CURRICULUM VITAE

JERSON LIMA SILVA, M.D., Ph.D.

Place of Birth: Rio de Janeiro, RJ Birth Date: February 29, 1960

Nationality: Brazilian

Present Position

Professor of Biochemistry (Instituto de Bioquimica Medica, Universidade Federal do Rio de Janeiro)
Director of the National Institute of Science and Technology for Structural Biology and Bioimgaing (INBEB)
Director Emeritus of the Jiri Jonas National Center for Nuclear Magnetic Resonance
Scientific Director of the State Funding Agency of Rio de Janeiro **"**Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro – FAPERJ"

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Education:

- Institution: School of Medicine, Federal Univ. Rio de Janeiro. Degree: M.D. (January, 1985).
- Institution: Biophysics Institute, Federal Univ. Rio de Janeiro. Degree: Ph.D. (March, 1987).
- Institution: Department of Biochemistry, University of Illinois. Post Doctoral Fellow (1985-1986).

Positions:

1987-1988-1996 Assistant, Associate, Professor of Biochemistry, Department of Biochemistry, ICB, Federal University of Rio de Janeiro, Rio de Janeiro (UFRJ).

1997-current Professor of Biochemistry, Institute of Medical Biochemistry, ICB, UFRJ.

1991-1992 Visiting Professor, Department of Biochemistry, University of Illinois, Urbana, Illinois.

1994-1997 Chairman, Department of Biochemistry, ICB, UFRJ

1997-current Director, Jiri Jonas National Center for Macromolecular Nuclear Magnetic Resonance, UFRJ

1996-1998 Member, Presidential Committee on Biosafety

1998- Member of the Brazilian Academy of Sciences

1997- 2001 Member, Brazilian Research Council, Board of Biochemistry and Biophysics

1998-2003 Coordinator of the project in the Program of Centers of Excellence (PRONEX).

2000, 2003, 2005, 2007- Scientist of Rio de Janeiro State Award.

2003-current Scientific Director of the State Funding Agency "Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro".

2005-2008 Director of the Millenium Institute for Structural Biology in Biomedicine and Biotechnology.

2007-2013 Director of the Brazilian Academy of Sciences

2008-2012 President of the Brazilian Biophysical Society

2007-2012 Member of the Editorial Board of the JOURNAL OF BIOLOGICAL CHEMISTRY

2012-current Member of the Editorial Advisory Board of the FEBS Journal.

2008-2011 Member of the Council of the National Fund for Science and Development of Brazil (FNDCT).

2009-2014 Member of the Regional Committee for Latin American and the Caribbean of the International Council for Science – ICSU.

2008-current Director of the National Institute of Science and Technology for Structural Biology and Bioimaging.

2010-current Member and Chair of the TWAS Membership Advisory Committee (MAC) in Structural, Cell & Molecular Biology.

2014-2016 President of the Brazilian Society for Biochemistry and Molecular Biology (SBBq)

2015 Program Chair / President of the 23rd Congress of the International Union of Biochemistry and Molecular Biology (IUBMB) and the 44th Annual Meeting of the Brazilian Society for Biochemistry and Molecular Biology (SBBq)

Prizes and Awards:

1991 John Simon Guggenheim Fellow

1995 Brazilian Sendas Award for Scientific Work on Infectious Diseases of Children

1998- Member of the Brazilian Academy of Sciences

1998 Unibanco Saude Award in Medicine for Medical Research

1998-2002 International Fellow of the Howard Hughes Medical Institute

2000, 2003, 2005, 2007- Scientist of Rio de Janeiro State Award.

