

LUCÍA PRONSATO

PERSONAL DATA

Place and date of Birth: Neuquén, Argentina. 22 July 1984

Nacionality: Argentina

Passport Nº: AAK323136

Home address: Tucumán 83 - Bahía Blanca C.P.: 8000

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Work Address: Biological Chemistry and Developmental Biology Laboratory - Instituto de Ciencias Biológicas y Biomédicas del Sur (INBIOSUR UNS-CONICET). San Andrés 800 - C.P.: 8000 Bahía Blanca, Argentina.

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STUDIES

Biochemistry

Universidad Nacional del Sur (UNS), Bahía Blanca. Buenos Aires. Argentina (2008).

Doctor in Biochemistry (PhD)

Universidad Nacional del Sur (UNS), Bahía Blanca. Buenos Aires. Argentina (2014).

PRESENT JOBS

Investigador Asistente del CONICET (Researcher). Member of the Laboratory of Biological Chemistry and Development Biology at Institute of Biological and Biomedical Sciences of the South (INBIOSUR UNS-CONICET).

Teaching Assistant of Biological Chemistry. Universidad Nacional del Sur (UNS). Bahía Blanca. Argentina.

Collaborating teacher of the postgraduate course: "Signal Transduction Mechanisms" at UNS.

PhD THESIS

"Role of the testosterone receptor against apoptosis in murine muscle cells". Mark: 10 (Excellent). UNS.

DEGREE THESIS ADVISOR

• Director of thesis to obtain the degree of Bachelor of Biological Sciences (2019-2022) Student: Virginia Taylor. Mark: 10 (Excellent). UNS.

• Director of thesis to obtain the degree of Bachelor of Biological Sciences (2021-2022) Student: Valeria Toledo. Mark: 10 (Excellent). UNS.

TEACHING BACKGROUND

• **Teaching Assistant of General Physics** at UNS. From 10/07/2011 to 12/31/2011.

• **Teaching Assistant of the Physics Leveling Course** at UNS. From February to March 2012.

• **Teaching Assistant of Biological Chemistry.** UNS. From 09/30/2014 until today.

• **Collaborating teacher of the postgraduate study:** "Signal Transduction Mechanisms" at UNS.

• **Collaborating teacher of the postgraduate study:** "Basic methods for biological research at cellular and molecular level" at UNS.

• **Collaborating teacher of Biochemistry course:** Forli. University of Bologna (UNIBO). From April-July 2022.

• **Guest professor of Cell Signaling course:** Two-hour lecture on the topic: "The biological role of testosterone and its receptor in skeletal muscle cells". University of Bologna (UNIBO). June 10, 2022; June 6, 2024; and June 6, 2025.

REASERCH BACKGRAOUND

CAREER OF THE SCIENTIFIC AND TECHNOLOGICAL RESEARCHER

Member of the scientific and technological researcher career in the assistant class, of the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET). Admission: September 1st, 2016.

