

**CURRICULUM VITAE
OF
PROFESSOR FRANCISCO FERNANDEZ-LIMA
DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY
FLORIDA INTERNATIONAL UNIVERSITY**

(Last updated November 2024)

EDUCATION

Degree	Institution	Field	Dates
PhD	Pontific Catholic University Rio de Janeiro, Brazil	Applied Physics	2003-2006
MS	Institute of Nuclear Sciences and Technology Havana, Cuba	Nuclear Physics	2001-2003
BS	Institute of Nuclear Sciences and Technology Havana, Cuba	Nuclear Physics	1996-2001

FULL-TIME ACADEMIC EXPERIENCE

Institution	Rank	Field	Dates (Month & Year)
Texas A&M University College Station, TX	K99 post-doctoral fellow (NIH/NIGMS fellow)	Chemistry	Sept, 2010-Jun, 2012
Texas A&M University College Station, TX	post-doctoral fellow	Chemistry	Jan, 2007-Aug, 2010
Federal University of Rio de Janeiro, Brazil	post-doctoral fellow (CNPq fellow)	Chemistry	Jul, 2006-Dec, 2006
Pontific Catholic University of Rio de Janeiro, Brazil	graduate student (CLAF fellow)	Applied Physics	Sept, 2003-Jul, 2006
Institute of Nuclear Sciences and Technology, Havana, Cuba	research scientist	Nuclear Physics	Sept, 2001-Aug, 2003

EMPLOYMENT RECORD AT FIU

Rank	Dates
Professor	Jul, 2020 - present
Associate Professor	Jul, 2017 – Jun, 2020
Assistant Professor	Jun, 2012 – Jun, 2017

PUBLICATIONS IN DISCIPLINE

Total 171 peer reviewed papers, citations > 5250, h-index = 40, i10-index = 115 and 2 book chapters

Articles (students and post-doctoral fellows are single and double underline, respectively and * denotes corresponding author).

Full text is available online at <http://faculty.fiu.edu/~fernandf/publications.html> and citation indexes at <https://scholar.google.com/citations?user=qDzVEjcAAAAJ&hl=en&oi=ao> . Notice that some journals are not included in the Web of Science database.

2024

171. S. A. Miller, A. R. Forero, L. Valadares-Tose, J. E. Krechmer, F. Muntean, and **F. Fernandez-Lima***, "High-Throughput Screening of Fentanyl Analogs.", *Talanta*, 2025, 283, 127191. IF = 6.0
170. C. Fuller, K. Jeanne Dit Fouque, L. V. Tose, F. Vitorino, B. Garcia, **F. Fernandez-Lima***, "Online, Bottom-up Characterization of Histone H4 4-17 Isomers." *Anal. Chem.*, 2024, 96, 17165-17173. IF = 7.0 (Journal Cover)
169. P. R. B. Oliveira, D. Leyva, L. V. Tose, C. Weisbrod, A. N. Kozhinov, K. O. Nagornov, Y. O Tsybin, **F. Fernandez-Lima**, "Revisiting Dissolved Organic Matter Analysis Using High-Resolution Trapped Ion Mobility and FT-ICR Mass Spectrometry", *J. Am. Soc. Mass Spectrom.* 2024, 35, 10, 2400–2407. IF=3.1
168. K. J. Dit Fouque, M. Fernandez-Rojas, A. Roque, **F. Fernandez-Lima***, "Top-Down Structural Characterization of Native Ubiquitin Combining Solution Stable Isotope Labelling, Trapped Ion Mobility Spectrometry and Tandem Electron Capture Dissociation Mass Spectrometry.", *Anal. Chem.*, 2024, 96, 37, 14963–14970. IF = 7.0
167. S. Miller, K. J. Dit Fouque, A. Mebel, K. Chandler, **F. Fernandez-Lima***, "Gas-Phase Structures of Fucosylated Oligosaccharides: Alkali Metal and Halogen Influences", *J. Phys. Chem. B*, 2024, 128, 37, 8869–8877. IF = 2.8
166. C. Fuller, L. Valadares Tose, F. Vitorino, N. Bhanu, E. Panczyk, M. Park, B. Garcia, **F. Fernandez-Lima***, "Bottom-up Histone Post-translational Modification Analysis using Liquid Chromatography, Trapped Ion Mobility Spectrometry, and Tandem Mass Spectrometry." *J. Proteome Res.*, 2024, 23, 9, 3867–3876. IF = 3.8
165. K. J. Dit Fouque, J. C. Molano-Arevalo, F. Leng, **F. Fernandez-Lima***, "Conformational and Structural Characterization of Knotted Proteins", *Biochem.* 63 2024, (18), 2293-2299. IF= 2.9
164. M. Annunziato, N. Bashirova, M. N.H. Eeza, A. Lawson, **F. Fernandez-Lima**, L. V. Tose, J. Matysik, A. Alia, and J. P. Berry*, "An Integrated Metabolomics-Based Model, and Identification of Potential Biomarkers, of Perfluorooctane Sulfonic Acid Toxicity in Zebrafish Embryos". *Env.l Toxicology and Chemistry*, 2024, 43(4), 896-914. IF= 4.1

163. M. Fernandez-Rojas, C. N. Fuller, L. Valadares Tose, M. Willetts, M. A. Park, N. V. Bhanu, B. A. Garcia, **F. Fernandez-Lima***, “Histone Modification Screening using Liquid Chromatography, Trapped Ion Mobility Spectrometry, and Time-Of-Flight Mass Spectrometry”. *JoVE*, 2024 DOI: 10.3791/65589. PMID: 38284546.

162. A. R. Forero, L. Valadares Tose, M. Willetts, M. A. Park, E. N. Shoff, **F. Fernandez-Lima***, “Fentanyl Analog Screening using LC-TIMS-TOF MS/MS”. *JoVE*, (2024 in press).