2002 Brazilian National Order of Scientific Merit ("Comand"), Presidency of the Republic of Brazil

2005 TWAS Prize in Biology 2005 – Prize of The World Academy of Sciences for the Advance of Sciende in Developing Countries

2006- Elected as Fellow of the The World Academy of Sciences – TWAS

2009 Brazilian National Order of Scientific Merit ("Great-Cross"), Presidency of the Republic of Brazil.

2010 FCW Prize in General Science from Fundação Conrado Wessel.

2011 Elected Member of the National Academy of Medicine.

2013 Prize Jornal O Globo in Science and Health

2018 Gregorio Weber Award for Excellence in Fluorescence Theory and Applications

Major Grants

1988-1990 Coordinator - FINEP Project: "Energetics and Dynamics of Oligomeric Proteins".

1991-present Coordinator - FINEP Project: "Thermodynamics of Proteins and Virus Structures".

1991-1996 Coordinator - European Econonic Community (EEC) Project: "Phosphorescence Spectroscopy and High Pressure Studies on the Structure, Conformation and Biological Activities of Viruses and Large Oligomers".

1993-1996 Coordinator - PADCT/SBIO Project: "Effects of Pressure on Biological Systems: Biotechnological Applications"

1995-1997 Coordinator - PADCT/SBIO Project: "Energy Coupling between Protein Folding and Nucleic Acid Recognition"

1997-2000 Coordinator - PADCT Multidisciplinary Project: "National Center of Nuclear Magnetic Resonance of Macromolecules".

1997-2002 Coordinator - PRONEX (Special Program of the Ministry of Science and Technology)

1997-2002 Howard Hughes Medical Institute Scholar

2004- Coordinator of the Infrastructure Project of of the Ministry of Science and Technology to install a high field magnet (800 MHz) at the National NMR facility.

2005- Director of the Millenium Institute for Structural Biology in Biomedicine and Biotechnology.

2007- Coordinator of the Infrastructure Project of the Ministry of Science and Technology to acquire and install a 7 Tesla Magnetic Resonance Imaging for small animals.

2008- Coordinator of the National Institute of Science and Technology for Biological Structure and Bioimaging.

Research Topics: Protein folding, protein misfolding and amyloidogenic diseases, prions, neurodegenerative diseases, virus assembly, virus inactivation, antiviral vaccines and antiviral drugs.

Supervision of Theses: From 1990 to 2017: 31 MS theses, 33 PhD theses. In progress: 2 MS, 4 PhD.

Short Biography

Jerson Lima Silva received his degree of Medical Doctor from the Universidade Federal do Rio de Janeiro (UFRJ) in 1984 and finished his PhD in Biophysics in 1987 (Institute of Biophysics, UFRJ). He is Full Professor of Biochemistry in the Institute of Medical Biochemistry at Universidade Federal do Rio de Janeiro. His main research interest is the study of the basic factors responsible for protein folding, protein-nucleic acid interactions and for the formation of biological assemblages such as viruses and amyloid aggregates. Dr. Silva has published more than 170 full papers, deserving prominence review papers in the Annual Review of Physical Chemistry, Current Opinion in Structural Biology, Accounts of Chemical Research, Trends in Biochemical Sciences, Accounts of Chemical Research and Chemical Reviews. His research is published in Journals of high impact index (such as, J. Mol. Biol., Biochemistry, PNAS, Biophys. J., J. Biol. Chem., Protein Science, J. Exp. Med., J. Virol., J. Amer. Chem. Soc.). His research articles are highly cited with more than 5500 citations (H index= 43). The work of Silva has added a new impetus for the use of pressure perturbations in the field of protein structure and dynamics. More recently, the pressure-assisted isolation of folding intermediates has made it possible to explore the mechanisms underlying protein misfolding, important in many human diseases, including tumoral, prion and Parkinson´s diseases. Silva was the Advisor of 33 PhD Thesis. Silva was recipient of many prizes and awards, including: Fellow of the John Simon Guggenheim Foundation, 1991; Brazilian Sendas Award for Scientific Work on Infectious Diseases of Children (shared), 1995; International Scholar, Howard Hughes Medical Institute, 1997; Centers of Excellence Award, Ministry of Science and Technology, 1998; National Unibanco Award in Medicine for Medical Research (shared), 1998; Scientist of Rio de Janeiro State Award, 2000, 2003, 2005, 2007; Brazilian Order of Scientific Merit , Presidency of the Republic of Brazil, Command in 2002, Great-Cross in 2009; TWAS Prize in Biology 2005, the Academy of Sciences for the Developing World (TWAS), 2005; FCW Prize in General Science from Fundação Conrado Wessel, 2010; "Faz Diferença" Prize in Science and Health 2012 (Jornal O GLOBO); Gregorio Weber Award (American Biophysical Society - 2018). Silva is member of the Brazilian Academy of Sciences since 1998; Fellow of TWAS, The World Academy of Sciences for the Advancement of Science in Developing Countries (since 2006); member of the Editorial Board of the Journal of Biological Chemistry (2007-2012); member of the Editorial Advisory Board of FEBS JOURNAL (2012-), Academic Editor of PEERJ journal (2012-), and Fellow of the National Academy of Medicine (Brazil). Silva is the Coordinator of the National Center of Nuclear Magnetic

