

JORGE FRIAS-LOPEZ

9132 SW 41st Ln
Gainesville, FL 32608

Department of Oral Biology
University of Florida, College of Dentistry
PO Box 100424
1395 Center Drive
Gainesville, FL 32610-0424

ACADEMIC AND RESEARCH EXPERIENCE

- University of Florida, Associate Professor 2016-present
- Forsyth Institute, Associate Member of the Staff 2013-2016
- Forsyth Institute, Assistant Member of the Staff 2010-2013
- Forsyth Institute, Assistant Research Investigator 2008-2010
- Harvard School of Dental Medicine, Lecturer 2008-2016
- Massachusetts Institute of Technology, Research Scientist 2004-2008
- University of Illinois Urbana-Champaign, Postdoctoral Research Associate 2001-2004
- University of Illinois Urbana-Champaign, Postdoctoral Research Associate 1997-1998
- University of Barcelona, Assistant Professor 1994-1997

EDUCATION

- Ph. D. Microbiology, University of Barcelona. (Spain) 1992
- B.Sc. Biology, University of Barcelona. Spain. 1987
- Agricultural Engineer. Polytechnic University of Catalonia. (Spain) 1998

AWARDS AND HONORS

- Vice-chair of the Department of Microbiology, Forsyth Institute, 2013-2016.
- Forsyth Institute John W. Hein Research Fellowship 2008-2010.
- Award to the best poster presentation Spanish Society of Periodontology. 2000.
- Especial award to the best Ph.D. thesis of the year. University of Barcelona. 1993.
- Fellowship from the Spanish Government, for the development of an apparatus to measure biodegradable dissolved organic matter in waters. 1992-93.
- "ERASMUS" Fellowship, N:PIC F-8256 from the European Community for an internship at the Centre des Sciences de l'Environnement (Université de Metz, France) 1989.
- Fellowship from the Regional Catalan Government, CIRIT. 1988.
- Undergraduate scholarship from the Spanish government. 1982-1987.

GRANTS AND CONTRACTS

- **Frias-Lopez, J.** NIH/NIDCR Grant Number: 2R01DE021553-05A1. 04/01/2016 – 03/31/2021. Dysbiosis of the subgingival microbiome: host-microbial metatranscriptomic analysis during periodontal disease progression and post periodontal treatment. The goal of this project is to understand the cross-talk between organisms and host and what they are doing during periodontitis progression to develop specific treatments against disease. \$3,722,559
- Teles, Flavia., **Frias-Lopez, J.** and others. NIH/NIDCR Grant Number: R01DE024767. 1/1/2015-12/31/2018. Targeted Cultivation of New Periodontal Pathogens. The goal of this project was to culture oral organisms that were not cultured before. \$1,104,464.
- Cavanaugh, C., Borisy, G., **Frias-Lopez, J.** Harvard Catalyst. Human Oral Microbiome: Collaboration Opportunity Funded Projects. 2015. Combined Oligotyping and Metagenomic Approaches for a High-Resolution View of the Tongue Microbiome. \$50,000.
- **Frias-Lopez, J.** Colgate-Palmolive Grant. 2015-2016. The development of clinically relevant preclinical oral biofilm models using a transcriptomics approach (Continuation). \$200,872.
- **Frias-Lopez, J.** Colgate-Palmolive Grant. 2013-2014. The development of clinically relevant preclinical oral biofilm models using a transcriptomics approach. \$225,570.
- **Frias-Lopez, J.** Colgate-Palmolive Grant. 2012-2013. Assessing the potential of different products to inhibit plaque formation in vivo: their effect on the metagenome and metatranscriptome of a dental plaque. \$386,109.
- **Frias-Lopez, J.** NIH/NIDCR Grant Number: 1R01DE021553-01. 09/03/2010 – 08/31/2014. Metatranscriptome of the Oral Microbiome During Periodontal Disease Progression. The aim of this project is to characterize the microbial communities and their gene expression profiles associated with the progression of periodontal disease on specific sites. \$2,461,856
- Borisy, G., **Frias-Lopez, J.** and others. NIH/NIDCR Grant Number: 1RC1 DE020630-01, 09/22/09 – 08/31/11. Combinatorial Imaging of the Oral Microbiome. The aim of this project is to develop Combinatorial Imaging for the simultaneous imaging of up to 28 oral taxa. Aim 1 is to optimize a combinatorial imaging protocol for labeling oral microbes. Aim 2 is to validate the method on a 12-species biofilm. Aim 3 is to validate the Combinatorial Imaging on dental plaque.
- **Frias-Lopez, J.** Colgate-Palmolive Grant. 2009-2010. Identifying potential targets to inhibit plaque formation and establishment of the pathogenic community studying gene expression patterns in a multispecies biofilm model. \$116,000.
- Klaus, J, Fouke, B. and **Frias, J.** ISRS OC 2004. The Effects of Pollution on the Microbial Ecosystem and Health of *Diploria strigosa*. \$10,000.
- **Frias-Lopez, J.** and others. Grant PROFIT from the Spanish government for the study of key microorganisms in the formation of dental biofilm and screening for new products with potential antiplaque activity. 2000. \$ 55,000.
- **Frias-Lopez, J.** and others. Grant CDTI from the Spanish government for the study of key microorganisms in the formation of dental biofilm and screening for new products with potential antiplaque activity. 1999- 2000. \$427,000.
- Kaplan L.A., **Frias-Lopez, J.**, and others. Grant from the American Water Works Association Research Foundation (project 729-91) for the standardization of a new method to measure the biodegradable organic carbon in waters. 1991-1993. \$348,343, with a total of \$148,051 in AWWARF support and the balance as in-kind contributions.
- Lucena, F., **Frias-Lopez, J.** and others. Contract with Empresa Metropolitana de Sanejament, S.A. Studies on bacterial and viral fecal contamination on the coast of Barcelona. 1991-1992
- Lucena, F., **Frias-Lopez, J.** and others. Contract with the company “Empresa Bioibérica, S.A”. Study of the effect of fertilizers on the increase of bacterial biomass in water. 1990.

