

CURRICULUM VITAE

Marcelo Rigon Zimmer

Country of Citizenship: Brazil

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LANGUAGES

Portuguese and English, fluent written and spoken.

RESEARCH POSITION

2019 - Present Postdoctoral fellow in Biochemistry

Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil

Supervisor: Dr. Diogo Onofre Gomes de Souza

EDUCATION

2008 - 2012 Bachelor of Pharmacy (BPharm)

Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, Brazil

Supervisor: Dr. Flávia Valladão Thiesen

2008 - 2009 Undergraduate researcher

Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, Brazil

Supervisor: Dr. Carlos Alexandre Sanchez Ferreira

- 2011 - 2012 Undergraduate researcher**
Pontificia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, Brazil
Supervisor: Dr. Flávia Valladão Thiesen
- 2013 - 2019 PhD in Biochemistry**
Thesis defense date: February 20th, 2019
Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil
(Degree granting institution)
Yale University, New Haven, USA (Experimental work)
Supervisor: Dr. Marcelo de O. Dietrich
Co-Supervisor: Dr. Diogo Onofre Gomes de Souza

Research Interest

I am interested in understanding the neural mechanisms underlying infant-to-mother interaction/attachment in animal models.

Research Expertise

- Neurodevelopment;
- Mother-infant interaction;
- Animal behavior;
- Neonatal animal behavior.

Research Skills

- Genotyping;
- Transgenic animal models;
- Molecular biology (ribosome profiling, RNA extraction, DNA extraction, qPCR);
- Brain sectioning and immunohistochemistry;
- Stereotaxic surgery in neonatal animal models;
- Behavioral design and assessment in experimental models.

Ongoing Projects

1. Assessment of the brain areas involved in infant-to-mother interaction in neonatal rats.
2. Evaluation of the brain areas involved in the development of infant-to-mother attachment in neonatal guinea pigs.
3. Effects on mental health in children due to COVID-19 pandemic.

UNIVERSITY TEACHING

2019 - present **Medical Biochemistry I.** School of Medicine, Universidade Federal do Rio Grande do Sul (UFRGS), Brazil.

SCHOLARSHIPS & AWARDS

2014 - 2015 - PhD scholarship, Science Without Borders, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)

2015 - 2016 - PhD scholarship, Science Without Borders, Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)

2017 - 2018 - PhD scholarship, Science Without Borders, Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES).

2020 - Best Ph.D. Thesis in Biological Sciences II (Prêmio Capes de Tese 2020).

ONGOING RESEARCH SUPPORT

1. CAPES 12/2020, Telemedicine and Healthcare Data Analytics [88887.507218/2020] (SICAPES3) - Souza (PI), Zimmer (CO-PI) – 01/08/2020 - 01/08/2023

Project title: *Development of an interactive mobile platform for risk assessment of depression and anxiety in quarantined children due to the COVID-19 pandemic.*

