
SHORT RESUME

Part I: Biography

Qualification (Short biography)	<p>Graduated in Biological Sciences with PhD in Biotechnology by RENORBIO/UFC in the area of Functional Cancer Proteomics (GD/CNPq grant). The doctoral thesis was developed in the Department of Surgery (Liver Transplantation of the University Hospital HUWC/UFC) under the supervision of Dr. Odorico Moraes (MD) and Dr. Huygens Garcia (MD) and the experimental work was carried out at the University of Siena (UNISI) Italy, under the supervision of Dr Luca Bini (PDEE grant/Capes). Currently, works with Translational Medicine, in experimental problems translated from the clinic to the benchside (from downstream services to upstream technologies). As visiting researcher at Heart Institute of the University of Sao Paulo Brazil (2020) works with metabolomics in SARS-CoV-2 patients in the largest hospital of this kind in Brazil (HC/USP), using biomarkers, diagnostic and Artificial Intelligence integration to predict clinical outcomes. As a senior researcher at CEMBIO – CEU University of San Pablo Madrid/Spain (2019) worked with Translational Cardiology, within projects of metabolomics in atherosclerosis (ICDF/UnB), Chagas' disease (ICDF/Sirio Libanes) and familiar hypercolerestemia (INCOR/USP). Held a position of Visiting Professor at the Faculty of Medicine (Unb), from 2016 to 2018. Developed an experimental postdoctoral work (PDJ grant/CNPq - 2016) within the area of serum biomarkers in HCC (primary liver cancer), at University Hospital (HUWC/UFC - Liver Transplantation team), Universidade Católica de Brasília (UCB - under the supervision of Dr. Octavio Franco). Nowadays, work as a collaborator and supervisor at Medical Science Graduated Program at University of Brasilia and at Department of Surgery of the Federal University of Ceara. Also, performed some works on mass spectrometry imaging (DESI) in the areas of Hepatology and Cardiology and begins to develop some work at clinical and molecular data integration, Machine Learn in Health Science</p>
--	---

Information Martins, Aline M A. 2021.

	and Artificial Intelligence (with Dr. Patrick Mathias, UW Laboratory Medicine). International Invited Editor: <i>Frontiers in Oncology</i> (Nature Publishing Group) with the Special Topic <i>Mass Spectrometry to Answer Clinical Questions: Insights in Oncology and Health Science Research</i> . Other areas: cancer biology, functional metabolomics, functional proteomics, mass spectrometry imaging (MSI), mass spectrometry applied to clinical issues, biomarkers in noninvasive liquid biopsies, interactomics (signaling pathways).
Part II: General information	
Contacts	Email: alin3.m4rtins@gmail.com / alinemartins@ufc.br Phone: +55 61 982506699 ORCID: https://orcid.org/0000-0001-9481-0327 Lattes: http://lattes.cnpq.br/6579451653397387 Twitter: @_AlineMAMartins
Part III: Professional Information	
Academic Interest	Translational Medicine Molecular Pathology Mass Spectrometry Molecular Events in Clinics
Member of institution, association, society	EUSTM – European Society of Translational Science American Society of Mass Spectrometry Society - ASMS Brazilian Society of Mass Spectrometry – BrMass Brazilian Society of Proteomics – BrProt Brazilian Society of Clinical Oncology – SBOC American College of Cardiology – ACC Metabolomics Society
Publications (recent)	INNOVATIVE APPROACHES TO ASSESS INTERMEDIATE CARDIOVASCULAR RISK SUBJECTS: METABOLOMICS ROLE AS NEW TOOL FOR STRATIFICATION (2021) Aline Maria Araújo Martins*†, Mariana Ubaldo Barbosa Paiva‡, Diego Viana Neves Paiva, Henrique Louzan Machado, Leonardo Jadyr Silva Rodrigues Alves, Carolina Raíssa Costa Picossi, Raphaela Menezes de Oliveira, Viviane Zorzaneli Rocha Giraldez, Raul Dias dos Santos, Guilherme Urpia Monte, Fernando Antibas Atik. (Submitted to JACC - Aug 2021)