Resonance (UFRJ) that received budgets of World Bank and Ministry of Science and Technology for acquisition of NMR equipments of high field (800, 700, 600, 500 and 400 MHz). This center was the first to be installed in Brazil and it has made a great qualitative jump in the research field of Structural Biology. In the last 15 years, more than 350 investigators from Brazil and other countries have used the NMR national facility. The NMR center has also been fundamental to contribute to a new generation of young scientists in Structural Biology. Silva has coordinated a Millennium Institute and is currently the Coordinator of the National Institute of Science and Technology for Structural Biology and Biomaging (INBEB). Silva has shared his research activities with the scientific directorship of the State Funding Agency (Fundação Carlos Chagas Filho de Amparo à Pesquisa do Estado do Rio de Janeiro) and as President of the Brazilian Biophysical Society (2008-2012) and President of the Brazilian Society for Biochemistry and Molecular Biology (2014-2016).

List of Publications:

1. Silva JL, Cino EA, Soares IN, Ferreira VF, A P de Oliveira G (2018) Targeting the Prion-like Aggregation of Mutant p53 to Combat Cancer. ***Acc Chem Res***. 2018 Jan16;51(1):181-190. doi: 10.1021/acs.accounts.7b00473. Epub 2017 Dec 20.
2. Marques MA, Pinto JR, Moraes AH, Iqbal A, de Magalhães MT, Monteiro J, Pedrote MM, Sorenson MM, Silva JL, de Oliveira GA (2017). Allosteric Transmission along aLoosely Structured Backbone Allows a Cardiac Troponin C Mutant to Function withOnly One Ca(2+) Ion. ***J Biol Chem.*** 2017 Feb 10;292(6):2379-2394. doi:10.1074/jbc.M116.765362.
3. Ferraz da Costa DC, Fialho E, Silva JL. Cancer Chemoprevention by Resveratrol: The p53 Tumor Suppressor Protein as a Promising Molecular Target. ***Molecules***. 2017 Jun 18;22(6). pii: E1014. doi: 10.3390/molecules22061014. Review.
4. Kovachev PS, Banerjee D, Rangel LP, Eriksson J, Pedrote MM, Martins-Dinis MMDC, Edwards K, Cordeiro Y, Silva JL, Sanyal S (2017). Distinct modulatory role of RNA in the aggregation of the tumor suppressor protein p53 core domain. ***J Biol Chem.*** 2017 Jun 2;292(22):9345-9357. doi: 10.1074/jbc.M116.762096.
5. Carvalho CAM, Silva JL, Oliveira AC, Gomes AMO (2017). On the entry of an emerging arbovirus into host cells: Mayaro virus takes the highway to the cytoplasm through fusion with early endosomes and caveolae-derived vesicles. ***PeerJ.*** 2017 Apr 27;5:e3245. doi: 10.7717/peerj.3245. eCollection 2017.
6. Dumard CH, Barroso SPC, Santos ACV, Alves NS, Couceiro JNSS, Gomes AMO, Santos PS, Silva JL, Oliveira AC (2017). Stability of different influenza subtypes: How can high hydrostatic pressure be a useful tool for vaccine development? ***Biophys Chem***. 2017 Apr 6. pii: S0301-4622(17)30018-2. doi: 10.1016/j.bpc.2017.04.002.
7. Veltri T, de Oliveira GA, Bienkiewicz EA, Palhano FL, Marques MA, Moraes AH, Silva JL, Sorenson MM, Pinto JR (2017). Amide hydrogens reveal a temperature-dependent structural transition that enhances site-II Ca(2+)-binding affinity in a C-domain mutant of cardiac troponin C. ***Sci Rep***. 2017 Apr 6;7(1):691. doi: 10.1038/s41598-017-00777-6.
8. de Oliveira GA, Silva JL (2017). The push-and-pull hypothesis in protein unfolding, misfolding and aggregation. ***Biophys Chem***. 2017 Mar 29. pii: S0301-4622(17)30023-6. doi: 10.1016/j.bpc.2017.03.007.
9. Costa DC, de Oliveira GA, Cino EA, Soares IN, Rangel LP, Silva JL (2016) Aggregation and Prion-Like Properties of Misfolded Tumor Suppressors: Is Cancer a Prion Disease? ***Cold Spring Harb Perspect Biol.*** 2016 Oct 3; 8(10). pii: a023614. doi:10.1101/cshperspect.a023614.

