Curriculum Vitae
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1- **Contact information**

Head of Research and Development- Feed additives at Vetanco S.A.
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2- **Degrees**

- Post-doctoral, University of California, Davis. 2003-2006.
- PhD, School of Medicine, University of Buenos Aires. 2003.
- Licence in Molecular Biology, FCEN-University of Buenos AIres. 1998

3- **Academic afiliation**

PRESENT:

- Researcher; Category: Principal, **National Scientific and Technical Research Council (CONICET-Consejo Nacional de Investigación Científica y Tecnológica**), Buenos Aires, Argentina. 2019-.

FORMER:

- Vice Director, Institute of Veterinary Pathobiology, **National Institute of Agricultural Technology, Argentina.** 2019-2024.
- Coordinator (ad.), Antimicrobial Resistance and Alternatives Program, **National Institute of Agricultural Technology, Argentina.** 2019-2024.
- Coordinator of Avian Infectious Disease Program, **National Institute of Agricultural Technology, Argentina**
- Researcher; Category: Independent, **National Scientific and Technical Research Council (CONICET-Consejo Nacional de Investigación Científica y Tecnológica)**, Buenos Aires, Argentina. 2012-2019.

- Researcher; Category: Adjunt, **National Scientific and Technical Research Council (CONICET-Consejo Nacional de Investigación Científica y Tecnológica)**, Buenos Aires, Argentina. 2009-2012.
- Researcher; Category: Assisant, **National Scientific and Technical Research Council (CONICET-Consejo Nacional de Investigación Científica y Tecnológica)**, Buenos Aires, Argentina. 2007-2008.
- Post-doctoral fellow, **University of California**, Davis. California, United States. 2003- 2006.
- Invited Research Associate, Faculty of Pharmaceutical Sciences, **Tokushima-Bunri University,** Tokushima, Japan. 2002- 2003.Project Analyst, Department of immunochemistry, **Aventis Pasteur**, Buenos Aires, Argentina. 2002.
- PhD, Departamento de Fisiología, Facultad de Medicina, **Universidad de Buenos Aires**, Buenos Aires, Argentina. 1999- 2003 (Parte de la tesis fue hecha en la EEA INTA Bariloche, Rio Negro, años 2000-2002)
- Research Assistant, Departamento Vacunas bacterianas, Centro Nacional de Control de Calidad de Biologicos (CNCCB), **Instituto Nacional de Microbiologia Dr. Carlos G. Malbrán**. Buenos Aires, Argentina. 1995- 1999.

4- **Publications**

4.1- Peer reviewed articles, published or in press.

82. Could tannins be the right dietary alternative for replacing antibiotics as growth promoters in broiler chicken production? A comprehensive microbiota shift assessment in a commercial farm. NP Viso, E Redondo, L Redondo, JD Carrasco, M Farber, MF Miyakawa. Poultry Science 104 (8), 105260 2 2025

81. Genomic characterization of plasmids of mcr-1-positive Escherichia coli isolated from cohabiting rats, dairy cattle and pigs. JE Dominguez, F Martino, R Lovera, NA Casanova, C Seah, R Cavia, Alejandra Corso,

RG Melano, D Faccone, ME Fernández Miyakawa. BMC Veterinary Research 21 (1), 271

80. Environmental effects on gut health in production animals: Environmental Effects on Gut Health in Production Animals. M Kogut, M Fernandez-Miyakawa. BRILL 2024

79. Epithelial water transport and environment moisture in poultry gut health and disease. ME Fernández-Miyakawa, MH Kogut. Environmental effects on gut health in production animals, 273-303, 2024.