PATENTS

Lyndsay Schaeffer-Korbylo and **Jorge Frias-Lopez**. 2013. Oral care compositions containing deoxy sugar antimetabolites. Patent number 61792953.

Jorge Frias-Lopez. 2015. Compositions and methods for detecting and treating periodontal disease. Patent number 62152579.

TEACHING EXPERIENCE

- Associate Professor: Department of Oral Biology. University of Florida. 2016-Present.
- Lecturer: Department of Oral Medicine Infection and Immunity. Harvard School of Dental Medicine. 2008-2016. Microbiology.
- Assistant Professor: Department of Microbiology, University of Barcelona. 1994-1996. General Microbiology. Applied Microbiology.
- Visiting Assistant Professor: course on environmental management. Microbiological parameters in waters. 1994-1995.
- Visiting Assistant Professor: Master courses on waste management. Biological Treatment of industrial waste. (Palau de les Heures, Fundació Bosch i Gimpera). 1994.
- Visiting Assistant Professor: course for techniques in water treatment plants. The microbiological pollution. 1994.
- Visiting Assistant Professor: Master courses on water techniques. Aquatic Microbiology. (Polytechnic University of Catalonia and University of Barcelona). 1993-1994
- Teaching assistant: Master courses on water techniques. Aquatic Microbiology. (Polytechnic University of Catalonia and University of Barcelona). 1990-1992.
- Teaching assistant: Course on physicochemical and microbiological analysis of waters. Catalan Society for Biology. 1988.

