

Bianca Ribeiro de Souza Sasaki MSc.

Biologist, Ph.D. Student

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Education

- 2019 – in progress** **Ph.D. Student in Cellular and Structural Biology (Cell Biology)**
Institute of Biology, Department of Structural and Functional Biology of University of Campinas (UNICAMP) – Campinas/Sao Paulo, Brazil
- Thesis Title: Immunotherapy with OncoTherad® (MRB-CFI-1) associated with Erythropoietin in the Treatment of Ovarian Cancer: Cytotoxic Inflammatory Response Analysis, Immunological Checkpoints and Regulation of Angiogenesis
- Supervisor Dr. Wagner José Fávaro
- 2015 - 2017** **Master of Science (Biosciences - Characterization and Application of Biological Diversity)**
Faculty of Science and Letters, Department of Biotechnology of São Paulo State University (UNESP) – Assis/São Paulo, Brazil
- Dissertation Title: Histopathological and Immuno-histochemical Analysis of Ovaries of Rats treated with Nandrolone Decanoate Steroid associated with Melatonin
- Supervisor Dr. Isabel Cristina Cherici Camargo
- 2011 - 2015** **Bachelor Degree in Biology**
São Paulo State University (UNESP) – Assis/São Paulo, Brazil
- Undergraduate
Research Title: Evaluation of the Reversibility of Effects resulting from isolated or simultaneous administration of Anabolic Steroid, Alcohol and Nicotine in Wistar rats' Testicles and Epididymis
- Supervisor Dr. Isabel Cristina Cherici Camargo
- 2011 - 2015** **Teaching Degree in Biology**
São Paulo State University (UNESP) – Assis/São Paulo, Brazil

Journal articles published

REIS, S.K.; SOCCA, E.R.; SOUZA, B.R.; GENARO, S.C.; DURÁN, N.; FÁVARO, W. J. Effects of combined OncoTherad immunotherapy and probiotic supplementation on modulating the chronic inflammatory process in colorectal carcinogenesis. **Tissue & Cell**, v. 75, 101747, 2022. <https://doi.org/10.1016/j.tice.2022.101747>.

ALONSO, J.C.C.; MACIEL, M.C.; FERRARI, H.A.; GONÇALVES, J.M.; SASAKI, B.R.S.; CINTRA, A.A.; DURÁN, N.; BILLIS, A.; FÁVARO, W. J. (2021, June). Safety and Efficacy of OncoTherad Nano-immunotherapy in Patients with Non-Muscle Invasive Bladder Cancer. **Journal of Physics: Conference Series**, v.1953, p. 012012 <https://doi.org/10.1088/1742-6596/1953/1/012012>

SOUZA, B.R.; CHUFFA, L.G.A.; SIMÃO, V.A.; CAMARGO, I.C.C. Histopathological changes in androgenized ovaries are recovered by melatonin treatment. **International Journal of Experimental Pathology**, v.99, n. 4, p.158-171, 2018. <https://doi.org/10.1111/iep.12283>

ANDRADE, G.H.B.; SIMÃO, V.A.; SOUZA, B.R.; CHUFFA, L.G.A.; CAMARGO, I.C.C. Sex steroid receptors profiling is influenced by nandrolone decanoate in the ampulla of the fallopian tube: Post-treatment and post-recovery analyses. **Tissue & Cell**, v.50, p.79-88, 2018. <https://doi.org/10.1016/j.tice.2018.01.001>

SOUZA, B.R.; MATHIAS, L.S.; SOUZA, T. M.; CAMARGO, I.C.C. Histopathological and morphometric evaluation in the testis and epididymis of adult rats submitted to a recovery period after treatment with anabolic steroid, alcohol and/or nicotine. **Journal of Interdisciplinary Histopathology**, v.5, n.3, p.92-98, 2017. [10.5455/jihp.20170124093401](https://doi.org/10.5455/jihp.20170124093401)

Manuscripts under review

REIS, I.B.; TIBO, L.H.S.; SOCCA, E.A.R. SOUZA, B.R.; DURÁN, N.; FÁVARO, W.J. OncoTherad® (MRB-CFI-1) Nano-Immunotherapy Reduced Tumoral Progression in Non-Muscle Invasive Bladder Cancer Through Activation of Toll-like Signaling Pathway. **Tissue & Cell**, (submission in 2021).

