LUÍS ADRIANO ANHOLETO

RESEARCH INTERESTS

- Infectious diseases and bacterial pathogenesis
- One Health
- Parasitology
- Invertebrates
- Cell and Molecular Biology
- Eukaryotic Cellular Biology
- Morphology
- Tick control
- Natural products and biological control
- Propagation and study of tick-borne pathogens in tick cell and organ cultures
- Use of tick cell lines as tools for the study of tick biology, physiology, and control
- Tick and Tick-borne diseases

PROFESSIONAL APPOINTMENTS

- March/2022 present: Acadia University, Wolfville, NS, Canada.
- Postdoctoral Researcher, Department of Chemistry and Biology.

As a Postdoctoral Fellow at Acadia University, my role focuses on advancing innovative research in tick management. This includes the development of novel repellents and acaricides utilizing natural compounds and microorganisms. I collaborate with companies such as AtlanTick and Maskwiomin to enhance their products and collect data necessary for registering these products with the Pest Management Regulatory Agency in Canada. Additionally, I utilize my neurobiology experience to evaluate how ticks respond to chemical stimuli, contributing insights into their host-seeking behaviours and reactions to repellents. I have successfully led projects to create plant-based tick repellents and acaricides, showcasing my project management and leadership abilities. My responsibilities also encompass designing and conducting bioassays to assess product efficacy using advanced analytical methods like HPLC, GC-MS, nanoparticle analysis, molecular biology, and microscopy. Effective collaboration with colleagues from diverse departments, such as Chemistry and Biology, has propelled research efforts toward shared objectives. Moreover, I mentor research associates to improve their skills, enhancing our lab's productivity. I have demonstrated strong organizational capabilities and a commitment to deadlines, producing high-quality research reports and presentations vital for securing funding and disseminating our research findings.

• July/2020 - February/2022: Brazilian Agricultural Research Corporation (EMBRAPA Southeastern Livestock, Brazil), São Carlos, SP, Brazil.

• Postdoctoral Researcher, Veterinary Parasitology Laboratory.

As a Postdoctoral Researcher at Embrapa, I gained extensive experience in tick research and management within a corporate setting. I collaborate with companies such as Decoy to enhance their products and collect data necessary to register them with Brazil's Ministry of Agriculture, Livestock and Food Supply. I successfully led a project that resulted in a patented solution for controlling cattle ticks, showcasing my ability to drive innovative research and development by integrating Biology, Animal Physiology, Chemistry, Nanotechnology, and Pest Management. My expertise covers a wide range of techniques, including microscopy (histology, histochemistry, immunohistochemistry, scanning electron microscopy, transmission electron microscopy, and confocal laser microscopy), molecular biology (DNA extraction, PCR, qPCR), and animal handling. I deeply understand tick biology, encompassing their morphology, physiology, and behaviour. I have effectively conducted toxicological analyses of natural products to evaluate their efficacy against ticks and their potential impact on livestock. In addition, I have experience in cultivating tick cells in vitro, offering valuable insights into their biology and possible targets for control strategies. My capacity to plan and execute bioassays has been crucial in assessing the effectiveness of tick control methods. I have also implemented biological control to create sustainable and integrated tick management strategies. Throughout my tenure at Embrapa, I have consistently exhibited

strong research skills, including data analysis, report writing, and scientific communication. My contributions to the field have been acknowledged through the publication of scientific papers and the development of a patented technology.

• Jan/2020 – June/2020: Eurofins Brazil Environment Testing, Rio Claro, SP, Brazil.

• Analytical Services Specialist I, Analytical Service Manager.

As an Analytical Services Specialist at Eurofins, I played a crucial role in ensuring the accuracy, timeliness, and compliance of environmental analysis reports. I was responsible for evaluating data and preparing comprehensive reports for a wide range of parameters, including physical-chemical, microbiological, organic, inorganic, and toxicological analyses in environmental matrices such as water, effluents, soils, sediments, residues, and atmospheric emissions. I maintained a strong focus on customer satisfaction, delivering exceptional service throughout the entire analysis process. My responsibilities included monitoring sample progress, promoting the use of online systems for sample registration and report access, and providing technical support to clients. My expertise in environmental analysis and commitment to quality assurance enabled me to deliver reliable and accurate results that met the stringent requirements of the ABNT NBR ISO/IEC 17025 standard.

• Aug/2017 - Dec/2017: São Paulo State University, Rio Claro, SP, Brazil

Adjunct professor

As an Adjunct Professor (contracted limited term) at UNESP, I successfully designed and delivered lectures, seminars, and laboratory sessions for the course "Aging and Cell Death." My primary focus was enhancing student learning outcomes and fostering a stimulating and engaging learning environment. The course examined the fundamental concepts of aging theories, their purposes, and their impacts on various cell types. I covered topics such as cardiovascular deterioration, neural loss, age-associated diseases, and the role of cellular structures in aging. Additionally, I explored the different types of cell death, including apoptosis, autophagy, and necrosis, using both morphological and molecular approaches. I encouraged active participation through seminars and class discussions to deepen student understanding. These sessions provided opportunities for students to examine the environmental influences on aging, discuss physiological and anatomical changes, and connect course content to their daily lives.

• Apr/2015 - May/2019: São Paulo State University, Rio Claro, SP, Brazil.

