

Natalia Montellano Duran

Curriculum Vitae

Personal Data

ID: 6381762 (Bolivia)

Birth date: March 17th, 1989 (31 years)

Birth place: Camiri, Bolivia

Address: Juan Roca Street 3160, Santa Cruz de la sierra, Bolivia

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Scientific social networks

Linkedin <https://www.linkedin.com/in/natalia-montellano-duran-9a5a8937/>

ResearchGate https://www.researchgate.net/profile/Natalia_Montellano_duran

ORCID <https://orcid.org/0000-0003-2094-8694>

Actual position

2019–Actual Professor and Biotechnology Career coordinator in Bolivian Catholic University, Saint Paul. Courses: Chemistry.

Titles

2019 Certified in Teaching in Superior Education. UCB – Bolivia.

2014–2018 PhD in Biological Sciences. Thesis: “Structural and functional properties of quinoa proteins and its hydrolysates”. Chemistry-Physics area. Faculty of Biochemical and Pharmaceutical Sciences, National University of Rosario, Argentina.

2007–2014 Bachelor degree in Biotechnology (5 years with thesis). Thesis: “Immobilization of enzymes of biotechnological interest in a matrix of natural and modified polyelectrolytes”. Institute of Biotechnological and Chemical Processes (IPROByQ). Faculty of Biochemical and Pharmaceutical Sciences, National University of Rosario (FBioyF-UNR), Argentina.

2007-2012 University Bachelor's Degree with Mention in Chemistry. Faculty of Biochemical and Pharmaceutical Sciences, National University of Rosario (FBioyF-UNR), Argentina.

Research Papers

06/2019 Effective participatory science education in a diverse Latin American population. Leonardo Ferreira, Giovanni Carosso, Natalia Montellano Duran, Soad Bohorquez-Massud, Gustavo Vaca-Diez, Laura Ines Rivera Betancourt, Yara Rodriguez, Dalila Ordonez, Diana Alatraste-Gonzalez, Aldo Vacaflares, Lilian Gonzales Auza, Christian Schuetz, Lucia Elena Alvarado-Arnez, Carolina Alexander-Savino, Omar Gandarilla, Mohammed Mostajo-Radji. Palgrave Communications. 2019. <https://doi.org/10.1057/s41599-019-0275-0>.

03/2019 Characterization of acid induced gels of quinoa proteins and carrageenan. Natalia Montellano Duran, Darío Spelzini, Valeria Boeris. LWT – Food Science and Technology. 2019. <https://doi.org/10.1016/j.lwt.2019.03.052>

- 09/2018 Peptidase from *Aspergillus niger* NRRL 3: Optimization of its production by solid-state fermentation, purification and characterization. López DN, Galante M, Ruggieri G, Piaruchi J, Dib ME, Montellano Duran N, Lombardi J, de Sanctis M, Boeris V, Risso PH, Spelzini D. *LWT – Food Science and Technology*. 2018. <https://doi.org/10.1016/j.lwt.2018.09.013>
- 03/2018 The effect of carrageenan on the acid-induced aggregation and gelation conditions of quinoa proteins. Natalia Montellano Duran, Micaela Galante, Darío Spelzini, Valeria Boeris. *Food Research International*. 2018. DOI: 10.1016/j.foodres.2018.03.015
- 09/2017 A combined experimental and molecular simulation study of factors influencing interaction of quinoa proteins–carrageenan. Natalia Montellano Duran, Darío Spelzini, Natael Wayllace, Valeria Boeris, Fernando Luis Barroso da Silva. *International Journal of Biological Macromolecules*. 2018. 107 (949-956). DOI: 10.1016/j.ijbiomac.2017.09.076

Research experience

- 05/2020 – Actual Searching Natural Antibiotic from bolivian sources. Universidad Católica Boliviana – Santa Cruz. Director: Dr. Natalia Montellano.
- 04/2020 – Actual Tropical Epidemiology: Mosquitoes and me. University of Iowa and Walking Palms. Director: Dr. Sara Erickson.
- 10/2019 – Actual Antibacterial activity of propolis from native bees in Dry Forest Chiquitania. Universidad Católica Boliviana San Pablo – Santa Cruz. Director: Lic. Felix Salek.
- 09/2019 - 03/2022 Tropical fruits study: organoleptic and nutritional characteristics (sensory, physicochemical and textural) and biological properties (antioxidant, antibacterial and bioactive compounds). OWSD Early Career Fellowship 2019 – TWAS, UNESCO. Director: Natalia Montellano Duran. Universidad Católica Boliviana San Pablo, Santa Cruz de la Sierra, Bolivia.
- 01/2015–12/2018 Use of milk and fruit-vegetables sub-products and the valorization of native resources for the production of functional foods, promoting the development of economically vulnerable areas (LACFUN). Science and Technology for development (CYTED). Faculty of Exact and Natural Sciences. Buenos Aires University (UBA). Code: 415RT0495. Director: Patricia Risso. Project director: María del Pilar Buera.
- 01/2015–12/2016 Obtaining and modification of quinoa and chia proteins. Secretariat of Science and Technology. National University of Rosario. Code: 1BIO430. Director: Boeris, Valeria.
- 06/2014–06/2016 Association and hydrolysis of vegetable proteins. Projects of Scientific and Technological Research. Code: PICT-2014-1571. Director: Boeris, Valeria.
- 07/2014–07/2015 Glycosylation, isolation and concentration of soy proteins for the food products application. New Bank of Santa Fe Foundation. Director: Boeris, Valeria. Code: PICT-2008-0186
- 01/2014–12/2015 Thermodynamic incompatibility between polysaccharides and proteins in food systems. Secretariat of Science and Technology. National University of Rosario. Director: Boeris, Valeria. Code: 1BIO385
- 01/2014–12/2015 Employ of agro industrial and forestall wastes like substrate for the fungal enzymes production by solid state fermentation. Secretariat of Science and