78. Opportunities and challenges in antimicrobial resistance policy including animal production systems and humans across stakeholders in Argentina: a context and qualitative analysis. K Allel, M Fernandez-Miyakawa, W Gaze, A Petroni, A Corso, F Luna, BMJ open 14 (6), e082156

77. National action plans on antimicrobial resistance in Latin America: an analysis via a governance framework P Avello, LM Collins, SA Gómez, F Luna, ME Fernández Miyakawa, HM West, G Iossa. Health Policy and Planning 39 (2), 188-197

76. How did antibiotic growth promoters increase growth and feed efficiency in poultry?. ME Fernandez-Miyakawa, NA Casanova, MH Kogut. 2024, Poultry Science 103 (2), 103278

75. Rats as sources of multidrug-resistant Enterobacteriaceae in animal production environments. JE Dominguez, L Rosario, S Juliana, LM Redondo, PA Chacana, R. Cavia, ME Fernandez-Miyakawa. 2023, Zoonoses and Public Health 70 (7), 627-635

74. Phenotype Alterations in the Cecal Ecosystem Involved in the Asymptomatic Intestinal Persistence of Paratyphoid Salmonella in Chickens. MH Kogut, ME Fernandez Miyakawa. 2023, Animals 13 (18), 2824

73. Use of adjuvant ISA VG 71 to produce neutralizing egg yolk antibodies against bothropic venom. CL Leiva, A Cangelosi, V Mariconda, A Celi, P Joaquim, P Geoghegan, M. Fernández-Miyakawa, P. Chacana. 2023, Applied Microbiology and Biotechnology 107 (5), 1947-1957

72. Functional mechanisms at the avian gut microbiome-intestinal immunity interface and its regulation of avian physiological responses. 2023, M Kogut, ME Fernández-Miyakawa. Frontiers Media SA

71. Tannins and gut health in broilers: Effects of a blend of chestnut and quebracho tannins on gut health and performance of broiler chickens. EA Redondo, LM Redondo, OA Bruzzone, JM Diaz-Carrasco, C Cabral, **Fernandez Miyakawa** M. 2022, PloS one, 17 (1), e0254679.

70. The Role of Farm Environment and Management in Shaping the Gut Microbiota of Poultry. JM Díaz Carrasco, LM Redondo, NA Casanova, ME Fernández Miyakawa. Gut Microbiota, Immunity, and Health in Production Animals, 193-224

69. Efficacy of chestnut and quebracho wood extracts to control Salmonella in poultry. NA Casanova, LM Redondo, EA Redondo, PE Joaquim, JE Dominguez, **Fernandez Miyakawa** MF, Chacana PA. Journal of Applied Microbiology. 2021 131 (1), 135-145

68. Geography as non-genetic modulation factor of chicken cecal microbiotaPin Viso N, E Redondo, JM Diaz Carrasco, L Redondo, J

Sabio y Garcia, **Fernandez Miyakawa** ME, Farber M. 2021, PloS one 16 (1), e0244724

67. Use of antimicrobial alternatives in broilers and their impacts on health and productive performance. LM Redondo, ME **Fernandez-Miyakawa**. 2021, CAB Reviews 16 (001), 1-14.

66. Use of Alternative Adjuvant Systems to Produce Neutralizing IgY Antibodies Against Bothrops Alternatus Venom. CL Leiva, A Cangelosi, V Mariconda, A Celi, P Geoghegan, L Brero, **M Fernández-Miyakawa**, P Chacana Toxicon . 2020 Apr 20;177 Suppl 1:S57-S58.

65. Evaluation of an IgY-based Antivenom Against Apitoxin From Honeybees. CL Leiva, A Cangelosi, V Mariconda, A Celi, P Geoghegan, L Brero, M **Fernández-Miyakawa**, MA Palacios, P Chacana. Toxicon 2020, 177, S58.

64. Microbiota, Gut Health and Chicken Productivity: What Is the Connection? JMD Carrasco, NA Casanova, **M.E. Fernandez-Miyakawa.** Microorganisms. 2019. 7 (10)

63. Natural Tannin Wood Extracts as a Potential Food Ingredient in the Food Industry. S Molino, NA Casanova, JA Rufián Henares, **M.E. Fernandez Miyakawa**. Journal of Agricultural and Food Chemistry. 2019. 68 (10), 2836-2848

62. Characterization of Escherichia coli carrying mcr-1-plasmids recovered from food animals from Argentina. J. Dominguez, D. Faccone, N. Tijet, S. Gomez, A. Corso, **M. Fernandéz-Miyakawa**, R. Melano. Frontiers in cellular and infection microbiology. 2019. 9, 41