161. K. D. Castro, L. Valadares Tose, M. Willetts, M. A. Park, M. Nouzova, F. Noriega, **F. Fernandez-Lima***, “Tracing de novo Lipids using Stable Isotope Labeling LC-TIMS-TOF MS/MS”. *JoVE*, 2024 Aug 23:(210). doi: 10.3791/65590.

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160. Miller, S. A., Jeanne Dit Fouque, K., Hard, E. R., Balana, A. T., Kaplan, D., Voinov, V. G., Ridgeway, M. E., Park, M. A., Anderson, G. A., Pratt, M. R., **Fernandez-Lima, F.*** “Top/Middle-Down Characterization of α -Synuclein Glycoforms”. *Anal. Chem.* 95 (49), 18039-18045, 2023. IF= 7.4

159. Caobi, A., Bonilla, J, Gomez, M, Andre, M., Yndart, A., **Fernandez-Lima, F.**, Nair, M. P., Raymond, A.D.*, “HIV-1 and opiates modulate miRNA profiles in extracellular vesicles”, *Frontiers in Immunology.* 14, 1259998, 2023. IF= 7.3

158. J. Leyria, A. A Guarneri, M. G. Lorenzo, M. Nouzova, F. G Noriega, S. AM Benrabaa, **F. Fernandez-Lima**, L. Valadares Tose, I. Orchard, A. B Lange*, “Effects of mating on female reproductive physiology in the insect model, *Rhodnius prolixus*, a vector of the causative parasite of Chagas disease”, *PLOS Neglected Tropical Diseases*, 17, 9, e0011640. IF= 4.8

157. G. Mejia, L. Su, P. Pandey, K. J. Dit Fouque, A. J. McGoron, **F. Fernandez-Lima**, J. He, A. M. Mebel, F. Leng*. “Anticancer Drug Doxorubicin Spontaneously Reacts with GTP and dGTP”, *Chem. Res. Toxicol.* 36, 4, 660–668, 2023. IF= 4.1

156. M. Santos-Fernandez, K. J. Dit Fouque, **F. Fernandez-Lima***, “Integration of Trapped Ion Mobility Spectrometry and Ultraviolet Photodissociation in a Quadrupolar Ion Trap Mass Spectrometer”, *Anal. Chem.*, 95 (22), 8417-8422, 2023. IF= 7.4

155. Md S. Alam, D. Leyva, W. Michelin, **F. Fernandez-Lima**, Jaroslava Miksovska*, “Distinct mechanism of Tb 3+ and Eu 3+ binding to NCS1”, *Phys. Chem. Chem. Phys.*, 25(13) 9500-9512, 2023. IF = 4.0

154. D. Leyva, M. Usman Tariq, R. Jaffé, F. Saeed, **F. Fernandez-Lima***, “Description of Dissolved Organic Matter Transformational Networks at the Molecular Level”, *Environ. Sci. Technol.* 57, 6, 2672–2681, 2023. IF= 9.0

153. J. Leyria, S. Benrabaa, M. Nouzova, F. G. Noriega, L. Valadares Tose, **F. Fernandez-Lima**, I. Orchard, A. B. Lange*, “Crosstalk between Nutrition, Insulin, Juvenile Hormone, and Ecdysteroid Signaling in the Classical Insect Model, *Rhodnius prolixus*”, *Int. J. Mol. Sci.*, 24 (1) 7, 2023. IF= 6.6

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152. M. Nouzova*, M. J. Edwards, M. DeGennaro, D. Leyva, L. V. Tose, **F. Fernandez-Lima**, F. G. Noriega, “Genetics tools for *corpora allata* specific gene expression in *Aedes aegypti* mosquitoes”, *Nature Sci Rep.*, 12:20426, 2022. IF= 5.0
151. K. J. Dit Fouque, S. Miller, K. Pham, N. Bhanu, Y. Cintron-Diaz, D. Leyva, D. Kaplan, V. Voinov, M. Ridgeway, M. Park, B. Garcia, **F. Fernandez-Lima***, “Top-“Double-Down” Mass Spectrometry of Histone H4 Proteoforms: Tandem UV-Photon and Mobility/Mass-Selected Electron Capture Dissociations”. *Anal. Chem.*, 94 (44), 15377-15385, 2022. IF= 6.3
150. D. Leyva, R. Jaffé, J. Courson, J. Kominoski, M. Usman Tariq, F. Saeed, **F. Fernandez-Lima***, “Molecular level characterization of DOM along a freshwater-to-estuarine coastal gradient in the Florida Everglades”, *Aquatic Sci.*, 84 (4), 1-14, 2022. IF= 2.8
149. A. Castellanos, R H Gomer, **F. Fernandez-Lima***, “Submicron 3-D mass Spectrometry imaging reveals an asymmetric molecular distribution on chemotaxing cells”, *F1000 Research*, 2022, 11:1017. IF = 2.3
148. R. Farhana, R. Lei, K. Pham, V. Derrien, J. Cedeno, V. Rodriquez, S. Bernad, **F. Fernandez Lima**, J. Miksovskaa*, “Globin X: A highly stable intrinsically hexacoordinate globin”, *J. Inorg. Biochem.*, 236, 111976, 2022. IF= 4.3
147. S. Forcisi*, F. Moritz,* C. J. Thompson*, B. Kanawati, J. Uhl, C. Afonso, C. D. Bader, A. Barsch, B. A. Boughton, R. K. Chu, J. Ferey, **F. Fernandez-Lima**, C. Guéguen, D. Heintz, M. Gomez-Hernandez, K.-S Jang, N. Kessler, V. Mangal, R. Müller, R. Nakabayashi, E. Nicol, S. Nicolardi, M. Palmblad, L. Paša-Tolić, J. Porter, I.e Schmitz-Afonso, J. Bok Seo, E. Sommella, Y. E. M. van der Burgt, C. Villette, M. Witt, A. Wittrig, J. J. Wolff, M. L. Easterling, Frank H. Laukien, P. Schmitt-Kopplin, “A large scale inter-laboratory DI-FT-ICR MS comparability study employing various systems”, *J. Am. Soc. Mass Spectrom.*, 33(12) 111976, 2022. IF=3.1
146. M. S. Alam, S. Azam, K. Pham, D. Leyva, K. J. Dit Fouque, **F. Fernandez-Lima**, J. Miksovskaa*, “Nanomolar affinity of EF-hands in neuronal calcium sensor 1 for bivalent cations Pb^{2+} , Mn^{2+} , and Hg^{2+} ”, *Metallomics*, 14(7):mfac039, 2022. IF= 4.6
145. K. J. Dit Fouque, S. N. Sipe, A. Garabedian, G. Mejia, L. Su, M. L. Hossen, P. P. Chapagain, F. Leng, J. S. Brodbelt, **F. Fernandez-Lima***, “Exploring the Conformational and Binding Dynamics of HMGA2•DNA Complexes Using Trapped Ion Mobility Spectrometry – Mass Spectrometry”, *J. Am. Soc. Mass Spectrom.*, 33 (7), 1103-1112, 2022. IF=3.1 (journal cover)
144. S. A. Miller, K. J. Dit Fouque, M. E. Ridgeway, M. A. Park,**F. Fernandez-Lima***, “Trapped Ion Mobility Spectrometry, Ultraviolet Photodissociation and ToF Mass Spectrometry for Gas-Phase Peptide Isobars/Isomers/Conformers Discrimination”, *J. Am. Soc. Mass Spectrom* 33(7): 1267–1275, 2022. IF=3.1
143. S. N. Sipe, K. J. Dit Fouque, A. Garabedian, F. Leng, **F. Fernandez-Lima**, J. S. Brodbelt*, “Exploring the Conformations and Binding Location of HMGA2•DNA Complexes Using Ion