• Laboratory Manager

As a Laboratory Manager (PhD student) at UNESP, I managed the operations of a research laboratory focused on tick control. My responsibilities included overseeing a team of undergraduate and graduate students, ensuring the proper maintenance and calibration of laboratory equipment, and maintaining tick colonies following ethical guidelines. I played a crucial role in designing and conducting bioassays to assess the efficacy of natural products against ticks. My expertise in microscopy techniques, including histology, histochemistry, immunohistochemistry, scanning and transmission electron microscopy, and confocal microscopy, allowed me to analyze samples at a cellular level. I successfully extracted RNA and DNA from various samples, facilitating downstream molecular analysis. My proficiency in PCR and qPCR techniques enabled me to amplify and quantify specific DNA sequences. Additionally, I ran electrophoresis gels to visualize and analyze DNA and RNA fragments. I maintained in vitro cultures of invertebrates (ticks) and mammalian cells, monitoring their viability and growth under aseptic conditions. Alongside my research activities, I trained and mentored students and fostered a positive and productive learning environment. Furthermore, I demonstrated strong organizational skills and a commitment to meeting deadlines, ensuring the timely completion of research projects and the production of high-quality reports.

• Oct/2018 – Jan/2019: University of Liverpool, Liverpool, UK

• Honorary Research Assistant

As an Honorary Research Assistant at the University of Liverpool, I investigated the effects of natural products on tick cell lines. My research focused on populations of Rhipicephalus microplus exhibiting varying levels of acaricide resistance. I gained valuable experience in tick cell culture techniques and light microscopy, specifically in histology and histochemistry. My responsibilities included preparing solutions, culture media, samples, and slides for toxicological analysis and histological staining. I also designed and conducted bioassays to evaluate the toxicity of natural products on tick cells, analyzing the results and reporting my findings. Through my research, I developed skills in biostatistics, interpersonal communication, presentation, technical writing, and collaborative problem-solving. My contributions to the research team were crucial in advancing our understanding of tick biology and potential natural product-based control strategies.

EDUCATION AND RESEARCH TRAINING

2019. PhD in Cell and Molecular Biology. São Paulo State University, Brazil, with a collaborative period in the *Tick Cell Biobank* laboratory from the **University of Liverpool, UK**, under Dr Lesley Bell Sakyi's supervision. **Research project:** "Acaricidal activity *in vitro* of spilanthol against cell lines derived from acaricide-resistant and acaricide-susceptible *Rhipicephalus microplus* ticks with or without *Ehrlichia minasensis* infection." **Dissertation:** The acaricide action of Jambu (*Acmella oleracea*): Study of the effects on morphophysiology of male and female reproductive systems of *Amblyomma cajennense* (Fabricius, 1787) (Acari: Ixodidae) ticks. Advisor: Professor Dr Maria Izabel Camargo-Mathias

2015. MPhil in Cell and Molecular Biology. São Paulo State University, Brazil

Thesis: Effect of the extract of salivary glands of female *Rhipicephalus sanguineus* (Latreille, 1806) on inhibition and proliferation of tumour cells. Advisor: Professor Dr Maria Izabel Camargo-Mathias.

2013. Licentiate degree in Biological Sciences (Honours – education). São Paulo State University, Brazil. Honours thesis: "Analysing the movie Antz as a resource for science education." Advisor: Professor Dr José Euzébio de Oliveira Souza Aragão.

2012. BSc in Biological Sciences (Honours). São Paulo State University, Brazil. **Honours thesis**: "Testes of fed and unfed *Amblyomma cajennense* ticks (Acari: Ixodidae). First morphological data". Advisor: Professor Dr Maria Izabel Camargo-Mathias.

AWARDS

2023: XIV Brazilian Symposium of Pharmacognosy, Maranhão, Brazil. Best oral presentation.

2022-2023: Research Internships Abroad (BEPE) Postdoctoral fellow – FAPESP, Embrapa, São Paulo, Brazil / Acadia University, Canada.

2020-2023: Postdoctoral fellowship award (FAPESP), Embrapa, São Paulo, Brazil.

2018-2019: Research Internships Abroad (BEPE) PhD – FAPESP, São Paulo State University, São Paulo, Brazil / University of Liverpool, UK.

2015-2019: Ph.D. scholarship (FAPESP) in Cell and Molecular Biology, São Paulo State University, São Paulo, Brazil. 2013-2015: Master's scholarship (FAPESP) in Cell and Molecular Biology, São Paulo State University, São Paulo, Brazil.

TEACHING EXPERIENCE

Courses taught

Aging and Cell Death (Biological Science undergraduate program), São Paulo State University, Brazil, 2017 (1 semester).

Teaching assistantships

Histology course – Biological Science program – UNESP- Brazil (2014 – 2016) (2 semesters)
Cell Biology course – Biological Science program – UNESP- Brazil (2015 – 2015) (1 semester)
Functional Histology course – Biological Science program – UNESP- Brazil (2015 – 2015) (1 semester)

GUEST LECTURER

Graduate program:

<u>Veterinary Sciences - São Paulo State University - Jaboticabal</u> Campus

Alternative Control of Cattle and Sheep Parasites: Current Affairs and Practices course – Morphology and electrophysiology as tools in tick control studies on 9 September 2024.

Veterinary Sciences - São Paulo State University - Jaboticabal Campus

Alternative Control of Cattle and Sheep Parasites: Current Affairs and Practices course – Morphology and electrophysiology as tools in tick control studies on 30 May 2023.

Veterinary Sciences - São Paulo State University - Jaboticabal Campus

Alternative Control of Cattle and Sheep Parasites: Current Affairs and Practices course - Morphology as a tool in toxicological studies in ticks on 15 February 2022.

