

Cristina Baquero Mayo

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Date of birth: 25/06/1992 (30 years old)

EDUCATION

- **PhD in Biochemistry, Molecular Biology and Biomedicine.** 2017 - 2023
Complutense University of Madrid. Doctoral thesis: "Role of C3G in megakaryocytic differentiation. Regulation of liver damage processes by platelets C3G protein" supervised by Dr Almudena Porras Gallo and Dr Paloma Bragado Domingo
- **Master in Biochemistry, Molecular Biology and Biomedicine.** 2015 - 2016
Complutense University of Madrid.
- **Degree in Chemistry.** 2010 - 2015
Complutense University of Madrid.

PROFESSIONAL EXPERIENCE

- **Researcher PhD Student.** October 2017 – March 2023
Predoctoral grant of the community of Madrid (programme for youth employment of the european social fund and predoctoral contract associated with the project PID2019-104143-RB-C22 in the research group of Dra. Almudena Porras Gallo. Department of Biochemistry and Molecular Biology. Complutense University of Madrid.
- **Researcher PhD Student.** January 2022– March 2022
3-month short stay of in the Cancer Research Center, IBMCC, Salamanca (Spain), under supervision of Dra. Carmen Guerrero Arroyo, full professor at the Department of Medicine of the University of Salamanca and group leader at the Cancer Research Center, IBMCC, Salamanca, Spain.
- **Assistant Researcher.** October 2015 – September 2016
Research group of Almudena Porras Gallo. Department of Biochemistry and Molecular Biology. Complutense University of Madrid. Master's Degree Final project: "Regulation of C3G during platelet differentiation and characterization of GATA-1"
- **Laboratory technician.** March – April 2015
Microbiological Control Laboratory, Las Rozas (Spain), as Laboratory Technician in "Physical-chemical analysis of contamination of drinking and wastewater"
- **Undergraduate Student Researcher.** December 2014 – May 2015
Department of Analytical Chemistry. Complutense University of Madrid. Degree Final project in "Implementation of electrochemical magnetobiosensors for the diagnosis/prognosis in oncological diseases"
- **Laboratory analyst.** July – September 2014
Santander CRUE CEPYME Scholarship for Company Internships. Microbiological Control Laboratory, Las Rozas (Spain). Analyst in the Environmental Laboratory (water, cosmetics, environments and surfaces).

PUBLICATIONS

- Nerea Palao, Celia Sequera, Ángel M Cuesta, **Cristina Baquero**, Paloma Bragado, Alvaro Gutierrez-Uzquiza, Aránzazu Sánchez, Carmen Guerrero and Almudena Porras. "C3G down-regulation enhances pro-migratory and stemness properties of oval cells by promoting an epithelial-mesenchymal-like process" International Journal of Biological Sciences (2022); 18(15): 5873-5884.
- Sara Ortiz-Rivero, **Cristina Baquero**, Luis Hernández-Cano, Juan José Roldán-Etcheverry, Sara Gutiérrez-Herrero, Cristina Fernández-Infante, Víctor Martín-Granado, Eduardo Anguita, José María de Pereda, Almudena Porras and Carmen Guerrero. "C3G, through its GEF activity, induces megakaryocytic differentiation and proplatelet formation" Cell Communication and Signaling (2018) 16:101
- **Cristina Baquero** et al. "Platelet C3G protects from liver fibrosis, while enhancing tumor growth through regulation of immune response". (Paper in preparation).