Mobility Spectrometry and 193 nm Ultraviolet Photodissociation Mass Spectrometry”, *J. Am. Soc. Mass Spectrom.*, 33, 7, 1092–1102, 2022. IF=3.1

142. L. V. Tose, C. Ramirez, V. Michalkova, M. Nouzova, F. Noriega, **F. Fernandez-Lima***, "Coupling stable isotope labelling and LC-TIMS-TOF MS/MS for *de novo* mosquito ovarian lipid studies", *Anal. Chem.*, 94(16), 6139-45, 2022. IF= 6.3

141. Y. L. Cintron-Diaz, M. E. Gomez-Hernandez, M. M. H. A. Verhaert, P. D. E. M. Verhaert, and **F. Fernandez-Lima***, “Spatially resolved neuropeptide characterization from neuro-pathological FFPE tissue sections by a combination of Imaging MALDI FT-ICR MSHC and LESA-TIMS-MS/MS”, *J. Am. Soc. Mass Spectrom.*, 33,4,681-687, 2022. IF=3.1

140. A. Garabedian, K. J. Dit Fouque, P. P. Chapagain, F. Leng, **F. Fernandez-Lima***, “AT-hook peptides bind the major and minor groove of AT-rich DNA duplexes”. *Nucleic Acids Res.*, 50 (5), 2431-2439, 2022. IF= 16.9

139. M. Hejníková, M. Nouzova, C. E. Ramirez, **F. Fernandez-Lima**, F. G. Noriega, D Doležel*, “Sexual dimorphism of diapause regulation in the hemipteran bug *Pyrrhocoris apterus*”, *Insect Biochem. Mol Biol*, 22, 103721,2022. IF = 4.7

138. D. Leyva, M. U. Tariq, R. Jaffe, F. Saeed, **F. Fernandez Lima***, “Unsupervised Structural Classification of Dissolved Organic Matter Based on Fragmentation Pathways”, *Environ. Sci. Technol.*, 56, 1458-1468, 2022. IF = 9.0

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137. T. Le, K. J. Dit Fouque, M. Santos-Fernandez, C. D. Navo, G. Jiménez-Osés, R. Sarkisian, **F Fernandez-Lima***, W. A. van der Donk*, “Substrate sequence controls regioselectivity of lanthionine formation by ProcM”, *J. Amer. Chem. Soc.*, 143, 44, 18733–18743, 2021. IF = 15.4

136. K. Pham, **F. Fernandez-Lima***, " Structural Characterization of Human Histone H4.1 By Tandem Non-Linear and Linear Ion Mobility Spectrometry Complemented with Molecular Dynamics Simulations", *ACS Omega*, 6, 44, 29567–29576, 2021. IF= 4.1

135. M. Nouzova, M. Edwards, V. Michalkova, C. E Ramirez, M. Ruiz, M. Areiza, M. DeGennaro, **F. Fernandez-Lima**, R. Feyereisen, M. Jindra, F. G. Noriega*, "Epoxidation of juvenile hormone was a key innovation improving insect reproductive fitness", *PNAS*, 118 (45) e2109381118, 2021. IF = 11.2

134. J. D. Hegemann,* K. Jeanne Dit Fouque, M. Santos-Fernandez, **F. Fernandez-Lima**, “A Bifunctional Leader Peptidase/ABC Transporter Protein Is Involved in the Maturation of the Lasso Peptide Cochonodin I from *Streptococcus suis*”, *J. Nat. Prod.*, 84, 10, 2683–2691, 2021, IF= 4.3

133. C.A. Olanrewaju, C. E. Ramirez, **F. Fernandez-Lima***, “Characterization of Deasphalted Crude Oils Using Gas Chromatography–Atmospheric Pressure Laser Ionization–Trapped Ion Mobility Spectrometry–Time-of-Flight Mass Spectrometry”, *Energy & Fuels*, 2021, 35, 17, 13722–13730. IF= 3.4