BIBLIOGRAPHY

★ Selected Publication

Peer-Reviewed Original Research

1. ★ *Functional Ontogeny of Hypothalamic Agrp Neurons in Neonatal Mouse Behaviors.* **Zimmer MR**, Fonseca AHO, Iyilikci O, Pra RD, Dietrich MO. *Cell*. 2019 Jun 27. doi: 10.1016/j.cell.2019.04.026.
2. *Activation of Agrp neurons modulates memory-related cognitive processes in mice.* **Zimmer MR**, Schmitz AE, Dietrich MO. *Pharmacol Res*. 2019 Mar. doi: 10.1016/j.phrs.2018.12.024.
3. *Regulation of substrate utilization and adiposity by Agrp neurons.* Cavalcanti-de-Albuquerque JP, Bober J, **Zimmer MR**, Dietrich MO. *Nat Commun*. 2019 Jan 18. doi: 10.1038/s41467-018-08239-x.
4. ★ *Hypothalamic Agrp neurons drive stereotypic behaviors beyond feeding.* Dietrich MO, **Zimmer MR**, Bober J, Horvath TL. *Cell*. 2015 Mar 5. doi: 10.1016/j.cell.2015.02.024.
5. *O-GlcNAc transferase enables AgRP neurons to suppress browning of white fat.* Ruan, HB, Dietrich MO, Liu ZW, **Zimmer MR**, Li MD, Singh JP, Yin R, Wu J, Horvath TL, Yang X. *Cell*. 2014 Oct 9. doi: 10.1016/j.cell.2014.09.010.
6. *Leptin signaling in astrocytes regulates hypothalamic neuronal circuits and feeding.* Kim JG1, Suyama S, Koch M, Jin S, Argente-Arizon P, Argente J, Liu Z, **Zimmer MR**, Jeong JK, Szigeti-Buck K, Gao Y, Garcia-Caceres C, Yi CX, Salmaso N, Vaccarino FM, Chowen J, Diano S, Dietrich MO, Tschöp MH, Horvath TL. *Nat Neurosci*. 2014 Jul. doi: 10.1038/nn.3725.

TALKS

- Invited speaker. Online talk at Graduate Program in Physiology, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil. “Ontogeny of *hunger*-promoting neurons and their role in nonfood-related behaviors” (November 6, 2020).
- Invited speaker. Online talk at Graduate Program in Biosciences-Biochemistry and Neuroscience, Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSA), Porto Alegre, Brazil. “Ontogeny of *hunger*-promoting neurons and their role in nonfood-related behaviors” (October 14, 2020).
- Invited speaker. Online talk at JRNL club. “Functional Ontogeny of Hypothalamic Agrp Neurons in Neonatal Mouse Behaviors” (August 3, 2020).
- Invited speaker. Online talk at Universidade de São Paulo. “ON/OFF: modulating neuronal subpopulations activity” (June 25, 2020).

- Invited speaker. Online talk at International Dementia Conference Series, Montreal, Canada. “Hypothalamic Agrp neurons mediate neonatal behaviors in mice” (June 17, 2020).
- Invited speaker. Talk at Graduate Program in Biological Sciences-Biochemistry and Neuroscience, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil. “Hypothalamic Agrp neurons mediate neonatal behaviors in mice” (March 12, 2020).
- Invited speaker. Talk at Graduate Program in Biological Sciences-Biochemistry, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil. “Hypothalamic Agrp neurons mediate neonatal behaviors in mice” (December 16, 2019).
- Invited speaker. Talk at 10th Seminar Series of Scientific Research of the Institute of Biology, Universidade de Campinas, Brazil. “Hypothalamic Agrp neurons mediate neonatal behaviors in mice” (September 18, 2019).
- Invited speaker. Talk at Graduate Program of Pharmaceutical Sciences, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil. “Hypothalamic Agrp neurons mediate neonatal behaviors in mice” (September 17, 2019).
- Invited speaker. Talk at Carlos Chagas Filho Institute of Biophysics, Universidade Federal do Rio de Janeiro, UFRJ. “Hypothalamic Agrp neurons mediate neonatal behaviors in mice” (June 4, 2019).
- Invited speaker. Talk at Graduate Program in Animal Biology, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brazil. “Hypothalamic Agrp neurons mediate neonatal behaviors in mice” (March 5, 2019).
- Invited speaker. Talk at Seminars in Biomedical Sciences, Porto Alegre, Brazil. “Ontogeny of Agrp neurons in neonatal behaviors” (December 11, 2018).
- Talk at ICSNM Program Lab Presentations, Yale University. “Neonatal Agrp neurons signal infant-mother attachment” (November 28, 2017).
- Talk at Integrative Cell Signaling and Neurobiology of Metabolism (ICSNM) Retreat, Yale University. “Agrp neurons signal mother-infant bond” (June 17, 2016).
- Talk at Integrative Cell Signaling and Neurobiology of Metabolism (ICSNM) Retreat, Yale University. “Role of Agrp neurons during neonatal period” (May 14, 2015).