

KENNEDY BONJOUR

Paris/FR - France

E-mail: kennedybonjour@gmail.com

ORCID: <https://orcid.org/0000-0002-0754-5578>

ResearcherID:

<https://publons.com/researcher/J-6407-2015/>

OBJECTIVE: RESEARCHER

Personal Statement

I am a dedicated and enthusiastic young scientist who has been contributing to interdisciplinary research studies on the interface of Cellular Biology, Immunology, and Microbiology. My scientific contributions to these fields have been primarily directed toward understanding leukocyte biology. These have included ultrastructure and cellular processes of eosinophil responses to inflammatory conditions and application of advanced microscopy techniques to the study of host-pathogen interactions. My contributions are attested by the following publications (H- Index: 4 - source: ISI Web of Knowledge). Currently, I am a postdoctoral researcher at Thomas Wollert's Lab/ Institut Pasteur working on membrane nucleation during phagophore expansion, applying both 3D imaging and cryo-microscopy techniques.

Scholarship and Awards

2021 First prize – Health Innovation for development of the Brazilian vaccine - sponsored by National Healthcare System (SUS) and Ministry of Health/Brazil.

2010 Best Oral Presentation at the III Integrated Scientific Congress, Federal University of Juiz de Fora. Title: Mechanism of Eosinophil Secretion in Experimental Asthma- Is there an Intracellular site for Pharmacologic Treatment?

2011 Scholarship winner at the III Transmission Electron Microscopy School for Brazilian Center for Physical Research.

2016 Best Oral Presentation at the XXXIX Scientific Symposium of Biology, Federal University of Juiz de Fora. Title: Vesicles Associated with Human Eosinophil Secretion Remains in Whole Morphology After Cell Death.

Professional Experience

Institut Pasteur, Paris/France

Dec 2022 – currently

Postdoctoral Researcher/Cell Biology

- I have investigated the subcellular localization of the connexins and pannexins in animal models and human lung tissue under immunofluorescence, immunohistochemistry, transmission electron microscopy, immunolabeling electron microscopy and tomography techniques.
- I have studied the gene and cytoplasmic expression of the connexins and pannexins in animal models of the COVID-19 and human biopsies.

I have studied the mechanistic pathway immunomodulatory process of connexin and pannexin blockers trigger to COVID-19 as pharmacological therapy

University of São Paulo, São Paulo/Brazil

Jun 2020 – Nov 2022

Postdoctoral Researcher/Pathology - Nov/2021 to Nov/2022

- I have investigated the subcellular localization of the connexins and pannexins in animal models and human lung tissue under immunofluorescence, immunohistochemistry, transmission electron microscopy, immunolabeling electron microscopy and tomography techniques.
- I have studied the gene and cytoplasmic expression of the connexins and pannexins in animal models of the COVID-19 and human biopsies.
- I have studied the mechanistic pathway immunomodulatory process of connexin and pannexin blockers trigger to COVID-19 as pharmacological therapy

Analyst of Innovation/Immunology - Jun/2021 to Nov/2021

- I have participated of the nasal vaccine development against COVID-19 at the Department of Immunology/ICB IV

- I have analyzed vaccines based on virus-like particle (VLP) and liposome under Cryo-Electron Microscopy (EM analysis)
- Along of the research, I presented the vaccine proposal to Biominas InovaLabs/Biomanguinhos/Fiocruz and won the 1st prize as Innovative Solution

Federal University of Juiz de Fora, Juiz de Fora/Brazil

February 2020 - currently

Collaborator Researcher - Feb/2020 to Jun/2021

- I have been responsible for gathering, analyzing, and sharing insights on research and scientific intelligence about ultrastructure of the SARS-CoV-2 infection
- I provided training in electron microscopy at the Microscopy Center of UFMG with emphasis on Tomography (3D reconstruction).
- I was responsible for the training and technical evaluation of the research team for the sample collection, data analysis and imaging processing.

NOVA Institute, Belo Horizonte/Brazil

February 2018 - February 2021

Professor of Nursing and Pharmacy - 02/2018 to Dez/2021

- Adjunct professor for the disciplines Cell Biology, Histology, Genetics, Immunology, Microbiology, Pathology, Epidemiology, Laboratory Analysis applied to Nursing and Undergraduate Thesis Advise.
- I was responsible to improve of the Pedagogical Plan of the nursing course.

