CURRICULUM VITAE

Isabela Gerdes Gyuricza

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EDUCATION

2017 - 2019. MSc in Genetics at the Genetics and Evolutionary Biology Department - Biosciences Institute – University of São Paulo, São Paulo, Brazil.

2012 - 2016. BSc in Biology at the College of Philosophy, Sciences and Literature of Ribeirão Preto – University of São Paulo, Ribeirão Preto, Brazil.

RESEARCH EXPERIENCE

Nov 2019 – Current. Research Data Analyst at The Jackson Laboratory. Working on projects involving big data and aging.

Principal Investigator: Gary Churchill. The Jackson Laboratory, Bar Harbor, USA.

Skills: R; bash; RNA sequencing and proteome analysis and processing; Quantitative Trait Loci (QTL) mapping; statistics modeling; data visualization; computational biology; writing reports and manuscripts.

Sept 2018 – Mar 2019. Visiting scholar at The Jackson Laboratory. Training in computational biology and statistics.

Principal Investigator: Gary Churchill. The Jackson Laboratory, Bar Harbor, USA.

Projects: Analysis of differential gene expression in a mouse model for Marfan Syndrome with phenotypic variability; differential gene and protein expression in the aging heart of Diversity Outbred mice.

Skills: R; bash; RNA sequencing and proteome data analysis; QTL mapping; statistics; computational biology; writing reports.

2017 – 2019. Master's student at the Genetics and Evolutionary Biology Department.

Principal Investigator: Lygia da Veiga Pereira, University of São Paulo, São Paulo, Brazil.

Project: Characterization of the role of *Hspg2* gene as a modulator of cardiovascular and skeletal phenotypes in Marfan Syndrome.

Skills: Molecular biology; murine model experimentation; histological techniques.

2013 – 2016. Undergraduate research fellow at Fundação Hemocentro of Ribeirão Preto.

Principal Investigator: Simone Kashima, University of São Paulo, Ribeirão Preto, Brazil.

Project: Teratoma formation assay in mice for evaluating pluripotency of induced pluripotent stem cells (iPS).

Skills: Cellular culture; murine model experimentation; histological techniques.

CONTINUING EDUCATION

2021. Good with Words: Writing and Editing Specialization, University of Michigan - (Coursera).

LANGUAGE SKILLS

Portuguese (native); English (fluent).

PUBLICATIONS

Takemon Y; Chick, JM; Gerdes Gyuricza, I; Skelly DA; Devuyst O; Churchill GA; Korstanje, R**.** Proteomic and transcriptomic profiling reveal different aspects of aging in the kidney. *eLife*, 2021. DOI: 10.7554/eLife.62585

Barbosa de Souza, R; Gerdes Gyuricza, I; Cassiano Lucena, L; Farinha-Arcieri, LE; Liberatore Alvim, NA; do Carmo Schuindt, S; Caldeira, W; Cruz, MV; Ribeiro, AF; Tedesco, RC; Reinhardt, DP; Smith, R; Koh, IHJ; Pereira, LV. The $mg^{\Delta lpn}$ mouse model for Marfan syndrome recapitulates the ocular phenotypes of the disease. *Experimental Eye Research*, 2021. DOI: 10.1016/j.exer.2021.108461

Preprint: Choi, K; He, H; Gatti, DM; Philip, VM; Raghupathy, N; Gerdes Gyuricza, I; Munger, SC; Chesler, EJ; Churchill, GA. Genotype-free individual genome reconstruction of Multiparental Population Models by RNA sequencing data. *bioRxiv*, 2020. DOI: 10.1101/2020.10.11.335323

Preprint: Gerdes Gyuricza, I; Chick, JM; Keele GR; Deighan AG; Munger, SC; Korstanje, R; Gygi, SP; Churchill GA**.** Genome-wide transcript and protein analysis reveals distinct features of aging in the mouse heart. *bioRxiv*, 2020. DOI: 10.1101/2020.08.28.272260

Gerdes Gyuricza, I; Barbosa de Souza, R; Farinha-Arcieri, LE; Pereira, LV. Is *HSPG2* a modifier gene for Marfan Syndrome? *Eur J Hum Genet*, 2020. DOI: 10.1038/s41431-020-0666-0

Reis, LCJ; Picanço-Castro, V; Paes, BCMF; Ferreira, AO; Gerdes Gyuricza, I; Araújo, FT; Morato, M; Moreira, LF; Costa, EBO; Santos, TPM; Covas, DT, Pereira, LV; Russo, EMS. Induced Pluripotent Stem Cell for the Study and Treatment of Sickle Cell Anemia. *Stem Cell International*, 2017. DOI: 10.1155/2017/7492914

HONORS, AWARDS AND FUNDINGS

2021. Scholarship from the University of Washington to attend to the 2021 Online Summer Institute in Statistical Genetics (SISG).