10. Silva JL, Cordeiro Y (2016) The "Jekyll and Hyde" Actions of Nucleic Acids on the Prion-like Aggregation of Proteins. ***J Biol Chem***. 2016 Jul 22;291(30):15482-90. doi: 10.1074/jbc.R116.733428.

11. de Oliveira GAP, Marques MA, Cruzeiro-Silva C, Cordeiro Y, Schuabb C, Moraes AH, Winter R, Oschkinat H, Foguel D, Freitas MS, Silva JL (2016) Structural basis for the dissociation of α-synuclein fibrils triggered by pressure perturbation of the hydrophobic core. ***Sci Rep***, 2016 Nov 30; 6: 37990. doi: 10.1038/srep37990

12. Beraldo FH, Ostapchenko VG, Caetano FA, Guimaraes AL, Ferretti GD, Daude N, Bertram L, Nogueira KO, Silva JL, Westaway D, Cashman NR, Martins VR, Prado VF, Prado MA (2016). Regulation of Amyloid β Oligomer Binding to Neurons and Neurotoxicity by the Prion Protein-mGluR5 Complex. ***J Biol Chem***. 291(42): 21945-21955.

13. Cino EA, Soares IN, Pedrote MM, de Oliveira GAP, and Silva JL (2016) Aggregation tendencies in the p53 family are modulated by backbone hydrogen bonds. ***Sci Rep***, Sep 7;6:32535. doi: 10.1038/srep32535.

14. Alves NS, Mendes YS, Souza TL, Bianconi ML, Silva JL, Gomes AM, Oliveira AC (2016) A biophysical characterization of the interaction of a hepatitis C virus membranotropic peptide with micelles. ***Biochimica et Biophysica Acta. Proteins and Proteomics*** 1864(4): 359-71. doi: 10.1016/j.bbapap.2016.01.003

15. Cino EA, Soares IN, Freitas MS, Silva JL (2016) Backbone resonance assignments of the human p73 DNA binding domain. ***Biomol NMR Assign***. 10(1): 49-51. doi: 10.1007/s12104-015-9635-x.