Abstracts published at meetings of the American Society of Clinical Oncology (ASCO)

SASAKI, B.R.S.; REIS, I.B.; OLIVEIRA, G.; DURAN, N.; FÁVARO, W.J. Modulation of the RANK/RANKL/OPG system and FOXP3+ regulatory T cells in the tumor microenvironment of noninvasive bladder cancer after intravesical oncotherad immunotherapy associated with platelet-rich plasma. **Journal Of Clinical Oncology**, v. 39, n. 6_suppl, p. 462, 2021. http://dx.doi.org/10.1200/jco.2021.39.6_suppl.462

SASAKI, B.R.S.; CAMARGO, G.C.A.; REIS, I.B.; DIAS, Q.C.; DURAN, N.; FÁVARO, W.J. A potential new therapeutic option for the treatment of nonmuscle invasive bladder cancer: Combination of intravesical oncotherad immunotherapy and platelet rich plasma (PRP). **Journal Of Clinical Oncology**, v. 39, n. 6_suppl, p. 461, 2021. http://dx.doi.org/10.1200/jco.2021.39.6_suppl.461

ALONSO, J.C.C.; REIS, I.B.; GONÇALVES, J.M.; SASAKI, B.R.S.; CINTRA, A.A.; DURAN, N.; BILLIS, A.; FÁVARO, W.J. Oncotherad immunotherapy elicits promising responses in Bacillus Calmette-Guérin-unresponsive non-muscle invasive bladder cancer: Results from phase I/ II study. **Journal Of Clinical Oncology**, v. 38, n. 15_Suppl, p. e17048, 2020. http://dx.doi.org/10.1200/jco.2020.38.15_suppl.e17048

Abstracts published at other conferences

LEME, G.; SOUZA-SASAKI, B.R.; OLIVEIRA, G.; CABRAL, F.A.T.; REIS, I.B.; FELIZZOLA, C.R.; DURÁN, N.; FÁVARO, W.J. Effects of Oncotherad® Immunotherapy and Erythropoietin on the estrous cycle, Survival and Macroscopy of Reproductive Organs of Ovarian Cancer Induced Rats. Unicamp Undergraduate Research Congress (online), 2021.

<https://proceedings.science/pibic-2021/papers/effects-of-oncotherad---immunotherapy-and-erythropoietin-on-the-estrous-cycle--survival-and-macroscopy-of-reproductive-o>

SANTOS, D.H.S.; OLIVEIRA, G.; SOUZA-SASAKI, B.R.; PAULA, J.L.B.; REIS, I.B.; DURÁN, N.; FÁVARO, W.J. Association of Oncotherad® Immunotherapy and Platelet-Rich Plasma in the Treatment of Induced Ovarian Cancer in Rats: Evaluation of Estrous Cycle, Weight Parameters and Macroscopy. Unicamp Undergraduate Research Congress (online), 2021.

<https://proceedings.science/pibic-2021/papers/association-of-oncotherad---immunotherapy-and-platelet-rich-plasma-in-the-treatment-of-induced-ovarian-cancer-in-rats--e>

SOUZA-SASAKI, B.R.; CAMARGO, G.C.A.; REIS, I.B.; DIAS, Q.C.; DURÁN, N.; FÁVARO, W.J. Oncotherad® Intravesical Nano-Immunotherapy Associated to Platelet Rich Plasma Modulates IFN-Gamma Production and JAK-STAT Signaling Pathway in Bladder Cancer. Brazilian Congress of Clinic Oncology (online), 2021.

