



GENERAL INFORMATION

Nationality: Argentina

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PRESENT POSITION

Since January 2015. Assistant Researcher, Argentine Research Council (CONICET). Fundación Instituto Leloir, Buenos Aires, Argentina.

Research Project: Generation of nanobodies as a tool for the crystallization of complex macromolecules of therapeutic interest and for the development of diagnostic techniques. Supervisor: Dr. Fernando A. Goldbaum.

EDUCATION

2010-2012 Position: Postdoctoral Researcher. Supervisor: Dr Fernando Goldbaum. Title: "BLS as a model antigen to characterize the mechanisms and kinetics of antigen presentation". Laboratory of Molecular Immunology and Microbiology. Fundación Instituto Leloir, Buenos Aires, Argentina.

2005-2010 University of Buenos Aires, School of Natural and Exact Sciences, Argentina. Degree: Doctor of the University of Buenos Aires, Biological Chemistry Area. Supervisor: Dr. Fernando A. Goldbaum. Thesis title: "Single domain llama antibodies as intracellular inhibitors of a bacterial toxin"

1997-2003 University of La Pampa, School of Natural and Exact Sciences, Argentina. Degree: Diploma in biological sciences.

SCIENTIFIC PUBLICATIONS

9- Development of a hyperimmune equine serum therapy for COVID-19 in Argentina. Vanesa Zylberman, Santiago Sanguineti, Andrea V Pontoriero, Sandra V Higa, María L Cerutti, Susana M Morrone Seijo, Romina Pardo, Luciana Muñoz, María E Acuña Intrieri, **Vanina A Alzogaray**, Martín M Avaro, Estefanía Benedetti, Paula M Berguer, Laura Bocanera, Lucas Bukata, Marina S Bustelo, Ana M Campos, Mariana Colonna, Elisa Correa, Lucía Cragnaz, María E Dattero, María Dellafiore, Sabrina Foscaldi, Joaquín V González, Luciano L Guerra, Sebastián Klinke, María S Labanda, Constanza Lauché, Juan C López, Anabela M Martínez, Lisandro H Otero, Elías H Peyric, Pablo F Ponziani, Romina Ramondino, Jimena Rinaldi, Santiago Rodríguez, Javier E Russo, Mara L Russo, Soledad L Saavedra, Mauricio Seigelchifer, Santiago Sosa, Claudio Vilariño, Patricia López Biscayart, Esteban Corley, Linus Spatz, Elsa G Baumeister, Fernando A Goldbaum. **Medicina (B Aires). 2020; 80 Suppl 3:1-6.**

8- Characterization of folding-sensitive nanobodies as tools to study the expression and quality of protein particle immunogens. **Alzogaray V**, Urrutia M, Berguer P, Rossi A, Zylberman V, Pardo R, Bonomi HR, Goldbaum FA. **J. Biotechnol. 2019. doi: 10.1016/j.jbiotec.2019.01.001.**

7- Selection of Nanobodies that Block the Enzymatic and Cytotoxic Activities of the Binary Clostridium Difficile Toxin CDT. Unger M, Eichhoff AM, Schumacher L, Stryio Menzel S, Schwan C, **AlzogaraV**, Zylberman V, Seman M, Brandner J, Rohde H, Zhu K, Haag F, Mittrücker HW, Goldbaum F, Aktories K, Koch-Nolte F. **Scientific Reports. 2015. doi: 10.1038/srep07850.**

6- A polymeric protein induces specific cytotoxicity in a TLR4 dependent manner in the absence of adjuvants. Berguer PM, **Alzogaray V**, Rossi AH, Mundiñano J, Piazzon I, Goldbaum FA. **PLoS One. 2012. doi: 10.1371/journal.pone.0045705.**

5- Polymeric Display of proteins through high affinity leucine zipper peptide adaptors. Craig PO, **Alzogaray V**, Goldbaum FA. **Biomacromolecules. 2012. doi: 10.1021/bm201875p.**

