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Born: 22 May 1981
Nationality: Brazilian. Permanent Resident (USA).
Current position: Assistant Professor in Comparative Medicine and Neurobiology, Yale School of Medicine.
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Bibliography and citations: Google scholar: [goo.gl/W7deTY](https://scholar.google.com/citations?user=W7deTY)
 PubMed: [goo.gl/eUG4nW](https://pubmed.ncbi.nlm.nih.gov/?term=marcelo+dietrich)
 My Bibliography: [goo.gl/AzuXQM](https://www.bibliographygenerator.com/)

Education and degrees

M.D. Universidade Federal do Rio Grande do Sul, Brazil (2007)
 Ph.D. Biochemistry. Universidade Federal do Rio Grande do Sul, Brazil (2012)

Training and positions

2014/07- Member, Program in Integrative Cell Signaling and Neurobiology of Metabolism, Yale University.
 2014/07- Assistant Professor, Yale University, Comparative Medicine and Neurobiology.
 2014- Affiliated to the Graduate Program in Biological Sciences: Biochemistry, UFRGS, Brazil.
 2013-2014/06 Associate Research Scientist, Yale University, Section of Comparative Medicine.
 2008-2013/01 Postdoctoral fellow, Yale University. Lab: Tamas L. Horvath.
 2008/04-06 Visitor researcher, Hosp.12 de Octubre, Madrid, Spain. Lab: Eva Carro.
 2005-2006 Postgrad. associate, Yale University. Lab: Tamas L. Horvath.
 2004-2005 Visitor student, Cajal Institute, Madrid, Spain. Lab: Ignacio Torres-Aleman.
 2003 Visitor student, NINDS/NIH, USA. Lab: Thomas S. Reese.

Honors and Awards

2015 Charles H. Hood Foundation Research Award.
 2015 Whitehall Foundation Research Grant.
 2015 Young Talent, Science Without Borders, CNPq, Brazil.
 2014 Nominee. Helmholtz Young Investigator in Diabetes (HeIDI) Award, Germany.
 2014 Yale Center for Clinical Investigation (YCCI) Scholar Award.
 2014 NARSAD Young Investigator, Brain & Behavior Research Foundation.
 2014 Yale nominee, Blavatnik Award for Young Scientists.
 2012 Junior Member of the Brazilian Academy of Sciences.
 2009 OROBOROS Scholarship, Austria.
 2009 Keystone Symposia Scholarship.
 2009 13th Latin American Young Talent Award in Life Sciences, Brazilian Society for Biochemistry and Molecular Biology and GE Health Care Life Sciences.
 2008 PENS Summer School Award, Germany.
 2006 I Cristália Award for Research, Brazil.

Professional Service

Peer Review Groups/Grant Study Sections:

2012-2013 Referee for Grant evaluation, *Auckland Medical Research Foundation*, New Zealand.
 2012-2014 Referee for Grant evaluation, *French National Research Agency*, France.
 2014 Referee for Grant evaluation, *National Science Foundation (NSF)*, United States.

Journal Service

Editor/Associate Editor:

2012-present Associate Editor, *Molecular Metabolism*.**Reviewer:**Reviewer for *Neurobiology of Aging, Journal of Alzheimer's Disease, Revista Brasileira de Psiquiatria, Hippocampus, PLoS One, Sport Medicine, Adipocyte, Neuroscience & Biobehavioral Reviews, Molecular Metabolism, Cerebral Cortex, Scientific Reports*.**Publications (in chronological order)**

‡ Corresponding author

★ Selected publication

Peer-reviewed articles:

