

Carolina Silva Nodari

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Educational Background

PhD in *Sciences - Translational Medicine*, Universidade Federal de São Paulo (UNIFESP), São Paulo, Brazil. Title of the Thesis: Molecular characterization of polymyxin resistance mechanisms among multidrug resistant *Acinetobacter baumannii*. Advisor: Ana Cristina Gales. Apr/2016-May/2020.

Master in *Pharmaceutical Sciences*, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil. Title of the Dissertation: Resistome analysis of carbapenemase-producing Enterobacteriaceae using Next-Generation Sequencing. Advisor: Afonso Luís Barth. Apr/2014-Mar/2016.

Bachelor in *Pharmacy*, UFRGS, Porto Alegre, Brazil. Project title: Frequency of imipenem heteroresistance among KPC-producing Enterobacteriaceae. Advisor: Afonso Luís Barth. Mar/2008-Dec/2013.

Post-Doctoral Training

Institut Pasteur, Paris, France. Project title: Emergence of antimicrobial-resistant populations of Enteropathogenic *Escherichia coli* (EPEC) during the 1950s to the 1970s. Supervisor: François-Xavier Weill. Nov/2020-Jun/2023.

Current Position

Deputy Director at the French National Reference Centre for *E. coli*, *Shigella* and *Salmonella* (CNR-ESS), Institut Pasteur, Paris, France. Jul/2023-present.

Grants and scholarships

ESCMID Individual Research Grant, funded by the European Society of Clinical Microbiology and Infectious Diseases (ESCMID), 2024.

ECCMID Travel Grant, provided by the European Society of Clinical Microbiology and Infectious Diseases (ESCMID), 2023.

Attendance support grant at the 12th International Symposium on the Biology of *Acinetobacter*, provided by the Federation of European Microbiological Societies (FEMS), 2019.

PhD scholarship for studying abroad, provided by the Coordination of Superior Level Staff Improvement (CAPES), 2018-2019.

Attendance support grant at the 16th ESCMID Summer School, provided by ESCMID, 2017.

ASM Student and Postdoctoral Travel Award - ASM Microbe, provided by the American Society for Microbiology, 2016.

PhD scholarship, provided by the Coordination of Superior Level Staff Improvement (CAPES), 2016-2020.

DAAD-Hochschulwinterkursstipendium 2013/2014, granted by the Deutsche Akademische Austauschdienst (DAAD), 2013.

Participation in scientific projects – only ongoing projects are listed here. The complete list of current and finished projects is available at <https://www.carolina-nodari.org/research-projects/>

AMRrules – Organism-specific interpretation of AMR genotypes. Project supported by ESCMID and EUCAST. Role: Collaborating investigator, member of the *E. coli/Shigella* subgroup. Groups leaders: Kat Holt, Natacha Couto, and Kate Baker (*E. coli/Shigella* subgroup). 2024-present.

Evaluation of the potential use of intimin and flagellar antigen types as molecular markers of enteropathogenic *Escherichia coli* (EPEC) population diversity. Project funded by ESCMID. Role: Principal Investigator. 2024-present.

Development and improvement of genomic typing tools for *Shigella* spp. and enteric *E. coli* populations. Role: Collaborating investigator. Principal investigator: François-Xavier Weill. 2023-present.

Surveillance of emerging extremely drug resistant (XDR) populations of *Shigella* spp.. Role: Principal Investigator. 2023-present.

Evolution of enteropathogenic and enterohemorrhagic populations of *E. coli* in Europe and emergence of antimicrobial resistance among these pathotypes. Role: Principal Investigator. 2020-present.

Publication summary – the complete track record can be found at <https://www.carolina-nodari.org/publications/>

Journal articles

Total: 32

In the last 3 years (2022-2024): 7

Total citations: 449 (as of 30.07.24 on Google Scholar)

Conference poster and oral presentations

Total: 39

In the last 3 years (2022-2024): 2

Presenting author: 13

Event attendances

34th European Congress of Clinical Microbiology and Infectious Diseases. Barcelona, Spain, 2024.