Undergraduate program:

Biology course - Environmental Science program

Prokaryotic and Eukaryotic Cells on April 4, 2016 Bacteria on May 18, 2015. Fungi on May 25, 2015. Cell visualization and microscopy on 21 May 2016. Prokaryotic and Eukaryotic Cells on March 10, 2014.

Histology Course - Biology program

Blood Cells on April 1st, 2015. **Adipose Tissue** on November 10, 2015.

Developmental Biology: Regulatory Mechanisms course - Biology program

Sex determination mechanisms involving genetic and environmental factors (intrinsic and extrinsic) on April 7, 2016.

Initial development of multicellular organisms: universal mechanisms of development and genesis of the body plane on April 28, 2016

Assembly of histological slides and photo documentation in bright-field microscope on 16 June 2016.

Cell Biology course - Biology program

Cell staining and visualization techniques, on June 12, 2015.

WORKSHOPS

ANHOLETO, LUÍS ADRIANO; CAMARGO-MATHIAS, M. I. DELALIBERA JR, I. OLIVEIRA, P. R.; TRAVAGLINI, R. V.; D'ALESSANDRO, C. P.; DINIZ, A.; ALVES, G. R. Biological Control applied to pests and vectors of zoonoses, carried out at UNESP of Rio Claro, SP, in the period from 11 to 12 July 2018.

ANHOLETO, L. A. Fundamentals of Histology and Light Microscopy at UNESP, Rio Claro, SP, from January 25 to 27, 2016.

MENTORING ACTIVITIES

Graduate students

Melissa Carolina Pereira, MSc, São Paulo State University, 2021 (Co-advisor)

Undergraduate students

Jaclyn Delahunt – research topics 2025, Acadia University, Canada (Co-supervisor).

Kennedy Jefferson – research topics 2024, Acadia University, Canada (Co-supervisor).

Leilia Fraser – Summer student 2024, Acadia University, Canada (Co-supervisor).

Creighton Jarvis - Summer student 2024, research topics 2024, 2025, Acadia University, Canada (Co-supervisor).

Bronwyn Naugler - Summer student 2024, Acadia University, Canada (Co-supervisor).

Sophia Blanchard - Summer student 2023, Acadia University, Canada (Co-supervisor).

Thais Scopinho Ceccato, BSc, Honour Thesis, 2021 (Co-advisor)

High School students (Community outreach)

Eduardo Lopes da Silva, Research Internship, Public School EE Chanceler Raul Fernandes, 2019 (Advisor). Lara Lima Bertola, Research Internship, Public School EE Chanceler Raul Fernandes, 2019 (Advisor). Julia Roccon Tomaz, Research Internship, Public School EE Marciano de Toledo Piza, 2019 (Advisor).

COMMUNITY OUTREACH

Community project:

Organizer of First Steps in Science. 2017. *Founder of the Project*. São Paulo State University, Brazil. Organizer of First Steps in Science. 2016. *Founder of the Project*. São Paulo State University, Brazil.

Guest lecturer:

High School:

"Fundamentals of Cell Biology and Microscopy," on June 10, 2016, to the students of the 2nd grade of the High School of the State School Prof. Délcio Báccaro.

"Cells Closely: An Introduction to Light Field Microscopy," held together with the thematic course "From Mendel to Modern Biotechnological Applications, An Update for Teachers and High School Students," on October 22, 2016, at UNESP Rio Claro, SP.

"The microscope as a tool for the study of the cell" in the community project "IV First Steps in Science," promoted by the Cellular and Molecular Biology Graduate Program at UNESP Rio Claro.

"Cells up close, from the cytoplasm to nucleus: everything you've ever wanted to know (and see) about the smallest components of living beings," taught in the extension project "First Steps in Science, held at UNESP Rio Claro, SP, from July 3 to 7, 2017.

"Getting to know UNESP Rio Claro: practical activity of microscopy," carried out on April 23, 2019, at UNESP Rio Claro, SP, as part of the activities of the Week of the Worker, carried out by the School Company Integration Centre - CIEE.

"Unity and diversity: the cell closely" was taught in the "First Steps in Science" community project, held at UNESP Rio Claro, SP, from July 4 to 8, 2016.

THESIS COMMITTEE MEMBER

Bianca Augusto de Souza (UFRRJ), Master's thesis, Brazil, 2024. João Vitor Carvalho Constantini (UNESP), Qualifying Examination for Master's Degree, Brazil, 2023 Leonardo Aparecido Lima dos Santos (UNESP), Master's thesis, Brazil, 2023 Ana Victória Gonçalves (UNESP), Honours Thesis, Brazil, 2021 Cleiton Pereira de Souza (UNESP), PhD candidate, Brazil, 2019

PUBLICATIONS (PEER-REVIEWED)

Journals

- **1.** GAUDET, K..; **ANHOLETO, LA.**; HILLIER, N.K.; FARAONE, N. Lemongrass essential oil and DEET inhibit attractant detection in infected and non-infected *Ixodes scapularis* ticks. Current Research in Insect Science, v. 6, p. 100096, 2024.
- **2. ANHOLETO, L.A.**; BLANCHARD, S.; WANG, H.V.; CHAGAS, A.C.S.; HILLIER, N.K.; FARAONE, N. *In vitro* acaricidal activity of essential oils and their binary mixtures against *Ixodes scapularis* (Acari: Ixodidae). Ticks and Tick-Borne Diseases, v. 15, p. 102309, 2024.