132. K. J. Dit Fouque, J. D. Hegemann, M. Santos-Fernandez, T. T. Le, M. Gomez-Hernandez, W. A. van der Donk, **F. Fernandez-Lima***, “Exploring Structural Signatures of the Lanthipeptide Prochlorosin 2.8 using Tandem Mass Spectrometry and Trapped Ion Mobility-Mass Spectrometry”, *Anal. Bioanal. Chem.*, 413, 4815–4824, 2021. IF= 3.3
131. K. Pham, Y. Mamun, **F. Fernandez-Lima***, "Structural Heterogeneity of Human Histone H2A.1", *J. Phys. Chem. B.*, 125, 19, 4977–4986, 2021. IF= 3.2
130. K. J. Dit Fouque, D. Kaplan, V. Voinov, **F. Fernandez-Lima***, "Proteoform Differentiation using Tandem Trapped Ion Mobility, Electron Capture Dissociation, and ToF Mass Spectrometry", *Anal. Chem.*, 93, 27, 9575–9582, 2021. IF= 6.3
129. K. J. Dit Fouque, M. Wellmann, D. Leyva Bombuse, M. Santos-Fernandez, Y. L. Cintron-Diaz, M. E. Gomez-Hernandez, D. Kaplan, V. G. Voinov, **F. Fernandez-Lima***. “Effective Discrimination of Gas-Phase Peptide Conformers using TIMS-ECD-ToF MS/MS.” *Anal Meth*, 13, 5216–5223, 2021. IF= 2.6
128. L. V. Tose, C. R. Weisbrod, V. Michalkova, M. Nouzova, F. G. Noriega, **F. Fernandez-Lima***, “Following de novo triglyceride dynamics in ovaries of *Aedes aegypti* during the previtellogenic stage”, *Nat. Sci. Rep.*, 11, 9636, 2021. IF = 4.0
127. C. A. Olanrewaju, C. E. Ramirez, **F. Fernandez-Lima***, “Comprehensive Screening of Polycyclic Aromatic Hydrocarbons and Similar Compounds Using GC–APLI–TIMS–TOFMS/GC–EI–MS”, *Anal. Chem.*, 93, 15, 6080–6087, 2021. IF= 6.3
126. K. J. Dit Fouque, V. Scutelnic, J. Hegemann, S. Rebuffat, P. Maitre, T. Rizzo, **F. Fernandez-Lima***. “Structural Insights from Tandem Mass Spectrometry, Ion mobility-Mass Spectrometry, and Infrared/Ultraviolet Spectroscopy on Sphingonodin I: Lasso vs. Branched-cyclic Topoisomers”, *J. Am. Soc. Mass Spectrom.*, 32, 4, 1096-1104, 2021. IF = 3.2
125. K. J. Dit Fouque, A. Garabedian, F. Leng, Y-C Tse-Dinh, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima***, “Trapped Ion Mobility Spectrometry of Native Macromolecular Assemblies”, *Anal. Chem.*, 93, 5, 2933–2941, 2021. IF= 6.3

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124. L. Su, N. Bryan, S. Battista, J. Freitas, A. Garabedian, F. D’Alessio, M. Romano, F. Falanga, A. Fusco, L. Kos, J. Chambers, **F. Fernandez-Lima**, P. P. Chapagain, S. Vasile, L. Smith, and Fenfei Leng*, “Identification of HMGA2 inhibitors by AlphaScreen-based ultra-high-throughput screening assays”, *Nat. Sci. Rep.* 10, 18850, 2020. IF=4.0
123. Y. Cintron-Diaz, A. M. A. de la Rocha, A. Castellanos, J. W. Chambers, **F. Fernandez-Lima***, “Mapping chemotherapeutic drug distribution in cancer cell spheroids using 2D-TOF-SIMS and LESA-TIMS-MS”, *Analyst* 145, 7056 – 7062, 2020. IF=4.0.
122. J Porter, K. Jeanne Dit Fouque, J. Miksovska, **F. Fernandez-Lima***, “Salt bridges govern the structural heterogeneity of heme protein interactions and porphyrin networks: microperoxidase-11”, *RSC Advances* 10 (56), 33861-33867, 2020. IF=4.0

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120. K. Jeanne Dit Fouque, **F. Fernandez-Lima***, "Following Structural Changes by Thermal Denaturation Using Trapped Ion Mobility Spectrometry – Mass Spectrometry", *J. Phys. Chem B* 124 (29), 6257-6265, 2020. IF = 3.2

119. E. Sisley, J. Ujma, M. Palmer, K. Giles, **F. Fernandez-Lima**, H. Cooper*, "LESA cyclic ion mobility mass spectrometry of intact proteins from thin tissue sections", *Anal. Chem.* 2020, 92, 9, 6321–6326, 2020. IF= 6.8

118. B. Gonzalez, M. Perez-Nevarez, A. Mirza, M. Gonzalez Perez, Y.M. Lin, C.-P. Hsu, A. Caobi, A. D. Raymond, M. G. Hernandez, **F. Fernandez-Lima**, F. George, S. Ramaswamy*, “Physiologically-Relevant Fluid-Induced Oscillatory Shear Stress Stimulation of Mesenchymal Stem Cells Enhances the Engineered Valve Matrix Phenotype”, *Frontiers in Cardiovascular Medicine*, 7, 69, 2020. IF = 4.8

117. M. J. Villalobos-Sambucaro, M. Nouzova, C. E. Ramirez, M. E Alzugaray, **F. Fernandez-Lima**, J. R. Ronderos, F G. Noriega*, “The juvenile hormone described in *Rhodnius prolixus* by Wigglesworth is juvenile hormone iii skipped bisepoxide”, *Nature Scientific Reports* 10, 3091, 2020, IF=4.3.