Sept 2018 – Mar 2019. International fellow research scholarship by the Sao Paulo Research Foundation (FAPESP). Project: Analysis of differential gene expression in a mouse model for Marfan Syndrome with phenotypic variability. The Jackson Laboratory, Bar Harbor, USA.

2017 - 2019. Masters research scholarship by the Sao Paulo Research Foundation (FAPESP). Project: Characterization of the role of *Hspg2* gene as a modulator of cardiovascular and skeletal phenotypes in Marfan Syndrome. University of São Paulo, São Paulo, Brazil.

2017. Sponsorship from The Howard Hughes Medical Institute. Human and Mammalian Genetics and Genomics: The 58th McKusick Short Course". The Jackson Laboratory, Bar Harbor, USA.

Jan 2016 – May 2016. Undergraduate research scholarship by the National funding agency (CNPq). Project: Molecular and functional characterization of induced pluripotent stem cells (iPS). University of São Paulo, Ribeirão Preto, Brazil.

2013 - 2016. Undergraduate research scholarship by the Sao Paulo Research Foundation (FAPESP). Project: Teratoma formation assay in mice for evaluating pluripotency of induced pluripotent stem cells (iPS). University of São Paulo, Ribeirão Preto, Brazil.

2013. Honorable mention award at the Undergraduate Research Symposium at the University of São Paulo. Poster presentation: Teratoma formation assay for evaluating pluripotency of induced pluripotent stem cells (iPS). University of São Paulo, Ribeirão Preto, Brazil.

PARTICIPATION IN SCIENTIFIC EVENTS/COURSES

2020. 49th Annual AGE meeting (online).

Talk: Using genetically diverse mice to define transcript and protein dynamics in the aging heart. Gyuricza,I.G.; Chick, J.M.; Keele, G.R.; Deighan, A.G.; Munger, S.C.; Korstanje, R.; Gygi, S.P.; Churchill, G.A.

2020. TAGC 2020 (online).

Poster presentation: Using genetically diverse mice to define transcript and protein dynamics in the aging heart. Gyuricza,I.G.; Chick, J.M.; Keele, G.R.; Deighan, A.G.; Munger, S.C.; Korstanje, R.; Gygi, S.P.; Churchill, G.A.

2019. 17th Meeting of the Complex Traits Community, San Diego, USA.

Talk: Differential gene and protein expression in the aging heart of Diversity Outbred mice. Gyuricza,I.G.; Choi, K.; Pham, D.; Deighan, A.; Churchill, G.A.

2018. The American Society of Human Genetics (ASHG 2018), San Diego, USA.

Poster presentation: Characterization of vascular phenotypic variability in a non-isogenic mouse model for Marfan Syndrome. Gyuricza, I.G.; Souza, R.B.; Fernandes, G.R.; Farinha-Arcieri, L.E.; Koh, I.H.J.; Pereira, L.V.

2017. Class taught: “Exome and Genome”. Postgraduate program of Gastroenterology and Pediatric Hepatology - School of Medicine at the Federal University of São Paulo, São Paulo, Brazil.

2017. Human and Mammalian Genetics and Genomics: The 58th McKusick Short Course”. The Jackson Laboratory, Bar Harbor, USA.

Poster presentation: Analysis of *Hspg2* and *Fbn1* expression in the modulation of phenotypic variability in two mice strains. Gyuricza, I.G.; Souza, R.B.; Farinha-Arcieri, L.E.; Fernandes, G.R.; Pereira, L.V.

2016. I Workshop of Genome Structure and Expression, Federal University of São Paulo, Ribeirão Preto, Brazil.

Talk: Characterization of the role of *Hspg2* gene as a modulator of cardiovascular and skeletal phenotypes in Marfan Syndrome. Gyuricza, I.G.; Souza, R.B.; Farinha-Arcieri, L.E.; Fernandes, G.R.; Pereira, L.V.

2015. XII Conference to Biology Students (XII CAEB), State University of Campinas, Campinas, Brazil.

Poster presentation: *TCL1* contribution to pluripotent and tumorigenic properties of induced pluripotent stem cells (iPS). Gyuricza, I.G.; Malta, T.M.; Magalhães, D.A.R.; Neder, L.; Covas, D.T.; Kashima, S.