16. de Souza TLF, Lima SMBd, Braga VLdA, Peabody DS, Ferreira DF, Bianconi ML, Gomes AMdO, Silva JL, de Oliveira AC. (2016) Charge neutralization as the major factor for the assembly of nucleocapsid-like particles from C-terminal truncated hepatitis C virus core protein. ***PeerJ*** 4:e2670 https://doi.org/10.7717/peerj.2670

17. de Oliveira GA, Silva JL (2015). A hypothesis to reconcile the physical and chemical unfolding of proteins. ***Proc Natl Acad Sci U S A.*** May 26; 112(21): E2775-84. doi: 10.1073/pnas.1500352112

18. Barroso SP, Nico D, Nascimento D, Santos AC, Couceiro JN, Bozza FA, Ferreira AM, Ferreira DF, Palatnik-de-Sousa CB, Souza TM, Gomes AM, Silva JL, Oliveira AC (2015). Intranasal Immunization with Pressure Inactivated Avian Influenza Elicits Cellular and Humoral Responses in Mice. ***PLoS One.*** 2015 Jun 9;10(6):e0128785. doi: 10.1371/journal.pone.0128785.

19. de Oliveira GA, Rangel LP, Costa DC, Silva JL (2015). Misfolding, Aggregation, and Disordered Segments in c-Abl and p53 in Human Cancer. ***Front Oncol.*** 2 Apr 29; 5:97. doi: 10.3389/fonc.2015.00097. eCollection 2015.

20. Silva JL (2015). The increasing velocity of S&T in the State of Rio de Janeiro. ***The Academic Executive Brief*** 5(1); 14-17.

21. de Moraes MC, Santos JB, Dos Anjos DM, Rangel LP, Vieira TC, Moaddel R, da Silva JL (2015). Prion protein-coated magnetic beads: Synthesis, characterization and development of a new ligands screening method. ***J Chromatogr A.*** Jan 30;1379:1-8. doi: 10.1016/j.chroma.2014.12.014. Epub 2014 Dec 12.

22. Cortines JR, Lima LM, Mohana-Borges R, Millen Tde A, Gaspar LP, Lanman JK, Prevelige PE Jr, Silva JL (2015). Structural insights into the stabilization of the human immunodeficiency virus type 1 capsid protein by the cyclophilin-binding domain and

implications on the virus cycle. ***Biochim Biophys Acta.*** May; 1854(5): 341-8. doi: 10.1016/j.bbapap.2014.12.008.

