

Curriculum Vitae

Identification:

Name: Leonardo Sanches

Address: Av. Prof. Lineu Prestes, 748, Laboratory 1812 - Butantã, São Paulo - SP, 05508-900

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Lattes iD: <http://lattes.cnpq.br/1796879990589201>

Summary:

Biologist with a degree from the University of São Paulo (USP) and a background in scientific research. Completed undergraduate research and a master's degree at the Ecology and Evolution Laboratory of the Butantan Institute, focusing on antimicrobial peptides from snakes. Driven by a strong interest in bioinformatics, I shifted my focus to cancer genomics. Currently pursuing a Ph.D. in Biochemistry at the Genomics and Gene Expression in Cancer Laboratory of the Institute of Chemistry at USP, with a research project exploring the functionality of cancer-associated long non-coding RNAs (lncRNAs) through co-expression network analysis. I am highly motivated, eager to learn and study new techniques, and committed to contributing to the advancement of knowledge in the field.

Areas of Expertise:

- Bioinformatics
- Biochemistry / Molecular Biology

Skills:

- Co-expression network analysis
- Transcriptomics analysis using RNA-seq data
- Bioinformatics tools and pipelines
- Python programming
- R programming
- Linux and Bash scripting
- Genomic data visualization
- Genetics
- Phylogeny Analysis
- Molecular biology techniques

Languages:

- English: Proficient in comprehension, reasonable speaking and writing skills.
- Portuguese: Proficient in comprehension, speaking, reading, and writing.
- Spanish: Proficient in comprehension, reasonable speaking, reading, and basic writing skills.

Education:

2021 - Present

Ph.D. in Biochemistry (CAPES Grade 6) University of São Paulo (USP), Brazil Title: Exploring Cancer-Associated lncRNAs Functionality through Co-expression Networks Analysis Advisor: Eduardo Moraes do

Rego Reis Scholarship: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), Brazil

2020 (Interrupted)

Ph.D. interrupted in 2021 in Bioinformatics (CAPES Grade 4) University of São Paulo (USP), Brazil Advisor: Eduardo Moraes Rego Reis Interruption year: 2021

2015 - 2017

Master's Degree in Toxinology (CAPES Grade 5) Instituto Butantan (IBU), Brazil Title: Expression of B-defensins in the snake *Bothrops jararaca* Year of Completion: 2017 Advisor: Nancy Oguiura Scholarship: Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES), Brazil

2009 - 2014

Bachelor's Degree in Biological Sciences University of São Paulo (USP), Brazil Title: Interaction of crotamine, a myotoxin from rattlesnake venom, with artificial membranes Advisor: Nancy Oguiura

Scientific Production:

1. OGUIURA, NANCY ; SANCHES, LEONARDO ; DUARTE, PRISCILA V. ; SULCA-LÓPEZ, MARCOS A. ; MACHINI, MARIA TERÊSA . Past, Present, and Future of Naturally Occurring Antimicrobials Related to Snake Venoms. *ANIMALS*, v. 13, p. 744, 2023.
2. VALENTE, RICHARD HEMMI ; LUNA, MILENE SCHMIDT ; DE OLIVEIRA, URSULA CASTRO ; NISHIYAMA-JUNIOR, MILTON YUTAKA ; JUNQUEIRA-DE-AZEVEDO, INÁCIO DE LOIOLA ; PORTES-JUNIOR, JOSÉ ANTONIO ; CLISSA, PATRICIA BIANCA ; VIANA, LUCIANA GODOY ; SANCHES, LEONARDO ; MOURA-DA-SILVA, ANA MARIA ; PERALES, JONAS ; YAMANOUYE, NORMA . *Bothrops jararaca* accessory venom gland is an ancillary source of toxins to the snake. *Journal of Proteomics*, v. 177, p. 137-147, 2018.
3. VIALA, VINCENT LOUIS ; HILDEBRAND, DIANA ; FUCASE, TAMARA MIECO ; SCIANI, JULIANA MOZER ; PREZOTTO-NETO, JOSÉ PEDRO ; RIEDNER, MARIA ; SANCHES, LEONARDO ; NISHIMURA, PAULA JULIANA ; OGUIURA, NANCY ; PIMENTA, DANIEL CARVALHO ; SCHLÜTER, HARTMUT ; BETZEL, CHRISTIAN ; ARNI, RAGHUVIR KRISHNASWAMI ; SPENCER, PATRICK JACK . Proteomic analysis of the rare Uracoan rattlesnake *Crotalus vegrandis* venom: Evidence of a broad arsenal of toxins. *TOXICON*, v. 107, p. 234-251, 2015.
4. COSTA, BRUNO A. ; SANCHES, LEONARDO ; GOMIDE, ANDREZA BARBOSA ; BIZERRA, FERNANDO ; DAL MAS, CAROLINE ; OLIVEIRA, EDUARDO B. ; PEREZ, KATIA REGINA ; ITRI, ROSANGELA ; OGUIURA, NANCY ; HAYASHI, MIRIAN A. F. . Interaction of the Rattlesnake Toxin Crotamine with Model Membranes. *JOURNAL OF PHYSICAL CHEMISTRY B*, v. 118, p. 5471-5479, 2014.

