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Education

- 2009-2011 Post-Doctoral training. Department of Biomedical Sciences, Oregon State University, USA
2004-2009 Ph.D., Oregon State University, USA
1997-2002 Food Engineering, Universidad Austral de Chile, Chile

Employment/Affiliations

- 2020-to date Associate Professor, Department of Biology, College of Sciences, Texas A&M University, TX, USA.
2020-to-date Visiting Professor, Faculty of Life Sciences, Universidad Andrés Bello, Chile
2014-2020 Associate Professor, Department of Biological Sciences, Faculty of Life Sciences, Universidad Andres Bello, Chile
2011-14 Assistant Professor, Department of Biological Sciences, Faculty of Biological Sciences, Universidad Andres Bello, Chile
2011-15 Courtesy Faculty, Department of Biomedical Sciences, College of Veterinary Medicine, Oregon State University

Brief CV Summary

I have received a B.Sc. degree from Universidad Austral de Chile and a Ph.D. from Oregon State University (OSU). During my Ph.D. work, I dissected the molecular mechanism of germination of *Clostridium perfringens* spores. In 2009, I continued my training at OSU as a Postdoctoral Researcher. In this position, I began my work on the biology of *Clostridium difficile* spores. In 2011, I joined Universidad Andrés Bello, where I expanded my research interests into microbial pathogenesis, pathogen/microbiota-host interactions, bacterial spore physiology, genomic epidemiology and more recently vaccine-development. To date, the efforts of my group has resulted in 91 research articles, secured grant funds for more than USD \$ 4 million, and two submitted patent applications.

Research Funding

1. Title: *Clostridium difficile* spore-host interactions: Defining the role of the collagen-like BclA exosporium proteins in *Clostridium difficile* spore-entry into intestinal epithelial cells and in the pathogenesis of the infection ¹
Funding Agency: FONDECYT, CONICYT
Role: Director
Budget: USD \$ 330,000
2. Title: Nucleus Millennium in the Biology of intestinal Microbiota
Funding Agency: MILLENNIUM INNICIATIVE, Ministry of Economy, Development and Tourism.
Role: Director
Budget: USD \$ 923,000 (2018-2021)

¹ Ranked FIRST among proposals of the same study section.

3. Title: Development of chimeric proteins as a strategy for vaccine to prevent the initiation and recurrence of *Clostridium difficile* infections
Funding Agency: FONDEF, CONICYT
Role: Director
Budget: USD \$ 460,000 (2018-2020)
4. Title: Genomic EpideMIology of *Clostridium difficile* in Latin America
Funding Agency: FONDEF, CONICYT
Role: Project Coordinator (until 2020)
Budget: USD \$ 800,000 (2018-2021)
5. Title: Investigating the role of type II toxin-antitoxin systems in *Clostridium difficile* antibiotic tolerance and persistence in the host
Funding Agency: FONDECYT, CONICYT
Role: Co-Investigator
Budget: USD \$ 166,000 (2017-2021)
6. Title: Pharmacotherapy for the treatment of recurrent *Clostridium difficile* infections
Funding Agency: FONDEF, CONICYT
Role: Director
Budget: USD \$ 333,000 (2016-2019)
7. Title: Optimization of pharmacological formulation for treatment of *Clostridium difficile* recurrent diseases
Funding Agency: Laureate Innovation Hub
Role: Director
Budget: USD \$ 60,000 (2016-2017)
8. Title: *Clostridium difficile* toxin-mediated remodeling of the colonic mucosa promotes spore persistence and infection recurrence: Role of monoclonal antibodies in protection against recurrent infection
Funding Agency: Merck
Role: Principal Investigator
Budget: USD \$ 96,000 (2018-2019)
9. Title: NextSeq 500 (Illumina) sequencing platform: A solution for genomic, transcriptomic and metagenomic analysis of prokaryotes and eukaryotes in Chile.
Funding Agency: FONDEQUIP, CONICYT
Role: Director.
Budget: USD \$ 435,000 (2016-2018)
10. Title: *Clostridium difficile* spore-host interactions: Dissecting the mechanism of *C. difficile* spore-entry into intestinal epithelial cells and its role in persistent infections²
Funding Agency: FONDECYT, CONICYT
Role: Principal Investigator
Budget: USD \$ 330,000 (2015-2019)
11. Title: Immunotherapy to combat recurring infections of *Clostridium difficile*
Funding Agency: FONDEF, CONICYT
Role: Director
Budget: USD \$ 264,000 (2014-2016)
12. Title: Identification and characterization of the exosporium proteins in *Clostridium difficile* spores
Funding Agency: UNAB REGULAR DI-275-13/R
Role: Principal Investigator
Amount: USD \$ 8,000 (2014-2015)
13. Title: Development of clinical protocol to combat hospital acquired diarrhea according to local epidemiology of *Clostridium difficile* and the clinical profile in two hospital centers.
Funding Agency: National Health Research and Development Funds
Role: Deputy Director
Amount: USD \$ 46,000 (2012-2015)
14. Title: Adherence of *Clostridium difficile* spores to the intestinal mucosa
Funding Agency: FONDEF, CONICYT
Role: Principal Investigator
Amount: USD \$ 294,000 (2011-2015)
15. Title: Adherence of spores of the pathogenic bacterium, *Clostridium difficile*, to the intestinal mucosa.
Funding Agency: UNAB REGULAR