61. IgY-based antivenom against Bothrops alternatus: production and neutralization efficacy. C. Leiva, A. Cangelosi; V. Mariconda; P. Geoghegan; M. Farace; L. Brero; **M. Fernández-Miyakawa**; P. Chacana. Toxicon. 2019. 163, 84-92

60. Simultaneous Carriage of mcr-1 and Other Antimicrobial Resistance Determinants in Escherichia coli From Poultry. Dominguez JE, Redondo LM, Figueroa Espinosa RA, Cejas D, Gutkind GO, Chacana PA, Di Conza JA, **Fernández-Miyakawa ME**. Front. Microbiol., 2018. https://doi.org/10.3389/fmicb.2018.01679

59. Phytochemicals as antibiotic alternatives to promote growth and enhance host health. Lillehoj H, Liu Y, Calsamiglia S, **Fernandez-Miyakawa ME**, Chi F, Cravens RL, Oh S, Gay CG. Vet Res. 2018 Jul 31;49(1):76. doi: 10.1186/s13567-018-0562-6

58. Overview of the role of Shiga toxins in porcine edema disease pathogenesis. Casanova NA, Redondo LM, Dailoff GC, Arenas D, **Fernández Miyakawa ME**. Toxicon. 2018 Jun 15;148:149-154. doi: 10.1016/j.toxicon.2018.04.019.

57. Tannins and Bacitracin Differentially Modulate Gut Microbiota of Broiler Chickens. Díaz Carrasco JM, Redondo EA, Pin Viso ND, Redondo LM, Farber MD, **Fernández Miyakawa ME**. Biomed Res Int. 2018 Feb 21;2018:1879168. doi: 10.1155/2018/1879168. eCollection 2018.

56. Impact of Chestnut and Quebracho Tannins on Rumen Microbiota of Bovines. Díaz Carrasco JM, Cabral C, Redondo LM, Pin Viso ND, Colombatto D, Farber MD, **Fernández Miyakawa ME**. Biomed Res Int. 2017;2017:9610810. doi: 10.1155/2017/9610810

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54. Plasmid-mediated colistin resistance in Escherichia coli recovered from healthy poultry. Dominguez JE, Figueroa Espinosa RA, Redondo LM, Cejas D, Gutkind GO, Chacana PA, Di Conza JA, **Fernández-Miyakawa ME**. Rev Argent Microbiol. 2017 Jul - Sep;49(3):297-298. doi: 10.1016/j.ram.2017.02.001.

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51. Use of Plant Extracts as an Effective Manner to Control Clostridium perfringens Induced Necrotic Enteritis in Poultry. Diaz Carrasco JM, Redondo LM, Redondo EA, Dominguez JE, Chacana AP, **Fernandez Miyakawa ME**. Biomed Res Int. 2016;2016:3278359

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47. *Clostridium perfringens* type E virulence traits involved in gut colonization. Redondo L.M., Carrasco, J.D., Redondo E. A., Delgado F.O., **Miyakawa M.E**. PLoS ONE. 2015. 10, 1 – 10.

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27. Losada-Eaton D.M., F.A. Uzal, M.E. **Fernández-Miyakawa.** *Clostridium perfringens* epsilon toxin is absorbed from different intestinal segments of mice. Toxicon. 2008. 51(7):1207-13.

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9. **Fernández Miyakawa M.E.,** Uzal FA. In vitro and in vivo pathophysiological changes induced by *Clostridium perfringens* type A alpha toxin. (2005); American Journal of Veterinary Research. 66(2): 251-5.
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4. **Fernández Miyakawa M.E***.;* Ibarra C.A.; Uzal F.A. In vitro effects of *Clostridium perfringens* type D epsilon toxin on water and ion transport in ovine and caprine intestine. (2003); Anaerobe 9(3):145-149.
3. **Fernández Miyakawa** M.E*.,* Uzal FA. The early effects of *Clostridium perfringens* type D epsilon toxin in ligated intestinal loops of goats and sheep. (2003); Veterinary Research Communication 27(3): 231-41.
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4.2- Presentations at scientific meetings (last 5 years)

47. “Disruptions in the intestinal microbial ecology associated with Clostridium perfringens”. LM Redondo, JM Diaz Carrasco, NA Casanova, ME Fernández Miyakawa. Anaerobe Congress: The microbiota and beyond. 2021.