- **3. ANHOLETO, L.A.**; BRANCAGLION, G.A.; SANTOS, D.M.; KAPRITCHKOFF, R.T.I.; CASTRO, K.N.C.; CANUTO, K.M.; RODRIGUES, R.A.F.; CORREA, D.S.; CHAGAS, A.C.S.; PASTRE, J.C. Acaricidal activity of synthetic spilanthol derivative against ticks of medical and veterinary importance. Veterinary Parasitology, 2024.
- **4.** CEPEDA, D.F.; ASCARI, J.; OLIVEIRA, M.S.; ANTONIOLI, G.; BARCELLOS, T.; **ANHOLETO, L.A.**; NUNES, P.H. Effect of *Tagetes minuta* essential oil on the central nervous system of unfed *Rhipicephalus sanguineus* sensu lato tropical lineage' ticks. Experimental And Applied Acarology. v.1, 2023.
- **5.** SILVA, I.S.; VALE, L.; COUTINHO, A.L.; SOUSA, L.J.M.P.; MARCHESINI, P.; MATOS, R.S.; **ANHOLETO, L.A.**; CAMARGO-MATHIAS, M.I.; FERREIRA, L.L.; ARRUDA, W.; MONTEIRO, C. Thymol and eugenol against *Rhipicephalus sanguineus* sensu lato engorged females: biological, histopathological and bioinformatic analysis. Veterinary Parasitology, v. 319, p. 109938, 2023.
- **6.** SANTOS, I.B.; FERREIRA, A.U.C.; RABELO, M.D.; **ANHOLETO, L.A.**; SOUSA, G. A.; GAÍNZA, Y. A.; FIGUEIREDO, A.; ESTEVES, S. N.; CHAGAS, A.C. S. Portable near-infrared spectroscopy: A rapid and accurate blood test for diagnosis of *Haemonchus contortus* infection and for targeted selective treatment of sheep. International Journal for Parasitology. v.53, p.119 127, 2023.
- **7.** FIGUEIREDO, A.; **ANHOLETO, L.A.**; COLA, D.F.; FANTATTO, R.R.; GAINZA, Y.A.; SANTOS, I.B.; VIÇOZZI, G.P.; ÁVILA, D.S.; FRACETO, L.F.; CHAGAS, A.C.S. Acaricides containing zein nanoparticles: A tool for a lower impact control of the cattle tick *Rhipicephalus microplus*. Veterinary Parasitology, v. 318, p. 109918, 2023.
- **8.** PEREIRA, M.C.; **ANHOLETO, L.A.**; KASA, G.G.; CASTRO, K.N.C.; CANUTO, K.M.; SOUZA, A.S.Q.; CAMARGO-MATHIAS, M.I. Efficacy of essential oils of *Egletes viscosa* and *Lippia schaueriana* on the reproductive biology of *Rhipicephalus sanguineus* sensu lato engorged females. Experimental Parasitology, v. 244, p. 108423, 2023.
- **9.** FIGUEIREDO, A.; **ANHOLETO, L.A.**; COLA, D.F.; FANTATTO, R.R.; SANTOS, I.B.; GAINZA, Y.A.; SOUSA, G.A.; PICKETT, L.J.; FRACETO, L.F.; CHAGAS, A.C.S. Nanoformulations with synthetic and plant-derived compounds for cattle tick control. Veterinary Parasitology, v. 309, p. 109756, 2022.
- **10.**SANTOS, I.B; **ANHOLETO, L.A.**; SOUSA, G.A.; NUCCI, A.S.; GAINZA, Y.A.; FIGUEIREDO, A.; SANTOS, L.A.L.; MINHO, A.P.; BARIONI-JUNIOR, W.; ESTEVES, NOVITA, S.; NICIURA, S.C.M.; CHAGAS, A.C.S. Investigating the benefits of targeted selective treatment according to average daily weight gain against gastrointestinal nematodes in Morada Nova lambs. Parasitology Research, 2022.
- **11.**LIMA-DUARTE, L.; CASTRO-SANTIAGO, A.C.; CAMARGO, J.V.; FERRETTI, A. B. S. M.; **ANHOLETO, L. A.**; PEREIRA, M. C.; IKEDA, P.; PEREZ, C. A.; SANCHES, G. S.; CAMARGO-MATHIAS, M. I.; MELLO, D. C. C.; MACHADO, R. Z.; ANDRE, M. R.; BATTESTI, D. M. B. Establishment and multiapproach characterization of *Amblyomma sculptum* (Acari: Ixodidae) cell line (ASE-14) from Brazil. Ticks and Tick-Borne Diseases, 2022.
- **12.**LIMA DE SOUZA, J.R.; OLIVEIRA, P.R.; **ANHOLETO, L.A.**; SODELLI, L.F.; FERREIRA, A.R.F.; REMEDIO, R.N.; CAMARGO-MATHIAS, M.I. The bioactive compound carvacrol as a potential acaricide: An assessment of its effects on the integument of female sensu lato ticks. Microscopy Research and Technique, p. 1-7, 2021.
- **13.**LIMA-DUARTE, L.; CAMARGO, J.V.; CASTRO-SANTIAGO, A.C.; MACHADO, R.Z.; ADRRÉ, M.R.; CABRAL-DE-MELLO, D.C.; CAMARGO-MATHIAS, M.I.; IKEDA, P.; **ANHOLETO, L.A.;** PEREIRA, M.C.; COSTA, A.J.; BARROS-BATTESTI, D.M. Establishment and characterization of a cell line (RBME-6) of *Rhipicephalus (Boophilus) microplus* from Brazil. Ticks and Tick-borne Diseases, 12(5), 101770, 2021. DOI: https://doi.org/10.1016/j.ttbdis.2021.101770.
- **14.**DORIGO, A. S.*; ANJOS, A.*; MARCATO, A.C.C.*; PIRES-SILVA, D.*; Gonçalves, L. R.*; **ANHOLETO, L. A.*;** CHOLAK, L. R.*; RAMALHO, M. O.*; BORBA, R. S.*; ORTELANI, M. P.; CABRAL-DE-MELO, D. C. Projeto Primeiros Passos na Ciência: Rompendo barreiras sociais e estreitando laços entre a comunidade acadêmica e o Ensino Médio público. Revista Brasileira de Extensão Universitária, 11(1), 47-59, 2020. DOI: https://periodicos.uffs.edu.br/index.php /RBEU/article/ view/10768/pdf (* shared first authorship).
- **15.**KONIG, ISAAC FILIPE MOREIRA; OLIVEIRA, MARCOS VINÍCIUS SILVA; GONÇALVES, RAQUEL ROMANO PALMEIRA; PECONICK, ANA PAULA; THOMASI, SÉRGIO SCHERRER; **ANHOLETO, LUÍS ADRIANO**; LIMA-DE-SOUZA, JOSÉ RIBAMAR; CAMARGO-MATHIAS, MARIA IZABEL; NEODINI REMEDIO, RAFAEL. Low concentrations of acetylcarvacrol induce drastic morphological damages in ovaries of surviving Rhipicephalus sanguineus sensu lato ticks (Acari: Ixodidae). **Micron**. v.129, p. 102780, 2019. DOI: http://dx.doi.org/10.1016/j.micron.2019.102780.
- **16.**OLIVEIRA, PATRÍCIA ROSA; **ANHOLETO, LUIS ADRIANO**; FERREIRA, RODNEY ALEXANDRE RODRIGUES; ARNOSTI, ANDRÉ; BECHARA, GERVÁSIO HENRIQUE; CASTRO, KARINA NEOOB CARVALHO; CAMARGO-MATHIAS, MARIA IZABEL. Cytotoxic effects of extract of *Acmella olerace*a in the

