

Nivânia Camelo

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EDUCATION

Bachelor's Degree in Biology Education (Teacher Preparation) <i>Instituto de Ensino Superior Franciscano (IESF), Paço do Lumiar, Maranhão, Brazil</i> Brazilian teaching credential	2017
Master's Degree in Maternal and Child Health <i>Federal University of Maranhão (UFMA), São Luís, Maranhão, Brazil</i>	2012
Graduate Certificate in Clinical Hematology <i>Federal University of Maranhão (UFMA), São Luís, Maranhão, Brazil</i>	2008
Bachelor's Degree in Pharmacy-Biochemistry <i>Federal University of Maranhão (UFMA), São Luís, Maranhão, Brazil</i>	2007

World Education Services (WES) assessment: credential equivalency of two bachelor's degrees, one postgraduate diploma, and one master's degree; graduate GPA 3.88/4.00 (88.0 semester credits) and undergraduate GPA 3.49/4.00 (201.5 semester credits).

RESEARCH & ACADEMIC ENGAGEMENT

Clinical and Laboratory Studies Group in Hematology and Onco-Hematology (GECL-HOH) <i>Research Collaborator</i> <i>Municipal Health Department of São Luís and Hemocenter of Maranhão, Brazil</i> <i>Coordinator: Dr. Elda Pereira Noronha Ávila</i>	2019 - Present
Scientific focus: Continuous collaborative research in hematology and onco-hematology, integrating case-based investigation, advanced hematologic morphology, and clinical-laboratory interpretation of complex hematologic disorders.	
• Participate in continuous clinical-laboratory investigation of hematologic and onco-hematologic disorders, emphasizing complex case analysis, hematologic morphology, and integration of laboratory and clinical findings. • Contribute to case-based studies and retrospective analyses addressing acute leukemia, extreme leukocytosis, hematologic recovery during treatment, and diagnostically challenging hematologic conditions. • Collaborate in scientific interpretation, abstract and manuscript development, and dissemination of findings through national and international hematology meetings.	

RESEARCH EXPERIENCE & TRANSLATIONAL TRAINING

Maranhão Clinical Research Center - University Hospital of UFMA (CEPEC/HUUFMA) <i>Research Fellow and Clinical Research Collaborator</i> <i>Federal University of Maranhão, São Luís, Brazil</i> <i>Advisor: Dr. Raimundo Antônio Gomes Oliveira</i>	
Research focus: Structured academic and translational research in acute leukemias and hematologic malignancies, integrating clinical-laboratory investigation, study development, and scientific dissemination.	
Research Fellow 2008–2012. Research Collaborator 2026–Present	
• Renewed scientific collaboration with CEPEC/HUUFMA in 2026 through the development of clinical-laboratory studies in hematology and acute leukemia, building on earlier translational research conducted at the center. • Collaborate in study development, laboratory and clinical data interpretation, scientific writing, and dissemination of findings through abstracts submitted and accepted for presentation at national and international hematology meetings. • Earlier research fellowship (2008–2012) involved translational studies of pediatric acute leukemias, including hematologic, immunophenotypic, and molecular characterization; prognostic biomarkers; cell proliferation; and treatment-related laboratory changes. • Performed advanced hematologic analyses of peripheral blood and bone marrow specimens and contributed to flow cytometry-based immunophenotyping and RT-PCR molecular investigations. • Collaborated with multidisciplinary clinical and research teams in specimen processing, laboratory data interpretation, methodological standardization, and development of scientific outputs.	
Master's Thesis Research - Acute Leukemia <i>Graduate Researcher</i> <i>Graduate Program in Maternal and Child Health, Federal University of Maranhão</i> <i>Advisor: Dr. Raimundo Antônio Gomes Oliveira</i>	2009 - 2012
• Investigated hematologic and clinical factors associated with treatment response and outcomes during induction therapy in patients with acute leukemia. • Conducted retrospective cohort research integrating longitudinal hematologic, clinical, and treatment data from patients with B-ALL, T-ALL, and AML. • Contributed to data organization, laboratory-clinical interpretation, statistical analysis, and scientific synthesis of findings relevant to early treatment response.	