23. Silva JL, Barroso SP, Mendes YS, Dumard CH, Santos PS, Gomes AM, Oliveira AC. (2015) Pressure-Inactivated Virus: A Promising Alternative for Vaccine Production. High Pressure Bioscience - Basic Concepts, Applications and Frontiers (Ed.: Kazuyuki Akasaka and Hitoshi Matsuki). ***Springer*** (Dordrecht) ***Subcell Biochem***. 2015;72:301-18. doi: 10.1007/978-94-017-9918-8_15. PubMed PMID: 26174388.
24. Vieira TCRG and Silva JL (2015). Glycosaminoglycans in Prion and Prion-like Diseases. The Prion Phenomena in Neurodegenerative Diseases: New Frontiers in Neuroscience (Ed.: G. Legname and G. Giachin). ***Nova Science Publishers***, Inc. (Hauppauge, NY) pp 67-88.
25. Vieira TCRG, Cordeiro Y, Caughey B, and Silva JL (2014) Heparin binding confers prion stability and impairs its aggregation. ***FASEB J***, 28(6): 2667-2676. DOI: 10.1096/fj.13246777.
26. Silva JL, Gallo CV, Costa DC, Rangel LP (2014). Prion-like aggregation of mutant p53 in cancer. ***Trends Biochem Sci***. 39(6): 260-267. doi:10.1016/j.tibs.2014.04.001.
27. Silva JL, Oliveira AC, Vieira TC, de Oliveira GA, Suarez MC, Foguel D (2014). High-Pressure Chemical Biology and Biotechnology. ***Chem Rev***. 114(14): 7239-7267. doi: 10.1021/cr400204z.
28. Rangel LP, Costa DC, Vieira TC, Silva JL (2014). The aggregation of mutant p53 produces prion-like properties in cancer. ***Prion***. Feb 7; 8(1): 75-84. [Epub ahead of print] Review.
29. Carvalho, C. A., Sousa Jr, I. P., Silva, J. L., Oliveira, A. C., Gonçalves, R. B., & Gomes, A. M. (2014). Inhibition of Mayaro virus infection by bovine lactoferrin. ***Virology***, *452*, 297-302.
30. Chaves JA, Sanchez-López C, Gomes MP, Sisnande T, Macedo B, de Oliveira VE, Braga CA, Rangel LP, Silva JL, Quintanar L, Cordeiro Y (2014). Biophysical and morphological studies on the dual interaction of non-octarepeat prion protein peptides with copper and nucleic acids. ***J Biol Inorg Chem***. 2014 Aug;19(6):839-51.doi: 10.1007/s00775-014-1115-8.
31. Cordeiro, Y., Macedo, B., Silva, J. L., & Gomes, M. P. (2014) Pathological implications of nucleic acid interactions with proteins associated with neurodegenerative diseases. ***Biophys Rev***, 6: 97-110.
32. de Oliveira GA, Pereira EG, Ferretti GD, Valente AP, Cordeiro Y, Silva JL (2013). Intramolecular dynamics within the N-Cap-SH3-SH2 regulatory unit of the c-Abl tyrosine kinase reveal targeting to the cellular membrane. ***J Biol Chem*** 288(39): 28331-45 (Paper of the Week and Cover).
33. Silva JL, Rangel LP, Costa DC, Cordeiro Y, De Moura Gallo CV (2013). Expanding the Prion Concept to Cancer Biology: Dominant-Negative Effect of Aggregates of Mutant p53 Tumor Suppressor. ***Biosci Rep***. 2013 Jul 25;33(4). doi:pii: e00054. 10.1042/BSR20130065. PubMed PMID: 24003888
34. Esperante SA, Noval MG, Altieri TA, de Oliveira GA, Silva JL, Prat-Gay GD (2013). Fine Modulation of the Respiratory Syncytial Virus M2-1 Protein Quaternary Structure by Reversible Zinc Removal from its Cys3-His1 Motif. ***Biochemistry***. 52(39): 6779-89.
35. de Oliveira GA, Rocha CB, Marques Mde A, Cordeiro Y, Sorenson MM, Foguel D, Silva JL, Suarez MC (2013). Insights into the Intramolecular Coupling between the N- and C-Domains of Troponin C Derived from High-Pressure, Fluorescence, Nuclear Magnetic Resonance, and Small-Angle X-ray Scattering Studies. ***Biochemistry*** 52(1):28-40. doi: 10.1021/bi301139d. Epub 2012 Dec 19.

36. Cordeiro Y, Foguel D, Silva JL (2013). Pressure-temperature folding landscape in proteins involved in neurodegenerative diseases and cancer. ***Biophys Chem*** 183: 9-18.

37. Dumard CH, Barroso SP, de Oliveira GA, Carvalho CA, Gomes AM, Couceiro JN, Ferreira DF, Nico D, Oliveira AC, Silva JL, Santos PS (2013). Full inactivation of human influenza virus by high hydrostatic pressure preserves virus structure and membrane fusion while conferring protection to mice against infection. ***PLoS One***. 2013 Nov 25;8(11):e80785. doi: 10.1371/journal.pone.0080785.

38. Silva, J. L., Ano Bom, A. P., Costa, D. C., de Oliveira, G. A., Cordeiro, Y., De Moura Gallo, C. V., & Rangel, L. P. (2013). Is cancer a prion disease? Prion-like properties of amyloid oligomers fibrils of mutant p53. ***Prion*** 7: 16-17.