PUBLICATIONS

- Yost S, Stashenko P, Choi Y, Kukuruzinska M, Genco CA, Salama A, Weinberg EO, Kramer CD, **Frias-Lopez J**. 2018 Increased virulence of the oral microbiome in oral squamous cell carcinoma revealed by metatranscriptome analyses. *Int J Oral Sci*. 12;10(4):32.
- Duran-Pinedo AE, Solbiati J, **Frias-Lopez J**. 2018. The effect of the stress hormone cortisol on the metatranscriptome of the oral microbiome. *NPJ Biofilms Microbiomes*. 18;4:25.
- Kressirer CA, Chen T, Lake Harriman K, **Frias-Lopez J**, Dewhirst FE, Tavares MA, Tanner AC. 2018. Functional profiles of coronal and dentin caries in children. *J Oral Microbiol*. 16;10(1):1495976.
- Solbiati J, **Frias-Lopez J**. 2018. Metatranscriptome of the Oral Microbiome in Health and Disease. *J Dent Res*. 2018 May;97(5):492-500.
- Yost S, Duran-Pinedo AE, Krishnan K, **Frias-Lopez J**. 2017. Potassium is a key signal in host-microbiome dysbiosis in periodontitis. *PLoS Pathog*. 20;13(6):e1006457. doi: 10.1371/journal.ppat.1006457. eCollection 2017 Jun.
- Frias-Lopez J**. 2015. Targeting specific bacteria in the oral microbiome. *Trends Microbiol*. 23(9):527-8.
- Duran-Pinedo AE, Yost S, **Frias-Lopez J**. 2015. Small RNA Transcriptome of the Oral Microbiome during Periodontitis Progression. *Appl Environ Microbiol*. 81(19):6688-99.
- Yost S, Duran-Pinedo AE, Teles R, Krishnan K, **Frias-Lopez J**. 2015. Functional signatures of oral dysbiosis during periodontitis progression revealed by microbial metatranscriptome analysis. *Genome Medicine*. 7: (1)27.
- Duran-Pinedo AE **Frias-Lopez J**. 2015. Beyond microbial community composition: functional activities of the oral microbiome in health and disease. *Microbes and Infection*. 17(7):505-16.
- Duran-Pinedo AE, Chen T, Teles R, Starr JR, Wang X, Krishnan K, **Frias-Lopez J**. 2014. Community-wide transcriptome of the oral microbiome in subjects with and without periodontitis. *ISME J*. 8(8):1659-72.
- Duran-Pinedo AE, Baker VD, **Frias-Lopez J**. 2014. The periodontal pathogen *Porphyromonas gingivalis* induces expression of transposases and cell death of *Streptococcus mitis* in a biofilm model. *Infect Immun*. 82(8):3374-82.
- Diaz PI, Hong BY, **Frias-Lopez J**, Dupuy AK, Angeloni M, Abusleme L, Terzi E, Ioannidou E, Strausbaugh LD, Dongari-Bagtzoglou A. 2013. Transplantation-associated long-term immunosuppression promotes oral colonization by potentially opportunistic pathogens without impacting other members of the salivary bacteriome. *Clin Vaccine Immunol*. 20(6):920-930.
- Teles R, Teles F, **Frias-Lopez J**, Paster B, Haffajee A. 2013. Lessons learned and unlearned in periodontal microbiology. *Periodontology 2000*. 62(1):95-162.
- Frias-Lopez J**, Duran-Pinedo A. 2012. Effect of periodontal pathogens on the metatranscriptome of a healthy multispecies biofilm model. *J Bacteriol*. vol. 194 no. 8 2082-2095
- Duran-Pinedo AE, Paster B, Teles R, **Frias-Lopez J**. 2011. Correlation network analysis applied to complex biofilm communities. *PLoS One*. 2011;6(12):e28438.
- Malmstrom RR, Coe A, Kettler GC, Martiny AC, **Frias-Lopez J**, Zinser ER, Chisholm SW. 2010 Temporal dynamics of *Prochlorococcus* ecotypes in the Atlantic and Pacific oceans. *ISME J*. 4(10):1252-64. Epub 2010 May 13.
- Osburne MS, Holmbeck BM, **Frias-Lopez J**, Steen R, Huang K, Engelking J, Chisholm SW. 2010. A UV-resistant *Prochlorococcus marinus* MED4 mutant overexpresses photoreactivation genes. *Environ. Microbiol*. 12(7):1978-88. Epub 2010 Mar 23.
- J.Frias-Lopez**, A. Thompson, J. Waldbauer & S.W. Chisholm. 2009. Use of stable isotope-labeled cells to identify active grazers of picocyanobacteria in ocean surface waters. *Environmental Microbiology*. 11:512-525.
- J.Frias-Lopez**, Y. Shin, G. Tyson, M. Coleman, S.W. Chisholm, & E. F. DeLong. 2008. Microbial gene expression in the surface oceans. *PNAS*. 105:3805-3810