<https://ccm.iweventos.com.br/evento/sboc2021/trabalhosaprovados/naintegra/101231>

REIS, I.B.; TIBO, L.H.S.; SOUZA-SASAKI, B.R.; SOCCA, E.A.R.; DURÁN, N.; FÁVARO, W.J. Oncotherad® Immunotherapy Downregulated RANK/RANKL Signaling Pathway in Non-Muscle Invasive Bladder Cancer. Brazilian Congress of Clinic Oncology (online), 2021. **(co-author)**

<https://ccm.iweventos.com.br/evento/sboc2021/trabalhosaprovados/naintegra/101045>

FÁVARO, W.J.; REIS, I.B.; GONÇALVES, J.M.; SASAKI, B.R.S.; CINTRA, A. A.; BILLIS, A.; DURÁN, N.; ALONSO, J.C.C. Role of Oncotherad Nano-Immunotherapy in BCG-Unresponsive Non-Muscle Invasive Bladder Cancer: An Open-Label and Single-Arm Phase 1/2 Study. Brazilian Congress of Clinic Oncology, 2021. **(co-author)**

<https://ccm.iweventos.com.br/evento/sboc2021/trabalhosaprovados/naintegra/100754>

DIAS, Q.C.; SILVA, M.S.; SOUZA-SASAKI, B.R.; FÁVARO, W.J. Estratégias terapêuticas para o tratamento do câncer de bexiga não-Músculo-Invasivo (CBNMI) baseadas no uso do imunomodulador Oncotherad e Cisplatina: Análise da efetividade antitumoral e modulação do ciclo celular através das proteínas P53 e P21. XXXV FeSBE Annual Meeting (online), 2021. **(co-author)**

<https://anual2021.fesbe.org.br/video-posters/estrategias-terapeuticas-para-o-tratamento-do-cancer-de-bexiga-nao-musculo-invasivo-cbnmi-baseadas-no-uso-do-imunomodulador-oncotherad-e-cisplatina-analise-da-efetividade-antitumoral-e-modulacao-d/>

SOUZA-SASAKI, B.R.; REIS, I.B.; OLIVEIRA, G.; FÁVARO, W.J.; DURÁN, N. Evaluation of Immune Checkpoints in Bladder Cancer after Intravesical Treatment with Oncotherad® Immunotherapy and Platelet Rich Plasma (PRP). XII International Congress of Uro-oncology (online), 2021. **(Oral Presentation)**

<https://www.congressourooncologia.com.br/evento/uroonco2021/trabalhosaprovados/naintegra/1784>

REIS, I.B.; SOUZA-SASAKI, B.R.; DURÁN, N.; FÁVARO, W.J. Oncotherad® Immunotherapy Activates Toll-Like Receptor 4 Signaling Pathway and Inhibits Non-Muscle Invasive Bladder Cancer Progression. XII International Congress of Uro-oncology (online), 2021. **(co-author)**

<https://congressourooncologia.com.br/evento/uroonco2021/trabalhosaprovados/naintegra/1786>

SOUZA-SASAKI, B.R.; CAMARGO, G.C.A.; REIS, I.B.; DAYS, Q.C.; DURÁN, N.; FÁVARO, W.J. Modulation of the Toll-Like Signaling Pathway Receptors after Intravesical Oncotherad® Immunotherapy Associated with Rich Plasma Platelet (PRP) for Non-Muscle Invasive Bladder Cancer Treatment. XI International Congress of Uro-oncology (online), 2020. **(Poster presentation)**

<https://rvmais.iweventos.com.br/evento/uroonco2020/trabalhosaprovados/naintegra/1628>

ALONSO, J.C.; REIS, I.B.; SOUZA-SASAKI, B.R.; CINTRA, A.A.; DURÁN, N.; BILLIS, A.; FÁVARO, W.J. Oncotherad Immunotherapy Induces Toll-Like Receptor 4-Mediated Interferon Signaling Pathway and Leads to Formation of Primary Lymphoid Follicles in Bacillus Calmette-Guérin-Unresponsive Non-Muscle Invasive Bladder Cancer. XI International Congress of Uro-oncology, 2020 **(Oral Presentation)**