1. Dall'Igna OP, **Dietrich MO**, Hoffmann A, Neto W, Vendite D, Souza DO, Lara DR. Catalepsy and hypolocomotion induced by a nitric oxide donor: attenuation by theophylline. **Eur J Pharmacol**. 2001 Nov 30;432(1):29-33.
2. Coitinho AS, **Dietrich MO**, Hoffmann A, Dall'Igna OP, Souza DO, Martins VR, Brentani RR, Izquierdo I, Lara DR. Decreased hyperlocomotion induced by MK-801, but not amphetamine and caffeine in mice lacking cellular prion protein (PrP(C)). **Brain Res Mol Brain Res**. 2002 Nov 15;107(2):190-4.
3. Dall'Igna OP, Da Silva AL, **Dietrich MO**, Hoffmann A, de Oliveira RV, Souza DO, Lara DR. Chronic treatment with caffeine blunts the hyperlocomotor but not cognitive effects of the N-methyl-D-aspartate receptor antagonist MK-801 in mice. **Psychopharmacology (Berl)**. 2003 Mar;166(3):258-63.
4. Lourenço Da Silva A, Hoffmann A, **Dietrich MO**, Dall'Igna OP, Souza DO, Lara DR. Effect of riluzole on MK-801 and amphetamine-induced hyperlocomotion. **Neuropsychobiology**. 2003;48(1):27-30.
5. Farina M, Frizzo ME, Soares FA, Schwalm FD, **Dietrich MO**, Zeni G, Rocha JB, Souza DO. Ebselen protects against methylmercury-induced inhibition of glutamate uptake by cortical slices from adult mice. **Toxicol Lett**. 2003 Oct 15;144(3):351-7.
6. Tort AB, **Dietrich MO**, Gonçalves CA, Souza DO, Portela LV. Influence of anticoagulants on the measurement of S100B protein in blood. **Clin Biochem**. 2003 Oct;36(7):519-22.
7. **Dietrich MO**, Tort AB, Schaf DV, Farina M, Gonçalves CA, Souza DO, Portela LV. Increase in serum S100B protein level after a swimming race. **Can J Appl Physiol**. 2003 Oct;28(5):710-6.
8. Tort AB, Mantese CE, dos Anjos GM, **Dietrich MO**, Dall'Igna OP, Souza DO, Lara DR. Guanosine selectively inhibits locomotor stimulation induced by the NMDA antagonist dizocilpine. **Behav Brain Res**. 2004 Oct 5;154(2):417-22.
9. **Dietrich MO**, Mantese CE, Dos Anjos GM, Rotta LN, Perry ML, Souza DO, Lara DR. Increased locomotor response to amphetamine, but not other psychostimulants, in adult mice submitted to a low-protein diet. **Physiol Behav**. 2004 Oct 30;83(1):129-33.
10. **Dietrich MO**, Mantese CE, Anjos G, Souza DO, Farina M. Motor impairment induced by oral exposure to methylmercury in adult mice. **Environmental Toxicology and Pharmacology**. 2005 Jan; 19(1):169-175.
11. **Dietrich MO**, Mantese CE, Porciuncula LO, Ghisleni G, Vinade L, Souza DO, Portela LV. Exercise affects glutamate receptors in postsynaptic densities from cortical mice brain. **Brain Res**. 2005 Dec 14;1065(1-2):20-5.
12. Machado-Vieira R, **Dietrich MO**, Leke R, Cereser VH, Zanatto V, Kapczinski F, Souza DO, Portela LV, Gentil V. Decreased plasma brain derived neurotrophic factor levels in unmedicated bipolar patients during manic episode. **Biol Psychiatry**. 2007 Jan 15;61(2):142-4.
13. Lopez-Lopez C, **Dietrich MO**, Metzger F, Loetscher H, Torres-Aleman I. Disturbed cross talk between insulin-like growth factor I and AMP-activated protein kinase as a possible cause of vascular