National Cancer Institute of Brazil (INCA) - Pediatric Hematology/Oncology Jan 2010 - Apr 2010
Visiting Research Trainee | Rio de Janeiro, Brazil | 592 hours | Advisor: Dr. Maria do Socorro Pombo de Oliveira

- Completed intensive translational research training in pediatric acute leukemia, emphasizing integration of morphology, immunophenotyping, and molecular diagnostics.
- Received hands-on training in flow cytometry-based immunophenotyping, RT-PCR molecular assays, leukemia specimen processing, and interpretation of laboratory findings in pediatric hematologic malignancies.

Earlier Research Experience
Graduate Certificate Research - Clinical Hematology | Federal University of Maranhão | 2007 - 2008
 Research monograph: Red Blood Cell Morphological Assessment in Sick Cell Anemia: Diagnostic and Prognostic Implications. Advisor: Dr. Raimundo Antônio Gomes Oliveira.

Undergraduate Research - Pharmacy-Biochemistry | Federal University of Maranhão | 2004 - 2007
 Research thesis: Comparative Analysis of the Antimicrobial Activity of Carbapenems Against Gram-Negative Bacteria in Hospital Settings. Advisor: Dr. Azizedite Guedes Gonçalves; resulted in a peer-reviewed publication.

PROFESSIONAL EXPERIENCE (Clinical and Laboratory Practice)

Independent Consultant in Hematology and Laboratory Onco-Hematology 2021 - Present
Independent Practice, São Luís, Maranhão, Brazil

- Provide independent hematologic analysis and technical consultation in complex hematology and onco-hematology cases, integrating morphology, analytical findings, and clinical context to support diagnostic interpretation.
- Provide technical guidance and professional training in peripheral blood smear review, diagnostic reasoning, and laboratory quality practices.

Senior Medical Laboratory Scientist / Pharmacist-Biochemist (Permanent Municipal Appointment) 2008 - Present
Municipal Health Department of São Luís (SEMUS), emergency and urgent-care laboratory network, São Luís, Brazil

- Perform and validate urgent, high-complexity laboratory analyses across hematology, clinical chemistry, immunology, coagulation, urinalysis, and parasitology in acute-care settings.
- Interpret CBC/Diff and peripheral blood morphology, identify clinically significant abnormalities, and communicate critical findings in time-sensitive clinical settings.
- Maintain analytical accuracy, quality-control compliance, biosafety, and diagnostic reliability in high-demand emergency laboratories.

Hematology Department Coordinator and Senior Hematology Analyst 2021 - 2025
Diagnósticos Santo André Ltda. / Laboratório São Luís, São Luís, Maranhão, Brazil

- Led technical restructuring of hematology, immunohematology, and coagulation workflows, strengthening analytical standardization and staff proficiency.
- Implemented standardized analytical protocols, advanced analyzer parameters, microscopy-review criteria, and result-validation practices.
- Trained multidisciplinary teams, investigated nonconformities, and implemented corrective and workflow-improvement measures to enhance diagnostic reliability and operational continuity.

Senior Hematology Analyst / Pharmacist-Biochemist 2019 - 2021
Laboratory of Clinical Analyses of Maranhão (LACMAR), São Luís, Maranhão, Brazil

- Conducted high-complexity hematologic analyses and microscopy, supported method standardization and quality-control programs, trained laboratory staff, and provided diagnostic support for complex hematologic specimens.

TEACHING & ACADEMIC EXPERIENCE

Instructor - Undergraduate Health Sciences Programs 2014 - 2022
Estácio University of São Luís, São Luís, Maranhão, Brazil

- Instructed students in Cell Biology, Histology, Embryology, Genetics, Parasitology, and Foundations of Biology across Nursing, Nutrition, Biomedicine, Physiotherapy, and Pharmacy programs.
- Designed and delivered lectures, laboratory-oriented learning activities, assessments, and academic guidance in multidisciplinary biomedical-science courses.