RED WINE REMODELS GUT MICROBIOTA INDEPENDENTLY OF TRIMETHYLAMINE -N-OXIDE LEVELS (2021)

Elisa Alberton Haas, Francisco Rafael Martins Laurindo, Mario Saad, Andrey Santos, Nicola Vitulo, Wilson Fernandes Lemos Junior, **Aline Maria Araújo Martins**, Carolina Raissa Picossi, Desidério Favarato, Peter Libby, Protasio Lemos da Luz* (submitted to Molecular Metabolism – Aug 2021)

QUANTITATIVE ANALYSIS OF BONE MARROW PLASMA PROTEOME AND GENE EXPRESSION IN MONONUCLEAR CELLS: ESTABLISHING TALIN-1 AND CENTROSOMAL PROTEIN OF 55 KDA AS POTENTIAL MARKERS FOR MYELODYSPLASTIC SYNDROME (2021)

Arlindo A. Moura, Maria Julia B. Bezerra, **Aline M. A. Martins**, Arabela G. Viana, Daniela P. Borges, Roberta T. G. de Oliveira, Guilherme G. C. Carvalho, Carlos R. K. Paier, Kaio Farias, Marcelo V. Sousa, Wagner Fontes, Carlos A. O. Ricart, Cristiana L. M. Furtado, Manoel O. Moraes-Filho, Claudia Pessoa, Ronald F. Pinheiro* (submitted to Haematologica – Aug 2021)

NOVEL POSSIBLE PROTEIN TARGETS IN NEOVASCULAR AGE-RELATED MACULAR DEGENERATION: A PILOT STUDY EXPERIMENT (2021)

Bruno Nobre Lins Coronado*, Felipe Bruno Santos da Cunha, Raphaela Menezes de Oliveira, Otávio de Toledo Nóbrega, Carlos André Ornelas Ricart, Wagner Fontes, Marcelo Valle de Sousa, Marcos Pereira de Ávila, **Aline Maria Araújo Martins*** (submitted to Frontiers in Medicine – Apr 2021)

PROTEINS EXPRESSED IN THE EUTOPIC ENDOMETRIUM OF PATIENTS WITH DEEP BOWEL ENDOMETRIOSIS SHOW CANCER-RELATED MOLECULAR PANEL (2021)

Lidia Hyun Joo Myung, Raphaela Menezes de Oliveira, Wagner Fontes, Carlos André O Ricart, Marcelo V Sousa, Maria Julia Barbosa Bezerra, Arlindo Araripe Moura, Kathiane Lustosa Augusto, Leonardo Bezerra, Edmund Chada Baracat, Edecio Cunha-Neto, Rosanne Marie Kho, **Aline Maria Araujo Martins**, Mauricio Simoes Abrao* (Submitted to Fertility and Sterility – Apr 2021)

PREDICTIVE MARKERS IN SARS-COV2: AN INTEGRATIVE APPROACH WITH METABOLOMICS AND CLINICAL DATA USING ARTIFICIAL INTELLIGENCE

Aline Maria Araújo Martins, Carolina Raissa Picosi, Maria Anita Mendes, Meriellen Dias, Cláudio Augusto Oller do Nascimento, Gabriela Justamante Händel

Schmitz, Keity Souza Santos, Cristiane Esteves Silva, Tiago Almeida de Oliveira, Alexandre Chiavegatto Filho, Heraldo Possolo de Souza, Jorge Elias Kalil, Edécio Cunha-Neto* (in preparation)

MASS SPECTROMETRY IMAGING BY LA-ICP AND DESI OF CIRRHOSIS AND HEPATOCELLULAR CARCINOMA: A PILOT-SCALE APPROACH (2021)

Pedro H. Vendramini, Gustavo S. Pessoa, Raphaela M. Oliveira, André L. Rennó, José H. P. Garcia, Marco A. Arruda, Marcos N. Eberlin, Alessandra Sussulini*, **Aline A. M. Martins*** (in preparation)

THE IMPACT OF MASS SPECTROMETRY APPLICATION TO SCREEN NEW PROTEOMICS BIOMARKERS IN OPHTHALMOLOGY (2021)