<https://rvmais.iweventos.com.br/evento/uroonco2020/trabalhosaprovados/naintegra/1636>

ALONSO, J.C.; REIS, I.B.; GONÇALVES, J.M.; SOUZA-SASAKI, B.R.; CINTRA, A.A.; DURÁN, N.; BILLIS, A.; FÁVARO, W.J. Efficacy and Safety of Oncotherad Immunotherapy in Bacillus

Calmette-Guérin-Unresponsive Non-Muscle Invasive Bladder Cancer Patients: Results from A Phase 1/2 Open-Label Study. XI International Congress of Uro-oncology, 2020 (**co-author**)

<https://rymais.iweventos.com.br/evento/uroonco2020/trabalhosaprovados/naintegra/1638>

CAMARGO, G.C.Á.; SOUZA-SASAKI, B.R.; REIS, I.B.; DAYS, Q.C.; DURÁN, N.; FÁVARO, W.J. New Therapeutic Approaches for Non-Muscle Invasive Bladder Cancer (NMIBC): Intravesical Use of OncoTherad Biological Response Modifier and Its Association with Platelet-Rich Plasma (PRP). XXVII Scientific Initiation Congress of UNICAMP, 2019. *Journal of Scientific Initiation Works of Unicamp*, n.27, 2019. DOI: 10.20396/revpibic. (**Poster, co-author**)

<https://www.prp.unicamp.br/inscricao-congresso/resumos/2019P15364A33507O2676.pdf>

SOUZA, B.R.; SIMÃO, V.A.; CHUFFA, L.G.A.; CAMARGO, I. C. C. Evaluation of the estrous cycle and ovarian tissue in androgenized rats treated with melatonin. 7th CPCB – Paraná Congress of Biomedical Sciences, State University of Londrina (UEL), 2017. (**Poster presentation**)

<http://www.uel.br/eventos/cpcb/pages/arquivos/2017/ANAIS-7-CPCB-2017.pdf>

SILVA, H.O.; SOUZA, B.R.; SIMÃO, V.A.; CHUFFA, L.G.A.; CAMARGO, C.C.C. Evaluation of treatment with melatonin in the suppression of side effects promoted by nandrolone decanoate in the estrous cycle and in the uterine tissue of rats. VI Pharmaceutical Congress of Faculty of Pharmaceutical Sciences – UNESP, 2016. *Journal of Basic and Applied Pharmaceutical Sciences*, v.37, 2016. (**Poster, co-author**) <http://seer.fcfar.unesp.br/rcfba/index.php/rcfba/article/view/452/259>

MATHIAS, L.S.; SOUZA, B.R.; CAMARGO, C.C.C. Morphometric evaluation of the testes and epididymis of adult rats submitted to a post-treatment recovery period with nicotine, alcohol and anabolic steroid. 67th Annual Meeting of the Brazilian Society for the Advancement of Science - UFSCar, 2015. *Proceedings of the 67th Annual Meeting of the Brazilian Society for the Advancement of Science*, 2015. (**Poster, co-author**)

http://www.sbpnet.org.br/livro/67ra/resumos/resumos/1781_1e429a8ce1f40f0588f73776c6fee1cae.pdf

SOUZA, B.R.; MATHIAS, L.S.; CAMARGO, C.C.C. Evaluation of the reversibility of the effects resulting from the isolated or simultaneous administration of anabolic steroid, alcohol and nicotine in the testes and epididymis of Wistar rats. XXX Biology Week of the Institute of Biosciences, Letters and Exact Sciences – UNESP, 2014. (**Oral presentation**) http://semanadabioibilce.com.br/wp-content/uploads/2013/02/semanadabioibilce_apresentacao-de-trabalhos19.pdf