PUBLICATIONS

- 1. Pronsato L**, Ronda A, Milanese L, Vasconsuelo A, Boland R. "Protective role of 17 β -estradiol and testosterone in apoptosis of skeletal muscle". Revista: Actualizaciones en Osteología (2010). ISSN: 1669-8975 (print); ISSN: 1669-8983 (online). Vol. 6, Nº 2, pág. 65-80.
- 2. Vasconsuelo A, Pronsato L**, Ronda AC, Boland R, Milanese L. "Role of 17 β - estradiol and testosterone in apoptosis". Steroids (2011). ISSN: 0039-128X. 76, 1223–1231.
- 3. Pronsato L**, Boland R, Milanese L. "Testosterone exerts anti-apoptotic effects against H₂O₂ in C2C12 skeletal muscle cells through the apoptotic intrinsic pathway". Journal of Endocrinology (2012). ISSN: 0022-0795. 212, 371-381.
- 4. Pronsato L**, La Colla A, Ronda A, Milanese L, Boland R, Vasconsuelo A. "High passage numbers induce resistance to apoptosis in C2C12 muscle cells". Biocell (2013). ISSN 1667-5746. 37(1): 1-9.
- 5. Pronsato L**, Boland R, Milanese L. "Non-classical localization of androgen binding proteins in the C2C12 skeletal muscle cell line". Archives of Biochemistry and Biophysics (2013). ISSN: 0003-9861. 530, 13–22. Las imágenes de este trabajo fueron seleccionadas como tapa de la revista.
- 6. La Colla A, Pronsato L**, Ronda AC, Milanese L, Vasconsuelo A, Boland R. "17 β -estradiol and testosterone protect mitochondria against oxidative stress in skeletal muscle cells". Actualizaciones en Osteología (2014). ISSN: 1669-8975 (print); ISSN: 1669-8983 (online). 10(2): 122-135.
- 7. La Colla A, Pronsato L**, Milanese L, Vasconsuelo A. "17 β -estradiol and testosterone in sarcopenia: role of satellite cells". Ageing Research Reviews (2015). ISSN: 1568-1637. 24(Pt B):166-77.
- 8. Pronsato L**, Milanese L. "Effects of testosterone on the regulation of p53 and p66Shc during oxidative stress damage in C2C12 cells". Steroids (2016). ISSN: 0039-128X. 106: 41-54.
- 9. La Colla A, Vasconsuelo A, Milanese L, Pronsato L**. "17 β -Estradiol Protects Skeletal Myoblasts from Apoptosis through P53, BCL-2 and FoxO Families". Journal of Cellular Biochemistry (2017) 118: 104-115.
- 10. Pronsato L**, Milanese L, Vasconsuelo A, La Colla A. "Testosterone modulates FoxO3a and p53-related genes to protect C2C12 skeletal muscle cells against apoptosis". Steroids (2017) 124: 35–45.
- 11. Musso F, Lincor D, Vasconsuelo A, Pronsato L**, Faraoni B, Milanese L. "Adverse effects in skeletal muscle of the medicinal use of *Nicotiana glauca*". Biological and Pharmaceutical Bulletin (2019) 42: 671-679.
- 12. Pronsato L**, Milanese L, Vasconsuelo A. "Testosterone Induces Up-Regulation Of Mitochondrial Gene Expression In Murine C2C12 Skeletal Muscle Cells Accompanied By An Increase Of Nuclear Respiratory Factor-1 And Its Downstream Effectors". Molecular and Cellular Endocrinology (2019). 500:110631. doi: 10.1016/j.mce.2019.110631.
- 13. Musso F, Pronsato L**, Milanese L, Vasconsuelo A, Faraoni B. "Lipid extracts of *Nicotiana glauca* Graham (Solanaceae) induce apoptosis in human rhabdomyosarcoma cells". *Rodriguésia* (2020) 71: e01012019. doi: 10.1590/2175-7860202071047.
- 14. Frattini N, Pulido Carrasquero A, Pronsato L**, Milanese L, Vasconsuelo A. "Effects of common fertilizers on the soil ecosystem". Bulletin of the National Research Centre (2023) 47:78. Doi: 10.1186/s42269-023-01051-8.
- 15. Milanese L, Pronsato L**, Vasconsuelo A. "Potential uses of non-edible parts of Tomato plant: molecular bases". Current Topics in Biochemical Research (2023) 24, 61-76.
- 16. Pronsato L**, Milanese L, Vasconsuelo A. Commentary: "Modulation of mitochondrial gene expression by testosterone in skeletal muscle". Cell Signaling (2024) 2(1):80-85.
- 17. Milanese L, Vasconsuelo A, Pronsato L, Frattini N, Blanco N**. "Indole Family and Neomycin Sulfate: Inductors of Differentiation in C2C12 and RD Cell Lines". Journal of Cellular Signaling (2024) 5(4):195-207.
- 18. Pronsato L**, Milanese L, Vasconsuelo A, Frattini N, Blanco N. "The extract of *Nicotiana glauca* induces apoptosis in rhabdomyosarcoma cells". Cell Signaling (2025) 3(1):10-18.
- 19. Frattini N, Blanco N, Pronsato L**, Milanese L, Vasconsuelo A. "*Nicotiana glauca* induces apoptosis in human rhabdomyosarcoma cells: molecular targets". Journal of Cellular Signaling (2025) 6(1):18-28.
- 20. Blanco N, Frattini N, Pronsato L**, Milanese L, Vasconsuelo A. Commentary: "Exploring cell differentiation, induced by direct and indirect protein kinase C inhibitors, as a potential therapeutic strategy against rhabdomyosarcoma". Archives of Cancer Biology and Therapy. (2025) 3(1):1-4.
- 21. Frattini N, Milanese L, Pronsato L**, Blanco N, Vasconsuelo A. Commentary: "Extracts from *Nicotiana glauca* as a therapeutic strategy against rhabdomyosarcoma: cell death and transformation to a non-tumor phenotype". Cell Signaling. (2025). Submitted for publication.
- 22. Pronsato L**, Milanese L, Vasconsuelo A. "Modulation of mitochondrial gene transcription by the androgen receptor in C2C12 muscle cells". Journal of Steroid Biochemistry and Molecular Biology (2025). Submitted for publication.