- Klaus, J., **J. Frias-Lopez**, G.T. Bonheyo, J.M. Heikoop & B.W. Fouke. 2005. Bacterial communities inhabiting the healthy tissues of two Caribbean reef corals: spatial and interspecific variation. *Coral Reefs*. 274: 129-137
- Frias-Lopez, J.**, G.T. Bonheyo & B.W. Fouke. 2004. Bacterial community associated with black band disease in corals. *Applied and Environmental Microbiology*. 70:5955-5962.
- Frias-Lopez, J.**, G.T. Bonheyo & B.W. Fouke. 2003. Identification of Differential Gene Expression in Bacteria Associated with Coral Black Band Disease using RNA-Arbitrarily Primed PCR. *Applied and Environmental Microbiology*. 70: 3687-3694.
- Frias-Lopez, J.**, G.T. Bonheyo, Q. Jin & B.W. Fouke. 2003. Cyanobacterial diversity associated with coral black band disease in Caribbean and Indo-Pacific Reefs. *Applied and Environmental Microbiology*. 69:2409-2413.
- Fouke, B.W., Bonheyo, G.T., Sanzenbacher, E., & **J. Frias-Lopez**. 2003. Partitioning of bacterial communities between travertine depositional facies at Mammoth Hot Springs, Yellowstone National Park, USA. *Canadian Journal of Earth Sciences*. 40: 1531-1548.
- Frias-Lopez J.**, A.L. Zerkle, G.T. Bonheyo & B.W. Fouke. 2002. Partitioning of bacterial communities between seawater and healthy, black band diseased and dead coral surfaces. *Applied and Environmental Microbiology*. 68:2214-2228.
- Frias, J.**, E. Olle & M. Alsina. 2001. Periodontal pathogens produce quorum sensing signal molecules. *Infection and Immunity*. 69:3431-3434.
- Alsina, M, E. Olle & **J. Frias**. 2001. Improved, low-cost selective culture medium for *Actinobacillus actinomycetemcomitans*. *Journal of Clinical Microbiology*. 39:509-513.
- Frias, J.** & M. Alsina. 2001. New perspectives on dental biofilms. *Periodoncia: Revista Oficial de la Sociedad Española de Periodoncia*. 11: 23-32. Review (Spanish).
- Puig, A., R. Araujo, J. Jofre & **J. Frias-Lopez**. 2001. Identification of cell wall proteins of *Bacteroides fragilis* to which bacteriophage B40-8 binds specifically. *Microbiology*. 147:281-288.
- Frias, J.**, F. Ribas & F. Lucena. 2001. Effects of different nutrients on bacterial growth in a pilot distribution system. *Antonie van Leeuwenhoek*. 80: 129-138.
- Perramón, J., A. Terradillos, F. Ribas, **J. Frias** & F. Lucena. 2000. The *Pseudomonas* group as an indicator of potential regrowth in water distribution systems. *Journal of Applied Microbiology*. 88:704-710.
- Ribas, F., **J. Frias**, J.M. Huguet & F. Lucena. 1997. Efficiency of different water treatment processes in the evolution of biodegradable dissolved organic carbon and assimilable organic carbon. *Water Research*. 31: 639-649.
- Kott, Y., F. Ribas, **J. Frias** & F. Lucena. 1997. Comparison between the evaluation of bacterial regrowth capability in a turbidimeter and biodegradable dissolved organic carbon bioreactor measurements in water. *Journal of Applied Microbiology*. 83: 347-352.
- Lasobras, J., M. Muniesa, **J. Frias**, F. Lucena & J. Jofre. 1997. Relationship between the morphology of bacteriophages and their persistence in the environment. *Water Science and Technology*. 35: 129-132.
- Reeves, A.R., J.N. D'Elia, **J. Frias** & A.A. Salyers. 1996. A *Bacteroides thetaiotaomicron* outer membrane protein that is essential for utilization of maltooligosaccharides and starch. *Journal of Bacteriology*. 178: 823-830.
- Frias, J.**, F. Ribas & F. Lucena. 1995. Comparison of methods for the measurement of biodegradable organic carbon and assimilable organic carbon in waters. *Water Research*. 29: 2785-2788.
- Ribas, F., **J. Frias**, F. Ventura, L. Mohedano & F. Lucena. 1995. Assessment of biological activity and fate of organic compounds in a reactor for the measurement of biodegradable organic carbon in water. *Journal of Applied Bacteriology*. 79: 558-568.
- Frias, J.**, F. Ribas & F. Lucena. 1994. Critical study of the use of *Pseudomonas fluorescens* P17 to determine assimilable organic carbon (AOC). *Water Research*. 28:1463-1469.
- Frias, J.**, F. Ribas & F. Lucena. 1994. Substrate affinity from bacterial strains and distribution water biofilms. *Journal of Applied Bacteriology*. 76:182-189.
- Frias, J.**, F. Ribas & F. Lucena. 1992. A method for the measurement of biodegradable organic carbon in waters. *Water Research*. 26: 255-258.
- Frias, J.**, F. Ribas, y F. Lucena. 1992. Assessment of biodegradable organic carbon in the process of water treatment. *Medio Ambiente RETEMA*. 93-97. Review. (Spanish).