SOUZA, B.R.; MATHIAS, L.S.; CAMARGO, C.C.C. Evaluation of the reversibility of the effects promoted by anabolic steroids, alcohol and nicotine on the testicles and epididymis of rats. XXVI Scientific Initiation Congress at UNESP, São Paulo State University, 2014. (**Poster presentation**) http://prope.unesp.br/cic_isbn/busca.php

Academic Experience (Teaching Assistant)

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| 2016 | Basic and Comparative Histology (20h, volunteer)
Taught practical classes for the 2nd year of the Biological Sciences undergraduate course. Faculty of Sciences and Letters of Assis - UNESP |
| 2016 | Comparative Embryology (10h, volunteer)
Taught practical classes for the special class of the Biological Sciences undergraduate course. Faculty of Sciences and Letters of Assis – UNESP |
| 2015 | Comparative Embryology (20h, volunteer)
Taught practical classes for the 1st year of the Biological Sciences undergraduate course. Faculty of Sciences and Letters of Assis - UNESP |
| 2014 | Comparative Embryology (20h, volunteer)
Taught practical classes for the 1st year of the Biological Sciences undergraduate course. Faculty of Sciences and Letters of Assis - UNESP |

Professional Appointments (Teaching Experience)

- 2017 – 2018** **Science, Chemistry and Biology Teacher**
Colégio Cotiguara, Presidente Prudente, SP, Brazil.
6th, 7th, 8th and 9th grades of Elementary School II
- 2017** **Mathematics Teacher**
Colégio São Paulo, Presidente Prudente, SP, Brazil.
8th and 9th grade classes of Elementary School II
- 2016** **Science and Chemistry Teacher (Substitute)**
Colégio Rui Barbosa (Anglo Xereta), Assis, SP, Brazil.
Elementary School II classrooms

Research Experiences (Fellowships)

- 2021 – in progress** Ph.D. Research Project
São Paulo Research Foundation (FAPESP)
Immunotherapy with OncoTherad® (MRB-CFI-1) associated with Erythropoietin in the Treatment of Ovarian Cancer: Cytotoxic Inflammatory Response Analysis, Immunological Checkpoints and Regulation of Angiogenesis
- 2019 - 2021** Ph.D. Research Project
National Council for Scientific and Technological Development (CNPq)
Effects of Intravesical Platelet-Rich Plasma (PRP) Therapy Associated with OncoTherad Biological Response Modifier (MRB-CFI-1) in the Treatment of Non-Muscle Invasive Bladder Cancer (NMIBC)
- 2013 - 2014** Undergraduate Research Project
São Paulo Research Foundation (FAPESP)
Evaluation of the Reversibility of Effects resulting from isolated or simultaneous administration of Anabolic Steroid, Alcohol and Nicotine in Wistar rats' Testicles and Epididymis

Invited Talks

- 2018** **Reproductive Toxicology (short course, 4h)**
XIV EEBBA – Meeting of Biotechnological Engineering and Biosciences of Assis at the Faculty of Sciences and Letters of Assis – UNESP
- 2017** **Fertility and Sexual Health: The impact of drugs of abuse (short course, 4h)**
XVIII Conference on Education and Scientific Initiation Symposium of the Presidente Prudente Faculty of Arts, Sciences and Education of UNOESTE
- 2015** **The search for the “perfect body”: is it worth it? (Lectures, 12h)**
Lectures given to high school students from public and private schools in Assis/SP. Institution promoting the Extension Project: UNESP
- 2013** **Science and Biology Syllabus: Knowledge and Educational Practices (Technical Guidance, 4h)**
Technical guidance for teachers of Science and Biology disciplines in Schools under the jurisdiction of the Education Board of the Region of Assis.

Technical Skills

- Animal manipulation** Handling and restraining (mice and rats), administration of injections (IP, IM, SC, intravesical), surgical procedures, blood and other samples collection, dissection.
- Histology** Trimming, embedding, microtomy, staining processes, immunohistochemistry.
- Molecular Biology/ Biochemistry** Protein extraction and quantification (Bradford Method), Western Blot, DNA extraction (microbiota).
- Statistics** Conducting statistical analysis (ANOVA parametric, Kruskal-Wallis non-parametric analysis of variance, post hoc tests, two-way ANOVA, Chi-Square test, Kaplan-Meier method, log-rank test) and software use (GraphPad Prism, and BioEstat 5.0).
- Others** Patient sample handling techniques, data processing, light microscopy, Adobe Photoshop, experimental design, conducting and interpretation of scientific research, writing projects and reports, training and assisting in advising undergraduate students.