² Ranked FIRST among proposals of the same study section.

Role: Principal Investigator
Amount: USD \$ 8,000 (2011-2012)

16. Title: Evaluation of Real-Time PCR versus enzyme immuno assay in the diagnostics of *Clostridium difficile* infections.
Funding Agency: Pontificia Universidad Católica de Chile
Role: Co-Investigator
Amount: USD \$ 1,200 (2011-2012)
17. Title: Evaluation of a multiple real-time polymerase chain reaction test for the detection of toxin B of *Clostridium difficile* in stool samples.
Funding Agency: Pontificia Universidad Católica de Chile
Amount: USD \$ 28,000 (2011-2012)
Role: Associate Investigator.

Publications in peer-reviewed journals:

(#, Equal contribution; *, Corresponding author)

2020

1. Muñoz, M., Guerrero-Araya, E., Cortés-Tapia, C., Plaza-Garrido, A., Lawley, T.D., **Paredes-Sabja, D.** Comprehensive genome analyses of *Sellimonas intestinalis*, a potential biomarker of homeostasis gut recovery. Under review.
2. Romero-Rodríguez, A., Troncoso-Cotal, S., Guerrero-Araya, E., **Paredes-Sabja, D.** The *Clostridioides difficile* cysteine-rich exosporium morphogenetic protein, CdeC, exhibits self-assembly properties that lead to organized inclusion bodies in *Escherichia coli*. Under review.
3. Maia, A.R., Reyes-Ramírez, R., Pizarro-Guajardo, M., Saggese, A., Ricca, E., Baccigalupi, L., and **Paredes-Sabja, D.** Nasal immunization with the C-terminal domain of BclA3 induced specific IgG production and attenuated disease symptoms in mice infected with *Clostridioides difficile* spores. Under review.
4. Álvarez, R., Ortega-Fuentes, C., Queraltó, C., Inostroza, O., Díaz-Yañez, F., González, R., Calderón, I.L., Fuentes, J.A., **Paredes-Sabja, D.**, Gil, F. Evaluation of functionality of type II toxin-antitoxin systems of *Clostridioides difficile* R20291. Microbiological Research. 2020. Jun 28; 239:126539. doi: 10.1016/j.micres.2020.126539.
5. Pizarro-Guajardo, M., Calderon-Romero, P., Romero-Rodríguez, A., **Paredes-Sabja, D.** Characterization of exosporium layer variability of *Clostridioides difficile* spores in the epidemically relevant strain R20291. Frontiers in Microbiology. 2020. Accepted
6. Guerrero-Araya, E., Meneses, C., Castro-Nallar, E., Guzmán D, AM., Álvarez-Lobos, M., Quesada-Gómez, C., **Paredes-Sabja, D.***, Rodríguez, C. Origin, genomic diversity and microevolution of the *Clostridium difficile* B1/NAP1/RT027/ST01 strain in Costa Rica, Chile, Honduras and Mexico. Microb. Genom. 2020. Mar 16. doi: 10.1099/mgen.0.000355.
7. Maia, AR., Reyes-Ramírez, R., Pizarro-Guajardo, M., Saggese, A., Castro-Córdova, P., Isticato, R., Ricca, E., **Paredes-Sabja, D.***, Baccigalupi, L. Induction of a specific humoral immune response by nasal delivery of BclA2_{CTD} of *Clostridioides difficile*. Int. J. Mol. Sci. 2020 Feb 14; 21(4): 1277. doi: 10.3390/ijms21041277.
8. Castro-Córdova, P., Díaz-Yañez, F., Muñoz-Miralles, J., Gil, F., **Paredes-Sabja D.** Effect of antibiotic to induce *Clostridioides difficile*-susceptibility and infectious strains in a mouse model of *Clostridioides difficile* infection and recurrence. Anaerobe. 2020. Apr;61:102149. doi: 10.1016/j.anaerobe.2020.102149.