4- Single-domain llama antibodies as specific intracellular inhibitors of SpvB, the actin ADP-ribosylating toxin

of Salmonella typhimurium. **Alzogaray V**, Danquah W, Aguirre A, Urrutia M, Berguer P, García Vescovi E, Haag F, Koch-Nolte F, Goldbaum FA. **FASEB J. 2011. doi: 10.1096/fj.10-162958.**

3- Single domain antibodies are specially suited for quantitative determination of gliadins under denaturing conditions. Doña V, Urrutia M, Bayardo M, **Alzogaray V**, Goldbaum FA, Chirido FG. **J Agric Food Chem. 2010. doi: 10.1021/jf902973c.**

2- Single domain antibodies: promising experimental and therapeutic tools in infection and immunity. Wesolowski J, **Alzogaray V**, Reyelt J, Unger M, Juarez K, Urrutia M, Cauerhff A, Danquah W, Rissiek B, Scheuplein F, Schwarz N, Adriouch S, Boyer O, Seman M, Licea A, Serreze DV, Goldbaum FA, Haag F, Koch-Nolte F. **Med Microbiol Immunol. 2009. doi: 10.1007/s00430-009-0116-7.**

1- Single domain antibodies from llama effectively and specifically block T cell ecto-ADP-ribosyltransferase ART2.2 in vivo. Koch-Nolte F, Reyelt J, Schössow B, Schwarz N, Scheuplein F, Rothenburg S, Haag F, **Alzogaray V**, Cauerhff A, Goldbaum FA. **FASEB J. 2007. doi:10.1096/fj.07-8661com.**

PROFESSIONAL EXPERIENCE IN SCIENTIFIC RESEARCH

Extensive training in the area of molecular and cellular biology, immunology and biotechnology. Technical expertise: (i) cloning; (ii) design and development of antibody libraries; (iii) phage display technology; (iv) ELISA (characterization of recombinant antibodies from best hits); (v) recombinant protein expression and purification; (vi) development of monoclonal antibodies; (vii) mammalian cell cultures.

TRAINING OF HUMAN RESOURCES

2019-Present Supervisor postdoctoral. PhD Soledad Labanda. Title: "Generation of nanobodies as chaperones for the crystallization of complex macromolecules of therapeutic interest". Fundación Instituto Leloir. Ciudad de Buenos Aires. Argentina.

2011-2016 Co-Supervisor, PhD Thesis: Dr. Andrés Rossi. Title: "BLS as a model antigen to characterize the mechanisms and kinetics of antigen presentation". University of Buenos Aires, School of Pharmacy and Biochemistry. Ciudad de Buenos Aires, Argentina.

2012-2014 Training and supervision in pharmaceutical industry of 8 analysts in the Quality Control sector. Fapromed S.A, Ciudad de Buenos Aires, Argentina. GMB pharma, General Pico, La Pampa. Argentina.

SERVICE

2020 Purification and production of pilot batches of SARS-CoV-2 virus proteins for use in generating antibodies in horses, camelids and others. During the month of April 2020, we carried out two campaigns for the expression and purification of the "Receptor Binding Domain" (RBD) protein domain belonging to the "Spike" protein of the new SARS-CoV-2 coronavirus at the Leloir Institute Foundation. This work was carried out at the request of the firm Inmunova S.A., for its subsequent use as an antigen for the inoculation of horses, with the aim of producing a hyperimmune serum for the treatment of COVID-19.

COMMUNICATIONS TO SCIENTIFIC MEETINGS AND CONGRESSES

To date, I have over 22 presentations in Argentina and International meetings (oral communications and posters).

EXPERIENCE IN PHARMACEUTICAL INDUSTRY.