	Technology. National University of Rosario. Director: Spelzini, Darío. Code: 1BIO397
01/2012–12/2013	Characterization of adsorbent matrix made by polyelectrolytes for the fungal laccase from a culture. Secretariat of Science and Technology. National University of Rosario. Director: Spelzini, Darío. Code: 1BIO331
08/2010–05/2013	Biotechnological applications for the insoluble complex formation between flexible chains polymers with electric charges. FCBioyF-UNR. Director: Romanini, Diana. Code: PICT-2008-0186
08/2010-03/2011	Use of flexible chain polyelectrolytes from natural origin for the immobilization of lignolytic enzymes of fungal origin. Secretariat of Science and Technology. National University of Rosario. FCBioyF-UNR. Director: Spelzini, Darío. Code: 1BIO248

Conferences presentations

04/2018	Julia Lombardi, Débora Natalia López, Natalia Montellano Duran, Germán Ruggieri, Julia Piaruchi, María Eugenia Dib, Patricia Hilda Risso, Valeria Boeris, Darío Spelzini. Oral communication and abstracts book: <i>Aspergillus niger</i> nr1 3 Peptidases: optimization of its production by fermentation in solid state, purification and characterization. Latin American Conference of Engineering and Applied Sciences. Faculty of Applied Sciences to Industry, National University of Cuyo. San Rafael, Mendoza, Argentina.
11/2017	Natalia Montellano Duran, Darío Spelzini, Valeria Boeris. Oral communication and abstracts book: Microstructure of quinoa proteins and carrageenan acid gels. XVI Argentinian Conference of Food Science and Technology (CYTAL). Mar del Plata, Buenos Aires, Argentina.
05/2017	Natalia Montellano Duran, Jorge Ibarra, Darío Spelzini, Fernando Barroso Da Silva, Valeria Boeris. Oral communication and abstracts book: Interaction between quinoa seed proteins and chitosan. Experimental and computational studies. XX Argentinian Conference of Physical Chemistry and Inorganic Chemistry (CAFQI). Carlos Paz. Córdoba. Argentina.
03/2017	Natalia Montellano Duran, Darío Spelzini, Valeria Boeris, Fernando Barroso Da Silva. "Interaction of quinoa protein and carrageenan. Experiment and computational simulation". School on Biological Soft Matter: from molecular interactions to engineered materials. IFT-UNESP, São Paulo. Brazil.
11/2016	Natalia Montellano Duran, Darío Spelzini, Valeria Boeris. Oral communication and abstracts book: Determination of proper conditions to obtain quinoa protein gels and carrageenan. VI International Conference of Food Science and Technology (CICYTAC). Córdoba. Argentina.
11/2016	Natalia Montellano Duran, Darío Spelzini, Valeria Boeris. Poster presentation and abstracts book: Study of the quinoa proteins aggregation by thermal treatment and acidification. VI International Conference of Food Science and Technology (CICYTAC). Córdoba. Argentina.
05/2015	Natalia Montellano Duran, Darío Spelzini, Valeria Boeris. Oral communication and abstracts book: Physicochemical characterization of the quinoa proteins and carrageenan and their interaction. XIX Argentinian Conference of Physical Chemistry and Inorganic Chemistry (CAFQI). Buenos Aires. Argentina.
03/2015	Natalia Montellano Duran, Darío Spelzini, Valeria Boeris. "Physicochemical properties and their interaction with polyelectrolytes". Onuchic Minicourse on