Visiting Instructor - Graduate Hematology Certificate Program 2015 - 2015
Centro de Capacitação Educacional (CCE), Brazil

- Delivered advanced modules on the erythroid series, anemias, and neoplastic hematologic disorders for laboratory professionals.

Instructor - Undergraduate Health Sciences Programs 2011 - 2013
Florence University Center, São Luís, Maranhão, Brazil

- Taught Clinical Hematology, Cell Biology, Genetics, Molecular Genetics, Biochemistry, Cytology, and Histology in Nursing, Pharmacy, and Dentistry programs.
- Prepared instructional materials and practical sessions, evaluated student learning, and contextualized foundational biomedical concepts for health-professions education.

Course Instructor - Preservation of Bone Marrow and Peripheral Blood Cells <i>Maranhão Clinical Research Center, University Hospital of UFMA (CEPEC/HUUFMA), São Luís, Brazil</i> Delivered a 45-hour course on cell freezing and preservation for downstream molecular biology, cytogenetics, and immunophenotyping applications.	2010 - 2010
Graduate Teaching Assistant - Immunomolecular Markers in Onco-Hematology <i>Graduate Program in Maternal and Child Health, Federal University of Maranhão (UFMA), São Luís, Brazil</i> Assisted with practical classes and prepared and organized the laboratory and instructional materials for each session.	2009 - 2009
Undergraduate Teaching Assistant - Clinical Hematology I <i>Bachelor's Program in Pharmacy, Federal University of Maranhão (UFMA), São Luís, Brazil</i> - Delivered selected theoretical and practical classes in Clinical Hematology I. - Prepared and organized the laboratory and course materials; administered and graded assignments and written and practical examinations; and maintained student grade records.	2006 - 2006

RESEARCH & LABORATORY SKILLS

- Translational Research: integration of hematologic, immunophenotypic, molecular, and clinical data; clinical specimen-based investigation; retrospective clinical-laboratory studies.
- Hematology & Onco-Hematology: advanced CBC/Diff interpretation; peripheral blood and bone marrow morphology; laboratory evaluation of leukemias, lymphomas, anemias, and hemoglobinopathies; morphology-guided differential diagnosis.
- Flow Cytometry & Molecular Methods: flow cytometry-based immunophenotyping; RT-PCR and PCR-based molecular diagnostics; DNA extraction; preservation and processing of peripheral blood and bone marrow specimens.
- Quality & Research Integrity: method standardization; analytical validation; internal and external quality control; data reliability and reproducibility; biosafety-compliant specimen management.
- Laboratory Leadership: workflow optimization, nonconformity investigation, corrective-action planning, staff training, and implementation of best laboratory practices.
- Selected Instrumentation: Siemens ADVIA 2120; Sysmex XN-2000; Mindray BC-5380 and BC-760; Abbott CELL-DYN 3700 and Ruby; Sysmex CS-2100i; Bio-Rad VARIANT II.

PEER-REVIEWED PUBLICATIONS

- Lopes, T. C.; Andrade, K. N. S.; **Camelo, N. L.**; Rodrigues, V. P.; Oliveira, R. A. G. *Influence of aberrant myeloid expression on acute lymphoblastic leukemia in children and adolescents from Maranhão, Brazil*. Genetics and Molecular Research. 2014;13: 10301-10307. doi: 10.4238/2014.december.4.25.
- Camelo, N. L.**; Marques, S. G.; Gonçalves, A. G. *Comparative analysis of the antimicrobial activity of carbapenems against Gram-negative bacilli isolated from public and private hospitals in São Luís, Maranhão*. Revista de Ciências da Saúde (São Luís). 2006;8: 95-102. (In Portuguese).

MANUSCRIPT IN PREPARATION

- Camelo, N. L.**; dos Santos, E. L.; Bernardino, G. A.; Spindola, R. F.; Gonçalves, V. C.; Ávila, E. P. N. *Distinguishing Leukemoid Reaction from Leukemia in a Critically Ill Infant: A Morphology-Based Diagnostic Approach*. Short communication in preparation.

