

## **Luiz C. Godoy, Ph.D.**

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GREEN CARD HOLDER

### **SUMMARY**

I am a cell biologist/biochemist with broad experience in multidisciplinary projects dealing with diseases of immuno-inflammatory, infectious, or neoplastic natures. In my most recent projects, at MIT, I applied my expertise in cell signaling pathways, protein biochemistry, immunology, and cell-based assays to design and execute studies that ultimately led to breakthrough findings, such as a mechanism with potential to integrate a new combination-therapy against melanoma. I am passionate about team work, learning, and mentoring. I am looking for opportunities to tutor students (Grades 8-12) in Math and Science in the greater Boston area.

### **EDUCATION**

- **Ph.D. Immunology and Microbiology** • Federal University of São Paulo, Brazil.
- **B.S. Biology / Biology Teaching Licensure** • Federal University of São Carlos, Brazil.

### **EXPERIENCE**

#### **Massachusetts Institute of Technology • Cambridge, MA**

##### **Research Associate**

- Collaborated with a multidisciplinary team to successfully create and optimize technologies to analyze free-radical-based signaling in cancer cells (e.g.: A375, SK Mel, MeWo, HCT116, HeLa, B16F10, MCF7).
- Using pharmacological inhibitors and compounds such as cisplatin and tamoxifen, discovered mechanisms of resistance to chemotherapy and hypoxia in melanoma and colon and breast cancers.
- Designed and executed cell-based assays that validated a new chemical probe to detect S-nitrosothiols.
- Extensively wrote reports and scientific articles; peer-reviewed for two indexed journals.
- Proactively assisted in grant proposal writing and funding renewal.
- Trained postdoctoral fellows and technicians; directly supervised graduate and undergraduate students.

#### **University of Massachusetts Medical School • Worcester, MA**

##### **Postdoctoral Associate**

- Along with the PI, spearheaded a multi-national study that elucidated the physiological implications of nitric oxide-induced alterations of cytochrome c in multiple cancer cell lines.
- Successfully characterized, in cancer cells, the protective role of cytochrome c during oxidative stress through extensive application of cell culture, compound screening, confocal microscopy, immunoprecipitation, and western blotting.

#### **University of São Paulo Medical School • São Paulo, Brazil**

##### **Research Scientist**

- Implemented novel procedures for analysis of protein modifications, which enabled and led to the advancement of multiple projects.
- Discovered a novel, CD40-dependent regulatory mechanism of LPS-induced inflammation in human and mouse macrophages.
- Mentored graduate and undergraduate students.

## **TECHNICAL SKILLS**

- Cell culture and assays: assessment of proliferation, apoptosis, and viability in numerous cell lines; primary culture and immunoassay of mouse lymph node, macrophage, and spleen cells; phagocytic assays; co-culture, antigen-presentation assays.
- Animal models: injections, immunization, anesthesia, dissection, and harvest of solid tissues and blood.
- Protein analysis: posttranslational modifications, enzyme activity, western blotting, immunoprecipitation, ELISA.
- Immunolabeling and analysis by FACS, immunocytochemistry, confocal microscopy, and epifluorescence.
- Experience with siRNA and transient transfection systems.
- Excellent communicator and project manager: fluent in Portuguese and English, oral and written; preparation/presentation of reports; troubleshooting and problem solving.
- Analysis/presentation of data: Excel, GraphPad Prism, ImageJ, Power Point, GraphPad InStat.

## **MEDIA FEATURES**

- **MIT News Office:** “Study reveals how melanoma evades chemotherapy” (Apr 7th, 2013).
- **MIT Homepage:** “NO news is good news” (Apr 9th, 2013).
- **PNAS article (2012) highlighted** on the newsletter of the Society for Free radical Biology and Medicine (Winter 2012).
- **JACS article (2013) highlighted** on the newsletter of the American Chemical Society (Oct 2013).
- Several articles highlighted in books, MDLinx and indexed journals’ editorial sections.

## **OTHER PROFESSIONAL ACTIVITIES**

- Indexed **journal referee** for *PLOS ONE* and *Clinical Medicine Insights*.
- **Coordinated** a roundtable discussion at the “Research Practice Seminar, MIT Postdocs: Mentoring and Career Development”, 2012.

## **AWARDS**

- **Distinguished Postdoctoral Fellow** - Aspen Cancer Conference - Aspen, CO, USA - 2009.
- **Best Scientific Poster** (Chemical Toxicology Division) - 244<sup>th</sup> American Chemical Society National Meeting & Exposition - Philadelphia, PA, USA – 2012.

## **VOLUNTEER WORK**

- **Pie in the Sky** – Delivered Thanksgiving pies to selling locations, as part of fundraising for the Community Servings program. Boston, MA – Nov-2015.
- **Community Servings** – Helped prepare, portion, and pack food to be delivered to individuals and families who are homebound with an acute life-threatening illness. Boston, MA – Jan-2015.