- Ribas, F., R. Araujo, **J. Frias**, J.M. Huguet, F.R. Ribas & F. Lucena. 1991. Comparison of different media for the identification and quantification of *Aeromonas* spp. in water. *Antonie van Leeuwenhoek* . 59:225-228.
- Ribas, F., **J. Frias** & F. Lucena. 1991. A new dynamic method for the rapid determination of the biodegradable dissolved organic carbon in drinking water. *Journal of Applied Bacteriology*. 71:371-378.
- Lucena, F., **J. Frias** & F. Ribas. 1990. A new dynamic approach to the determination of biodegradable dissolved organic carbon in water. *Environmental Technology*. 12:343-347.

BOOKS

- J. Frias-Lopez**. 2014. An overview of biofilm control strategies in dental health *In* Antibiofilm agents : from diagnosis to treatment and prevention. Springer Ed.
- G.T.Bonheyo, **J. Frias-Lopez** and Bruce W. Fouke. 2003. A test for airborne dispersal of thermophilic bacteria from hot springs *In* Geothermal Biology and Geochemistry in Yellowstone National Park. Ed. WP Inskeep and TR McDermott. MSU Thermal Biology Institute.
- A. Salyers, N. Shoemaker, G. Bonheyo and **J. Frias**. 1999. Conjugative Transposons: Transmissible Resistance Islands *In* Pathogenicity Islands and Other Mobile Virulence Elements. Ed. J.B. Kaper and J. Hacker. *American Society for Microbiology, Washington DC*.
- C. Madrid, **J. Frias-Lopez**, M. Grifoll, S. Merino, R. M. Pintó, A. M. Solanas. 1995. Guide for the practical courses of general microbiology. Department of Microbiology. *University de Barcelona. UB Publications*.
- L.A. Kaplan, F. Ribas, J. C. Joret , C. Volk, **J. Frias** & F. Lucena. 1994. Biofilm reactor for the biodegradable organic matter measurement. *Published by the American Water Works Association Research Foundation*.

PUBLISHED ABSTRACTS

- M. L. Coleman, **J. Frias-Lopez**, Y. Shi, G. Tyson, E. F. DeLong & S.W. Chisholm. 2007. Comparing the transcriptomes of wild and cultured *Prochlorococcus*. *Metagenomics 2007*. UC San Diego. San Diego. California.
- J. Frias-Lopez**, J.S. Klaus, J. Shisler, M. Ho, B. Wilson & B. W. Fouke. 2004. Oral presentation. Black Band Disease (BBD) bacterial mat produces a toxic compound that kills *Symbiodinium* sp. 10th ICRS Conference. Okinawa. Japan.
- Fouke , B. W., J. S. Klaus & **J. Frias-Lopez** 2004. Identifying key microorganisms in corals infected with black band disease. 10th ICRS Conference. Okinawa. Japan.
- Jim S. Klaus, **J. Frias-Lopez** & B. W. Fouke, 2004. Effects of Depth and Temperature on Bacterial Communities associated with *Diploria strigosa*. 10th ICRS Conference. Okinawa. Japan.
- Klaus, J., **J. Frias-Lopez**, G.T. Bonheyo & B.W. Fouke. 2003. Coral microbial communities: indicators of coral reef ecosystem stress. GSA Annual Conference. Seattle. Washington.
- Jin, Q., J. Park, G.T. Bonheyo, **J. Frias-Lopez**, G. Roadcap, B. Fouke, C. Bethke & R.A. Sanford. 2003. Molecular characterization of methanotrophs in Middendorf aquifer, South Carolina. GSA Annual Conference. Seattle. Washington.
- Frias-Lopez, J.**, G. T. Bonheyo, Q. Jin & B.W. Fouke. 2003. Oral presentation. Coral black band disease: A single symptom associated with different cyanobacteria in widely-spaced ocean basins. AAPG Annual Convention. Salt Lake City. Utah.
- Bonheyo, G. T., , **J. Frias-Lopez**, J. Klaus & B.W. Fouke. 2003. How are hot springs colonized by thermophilic bacteria? AAPG Annual Convention. Salt Lake City. Utah.
- Jin, Q., J. Park, G. T. Bonheyo, G. Roadcap, **J. Frias-Lopez**, B. Fouke & C. M. Bethke. 2002. Microbial and geochemical zoning of Middenford aquifer, South Carolina. AUG Fall Meeting. San Francisco, California.
- Frias-Lopez, J.**, G. T. Bonheyo & B.W. Fouke. 2002. Distribution of bacterial communities living in seawater, healthy, black band diseased, and dead coral surfaces. ASM General Conference. Salt Lake City, Utah.
- Bonheyo, G.T, **J. Frias-Lopez** & B.W. Fouke. 2002. Facies distribution of bacteria in a travertine depositing hot spring: bringing order to a complex environmental system. ASM General Conference. Salt Lake City, Utah.