Editor of the Health Journal- Apr/2019 a May/2021

- I was responsible for the technical elaboration of the journal scope.
- Selection of teachers to join the editorial team
- Development of protocols to evaluate writing quality

Vorxy Media Lab (Science and Health Communication), Juiz de Fora/MG

January 2014- June 2017

- Entrepreneur / Director of medical-science relationship.
- I was responsible to understand and represent scientific data to help physicians and the academic public to transmit scientific concepts through visual communication.
- I was responsible for developing custom scientific communication branding, through which papers were selected for the cover of relevant journals.
- I have participated of the book edition " *Células & Microscopia: Princípios práticos e teóricos*" from Editora Manole.

Academic Background

PhD in Cell Biology, Federal University of Minas Gerais, Belo Horizonte

December 2015 - November 2019

Mechanisms of eosinophil secretion during Influenza A H1N1 infection in the comorbidity model
Eosinophil mitochondrial dynamics in the health-disease process
Microscopy strategies for reconstructing 3D volumes of cells and organelles.

Techniques: Mammalian Cell Culture, Electron Microscopy, Confocal Microscopy, Light Microscopy, Immunostaining, Flow Citometry, ELISA, Animal Models.

MSc in Molecular and Cellular Biology, Oswaldo Cruz Foundation, Rio de Janeiro

February 2013 - July 2015

Eosinophil degranulation during asthma and inflammatory responses.

Techniques: Transmission Electron Microscopy, Light Microscopy and Molecular Biology (Western Blotting).

Bachelor of Nursing, Federal University of Juiz de Fora, Juiz de Fora

August 2007 - December 2012

 **English:** Writing (advanced), reading (advanced) and speaking (intermediate/advanced)

PUBLICATIONS

1. In Vivo ETosis of Human Eosinophils: The Ultrastructural Signature Captured by TEM in Eosinophilic Diseases

Frontiers in Immunology. 2022 –DOI: <https://doi.org/10.3389/fimmu.2022.938691>

VITOR H. NEVES, CINTHIA PALAZZI, KENNEDY BONJOUR, SHIGEHARU UEKI, PETER F. WELLER AND ROSSANA C. N. MELO

2. Mitochondrial Population in Mouse Eosinophils: Ultrastructural Dynamics in Cell Differentiation and Inflammatory Diseases

Frontiers in Cell and Developmental Biology. 2022 –DOI: <https://doi.org/10.3389/fcell.2022.836755>

KENNEDY BONJOUR; PALAZZI, C.; SILVA, T. P.; MALTA, KÁSSIA K.; NEVES, V. H.; BARROS, E. G. O.; NEVES, I.; KESTERN, V.; FORUNA, B. T.; SAMARASINGHE, A. E.; WELLER, PETER F.; BANDEIRA-MELO, C.; MELO, ROSSANA C. N.

3. Targeting the Annexin A1-FPR2/ALX pathway for host-directed therapy in dengue disease

eLife . 2022 - DOI: <https://doi.org/10.7554/eLife.73853>

COSTA, VIVIAN VASCONCELOS; SUGIMOTO, MICHELLE A; HUBNER, JOSY; BONILHA, CAIO S; QUEIROZ-JUNIOR, CELSO MARTINS; GONÇALVES-PEREIRA, MARCELA HELENA; CHEN, JIANMIN; GOBBETTI, THOMAS; LIBANIO RODRIGUES, GISELE OLINTO; BAMBIRRA, JORDANA L; PASSOS, INGREDY B; MACHADO LOPES, CARLA ELIZABETH; MOREIRA, THAIANE P; BONJOUR, KENNEDY; MELO, ROSSANA CN; OLIVEIRA, MILTON AP; ANDRADE, MARCUS VINICIUS M; SOUSA, LIRLÂNDIA PIRES; SOUZA, DANIELLE GLORIA; SANTIAGO, HELTON DA COSTA; PERRETTI, MAURO; TEIXEIRA, MAURO MARTINS

4. Single-Cell Analyses of Human Eosinophils at High Resolution to Understand Compartmentalization and Vesicular Trafficking of Interferon-Gamma

Frontiers in Immunology. 2018 - DOI: [10.3389/fimmu.2018.01542](https://doi.org/10.3389/fimmu.2018.01542)

CARMO, LÍVIA A. S.; BONJOUR, KENNEDY; SPENCER, LISA A.; WELLER, PETER F.; MELO, ROSSANA C. N.