2019

9. Stojković V, Ulate M.F., Hidalgo-Villeda F., Aguilar E., Monge-Cascante C., Pizarro-Guajardo M., Tsai K., Tzoc E., Camorlinga M., **Paredes-Sabja D.**, Quesada-Gómez C., Fujimori D.G., Rodríguez C. cfr(B), cfr(C), and a New cfr-Like Gene, cfr(E), in *Clostridium difficile* Strains Recovered across Latin America. Antimicrob. Agents Chemother. 2019. Dec 20; 64(1). pii: e01074-19. doi: 10.1128/AAC.01074-19.
10. Shen, A., Edwards A.N., Sarker M.R., **Paredes-Sabja D.** Sporulation and germination in Clostridial pathogens. Microbiol Spectr. 2019. Nov; 7(6). doi: 10.1128/microbiolspec.GPP3-0017-2018.
11. Pizarro-Guajardo, M., Chamorro-Veloso, N., Vidal, M.R., **Paredes-Sabja, D.***. New insights for vaccine development against *Clostridium difficile* infections. Anaerobe. 2019. Apr 26. pii: S1075-9964(19)30076-9. doi: 10.1016/j.anaerobe.2019.04.009.

12. Huang, J., Kelly, C.P., Bakirtzi, K., Villafuerte Gálvez, J.A., Lyras, D., Mileto, S., Larcombe, S., Xu, H., Yang, X., Shields, K.S., Zhu, W., Zhang, Y., Goldsmith, J.D., Patel, I.J., Hansen, J., Huang, M., Yla-Herttuala, S., Moss, A.C., **Paredes-Sabja, D.**, Pothoulakis, C., Shah, Y.M., Wang, J., and Chen, X.* The Role of Toxin-induced VEGF-A and Vascular Response in the Pathogenesis of *Clostridium difficile* Infection. *Nature Microbiology*. 2019. **4(2): 269-279**. doi: 10.1038/s41564-018-0300-x.

2018

13. Brito-Silva, C., Pizarro-Cerda, J., Gil, F., and **Paredes-Sabja, D.*** Identification of *Escherichia coli* strains for the heterologous overexpression of soluble *Clostridium difficile* exosporium proteins. *Journal of Microbiological Methods*. 2018. 154: 46-51. doi: 10.1016/j.mimet.2018.10.002.
14. Muñoz-Miralles, J., Trindade, B.C., Castro-Córdova, P., Bergin, I.L., Kirk, L.A., Aronoff, D., **Paredes-Sabja, D.*** Indomethacin increases severity of *Clostridium difficile* infection in mouse model. *Future Microbiology*. 2018. 13: 1271-1281. doi: 10.2217/fmb-2017-0311.
15. Pizarro-Guajardo, M., Ravanal, C., Paez, M.D., Callegari, E., **Paredes-Sabja, D.*** Identification of *Clostridium difficile* Immunoreactive spore proteins of the epidemic strain R20291. *Proteomics Clinical Applications*. 2018. 12(5): e1700182. doi: 10.1371/journal.ppat.1007199.
16. Calderón-Romero, P., Milano, M., Guerrero, E., Olguín, V., Castro-Cordova, P., Gil, F., **Paredes-Sabja, D.*** *Clostridium difficile* exosporium cysteine-rich proteins are essential for the morphogenesis of the exosporium layer, spore resistance, and affect *C. difficile* pathogenesis. *Plos Pathogens*. 2018. 14(8):e1007199. doi: 10.1371/journal.ppat.1007199
17. Álvarez, R., Inostroza, O., Garavaglia, M., Minton, N.P., **Paredes-Sabja, D.***, and Gil, F.*. Effect of antibiotic treatment on the formation of non-spore *Clostridium difficile* persister-like cells. *J. Antimicrobial Chemotherapy*. 2018. 73(9):2396-2399. doi: 10.1093/jac/dky186.
18. Salazar, C.L., Reyes, C., Cienfuegos, V., Emma Best, E., Atehortua, S., Patricia Sierra, P., Margarita M. Correa, M.C., **Paredes-Sabja, D.**, Fawley, W.N., Mark Wilcox, M., Gonzalez, A.* Subtyping of *Clostridium difficile* PCR ribotypes 591, 106 and 002, the dominant strain types circulating in Medellín, Colombia. *PlosOne*. 2018. 13(4): e0195694. doi: 10.1371/journal.pone.0184689.
19. Gil, F.*, Calderón, I.L., Fuentes, J.A., **Paredes-Sabja, D.*** *Clostridioides (Clostridium) difficile* infection: Current and alternative therapeutic strategies. *Future Microbiology*. 2018. Mar;13:469-482
20. Deng, K., Serment-Moreno, V., Welti-Chanes, W., **Paredes-Sabja, D.***, Fuentes, C., Wu, X., Torres, J.A.*. Inactivation model and risk-analysis design for apple juice processing by high pressure CO₂. *Journal of Food Science and Technology*. 2018. 55(1):258-264.
21. Yang, H.T., Chen, J.W., Rathod, J., Jiang, Y.Z., **Paredes-Sabja, D.**, Tsai, P.J., Hung, Y.P., Ko, W.C., Huang, I.H.* Lauric Acid is an inhibitor of *Clostridium difficile* growth in vitro and reduces inflammation in a mouse model of infection. *Frontiers in Cellular and Infection Microbiology*. 2018. 8:2635. doi: 10.3389/fmicb.2017.02635.