Bruno Nobre Lins Coronado*, Felipe Bruno Santos da Cunha, Otávio de Toledo Nobrega, **Aline Maria Araujo Martins***

International Ophthalmology – Springer | doi: <https://doi.org/10.1007/s10792-021-01807-z>

PROTEOMIC PROFILE OF PRE-IMPLANTATIONAL OVINE EMBRYOS PRODUCED IN VIVO (2021)

Deisy J. D. Sanchez, Fabio R. Vasconcelos, Antônio C. A. Teles-Filho, Arabela G. A. Viana, **Aline M. A. Martins**, Marcelo V. Sousa, Mariana S. Castro, Carlos A. Ricart, Wagner Fontes, Marcelo Bertolini, Ivan C. Bustamante-Filho, Arlindo A. Moura*
Reproduction in Domestic Animals – Wiley 2021;00:1–18 | doi: DOI: 10.1111/rda.13897

ABSENCE OF THE CASPASES 1/11 MODULATES LIVER GLOBAL LIPID PROFILE AND GUT MICROBIOTA IN HIGH-FAT-DIET-INDUCED OBESE MICE (2020)

Sant'Ana LP, Ribeiro DJS, **Martins AMA**, dos Santos FN, Corrêa R, Almeida RN, Eberlin MN, Maurice CF and Magalhães KG* Frontiers in Immunology - NPJ | doi: 10.3389/fimmu.2019.02926

BIOMARKERS IN COLORECTAL CANCER: THE ROLE OF TRANSLATIONAL PROTEOMICS RESEARCH (2019)

Alves Martins BA, de Bulhões GF, Cavalcanti IN, Martins MM, de Oliveira PG and **Martins AMA**.

Frontiers in Oncology – NPJ | doi: 10.3389/fonc.2019.01284

MASS SPECTROMETRY AS A CLINICAL INTEGRATIVE TOOL TO EVALUATE HEPATOCELLULAR CARCINOMA: MOVING TO THE MAINSTREAM (2019)

Aline M. A. Martins*, J. Huygens P. Garcia & Marcos N. Eberlin

Expert Review of Gastroenterology & Hepatology – Francis & Taylor Journal | doi: 10.1080/17474124.2019.1651643

PROTEOMIC LANDSCAPE OF SEMINAL PLASMA ASSOCIATED WITH BULL FERTILITY (2018)

A. G. A. Viana†, A. M. A. Martins†, A. H. Pontes, W. Fontes, M. S. Castro, C. A. O. Ricart, M. V. Sousa, A. Kaya, E. Topper, E. Memili5 & A. A. Moura*

Scientific Reports – NPJ | doi:10.1038/s41598-018-34152-w

MOLECULAR SIGNATURES OF HIGH-GRADE CERVICAL LESIONS (2018)

Porcari AM*, Negrão F, Tripodi GL, Pitta DR, Campos EA, Montis DM, Martins AMA, Eberlin MN and Derchain SFM

Frontiers in Oncology | doi: 10.3389/fonc.2018.00099

USE OF MASS SPECTROMETRY TO SCREEN GLYCAN EARLY MARKERS IN HEPATOCELLULAR CARCINOMA (2018)

de Oliveira RM, Ornelas Ricart CA and Araujo Martins AM*

Frontiers in Oncology, 15 January 2018 | doi.org/10.3389/fonc.2017.00328

THYROID DISORDERS: MECHANISMS AND MOLECULAR CHARACTERIZATION (2016)

Gisele Marques Alvarenga, Elane Barboza da Silva, Márcia Elaine Braga de Menezes, Rafael Perseguini Del Sarto and Aline Maria Araújo Martins*

Biology and Medicine, 8:4 | DOI: 10.4172/0974-8369.1000300

MOLECULAR EVENTS OF HEPATITIS C IN HEPATOCELLULAR CARCINOMA (2016)

Aline de Souza Reis, Mayra Barros Ribeiro, Rafael Perseguini Del Sarto and Aline Maria Araújo Martins*