33rd European Congress of Clinical Microbiology and Infectious Diseases. Copenhagen, Denmark, 2023.

32nd European Congress of Clinical Microbiology and Infectious Diseases. Lisbon, Portugal, 2022.

VI Congresso Acadêmico da UNIFESP - Ciência e Universidade: Transformações para a Sociedade. Online only event, 2020.

12th International Symposium on the Biology of Acinetobacter. Frankfurt, Germany, 2019.

29th European Congress of Clinical Microbiology and Infectious Diseases. Amsterdam, Netherlands, 2019.

28th European Congress of Clinical Microbiology and Infectious Diseases. Madrid, Spain, 2018.

29º Congresso Brasileiro de Microbiologia. Foz do Iguaçu, Brazil, 2017.

16th ESCMID Summer School. Borstel, Germany, 2017.

ASM Microbe 2016. Boston, USA, 2016.

25th European Congress of Clinical Microbiology and Infectious Diseases. Copenhagen, Denmark, 2015.

28º Congresso Brasileiro de Microbiologia. Florianópolis, Brazil, 2015.

IV Simpósio Internacional de Microbiologia Clínica. João Pessoa, Brazil, 2014.

III Congresso Latino-Americano de Resistência Bacteriana. Gramado, Brazil, 2013.

Event Organization

“Séquençage génomique pour la surveillance de l'antibio-résistance : théorie et pratique”. Course organized by Institut Pasteur de Paris and Institut Pasteur de Dakar, Dakar, Senegal, 2023.

“Panorama da Resistência Bacteriana”. Continuous education course by Laboratorio Especial de Microbiologia Clínica, Sao Paulo, Brazil, 2019.

“Novas Tecnologias e Stewardship em Microbiologia Clínica”. Continuous education course by Laboratorio Especial de Microbiologia Clínica, Sao Paulo, Brazil, 2016.

“Teste de Sensibilidade de A a M”. Pre-congress course at the 4th International Symposium of Clinical Microbiology, Joao Pessoa, Brazil, 2014.

Invited Talks

“Gene-by-gene approach Part 2: cgMLST applications using Enterobase”. Lecture during “GenEpi-BioTrain – Interdisciplinary Workshop FWD”, Paris, France, 2024.

- “Biology and genomics of diarrheagenic *E. coli* and *Shigella*”. Lecture during “GenEpi-BioTrain – Interdisciplinary Workshop FWD”, Paris, France, 2024.
- “The use of genomic approaches for population studies and outbreak surveillance of diarrheagenic *Escherichia coli*”. Webinar organized by ESCMID study groups EFWISG and ESGEM, online, 2023.
- “Typage des *Escherichia coli* et *Shigella* spp. : Les concepts de sérotypes et pathotypes”. Lecture (in French) during “Séquençage génomique pour la surveillance de l'antibio-résistance : théorie et pratique”. Dakar, Senegal, 2023.
- “Surveillance génomique d’*E. coli* et *Salmonella* : l’outil EnteroBase”. Lecture (in French) during “Séquençage génomique pour la surveillance de l'antibio-résistance : théorie et pratique”. Dakar, Senegal, 2023.
- “Panorama Atual e Mecanismos de Resistência em *Neisseria gonorrhoeae*”. Lecture (in Brazilian Portuguese) during “VIII Curso LEMC/ALERTA – Resistência bacteriana de A a Z: da biologia molecular à prática clínica”, São Paulo, Brazil, 2017.
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Teaching/advisory experience