46. “Field comparisons of two natural product alternatives to a commercial antibiotic growth promotant (AGP) program in broiler diets”. LM Redondo, G Royero,…, JM Diaz Carrasco, ME Fernández Miyakawa. International Poultry Scientific Forum. 2020.

45. “The dose of chestnut and quebracho polyphenols alters rumen microbiota profile and production of volatile fatty acids in bovines”. JM Diaz Carrasco, J Baeck, C Cabral, AR Castillo, ME Fernández Miyakawa. ATA 3rd International Symposium on Alternatives to Antibiotics. 2019.

44. “Study of cost effective feed additives to replace AGP in poultry chickens, improving productive parameters and reducing antimicrobial resistance spread” LM Redondo, G Royero,…, JM Diaz Carrasco, ME Fernández Miyakawa. ATA 3rd International Symposium on Alternatives to Antibiotics. 2019.

43. “The Microbiome, Gut Health and Plant Bioactives”. JM Diaz Carrasco. Multi-State Poultry Feeding and Nutrition Conference & Silvateam Technical Symposium. Indianapolis, USA. 2019.

42. “Comparative analysis of microbiota from commercial broiler farms of two integration companies using AGP or chestnut and quebracho polyphenol extracts”. JM Diaz Carrasco, LM Redondo, NA Casanova, ME Fernández Miyakawa. Symposium on Gut Health in Production of Food Animals. 2019.

41. Fernandez Miyakawa, M. Dynamic modulation of intestinal microbiota induced by tannins and antibiotics feed additives in poultry. XVth European Poultry Conference, 2018. Dubrovnik, Croatia.

40. Fernandez Miyakawa, M. Metagenómica y las nuevas herramientas para la toma de decisiones en salud intestinal”. XIX Simpósio Brasil Sul de Avicultura, April 2018, Brasil.

39. “Análisis comparativo de la microbiota de ciegos de pollos de engorde para la caracterización de variables que contribuyan a mejoras en la productividad”. N.D. Pin Viso, J.M. Díaz Carrasco, E.A. Redondo, M.E. Fernández Miyakawa, M.D. Farber. IV Congreso Argentino de Microbiología Agrícola y Ambiental (CAMAyA). Mar del Plata, Argentina, 11 al 13 de abril de 2018.

38. E. Redondo, L. Redondo, J. Diaz Carrasco, O. Bruzzone, C. Cabral, V. Garces, M. Liñeiro, M. Battaglia, M. Fernandez Miyakawa. A one year field comparison between the effects of a blend of Quebracho and Chestnut tannins and a commercial antibiotic program on broiler live performance. International Production & Processing Expo 2018, Atlanta, USA.

37. JOHANA E. DOMINGUEZ; L. M. REDONDO; R. LOVERA; J. BUCCI; R. CAVIA; MARIANO E. FERNANDEZ MIYAKAWA. Antibiotic resistance of Escherichia coli isolated from Norway rats (Rattus norvegicus) from farms of Northeast Buenos Aires. Reunión Conjunta de la Sociedad de Biociencias. Buenos Aires, Noviembre, 2017.

36. “Impact of antibiotics and tannins-based feed additives on cecal microbiota of chickens under experimental and commercial conditions”. J.M. Díaz Carrasco, N.D. Pin Viso, E.A. Redondo, L.M. Redondo, M.D. Farber, M.E. Fernández Miyakawa. VIII Argentinian Bioinformatics and Computational Biology Congress. Posadas, Argentina, 27 a 29 de Noviembre de 2017.

