Stanford

Louise Alessandra Mesentier Louro

Postdoctoral Research Fellow, Ophthalmology

Bio

HONORS AND AWARDS

- NEI Vision Core grant funding, National Eye Institute (2018/03-2018/06)
- Translational Research and Applied Medicine (TRAM) Pilot Grant, Stanford (2018-2019)
- PAPD Scholarship, Capes/FAPERJ (Brazil) (2016-2017)
- Science Without Borders Scholarship (Visitor Graduate Student), Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq Brazil) (2013-2014)
- BRAVO/Allergan prize, Experimental Biology Societies Federation (FeSBE) (2009)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Universidade Federal Rio De Janeiro (2015)
- Master of Science, Universidade Federal Rio De Janeiro (2011)
- Bachelor of Science, Universidade Federal Rio De Janeiro (2008)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Interested in understanding how glia shapes neuronal fate in neurodegenerative diseases and in designing therapeutic approaches to prevent retinal ganglion cell loss and irreversible damage to the optic nerve, the only connection between the eye and the brain.

Currently researching the impact of hypoxic-ischemic injury to the visual pathway due to systemic hypoxia or ischemic optic neuropathy. Hypoxic (low oxygen), ischemic (low blood flow) injury is common in all age groups and can occur as a result of perinatal asphyxiation in babies; near-drowning and poisoning in children; or cardiac arrest, stroke, pulmonary diseases, peri-operative complications, high altitude exposure, and space travel in adults. Anterior ischemic optic neuropathy is the most common cause of sudden vision loss in those older than 50. I am currently investigating the impact of hypoxic-ischemic conditions in the metabolic stress and gliosis in the visual pathway.

Other interests and experience: cell therapies with adult stem cells; disease modeling using induced pluripotent stem cells; oligodendroglia generation and biology.

Publications

PUBLICATIONS

- **Increased ER Stress After Experimental Ischemic Optic Neuropathy and Improved RGC and Oligodendrocyte Survival After Treatment With Chemical Chaperon.** *Investigative ophthalmology & visual science*
  Kumar, V., Mesentier-Louro, L. A., Oh, A. J., Heng, K., Shariati, M. A., Huang, H., Hu, Y., Liao, Y. J.

2019; 60 (6): 1953–66

- **Nerve Growth Factor Role on Retinal Ganglion Cell Survival and Axon Regrowth: Effects of Ocular Administration in Experimental Model of Optic Nerve Injury.** *Molecular neurobiology*
  Mesentier-Louro, L. A., Rosso, P., Carito, V., Mendez-Otero, R., Santiago, M. F., Rama, P., Lambiase, A., Tirassa, P.
  2018

- **Distribution of Mesenchymal Stem Cells and Effects on Neuronal Survival and Axon Regeneration after Optic Nerve Crush and Cell Therapy** *PLOS ONE*
  Mesentier-Louro, L., Zaverucha-do-Valle, C., da Silva-Junior, A., Nascimento-dos-Santos, G., Gubert, F., Padilha de Figueiredo, A., Torres, A., Paredes, B. D., Teixeira, C., Tovar-Moll, F., Mendez-Otero, R., Santiago, M. F.
  2014; 9 (10): e110722

- **The stressed optic nerve: gliopathy in hypoxic injury and potential for therapy**
  Mesentier-Louro, L., Camargo, A., Shariati, A., Nathan, A., Dalal, R., Kumar, V., Dardet, M. E., Perez, V., Liao, Y.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2019

- **Stem cell therapy for treatment of ischemic optic neuropathy**
  Mesentier-Louro, L., Yang, N., Shariati, A., Domizi, P., Dodd, R., Wernig, G., Wernig, M., Liao, Y.
  ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2018

- **Prevalence of IgG Autoantibodies against GD3 Ganglioside in Acute Zika Virus Infection.** *Frontiers in medicine*
  Nico, D., Conde, L., Rivera-Correa, J. L., Vasconcelos-Dos-Santos, A., Mesentier-Louro, L., Freire-de-Lima, L., Arruda, M. B., Freire-de-Lima, C. G., Ferreira, O. d., Lopes Moreira, M. E., Zin, A. A., Vasconcelos, Z. F., Otero, et al
  2018; 5: 25

- **Time-Dependent Nerve Growth Factor Signaling Changes in the Rat Retina During Optic Nerve Crush-Induced Degeneration of Retinal Ganglion Cells** *INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES*
  Mesentier-Louro, L. A., De Nicolo, S., Rosso, P., De Vitis, L. A., Castoldi, V., Leocani, L., Mendez-Otero, R., Santiago, M. F., Tirassa, P., Rama, P., Lambiase, A.
  2017; 18 (1)

- **Bone Marrow-Derived Cells as a Therapeutic Approach to Optic Nerve Diseases** *STEM CELLS INTERNATIONAL*
  Mesentier-Louro, L. A., Zaverucha-do-Valle, C., Rosado-de-Castro, P. H., Silva-Junior, A. J., Pimentel-Coelho, P. M., Mendez-Otero, R., Santiago, M. F.
  2016: 5078619

- **Sustained effect of bone marrow mononuclear cell therapy in axonal regeneration in a model of optic nerve crush** *BRAIN RESEARCH*
  Zaverucha-do-Valle, C., Mesentier-Louro, L., Gubert, F., Mortari, N., Padilha, A., Paredes, B. D., Mencalha, A., Abdelhay, E., Teixeira, C., Ferreira, F. M., Tovar-Moll, F., Lopes de Souza, S., Gutfilen, et al
  2014; 1587: 54–68

- **Cell Therapy Modulates Expression of Tax1-Binding Protein 1 and Synaptotagmin IV in a Model of Optic Nerve Lesion** *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*
  Mesentier-Louro, L. A., Coronel, J., Zaverucha-do-Valle, C., Mencalha, A., Paredes, B. D., Abdelhay, E., Mendez-Otero, R., Santiago, M. F.
  2012; 53 (8): 4720–29

- **Bone Marrow Mononuclear Cells Increase Retinal Ganglion Cell Survival and Axon Regeneration in the Adult Rat** *CELL TRANSPLANTATION*
  Zaverucha-do-Valle, C., Gubert, F., Bargas-Rega, M., Coronel, J. L., Mesentier-Louro, L. A., Mencalha, A., Abdelhay, E., Santiago, M. F., Mendez-Otero, R.
  2011; 20 (3): 391–406

- **TROPHIC ACTIVITY DERIVED FROM BONE MARROW MONONUCLEAR CELLS INCREASES PERIPHERAL NERVE REGENERATION BY ACTING ON BOTH NEURONAL AND GLIAL CELL POPULATIONS** *NEUROSCIENCE*
  Ribeiro-Resende, V. T., Pimentel-Coelho, P. M., Mesentier-Louro, L. A., Mendez, R. B., Mello-Silva, J. C., Cabral-Da-Silva, M. C., De Mello, F. G., Reis, R., Mendez-Otero, R.
  2009; 159 (2): 540–49