PUBLISHED BOOK CHAPTERS

1. **Pronsato L.**, La Colla A., Milanesi L., Vasconsuelo A. "The Subcellular Localization and Physiological Roles of Estrogen Receptors". (2017) In: Estradiol: Synthesis, Functions and Effectiveness (ed. NOVA Science Publishers) pp. 1-32. ISBN-13: 978-1536122985.
2. **Pronsato L.** "Subcellular Localization and Physiological Roles of Androgen Receptor" (2019). In: Sex Steroids and Apoptosis In: Skeletal Muscle: Molecular Mechanisms. Ed. Bentham eBooks. Pp. 1-62. ISBN: 978-981-14-1235-6.
3. Vasconsuelo A., **Pronsato L.** "General Concepts of Skeletal Muscle and Apoptosis: Molecular Mechanisms and Regulation by Sex Steroids" (2019). In: Skeletal Muscle: Molecular Mechanisms. Ed. Bentham eBooks. Pp. 80-111. ISBN: 978-981-14-1235-6.

CONGRESS PRESENTATIONS

Total of congress presentations: 36

List of the last Conference Presentations (2019-2025):

- Faraoni MB, Musso F, **Pronsato L**, Milanesi L, Vasconsuelo A. "Apoptosis en células de rhabdomioma embrionario humano inducida por extractos lipídicos de *Nicotiana glauca*". XII Simposio Brasileiro de Farmacognosia y XVII Simposio Latinoamericano de Farmacobotánica. Petrópolis, Brasil. May, 2019.
- **Pronsato L**, Milanesi L, Vasconsuelo A, Frattini N. "Testosterone induces up-regulation of mitochondrial gene expression in skeletal muscle cells accompanied by an increase of nuclear respiratory factor-1 and its downstream effectors". LXIV Reunión Científica Anual de la Sociedad Argentina de Investigación Clínica (SAIC). Mar del Plata, Argentina. November, 2019.
- Blanco N., Gili V, Frattini N, Pulido A, **Pronsato L**, Santillán G, Milanesi L, Vasconsuelo, A. "*El extracto etanólico de parénquima de Aloe arborescens Miller promueve la viabilidad, la proliferación y la migración de células osteoprogenitoras*". XII Jornadas de Jóvenes Investigadores de la Universidad de Buenos Aires (UBA). Buenos Aires, Argentina. Junio 2023.
- Frattini N, Pulido A, Blanco N, **Pronsato L**, Milanesi L, Vasconsuelo A. "*El extracto liposoluble de *Nicotiana glauca* induce la fosforilación de Akt y Hsp27 en la línea celular de rhabdomioma embrionario*". XII Jornadas de Jóvenes Investigadores de la Universidad de Buenos Aires (UBA). Buenos Aires, Argentina. Junio 2023.
- Pulido A, Frattini N, Blanco N, Vasconsuelo Andrea, **Pronsato L**, Milanesi L. "*El extracto liposoluble de *Nicotiana glauca* induce muerte celular por apoptosis en células de Rhabdomioma humano*". XII Jornadas de Jóvenes Investigadores de la Universidad de Buenos Aires (UBA). Buenos Aires, Argentina. Junio 2023.
- Blanco, N.O., Gili V., Frattini N., Pulido A., **Pronsato L.**, Santillán G., Milanesi L. y Vasconsuelo A. "Efectos del extracto etanólico de parénquima de *Aloe arborescens* Miller en células osteoprogenitoras y mioblastos (C2C12). 6to Congreso Argentino de Osteología. Asociación Argentina de Osteología y Metabolismo Mineral (AAOMM). Sociedad Argentina de Osteoporosis (SAO). Córdoba, Argentina. Agosto 2023.
- Blanco, N., Frattini N., Pulido A., **Pronsato L.**, Milanesi L. y Vasconsuelo A. Evaluación de los efectos del extracto etanólico de parénquima de *Aloe arborescens* Miller en células osteoprogenitoras. XXXI Jornadas Científicas "Dr. Juan Carlos Plunkett". I Jornada de Residentes. Hospital Interzonal General "Dr. José Penna". Bahía Blanca, Argentina. Noviembre 2023.
- Frattini, N., Pulido, A., Blanco, N., **Pronsato, L.**, Milanesi, L. y Vasconsuelo, A. Inducción de la fosforilación de Akt, FOXO 3a y Hsp27 por el extracto liposoluble de *Nicotiana glauca* en células de rhabdomioma embrionario. XXXI Jornadas Científicas "Dr. Juan Carlos Plunkett". I Jornada de Residentes. Hospital Interzonal General "Dr. José Penna". Bahía Blanca, Argentina. Noviembre 2023.
- Pulido, A., Frattini, N., Blanco, N., **Pronsato, L.** y Milanesi, L. y Vasconsuelo, A. *Nicotiana glauca* induce la muerte celular por apoptosis en las células de rhabdomioma humano. XXXI Jornadas Científicas "Dr. Juan Carlos Plunkett". I Jornada de Residentes. Hospital Interzonal General "Dr. José Penna". Bahía Blanca, Argentina. Noviembre 2023.
- Blanco N., Frattini N., **Pronsato L.**, Vasconsuelo A., Milanesi L. Therapeutic potential of *Aloe Arborescens* Miller parenchyma ethanolic extract on osteoprogenitor cells and myoblast (C2C12). LVI Reunión Anual de la Asociación Argentina de Farmacología Experimental. Bahía Blanca, Buenos Aires, Argentina. Octubre 2024.