Gastroenterol Hepatol Open Access, 4(4): 00108, Volume 4 Issue 4 – 2016. | DOI: 10.15406/ghoa.2016.04.00108

LEPTIN LEVELS AND ITS RELATIONSHIP TO LIVER DYSFUNCTIONAL DISEASES AND HEPATOCELLULAR CARCINOMA (2016)

	<p>Ana Lúcia Prudêncio del Castelo, Kelly Cristina Oliveira Jordão, Ayeska Espeschit Maia, Rafael Perseghini Del Sarto, Aline Maria Araújo Martins* Gastroenterol Pancreatol Liver Disord 3(5): 1-7. DOI: http://dx.doi.org/10.15226/2374-815X/2/4/00171</p> <p>HEPATIC STEATOSIS ASSESSMENT: A COMPARATIVE STUDY BETWEEN SURGEON EVALUATION AND FORWARD HISTOPATHOLOGIC FINDINGS (2013) Aline M. A. MARTINS*, Gustavo R. COELHO*, Geraldo A. MARQUES, Manoel O. MORAES, José Telmo VALENÇA Jr. and José Huygens P. GARCIA. Arquivos de Gastroenterologia v. 50 no. 1 doi: 10.1590/S0004-28032013000100004</p> <p>MASS SPECTROMETRY TO ANSWER CLINICAL QUESTIONS. Special Edition Frontiers in Oncology. Nature Publishing Group. https://www.frontiersin.org/research-topics/3900/mass-spectrometry-to-answer-clinical-questions-insights-in-oncology-and-health-science-research</p>
Participating Projects	<p>Identification of prognostic plasma markers of severity and death in COVID-19: metabolomics and proteomics approach - InCor / USP. Sdc: 2014 / 50890-5. Responsible: Edecio Cunha Neto. Co-responsible: Jorge Kalil. Cooperation Agreements / COVID-19 / COVID-19 - Research Project - Regular - Call for Proposals (2020). Visiting researcher in the field of metabolomics.</p> <p>Research and Development Project Related to Knowledge Transfer in Metabolomics applied to Cardiovascular Diseases - AIRBUS / Ministry of Defense of Brazil. Responsible: Coral Barbas, Universidad CEU San Pablo Madrid. Commercial, industrial and technological compensation agreement. Draft number 002 / DCAT-COPAC / 2014. Visiting researcher in the field of metabolomics.</p> <p>Oxidative Stress, Response to Endoplasmic Reticulum Stress and Immune Interactions in Rheumatic Disease - InCor / USP. Sdc: 4492-16-158. LIM 64 Project. Responsible: Roney Orismar Sampaio. Co-responsible: Francisco Rafael Laurindo. Draft number 2017 / 27035-0 Collaborator in the field of metabolomics.</p> <p>Nanoparticles that bind to lipoprotein receptors in the treatment of atherosclerosis, acute myocardial infarction, post-heart transplantation, cancer and endometriosis - InCor / HCFM / USP. Responsible: Raul Cavalcante Maranhao. Draft number 2017 / 27035-0 Collaborator in the field of metabolomics.</p>