- Energy Landscapes in Biophysics & Minischool on Biophysics of Protein Interactions. IFT-UNESP, São Paulo. Brazil
- 11/2014 Natalia Montellano Duran, Valeria Boeris, Patricia Risso, Darío Spelzini. Poster and abstracts book: Preliminary studies of the quinoa proteins solubility. XVI Conference of the Biology Society of Rosario (SBR). Rosario. Argentina.
- 05/2014 Natalia Montellano Duran, Beatriz Farruggia, Darío Spelzini. Poster and abstracts book: Colorants degradation by laccase from *Trametes versicolor* entrapped in polyelectrolytes spheres. 3rd Environmental Science Workshop (III TACA). Córdoba. Argentina.
- 10/2013 Natalia Montellano Duran, Beatriz Farruggia, Darío Spelzini. Poster and abstracts book: Laccase entrapped in alginate-Eudragit L microspheres. VII Conference of Science and Technology (SCyT). Rosario. Argentina.
- 10/2013 Natalia Montellano Duran, Beatriz Farruggia, Darío Spelzini. Poster and abstracts book: Laccase entrapped in microspheres alginate-Eudragit L. XXI Conference of young researchers of the Association of Universities of the Montevideo Group. Corrientes. Argentina.
- 05/2013 Natalia Montellano Duran, Beatriz Farruggia, Darío Spelzini. Poster and abstracts book: Laccase entrapped in alginate-Eudragit L microspheres. XVIII Argentinian Conference of Physical Chemistry and Inorganic Chemistry. Rosario. Argentina.
- 05/2012 Eva Arrúa; Natalia Montellano Duran; Diana Romanini; Beatriz Farruggia; Darío Spelzini. Poster and abstracts book: Laccase isolation by adsorption in chitosan matrix. 2do Argentinian symposium on biotechnological processes (SAProBio). La Plata. Argentina.
- 11/2011 Darío Spelzini, Natalia Montellano Duran, Eva Arrúa, Diana Romanini y Beatriz Farruggia. Poster: Characterization of Immobilized Laccase in alginate. V Conference of Science and Technology, UNR. Rosario. Argentina.
- 05/2011 Natalia Montellano Duran, Eva Carolina Arrúa, Diana Romanini, Beatriz Farruggia, Darío Spelzini. Poster and abstracts book: Laccase immobilization in alginate microspheres. XVII C Argentinian Conference of Physical Chemistry and Inorganic Chemistry. Córdoba. Argentina.

Internships experience

- 09/2015 Internship in the Laboratory of Computational Biophysical Chemistry, Faculty of Pharmacy and Biochemistry, University of Sao Paulo – Campus Ribeirao Preto, Brazil.
- 08/2010-03/2012 Internship in the Institute of Biotechnological and Chemical Processes (IPROByQ). Faculty of Biochemical and Pharmaceutical Sciences, National University of Rosario (FBioyF-UNR), Argentina.

Teaching experience

- 05/2020 - Present Course Industrial Biotechnology. 40 hrs. UCB-SCZ. Bolivia.
- 05/2020 – Present Tutor of pre grade thesis of Ayelen Camacho, Chemistry Engineering student. UCB – Cochabamba, Bolivia.
- 03/2020- Present Director of internships of 11 pre grade students of Biotechnology Career. UCB, Santa Cruz, Bolivia.
- 01/2020 Short Course for Kids in Your Young Science Summer Camp. Santa Cruz, Bolivia.
- 10/2019 Course White Biotechnology. 20 hrs. UCB-SCZ. Bolivia.
- 09/2019 Course of Academic Scientific Alphabetization. 15 hrs. UCB-SCZ. Bolivia.

07/2019-12/2019 Professor Analytical Chemistry Quantitative and Instrumental. UCB – SCZ. Bolivia.

07/2019-12/2019 Professor Chemistry of disolutions. UCB – SCZ. Bolivia.

05/2019 Course Bioethic. 15 hrs. UCB-SCZ. Bolivia.

02/2019-06/2019 Professor Chemical Physics and Laboratory. UCB – SCZ. Bolivia.

01/2019 - Present Professor. General Chemistry I and Laboratory. Bolivian Catholic University. Santa Cruz de la Sierra, Bolivia

06/2018 - 07/2019 Co-instructor Science Clubs Colombia, summer school. Bucaramanga, Colombia.

09/2018 - Present Invited Professor. Industrial Biotechnology. Agrosiences Faculty. Gabriel Rene Moreno University. Santa Cruz, Bolivia.

09/2016 - 09/2017 Codirecting bachelor student internship, Jorge Ibarra with a degree in Chemistry from the Argentinian Catholic University. Argentina.

01/2016 - Present Co-instructor in Science Clubs Bolivia, summer school. Santa Cruz, Bolivia.

03/2015 - 07/2015 Codirecting Bachelor Student internships, Juan Cruz and Natael Wayllace, Biotechnology degree of the National University of Rosario. Argentina.

08/2014, 2015 Assistant professor in the Chemistry Week. Faculty of Biochemical and Pharmaceutical Sciences, National University of Rosario. Argentina.