35. “Intestinal microbiota modulation induced by antibiotics and tannins-based feed additives under experimental and commercial conditions in poultry”. J.M. Díaz Carrasco, E.A. Redondo, N.D. Pin Viso, L.M. Redondo, M.D. Farber, M.E. Fernández Miyakawa. Reunión Conjunta de Sociedades de Biociencias 2017. Buenos Aires, Argentina, 13 a 17 de Noviembre de 2017.

34. “Intestinal microbiota changes produced by chestnut and quebracho tannins added to poultry feed”. J.M. Díaz Carrasco, N.D. Pin Viso, E.A. Redondo, L.M. Redondo, M.D. Farber, M.E. Fernández Miyakawa. 11th World Congress on Polyphenols Applications. Vienna, Austria, 20 y 21 de Junio de 2017.

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28. Domínguez, J.E., Redondo, E.A., Bucci, J.S., Redondo, L.M., Fernández-Miyakawa, M.E. “Susceptibilidad a colistina y neomicina en aislamientos de Escherichia coli en granjas de pollos parrilleros". XXIII Congreso Latinoamericano y XIV Argentino de Microbiología. Rosario – Argentina. 2016.

27. Domínguez, J.E., Redondo, L.M., Fernández-Miyakawa, M.E., Di Conza, J.A., Mercado, E.C. “Detección de genes blaCTX-M y PMQRs en Escherichia coli aislada de granjas de pollos parrilleros en Argentina". XXIII Congreso Latinoamericano y XIV Argentino de Microbiología. Rosario – Argentina. 2016.

26. Redondo, L.M., Redondo, E. A., Díaz-Carrasco, J.M., Geoghegan, P., Cangelosi, A., Fernández-Miyakawa, M “Reproducción experimental de la enteritis por Clostridium perfringens tipo E”. XXI Reunión científico técnica Asociación Argentina de Veterinarios de Laboratorio Diagnostico. Jujuy – Argentina. 2016

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17. DOMINGUEZ JE; REDONDO, LM; RABINOVITZ, BC; REDONDO, EA; DIAZ CARRASCO, JM; FERNANDEZ MIYAKAWA, ME. Tannins and Antimicrobials Resistance in Clostridium perfringens. 9th International Conference on the Molecular

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9. REDONDO, L M; DOMINGUEZ, J E; REDONDO, E A; RABINOVITZ, B C; FERNANDEZ MIYAKAWA, ME. Selección de subpoblaciones de Clostridium perfringens resistentes a antimicrobianos promotores de crecimiento en pollos parrilleros. III Congreso Panamericano de Zoonosis, VIII Congreso Argentino de Zoonosis. Lugar: Ciudad Autonoma de Buenos Aires, 2014.

8. REDONDO, L M; FERNANDEZ MIYAKAWA, ME; FORTUNATO, R; SALVAT, A; CHACANA, P. Eficacia de aditivos alimentarios basados en extractos vegetales para disminuir la excreción de Salmonella enteritidis en pollitos BB. II Seminario Internacional de Salmonellosis Aviar. Lugar: Medellin, 2013.

7. REDONDO L.; REDONDO E.; PEREYRA A.; FERNANDEZ MIYAKAWA ME. Potenciales mecanismos de virulencia de Clostridium perfringens tipo A en rumiantes. XIII Congreso Argentino de Microbiología, 2013.

6. REDONDO E.; REDONDO L.; DELGADO F.; LASALA L.F.; PEREYRA A.; GARBACCIO S.; CHACANA P.A.; FERNANDEZ MIYAKAWA ME. Efecto in vivo de taninos en un modelo aviar de enteritis necrótica por Clostridium perfringens. XIII Congreso Argentino de Microbiología, 2013.

5. DAILOFF G.; RIZZI M.; RUFFET C.; CONDE S.; REDONDO L.; FERNANDEZ MIYAKAWA ME; HASENAUER F.; DELAFUENTE I.; SAMARTINO L. Diagnostico de Brucelosis por LAMP PCR en muestras de leche. XIII Congreso Argentino de Microbiología, 2013.