- ovaries and midgut of *Rhipicephalus sanguineus* Latreille, 1806 (Acari: Ixodidae) female ticks. **Journal of Microscopy and Ultrastructure**, v.7, p.28, 2019. DOI: http://dx.doi.org/10.4103/jmau.jmau_16_18
- **17.**SOUZA, JOSÉ RIBAMAR LIMA; OLIVEIRA, PATRÍCIA ROSA; **ANHOLETO, LUÍS ADRIANO**; ARNOSTI, ANDRÉ; PINTO, ERIK DAEMON SOUZA; REMEDIO, RAFAEL NEODINI; CAMARGO-MATHIAS, MARIA IZABEL. Effects of carvacrol on oocyte development in semi-engorged *Rhipicephalus sanguineus* sensu lato females ticks (Acari: Ixodidae). **Micron**, v.116, p.66 72, 2018. DOI: http://dx.doi.org/10.1016/j.micron.2018.09.015
- **18.ANHOLETO, LUÍS ADRIANO**; OLIVEIRA, PATRÍCIA ROSA; RODRIGUES, RODNEY ALEXANDRE FERREIRA; YAMANE, LAIS THIEMI; CASTRO, KARINA NEOOB DE CARVALHO; CAMARGO-MATHIAS, MARIA IZABEL. Morphological alterations in the ovaries of semi-engorged ticks exposed to ethanolic extract of *Acmella oleracea*. **Microscopy Research and Technique**, v.1, p.1-11, 2018. DOI: http://dx.doi.org/10.1002/jemt.23145
- **19.**ABREU, RUSLEYD MARIA MAGALHÃES; ABREU, MARINA RODRIGUES; SANTOS, JUAN PARENTE; HEBLING, LETÍCIA MARIA GRABALLHOS FERRAZ; **ANHOLETO, LUÍS ADRIANO**; SOUZA, JOSÉ RIBAMAR LIMA; CAMARGO-MATHIAS, MARIA IZABEL. Morphological evaluation of the liver in Wistar rats inoculated with (Latreille, 1806) (Acari: Ixodidae) salivary gland extracts. **Microscopy Research and Technique**, v.81, p.1332-1338, 2018. DOI: http://dx.doi.org/10.1002/jemt.23142
- **20.**OLIVEIRA, PATRÍCIA ROSA; **ANHOLETO, LUIS ADRIANO**; RODRIGUES, RODNEY ALEXANDRE FERREIRA; BECHARA, GERVÁSIO HENRIQUE; CASTRO, KARINA NEOOB CARVALHO; CAMARGO-MATHIAS, MARIA IZABEL. The potential of *Acmella oleracea* (Jambu) extract in the control of semi-engorged *Rhipicephalus sanguineus* (Latreille, 1806) (Acari: Ixodidae) female ticks. **International Journal of Acarology**, v.44, p.192-197, 2018. DOI: https://doi.org/10.1080/01647954.2018.1472637
- **21.ANHOLETO, LUÍS ADRIANO**; OLIVEIRA, PATRÍCIA ROSA; RODRIGUES, RODNEY ALEXANDRE FERREIRA; YAMANE, LAIS THIEMI; CASTRO, KARINA NEOOB CARVALHO; CAMARGO-MATHIAS, MARIA IZABEL. Toxic action of *Acmella oleracea* extract on the male reproductive system of *Amblyomma cajennense* ticks. **Veterinary Parasitology**, v.244, p.164 171, 2017. DOI: http://dx.doi.org/10.1016/j.vetpar.2017.07.031
- **22.**YAMANE, LAIS THIEMI; PAULA, ENEIDA; JORGE, MICHELLE PEDROZA; FREITAS-BLANCO, VERÔNICA SANTANA; JUNIOR, ÍLIO MONTANARI; FIGUEIRA, GLYN MARA; **ANHOLETO, LUÍS ADRIANO**; OLIVEIRA, PATRICIA ROSA; RODRIGUES, RODNEY ALEXANDRE FERREIRA. *Acmella oleracea* and *Achyrocline satureioides* as sources of natural products in topical wound care. **Evidence-Based Complementary and Alternative Medicine**, v.2016, p.1 9, 2016. DOI: http://dx.doi.org/10.1155/2016/3606820
- **23.**OLIVEIRA, PATRÍCIA ROSA; CASTRO, KARINA NEOOB CARVALHO; **ANHOLETO, LUIS ADRIANO**; CAMARGO MATHIAS, MARIA IZABEL. Cytotoxic effects of extract of *Acmella oleraceae* (Jambú) in *Rhipicephalus microplus* females ticks. **Microscopy Research and Technique**, p.744 753, 2016. DOI: http://dx.doi.org/10.1002/jemt.22693
- **24.**OLIVEIRA, PATRÍCIA ROSA; **ANHOLETO, LUIS ADRIANO**; BECHARA, GERVÁSIO HENRIQUE; MATHIAS, MARIA IZABEL CAMARGO. Dinotefuran-induced morphophysiological changes in semi-engorged females *Rhipicephalus sanguineus* Latreille, 1806 (Acari: Ixodidae) ticks: Ultra-structural evaluation. **Acta Tropica**, v.166, p.139 154, 2016. DOI: http://dx.doi.org/10.1016/j.actatropica.2016.11.017
- **25.**REMEDIO, RAFAEL NEODINI.; NUNES, PABLO HENRIQUE; **ANHOLETO, LUÍS ADRIANO**; OLIVEIRA, PATRICIA ROSA; SÁ, I.C.G.; CAMARGO-MATHIAS, MARIA IZABEL. Morphological alterations in salivary glands of *Rhipicephalus sanguineus* ticks (Acari: Ixodidae) exposed to neem seed oil with known azadirachtin concentration. **Micron**, v.83, p.19-31, 2016. DOI: http://dx.doi.org/10.1016/j.micron.2016.01.004
- **26.ANHOLETO, LUÍS ADRIANO**; OLIVEIRA, PATRÍCIA ROSA; RODRIGUES, RODNEY ALEXANDRE FERREIRA; SPINDOLA, CAROLINE DOS SANTOS; LABRUNA, MARCELO BAHIA; PIZANO, MARCOS APARECIDO; CASTRO, KARINA NEOOB DE CARVALHO; CAMARGO-MATHIAS, MARIA IZABEL. Potential action of extract of *Acmella oleracea* (L.) R.K. Jansen to control *Amblyomma cajennense* (Fabricius, 1787) (Acari: Ixodidae) ticks. **Ticks and Tick-Borne Diseases**, v.8, p.65 72, 2016. DOI: http://dx.doi.org/10.1016/j.ttbdis.2016.09.018
- **27.**PEREIRA, MELISSA CAROLINA.; NODARI, ELEN FERNANDA.; **ANHOLETO, LUIS ADRIANO**.; CAMARGO-MATHIAS, MARIA IZABEL. The use of imidazole-osmium (C3H4N2/OsO4) to stain lipids in salivary gland histological sections of *Rhipicephalus sanguineus* sensu lato (Acari: Ixodidae) female ticks. **The Journal of Basic & Applied Zoology**, v.74, p.68 74, 2016. DOI: http://dx.doi.org/10.1016/j.jobaz.2016.10.004
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ORAL PRESENTATIONS

