PAOLA BORREGO-MUÑOZ, MSC, PhD
Research Professor, Research Center
Fundación Universitaria Juan N. Corpas.
paola.borrego@juanncorpas.edu.co

DEGREES

- PhD in Applied Sciences - Universidad Militar Nueva Granada Cajicá-Colombia (2017- 2022). Thesis: Synthesis of phytoalexin analogues from simple amino acids: formulation of a structure-activity correlation model against *Fusarium oxysporum*.
- MSc in Biological Sciences. Emphasis Chemistry of Natural Products. Pontificia Universidad Javeriana. Bogotá-Colombia (2012- 2017). Thesis: Phytochemical study and screening of the biological activity of *Conyza trihecatactis* and *Ageratina vacciniaefolia* species.
- B.Sc in Chemistry. Universidad Distrital Francisco José de Caldas Bogotá D.C. (2004 - 2010). Thesis: Phytochemistry of extracts and fractions of *Petiveria alliacea* L. and evaluation of the cytotoxic effect on tumor cell lines K562, MCF-7, 4T1 and A375.

RESEARCH INTERESTS

- ✓ Phytochemistry
- ✓ Chemoinformatics
- ✓ Bioinformatics
- ✓ Organic Synthesis
- ✓ Biological Activity of Synthetic Compounds Synthetic and Secondary Metabolites

BIOGRAPHY

- **Research Professor**, Fundación Universitaria Juan N. Corpas, Research Center (2021- present).
- **PhD. Graduate Assistance**, Universidad Militar Nueva Granada. Project IMP-CIAS 2329 (2019-2020). Title: Derivatization of simple amino acids for the synthesis of pyrrolidinic heterocycles: structural study by X-ray diffraction and generation of a structure-activity model against *Fusarium oxysporum*.
- **PhD. Graduate Assistance**, Universidad Militar Nueva Granada. Project IMP-CIAS 2294 (2017-2018). Title: Derivatization of the amino acid L-tryptophan for the synthesis of 2-(1H-indol-3-ylmethyl)-4,5-disubstituted-2,4-dihydro-3H-pyrrole-3 -ona-type heterocyclic systems and their potential biological activity against Fusarium oxysporum.
- **Research Professional**, Fundación Universitaria Juan N. Corpas, Research Center (2013- 2017).

AWARDS AND RECOGNITIONS

- National GRANT as the Leader Researcher. MINCIENCIAS Grant Call 937. Project 100748. Title: Estudio biodirigido de dos especies endémicas colombianas como co-tratamiento antimicrobiano para disminuir la resistencia bacteriana. (2024-2027) Colombia.
- Scholarship and PhD. Graduate Assistance for the doctoral program at Universidad Militar Nueva Granada (2017-2020).
- International Doctoral Internship Scholarship (2020). Alianza del Pacífico - AGCID (Agencia Chilena de Cooperación Internacional para el Desarrollo)- Ministerio de Relaciones Exteriores. Chile.

SELECTED PUBLICATIONS

- Mahecha-Mahecha, C., **Borrego-Muñoz, P.**, Pombo, L. M., & Gamba-Sánchez, D. (2023). On the way to potential antifungal compounds: synthesis and in vitro activity of 2-benzofuranylacetic acid amides. RSC Advances, 13(36), 25296–25304. https://doi.org/10.1039/d3ra04737g.

- Mancipe JC, Vargas-Pinto P, Rodríguez OE, **Borrego-Muñoz P**, Castellanos Londoño I, Ramírez D, et al. Anti-Inflammatory Effect of Izalpinin Derived from Chromolaena leivensis: λ-Carrageenan-Induced Paw Edema and In Silico Model. Molecules. 2023;28(9): 3722. https://doi.org/10.3390/molecules28093722.

- **Borrego-Munõz P**, Becerra LD, Ospina F, Coy-Barrera E, Quiroga D. Synthesis (Z) vs (E) Selectivity, Antifungal Activity against Fusarium oxysporum, and Structure-Based Virtual Screening of Novel Schiff Bases Derived from l-Tryptophan. ACS Omega. 2022 ;7(28):24714–26. https://doi.org/10.3390/jof9010113.

- Arrué L, Cigna-Méndez A, Barbosa T, **Borrego-Muñoz P,** Struve-Villalobos S, Oviedo V, et al. New Drug Design Avenues Targeting Alzheimer's Disease by Pharmacoinformatics-Aided Tools. Vol. 14, Pharmaceutics. MDPI; 2022; 14: 1914. https://doi.org/10.3390/pharmaceutics14091914.

- Valdés-Jiménez A, Peña-Varas C, **Borrego-Muñoz P**, Arrue L, Alegría-Arcos M, Nour-Eldin H, et al. Psc-db: A structured and searchable 3d-database for plant secondary compounds. Molecules. 2021; 26(4): 1124. https://doi.org/10.3390/molecules26041124.

- Pombo Ospina LM, Piñeros LG, Urrea G, Mejia A, **Borrego-Muñoz P**, Barajas L, et al. Monografías de Cuatro Especies Vegetales Promisorias. 2018.

- Miguel L, Ospina P, **Borrego Muñoz P**, Matulevich J, Teherán A, Barajas Villamizar L. Composition and Antimicrobial Activity of the Essential Oils of Three Plant Species from the Sabana of Bogota (Colombia): *Myrcianthes leucoxyla, Vallea stipularis* and *Phyllanthus salviifolius*. NPC. 2016; 11(12): 1913-19.