39. Ano Bom APD, Rangel LP, Costa DCF, de Oliveira GAP, Sanches D, Braga CA, Gava LM, Ramos CHI, Cepeda AOT, Stumbo AC, De Moura Gallo CV, Cordeiro Y, and Silva JL (2012). Mutant p53 aggregates into prion-like amyloid oligomers and fibrils: Implications for cancer. ***J Biol Chem,*** 287: 28152-28162.

40. Gomes MP, Vieira TC, Cordeiro Y, and Silva JL (2012). The role of RNA in mammalian prion protein conversion. ***Wiley Interdiscip Rev RNA*** 3(3): 415-28.

41. Casanova F, Quarti J, da Costa DC, Ramos CA, da Silva JL, Fialho E. (2012). Resveratrol chemosensitizes breast cancer cells to melphalan by cell cycle arrest. ***J Cell Biochem***. 113: 2586-2596.

42. Macedo B, Millen TA, Braga CA, Gomes MP, Ferreira PS, Kraineva J, Winter R, Silva JL, Cordeiro Y (2012). Non-Specific Prion Protein-Nucleic Acid Interactions Lead to Different Aggregates and Cytotoxic Species. ***Biochemistry***. 51: 5402−5413

43. Barroso SPC, Nico D, Gomes DC, dos Santos ACV, Couceiro JNSS, de Sousa CBP, Silva JL, and Oliveira AC. (2012). Mice Vaccination with High Hydrostatic Pressure-Inactivated H3N8 Virus Protects Against Experimental Avian Flu. ***Procedia in Vaccinology*** 6: 98 – 105.

44. de Oliveira GAP., Pereira EG, Dias CV, Souza TLF, Ferretti GDS, Cordeiro Y, Camillo LR, Cascardo J, Almeida FC, Valente AP, and Silva JL (2012) Moniliophthora perniciosa Necrosis- and Ethylene-Inducing Protein 2 (MpNep2) as a Metastable Dimer in Solution: Structural and Functional Implications. ***PLoS ONE*** 7(9): e45620. doi:10.1371/journal.pone.0045620

45. Mendes YS, Alves NS, Souza TLF, Sousa IP Jr, Bianconi ML, Bernardi RC, Pascutti PG, Silva JL, Gomes AMO, and Oliveira AC (2012). The Structural Dynamics of the Flavivirus Fusion Peptide–Membrane Interaction. ***PLoS ONE*** 7(10): e47596. doi:10.1371/journal.pone.0047596

46. Ferraz da Costa DC, Casanova FA, Quarti J, Malheiros MS, Sanches D, Santos PS, Fialho E, and Silva JL (2012) Transient Transfection of a Wild-Type p53 Gene Triggers Resveratrol-Induced Apoptosis in Cancer Cells. ***PLoS ONE*** 7(11): e48746. doi:10.1371/journal.pone.0048746

47. Vieira, T. C. R. G., Reynaldo, D. P., Gomes, M. P. B., Almeida, M. S., Cordeiro, Y. and Silva, J. L. (2011). Heparin Binding by Murine Recombinant Prion Protein Leads to Transient Aggregation and Formation of RNA-Resistant Species. ***J Amer Chem Soc*** 133: 334-344.

48. Silva JL, Vieira TC, Gomes MP, Rangel LP, Scapin SM, Cordeiro Y (2011). Experimental approaches to the interaction of the prion protein with nucleic acids and glycosaminoglycans: Modulators of the pathogenic conversion. ***Methods*** 53: 306-317. Epub 2010 Dec 8.

49. Braga AC, Follmer C, Palhano F, Khattar E, Freitas MS, Romão L, Di Giovanni S, Lashuel HA, Silva JL, and Foguel D (2011). The Anti-Parkinsonian Drug Selegiline Delays the Nucleation Phase of Alpha-Synuclein Aggregation Leading to the Formation of Non-Toxic Species. ***J Mol Biol*** 405: 254-273.