MEETINGS OR
CONGRESSES

- **International Liver Cancer Association's 16th Annual Conference.** 1st-4th September 2022. Poster: "*Platelet C3G regulates hepatocarcinoma progression*". Authors: Cristina Baquero, Nerea Palao, Celia Sequera, Maria Rodrigo, Cristina Fernandez-Infante, Ángel Cuesta, Álvaro Gutierrez-Uzquiza, Aránzazu Sánchez, Paloma Bragado, Carmen Guerrero, Almudena Porras. Madrid, Spain. Poster presentation.
- **43th Congress of Spanish Society of Biochemistry and Molecular Biology.** 19th-22nd July 2021. Poster: "*Platelet C3G as a potential regulator of the response to damage during liver disease development*". Authors: **Cristina Baquero**, Nerea Palao, Celia Sequera, Sara Manzano, Maria Rodrigo, Ángel Cuesta, Álvaro Gutierrez-Uzquiza, Paloma Bragado, Carmen Guerrero, Almudena Porras. Virtual congress. Poster presentation.
- **IV PhDay Complutense.** 23th September 2021.
Oral communication: "*Platelet C3G as a potential regulator of the response to damage during liver disease development*" Author: **Cristina Baquero**. Complutense University of Madrid. Oral presentation.
- **Interinstitutional Virtual Seminar Series.** 30th November 2020.
Oral communication: "*Role of platelet C3G in the regulation of liver damage processes*". Author: **Cristina Baquero**. Universidad Autónoma de Guerrero and Wesleyan University. Oral presentation.
- **III PhDay Complutense.** 5th November 2019.
Poster: "*Platelet C3G as a potential regulator of the response to acute and chronic liver injury*". Author: **Cristina Baquero**. Complutense University of Madrid. Poster presentation.
- **1st Congress in translational hepatology. Status Quo and new horizons in the study of the liver (FEEH) (AEEH).** 4th-5th October 2019.
Poster: "*Platelet C3G as a potential regulator of the response to acute and chronic liver injury*". Authors: **Cristina Baquero**, Nerea Palao, Celia Sequera, Sara Manzano, Álvaro Gutiérrez-Uzquiza, Paloma Bragado, Carmen Guerrero, Almudena Porras. Madrid (Spain). Poster presentation.
- **42th Congress of Spanish Society of Biochemistry and Molecular Biology.** 16th-19th July 2019. Poster: "*C3G as a potential regulator of liver regeneration upon injury*". Authors: **Cristina Baquero**, Nerea Palao, Celia Sequera, Sara Manzano, Álvaro Gutierrez-Uzquiza, Paloma Bragado, Aránzazu Sanchez, Carmen Guerrero, Almudena Porras. Santander (Spain). Poster presentation.
- **41st Congress of Spanish Society of Biochemistry and Molecular Biology.** 10th-13th September 2018. Poster: "*Role of platelet C3G in the regulation of the response to acute and chronic liver injury*". Authors: **Cristina Baquero**, Sara Manzano, Celia Sequera, Nerea Palao, Sara Ortiz-Rivero, Álvaro Gutierrez-Uzquiza, Carmen Guerrero, Almudena Porras. Santander (Spain). Poster presentation.
- **XL Congress of SEBBM - FEBS3+.** 23rd-26th October 2017.
Poster: "*Role of GATA-1 in the regulation of C3G during platelet differentiation*". Authors: **Cristina Baquero**, Sara Manzano, Celia Sequera, Nerea Palao, Carmen Guerrero, Almudena Porras. Barcelona (Spain). Poster presentation.

SCIENTIFIC
PROJECTS

- **PID2019-104143-RB-C22.** July 2020 - June 2023.
"New functions of C3G in tumor progression, liver physiology and biology of megakaryocytes and platelets. Contribution of platelet C3G to pathological neoangiogenesis and liver damage". Ministry of Science, Innovation and Universities. Principal Investigator: Almudena Porras Gallo. Researcher: C. Baquero
- **SAF-2016-76588-C2-1-R (MINECO).** January 2017 - December 2020.
"Function of C3G in tumor development and liver pathophysiology. Implication of platelet C3G in angiogenesis and liver and cardiovascular diseases" Principal Investigator: Almudena Porras Gallo
- **SAF-2013-48210-C02-02 (MINECO).** January 2014 - December 2016.
"In vitro and in vivo analysis of C3G function in different cell types and their impact on cardiovascular disease and metastasis". Principal Investigator: Almudena Porras Gallo
- **PID2019-104991RB-I00.** July 2020 - May 2023
"Deciphering the role of neuropilins and plexins in the regulation of cell fate of disseminated tumor cells and the formation of metastases". Ministry of Science, Innovation and Universities. Principal Investigator: Paloma Bragado Domingo. As a collaborator