- dysfunction in the amyloid precursor protein/presenilin 2 mouse model of Alzheimer's disease. **J Neurosci**. 2007 Jan 24;27(4):824-31.
14. **Dietrich MO**, Muller A, Bolos M, Carro E, Perry ML, Portela LV, Souza DO, Torres-Aleman I. Western style diet impairs entrance of blood-borne insulin-like growth factor-1 into the brain. **Neuromolecular Med**. 2007;9(4):324-30.
 15. Muller AP, Cammarota M, **Dietrich MO**, Rotta LN, Portela LV, Souza DO, Izquierdo I, Bevilaqua LR, Perry ML. Different effect of high fat diet and physical exercise in the hippocampal signaling. **Neurochem Res**. 2008 May;33(5):880-5.
 16. **Dietrich MO**, Spuch C, Antequera D, Rodal I, de Yébenes JG, Molina JA, Bermejo F, Carro E. Megalin mediates the transport of leptin across the blood-CSF barrier. **Neurobiol Aging**. 2008 Jun;29(6):902-12.
 17. ★ **Dietrich MO**, Andrews ZB, Horvath TL. Exercise-induced synaptogenesis in the hippocampus is dependent on UCP2-regulated mitochondrial adaptation. **J Neurosci**. 2008 Oct 15;28(42):10766-71.
 18. Nie Y, Erion DM, Yuan Z, **Dietrich MO**, Shulman GI, Horvath TL, Gao Q. STAT3 inhibition of gluconeogenesis is downregulated by SirT1. **Nature Cell Biology**, p. 1-0, 2009.
 19. Maejima Y, Sedbazar U, Suyama S, Kohno D, Onaka T, Takano E, Yoshida N, Koike M, Uchiyama Y, Fujiwara K, Yashiro T, Horvath TL, **Dietrich MO**, Tanaka S, Dezaki K, Oh-I S, Hashimoto K, Shimizu H, Nakata M, Mori M, Yada T. Nesfatin-1-regulated oxytocinergic signaling in the paraventricular nucleus causes anorexia through a leptin-independent melanocortin pathway. **Cell Metab**. 2009 Nov;10(5):355-65.
 20. ★ **Dietrich MO**, Antunes C, Geliang G, Liu ZW, Borok E, Nie Y, Xu AW, Souza DO, Gao Q, Diano S, Gao XB, Horvath TL. Agrp neurons mediate Sirt1's action on the melanocortin system and energy balance: roles for Sirt1 in neuronal firing and synaptic plasticity. **J Neurosci**. 2010. Sep 1;30(35):11815-25.
 21. Diano S, Liu ZW, Jeong JK, **Dietrich MO**, Ruan H, Kim E, Suyama S, Kelly K, Gyengesi E, Arbiser JL, Belsham DD, Sarruf DA, Schwartz MW, Bennet A, Shanabrough M, Mobbs CV, Yang X, Gao XB, Horvath TL. Peroxisome proliferation-related hypothalamic control of ROS sets melanocortin tone and feeding in diet-induced obesity. **Nat Med**. 2011 Aug 28;17(9):1121-7.
 22. Thaler JP, Yi CX, Schur EA, Guyenet SJ, Hwang BH, **Dietrich MO**, Zhao X, Sarruf DA, Izgur V, Maravilla KR, Nguyen HT, Fischer JD, Matsen ME, Wisse BE, Morton GJ, Horvath TL, Baskin DG, Tschöp MH, Schwartz MW. Obesity is associated with hypothalamic injury in rodents and humans. **J Clin Invest**. 2012 Jan 3;122(1):153-62.
 23. Coupé B, Ishii Y, **Dietrich MO**, Komatsu M, Horvath TL, Bouret SG. Loss of Autophagy in Pro-opiomelanocortin Neurons Perturbs Axon Growth and Causes Metabolic Dysregulation. **Cell Metab**. 2012 Feb 8;15(2):247-55.
 24. ★ **Dietrich MO**, Bober J, Ferreira JG, Tellez LA, Mineur Y, Souza DO, Gao XB, Picciotto M, Liu ZW, Horvath TL. AgRP neurons regulate development of dopamine neuronal plasticity and non food-associated behaviors. **Nature Neuroscience**. 2012 Jun 24;15(8):1108-10.
 25. Simon-Areces J, **Dietrich MO**, Hermes G, Garcia-Segura LM, Arevalo MA, Horvath TL. UCP2 induced by natural birth regulates neuronal differentiation of the hippocampus and related adult behavior. **PLoS One**. 2012;7(8):e42911.
 26. Horvath TL, Abizaid A, **Dietrich MO**, Li Y, Takahashi JS, Bass J. Ghrelin-labeled hypothalamic neurons tie the circadian clock and visual system to the lateral hypothalamic arousal center. **Molecular Metabolism**. 2012. Aug 18;1(1-2):79-85.
 27. Fuente-Martín E, García-Cáceres C, Granado M, de Ceballos ML, Sánchez-Garrido MÁ, Sarman B, Liu ZW, **Dietrich MO**, Tena-Sempere M, Argente-Arízón P, Díaz F, Argente J, Horvath TL, Chowen JA. Leptin regulates glutamate and glucose transporters in hypothalamic astrocytes. **J Clin Invest**. 2012 Nov 1;122(11):3900-13.