116. A. Castellanos, M. Gomez Hernandez, M. Tomic-Canic, I. Jozic*, **F. Fernandez-Lima***, “Multimodal, in-situ imaging of ex-vivo human skin reveals decrease of cholesterol sulfate in the neoeplithelium during acute wound healing”. *Anal. Chem.*, 92, 1, 1386-1394, 2020. IF= 6.1.

115. C. E. Ramirez, M. Nouzova, V. Michalkova, **F. Fernandez-Lima**, F. G. Noriega*, “Common structural features facilitate the simultaneous identification and quantification of the five most common juvenile hormones by liquid chromatography-tandem mass spectrometry”. *Insect Biochem. Mol. Biol.*, 116, 103287, 2020. IF=3.6.

2019

*Application for promotion to Full Professor at FIU

114. B. N Koleva, H. Gokcan, A. A. Rizzo, S. Lim, K. J. Dit Fouque, A. Choy, **F. Fernandez-Lima**, D. M. Korzhnev, G. A. Cisneros, P. J. Beuning*, “Dynamics of the *E. coli* β clamp dimer interface and its influence on DNA loading”. *Biophys. J.*, 117 (3), 587-601, 2019. IF = 3.5.

113. M. Nouzova, V. Michalkova, C. E. Ramirez, **F. Fernandez-Lima**, F. G. Noriega*, “Inhibition of juvenile hormone synthesis in mosquitoes by the methylation inhibitor 3-deazaneplanocin A (DZNep)”, *Insect Biochem. Mol. Biol.*, 113, 103183, 2019. IF = 3.6.

112. K. Jeanne Dit Fouque, J. Moreno, **F. Fernandez-Lima***, "Exploring the Conformational Space of Growth Hormone-Releasing Hormone Analogs using Dopant Assisted Trapped Ion Mobility Spectrometry- Mass Spectrometry", *J. Phys. Chem. B*, 123, 6169-6177, 2019, **Young Scientists virtual special issue**. IF = 3.2.

111. J. Haler, E. Sisley, Y. Cintron Diaz, S. Meitei, H. Cooper, **F. Fernandez-Lima***, “Workflow for Fast Lipid Tissue Screening using LESA-FT-ICR-MS”, *Anal. Meth.* 11, 2385–2395, 2019. IF = 2.0.
110. K. Jeanne Dit Fouque, **F. Fernandez-Lima***, “Recent Advances in Biological Separations using Trapped Ion Mobility Spectrometry – Mass Spectrometry”, *Trends in Anal. Chem.*, 116, 308-315, 2019, IF = 7.6.
109. K. Jeanne Dit Fouque, C. E. Ramirez, R. L. Lewis, J. P. Koelmel, T. J. Garrett, R. A. Yost, **F. Fernandez-Lima***, “Effective Liquid Chromatography – Trapped Ion Mobility Spectrometry – Mass Spectrometry Separation of Isomeric Lipid Species”, *Anal. Chem.*, 91 (8), 5021–5027, 2019. IF = 6.1.
108. A. McKenzie-Coe; **F. Fernandez-Lima***; “Influence of gas modifiers on the TIMS analysis of familiar explosives”, *Int. J. Ion Mobil. Spectrom.*, 2019, 22 (2), 71-76. IF = 1.0.
107. N. Oranzi, R. Kemperman, M. Wei, V. Petkovska, S. Granato, B. Rochon, J. Kaszycki, A. La Rotta, K. Jeanne Dit Fouque, **F. Fernandez-Lima**, R. Yost*, “Measuring the integrity of gas-phase conformers of sodiated 25-hydroxyvitamin D3 by drift tube, travelling wave, trapped, and high-field asymmetric ion mobility”, *Anal. Chem.*, 916, 4092-4099, 2019, IF = 6.3
106. A. Castellanos, C. Ramirez, V. Michalkova, M. Nouzova, F. Noriega, **F. Fernandez-Lima***, “Three Dimensional Secondary Ion Mass Spectrometry Imaging (3D-SIMS) of *Aedes aegypti* ovarian follicles”, *J. Anal. At. Spectrom.* 34, 874-883, 2019. IF= 3.6
105. D. Leyva, L. V. Tose, J. Porter, J. Wolff, R. Jaffé, **F. Fernandez-Lima***; “Understanding the Structural Complexity of Dissolved Organic Matter: isomeric diversity”, *Faraday Discussions*, 218, 431-440, 2019. IF = 2.8
104. K. Jeanne Dit Fouque, J. D. Hegemann; S. Zirah, S. Rebuffat, E. Lescop, **F. Fernandez-Lima***; “Evidence of Cis/Trans-Isomerization at Pro7/Pro16 in the Lasso Peptide Microcin J25”, *J. Am. Soc. Mass Spectrom.*, 30 (6), 1038-1045, 2019. IF = 2.8
103. S. Hernández-Martínez, M. Nouzova, V. Michalkova, C. E. Ramirez, **F. Fernandez-Lima**, F. G. Noriega*. “Juvenile hormone controls nutritional allocation and ovarian development in female *Anopheles albimanus* mosquitoes”. *Nature Scientific Reports*, 9(1) 2127, 2019 IF = 4.3
102. K. Jeanne Dit Fouque, A. Garabedian, F. Leng, Y. Tse-Dinh, **F. Fernandez-Lima***, “Micro Heterogeneity of Topoisomerase IA/IB and Their DNA-bound States”, *ACS Omega*, 4, 3619–3626, 2019. IF = 4.1
101. K. Jeanne Dit Fouque, V. Bisram, J. Hegemann, S. Zira, S. Rebuffat; **F. Fernandez-Lima***. “Structural Signatures of the Class III Lasso Peptide BI-32169 and the Branched-cyclic Topoisomers Using Trapped Ion Mobility Spectrometry – Mass Spectrometry and Tandem Mass Spectrometry”, *Anal. Bioanal. Chem.*, 411 (24), 6287-6296, 2019. IF = 3.3
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11. **F. A. Fernandez-Lima**, J.A. Rodríguez, E. Pedrero, H.D. Fonseca Filho, A. Llovera, M. Riera, C. Dominguez, M. Behar, F.C. Zawislak*, “Ion Beam Analysis of PECVD silicon oxide thin films”, *Nucl. Instr. and Meth. in Phys. Res. B* 243(1), 200-204, 2006. IF = 1.2
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7. Y. González-Alfaro, **F. A. Fernandez-Lima**, E. M. Larramendi*, H. D. Fonseca Filho, M. E. H. Maia da Costa, F. L. Freire Jr., R. Prioli, R. R. de Avillez, E. F. da Silveira, O. Calzadilla, O. de Melo, E. Pedrero, E. Hernández, “Influence of a thin layer of a polymeric colloid on the substrate surface on the growth of polycrystalline thin films of PbS by chemical bath deposition”, *Phys. Stat. Sol. C*, 2(10), 3690, 2005. IF = 1.6
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BEFORE PhD