5. CD63 is tightly associated with intracellular, secretory events chaperoning piecemeal degranulation and compound exocytosis in human eosinophils

Journal of Leukocyte Biology. 2016 - DOI: <https://doi.org/10.1189/jlb.3a1015-480r>

CARMO, L. A. S.; Bonjour, K.; UEKI, S.; NEVES, J. S.; LIU, L.; SPENCER, L. A.; DVORAK, A. M.; WELLER, P. F.; MELO, R. C. N.

6. Extracellular Microvesicle Production by Human Eosinophils Activated by -Inflammatory- Stimuli.

Frontiers in Cell and Developmental Biology. 2016 – DOI: <https://doi.org/10.3389/fcell.2016.00117>

AKUTHOTA, PRAVEEN; CARMO, LÍVIA A. S.; BONJOUR, KENNEDY; MURPHY, RYANN O.; SILVA, THIAGO P.; GAMALIER, JULIANA P.; CAPRON, KELSEY L.; TIGGES, JOHN; TOXAVIDIS, VASILIS; CAMACHO, VIRGINIA; GHIRAN, IONITA; UEKI, SHIGEHARU; WELLER, PETER F.; MELO, ROSSANA C. N

7. Eosinophil Secretion of Granule-Derived Cytokines

Frontiers in Immunology. 2016 – DOI: <http://dx.doi.org/10.3389/fimmu.2014.00496>

SPENCER, LISA A.; BONJOUR, KENNEDY; MELO, ROSSANA C. N.; WELLER, PETER F

 **Reviewer:** eLife (<https://elifesciences.org/>)

Certificates and Qualifications

Python and Machine Learning, USP.

May 2021 - currently

Intellectual Property, Fiocruz

February 2022 - currently

Electron Microscopy Techniques as Tool for Elucidating Biological Process – Practical course consists of: Cryoultramicroscopy, High Pressure freezing, Freeze fracture, Cryosubstitution and Tomography.

December 2018

Confocal Microscopy Applied to In vivo and Ex vivo Imaging (UFMG)

October 2018

Introduction of statistics by language R (Fiocruz,RJ)

January 2020

III TEM scholarship from CBPF/LABNANO

December 2011

Member in ongoing research projects

2021 - Role of connexin43 hemichannels and pannexin1 channels in liver injury induced by COVID-19 drugs

2021 - Current Immunological Aspects of COVID-19 as Evidence for Nursing Diagnosis.

2020 - Pathogenesis of SARS-CoV-2 infection: Viral Replication and Impact Compartments on Human Eosinophils

2019 - Eosinophils: functional responses in experimental models and human eosinophilic diseases

Member in Recently Completed Projects

2016 - 2020 CBB - APQ-03647-16 - Production of extracellular vesicles by human eosinophils activated by inflammatory stimuli

2012 – 2016 *Schistosoma mansoni* infection: parasitic-host-environment interactions and eosinophil secretion mechanisms

2011 - 2017 FAPEMIG: CBB-APQ-02239-14- Ultrastructure and eosinophil secretion mechanisms in response to experimental asthma and inflammatory stimuli

Member In Projects of Scientific & Technological Development

2018 - 2021 OnLine Microscopy (MOL) – Virtual Microscopy for Undergraduate Student

2014 - 2019 Microscopy and Microanalysis Network of Minas Gerais State (FAPEMIG). The main objective of this multi-institutional project is to disseminate the use of microscopy and microanalysis for the development of scientific and technological research in the Minas Gerais State (Brazil).

2011 - 2015 Center for Excellence in Microscopy and Microanalysis of High Resolution (PRONEX). A multi-institutional arrangement project to support the development and implementation of technological advances in microscopy and microanalysis fields promoting multidisciplinary research projects.

Member in Academic Extension Projects

2010 – 2011 Campaign for the capture and registration of bone marrow donors in the Minas Gerais State.

Description: Capture of bone marrow donors to strengthen the National Registry of Bone Marrow Donors REDOME

2010 - 2011 Child Cancer Awareness

Description: Awareness Extension Project on oncopathologies involved in child development

2010 - 2011 Beija -Flor: comprehensive care for infant carriers of sickle cell syndromes

Description: Attention to infant patients with sickle cell anemias



Supervision of Students

- Supervision of 3 Junior Research Fellow
- Thesis advisor for 14 undergraduates



Other Activities

- Experience in organization of scientific and academic events
- Evaluation commission for dissertation or thesis approval in Graduate Program of Ecology/UFJF (2020), Graduate program in Cell Biology/UFMG (2019) and Biological Science - undergraduate degree/UFJF (2018).