4. REDONDO L.; REDONDO E.; DELGADO F.; LASALA L.F.; PEREYRA A.; LASALA L.F.; GARBACCIO S.; CHACANA P.A.; FERNANDEZ MIYAKAWA ME. Control of Clostridium perfringens necrotic enteritis by tannins added to the diet. Clostpath 2013..

3. REDONDO L.; PEREYRA A.; DOMINGUEZ J.; FERNANDEZ MIYAKAWA ME. Competitive exclusion between non-pathogenic type A and type E strains of Clostridium perfringens. Clostpath 2013.

2. REDONDO L.; MORRIS W.E.; FERNANDEZ MIYAKAWA ME. La toxina épsilon de Clostridium perfringens produce cambios en las células epiteliales intestinales mediante la formación de poros. 27º Congresso Brasileiro de Microbiologia, 2013.

1. REDONDO L.; REDONDO E.; DELGADO F.; LASALA L.F.; PEREYRA A.; GARBACCIO S.; CHACANA P.A.; FERNANDEZ MIYAKAWA ME. Taninos en el control de las enfermedades clostridiales: Enteritis necrótica en pollos parrilleros. 27º Congresso Brasileiro de Microbiologia. Año: 2013.

4.3- Book chapters

The Prokaryotes. Chapter: The Genus Clostridium—Medical (Release 3.18).The Enterotoxic Clostridia. *Bruce A. McClane, Francisco A. Uzal,* **Mariano E. Fernandez Miyakawa***, David Lyerly, Tracy Wilkins*. 1991, 1994-2004 Springer-Verlag New York, LLC.

Toxinology: Microbial Toxins. Enterotoxemias in monogastrics and ruminants. **Fernandez Miyakawa. M.E**. & Redondo L.M. 2018. Springer, New York, LLC.

5- **Awards**

First Prize “Prof. Alfredo Manzullo. “Selección de subpoblaciones de Clostridium perfringens resistentes a antimicrobianos promotores de crecimiento en pollos parrilleros”. III Congreso Panamericano de Zoonosis y Enfermedades Emergentes. VIII Congreso Argentino de zoonosis. Buenos Aires – Argentina (Junio 2014). Redondo, L. M., Domínguez, J. E., Rabinovitz, B. C., Redondo, E. A., & **Fernández Miyakawa, M. E.**

Firt place in Applied Research in the competition **Innovar 2012** del Ministerio de Ciencia, Tecnología e Innovación productiva. Ensayo de inmunocromatografía para el diagnóstico rápido del Síndrome Urémico Hemolítico de **Mariano Fernández Miyakawa**, Yanil R. Parma, Pablo Chacana y equipo.

Firt place in Applied Research in the competition **Innovar 2011** del Ministerio de Ciencia, Tecnología e Innovación productiva. Inmunoensayo para la detección de toxinas causantes del Síndrome Urémico Hemolítico de **Mariano Fernández Miyakawa**, Yanil R. Parma, Pablo Chacana y equipo.

First place in Public Health of I **Congreso Internacional de Zoonosis**, Buenos Aires, 2011. Rol de los bovinos como reservorio de *Clostridium perfringens* tipo A productor de enterotoxina. Redondo L., Parma Y., Elizondo A., Pereyra A., **Fernandez Miyakawa** M.E.

First place in Accesit /I **Congreso Internacional de Zoonosis**, Buenos Aires, 2011. Neutralización de los efectos de las toxina Shiga in vitro e in vivo

mediante el uso de anticuerpos de yema de Huevo. Parma Y., Chacana P., Cangelosi A., Geoghegan P., Lucchesi P., **Fernandez Miyakawa** M.

First place in the young investigator's competition: Morphological and Physiological effects of *Clostridium perfringens* type D epsilon toxin on sheep and goat intestine. **Fernández Miyakawa M.E.**, Uzal FA., Ibarra C. 6th Biennial Congress of the Anaerobe Society of the Americas, Park City-Utah, United States. 2002.

6- **Grants**

Desarrollo de sueros heterólogos para tratar envenenamientos e intoxicaciones basados en tecnología IgY (anticuerpos de yema de huevo). FONARSEC PPM 03/2013. CAPP ANLIS-INTA. Coordinador.