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- **1. ANHOLETO, L.A.;** FERGUSON, L., FARAONE, N. Isolation and identification of *Clonostachys rosea* (Ascomycota: Hypocreales) from deceased ticks, revealing a novel natural tick pathogen. 63rd Annual Meeting of the Canadian Society of Zoologists, Moncton, NB, Canada, 2024.
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- **3. ANHOLETO, L. A.;** CHOLAK, L. R.; BORBA, R. S.; MELLO, D. C. C.; GONCALVES, L. R. . First Steps in Science: an experience of integration between high school and research. Meeting of the Graduate Program in Education INTEGRAP, UNESP Rio Claro, SP, Brazil, 2019.
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- **5. ANHOLETO, L. A.**; CAMARGO-MATHIAS, M. I.; OLIVEIRA, P. R.; RODRIGUES, R. A. F.; LABRUNA, M. B.; PIZANO, M. A.; CASTRO, K. N. C. . Potential action of extract of *Acmella oleracea* (L.) R. K. Jansen to control *Amblyomma cajennense* (Fabricius, 1787) (Acari: Ixodidae) ticks. II Latin American Congress of Acarology, Quindío, Colombia, 2016.
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- **8.** ABREU, R. M. M.; CAMARGO-MATHIAS, M. I.; ABREU, M. R.; **ANHOLETO, L.A.**; SANTOS, J. P.; HEBLING, L. M. G. F.; PEREIRA, N. R. C.; LIMA-SOUZA, J. R.; NODARI, E. F.; MATOS, R. S. . Renal evaluation in rats submitted to the extract of salivary gland from *Rhipicephalus sanguineus* (Latreille, 1806) (Acari: Ixodidae). II Latin American Congress of Acarology, Quindío, Colombia, 2016.
- **9.** MATOS, R. S.; CAMARGO-MATHIAS, M. I.; DAEMON, E.; **ANHOLETO, L.A.**; OLIVEIRA, P. R.; CRUZ, P. B.; DELMONTE, C. C.; ARNOSTI, A.; SAMPIERI, B. R. Morphological analysis and lipid presence on Gene's organ of *Rhipicephalus sanguineus* sensu lato (Acari: Ixodidae) exposed thymol. II Latin American Congress of Acarology, Quindío, Colombia, 2016.

