*Curriculum vitae*

Surname: **Callero**

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**GRADUATE DEGREE**: Biotechnologist, (1994-2002): Biochemical and Pharmaceutical Science College, National University of Rosario (UNR), Argentina.

**POSGRADUATE DEGREE:** PhD in Chemical Biology (2005-2010), Buenos Aires University, Argentina

**IT DEGREE:** Data Scientist

**SCIENTIFIC BACKGROUND:**

*Graduate Thesis: "Optimization of DNA Extraction Technique from Saliva and Paraffin-embedded Tumor Tissues for Microsatellite Analysis*", (2001-2002). Histocompatibility and Molecular Biology Lab Garibaldi Hospital, Rosario, Argentina. Advisor: Dra. Edita Solis.

*Doctoral Thesis: Protein Tyrosine Phosphatase 1B in Erythropoietin signalling pathway (2005-2010). Biologic Analysis Lab, Buenos Aires University, Argentina.*

**Participation in Research Projects:**

* Study of breast tumor cell intrinsic factors and microenviroment on in situ-invasive transition. PICT- 2018-2021.
* “Effects of Aminoflavone on tumor stem cells and immune system on a breast cancer murine model” (CONICET). 2014-2017
* “Study of a new molecular target for the treatment of human ovarian and breast cancer: activation of the Aryl Hydrocarbon Receptor (AhR) by 2-(4-aminophenyl) benzothiazol.”

Posdoctoral Scholarship awarded from National Council of Scientific and Technologic Investigation.

* *“Mechanisms Involved in antiapoptotic Action of Erythropoietin”* (2005) Biological Analysis Lab, Biologic Chemistry Department, Exacts and Natural Sciences College, University of Buenos Aires, Argentina.

Doctoral Scholarship awarded from National Agency of Science and Technology from Argentina.

Doctoral Scholarship awarded from National Council of Scientific and Technologic Investigation.

* *“Early Markers of Cell Stress in Isolated Human Islets*”, (2004)Human Pancreatic Islets Unit, Nucel (www.nucel.prp.usp.br), Chemistry Institute, São Paulo University, Brasil. Advisors: Dra Mari Cleide Sogayar y Dra Anna Carla Goldberg.

Technical Scholarship awarded from National Council of Scientific and Technological Development from Brasil.

* *“Cloning and Expression of Human Blood Coagulation Factors in Human Eukariotic Cells: Factor VII and Von Willebrand; “Characterization of Auto-immune Hepatite Type I Auto-antigen”; “Effects of Exogenous Leptine in in vitro Proliferation and Production of Linfocytes T Cytokines in Patients with Common Variable Immunodeficiency Síndrome”,* (2003-2004) Cellular and Molecular Biology Lab, Chemistry Institute, Sao Paulo University, Brasil.

Technical Scholarship awarded from National Council of Scientific and Technological Development from Brasil.

***Direction of Research Projects:***

* Relevance of epitelial-mesenchymal transition and wnt pathway in the anti-invasive and anti-metastasic action of T2, an N4 -aryl substituted thiosemicarbazone, on triple negative breast cancer. Conicet PIP 2021-2023 1312. 2021-2023
* T2 action on tumor stem cells from murine colon cancer model CT26. ORT School. Período 2019.
* Activity study of 1-indanones derivated thiosemicarbazones as possible anti-tumor agents against breast cancer. FUNDACIÓN FLORENCIO FIORINI. 2017-2018.
* “Effects of AFP464 on cancer stem cells and the immune response in a mouse breast cancer model” FLORENCIO FIORINI Foundation 2014-2015.

# *Presentations in congresses:*

# National Congresses from 2001-2017:25 presentations

# National Congresses from 2018-2022:

* **LXIII Reunión anual de la sociedad argentina de Investigación Clínica (SAIC), LXIV Reunión Anual de la Sociedad Argentina de Inmunología (SAI) y XLVIII Reunión Anual de la Sociedad Argentina de Fisiología (SAFIS), 2018.** “An N4-aryl substituted thiosemicarbazone modulates miRNAs and decreases invasiveness and dissemination in 4T1 triple negative murine mammary cancer.” Sólimo A., Soraires Santacruz M.C., Loaiza Perez A.I., Bal de Kier Joffé E., Finkielsztein L., Callero M.A