2017

22. Salazar, C.L., Reyes, C., Atehortua, S., Sierra, P., Correa, M.M., **Paredes-Sabja, D.**, Best, E., Fawley, W.N., Wilcox, M., Gonzalez, A.* Molecular, microbiological and clinical characterization of *Clostridium difficile* isolates from tertiary care hospitals in Colombia. *PLoS One*. 2017. 12(9):e0184689. doi: 10.1371/journal.pone.0184689.
23. Pizarro-Guajardo, M., Díaz-Gonzalez F., Álvarez-Lobos, M., **Paredes-Sabja, D.*** Characterization of chicken IgY specific to *Clostridium difficile* R20291 spores and the effect of oral administration in mouse models of initiation and recurrent disease. *Frontiers in Cellular and Infection Microbiology*. 2017. 7: Article 365. doi: 10.3389/fcimb.2017.00365.
24. Gil, F., Lagos-Moraga, S., Calderón-Romero, P., Pizarro-Guajardo, M., **Paredes-Sabja, D.*** Updates on the biology of *Clostridium difficile* spore. *Anaerobe*. 2017. S1075-9964. doi: 10.1016/j.anaerobe.2017.02.018.
25. Deng, K., Talukdar, P.K., Sarker, M.R., **Paredes-Sabja, D.***, Torres, J.A.* Survival of *Clostridium difficile* spores at low water activity. *Food Microbiology*. 2017. 65 274-278. doi: 10.1016/j.fm.2017.03.013.
26. Bravo-Tello, K., Ehrenfeld, N., Solís, C.J., Ulloa, P.E., Hedrera, M., Pizarro-Guajardo, M., **Paredes-Sabja, D.**, Feijoo, C.G.* Effect of microalgae on intestinal inflammation triggered by soybean meal and bacterial infection in zebrafish. *PlosOne*. 2017. 12(11):e0187696. doi: 10.1371/journal.pone.0187696.

2016

27. Guerrero-Araya, E., Plaza-Garrido, A., Díaz-Yañez, F., Pizarro-Guajardo, M., Valenzuela, S.L., Meneses, C., Gil, F., Castro-Nallar, E., **Paredes-Sabja, D.*** Genome sequence of *Clostridium*