4. **F. Fernandez-Lima**, E. M. Larramendi, E. Purón, E. Pedrero, O. de Melo, D. L. Baptista, F. C. Zawislak*. “Structural characterization of epitaxial $\text{Cd}_{1-x}\text{Zn}_x\text{Te}$ semiconductor thin films by ion beam techniques”, *J. Crystal Growth*, 253(1-4), 89-94, 2003. IF = 1.7; times cited: 4
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1. T. Garcia, E. de Posada, L. Ponce, J.L. Sanchez, S. Diaz, E. Pedrero, **F. Fernandez**, P. Bartolo-Perez*, J.L. Peña, R. Diamant, J.A.M. Pereira. "Textured strontium ferrite thin films grown by PLD", *Materials Letters*, 49, 294–298, 2001. IF = 2.5

Chapters in Books

Chapter "Trapped Ion Mobility Spectrometry coupled to FT-ICR MS: Fundamentals and Applications". Authors: **Francisco Fernandez-Lima**, Book: "Fundamentals and applications of Fourier Transform Mass Spectrometry". Editor: Philippe Schmitt-Kopplin and Basem Kanawati, 2019. Elsevier Publishers. Paperback ISBN: 9780128140130

Chapter "Alkali Halide Clusters: Experiment and Theory". Authors: **Francisco Fernandez-Lima**, Enio F. da Silveira, Marco Antonio Chaer Nascimento. Book: Halides: Chemistry, Physical Properties and Structural Effects. Editor: Jean Lefebure. 2013. Nova Publishers. ISBN: 978-1-62417-947-1.

PRESENTED PAPERS, AND LECTURES (while at FIU)

1. C. N. Fuller, S. J. Guzman, L. Valadares Tose, M. Rodriguez, N. El-Hage, **F. Fernandez-Lima**, "Comparison of Pre- and Post-activation Post-translational Modifications in Promonocytes with Chronic Human Immunodeficiency Virus." International Undergraduate Research Symposium and Conference October 24, 2024 (student oral presentation)
2. **F. Fernandez-Lima**, "Combining Trapped Ion Mobility Spectrometry with electron and UV based tandem Mass Spectrometry", Oct 20-25, 2024, Raleigh Convention Center, North Carolina.(invited talk)
3. **F. Fernandez-Lima**, "Integration of HDX-TIMSn-EXD/UVPD-MSn for Structural Biology Applications", 38th Asilomar Conference on Mass Spectrometry, October 11-15, 2024, California.(invited talk)
4. Andrew R Forero; M. Santos; P. R B Oliveira; K. J. De Fouque; C. Greer; B. H Clowers; A. N. Kozhinov; Y. Tsybin; C. R Weisbrod; F. Saeed; **F. Fernandez-Lima**, "Integration Of Tandem High Resolution Ion-Mobility And Mass Spectrometry For Complex Mixture Analysis", 72nd annual conference mass spectrometry and allied topics, June 2-6, 2024, Anaheim, California. (student poster presentation)
5. P. R B Oliveira, D. Leyva; L. V Tose; M. U Tariq; C. Weisbrod; F. Saeed; **F. Fernandez-Lima**, "High Resolution Ion Mobility and Ultra-High resolution mass spectrometry for DOM chemical Formula based Structural Assignment"; 72nd annual conference mass spectrometry and allied topics, June 2-6, 2024, Anaheim, California. (postdoc poster presentation)
6. A. Forero, P. Batista Oliveira, K. J. De Fouque, A. Kozhinov, Y. Tsybin, C. R. Weisbrod, F. Saeed, **F. Fernandez-Lima**, "New Ultrahigh Resolution Mass Spectrometry Approaches for The Molecular Analysis of Dissolved Organic Matter", FIU Graduate Student Appreciation Week (GSAW) 2024, April 1-6, FIU Graham Center. (student poster presentation)
7. C. N. Fuller, K. J. Dit Fouque, L. Valadares Tose, F. N. L. Vitorino, B. A. Garcia, **F. Fernandez-Lima**, "New Mass spectrometry-based Tools for Histone Epigenetic Marker Screening", FIU Graduate Student Appreciation Week (GSAW) 2024, April 1-6, FIU Graham Center. (student poster presentation)
8. M. Santos-Fernandez, K. J. Dit Fouque, U. Karki, J. D. Hegemann, P. Chapagain, F.

