CURRICULUM VITAE ET STUDIORUM

Personal Information

- Work address: Division of Hematology and Clinical Immunology, Department of Medicine, Perugia University, Building CREO, Hospital S. Maria della Misericordia, Piazzale Menghini 8/9, 06129 Perugia, Italy
- Actual position: Postdoctoral Researcher at Università degli Studi di Perugia - UNIPG

EDUCATION

2021: Ph.D in Biotechnology, Federal University of Espirito Santo, Espirito Santo, Brazil, and University of Perugia, Perugia, Italy. Final Thesis Title: Genetic variability in *NOTCH1*: association with overweight and therapeutic implications in chronic lymphocytic leukemia in the elderly.

2016: M. Sc. in Biotechnology, Federal University of Espirito Santo, Espirito Santo, Brazil. Final Dissertation Title: Evaluation of the therapeutic potential of resveratrol as a new drug against visceral leishmaniasis

2008: Bachelor degree in Biological Sciences with honours, University of Vila Velha, Espirito Santo, Brazil. Final Thesis Title: Fungal community in senescent leaves of *Protium icicariba* in the restinga biome of Paulo Cesar Vinha State Park, Guarapari-ES.

TRAINING OR RESEARCH ACTIVITIES IN QUALIFIED ITALIAN AND FOREIGN RESEARCH INSTITUTES

2018-to date: Collaboration with University of São Paulo USP (Brazil) for genomic data analysis of elderlies from SABE project coordinated by the Pan American Health Organization

2017-2018: Training with Università degli studi di Perugia (Italy) in molecular and cellular biology techniques in the field of Chronic Lymphocytic Leukemia.

ORGANIZATION, COORDINATION, OR PARTICIPATION TO NATIONAL AND INTERNATIONAL RESEARCH GROUPS

2021-to date: Post Doc in Haematology, Univesity of Perugia – Università degli Studi di Perugia UNIPG (Italy) in the project "Development of multiparametric flow cytometry techniques in the diagnosis of Chronic Lymphocytic Leukemia"

2020-2021: Research scholarship in Haematology, University of Perugia - Università degli Studi di Perugia UNIPG (Italy) in the project "Study of new drugs anti-*NOTCH1* in CLL *in vitro* and *in vivo* models"

2016-2020: Ph. D. Fellowship in Biotechnology at Federal University of Espírito Santo – Universidade Federal do Espírito Santo UFES (Brazil) in the project "Association studies between Single Nucleotide Polymorphisms of *NOTCH1* and healthy aging – A cohort study"

2014-2016: M. Sc. Fellowship in Biotechnology at Federal University of Espírito Santo - Universidade Federal do Espírito Santo UFES (Brazil) in the project "Evaluation of the therapeutic potential of resveratrol as a new drug against visceral leishmaniasis"

TEACHING ACTIVITY

Seminars:

Systems Biology, Computational Biology and Synthetic Biology in the Omics Era. IV Biology Exhibition. In the original language: Biologia de sistemas, Biologia computacional e biologia sintética na era ômica. IV Mostra de Biologia. Federal University of Espirito Santo - UFES. Brazil. 2021. (Lecture Minister)

Laboratory training/tutoring:

Laboratory training in cell and molecular biology techniques to students at Università degli Studi di Perugia – UNIPG – Centro di Ricerca Emato Oncologica (CREO - Italy):

- Western blotting;
- Real time (qPCR) and digital PCR;
- Cell culture and in vitro experiments
- Flow cytometry and sorting analysis
- **RNA-Seq analysis with R programming for Drug Discovery**

Laboratory training in cell and molecular biology, genetics and immunology techniques to students at Universidade Federal do Espírito Santo – UFES (Brazil):

- Enzime Linked ImmunoSorbent Assay (ELISA);
- In vivo experimental infection
- Cell culture and in vitro experiments
- **SNP association study with R programming**

Student supervisor for thesis preparation:

Ferreira, Izabela. Polymorphism in *NOTCH1* is associated with RDW: a predictive marker of aging and mortality. In the original language: Polimorfismo de *NOTCH1* associado ao RDW: um marcador preditivo de envelhecimento e mortalidade. Department of Biological Sciences/Genetics. Federal University of Espirito Santo. 2022. (M. Sc. Dissertation Supervisor)

Capoccia, Silvia. Effect of curcumin in the stress of the Endoplasmatic Reticulum in patients with Chronic Lymphatic Leukemia. Department of Pharmaceutical Science. In the original language: Effetto della curcumina nello stress del reticolo endoplasmatico nei pazienti affetti da leucemia linfatica cronica. Università degli Studi di Perugia. 2021 (Thesis Supervisor – "Correlatore di tesi di Laurea")

Moura, Renan Garcia. Expression of inhibitory receptors and their ligands in lesions of patients with localized cutaneous leishmaniasis caused by *Leishmania braziliensis*. In the original language: Expressão de receptores inibitórios e seus ligantes em lesões de pacientes com leishmaniose cutânea localizada causada por *Leishmania braziliensis*. Departament of Pathology/Infectious diseases. Federal University of Espirito Santo. 2019. (M. Sc. Dissertation Supervisor)

Salgado, Caio Loreiro. Impact of aging on the immune response of BALB/C and C57BL/6 mice against leishmaniasis visceral. In the original language: Impacto do envelhecimento na resposta imune de camundongos BALB/c e C57BL/6 contra a leishmaniose visceral. Departament of Pathology/Infectious Diseases. Federal University of Espirito Santo. 2019. (M. Sc. Dissertation Supervisor)

Correa, Andrés Mendez. Use of adjuvants for mucosals (caf09, caf01 and MPL) in the vaccines formulation against Viceral Leishmaniasis. In the original language: Uso de adjuvants (CAF09, CAF01 e MPL) mucosa-compatíveis na formulação de vacinas contra a leishmaniose visceral. Departament of Pathology/Biotechnology. Federal University of Espirito Santo. 2018 (M. Sc. Dissertation Supervisor)

Barcelos, Divan Henrique Fernandes. Evaluation of the leishmanidal potential of bacteriokins. In the original language: Avaliação do potencial leishmanicida de bacteriocinas. Departament of Pathology/Biotechnology. Federal University of Espirito Santo. 2018 (M. Sc. Dissertation Supervisor)

Perin, Livia Reisen. In vitro effect of alfa-bisabolol and its derivatives on Macrophages and Promastigote and amastigote of *Leishmania amazonensis* e *L. infantum*. In the original language: Efeito in vitro do alfa-bisabolol e seus derivados sobre macrófagos e formas promastigotas e amastigotas de *Leishmania amazonensis* e *L. infantum*. Department of Veterinary Sciences. Federal University of Espirito Santo. 2017 (M. Sc. Dissertation Supervisor)

NATIONAL AND INTERNATIONAL CONGRESS/CONFERENCES PARTICIPATION

Poster/Oral Presentation:

Fernandes, I. S. ; **Silva Barcelos, Estevão Carlos** ; Naslavsky, M. ; Zeidler, S. L. V. V. ; Paula, F. ; Duarte, Y. ; Bueno, M. R. P. ; Zatz, M. ; Errera, F. I. V. Polymorphisms in *NOTCH1* are associated with RDW: A predictive marker of aging and mortality. II Symposium of human and molecular genetics of Espirito Santo. 2021. (Poster Presentation)

Silva Barcelos, Estevão Carlos; Baldoni, S. ; Adamo, F. M. ; Dorillo, E. ; Sorcini, D. ; Stella, A. ; Rompietti, C. ; Falco, F. ; Rosati, E. ; Cavalcante, L. ; Giles, F. J. ; Sportoletti, P. Targeting Chronic Lymphocytic Leukemia (Cll) cells with the Glycogen Synthase Kinase-3 Beta (Gsk-3β)-selective small molecule inhibitor, 9-Ing-41. European Hematology Association Congress Eha 2021. (Poster Presentation)