28. Matarese G, Procaccini C, Menale C, Kim JG, Kim JD, Diano S, Diano N, De Rosa V, **Dietrich MO**, Horvath TL. Hunger-promoting hypothalamic neurons modulate effector and regulatory T-cell responses. **Proc Natl Acad Sci U S A**. 2013 Apr 9;110(15):6193-8.
29. Muller AP, **Dietrich MO**, de Assis AM, Souza DO, Portela LV. High saturated fat and low carbohydrate diet decreases lifespan independent of body weight in mice. **Longevity & Healthspan** 2013 Jun 3;2(1):10. doi: 10.1186/2046-2395-2-10.
30. Hess ME, Hess S, Meyer KD, Verhagen LA, Koch L, Brönneke HS, **Dietrich MO**, Jordan SD, Saletore Y, Elemento O, Belgardt BF, Franz T, Horvath TL, Rütter U, Jaffrey SR, Kloppenburg P, Brüning JC. The fat mass and obesity associated gene (Fto) regulates activity of the dopaminergic midbrain circuitry. **Nat Neurosci**. 2013 Aug;16(8):1042-8.
31. Schneeberger M, **Dietrich MO**, Sebastián D, Imbernón M, Castaño C, Garcia A, Esteban Y, Gonzalez-Franquesa A, Castrillón Rodríguez I, Bortolozzi A, Garcia-Roves PM, Gomis R, Nogueiras R, Horvath TL, Zorzano A, Claret M‡ (2013) Mitofusin 2 in POMC Neurons Connects ER Stress with Leptin Resistance and Energy Imbalance. **Cell** 2013 Sep 26;155(1):172-87. Journal Cover.
32. ★ **Dietrich MO‡**, Liu Z-W, Horvath TL‡ (2013) Mitochondrial dynamics controlled by mitofusins regulate Agrp neuronal activity and diet-induced obesity. **Cell** 2013 Sep 26;155(1):188-99. Journal Cover.
33. Domingos AI, Sordillo A, **Dietrich MO**, Liu ZW, Tellez L, Vaynshteyn J, Ferreira J, Ekstrand MI, Horvath TL, de Araujo IE, Friedman J‡. Hypothalamic MCH neurons mediate the nutrient value of sugar. **eLife** 2013 Dec 31;2(0):e01462. doi: 10.7554/eLife.01462.
34. **Dietrich MO**, Antequera D, Pascual C, Castro N, Bolos M, Carro E‡. Alzheimer's-like impaired cognition in endothelial-specific megalin-null mice. **Journal of Alzheimer's Disease** 2014;39(4):711-7. doi: 10.3233/JAD-131604.
35. Kim JG, Suyama S, Koch M, Jin S, Argente-Arizon P, Argente J, Liu ZW, 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‡. Leptin signaling in astrocytes regulates hypothalamic neuronal circuits and feeding. **Nat Neurosci**. 2014 Jul;17(7):908-10. doi: 10.1038/nn.3725.
36. Ruan HB, **Dietrich MO**, Liu ZW, Zimmer MR, LI MD, Singh JP, Zhang K, Wu J, Horvath TL‡, Yang X‡. O-GlcNAc transferase-controlled Agrp neurons suppress browning of white fat. **Cell**. 2014 Oct 9;159(2):306-317. doi: 10.1016/j.cell.2014.09.010.
37. Koch M, Varela L, Kim JG, Kim JD, Hernandez F, Simonds SE, Castorena CM, Vianna CR, Elmquist JK, Morozov YM, Rakic P, Bechmann I, Cowley MA, Szigeti-Buck K, **Dietrich MO**, Gao X-B, Diano S, Horvath TL‡. Hypothalamic POMC neurons promote cannabinoid-induced feeding. **Nature**. 2015 Mar 5;519(7541):45-50.
38. ★ **Dietrich MO‡**, Zimmer MR, Bober J, Horvath TL. Hypothalamic Agrp neurons drive stereotypic behaviors beyond feeding. **Cell**. 2015 March 12; 160(6):1222-1232. Featured article.