- **10.** PEREIRA, M. C.; CAMARGO-MATHIAS, M. I.; NODARI, E. F.; **ANHOLETO, L.A.**; FURQUIM, K. C. S. . Imidazole-osmium to stain lipids in histological sections of *Riphicephalus sanguineus* s.l. salivary glands. II Latin American Congress of Acarology, Quindío, Colombia, 2016.
- **11.**PEREIRA, M. C.; NODARI, E. F.; CAMARGO-MATHIAS, M. I.; **ANHOLETO, L. A.** Osmium-imidazole for lipid staining in histological sections of salivary glands of tick females *Rhipicephalus sanguineus* (Acari: Ixodid). XXVIII Congress of Scientific Initiation, UNESP Rio Claro, 2016.
- **12.ANHOLETO, L.A.;** CAMARGO-MATHIAS, M. I.; MORAES, K. C. M.; ABREU, M. R. . Action of salivary gland extract of *Rhipicephalus sanguineus* (Latreille, 1806) on tumor cells HEP-G2. IX Scientific Symposium of Graduate Students CENA/USP, Piracicaba, Brazil, 2016.
- **13.**PEREIRA, N. R. C.; CAMARGO-MATHIAS, M. I.; PEREIRA, M. C.; NODARI, E. F.; **ANHOLETO, L.A.**; SANTOS, J. P. . Morphophysiological changes in the ovaries of *Rhipicephalus sanguineus* ticks (Acari: Ixodidae) induced by Deltamethrin. IX Scientific Symposium of Graduate Students CENA/USP, Piracicaba, Brazil, 2016.
- **14.ANHOLETO, L. A.;** REMEDIO, R. N.; NUNES, P. H.; OLIVEIRA, P. R.; LIMA-SOUZA, J. R.; CAMARGO-MATHIAS, M. I. Morphological effects of neem seed oil (*Azadiractha indica* A Juss) on the salivary glands of semi-engorged females of the tick *Rhipicephalus sanguineus* (Acari: Ixodidae). V SIBAC Brazilian Symposium on Acarology, UNESP Rio Preto, SP, Brazil, 2015.
- **15.**LIMA-SOUZA, J. R.; CAMARGO-MATHIAS, M. I.; **ANHOLETO, L. A.**; OLIVEIRA, P. R.; REMEDIO, R. N.; NUNES, P. H. . Ultrastructural changes in the salivary glands of *Rhipicephalus sanguineus* ticks exposed to neem seed oil (*Azadirachta indica*). V SIBAC Brazilian Symposium on Acarology, UNESP Rio Preto, SP, Brazil, 2015.
- **16.** ABREU, M. R.; ROCHA, F. A.; FURQUIM, K. C. S.; **ANHOLETO, L. A.**; NOVAES, F. C. F.; CAMARGO-MATHIAS, M. I. . Salivary glands of female ticks *Rhipicephalus sanguineus* like a potential source of molecules with inhibitory action: *In vivo* study with Walker 256 tumour cells. The 2014 Pathology Congress, London, 2014.
- **17.**SOUZA, C. P.; ARAUJO, C. S. T.; **ANHOLETO, L. A.**; SOUZA, R. B.; GUEDES, T. A.; MARIN-MORALES, M. A. Cytogenotoxic effects of residual concentrations of the herbicide Trifluralin in *Allium cepa*. Event: II Ecotoxicology Symposium, UNESP Rio Claro, SP, Brazil, 2014.
- **18.**CAMARGO-MATHIAS, M. I.; DENARDO, T. A. G. B.; SOUZA, N. M.; **ANHOLETO, L. A.**; VENDRAMINI, M. C.; SAMPIERI, B. R.; REMEDIO, R. N. Comparative morphological study of the midgut of *Rhipicephalus sanguineus* (Acari: Ixodidae) (Latreille, 1806) fed male and semi-engorged female ticks. Event: *Ticks and Tck-borne Pathogens International Conference* TTP7, Zaragoza, Spain, 2011.

PATENT

ANHOLETO, L. A.; CHAGAS, A. C. S.; PASTRE, J. C.; BRANCAGLION, G. A.; CORREA, D. S.; SANTOS, D. M.; CANUTO, K. M.; CASTRO, K. N. C.; MINHO, A. P.; BRITO, E. S.; ALVES, T. C.; RODRIGUES, R. A. F.; RODRIGUES, M. V. N.; SANTOS, A. S. . Acaricidal and repellent nanoemulsion. 2022, Brazil.

