

1 - Personal Data

Name: Nivea Dias Amoêdo

Date/Place of Birth: 04/27/1982, Rio de Janeiro, RJ, Brazil

Workplace: INSERM U1211 MRGM - Maladies Rares: Génétique et Métabolisme, Ecole des sages femmes, étage 2, CHU Pellegrin 33300 Bordeaux (France)

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2 - Education:

- Post Doctoral – Université de Bordeaux – Energy metabolism of lung cancer cells – since 2015.
- Post Doctoral - Federal University of Rio de Janeiro – Energy metabolism of cancer cells – 2010 - 2015
- PhD in Biochemistry; Federal University of Rio de Janeiro; 2010; Title: *Bioenergetics in lung cancer cells: metabolic reprogramming induced by sodium butyrate.*
- M.Sc. in Biochemistry; Federal University of Rio de Janeiro; 2006; Title: Epidermal Growth Factor Receptor (EGFR); Mapping of mutations in patients with non-small cell lung cancer and effect of sodium butyrate on cell lines of lung cancer.
- B.Sc. in Biology; Federal University of Rio de Janeiro; 2004

4 - Areas of expertise

Biochemistry and molecular biology, bioenergetics, lung cancer, metastasis, metabolic reprogramming, mitochondrial physiology and molecular biology

5 – Research activities (public and private)

I currently work as a research associate on academic projects focusing on **cancer metabolism and therapy** (UFRJ, U. Bordeaux – INSERM). I also performed 400 hours of teaching in Biochemistry and trained Ph.D and Master students. In 2018 I co-advise Saharnaz SARLAK (ESR1 – ITN Transmit).

I recently worked as consultant for the private sector in the field of mitochondrial biology (contract research organization; Cellomet and Biotech Pharma; OP2 Drug SAS). I co-author a patent (2018; pending) on the metabolic therapy of lung tumors EP17306858.6.).

6 - Full Papers published in scientific journals

1 - **Amoedo ND**, Obre E, Rossignol R. "Drug discovery strategies in the field of tumor energy metabolism: Limitations by metabolic flexibility and metabolic resistance to chemotherapy." *Biochim Biophys Acta*. 2017 Aug;1858(8):674-685. doi: 0.1016/j.bbabbio.2017.02.005.

2 - **Amoedo ND**, Punzi G, Obre E, Lacombe D, De Grassi A, Pierri CL, Rossignol R. "AGC1/2, the mitochondrial aspartate-glutamate carriers." *Biochim Biophys Acta*. 2016 Oct;1863(10):2394-412. doi: 10.1016/j.bbamcr.2016.04.011.

3 - Rodrigues MF, Obre E, de Melo FH, Santos GC Jr, Galina A, Jasiulionis MG, Rossignol R, Rumjanek FD, **Amoedo ND**. "Enhanced OXPHOS, glutaminolysis and β -oxidation constitute the metastatic phenotype of melanoma cells." *Biochem J*. 2016 Mar 15;473(6):703-15. doi: 10.1042/BJ20150645.

4 - Rodrigues MF, Carvalho É, Pezzuto P, Rumjanek FD, **Amoedo ND**. "Reciprocal modulation of histone deacetylase inhibitors sodium butyrate and trichostatin A on the energy metabolism of breast cancer cells." *J Cell Biochem*. 2015 May;116(5):797-808. doi: 10.1002/jcb.25036.

5 - Hort, Mariana Appel, Straliootto, Marcos Raniel, De Oliveira, Jade, **Amoedo, Nivea Dias**, Da Rocha, João Batista Teixeira, Galina Antonio, Ribeiro do-Valle Rosa Maria, De Bem, Andreza Fabro. Diphenyl diselenide protects endothelial cells against oxidized low density lipoprotein-induced injury: Involvement of mitochondrial function. *Biochimie (Paris. Print)*. , v.105, p.172 - 181, 2014.

6 - Cesari, Italo Mario, Carvalho, Erika, Figueiredo Rodrigues, Mariana, Mendonça, Bruna Dos Santos, **Amoedo, Nivea Dias**, Rumjanek, Franklin David. Methyl Jasmonate: Putative Mechanisms of Action on Cancer Cells Cycle, Metabolism, and Apoptosis. *International Journal of Cell Biology*. , v.2014, p.1 - 25, 2014.

7 - **Amoedo, Nivea Dias**, Rodrigues, Mariana Figueiredo, Rumjanek, Franklin David
MITOCHONDRIA: Are mitochondria accessory to metastasis?. *International Journal of Biochemistry & Cell Biology*. , v.51, p.53 - 57, 2014.

8 - Britto, Alan Messala A., **Amoedo, Nivea D.**, Pezzuto, Paula, Afonso, Adriana O., Martínez, Ana Maria B., Silveira, Jussara, Sion, Fernando S., Machado, Elizabeth S., Soares, Marcelo A., Giannini, Ana Lúcia M.
Expression levels of the innate response gene RIG-I and its regulators RNF125 and TRIM25 in HIV-1 infected adult and pediatric individuals. *AIDS (London)*. , v.27, p.1879 - 1885, 2013.