- paraputrificum* 373-A1 isolated in Chile from a patient infected with *Clostridium difficile*. Genome Announcement. 2016. 4(6): pii: e01178-16. doi: 10.1128/genomeA.01178-16
28. Banawas, S., **Paredes-Sabja, D.**, Setlow, P., Sarker, M.R.* Characterization of germinants and their receptors for spores of non-food-borne *Clostridium perfringens* strain F4969. Microbiology. 2016. 162(11):1972-1983. doi: 10.1099/mic.0.000365.
 29. Acuña, L.G., Barros, M.J., Martínez, D., Rodas, P.I., **Paredes-Sabja, D.**, Fuentes, J.A., Gil, F., Calderón, I.L.* A feed-forward loop between SroC and MgrR small RNAs modulates the expression of *eptB* and the susceptibility to polymyxin B in *Salmonella* Typhimurium. Microbiology. 2016. 162(11):1996-2004. doi: 10.1099/mic.0.000365.
 30. Ortega, A.P., Villagra, N.A., Urrutia, I.M., Valenzuela, L.M., Talamilla-Espinoza, A., Hidalgo, A.A., Rodas, P.I., Gil, F., Calderón, I.L., **Paredes-Sabja, D.**, Mora, G.C., Fuentes, J.A.* Lose to win: *marT* pseudogenization in *Salmonella enterica* serovar Typhi contributed to the surV-dependent survival to H₂O₂ and inside human macrophage-like cells. Infection Genetics and Evolution. 2016. 45:111-121. doi: 10.1016/j.meegid.2016.08.029.
 31. Mora-Urbe, P., Miranda-Cárdenas, C., Castro-Córdova, P., Gil, F., Calderón, I.C., Rodas, P., Fuentes, J.A., Banawas, S., Sarker, M.R. and **Paredes-Sabja, D.*** Characterization of the Adherence of *Clostridium difficile* Spores: The Integrity of the Outermost Layer Affects Adherence Properties of Spores of the Epidemic Strain R20291 to Components of the Intestinal Mucosa. Frontiers in Cellular and Infection Microbiology. 2016, 6:99 eCollection 2016. doi: 10.3389/fcimb.2016.00099.
 32. Frávega, J., Álvarez, R., Díaz, F., Inostroza, O., Tejías, C., Rodas, P.I., **Paredes-Sabja, D.**, Fuentes, J.A., Calderón, I.L., Gil, F.* *Salmonella* Typhimurium exhibits fluoroquinolone resistance mediated by the accumulation of the antioxidant molecule H₂S in a CysK-dependent manner. Journal of Antimicrobial Chemotherapy. 2016, 71(12):3409-3415. doi: 10.1093/jac/dkw311
 33. Gil, F* and **Paredes-Sabja, D***. Acyldepsipeptide antibiotics as a potential therapeutic agent against *Clostridium difficile* recurrent infections. Future Microbiology. 2016. 11: 1179-89. doi: 10.2217/fmb-2016-0064
 34. Pizarro-Guajardo, M., Calderón-Romero, P., **Paredes-Sabja, D***. Ultrastructural variability of the exosporium layer of *Clostridium difficile* spores from sporulating culture and biofilms. Applied and Environmental Microbiology. 2016. 82(19):5892-8. doi: 10.1128/AEM.01463-16.
 35. Rodas, P.I.* Aguayo, D.A., Escobar, A., Alvarez, F.P., Echeverría, V., Calderón, I.L., Fuentes, J.A., **Paredes-Sabja, D.**, Gil, F., Otero, C., Christodoulides, M. The NarE protein of *Neisseria gonorrhoeae* catalyzes ADP-ribosylation of several ADP-ribose acceptors despite an N-terminal deletion. FEMS Letter in Microbiology. 2016. 363(17). doi: 10.1093/femsle/fnw181.
 36. Pizarro-Guajardo, M., Calderón-Romero, P., Castro-Córdova, P., Mora-Urbe, P., **Paredes-Sabja, D***. Ultrastructural variability of the exosporium layer of *Clostridium difficile* spores. Applied and Environmental Microbiology. 2016. (82) 7: 1-8. doi: 10.1128/AEM.03410-15.
 37. Li, J., **Paredes-Sabja, D.**, Sarker, M.R., McClane B.A*. *Clostridium perfringens* sporulation and sporulation-associated toxin production. Microbiology Spectrum. 2016. 4(3). doi: 10.1128/microbiolspec.TBS-0022-2015.
 38. Plaza-Garrido, A., Barra-Carrasco, J., Macias, J.H., Carman, R., Fawley, W.N., Wilcox, M.H., Hernández-Rocha, C., Guzmán-Durán, A.M., Alvarez-Lobos, M., **Paredes-Sabja, D***. 2015. Predominance of *Clostridium difficile* ribotypes 012, 027 and 046 in a University Hospital in Chile, 2012. Epidemiology and Infection. 2016. 144(5): 976-979. doi: 10.1017/S0950268815002459.

2015

39. Plaza-Garrido, A., Miranda-Cárdenas, C., Olguín-Araneda, V., Cofré-Araneda, G., Hernández-Rocha, C., Carman, R., Ibañez, P., Fawley, W.N., Wilcox, M.H., Gil, F., Calderón, I.L., Fuentes, J.A., Guzmán-Durán, A.M., Alvarez-Lobos, M., **Paredes-Sabja, D***. 2015. Outcome of relapsing *Clostridium difficile* infections do not correlate with virulence- spore- and vegetative cell-associated phenotypes. Anaerobe. 2015. 36:30-8. doi: 10.1016/j.anaerobe.2015.09.005
40. Álvarez, R., Frávega, J., Rodas, P., Fuentes, J.A., **Paredes-Sabja, D.**, Calderón, I.L. Gil, F*. 2015. Participation of *S. Typhimurium* *cysJIIH* operon in the H₂S-mediated ciprofloxacin resistance in presence of sulfate as sulfur source. 2015. 458(1):46-51. doi: 10.1016/j.bbrc.2015.01.058
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42. Gil, F*, Pizarro-Guajardo, M., Álvarez, R., **Paredes-Sabja, D***. *Clostridium difficile* recurrent infection: possible implication of Toxin-Antitoxin systems. Future Microbiology. 2015. 10(10):1647-57. doi: 10.2217/fmb.15.94.
43. Valenzuela, L.M., Hidalgo, A.A., Rodríguez, L., Urrutia, I.M., Ortega, A.P., Villagra, N.A., **Paredes-Sabja, D.**, Calderón, I., Gil, F., Saavedra, C.P., Mora, G.C., Fuentes, J.A*. Pseudogenization of *sopA*