<p>International Congress</p>	<p>2020 - IMSC 2020 – International Mass Spectrometry Conference. Rio de Janeiro – RJ, Brazil from August 29 – 4 September, 2020. Short course - Translational Research and Data Integration (senior chair) (postpone)</p> <p>2020 - IMSC 2020 – International Mass Spectrometry Conference. Rio de Janeiro – RJ, Brazil from August 29 – 4 September, 2020. C06 - Getting the Basics of Reproducible Data Analysis: developing skills on R Programming and application of Machine Learning and Artificial Intelligence in Health Science (coordinator/lecture) (postpone)</p> <p>2019 – MSCL EU 2019 – Mass Spectrometry: Applications to Clinical Lab. Salzburg – AUT, from September 22-26, 2019. Metabolomics Applied to Coronary Clinical Burden: Use of Mass Spectrometry to Re-Stratify Asymptomatic Subjects of Intermediate Cardiovascular Risk (oral presentation)</p> <p>2019 - METABOLOMICS CONFERENCE. The Hague, The Netherlands, from June 23-27, 2019. <i>Metabolomics approach coupled with Leaman score to re-stratify coronary artery plaque burden: a translational pilot study with asymptomatic subjects of intermediate cardiovascular risk.</i> (poster)</p> <p>2019 - InterFORENSICS. São Paulo-SP, Brazil from May 21-24 2019, em <i>Identificação Humana por Imageamento Molecular: potencialidades da aplicação da espectrometria de massas em crimes.</i> (oral – invited)</p> <p>2018 - 2ST IBERO-AMERICAN, 7TH BRMASS CONFERENCE ON MASS SPECTROMETRY AND THE 14TH UPPCON Rio de Janeiro – RJ, Brazil from December 8-12, 2018 <i>The Long Bridge Walk Towards the Second Mile: Mass Spectrometry Answering Questions from Bench to the Bedside</i> (keynote speaker - invited)</p> <p>2018 - 2ST IBERO-AMERICAN, 7TH BRMASS CONFERENCE ON MASS SPECTROMETRY AND THE 14TH UPPCON Rio de Janeiro – RJ, Brazil from December 8-12, 2018 <i>From Zika Models to Human Translational Cardiology: what clinical MSI could do for you?</i> (oral - invited)</p> <p>2018 – ASMS 66TH AMERICAN SOCIETY FOR MASS SPECTROMETRY CONFERENCE. San Diego – CA, USA from June 3-7, 2018 <i>A translational pilot study of global lipid profile as risk</i></p>
-------------------------------	---

	<p><i>marker in coronary plaque: mass spectrometry approach on asymptomatic patients</i> (poster)</p> <p>2018 – ASMS 66TH AMERICAN SOCIETY FOR MASS SPECTROMETRY CONFERENCE. San Diego – CA, USA from June 3-7, 2018 <i>MALDI-TOF mass spectrometry method for differential diagnosis of Zika, Chikungunya and Dengue virus through protein/peptide and/or lipid profiles of serum</i> (poster)</p> <p>2018 - 45o CONGRESSO DA SOCIEDADE BRASILEIRA DE CIRURGIA CARDIOVASCULAR Goiânia – GO, Brazil from April 18-21, 2018 Perfil Lipidômico Global como Marcador Molecular para Pacientes Assintomáticos com Escore de Framingham Intermediário: Um Estudo Piloto Translacional (oral)</p> <p>2018 - 34TH INTERNATIONAL SYMPOSIUM ON MICROSCALE SEPARATIONS AND BIOANALYSIS Rio de Janeiro – RJ, Brazil from February 18-21, 2018 <i>Global Lipid Profile as Molecular Markers for Cardiovascular Asymptomatic Patients with Framingham Intermediate Score: A Translational Pilot Study</i> (oral - invited)</p> <p>2018 - IMSC – XXII INTERNATIONAL MASS SPECTROMETRY CONFERENCE Firenze – IT, Italy from August 26-31, 2018 <i>Multiomic Plasma Analysis of Patients with Hepatocellular Carcinoma by Mass Spectrometry</i> (oral)</p> <p>2018 - ABCHEM - ATLANTIC BASIN CONFERENCE ON CHEMISTRY Cancun – MX, México from February 23-26, 2018 <i>23 Mass Spectrometry Imaging by LA-ICP and DESI of Cirrhosis and Hepatocellular Carcinoma</i> (poster)</p> <p>2016 - 1ST IBERO-AMERICAN, 6TH BRMASS CONFERENCE ON MASS SPECTROMETRY AND THE 13TH UPPCON Rio de Janeiro – RJ, Brazil from December 10-14, 2016 <i>Somewhere over the rainbow: new Insights on the application of ambient MS imaging in Zika and liver cancer</i> (oral - invited)</p>
Books	<p>HIGH PERFORMANCE ANALYTICAL METHODS APPLIED TO TRANSLATIONAL MEDICINE - Springer (As an editor) Within the serie <i>Advances in Experimental Medicine and Biology</i> do Prof.</p>