- Alsina, M., E. Ollé, J.L. Peinado & **J. Frías**. 2000. Detection of *Actinobacillus actinomycetemcomitans* by culture techniques and PCR. XXXIV annual conference. SEPA (Spanish Society of Periodontology. Oviedo (Spain).
- Ribas, F.; B. Galofre; **J. Frías**; F. Lucena. 1997. On-Line Automatic Monitoring of BDOC in a Water Treatment Plant With Ozonation and GAC Filtration. AWWA . Water Quality Technology Conference. Denver, Colorado.
- Lasobras, J., M. Muniesa, **J. Frías**, F. Lucena & J. Jofre. 1996. Relationship between the morphology of bacteriophages and their persistence in the environment. Health-Related Water Microbiology. IAWQ Conference. Mallorca (Spain)
- Lhoëst, F., **J. Frías**, J. Comas, F. Ribas, J. Jofre & F. Lucena. 1996. Detection of *Giardia* cysts in environmental samples by flow cytometry. Health-Related Water Microbiology. IAWQ Conference. Mallorca (Spain)
- Kaplan, L. A., C. Volk, J.C. Joret, F. Ribas, **J. Frías** & F. Lucena. 1994. The use of biofilm reactors for the measurement of biodegradable dissolved organic carbon in drinking water. International Seminar on Biodegradable Organic Matter. Montreal (Canada)
- Kaplan, L. A., F. Ribas, J.-C. Joret, C. Volk, **J. Frías**, and F. Lucena. 1993. An immobilized biofilm reactor for the measurement of biodegradable organic matter in drinking water: Validation and field test. Proceedings of the Water Quality Technology Conference, Miami, FL, pp. 1457-1475.
- Ribas, F., M. Monedero, J.M. Huguet, **J. Frías** & F. Lucena. 1993. Control of the biodegradable organic carbon in a water treatment plant with double filtration and ozonation. XIV General Conference of the Spanish Society for Microbiology. Zaragoza (Spain)
- Ribas, F., **J. Frías**, J.M. Huguet & F. Lucena. 1992. Monitoring of the biodegradable organic carbon in a water treatment plant with Sand-GAC filtration-Ozonation using a fixed biomass reactor. Water Quality Technology Conference of the AWWA. Toronto (Canada)
- Ribas, F., **J. Frías** & F. Lucena. 1991. A dynamic method for the determination of biodegradable dissolved organic carbon (BDOC) in waters. XIII General Conference of the Spanish Society for Microbiology. Salamanca (Spain)
- Frías**, J., F. Lucena & F. Ribas. 1991. Biofilm affinity for distribution waters. XIII General Conference of the Spanish Society for Microbiology. Salamanca (Spain)
- Frías**, J., F. Lucena, L. Mohedano, F. Ribas, J. Rivera & F. Ventura. 1991. Biodegradation of volatile organic pollutants in reactor designed for the determination of biodegradable dissolved organic carbon (BDOC). General Conference of the Spanish Society of Chromatography. San Sebastian (Spain)
- Huguet Mestre, J.M., **J. Frías** & F. Lucena. 1989. Selection and activity of nitrifying bacteria growing on activated carbon. XII General Conference of the Spanish Society for Microbiology. Pamplona (Spain).
- Frías**, J., F. Ribas, J.M. Huguet & F. Lucena. 1989. Assimilable organic carbon (AOC) and biodegradable dissolved organic carbon (BDOC) throughout the water treatment process. General Conference of the Spanish Society for Microbiology. Pamplona (Spain).