- Fernandez-Lima, “Structural Characterization of Syanodin I using Hydrogen-Deuterium Exchange, Trapped Ion Mobility Spectrometry, and Electron Capture Dissociation, and tandem Mass Spectrometry”, FIU Graduate Student Appreciation Week (GSAW) 2024, April 1-6, FIU Graham Center. (student poster presentation)
9. S. A. Miller, A. R. Forero, L. Valadares Tose, K. J. Dit Fouque, J. Krechmer, F. Muntean, F. Fernandez Lima, “High-Throughput Atmospheric Pressure Screening of Fentanyl Analogues”, FIU Graduate Student Appreciation Week (GSAW) 2024, April 1-6, FIU Graham Center. (student poster presentation)
 10. M. S. Amador, P. R. B. Oliveira, J. S. Kominoski, **F. Fernandez-Lima**, “Exploring Dissolved Organic Matter in the Florida Everglades: A Molecular Level Identification along a Freshwater-to-Estuarine Coastal Gradient”, Undergraduate Research at FIU 2024 (URFIU), April 2, 2024, FIU Graham Center. (student poster presentation)
 11. L. Sama, C. N. Fuller, **F. Fernandez-Lima**, “High Throughput screening of epigenetic markers in H4 Histone” Undergraduate Research at FIU 2024 (URFIU), April 2, 2024, FIU Graham Center. (student poster presentation)
 12. A. E. Roque, K. J. Dit Fouque, **F. Fernandez-Lima**, “Top-Down Structural Characterization of Native Ubiquitin Combining Solution Stable Isotope Labelling, Trapped Ion Mobility Spectrometry and Tandem Electron Capture Dissociation Mass Spectrometry”, Undergraduate Research at FIU 2024 (URFIU), April 2, 2024, FIU Graham Center. (student poster presentation)
 13. A. Nau, M. Santos, K. J. Dit Fouque, J. Hegemann, **F. Fernandez-Lima**, “Developing innovative instrumentation and analytical solutions for the structural elucidation of lasso peptide topoisomers”, Undergraduate Research at FIU 2024 (URFIU), April 2, 2024, FIU Graham Center. (student poster presentation)
 14. P. Oliveira, D. Leyva, M. Usman Tariq, C. Weisbrod, F. Saeed, **F. Fernandez-Lima**, “High resolution Mobility-FT ICR MS/MS for DOM Chemical Formula based Structural Assignment”, 2024 ASMS Sanibel Conference January 21-24, 2024 (Flash talk/poster presentation)
 15. **F. Fernandez-Lima**, “Effective Fentanyl Analog Screening using LC-TIMS-TOF MS/MS”, 2024 Current Trends Symposium on Seized Drug Analysis, On-line Symposium, January 22-26, 2024 (invited speaker)
 16. S. A. Miller, A. R. Forero, L. V. Tose, K. J. Dit Fouque, M. Willetts, J. Krechmer, F. Muntean, **F. Fernandez-Lima**, “Evaluation of Sample Ionization Sources for the Characterization of Isomeric Fentanyl Analogs Utilizing Trapped Ion Mobility Spectrometry Time of Flight Mass Spectrometry (TIMS-ToF MS).”, 2024 Current Trends Symposium on Seized Drug Analysis, On-line Symposium, January 22-26, 2024 (student poster)- Poster Award
 17. **F. Fernandez-Lima**, “Top Down strategies using complementary HDX, TIMS, and ECD/UVPD MS/MS”, 35th Annual Tandem Mass Spectrometry Workshop Fairmont Chateau Lake Louise, Alberta, Canada, November 29 - December 2, 2023 (speaker)
 18. **F. Fernandez-Lima**, “New TIMS-MS strategies for Native Mass Spectrometry”, Bruker Workshop on Native Mass Spectrometry, Texas Tech University, Lubbock, Texas, October 19, 2023 (invited speaker)
 19. **F. Fernandez-Lima**, “Top Double-Down and Middle-Down Characterization of Proteoforms Using TIMS-UVPD-TIMS-Q-ECD-TOF MS/MS”, 2ND INTERNATIONAL TOP-DOWN PROTEOMICS SYMPOSIUM. Northwestern University, Chicago, IL,