Reviews:

39. **Dietrich MO**, Horvath TL‡. Feeding signals and brain circuitry. **Eur J Neurosci**. 2009 Nov;30(9):1688-96.
40. **Dietrich MO**, Horvath TL‡. The role of mitochondrial uncoupling proteins in lifespan. **Pflugers Arch**. 2010 Jan;459(2):269-75.
41. Nogueiras R, Habegger KM, Chaudhary N, Finan B, Banks AS, **Dietrich MO**, Horvath TL, Sinclair DA, Pfluger PT, Tschöp MH. Sirtuin 1 and sirtuin 3: physiological modulators of metabolism. **Physiol Rev**. 2012 Jul;92(3):1479-514.
42. ★ **Dietrich MO‡**, Horvath TL‡. Limitations in anti-obesity drug development: a critical role of hunger-promoting neurons in integrative physiology. **Nat Rev Drug Discov**. 2012 Sep;11(9):675-91. Journal

Cover.

43. **Dietrich MO**, Horvath TL‡. Neuroendocrine Regulation of Energy Metabolism. **Endocrinol Metab.** 2012 Dec;27(4):268-273.
44. **Dietrich MO**, Horvath TL‡. Hypothalamic control of energy balance: insights into the role of synaptic plasticity. **Trends Neurosci.** 2013 Feb;36(2):65-73.

Editorials and other publications:

45. **Dietrich MO**, Souza DO, Portela LV. Serum S100B protein: what does it mean during exercise? **Clin J Sport Med.** 2004 Nov;14(6):368; author reply 368-9. Comment on: Clin J Sport Med. 2003 Sep;13(5):292-302.
46. **Dietrich MO**, Horvath TL. GABA keeps up an appetite for life. **Cell.** 2009 Jun 26;137(7):1177-9.
47. **Dietrich MO**, Horvath TL. Neural Correlates of feeding behaviour. **Nature Reviews Neuroscience.** 2010 (Poster).
48. **Dietrich MO**, Horvath TL. Synaptic plasticity of feeding circuits: hormones and hysteresis. **Cell.** 2011 Sep 16;146(6):863-5.
49. **Dietrich MO**, Horvath TL. AgRP neurons: The foes of reproduction in leptin-deficient obese subjects. **Proc Natl Acad Sci U S A.** 2012 Feb 21;109(8):2699-700.
50. **Dietrich MO**, Horvath TL. Fat incites tanycytes to neurogenesis. **Nat Neurosci.** 2012 Apr 25;15(5):651-3.
51. **Dietrich MO**, Horvath TL. Phosphoribosomes for fingerprinting neurons. **Cell.** 2012 Nov 21;151(5):934-6.
52. **Dietrich MO**, Horvath TL. A marriage made to last in drug design. **Nature Medicine.** 2012 Dec 6;18(12):1737-1738.
53. **Dietrich MO**‡. Visualizing browning in vivo. **Molecular Metabolism.** 2013. 10.1016/j.molmet.2013.07.004.

Book chapters:

54. **Dietrich MO**, Horvath TL. Wired for Hunger: The Brain and Obesity and Anorexia Nervosa: A Mortal Clash between Reward and Hunger. Cerebrum 2010. Dana Foundation.
55. **Dietrich MO**, Horvath TL. Chapter 16: Neuroendocrine Regulation of Energy Balance. In: Food and Addiction: A Comprehensive Handbook, edited by Kelly Brownell and Mark Gold. Oxford University Press. 2012.