INVITED PRESENTATIONS

- Aegean Conferences. First International Conference on Oral Mucosal Immunity and Microbiome. Crete, Greece. The metatranscriptome of periodontitis progression. 2018.
- IADR Conference. London. The Metatranscriptome of the Oral Microbiome: Understanding Function in Complex Microbial Communities. 2018.
- AADR Conference. Fort Lauderdale. Potassium as a signal in oral dysbiosis. 2018.
- Colombian Association of Periodontics and Osseointegration (ACPO). Cartagena, Colombia. Functional changes within the oral microbiome: What are these bugs doing?. 2017.
- American Spinal Injury Association. Annual Scientific Meeting. Albuquerque. The human microbiome and its importance in human health. 2017.
- University of Florida at Gainesville. Signatures of oral functional dysbiosis revealed by metatranscriptome analysis. 2016.
- Penn Periodontal Conference. University of Pennsylvania. Metatranscriptomics-Understanding periodontal disease. 2015.
- University of North Carolina at Chapel Hill. Functional signatures of oral dysbiosis during periodontitis progression. 2015.
- Case Western Reserve University (CWRU). The metatranscriptome of the oral microbiome in health and disease. 2015.
- Temple University. The metatranscriptome of the oral microbiome in health and disease. 2015.
- Genomics of prokaryotes, handling the data analysis bottleneck. Valencia, 2014. FISABIO The metatranscriptome of periodontitis progression. 2014.
- University of Florida. Seminar Series. Community-level expression analysis of Complex Microbial Communities. 2014.
- Rensselaer Polytechnic Institute (RPI). Expression Analysis of Complex Microbial Communities in Health and Disease. 2013.
- IADR Conference. Seattle. Metatranscriptomics: Expression Analysis of Complex Microbial Communities. 2013.
- Ohio State University. What can we learn from the oral metatranscriptome. 2012.
- Beijing Stomatological Hospital, Capital Medical University. Beijing. What can we learn from the oral metatranscriptome. 2012.
- Mark Wilson Conference. Organized by the University of Florida. Aruba. Microbial metatranscriptome of the oral biofilm. 2012.
- Forsyth Institute. Who is Doing What in the Oral Microbiome. 2012.
- University of Barcelona. Department of Microbiology. Network analysis of microbial communities by 'weighted species co-expression network analysis (WGCNA). 2011.
- Forsyth Institute. Unveiling the secrets of microbial gene expression in the ocean. 2008.
- Jackson State University. The identity of *Prochlorococcus* and *Synechococcus* predators in ocean surface waters: the possible importance of mixotrophy. 2007.
- Northwestern University. Control of microbial community structure in the oceans: insights through *Prochlorococcus*. 2007.
- University of Connecticut. Control of microbial community structure in the oceans: insights through *Prochlorococcus*. 2007.
- University of Illinois. Geology Colloquium. Microbiology of coral diseases: the ecology of Black Band disease (BBD). 2004.
- University of Hawaii. Department of Microbiology. Bacteria and the global emergence of coral diseases. 2003.
- University of Tennessee. Department of Microbiology. Bacteria and the global emergence of coral diseases. 2003.
- University of Barcelona. Mechanisms of tetracycline resistance transmission among the anaerobe bacterium *Bacteroides thetaiotaomicron*. 1998.
- Health ministry of Spain. Workshop on Drinking Water Microbiology. Assessment of a bioreactor for the measurement of biodegradable organic carbon in waters. 1996.
- University of Barcelona and Polytechnic University of Catalonia. Civil Engineering Department. Spain. Workshop on "New perspectives on water microbiology". The biodegradable organic carbon in distribution waters. 1993.

PROFESSIONAL MEMBERSHIPS

International Association for Dental Research (IADR) and American Society for Microbiology (ASM).

Ph. D. DISSERTATION

Measurement of the assimilable and biodegradable organic carbon in distribution waters. Development of a new methodology. Advisor: F. Lucena

PROFESSIONAL SERVICES

Reviewer for: the journals Genome Biology, PLOS One, Journal of Periodontology, Microbes and Infection, Environmental Microbiology, FEMS Microbiology Ecology, Microbial Ecology Water Research, Coral Reefs and the granting agencies Natural Environment Research Council (UK), National Science Foundation (NSF) and International Foundation for Sciences (Sweden).

Member of the Editorial Board of Molecular Oral Microbiology.