09/2013-11/2015 Assistant professor. Course: Physical chemistry. Chemistry Physics Department, Physicochemical Area. FBioyF-UNR. Argentina.

08/2010–08/2013 Assistant professor Ad-Honorem. Courses: Physicochemistry and Biotechnological Process. Chemistry Physics Department, Physical Chemistry Area.

Member of academic associations/Volunteering

05/2020 – Present Tutor professor at iGEM Bolivia.

05/2020 - Present Member of OWSD National Chapter Bolivia.

04/2020 - Present Director of Science in Science Clubs Bolivia.

03/2020 - Present Member of ASEB, Association of Bolivian Entrepreneurs.

08/2019 - Present Member of OWSD, Organization of Women in Science in Developing Country. UNESCO.

07/2019 - Present Member of Youth Company. Bolivia.

08/2019 - Present Co-editor of Frontiers Journal, Science Education in Public Diplomacy.

07/2019-Present Member of the National Academy of Science – Research Advisors, Santa Cruz Regional. Bolivia.

02/2015 – 12/2017 Adherent member of the Argentine Association of Physical Chemistry and Inorganic Chemistry. Argentina.

Academic scholarships/fellowships

09/2019-05/2022 OWSD Early Career Fellowship. Organization for Women in Science for the developing world. UNESCO.

05/2017 Assistance and accommodation arrangements CAFQI. AAIFQ. Argentina.

03/2017 Assistance, daily allowances, accommodation and travel arrangements School on Biological Soft Matter: from molecular interactions to engineered materials. ICTP-SAIFR. Brazil.

11/2016 Assistance, daily allowances, travel arrangements and accommodation. Frontiers in Physical Sciences de CELFI. Brazil.

04/2016-03/2018 PhD Scholarship. 24 months student grant. CONICET. Argentina.

05/2015 Assistance and travel arrangements CAFQI. AAIFQ. Argentina.
 03/2015 Assistance, daily allowances, accommodation and travel arrangements
 Minischool on Biophysics of Protein Interactions. ICTP-SAIFR. Brazil.
 10/2013 Assistance, daily allowances, travel arrangements and accommodation to
 Conference of Young Researchers of AUGM. National University of
 Rosario. Argentina.

Post-grade Courses

01/2020 Food microbiology. 20 h. UCB-SCZ. Bolivia.
 10/2019-01/2020 Creating Inclusive Spaces in Higher Education. 40 h. UCB - LPZ.
 Bolivia.
 09/2019 Orientation Workshop OWSD Early Career Fellowship. 35 h. ICTP –
 Trieste, Italia.
 07/2019 Writing scientific projects and articles. 20 h. UCB-LPZ. Bolivia.
 06/2019 Entrepreneurship in Beekeeping. 15 h. UCB-SCZ. Bolivia
 05/2019 Intellectual property. From invention to patent. 15 h. UCB - SCZ.
 Bolivia.
 05/2019 MS Project for projects. 20 h. UCB - SCZ. Bolivia.
 04/2019-09/2019 Certified in High Level Education. 120 h. UCB – LPZ. Bolivia.
 03/2019 Bioethics in a global context. 60 h. Complutense University of
 Madrid. Santa Cruz, Bolivia.
 03/2017 School on Biological Soft Matter: from molecular interactions to
 engineered materials. 80 h. IFT-UNESP, São Paulo. Brazil.
 03/2016 Quantitative confocal microscopy. 30 h. Fbioyf-UNR. Rosario.
 Argentina.
 03/2016 Digital image analysis. 30 h. Fbioyf-UNR. Rosario. Argentina.
 11/2015 Structure-function protein relation: Physicochemical
 characterization. 70 h. Fbioyf-UNR. Rosario. Argentina.
 05/2015 Applied statistics. 70 h. Fbioyf-UNR. Rosario. Argentina.
 04-09/2015 Physiological anatomy of superior plants. 70 h. Fbioyf-UNR. Rosario.
 Argentina.
 03-06/2015 Epistemology. 30 h. Fbioyf-UNR. Rosario. Argentina.
 03/2015 Minischool on Biophysics of Protein Interactions. 40h. IFT-UNESP,
 São Paulo. Brazil.
 08-12/2014 Topics in organic and inorganic spectroscopy. 70 h. Professor:
 Alejandro Olivieri. Fbioyf-UNR. Rosario. Argentina.

Awards

01/2020 Profesional Award, Juventud Empresa.
 10/2019 Award Genoveva Ríos. FELCV.
 09/2019 Award Early Career Fellowship, OWSD – UNESCO.

Consulting

05/2020 Manual of biosecurity for the Chamber of Industry and Commerce
 of Bolivia. IBNORCA – Bolivia.
 03/2020 Scientific committee for the Bolivian Biosafety Council. Minister of
 Environment and Water. Bolivia.