Languages

Portuguese (native) and English

Research interests

Histopathology, Immuno-Oncology, Immunotherapies, Ovarian Cancer, Bladder Cancer.

Awards

- 2021** **2nd best scientific work (presenter, oral modality)**
XII International Congress of Uro-oncology. SOUZA-SASAKI, B.R.; REIS, I.B.; OLIVEIRA, G.; FÁVARO, W.J.; DURÁN, N. Evaluation of Immune Checkpoints in Bladder Cancer after Intravesical Treatment with Oncotherad® Immunotherapy and Platelet Rich Plasma (PRP).
- 2021** **1st place as the best scientific work (co-author)**
XII International Congress of Uro-oncology. REIS, I.B.; SOUZA-SASAKI, B.R.; DURÁN, N.; FÁVARO, W.J. Oncotherad® Immunotherapy Activates Toll-Like Receptor 4 Signaling Pathway and Inhibits Non-Muscle Invasive Bladder Cancer Progression.
- 2020** **1st place as the best scientific work (presenter, oral modality, co-author)**
XI International Congress of Uro-oncology. ALONSO, J.C.; REIS, I.B.; SOUZA-SASAKI, B.R.; CINTRA, A.A.; DURÁN, N.; BILLIS, A.; FÁVARO, W.J. Oncotherad Immunotherapy Induces Toll-Like Receptor 4-Mediated Interferon Signaling Pathway and Leads to Formation of Primary Lymphoid Follicles in Bacillus Calmette–Guérin-Unresponsive Non–Muscle Invasive Bladder Cancer.
- 2020** **2nd best scientific work (co-author)**
XI International Congress of Uro-oncology. ALONSO, J.C.; REIS, I.B.; GONÇALVES, J.M.; SOUZA-SASAKI, B.R.; CINTRA, A.A.; DURÁN, N.; BILLIS, A.; FÁVARO, W.J. Efficacy and Safety of Oncotherad Immunotherapy in Bacillus Calmette–Guérin-Unresponsive Non-Muscle Invasive Bladder Cancer Patients: Results from A Phase 1/2 Open-Label Study.
- 2017** **Honorable Mention for the best work in the area of Cell Biology and Histology (presenter, poster)**
7th CPCB - Paraná Congress of Biomedical Sciences. SOUZA, B.R.; SIMÃO, V.A.; CHUFFA, L.G.A.; CAMARGO, I. C. C. Evaluation of the estrous cycle and ovarian tissue in androgenized rats treated with melatonin.
- 2014** **2nd best work in the oral presentation category (presenter)**
XII EEBBA - Assis Biotechnological Engineering and Biosciences Meeting - Faculty of Science and Letters (UNESP). SOUZA, B.R.; MATHIAS, L.S.; CAMARGO, C.C.C. Evaluation of the reversibility of effects resulting from the isolated or simultaneous administration of anabolic steroid, alcohol and nicotine in the testes and epididymis of Wistar rats.

References

Dr. Wagner José Fávoro <i>University of Campinas</i> Campinas, Brazil wjfavaro@gmail.com	Dr. Nelson Durán <i>Nanomedicine Research Unit (Nanomed) and Federal University of ABC (UFABC)</i> Santo André, Brazil nelsonduran1942@gmail.com	Dr. Luis Gustavo de Almeida Chuffa <i>São Paulo State University</i> Botucatu, Brazil guchuffa@yahoo.com.br	Dr. Isabel Cristina Cherici Camargo <i>São Paulo State University</i> Assis, Brazil camargo@assis.unesp.br
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