CONFERENCE ABSTRACTS & SCIENTIFIC PRESENTATIONS

- Camelo, N. L.**; Oliveira, R. A. G.; Ávila, E. P. N.; et al. *Integrated Morphologic and Automated Hematology Assessment of Extreme Leukocytosis: A Comparative Study of Two Pediatric Cases*. Abstract submitted for poster presentation at the HEMO 2026 – Brazilian Congress of Hematology, Hemotherapy and Cellular Therapy, Rio de Janeiro, RJ, Brazil, October 28–31, 2026. (Under review.)
- Leal, R. C.; **Camelo, N. L.**; Vale, L. Q. E. D.; Ferreira Junior, R. S.; Lopes, T. C.; Barbosa, A. C.; Lima, K. F.; Bernardino, G. A.; Ávila, E. P. N. *Reference Intervals for Hematologic Parameters in Umbilical Cord Blood from Term Newborns on the ADVIA 2120i*. Abstract submitted for poster presentation at HEMO 2026 – Brazilian Congress of Hematology, Hemotherapy and Cellular Therapy, Rio de Janeiro, RJ, Brazil, October 28–31, 2026. (Under review.) (In Portuguese.)
- Bernardino, G. A.; **Camelo, N. L.**; Lopes, T. C.; Soares, J. A.; Silva, R. S.; Sileoni, A. P. S.; Noronha, E. P.; Oliveira, R. A. G. *Reference Intervals for Reticulocyte Parameters Determined by the ADVIA 2120i in Blood Donors from Maranhão*. Abstract submitted for poster presentation at HEMO 2026 – Brazilian Congress of Hematology, Hemotherapy and Cellular Therapy, Rio de Janeiro, RJ, Brazil, October 28–31, 2026. (Under review.) (In Portuguese.)
- Silva, K. N. A.; **Camelo, N. L.**; Miranda, I. S. C. A.; Santos, K. L. C. M.; Bernardino, G. A.; Ávila, E. P. N.; Sileoni, A. P. S.; Oliveira, R. A. G. *Immunophenotypic Lineage Switch from B-Cell to T-Cell Acute Lymphoblastic Leukemia After 15 Years of Complete Remission: A Case Report*. Abstract submitted for poster presentation at HEMO 2026 – Brazilian Congress of Hematology, Hemotherapy and Cellular Therapy, Rio de Janeiro, RJ, Brazil, October 28–31, 2026. (Under review.) (In Portuguese.)
- Camelo, N. L.**; Ávila, E. P. N.; Santos, K. L. C. M.; Miranda, I. S. C. A.; Silva, K. N. A.; Oliveira, R. A. G. *Platelet Recovery Kinetics During Induction Therapy in Pediatric B-Cell Acute Lymphoblastic Leukemia*. Accepted oral presentation, 5th European Congress on Hematology and Blood Disorders, Barcelona, Spain, October 22-23, 2026.