## PEER-REVIEWED PUBLICATIONS

1. Kodihalli CR, Wanxing EH, Chang C, **Godoy LC**, Wishnok J, Choon NO, Wong F, Wogan GN, Tannenbaum SR. An Untargeted Proteomics and Systems-based Mechanistic Investigation of Artesunate in Human Bronchial Epithelial Cells. *Chem Res Toxicol*, *JUST ACCEPTED*, September 2015.
2. Ulissi ZW, Sen F, Gong X, Sen S, Iverson N, Boghossian A, **Godoy LC**, Wogan GN, Mukhopahyay D, Strano MS. Spatiotemporal intracellular nitric oxide signaling captured using internalized, near infrared fluorescent carbon nanotube nanosensors. *Nano Lett*, 14(8):4887-94, 2014.
3. Seneviratne U, **Godoy LC**, Wishnok J, Wogan GN, Tannenbaum SR. Mechanism-Based Triarylphosphine-Ester Probes for Capture of Endogenous RSNOs. *J Am Chem Soc*, 125(20):7693-704, 2013.
4. **Godoy LC**, Anderson CTM, Chowdhury R, Trudel LJ, Wogan GN. Endogenously produced nitric oxide mitigates sensitivity of melanoma cells to cisplatin. *Proc Natl Acad Sci USA*, 109 (50):20373-8, 2012.
5. Chowdhury R, **Godoy LC**, Thiantanawat A, Trudel LJ, Deen W, Wogan GN. Nitric oxide produced endogenously is responsible for hypoxia-induced HIF-1 $\alpha$  stabilization in colon carcinoma cells. *Chem Res Toxicol*, 25(10):2194-202, 2012.
6. Oxer DS, **Godoy LC**, Borba E, Laurindo I, Passos LA, Kubo S, Lima-Salgado T, Barbeiro DF, Fernandes D, Laurindo FR, Curi R, Velasco IT, Bonfa E, Souza HP PPAR $\gamma$  Expression Is Increased in Systemic Lupus Erythematosus Patients and Represses CD40/CD40L Signaling Pathway. *Lupus*, 20(6):575-587, 2011.
7. **Godoy LC**, Moretti AI, Jurado MC, Oxer D, Janiszewski M, Ckless K, Velasco IT, Laurindo FR, Souza HP. Loss of CD40 endogenous S-nitrosylation during inflammatory response in endotoxemic mice and patients with sepsis. *Shock*, 33(6):626-33, 2010.
8. De Lorenzo BH, **Godoy LC**, Novaes e Brito RR, Pagano RL, Amorim-Dias MA, Grosso DM, Lopes JD, Mariano M. Macrophage suppression following phagocytosis of apoptotic neutrophils is mediated by the S100A9 calcium-binding protein. *Immunobiology*, 215(5):341-7, 2010.
9. Fernandes CI, Llimona F, **Godoy LC**, Negri EM, Pontieri V, Moretti AI, Fernandes TR, Soriano FG, Velasco IT, Souza HP. Treatment of hemorrhagic shock with hypertonic saline solution modulates the inflammatory response to live bacteria in lungs. *Br J Med Biol Res*, 42(10):892-901, 2009.
10. Li CQ, Kim MY, **Godoy LC**, Thiantanawat A, Trudel LJ, Wogan GN. Nitric oxide activation of Keap1/Nrf2 signaling in human colon carcinoma cells. *Proc Natl Acad Sci USA*, 25;106(34):14547-51, 2009.
11. **Godoy LC**, Pinedo CM, Castro L, Cardaci S, Schonhoff CM, King M, Tórtora V, Marín M, Miao Q, Jiang JF, Kapralov A, Jemmerson R, Silkstone GG, Patel JN, Evans J, Wilson MT, Green DR, Kagan VE, Radi R, Mannick JB. Disruption of the M80-Fe ligation stimulates the translocation of cytochrome c to the cytoplasm and nucleus in non-apoptotic cells. *Proc Natl Acad Sci USA* 106 (8):2653-8, 2009.
12. Popi AF, **Godoy LC**, Xander P, Lopes JD, Mariano M. B-1 Cells Facilitate *Paracoccidioides brasiliensis* Infection in Mice Via IL-10 Secretion. *Microbes and Infection*, 10(7):817-24, 2008.
13. Guido MC, Frimm C, Koike MK, Cordeiro FF, Moretti AI, **Godoy LC**. Low coronary driving pressure is associated with subendocardial remodelling and left ventricular dysfunction in aortocaval fistula. *Clin Exp Pharmacol Physiol*, 34:1165-1172, 2007.
14. Brito RRN, Lorenzo BHP, Xander P, **Godoy LC**, Lopes JD, Silva NP, Sampaio SC, Mariano M. Role of distinct immune components in the radiation-induced abrogation of systemic lupus erythematosus development in mice. *Lupus*, 16(12): 947-54, 2007.
15. Lorenzo BHP, Brito RRN, **Godoy LC**, Lopes JD, Mariano, M. Tolerogenic property of B-1b cells in a model of allergic reaction. *Immunol Lett*, 114(2):110-8, 2007.
16. **Godoy LC**, Mariano M, Lopes, JD. Immunity and hypersensitivity to gp43 in susceptible and resistant mice infected with *Paracoccidioides brasiliensis*. *Med Mycol*, 41(5):427-36, 2003.
17. Vigna AF, **Godoy LC**, Almeida SR, Mariano M, Lopes, JD. Characterization of B1-b cells as antigen presenting cells in the immune response to gp43 from *Paracoccidioides brasiliensis* in vitro. *Immunol Lett*, 83:61-66, 2002.