	Dr. Daniel Martins-de-Souza (Head Editor).
Supervisor/ co-supervisor Graduated Programs	<p>EDUARDO BACELAR ALMEIDA (FM/UFC - MSc) - Efeitos do Pós-Condicionamento com L- Alanil-Glutamina na Isquemia e Reperusão Cerebral em Ratos. (co-supervisor – out 2016) Supervisor: Prof. Dr. Paulo Vasconcelos Leitão. Surgery Graduated Program - FM, UFC (concluded)</p> <p>RAPHAELA MENESES DE OLIVEIRA (FM/UnB - MSc) – Análise Multiômica de Plasma de Pacientes em Carcinoma Hepatocelular por Espectrometria de Massas. (supervisor – out 2016). Work won a Distinguished Award at the Molecular Pathology Symposium - 2016. Molecular Pathology Graduated Program – FM, UnB (concluded)</p> <p>BRUNO NOBRE LINS CORONADO (FM/UnB - MSc) - Perfil Molecular de Pacientes com Degeneração Macular Relacionada à Idade do Tipo Neovascular (DMRIN) Tolerantes ao Anti-VEGF. (supervisor– ago 2017). Medical Science Graduated Program – FM, UnB (concluded)</p> <p>BRUNO ALVES MARTINS (FM/UnB - MSc) - Avaliação Proteômica Sérica e Fecal na Predição de Adenomas e Adenocarcinomas Colorretais. (co-supervisor – ago 2017) Supervisor: Prof. Dr. Paulo Gonçalves de Oliveira. Medical Science Graduated Program – FM, UnB (concluded)</p> <p>WALYSON SILVA SURIMÃ (FM/UFC - MSc) - Proteômica dos Efetores da Recorrência do Hepatocarcinoma Celular após Transplante Hepático: estudo do perfil global de proteínas e das vias de sinalização de possíveis marcadores. (co-supervisor – ago 2017) Supervisor: Prof. Dr. Huygens Parente Garcia. Surgery Graduated Program - FM, UFC (concluded)</p> <p>LIDIA HYUN JOO MYUNG (FM/USP- Siro Libanês - MSc) - Análise de Marcadores Proteicos no Endométrio de Mulheres com Endometriose Intestinal Profunda. (co-supervisor – ago 2017) Supervisor: Prof. Dr. Maurício Simões Abrão (Titular Departamento de Cirurgia – USP-Sírio-Libanês). Surgery Graduated Program - FM, USP (concluded)</p>

	<p>MARIANA UBALDO BARBOSA PAIVA (FM/UnB - PhD) - Perfil lipidômico como marcador de risco de placa coronariana em pacientes assintomáticos de risco intermediário para eventos cardiovasculares. (supervisor – jan 2018) Medical Science Graduated Program – FM, UnB</p> <p>EDUARDO BACELAR ALMEIDA (FM/UFC - PhD) - Biomarcadores em Dependentes de Cocaína/Crack e Resposta a Intervenção com Leite Enriquecido com Ômega 3, 6 E 9. (co-supervisor – ago 2017) Supervisor: Prof. Dr. Paulo Vasconcelos Leitão. Surgery Graduated Program - FM, UFC</p> <p>RAPHAELA MENESES DE OLIVEIRA (FM/UnB - PhD) – Proteômica e Metabolômica de Plasma e Tecido Cardíaco de Portadores de Cardiomiopatia Chagásica Crônica (supervisor – ago 2019). Molecular Pathology Graduated Program – FM, UnB</p>
Others	<p>IMPERIAL COLLEGE LONDON, DIVISION OF SYSTEM MEDICINE / FACULTY OF MEDICINE. November 19-21, 2019. Invited to an oral presentation and prospection of collaboration with the Phenome Lab (Prof Jules Griffin).</p> <p>3rd SCHOOL OF MASS SPECTROMETRY BrMass December 3-8, 2017. Natal – BR, Brazil. A Espectrometria de Massas Aplicada à Medicina Translacional no Câncer: da Imagem à Interação das Vias de Sinalização (Lecture)</p>