- and *sopE* is functionally linked and contributes to virulence of *Salmonella enterica* serovar Typhi. *Infection Genetics and Evolution*. 2015. 33: 131-142. doi: 10.1016/j.meegid.2015.04.021
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- 2014**
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2. Enzo Guerrero-Araya, Claudio Meneses, Eduardo Castro-Nallar, Ana María Guzmán, Manuel Álvarez-Lobos, **Daniel Paredes-Sabja**, César Rodríguez. diversity, origin, and microevolution of *Clostridioides difficile* BI/nAP1/027/ST1 strains from Latin America. ClostPath meeting, 11th International Conference of the Molecular Biology and Pathogenesis of Clostridia. Leiden, The Netherlands. 19-22th 2019.
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33. Escobar, K. (Presenter), Diaz, F., Tzeng, S., Maier, C., Sarker, M.R., Paredes-Sabja, D. Analysis of the exosporium proteome of *Clostridium difficile* spores. In XXXIV Congreso Chileno de Microbiología. 23-26 of November, 2012, Valdivia, Chile.
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35. Hernández-Rocha, C., Barra-Carrasco, J., **Paredes-Sabja, D.**, 'Guzmán Durán, A.M., Alvarez-Lobos, M. Evaluación prospectiva de PCR en tiempo real versus inmunoensayo enzimático para el diagnóstico de infección por *Clostridium difficile*. XXXIX Congreso Chileno de Gastroenterología. Junio 2012, Santiago, Chile.
36. **Paredes-Sabja, D.**, Cofré-Araneda, G., Brito-Silva, C., Pizarro-Guajardo, M., and M.R., Sarker. 2012. *Clostridium difficile* spore-macrophage interactions: spore survival. In General Meeting of the American Society for Microbiology, San Francisco, USA, June 16-19, 2012.
37. **Paredes-Sabja, D.**, (Presenter) and M.R., Sarker. Adherence of *Clostridium difficile* spores to human colonic enterocyte-like Caco-2 cells. CloSPATH 2011, 25th to 29th October 2011, Ames, IA, U.S.A.
38. Novel regulatory mechanism for spore formation and enterotoxin production in *Clostridium perfringens*. Ohtani, (Presenter) K., Hirakawa, H., **Paredes-Sabja, D.**, Tashiro, K., Kuhara, S., Sarker, M.R., and T., Shimizu. CloSPATH 2011, 25th to 29th October 2011, Ames, IA, U.S.A.
39. The molecular mechanism of *Clostridium perfringens* spore germination. Sarker, M.R. (Presenter), **Paredes-Sabja, D.**, and Peter Setlow. CloSPATH 2011, 25th to 29th October 2011, Ames, IA, U.S.A.
40. **Paredes-Sabja, D. (Presenter)**, Sarker, N., and M.R., Sarker. *tpcL* is expressed during sporulation of *Clostridium perfringens*. In General Meeting of the American Society for Microbiology, New Orleans, USA, May, 21st-24th 2011
41. Udombijitkul, P., **Paredes-Sabja, D.**, and M.R., Sarker. The inhibitory effects of nisin on *Clostridium perfringens* Type A isolates. In General Meeting of the American Society for Microbiology, New Orleans, USA, May, 21st-24th 2011.
42. Alnoman, M.M., Udombijitkul, P., **Paredes-Sabja, D.**, and M.R., Sarker. Characterization of germination of *Clostridium perfringens* animal isolates spores. In General Meeting of the American Society for Microbiology, New Orleans, USA, May, 21st-24th 2011
43. Banawas, S.S., **Paredes-Sabja, D.**, and M.R., Sarker. Role of GerAA in germination of spores of *Clostridium perfringens* non-food-borne isolates F4969. In General Meeting of the American Society for Microbiology, New Orleans, USA, May, 21st-24th 2011
44. **Paredes-Sabja, D. (Presenter)**, & Sarker, M.R. Role of a Host Serum Factor with Muramidase Activity in *Clostridium perfringens* Spore Germination and Innate Immunity. In General Meeting of the American Society for Microbiology, San Diego, USA, May, 23rd-27th 2010.
45. **Paredes-Sabja, D.**, & Sarker, M.R. (Presenter). Effect of a cortex-lytic enzyme, SleC, from a non-food borne *Clostridium perfringens* on the germination properties of SleC-lacking spores of food poisoning isolate. In General Meeting of the American Society for Microbiology, San Diego, USA, May, 23rd-27th 2010.
46. Udombijitkul, P. (Presenter), **Paredes-Sabja, D.**, and M.R., Sarker. GerH, a histidine kinase, regulates expression of GerQ during sporulation of *Clostridium perfringens*. In General Meeting of the American Society for Microbiology, San Diego, USA, May, 23rd-27th 2010.
47. **Paredes-Sabja, D.**, Setlow, P., Sarker, M.R. (Presenter). The protease CspB is essential for initiation of cortex hydrolysis and DPA release during spore germination of *Clostridium perfringens* type A food poisoning isolates. In ClostPath International Meeting, Rome, Italy, October 19th-23rd 2009.