Silva Barcelos, Estevão Carlos; Rompietti, C. ; Papa, B. ; Falco, F. ; Baldoni, S. ; Dorillo, E. ; Adamo, F. M. ; Stella, A. ; Sartori, S. ; Scialdone, A. R. ; Guarente, V. ; Mondani, E. ; Cecchini, D. ; Cantelmi, M. G. ; Rosati, E. ; Sportoletti, P. Curcumin exhibits in vitro and in vivo anti-leukemic activity interfering with the Notch1 pathway inducing Endoplasmic Reticulum stress in Chronic Lymphocytic Leukemia. XVI Congresso Nazionale Sies 2021. (Poster Presentation)

Fernandes, I. S. ; Souza, V. P. ; Adami, J. B. ; Bonfim, J. A. ; **Silva Barcelos, Estevão Carlos**; Errera, F. I. V. In silico valuation of the functional impact of SNPs associated with Asthma. IV Biology Exhibition. 2021. (Poster Presentation)

Silva Barcelos, Estevão Carlos; Gomes, Daniel Cláudio Oliviera ; Pereira, M. F. Phagocytosis, Persistence and cytokines production upon stimulation of human macrophages with *Staphylococcus aureus* of different lineages. XXIX Brazilian congress of microbiology. 2017. (Poster Presentation)

Silva Barcelos, Estevão Carlos; Gomes, Daniel Cláudio Oliviera ; Pereira, M. F. Antileishmania activity of resveratrol in a murine model of visceral leishmaniasis. 1st International Multidisciplinary Microscopy School and Exhibition. 2016. (Oral Presentation)

Barcelos, E. C. S.; Pescinalli, N. ; Gomes, D. C. O. Intranasal vaccination with Saag increase the imunogenic immune response against mastitis caused by *S. Aureus*. XXXIX Congress of the Brazilian Society of Immunology. 2014. (Poster Presentation)

Organization/Participation:

I Symposium of Human and Molecular Genetics of Espirito Santo. Federal University of Espirito Santo. Brazil. 2019. (Organizing Committee)

II Open Door Biotechnology: Bio economy and Biodiversity. Federal University of Espirito Santo. Brazil. 2019 (Symposium Monitor)

Chronic Lymphocytic Leukemia: Advances in Pathogenesis and Treatment. Venice, Italy. 2018 (Participation)

I Symposium of Head and Neck Cancer: Clinical conduct in the face of new challenges. Federal University of Espirito Santo. 2017 (Organizing Committee)

1st International Multidisciplinary Microscopy School and Exhibition. Federal University of Espirito Santo. 2016. (Participation)

XXXIX Congress of the Brazilian Society of Immunology. Brazil. 2014 (Participation)

PRIZES AND AWARDS FOR RESEARCH ACTIVITIES

Silva Barcelos, Estevão Carlos; Fernandes, I. S. ; Souza, V. P. ; Adami, J. B. ; Bonfim, J. A.; Errera, F. I. V. In silico valuation of the functional impact of SNPS associated with Asthma. II Symposium of human and Molecular Genetics. Federal University of Espirito Santo - Ufes. 2021. (Best Oral Presentation)

SCIENTIFIC PROFILE
(Orcid ID: 0000-0001-7076-6165; Scopus ID: 57189375292)

BIBLIOMETRIC INDEX (updated the 09/08/2022)

- NUMBER OF PUBLICATIONS: 5 in international journals with "peer-review" (cited in PubMed and Scopus and / or ISI Web of knowledge-Journal Citation Reports)
- TOTAL NUMBER OF CITATIONS: 32 **(Scopus)**; 45 (Google Scholar)
- TOTAL IF: 36.95
- H INDEX: 3 **(Scopus)**; 3 (Google Scholar)

MAIN RESEARCH AREAS

- Cellular/molecular biology and pharmacology research focused on Immunology, Oncology and Genetics.
- Computational biology and biostatistics in R programming language mainly applied to genetic association studies and gene expression analysis.
- *In vivo* studies involving experimental models of infection and cancer, specifically hematological malignancies.