9 - Agostini, M., Almeida, L.Y., Bastos,D.C., Ortega,R.M., Moreira, F.S., Seguin,

F.,Zecchin, K.G., Raposo, H.F., Oliveira, H.C., **Amoêdo, N.D.**, Salo, T., Coletta,R.D., Graner,E. (2013). The fatty acid synthase inhibitor orlistat reduces the growth and metastasis of orthopic tongue oral squamous cell carcinomas. *Mol Cancer Ther* Dec 20.

10 - **Amoêdo, N.D.**, Valencia, J.P., Rodrigues, M.F., Galina, A., Rumjanek, F.D. (2013). How does the metabolismo f tumour cells differ from that of normal cells. *Biosci Rep* Nov 15,33(6).

11 - Oliveira, M.F., **Amoêdo, N. D.**, Rumjanek, F.D. Energy and redox homeostasis in tumor cells. *international journal of cell biology*. , 2012.

12 - **Amoêdo, N. D.**, Figueiredo, M.R., El-Bacha, T, Rumjanek, F.D. Cell Cycle and Energy Metabolism in Tumor Cells: Strategies for Drug Therapy. *Recent Patents on Anti-Cancer Drug Discovery*. , v.6, p.15 - 25, 2011.

13 - **Amoêdo, Nívea Dias**, Rodrigues, Mariana Figueiredo, Pezzuto, Paula, Galina, Antonio, da Costa, Rodrigo Madeiro, de Almeida, Fábio Ceneviva Lacerda, El-Bacha, Tatiana, Rumjanek, Franklin David, Kowaltowski, Alicia J., AMOÉDO, N. D.

Energy Metabolism in H460 Lung Cancer Cells: Effects of Histone Deacetylase Inhibitors. *Plos One*. , v.6, p.e22264 - , 2011.

14 - **Amoêdo, Nívea D.**, Afonso, Adriana O., Cunha, Sílvia M., Oliveira, Ricardo H., Machado, Elizabeth S., Soares, Marcelo A., Speck, Roberto F., AMOÉDO, N. D.

Expression of APOBEC3G/3F and G-to-A Hypermutation Levels in HIV-1-Infected Children with Different Profiles of Disease Progression. *Plos One*. , v.6, p.e24118 - , 2011.

15 - Machado, A. S., Da Silva Robaina, M.C., Magalhães De Rezende, L.M., Apa, A.G., **Amoêdo, N. D.**, Bacchi, C.E., Klumb, C. E.

Circulating cell-free and Epstein-Barr virus DNA in pediatric B-non-Hodgkin lymphomas. *Leukemia & Limphoma*. , v.51, p.1020 - 1027, 2010.

16 - Ribeiro, F.S., Simão, T.A., **Amoêdo, N. D.**, Andreollo, N.A., Lopes, L.R., Acatauassu, R., Rumjanek, F.D., Albano, R.M., Monteiro, R.Q.

Evidence for increased expression of tissue factor and protease-activated receptor-1 in human esophageal cancer.. *Oncology Reports*. , v.21, p.1599 - 604, 2009.

17 - **Amoêdo, N. D.**, Castelo Branco, M.T.L., Paschoal, M.E.M., Pezzuto, P., Esperança, A.B.T, Rumjanek, V.M., Rumjanek,FD

Expression of ABC transporters, p53, Bax, Bcl-2 in an archival sample of non-small cell lung cancer bearing a deletion in the EGFR gene. *International Journal of*

Molecular Medicine. , v.23, p.609 - 14, 2009.

18 - Rodrigues-Mascarenhas, S., De Oliveira, A., **Amoêdo, N. D.**, Affonso Mitidiere Ottilia, Rumjanek,FD, Rumjanek, V.M.

Modulation of the immune system by ouabain. Annals of the New York Academy of Sciences. , v.1153, p.153 - 63, 2009.

19 - Matos, A.R., Sambuughin, N., Rumjanek, F.D., **Amoêdo, N. D.**, Cunha, L.B., Zapata-Sudo, G., Sudo, R.T.

Multigenerational Brazilian family with malignant hyperthermia and a novel mutation in the RYR1 gene.. Brazilian Journal of Medical and Biological Research (Impresso). , v.42, p.1218 - 24, 2009.

20 - Machado, A. S., Apa, A. G, Rezende, L. M. M., **Amoêdo, N. D.**, Rumjanek, F.D., Bacchi, C. E, Klumb, C. E

Plasma Epstein-Barr Viral Load Predicting Response after chemotherapy for post-transplant lymphoproliferative disease: a case report. Clinical and Experimental Medicine. v.8, p.129 - 132, 2008.

21 - Amoêdo, N. D., Damasceno, Lucia, Gualberto, Henrique Marcelo, Caldeira, Concy Maya, Faria, Bianca, Vargens, Daniela, **Amoêdo, Nivea Dias**, Volkweis, Rosana, Viana, Rosane Volkweis, Rumjanek, Franklin, Radler, Francisco DNA Typing: An Accessory Evidence in Doping Control. Journal of Forensic Sciences. , v.50, p.587 - 592, 2005.