 October. Recognition, Universidad SurColombiana "For its contribution in the region to aquaculture development and its laudable work in the formulation of projects". Neiva, Huila, Colombia.
- 2024 August. Recognition. National Health Authority of Colombia – Colombian Agricultural Institute ICA "Acknowledgement for the technical contribution provided in the health emergency that occurred in Colombia due to the presence of *Streptococcus Agalactiae* ST7 serotype Ia". Bogotá D.C., Colombia.
- 2022 December. Recognition. Trout producers of Norte de Santander. Mutiscua, Norte de Santander, Colombia.
- 2022 October. ACCUA Honorable Mention. Colombian Academic Association of Aquaculture. Montería, Córdoba, Colombia.
- 2022 August. ITALCOL recognition for contribution to the aquaculture sector as a scientist. Neiva, Huila, Colombia.
- 2021 May. 3M Award, 25 Women in Science: Latin America. <https://25mujeresenlaciencia.com/>

- 2019, October. Distinguished graduate. Specialization of Continental Aquaculture. Universidad de los Llanos, Villavicencio, Colombia.
- 2016, May. Colombian nominee to Anneke Levelt-Sengers price 2016 for young women scientist of Inter-American Network of Academies of Sciences (IANAS), Bogotá D.C., Colombia.
- 2015, October. Suma cum laude (Laureate) doctoral thesis. Res. 036 de 2015, Academic Council, Universidad Nacional de Colombia, Bogotá, Colombia.
- 2013, November. LCPG Travel Award for participation in ACVP & ASVCP 2013 Concurrent Annual Meeting, Montréal – Québec, Canada.
- 2011, January - 2015. Scholarship for doctoral studies “Generación bicentenario” COLCIENCIAS, Bogotá D.C., Colombia.
- 2006, May – August. Scholarship to trainee by JICA, Kyushu, Japan.

#### **PROFESSIONAL MEMBERSHIPS**

- 2021 – present: Regional Director of the Latin American and the Caribbean of World Aquatic Veterinary Medical Association (WAVMA)
- 2022 – present: ex-director of the Latin American and the Caribbean Chapter (LACC) of World Aquaculture Society (WAS)
- 2011 – Present: Past-President of Latin Comparative Pathology Group, Latin branch of Davis-Thompson Foundation for the Advancement of Veterinary and Comparative Pathology.  
<https://davisthompsonfoundation.org/latin-comparative-pathology-group/>
- 2014 – Present: Colombian Network of Scientific Women, Titular member.
- 2018 – Present: Miembro Asociación Académica Colombiana de Acuicultura (ACCUA)
- 2017 – Present: International Veterinary Vaccinology Network (IVVN)
- 2020 – Present: VEPA Colombia, capítulo VEPA Boyacá
- 2021 – Present: Network of Ecohealth and One Health (NEOH)