50. Sousa Jr., I. P., Carvalho, C. A. M., Ferreira, D. F., Weissmüller, G., Rocha, G. M., Silva, J. L., and Gomes, A. M. O. (2011). Envelope lipid-packing as a critical factor for the biological activity and stability of alphavirus particles isolated from mammalian and mosquito cells. ***J Biol Chem*** 286(3): 1730-1736.

51. Levy CB, Stumbo AC, Ano Bom APD, Portari E, Cordeiro Y, Silva JL, and De Moura-Gallo CV (2011). Co-localization of mutant p53 and amyloid-like protein aggregates in breast tumors. ***Int J Biochem Cell Biol*** 43: 60-64.

52. Freitas, M. S., Follmer, C., Costa, L. T., Vilani, C., Bianconi, M. L., Achete, C. A., and Silva, J. L. (2011). Measuring the Strength of Interaction between the Ebola Fusion Peptide and Lipid Rafts: Implications for Membrane Fusion and Virus Infection. ***PLoS ONE*** 6(1): e15756.

53. Silva JL, Vieira TC, Gomes MP, Bom AP, Lima LM, Freitas MS, Ishimaru D, Cordeiro Y, Foguel D. (2010) Ligand Binding and Hydration in Protein Misfolding: Insights from Studies of Prion and p53 Tumor Suppressor Proteins. ***Acc Chem Res.*** 43: 271-279.

54. Silva, JL, Gomes, MPB, Vieira, TCRG and Cordeiro, Y (2010) Functional and Pathological Roles of Prion-Nucleic Acid Interactions. ***Frontiers in Bioscience***, 15: 132-150.

55. Macedo B, Kaschula CH, Hunter R, Chaves JAP, van der Merwe JD, Silva JL, Egan TJ and Cordeiro Y. (2010) Synthesis and anti-prion activity evaluation of aminoquinoline analogues. ***Eur J Med Chem*** 45: 5468-5473.

56. Ano Bom AP, Freitas MS, Moreira FS, Ferraz D, Sanches D, Gomes AM, Valente AP, Cordeiro Y, Silva JL. (2010) The p53 core domain is a molten globule at low pH: Functional implications of a partially unfolded structure. ***J Biol Chem***. 285: 2857–2866.

57. Oliveira, G. A. P. ; Costa, E. S.; Freitas, M. S.; Dutra, F. F. ; Maia, S. F. ; Guerra, M. C. ; Tabernero, M. D. ; Borojevic, R. ; Otazu, I. B. ; Silva, Jerson L. (2010). Positive response to imatinib mesylate therapy for childhood chronic myeloid leukemia. ***Braz J Med Biol Res*** 43: 580-584.

58. Souza TLF, Sanches D, Gonçalves RB, Pita SSR, Pascutti PG, Bianconi ML, Almeida FCL, Silva JL and Oliveira AC. (2010). Conformational selection, dynamic restriction and the hydrophobic effect coupled to stabilization of the BIR3 domain of the human X-linked inhibitor of apoptosis protein by the tetrapeptide AVPI. ***Biophys Chem.*** 152: 99-108.

59. Romano SA, Cordeiro Y, Lima LM, Lopes MH, Silva JL, Foguel D, Linden R. (2009). Reciprocal remodeling upon binding of the prion protein to its signaling partner hop/STI1. ***FASEB J***. 23(12):4308-4316. Epub 2009 Aug 24.

60. Silva JL, Oliveira AC. (2009). Science and technology to combat dengue virus. ***An Acad Bras Cienc.*** 81(4):631-632.

61. Silva, JL and Foguel, D (2009) Hydration, cavities and volume in protein folding, aggregation and amyloid assembly. ***Phys. Biol.*** 6: 15002 (1-12).

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34: 5-6.

64. Marques, AF, Cordeiro, Y, Silva, JL, and Lima, LMTR (2009). Enhanced prion protein stability coupled to DNA recognition and milieu acidification. ***Biophys. Chem.*** 141(2-3): 135-139.

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