# International Congresses from 2001-2017: 12 presentations

# International Congresses from 2018-2022:

* **IV International Congress in Translational Medicine, 2018.** “Effects of an N4-aryl substituted thiosemicarbazone on the metastasis of triple negative 4T1 mouse mammary cancer cells in vitro and in vivo”. Sólimo A., Soraires Santacruz M.C., Loaiza Perez A.I., Bal de Kier Joffé E., Finkielsztein L., Callero M.A

# *Scientific Awards*

* Best Scientific Research Work in VIII Symposium of Scientific Spreading from Garibaldi Hospital from Rosario, Argentina. “DNA Extraction from Buccal cells for Paternity Analysis”
* Travel award from the European Society of Hematology. (June, 2006).
* Best Scientific Research Work in XXVIII Meeting of Angel H. Roffo Oncology Hospital, 2012.“Antitumor agent 5F 203 induces DNA damage and oxidative stress in human ovarian cancer cells”.
* Mention in LALCEC-Fiorini Foundation Cancer Award 2012. “Development of a bioassay to predict sensitivity to the antitumor agent 5F 203 in human ovarian cancer cells”. Callero MA, De Dios D, Loaiza Pérez A.
* Travel Award from FAPESP (Fundaçao de Amparo à Pesquisa de Sao Paulo, Brazil) SPSAS – for attending the meeting “Advances in Molecular Oncology: Translating Molecular Biology into Cancer Treatment” San Pablo, Brasil, 3 al 8 de Febrero de 2013. , Brasil.

***Scientific Publications***

* ***Sólimo Aldana M, Soraires Santacruz MC, Vanzulli S, Coggiola O, Bal de Kier Joffé E, Finkielsztein L, Callero MA***. Anti-invasive and anti-metastatic action of an N4-aryl substituted thiosemicarbazone on advanced triple negative breast cancer. Heliyon. 2020 Oct;6(10):e05161. doi: 10.1016/j.heliyon.2020.e05161. eCollection 2020 Oct.).
* ***Sólimo A, Soraires Santacruz MC, Loaiza Perez AI, Bal de Kier Joffé E, Finkielsztein LM, Callero MA.*** N4-aryl substituted thiosemicarbazones derived from 1-indanones as potential anti-tumor agents for breast cancer treatment. [J Cell Physiol.](https://www.ncbi.nlm.nih.gov/pubmed/29111571) 2018 Jun;233(6):4677-4687. doi: 10.1002/jcp.26240***.***
* ***Luzzani GA\*, Callero MA\*, Kuruppu AI, Trapani V, Flumian C, Todaro L, Bradshaw TD, Loaiza Perez AI.*** [In Vitro Antitumor Effects of AHR Ligands Aminoflavone (AFP 464) and Benzothiazole (5F 203) in Human Renal Carcinoma Cells.](https://www.ncbi.nlm.nih.gov/pubmed/28471540) (\*Both authors contributted equally to this publicaction). J Cell Biochem. 2017 Dec;118(12):4526-4535. doi: 10.1002/jcb.26114,
* ***Callero MA, Rodriguez CE, Sólimo A, Bal de Kier Joffé E, Loaiza Perez AI.*** “The immune system as a new possible cell target for AFP 464 in a spontaneous mammary cancer mouse model”. J Cell Biochem, 118(9):2841-2849, 2017. doi: 10.1002/jcb.25934
* ***Eileen Brantley\*, Mariana A Callero\*, Damian E Berardi; Petreena Campbell; Dain Zylstra; Louisa Amis; Michael Yee et al.*** “AhR ligand Aminoflavone inhibits alpha-6-integrin expression and breast cancer sphere-initiating capacity. (\*Both authors contributted equally to this publication). [**Cancer Lett.**](https://www.ncbi.nlm.nih.gov/pubmed/26996297)**28;376(1):53-61, 2016. doi 10.1016/j.canlet.2016.03.025.**
* [Callero MA](http://www.ncbi.nlm.nih.gov/pubmed?term=Callero%20MA%5BAuthor%5D&cauthor=true&cauthor_uid=23696052), [Luzzani GA](http://www.ncbi.nlm.nih.gov/pubmed?term=Luzzani%20GA%5BAuthor%5D&cauthor=true&cauthor_uid=23696052), [De Dios DO](http://www.ncbi.nlm.nih.gov/pubmed?term=De%20Dios%20DO%5BAuthor%5D&cauthor=true&cauthor_uid=23696052), [Bradshaw TD](http://www.ncbi.nlm.nih.gov/pubmed?term=Bradshaw%20TD%5BAuthor%5D&cauthor=true&cauthor_uid=23696052), [Perez AI](http://www.ncbi.nlm.nih.gov/pubmed?term=Perez%20AI%5BAuthor%5D&cauthor=true&cauthor_uid=23696052). Biomarkers of sensitivity to potent and selective antitumor 2-(4-amino-3-methylphenyl)-5-fluorobenzothiazole (5F203) in ovarian cancer.[J Cell Biochem.](http://www.ncbi.nlm.nih.gov/pubmed/23696052)  114(10):2392-404, 2013. doi: 10.1002/jcb.24589.
* ***Mariana A Callero, Guadalupe V Suarez, Gabriela Luzzani, Boris Itkin, Binh Nguyen and Andrea I Loaiza-Perez .*** “Aryl Hydrocarbon Receptor Activation by Aminoflavone: New molecular target for renal cancer treatment”. International Journal of Oncology, 2012, 41: 125-134.
* ***Mariana A.Callero and Andrea Irene Loaiza-Pérez.*** “The Role of Aryl hydrocarbon receptor and Cross talk with Estrogen Receptor in Response of Breast Cancer Cells to Novel Antitumor Agents Benzothiazoles and Aminoflavone”. International Journal of Breast Cancer. vol. 2011, Article ID 923250. doi:10.4061/2011/923250.
* ***Callero MA, Vota D, Chamorro ME, Wenker S, Vittori D, Nesse A***.“Calpain as a mediator between Erythropoietin and Protein Tyrosine Phosphatase 1B. Arch Biochem Biophys. 2011 Jan 15;505(2):242-9.
* ***Wenker SD, Chamorro ME, Vota DM, Callero MA, Vittori DC, Nesse AB.*** *“[Differential antiapoptotic effect of erythropoietin on undifferentiated and retinoic acid-differentiated SH-SY5Y cells.](http://www.ncbi.nlm.nih.gov/pubmed/20225234)” J Cell Biochem. 2010 May;110(1):151-61.*
* **Callero MA, Pérez G, Vittori D, Nesse A**. *“Modulation of Protein Tyrosine Phosphatase 1B by Erythropoietin in UT-7 Cell line* Cellular Phisiology and Biochemistry 20, 319-328, 2007.
* ***Anna Carla Goldberg, Freddy Goldberg Eliaschewitzc, Wagner Ricardo Montor, Gisele Vanessa Baracho, Paolo Ruggero Errante, Mariana Alejandra Callero, Maria Regina Alves Cardosob, Patricia Emilia Bragab, Jorge Kalilb, Mari Cleide Sogayara, Luiz Vicente Rizzo.*** “Exogenous leptin restores in vitro T cell proliferation and cytokine synthesis in patients with Common Variable Immunodeficiency Syndrome.” Clinical Immunology 114, 147– 153, 2005.