- 48. Paredes-Sabja, D. (Presenter)**, Akhtar, S., Torres, J.A., and M.R. Sarker. Strategy to inactivate *Clostridium perfringens* spores in meats. In General Meeting of the American Society for Microbiology, Philadelphia, USA, May 17th-21st 2009.
- 49. Paredes-Sabja, D.**, Setlow, P., and M.R. Sarker (**Presenter**). SleC is essential for cortex peptidoglycan hydrolysis during germination of spores of the pathogenic bacterium *Clostridium perfringens*. In General Meeting of the American Society for Microbiology, Philadelphia, USA, May 17th-21st 2009.
- 50. Bond, C. (Presenter)**, **Paredes-Sabja, D.**, Setlow, P., Carman, R.B., and M.R. Sarker. Heat Resistance and Germination of Spores of *Clostridium difficile* Isolates from a Hospital Outbreak of *Clostridium difficile*-associated disease (CDAD). In General Meeting of the American Society for Microbiology, Boston, USA. June 1st-5th 2008.
- 51. Paredes-Sabja, D.**, Sarker, N., Setlow, B., Setlow, P., and M.R. Sarker (**Presenter**). Roles of DacB and Spm proteins in *Clostridium perfringens* spore resistance to moist heat, chemicals and UV radiation. In General Meeting of the American Society for Microbiology, Boston, USA, June 1st-5th 2008.
- 52. Paredes-Sabja, D. (Presenter)**, Setlow, B., Setlow, P., and M.R. Sarker. Characterization of *Clostridium perfringens* spores that lack SpoVA proteins and dipicolinic acid. In General Meeting of the American Society for Microbiology, Boston, USA, June 1st-5th 2008.
- 53. Paredes-Sabja, D.**, Torres, J.A. (**Presenter**), and Sarker, M.R. A Weibull germination model for spores of *Clostridium perfringens* type A food poisoning isolates. In Nonthermal Processing Workshop. Portland, Oregon, USA, January 13th-16th 2008.
- 54. Paredes, D.**, Morales-Blancas, E., Ah-Hen, K.S, Velazquez, G., and J.A. Torres (**Presenter**). Crecimiento microbiano en alimentos refrigerados. In Proceedings of the International Congress of Food Safety, p. 307-321, Reynosa, Tamaulipas, Mexico, October 12th-15th 2004.

Awards and Honors:

- 2018:** **Young Scientist Award of the Universidad Andrés Bello.**
- 2016:** **Young Scientist Award of the Universidad Andrés Bello.**
- 2015:** **Chilean Young Scientist Award, Chilean Society of Biology.** To the most promising young scientist in Chile.
- 2009:** **Outstanding Doctoral Student Savery Award.** Awarded to the most outstanding doctoral student (research productivity and GPA) in the College of Agricultural Sciences at OSU.
- 2009:** **Oregon Lottery Scholarship.** Awarded to graduate students at OSU with academic merit in research productivity and course work.
- 2009:** **ASM Student Travel Grant Award.** For abstracts submitted to the 109th General Meeting of the American Society for Microbiology.
- 2008:** **Oregon Lottery Scholarship.** Awarded to graduate students at OSU with academic merit in research productivity and course work.
- 2008:** **Graduate Student Research Award.** Awarded to the graduate student with the highest research productivity of the College of Veterinary Medicine at OSU.
- 2004-2008:** **Chilean Presidential Fellowship.** Sponsors the formation of outstanding scientists covering graduate tuition and a partial stipend to pursue a Ph.D. degree.
- 2003:** **Academic Efficiency Award.** Sponsored by "Levaduras Collico, Chile" Consisting in the highest coefficient of GPA divided by the number of semesters attended at Universidad Austral de Chile (UACH), for students from the same entry year.