Additional Education:

2023

6th Researchers School at Campus USP São Carlos (14 hours), University of São Paulo (USP) (online course)

2021

Bioinformatics for Biologists: An Introduction to Linux, Bash Scripting (15 hours), Wellcome Genome Campus (online course)

2020

Introduction to Genomic Technologies (6 hours), Johns Hopkins University (online course)
Python for Genomic Data Science (8 hours), Johns Hopkins University (online course)
Genomic Data Science with Galaxy (8 hours), Johns Hopkins University (online course)
R Programming (57 hours), Johns Hopkins University (online course)

2018

Summer Course Workshop in Bioinformatics (8 hours), University of São Paulo
Summer Course in Bioinformatics (40 hours), University of São Paulo
2017 Annual Biosafety Course (8 hours), Instituto Butantan
Introduction to the R Language - hands-on (32 hours), Instituto Butantan

2016

Theoretical and Practical Fundamentals of Phylogenetic Systematics (40 hours), Instituto Butantan
Endnote Workshop - reference management tool (7 hours), Instituto Butantan

2015

Basic Concepts for the Study of Toxinology (30 hours), Instituto Butantan

2012

Biochemistry of Venoms (4 hours), University of São Paulo

2011

Apoptosis, Checkpoints, and Cancer (12 hours), University of São Paulo
Reptile Terrarium (4 hours), University of São Paulo

2010

Human Evolution: Molecular vs. Paleontological (12 hours), University of São Paulo
Forensic Entomology (12 hours), University of São Paulo

Presentations:

LACEN: An R Package for lncRNAs Functional Annotation Using Co-Expression Networks. SBBq. 2022.(Conference Presentation).

LACEN: An R Package for lncRNAs Functional Annotation Using Co-Expression Networks. I Simpósio dos Pós-Graduandos da Bioquímica. 2022. (Symposium Presentation).

Expression of B-defensins in Bothrops jararaca snake. 2017. (Conference Presentation).

Expressão de beta-defensinas na serpente Bothrops jararaca. 2016. (Symposium Presentation).

Expressão de B-defensinas na serpente Bothrops jararaca. 2016. (Seminar Presentation).

Interaction of the Rattlesnake Toxin Crotoamine with Model Membranes. 2014. (Other Presentation).

Interação da crotoamina com vesículas unilamelares gigantes. 2014. (Seminar Presentation).

Interaction of crotoamine with giant unilamellar vesicles. 2013. (Conference Presentation).

Interação de crotoamina com vesículas unilamelares gigantes. 2012. (Conference Presentation).

Participation in Events, Congresses, Exhibitions, and Fairs:

FEBRACE. Evaluator at FEBRACE. 2023. (Fair).

FEBRACE. Evaluator at FEBRACE. 2022. (Fair).

I Simpósio dos Pós-Graduandos da Bioquímica. 2022. (Symposium).

SBBq. 2022. (Congress).

FEBRACE. Evaluator at FEBRACE. 2020. (Fair).

FEBRACE. Evaluator at FEBRACE. 2019. (Fair).

XIV Congresso Brasileiro de Toxinologia. Expression of B-defensins in Bothrops jararaca snake. 2017. (Congress).

Simpósio da Pós-Graduação em Toxinologia do Instituto Butantan. Expressão de beta-defensinas na serpente Bothrops jararaca. 2016. (Symposium).

Reunião Científica Anual do Instituto Butantan. Interaction of Crotoamine with giant unilamellar vesicles. 2014. (Other).

Seminários do Laboratório de Ecologia e Evolução do Instituto Butantan. Interação da crotoamina com vesículas unilamelares gigantes. 2014. (Seminar).

Reunião Científica Anual do Instituto Butantan. Interaction of Crotoamine with giant unilamellar vesicles. 2013. (Meeting).

XI Congress of the Pan American Section of the International Society on Toxinology. Interaction of Crotoamine with giant unilamellar vesicles. 2013. (Congress).

Reunião Científica Anual do Instituto Butantã. Interaction of Crotoamine with giant unilamellar vesicles. 2012. (Meeting).

Reunión y Taller Científico Técnico de la Red Iberoamericana CYTED. Interação de crotoamina com vesículas unilamelares gigantes. 2012. (Other).

Seminários do Laboratório de Ecologia e Evolução do Instituto Butantan. Interaction of Crotoamine with giant unilamellar vesicles. 2012. (Seminar).

Workshop on Synthetic Biology and Robotics. 2011. (Other).