**TEACHING EXPERIENCE**

* ***2020- to the presente:*** Teaching Assistant, Biochemistry Department, Exacts Science College, Buenos AIres University.
* ***2019:*** Teaching Assistant Common Basic Cycle, Medicine School, Buenos Aires University.
* ***2019-2017:*** Guest Teacher at course “Molecular and cell Biology, towards understanding oncologic pathology”. Hospital Italiano de la Ciudad de Buenos Aires.
* ***2018-2014:*** Adjunct Professor Biochemistry Department , Biochemistry Scholl, John F. Kennedy University . Buenos Aires
* ***2018, 2016, 2014, 2012:*** Laboratory teacher at course “Cell and Tissue Culture”, Instituto de Oncología Angel H. Roffo, Buenos Aires University
* ***2019, 2017, 2015, 2013:*** Guest Teacher at course “Immunology, therapeutic targets”, Instituto de Oncología Angel H. Roffo, Buenos Aires University
* ***Año 2014:*** Guest Teacher at course Tumor Immunology, Salvador University

**STUDENTS TRAINING**

* ***2018- to the present:*** PhD director “Characterization of na N4-aryl substituted thiosemicarbazone as a new anti-tumorand anti-metastasic agent against triple negative breast cancer”. Buenos Aires University***.***
* ***2017:*** MD Thesis director “1-indanone derived thiosemicarbazones action on human breast câncer cell lines”, Buenos Aires University.
* ***2012-2015:*** MD thesis Co-direction “Effects of Aminoflavone on apoptosis and cell proliferation of kidney tumor cell lines” Buenos Aires University

**LANGUAGES**

* **English: First Certificate Degree**
* **Portuguese**