COMPLETE LIST OF PUBLICATIONS IN INTERNATIONAL JOURNALS

1) De Falco F, Rompietti C, Sorcini D, Esposito A, Scialdone A, Baldoni S, Del Papa B, Adamo F, **Silva Barcelos EC**, Dorillo E, Stella A, Di Ianni M, Screpanti I, Sportoletti P, Rosati E. GSK3β is a critical, druggable component of the network regulating the active NOTCH1 protein and cell viability in CLL. Cell death and disease. Provisionally accepted in 08 Aug 2022. (No citation, IF 2022: 8.79)
2) Baldoni S, Del Papa B, De Falco F, Dorillo E, Sorrentino C, Rompietti C, Adamo FM, Nogarotto M, Cecchini D, Mondani E, **Silva Barcelos EC**, Moretti L, Mameli MG, Fabi B, Sorcini D, Stella A, Giancola R, Guardalupi F, Ulbar F, Plebani S, Guarente V, Rosati E, Di Nicola M, Marchioni M, Di Ianni M, Sportoletti P. NOTCH1 Activation Negatively Impacts on Chronic Lymphocytic Leukemia Outcome and Is Not Correlated to the NOTCH1 and IGHV Mutational Status. Front Oncol. 2021 May 26;11:668573. doi: 10.3389/fonc.2021.668573. PMID: 34123837; PMCID: PMC8187905. (1 citation; IF 2021: 5.36)

3) Del Papa B, Baldoni S, Dorillo E, De Falco F, Rompietti C, Cecchini D, Cantelmi MG, Sorcini D, Nogarotto M, Adamo FM, Mezzasoma F, **Silva Barcelos EC**, Albi E, Iacucci Ostini R, Di Tommaso A, Marra A, Montanaro G, Martelli MP, Falzetti F, Di Ianni M, Rosati E, Sportoletti P. Decreased NOTCH1 Activation Correlates with Response to Ibrutinib in Chronic Lymphocytic Leukemia. Clin Cancer Res. 2019;25(24):7540-7553. doi: 10.1158/1078-0432.CCR-19-1009. (16 citations; IF 2021: 13.8)
4) Di Ianni M, Baldoni S, Del Papa B, Aureli P, Dorillo E, De Falco F, Albi E, Varasano E, Di Tommaso A, Giancola R, Accorsi P, Rotta G, Rompietti C, **Silva Barcelos EC**, Campese AF, Di Bartolomeo P, Screpanti I, Rosati E, Falzetti F, Sportoletti P. NOTCH1 Is Aberrantly Activated in Chronic Lymphocytic Leukemia Hematopoietic Stem Cells. Front Oncol. 2018;8:105. doi: 10.3389/fonc.2018.00105. eCollection 2018. (21 citations; IF 2021: 5.36)
5) Stegmiller, NP, **Silva Barcelos EC**, Leal, JM, Covre, LP, Donatele, DM, De Matos Guedes, HL, Cunegundes, MC, Rodrigues, RR, Gomes, DCO. Intranasal vaccination with adjuvant-free S. Aureus antigens effectively protects mice against experimental sepsis. Vaccine. 2016;16:30147/5. Doi: 10.1016/j.vaccine.2016.04.018. (7 citations; IF 2021: 3.64)

BOOK AND BOOK CHAPTERS

Fernandes IS, Sousa VP, Bride LL, **Barcelos ECS**, Marcarini BG, Ditchfield AD, Paula F, Rodrigues MCS, Rosetti EP, Errera FVI. Genetics in the omic age: analysis of important issues for the training of the dentist of the future In: Cristina Berger Fadel; Alessandra de Souza Martins. (Org.). Dentistry and comprehensive care: aspects of professional training and health services. First ed, Publishing company Cientifica, 2021, v. 1, p. 124-157.

SUBMITTED MANUSCRIPT

Silva Barcelos, Estevao Carlos et al. Genetic variation in *NOTCH1* is associated with excessive weight in Brazilian elderly. Manuscript submitted to the BMC genomics on 10 August 2022.

Silva Barcelos, Estevao Carlos et al. *NOTCH1* mutated CLL displays high endoplasmic reticulum stress response with druggable potential. Manuscript to be submitted to Leukemia (Nature) in October 2022.

12/10/2022