2015. Gene therapy course. XII Conference to Biology Students (XII CAEB), State University of Campinas, Campinas, Brazil.

2015. Brazilian conference for Hematology, Hemotherapy and Cell Therapy (HEMO 2015), São Paulo, Brazil.

Poster presentation: Molecular and functional characterization of induced pluripotent stem cells (iPS). Gyuricza, I.G.; Malta, T.M.; Souza, L.E.B.; Magalhães, D.A.R.; Orellana, M.D.; Neder, L.; Covas, D.T.; Kashima, S.

2014. XXII Undergraduate International Research Symposium at the University of São Paulo (XXII SIICUSP), Ribeirão Preto, Brazil.

Poster presentation: Molecular characterization of induced pluripotent stem cells (iPS). Gyuricza, I.G.; Rodrigues, E.S.; Orellana, M.D.; Magalhães, D.A.R.; Malta, T.M.; Kashima, S.

2014. II Cell Culture course of College of Pharmaceutical Sciences of Ribeirão Preto - University of São Paulo, Ribeirão Preto, Brazil

2013. XXI Undergraduate International Research Symposium at the University of São Paulo, Ribeirão Preto, Brazil.

Poster presentation: Teratoma formation assay for evaluating pluripotency of induced pluripotent stem cells (iPS). Gyuricza, I.G.; Malta, T.M.; Souza, L.E.B.; Kashima, S.

2013. Stem cells - From quality control to novel derivation procedures course. Brazilian Association for Cellular Therapy (ABTCel), Rio de Janeiro, Brazil.

2012. Animals models for fear and anxiety course. XXX Annual Meeting of Ethology e III Latin American Symposium of Ethology, Brazilian Society of Ethology (SBET), Ribeirão Preto, Brazil.

2012. Biotechnology applications course. XL Week of Biological Studies of College of Philosophy, Sciences and Letters of Ribeirão, University of São Paulo, Ribeirão Preto, Brazil.

PARTICIPATION IN SCIENTIFIC ABSTRACTS

2018. 10th International Research Symposium on Marfan Syndrome and related disorders, Amsterdam, The Netherlands.

Poster presentation: Disruption of the elastic fibers in the ocular system of mouse model for Marfan Syndrome. Souza, R.B.; Gyuricza, I.G.; Farinha-Arcieri, L.E.; Liberatore, A.M.A.; Martins, A.M.C.R.P.F.; Catroxo, M.H.B.; Tedesco, R.C.; Smith, R.; Koh, I.H.J.; Pereira, L.V.

2016. Brazilian congress of Hematology, Hemotherapy and Cell Therapy (HEMO 2016), Florianópolis, Brazil.

Poster presentation: Characterization of mesenchymal cells derived from induced pluripotent stem cells (iPS). Costa, P.N.M.; Malta, T.M.; Gyuriza, I.G.; Ferreira, A.R.; Caruso, S.R.; Tozetti, P.A.; Goday, A.L.C; Orellana, M.D.; Menezes, C.C.O.; Covas, D.T.; Kashima, S.

2016. Brazilian congress of Hematology, Hemotherapy and Cell Therapy (HEMO 2016), Florianópolis, Brazil.

Poster presentation: Generation of induced pluripotent stem cells with defined phenotype for blood transfusions. Catelli, L.F.; Eis, L.C.I.; Melo, F.U.F.; Gyuricza, I.G.; Sobral, L.M.; Ferreira, A.R.; Rodrigues, E.S.; Leopoldino, A.M.; Covas, D.T.; Kashima,S.

VOLUNTEER SCIENTIFIC ACTIVITIES

2021. Class taught: “Using omics data to unravel the molecular dynamics of the aging heart”. Data Science Club – University of Connecticut (Online).

2017. Graduate teaching assistant for Genetics and Evolution undergraduate course, University of São Paulo, São Paulo, Brazil.

2017. Public scientific exposition entitled “Bio na Rua” as part of the University extension project, College of Philosophy, Sciences and Letters of Ribeirão Preto, University of São Paulo, Ribeirão Preto, Brazil.

2016. Assistant for pluripotent cells course at VXI Summer Course: Genome, Proteome and the Cellular Universe at Fundação Hemocentro de Ribeirão Preto, University of São Paulo, Ribeirão Preto, Brazil.

2015. Scientific and educational project developed for elementary school students as part of the program “Casa da Ciência” at Fundação Hemocentro de Ribeirão Preto, University of São Paulo, Ribeirão Preto, Brazil.