- Co-advisor** of the M1 internship of Nataliya Baschinski, at Institut Pasteur. Research Topic: *Genomic analysis of historical ampicillin-resistant enteropathogenic E. coli (EPEC)*. Advisor: Francois-Xavier Weill. Jan-Jun/2023.
- Co-advisor** of the master’s dissertation of Felipe Alberto Lei, at the Federal University of São Paulo. Research topic: *Diversity of carbapenemases among clinical isolates belonging to Pseudomonas putida group*. Advisor: Ana Cristina Gales. Aug/2018-Dec/2020.
- Co-advisor** of the bachelor’s final project of Larissa Akie Natsumeda, at the Federal University of São Paulo. Research topic: *Azithromycin resistance mechanisms among Neisseria gonorrhoeae clinical isolates*. Advisor: Ana Cristina Gales. Mar-Dec/2018.
- Co-advisor** of the bachelor’s final project of Lisiane Rech Pancotto, at the Federal University of Rio Grande do Sul. Research topic: *Rapid phenotypic detection of carbapenemases among Enterobacteriaceae clinical isolates*. Advisor: Afonso Luís Barth. Mar-Dec/2015.
- Assistant professor** in the Clinical Bacteriology course, offered to Pharmacy students at the Federal University of Rio Grande do Sul. Teaching hours: 30 hours. Aug-Dec/2014.
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Experience as peer reviewer

- Peer reviewer for international scientific publications** since 2016. Over 150 revised manuscripts submitted in more than 20 international scientific journals in the fields of
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clinical microbiology, microbial genomics, and antibiotic resistance, such as *Microbial Genomics* (since 2023), *Microbiology Spectrum* (since 2022), *Antimicrobial Agents and Chemotherapy* (since 2019) and *Journal of Antimicrobial Chemotherapy* (since 2018).

Research Topic editor at *Frontiers in Cellular and Infection Microbiology* (2022).

Peer reviewer of applications to the National Reference Centre for *Salmonella* and *Shigella* spp. in Belgium (2024).

Membership in Academic Societies

Federation of European Microbiological Societies (FEMS) – 2019-present

Deutsche Gesellschaft für Hygiene und Mikrobiologie (DGHM) – 2019-present

European Society of Clinical Microbiology & Infectious Diseases (ECCMID) – 2014-present

ESCMID Food- and Water-borne Infectious Study Group (EFWISG) – 2023-present

ESCMID Study Group for Epidemiological Markers (ESGEM) – 2023-present

ESCMID Study Group for Antimicrobial Resistance Surveillance (ESGARS) – 2023-present

Sociedade Brasileira de Microbiologia (SBM) – 2014-2018

Other activities

Member of the Animation Committee of the Global Health Department at Institut Pasteur, 2024-present.

Deputy Officer for Copy-Editing and Translation of Piplettes, the science popularization blog of Institut Pasteur, Feb/2023-Jun/2023.

Graduate students' representative at the Unity Conseil, Faculty of Pharmacy, Federal University of Rio Grande do Sul, 2015.

Mentoring and support of Brazilian students interested in pursuing an academic career in Europe, 2021-present.

International experience

Visiting researcher at the Institute for Medical Microbiology, Immunology and Hygiene, University of Cologne, Germany, Sep/2018-Aug/2019.

Visiting student at the Faculty of Pharmacy, University of Tübingen, Germany, Sep/2010-Feb/2011.

Prizes

2^o Lugar no Prêmio Melhor Tema Livre do XI Sul Encontro de Controle de Infecção (2nd Place in the Best Free Theme Prize at XI Southern Meeting for Infection Control), 2015.

Menção Honrosa no IV Simpósio Internacional de Microbiologia Clínica (Honorable Mention at IV International Symposium of Clinical Microbiology), 2014.

Láurea Acadêmica (Magna Cum Laude) and Alfredo Leal Prize, granted to the best student in the 2013/2 Pharmacy Class at Universidade Federal do Rio Grande do Sul (Federal University of Rio Grande do Sul), 2014.

Outstanding Presentation in the Clinical Pathology Session and Nomination to the Young Scientist Prize at XXIV Salão de Iniciação Científica da UFRGS (XXIV Undergraduate Research Meeting), 2012.

Languages

Brazilian Portuguese: native speaker; *English*: Level C1; *German*: Level B2; *French*: Level B1.