Kit de ELISA para la detección de las toxinas Shiga causante del Síndrome Urémico. Hemolítico. 04/2014-04/2017. Agencia Nacional de Promoción Científica y Tecnológica (FONCyT ,Argentina), PICT Start Up 0737-2012. Investigador responsable.

Desarrollo de antisueros basados en anticuerpos de yema de huevo para neutralizar venenos ofídicos de importancia en Salud Pública. FOCANLIS 2013. Participante.

Convenio de Investigación y Desarrollo – Nacional. INTA- AGROCUBE S.A. -

Fecha de inicio 10/2013- 10/2016. Convenio 22267 - (Responsable técnico).

Enfermedades infecciosas de las Aves. 01/2013-01/2019. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. INTA. AESA-1115056. Responsable de Actividades.

Epidemiología y desarrollo de estrategias para la prevención y control de enfermedades que afectan a la salud pública, enfermedades exóticas y limitantes del comercio internacional. 01/2013-01/2019. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. INTA. AESA-1115052. Responsable de Actividades.

Convenio de Investigación y Desarrollo – Nacional - VETANCO S.A. – Convenio 2079408/2010- 08/2015- (Investigador)

Determinación de lesiones anatomopatológicas al momento de faena en pollos parrilleros. 11/2011-11/2013. Secretaria de Ciencia y Técnica, Universidad Nacional de Rio Cuarto (Investigador Responsable: Yaciuk, Raul Ernesto).

Detección en frigorífico de agentes etiológicos de presentación subclínica en pollos parrilleros. 11/2011-11/2013. Secretaria de Ciencia y Técnica, Universidad Nacional de Rio Cuarto (Investigador Responsable: Pelliza, Bibiana Rosa).

Manejo de la enterotoxemia producida por *Clostridium perfringens*: estudio de los cambios en la permeabilidad intestinal. 10/2010-10/2013. Agencia Nacional de Promoción Científica y Tecnológica (FONCyT ,Argentina), PICT 0861-2008. Investigador responsable.

Estudios sobre los cambios en la permeabilidad intestinal producido por toxinas bacterianas en la luz intestinal: toxina epsilon de *Clostridium perfringens*. 06/2010-06/2013. Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), PIP100172. Investigador responsable.

Enfermedades que afectan la producción de los rodeos lecheros. 01/2010-01/2013. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. INTA. AESA-203992.

Enfermedades de la producción aviar. 01/2010-01/2013. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. INTA. AESA-203941.

Conservación y valoración de recursos genéticos microbiológicos. 09/2009-09/2012. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. INTA. AERG-231251.

Mecanismos moleculares de resistencia a microorganismos patógenos. 09/2009-09/2012. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. INTA. AESA-232152.

Vacunas a subunidades: optimización de la presentación antigénica e inmunomodulación y de los métodos biotecnológicos de producción. 09/2009-09/2012. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. INTA. AERG-232161.

Convenio de asistencia técnica INTA-Indunor SA (autorización 2812). 2008-04-01/2009-12-01; Responsable técnico.

Características genéticas y fenotípicas de las cepas de *Clostridium perfringens* presentes en el intestino de animales de producción. 2008-2009. Instituto de Patobiología, CICVyA, Instituto Nacional de Tecnología Agropecuaria. Agencia Nacional de Promoción Científica y Tecnológica (FONCyT ,Argentina)

Caracterización de los cambios fisiopatológicos y morfológicos producidos por la toxina α de *Clostridium perfringens* tipo-A en el bovino. 2007-2008. Instituto de Patobiologia, CICVyA, Instituto Nacional de Tecnología Agropecuaria. Agencia Nacional de Promoción Científica y Tecnológica (FONCyT, Argentina)

Clostridium perfringens type B-D virulence plasmids. 2003-2007, California Animal Health and Food Safety, School of Veterinary Medicine, University of California. NIH, USA (PI: Bruce McClane)

Epidemiologia y diagnostico de clostridiosis en animals 2000-2005, Universidade Estadual Paulista. Fundação de Amparo à Pesquisa do Estado de São Paulo, Brasil (PI: Iveraldo Dutra)

7- Reviewing services

PLoS ONE, PLoS Pathogens, Molecules, Scientific Reports, Revista Argentina de Microbiología, Applied and Environmental Microbiology, Journal of Applied Microbiology, African Journal of Microbiological Research, Walailak Journal of Science and Technology, European Journal of Medicinal Plants, Analecta Veterinaria, MicrobiologyOpen, Animals, Science of the Total Environment, etc.