Teaching and Lectures

Teaching Assistantship:

- Discipline: *Medical Biochemistry*. Universidade Federal do Rio Grande do Sul (Brazil). Guest lectures. Coordinator: Professor Diogo O. Souza. From 2008-current.

Guest Lectures:

- *Invited Speaker*. Department of Internal Medicine, Division of Endocrinology, Universidade Federal do Rio Grande do Sul (Brazil). 03/2007.
- *Invited Speaker*. Section of Comparative Medicine, Yale School of Medicine. 04/2008. Host: Professor Tamas L. Horvath.
- *Invited Speaker*. Program of Postgraduation in Biochemistry, Universidade Federal do Rio Grande do Sul (Brazil). 01/2010. Host: Professor Diogo O. Souza.
- *Invited Speaker*. Nanjing University (China). 05/2011. Host: Professor Qian Gao.

- *Invited Speaker*. Xijing Hospital, Fourth Military Medical University (China). 05/2011. Host: Professor Hailong Dong.
- *Invited Speaker*. Dipartimento di Farmacologia Sperimentale, Università degli Studi di Napoli Federico II (Italy). 07/2011. Host: Professor Antonio Calignano.
- *Invited Speaker*. Yale School of Medicine. New Haven, CT (USA). 04/2012. Host: Yale Biology of Aging Interest Group, Dr. Albert Shaw.
- *Invited Symposium Speaker*. DiabeteSul, Porto Alegre, RS (Brazil). 05/2012. Keynote speaker. Host: Dr. Jorge Luiz Gross.
- *Invited Symposium Speaker*. Experimental Biology 2012. San Diego, EUA.
- *Invited Speaker*. Carleton University, Ottawa (Canada). 11/2012. Host: Professor Alfonso Abizaid.
- *Invited Symposium Speaker*. Nutrition, Metabolism and the Brain, Amsterdam (Holanda). 04/2013.
- *Invited Speaker*. Universidade Federal do Rio de Janeiro (Brazil). 05/2013. Host: Professor Antonio Galina. Rio de Janeiro, Brazil.
- *Invited Symposium Speaker*. Symposium: Role of the Brainstem in metabolism regulation. Chair: Lora K. Heisler, Cambridge, UK. 73rd American Diabetes Association Scientific Sessions. Chicago, US. 06/2013.
- *Invited Symposium Speaker*. Symposium: SP14 - Molecular, metabolic and functional aspects involved in the neuroprotection: from translational to clinical studies. Chair: Diogo O. Souza, UFRGS, Brazil. XXXVII Reunião Anual da Sociedade Brasileira de Neurociências e Comportamento (SBNec). Belo Horizonte, Brazil (September, 2013).
- *Invited Speaker*. Universidade Federal do ABC. Santo André, SP, Brazil. Host: Marcelo Caetano (September 18, 2013).
- *Invited Speaker*. Weizmann Institute, Israel. Host: Tali Kimchi (October 1, 2013).
- *Invited Symposium Speaker*. Cajal at Yale Symposium. Yale University, New Haven, CT, US (November 5-6, 2013).
- *Invited Speaker*. Special Seminar, John B Pierce Laboratory. New Haven, CT, US (February 26, 2014).
- *Invited Symposium Speaker*. Symposium 13: Bioenergetics. Chair: Carlos Gonçalves, UFRGS, Brazil. 43rd Annual Meeting of the SBBq, Iguazu Falls, Brazil. 05/2014.
- *Invited Symposium Speaker*. Session 7: Mitochondrial Biology. Chair: Jens Brüning (University of Cologne). Title: "Organelle dynamics in the control of metabolism". The 2nd Annual Helmholtz-Nature Medicine Diabetes Conference, September 21-23, 2014, Munich, Germany.
- *Invited Speaker*. Neurology Research Happy Hour. Yale University. "Hypothalamic Agrp neurons drive stereotypic behaviors beyond feeding". February 12, 2015. Host: Jaime Grutzendler.
- *Invited Speaker*. Wellcome Trust-MRC Institute of Metabolic Science, Cambridge, UK. "Multitasking of Agrp neurons in metabolism and behaviour". March 4, 2015. Host: Akhilesh B. Reddy.