2012-2014 Head Quality Control Section. Laboratory Fapromed S.A, Buenos Aires, Argentina. Laboratory GMB PHARMA S.A, General Pico, La Pampa. Reference: Adriana Saisi. e-mail: Asaisi@andreami.com. During this period in the private sector, train and supervise 8 analysts in the area quality control.

2009 Supervision and development of projects related to the generation of llama antibody libraries against different targets. Biotechnology company Inmunova and Ablynx. Buenos Aires, Argentina. Reference: Linus Spatz. e-mail: Linus@inmunova.com

INTERNSHIPS

2006-2008-2011 Institute of Immunology, University Medical Center. Hamburg, Germany. Reference: Prof. Dr. med Friedrich Koch-Nolte. e-mail: nolte@uke.uni-hamburg.de. Short stays.

2007-2008 Institute of Molecular and Cellular Biology of Rosario. University of Rosario, Argentina. Reference: Dr. Eleonora García Véscovi. e-mail: garciavescovi@ibr-conicet.gov.ar. Short stays.

RESEARCH GRANTS

2018 PICT(\$1.008.000). "Generation of nanobodies as chaperones for the crystallization of complex macromolecules of therapeutic interest". Internacional Raíces. ANPCyT. Role: Responsible Researcher.

2017 PIP(\$ 300.000). "Arenavirus nucleoprotein: Starting point for the design of tools applicable to the diagnosis and treatment of Argentine Hemorrhagic Fever". CONICET. Role: Responsible Researcher.

2017 PID(\$5.333.334). Optimization of monoclonal antibody production processes. ANPCyT. Role: Responsible Researcher.

2010 (5000 Euro). "Targeting bacterial toxins with llama single domain antibodies". Joint Research projects in the framework of cooperation MINCYT-BMFG. Buenos Aires, Argentina. Hamburg, Germany. Supervisor: Dr. Fernando Goldbaum and Prof. Dr. Med Friedrich Koch-Nolte. Role: Responsible Researcher.

2005 (10000 Euro). "Generation of llama single domain antibodies that inhibit ADP-ribosiltransferase toxins". DFG: German Research Foundation. Supervisor: Dr. Fernando Goldbaum and Prof. Dr. Med Friedrich Koch-Nolte. Role: Responsible Researcher.

SCHOLARSHIPS AND AWARDS

2018 Course / Workshop. Title: Nanobodies for Structural Biology and beyond. University of Brussels, Belgium. Organized by INSTRUCT structural biology research infrastructure. Award for assistance.

2010-2012 Internal postdoctoral fellowship. CONICET, Ciudad de Buenos Aires, Argentina.

2010 Ablynx. "Single Domain Antibodies Come of Age". Ghent, Belgium". Travel award.

2008 Congress. Title: NAD 2008. Award for travel and assistance.

2007 CABBIO. "Molecular Immunology of Protozoan Infections". INGEBI-CONICET. Ciudad de Buenos Aires, Argentina. Award for assistance.

2005-2010 Graduate Scholarship "José A. Estenssoro". Fundación YPF. Ciudad de Buenos Aires, Argentina.

2004 Generation of a library of llama specific VHHs fragments for gliadins and stable in denaturing media. Argentine Society of Immunology in the Joint Congress of Biomedical Societies. Prize to the best poster.

TEACHING AND SCIENCE COMMUNICATION

2020 Conference on "Development of a hyperimmune equine serum for COVID-19 in Argentina" and "Generation of nanobodies as a tool for structural biology". University of La Pampa. Argentina.

2019 Conference on "Generation of Nanobodies as tools for structural biology". Postgraduate course called "Cryo-EM and X-ray crystallography. University of Buenos Aires. Argentina.

2018 I participated as a teacher in a conference called "An introduction to the fascinating world of natural sciences". Ciudad de Tres Lomas, Buenos Aires. Argentina.

2017 Professor of the Immunology. Hospital Italiano, Buenos Aires. Argentina.

LANGUAGE

Spanish: Native. English: Intermediate level in conversation. Advanced level in reading and writing.