8- Supervising of junior researchers

Pre-Graduate

- Rondissone Lucila, Licenciatura en Biotecnología, Universidad Nacional de San Martin, 2009-2012
- Leiva Carlos L., Licenciatura en Biotecnología, Universidad Nacional de Quilmes, 2013.

Doctorate

- Parma Yanil R., Facultad de Farmacia y Bioquimica, Universidad Nacional de Buenos Aires, 2007-2012. Becario Doctoral CONICET.
- Morris Winston A., Facultad de Farmacia y Bioquimica, Universidad Nacional de Buenos Aires, 2008-2015.
- Redondo Leandro E., Facultad de Farmacia y Bioquimica, Universidad Nacional de Buenos Aires, 2009-2015. Becario Doctoral CONICET.
- Pereyra Ana, Facultad de Veterinaria, Universidad Nacional de Buenos Aires, 2009-presente
- Garbaccio Sergio G., Facultad de Veterinaria, Universidad Nacional de Buenos Aires, 2011-presente

- Redondo Enzo, Facultad de Veterinaria, Universidad Nacional de Buenos Aires, 2013-presente. Becario Doctoral CONICET.
- Dailoff Gabriela C., Facultad de Farmacia y Bioquimica, Universidad Nacional de Buenos Aires, 2014-presente. Becario Doctoral CONICET.
- Cabral Claudio, Departamento Ciencias Básicas, Universidad Nacional de Lujan, 2014- presente.
- Farace Mariano, Facultad de Farmacia y Bioquimica, Universidad de Buenos Aires, 2015-.
- Leiva Carlos, Facultad de Farmacia y Bioquimica, Universidad de Buenos Aires, 2015-. Co-dirección (Director Dr. Pablo Chacana).
- Arenas Mosquera David, Facultad de Medicina, Universidad de Buenos Aires, 2014-presente. Co-dirección (Director Dr. Jorge Goldstein). Becario Doctoral CONICET.
- Pin Viso Natalia, Facultad de Cs Exactas, Universidad de Buenos Aires, 2016-presente. Co-dirección (Director Dra. Marisa Farber). Becario Doctoral CONICET.
- Krista Nuñez Goluboay, Facultad de Farmacia y Bioquimica, Universidad de Buenos Aires, 2016-presente. Co-dirección (Director Dr. Jorge Goldstein). Becario Doctoral ANPCyT.
- Cintia Suarez, Facultad de Farmacia y Bioquimica, Universidad de Buenos Aires, 2020-.
- Silvia Molino, Departamento de Nutrición y Bromatología de la Universidad de Granada. 2018-2023.

Researchers

- Johana Dominguez, CIC CONICET. 2022-present.
- Natalia Casanova, ANPCyT INTA, 2015-. Becario Posdoctoral ANPCyT., Researcher 2018- present.
- Juan Díaz Carrasco, CONICET INTA, 2014-presente. Researcher, INTA-CONICET.
- Leandro Redondo, INTA-CONICET, Researcher, 2018-

- Alejandra Muñoz, CONICET, 2014-presente. . Becario Posdoctoral CONICET.
- Bettina C. Ravinobitz, CONICET, 2014-presente. . Becario Posdoctoral CONICET.
- Veschi Josi, UNESP Jaboticabal, Brasil, 2003-2007.

Institucional Services

Member of the National Committee on Antimicrobial Resistance, 2015-2024.

Member of the board of Medicated Feed, SENASA, 2016-present.

Thesis comittee. INTA, Universidad de Buenos Aires, 2011-present.