RESEARCH COLLABORATIONS

- **Dr. Alessandro Pelegrine Minho** (Department of Veterinary Parasitology, Brazilian Agricultural Research Corporation, São Carlos, Brazil).
- **2019-Present.** Project title: BIODEFENSE Development of alternative methods to control ectoparasites of veterinary interest.
- **Dr. Simone Cristina Méo Niciura and Dr. Ana Carolina de Souza Chagas** (Department of Veterinary Parasitology, Brazilian Agricultural Research Corporation, São Carlos, Brazil).
- **2021-2026.** Project title: Parasite-host-environment approach to control anthelmintic resistance in sheep flocks.
- **Dr. Nicoletta Faraone and Dr. Kirk Hillier** (Department of Chemistry and Department of Biology, Acadia University, Wolfville, Canada).
- **2022-2023.** Project title: Nanotechnology applied for the development of botanical acaricides and repellents against ticks of medical and veterinary importance.
- **Dr. Darci Moraes Barros Battesti** (Department of Pathology, Reproduction and One Health, São Paulo State University, Jaboticabal, Brazil).
- 2020-2022. Project title: Characterization of tick cell lines and their use as a substrate for the growth, maintenance and protein expression profile of *Anaplasma marginale*.
- **Dr. Lesley Bell-Sakyi** (Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool, Liverpool, UK).

2018-2019. Project title: Acaricidal activity *in vitro* of spilanthol against cell lines derived from acaricide-resistant and acaricide-susceptible *Rhipicephalus microplus* ticks with or without *Ehrlichia minasensis* infection.

Dr. Maria Izabel Souza Camargo (Department of Biology, São Paulo State University, Rio Claro, Brazil)

2015-2018. Project title: Determination and cellular tracking of direct and indirect actions of carvacrol and thymol as tick control strategy of *Rhipicephalus sanguineus* (Acari: Ixodidae).

2018-2019. Project title: Unraveling the *Ehrlichia canis* life cycle in the *Rhipicephalus sanguineus* (tropical lineage) tick: an essential step to control canine ehrlichiosis.

GRANTS

Research grant (2024/2025): Entomopathogenic fungus, *Clonostachys rosea* (Ascomycota: Hypocreales), as a novel tick biocontrol agent against *Ixodes scapularis* and *Dermacentor variabilis* ticks. CanLyme Foundation. 30,000 CAD.

Research grant (2022/2023): Nanotechnology applied for the development of botanical acaricides and repellents against ticks of medical and veterinary importance. The São Paulo Research Foundation, FAPESP grant n. 2021/10004-0. R\$ 59,123.90 + US\$ 35,972.11 = 64,482.25 CAD (total).

Research grant (2019/2022): Antiparasitic and antimicrobial activity of Spilanthol: the study of the effects on ticks of medical and veterinary importance and against pathogens transmitted by them. The São Paulo Research Foundation, FAPESP grant n. 2019/20185-1. R\$ 203,497.56 = 55,921.13 CAD.

Research grant (2018/2019): Acaricidal activity *in vitro* of spilanthol against cell lines derived from acaricide-resistant and acaricide-susceptible *Rhipicephalus microplus* ticks with or without *Ehrlichia minasensis* infection. The São Paulo Research Foundation, FAPESP grant n. 2018/08166-9. **R\$** 7,860.00 + **US\$** 10,205.56 = 15,844.57 CAD.

Research grant (2015-2019): The acaricide action of Jambu (*Acmella oleracea*): Study of the effects on morphophysiology of male and female reproductive systems of *Amblyomma cajennense* (Fabricius, 1787) (Acari: Ixodidae) ticks. The São Paulo Research Foundation, FAPESP grant n. 2015/01496-5. **R\$ 160,311.84 = 44,053.69 CAD.**

Research grant (2013-2015): Effect of the extract of salivary glands of female *Rhipicephalus sanguineus* (Latreille, 1806) on inhibition and proliferation of tumour cells. The São Paulo Research Foundation, FAPESP grant n. 2013/00654-0. R\$ 22,825.44 = 6,272.43 CAD.

PEER-REVIEWS FOR SCIENTIFIC JOURNALS

International Journal of Acarology (2025 – present) – Taylor & Francis.

Parasites & Vectors (2018 – present) – BMC.

Acta Parasitologica (2023 present) – Springer.

Revista Brasileira de Parasitologia Veterinária (2023 – present) - Colégio Brasileiro de Parasitologia Veterinária.

LEADERSHIP AND SERVICE

Leader of the Graduate Students in the Graduate counsel for the Cell and Molecular Biology Program, São Paulo State University, Rio Claro, SP, Brazil. 2017- 2019 (2 times).

Leader of the students in the Permanent Research Commission of the Biosciences Institute of São Paulo State University, Rio Claro, SP, Brazil. 2017 – 2019 (2 times).

Organizer of First Steps in Science. 2017. Founder of the Project.

Organizer of XXIX UNESP Undergraduate Research Congress, São Paulo State University, Brazil, 2017.

Organizer of V Symposium on Cell and Molecular Biology, Brazil, 2017.

Organizer of First Steps in Science. 2016. Founder of the Project.

Organizer of XXVIII UNESP Undergraduate Research Congress, Brazil, 2016.

Organizer of Workshop 40 Years of Graduate Studies at the Biosciences Institute, Brazil, 2016.

Organizer of IV Symposium on Cell and Molecular Biology, Brazil, 2015.

Organizer of III Symposium on Cell and Molecular Biology, Brazil, 2013.

LANGUAGE SKILLS

English (Advanced), Portuguese (native), Spanish (basic)

OTHER SKILLS

IT: Applications: Microsoft Office Suite, Internet, Corel Draw