- Camelo, N. L.;** Ávila, E. P. N.; Santos, K. L. C. M.; Miranda, I. S. C. A.; Silva, K. N. A.; Oliveira, R. A. G. *Dynamic Hematologic Recovery During Induction Therapy in Pediatric B-Cell Acute Lymphoblastic Leukemia*. Accepted for publication in the **SOHO 2026 Meeting Proceedings**, to be published by Elsevier as a supplement to Clinical Lymphoma, Myeloma & Leukemia; SOHO Annual Meeting, Houston, Texas, September 9-12, 2026.
- Camelo, N. L.;** Ávila, E. P. N.; Oliveira, R. A. G. *Marked Hematologic Heterogeneity Despite Similar Bone Marrow Leukemic Burden in Pediatric B-ALL*. Accepted poster presentation, 24th World Hematology Congress, Berlin, Germany, August 10-11, 2026.
- Camelo, N. L.;** dos Santos, E. L.; Bernardino, G. A.; Spindola, R. F.; Gonçalves, V. C.; Ávila, E. P. N. *Extreme Leukemoid Reaction in a Critically Ill Infant: The Role of Morphological Evaluation in Differentiating from Leukemia*. Video presentation and published proceedings abstract, 78th Annual Meeting of the Brazilian Society for the Advancement of Science (SBPC), Niterói, Rio de Janeiro, Brazil, July 26-August 1, 2026. Presentation publicly available through the event website and official SBPC YouTube channel. (In Portuguese).
- Marinho, H. T.; Furtado, A. M. M.; Marques, F. A.; Soares, E. F. A.; Sousa, H. R.; Penha, B. A. S.; **Camelo, N. L.;** Noronha, E. P.; Alves, A. C.; Oliveira, R. A. G. *Cell Proliferation in Childhood Acute Leukemias in Maranhão*. Proceedings abstract, XXII UFMA Scientific Initiation Seminar, São Luís, Brazil, 2010. (In Portuguese).
- Furtado, A. M. M.; Marques, F. A.; Soares, E. F. A.; Sousa, H. R.; Marinho, H. T.; **Camelo, N. L.** *Flow-Cytometric Immunophenotypic Study of Childhood Acute Leukemias in Maranhão*. Proceedings abstract, XXII UFMA Scientific Initiation Seminar, São Luís, Brazil, 2010. (In Portuguese).

RESEARCH FELLOWSHIPS & HONORS

- International Scientific Travel Support - SOHO 2026** 2026
Fundação Josué Montello, São Luís, Maranhão, Brazil
 - Institutional sponsorship covering airfare and per diem expenses, approved in recognition of the academic merit and scientific relevance of a first-author abstract accepted for publication in the SOHO 2026 Meeting Proceedings. Research conducted in collaboration with the Maranhão Clinical Research Center, University Hospital of UFMA (CEPEC/HUUFMA).
- Scientific Commendation** 2011
Brazilian Society for Clinical Analyses (SBAC-PB), Brazil
- CAPES-PROCAD Research Training Fellowship** 2010 - 2010
Coordination for the Improvement of Higher Education Personnel (CAPES), Brazilian Ministry of Education
 - Supported intensive molecular and translational hematology training at the National Cancer Institute of Brazil (INCA).
- Graduate Research Fellowship - Level 3** 2008 - 2012
Brazilian National Council for Scientific and Technological Development (CNPq), Brazil
- Graduate Research Fellowship** 2008 - 2009
Foundation for the Support of Research and Scientific and Technological Development of Maranhão (FAPEMA), Brazil

TUITION WAIVERS SCHOLARSHIPS & AWARDS

- Teaching Excellence Award** 2016 and 2017
Estácio University of São Luís, São Luís, Maranhão, Brazil
 Institutional recognition based on formal evaluations by students, program coordinators, and academic leadership
- Full Tuition Waiver (Master's Degree)** 2009–2012
Brazil's Government, Federal University of Maranhão, Brazil.
- Full Tuition Waiver (Bachelor's Degree)** 2002–2007
Brazil's Government, Federal University of Maranhão, Brazil.

ACADEMIC ADVISING & SERVICE

- Invited Undergraduate Thesis Examiner** 2011 - 2019
Estácio University, Florence University Center, Federal University of Maranhão, and Universidade Ceuma, Brazil
 • Evaluated 12 documented undergraduate theses spanning hematology, microbiology, epidemiology, nursing, nutrition, medicine, pharmacy, and biomedicine.
- Invited Scientific Abstract Reviewer** 2018
X Estácio Research Seminar, Estácio University, Brazil
- Scientific Event Organizer** 2016
I Scientific Cycle of Genetics, Estácio University, Brazil
- Undergraduate Thesis Co-advisor** 2010
Federal University of Maranhão (UFMA), São Luís, Brazil
 • Co-advised a hematology project on optimization of Romanowsky and peroxidase staining in heparinized peripheral blood and bone marrow specimens.