Teaching experience:

- 2000 Teaching Assistant of Meat Science, Department of Meat Science and Technology, College of Veterinary Science, Universidad Austral de Chile, Chile.
- 2001 Teaching Assistant of Meat Science, Department of Meat Science and Technology, College of Veterinary Science, Universidad Austral de Chile, Chile.
- 2005 Teaching Assistant of Food Microbiology, Department of Microbiology, Colleges of Agricultural Sciences and Science, Oregon State University, USA.
- 2006 Teaching Assistant of Food Processing Pilot Plant Experience, Department of Food Science and Technology, College of Agricultural Sciences, Oregon State University, USA.
- 2009 Section: **Anaerobic Pathogenic Bacteria of Veterinary Relevance** (2 lectures)
- 2011-2011- Section: **Molecular Biology of prokaryotes (Lecturer)**
- 2011- Section: **DNA Replication in bacteria** (1 lecture; Part of graduate course From Genes to Proteins).
- 2011-15 Section: ***Clostridium* infections of clinical relevance (2 lectures)**; in Clinical Microbiology for MD students.
- 2012-17 **Genetic Engineering of Microorganisms (Lecturer).**

Formation of Human Resources:

Advisor of Doctoral students (direct Ph.D. entry program):

Christian Brito	Ph.D. in Molecular Biosciences.	2012-2019
Marjorie Pizarro	Ph.D. in Biotechnology.	2013-2018
Paulina Calderón	Ph.D. in Molecular Biosciences.	2014-2020
Angela Plaza	Ph.D. in Molecular Biosciences.	2015-2020
Pablo Castro	Ph.D. in Biotechnology.	2016-expected 06-2019
Ana Inostroza	Ph.D. in Molecular Biosciences.	2016-expected 06-2019
Rodrigo Reyes	Ph.D. in Molecular Biosciences.	2017-to date
Catalina Cortés	Ph.D. in Molecular Biosciences	2018-to date
Enzo Guerrero	Ph.D. in Molecular Biosciences	2018-to date

International committee member of Doctoral students:

Kai Deng	Ph.D. in Food Science 2013-2016 (Oregon State University)
Claudia Marina Muñoz	Ph.D. In Biotechnology 2015-2018 (Universidad Nacional de Colombia)

Advisor of Master students:

Glenda Cofré.	Master in Biochemistry.	2012-2014
Mauro Milano.	Master in Biochemistry.	2012-2014
Camila Miranda.	Master in Biochemistry.	2012-2014
Angela Plaza.	Master in Biochemistry.	2012-2014
Rodrigo Pérez	Master in Molecular Biosciences.	2013-2015
Jaime Pizarro.	Master in Biochemistry.	2014-2016
Fernando Díaz.	Master in Biotechnology.	2014-2016
Pablo Castro.	Master in Biotechnology.	2014-2016
Catalina Rosales	Master in Biotechnology.	2014-2015
Paola Mora	Master in Biotechnology.	2015-2017
Macarena Otto	Master in Biotechnology.	2015-2017
Juan Muñoz	Master in Biotechnology.	2015-2017
Valentina Camilli	Master in Biotechnology.	2015-2017
Constanza Galilea	Master in Biotechnology.	2015-2017
Juan Pablo Peñaloza	Master in Molecular Biosciences.	2015-2017
Enzo Guerrero	Master in Biotechnology.	2016-expected 01-2020
Rodrigo Reyes	Master in Biochemistry.	2016-2020
Scarlet Troncoso	Master in Biotechnology & Life Sciences	2017-expected 3-2020
José García	Master in Biotechnology & Life Sciences	2018-to date
César Medina	Master in Biotechnology & Life Sciences	2018-to date
Nicolas Montes	Master in Biotechnology & Life Sciences	2018-to date
Giannina Massoni	Master in Biotechnology & Life Sciences	2019-to date
María José Mendoza	Master in Biotechnology & Life Sciences	2019-to date
César Ortega	Master in Biotechnology & Life Sciences	2019-to date

Memberships in Scientific Societies and Editorial Board:

2007 - present	American Society for Microbiology
2008 - present	American Association for the Advancement of Science
2010 - present	Sociedad Chilena de Microbiología

Editorial Board and Reviewer

2013 - present	Academic Editor of PloS ONE
2013 - present	Review Editorial Board in Frontiers in Cellular and Infection Microbiology
2013 - present	Review Editorial Board in Frontiers in Microbial Physiology and Metabolism
	Reviewer of : Microbiology Readings, Food Microbiology, Journal of Microbiological Methods, Trends in Microbiology, PloS One, PloS Pathogens, Journal of Proteomics, Journal of Antimicrobial and Chemotherapy, Virulence.

Reviewer of Grant Proposal for:

1. California Sea Grant College Program Proposals, U.S.A.

2. Research Proposals of CONICYT, CHILE.
3. Research Proposal of CONACYT, Argentina.
4. Research Proposal of National Science Center, Poland.
5. Research Proposal of Israel Science Foundation, Israel.
6. Research Proposal of French National Research Agency, France.
7. Research Proposal of Medical Research Council, United Kingdom