FELLOWSHIPS AND GRANTS

- **Doctoral fellowship**, CONICET-Argentina, 04/2009 – 03/2014.
- **Postdoctoral fellowship**, CONICET-Argentina, 04/2014 – 03/2016
- **Fellowship granted by Ministerio de Ciencia, Tecnología e Innovación Productiva de la República Argentina (MINCYT)** for the participation in the Workshop "Frontiers in Biosciences" organized by MINCYT, the MAX PLANCK society of Germany and the German embassy in Argentina.

- **Fellowship granted by Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)** for research assistant ships abroad. Place of work: Laboratory of Mitochondrial Medicine and Enzymology, Department of Biomedical and Neuromotor Sciences (DIBINEM), University of Bologna, Italy. April to July 2022.
- **PICT 2017-0386 Grant.** Young Researcher (2018-2020): "Rol de la testosterona frente a la apoptosis en células musculares esqueléticas murinas C2C12". **Responsible researcher: L. Pronsato.**
- **PGI-UNS 24/B309 (2020-2024) Grant.** "El extracto liposoluble de Nicotiana glauca induce la muerte celular por apoptosis en las células de rhabdomyosarcoma humano". **Integrative researcher: L. Pronsato.**
- **PGI-UNS 24/ZB90 (2020-2024) Grant.** "Estudio del impacto de las actividades agrícolas en el ecosistema de los suelos: parámetros moleculares para establecer un bioindicador". **Integrative researcher: L. Pronsato.**
- **PIP-CONICET (2022-2024) Grant.** "El extracto liposoluble de Nicotiana glauca induce la muerte celular por apoptosis en las células de rhabdomyosarcoma humano". **Integrative researcher: L. Pronsato.**
- **PGI-UNS 24/B373 (2025-2028) Grant.** "Estudio del impacto de las actividades agrícolas en el ecosistema de los suelos: parámetros moleculares para establecer un bioindicador". **Integrative researcher: L. Pronsato.**
- **PGI-UNS 24/B369 (2025-2028) Grant.** "Los indoles y la neomicina: inductores de la diferenciación en las líneas celulares C2C12 y RD". **Integrative researcher: L. Pronsato.**
- **PGI-UNS 24/ZB26 (2025-2026) Grant.** "Rol de la testosterona frente a la apoptosis en células musculares esqueléticas murinas C2C12". **Responsible researcher: L. Pronsato.**

ACADEMIC AND SCIENTIFIC AWARDS

- 2nd prize for the best work in basic research: "*Protective role of sex hormones in apoptosis of skeletal muscle*". Pronsato L, Ronda A, Milanesi L, Vasconsuelo A, Boland R. Awarded by the Asociación Argentina de Osteología y Metabolismo Mineral (AAOMM). August, 2009.
- 1st prize for the best work in basic research: "*Rol de la testosterona en la vía intrínseca de la apoptosis en músculo esquelético*". Pronsato L, Boland R, Milanesi L. Awarded by the AAOMM. September, 2010.
- Distinction to the poster: "Testosterone induces up-regulation of mitochondrial gene expression in skeletal muscle cells accompanied by an increase of nuclear respiratory factor-1 and its downstream effectors". Pronsato L, Milanesi L, Vasconsuelo A, Frattini N. Awarded by SAIC. November, 2019.

LANGUAGE

English. First Certificate in English issued by the University of Cambridge.