PROFESSIONAL
COMPETENCES

- **Cell culture:** Suspension and adherent cultures: megakaryocyte cell lines (immature megakaryocytes), hepatocarcinoma cell lines (Hep3B and HLE) and hepatic progenitors (oval cells)
- **Animal experimentation techniques:** Management, planning and design procedures and euthanasia. Mice handling skills: intraperitoneal injection of drugs and tissue extraction (liver, lung, adipose tissue, bone marrow and blood)
- **Molecular Biology Techniques:** isolation of RNA/DNA, conventional qPCR, real-time qPCR (RT-qPCR), DNA/RNA quantification, gene silencing techniques by shRNA using lentiviral particles.
- **Histological analysis techniques:** tissue preparation and embedding in paraffin, histological sections with microtome and/or cryotome. Immunohistochemistry and immunofluorescence techniques and preparation of stains for morphological analysis (H&E) by microscopy.
- **Microscopy techniques:** phase contrast microscopy, confocal and fluorescence.
- **Biochemical Techniques:** isolation and quantification of proteins, electrophoresis, ELISA, Western Blot, flow cytometry, proteomic analysis, preparation of solutions.
- **Chemical Techniques:** electrochemical biosensors and magnetobiosensors. Fundamental analysis techniques and basic analytical techniques: ICP-OES, HPLC, FT-IR, Mass Spectrometry, GC-MS.

PERSONAL
COMPETENCES

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Soft skills | <ul style="list-style-type: none"> • Great research skills and pro-active approach to work. Excellent perseverance to achieve the proposed objectives. • Problem solving, self-motivated, personal initiative, creative and highly competent. • Excellent communicative skills acquired in research centers and university teaching. • Great organizational competences with the ability to work independently and teamwork. High ability to lead and organize groups. |
| Computer skills | <ul style="list-style-type: none"> • Microsoft Office™ (Word, Excel, Power Point) (<u>Advanced level</u>) • Bibliographic search (Pubmed, Protein Data Bank, Uniprot, etc.) (<u>Advanced level</u>) • Data processing and statistics (Excel and Graphpad) (<u>Advanced level</u>) • Image processing (Photoshop, ImageJ Fiji) (<u>Basic level</u>) • Flow cytometry processing (FlowJo and BD Accuri A6) (<u>Basic level</u>) • Bioinformatics tools (BLAST, Gene Ontology, Panther, David Database, Gene Set Enrichment Analysis (GSEA), etc) (<u>advanced level</u>) |

LANGUAGES

- **Spanish:** Native language
- **English:** Intermediate level

UNIVERSITY
TEACHING

- **Biochemistry.** Academic year 2021-2022, 2020-2021 and 2018-2019
Double degree in Pharmacy and Nutrition. Dpt. of Biochemistry and Molecular Biology. Complutense University of Madrid. 90 hours
- **Biochemistry and Molecular Biology.** Academic year 2019-2020, 2018-2019 and 2017-2018. Degree in Pharmacy. Department of Biochemistry and Molecular Biology. Complutense University of Madrid. 90 hours.

COURSES

- **Animal experimentation training course function B:** Euthanasia in animals, organized by Animalaria Formación y Gestión, S.L. (Madrid). 24 hours. November-december 2018.
- **Animal experimentation training course function C:** Realization of Procedures, organized by Animalaria Formación y Gestión, S.L. (Madrid). 57 hours. November-december 2018.