- October 3-5, 2023 (invited speaker)
20. **F. Fernandez-Lima**, “New strategies for Biological Mass Spectrometry”, Department for Chemistry, University of Nebraska at Lincoln, September 29-30, 2023 (invited speaker)
 21. **F. Fernandez-Lima**, “Following molecular changes during wound skin healing with topical statin treatment”, ASIMS, Houston, September 11-15, 2023. (invited speaker)
 22. D. Leyva, M. Usman Tariq, R. Jaffé, F. Saeed, **Francisco Fernandez-Lima**, 32nd Annual ISIMS Conference, Maastricht, August 19-24, 2023. (invited speaker)
 23. **F. Fernandez-Lima**, “Structural Characterization of DNA-Protein Complexes”, Advancing Mass Spectrometry for Biophysics and Structural Biology, July 23-26, 2023. (invited speaker)
 24. **K. J. Dit Fouque**, S. A. Miller, E. Hard, M. R. Pratt, **F. Fernandez-Lima**, “Top/Middle-Down Characterization of α -Synuclein Glycoforms”, 71st ASMS Conference on Mass Spectrometry and Allied Topics, June 4-8, 2023, (poster presentation)
 25. **A. Forero**, L. Valadares Tose, M. Willetts, M. A. Park, **F. Fernandez-Lima**, “High-Throughput Characterization of Fentanyl Analogs using LC-TIMS-TOF MS/MS” 71st ASMS Conference on Mass Spectrometry and Allied Topics, June 4-8, 2023, (poster presentation)
 26. **C. N. Fuller**, J. A. Rodriguez-Casariago, L. Valadares Tose, J. M. Eirin-Lopez, L. A. Fieber, **F. Fernandez-Lima**, “Histone Post-Translational Modification Mapping of *Aplysia californica* Ganglia after Juvenile Exposure to Hypoxia using LC-TIMS-PASEF-ToF MS/MS” 71st ASMS Conference on Mass Spectrometry and Allied Topics, June 4-8, 2023, (poster presentation)
 27. **L. V. Tose**, A. Hawash, I. Jozic, **F. Fernandez-Lima**, “Following molecular changes during wound skin healing with topical statin treatment” 71st ASMS Conference on Mass Spectrometry and Allied Topics, June 4-8, 2023, (poster presentation)
 28. **M. Fernandez-Rojas**, K. Jeanne Dit Fouque, M. Santos Fernandez, **F. Fernandez-Lima**, “Integration of HDX and TIMS-q-ExD FT-ICR MS/MS for the Structural Characterization of Native Proteins” 71st ASMS Conference on Mass Spectrometry and Allied Topics, June 4-8, 2023, (poster presentation)
 29. **M. Santos-Fernandez**, K. J. Dit Fouque, J. D. Hegemann, **F. Fernandez-Lima**, “Following Lasso Peptide Multistep Unthreading by LC-TIMS-UVPD-MS/MS” 71st ASMS Conference on Mass Spectrometry and Allied Topics, June 4-8, 2023, (poster presentation)
 30. **S. A. Miller**, K. J. Dit Fouque, F. Leng, **F. Fernandez-Lima**, “Protein and Protein-DNA Thermal Conformational Changes studied by IR Laser-Assisted nESI-TIMS-ToF MS” 71st ASMS Conference on Mass Spectrometry and Allied Topics, June 4-8, 2023, (poster presentation)
 31. **F. Fernandez-Lima**, “Description of Dissolved Organic Matter Transformational Networks Using TIMS-FT-ICR MS/MS and Graph-Dom”, 13th North American FT MS Conference, April 30 — May 3, 2023, Key West, Florida. (invited speaker)
 32. **F. Fernandez-Lima**, “Integration of TIMS and top-double down MS approaches for the analysis of histone proteoforms”. Session “Tackling the Resolution of Biologically Relevant Isomers: Advances in Ion Mobility Separations Coupled to Mass Spectrometry”, Pittcon, March 18-22, 2023, Philadelphia, PA. (invited speaker)
 33. **F. Fernandez-Lima**. “Tandem Ion mobility, Mass Spectrometry and Infrared/Ultraviolet Spectroscopy on Sphingonodin I: Lasso vs. Branched-cyclic Topoisomers”. 3rd Iberoamerican Conference on Mass Spectrometry, December 10-15, 2022, Rio de Janeiro,

Brazil (keynote speaker).

34. **F. Fernandez-Lima**. “Structural characterization of Ribosomally synthesized and Post-Translationally Modified Peptides (RiPPs)”. Pontific Catholic University of Rio de Janeiro, , December 13, 2022, Rio de Janeiro, Brazil (invited talk).
35. **F. Fernandez-Lima**, “Development of top double down tandem IMS - UVPD/ECD - MS strategies for proteoform characterization”, Lake Louise 34th Workshop on Tandem Mass Spectrometry, November 30 - December 3, 2022 Lake Louise, Canada
36. **F. Fernandez-Lima**, “New strategies for the characterization of biological samples: from 3D mapping to 3D structural determination”, Department of Chemistry. Texas A&M University, September 13, 2022 (invited lecture)
37. **F. Fernandez-Lima**, “Characterization of histone proteoforms using TIMS- {ExD, UVPD}-MS/MS”, ACS Fall 2022 Ion Mobility Separations Symposium, August 23-24, Chicago, IL (invited lecture)
38. **M. Santos**, **K. Dit Fouque**, **F. Fernandez Lima**, “Implementation of a novel Tandem TIMS-QIT-MSn methodology.” 31st International Conference on Ion Mobility Spectrometry in Memphis, July 24 – 29, 2022, Tennessee, USA. (graduate student oral presentation)
39. **F. Fernandez-Lima**, “Integration of single- and double-down {CID, ExD/UVPD} strategies with TIMS-MS”, 31st International Conference on Ion Mobility Spectrometry in Memphis, July 24 – 29, 2022, Tennessee, USA. (oral presentation)
40. **C. N. Fuller**, **K. Dit Fouque**, **N. Bhanu**, **B. A. Garcia**, **F. Fernandez Lima**, “Development of a bottom-up Histone Characterization based on LC-TIMS-ToF-MS/MS.” 98th Florida Annual Meeting and Exposition, August 4-6, 2022, Tampa, FL. (graduate student oral presentation)
41. **M. Fernandez Rojas**, **K. Dit Fouque**, **D. Kaplan**, **V. G. Voinov**, **F. Fernandez-Lima**, “Development of Top-Down Hydrogen Deuterium back Exchange Mass Spectrometry using Tandem Trapped Ion Mobility and Electron Capture Dissociations”, 98th Florida Annual Meeting and Exposition, August 4-6, 2022, Tampa, FL. (graduate student oral presentation)
42. **M. Santos**, **K. Dit Fouque**, **G. Anderson**, **F. Fernandez Lima**, “Integration of Trapped Ion Mobility Spectrometry with Quadrupole Ion Traps”, 98th Florida Annual Meeting and Exposition, August 4-6, 2022, Tampa, FL. (graduate student oral presentation)
43. **Samuel A. Miller**, **K. J. Dit Fouque**, **D. Kaplan**, **V. G. Voinov**, **M. E. Ridgeway**, **M. A. Park**, **B. A. Garcia**, **F. Fernandez-Lima**, “Integration of Tandem UV-Photon and Mobility/Mass-Selected Electron Capture Dissociations for Top-Down Mass Spectrometry”, 98th Florida Annual Meeting and Exposition, August 4-6, 2022, Tampa, FL. (graduate student oral presentation)
44. **F. Fernandez Lima**, **Lecture** “Complex mixture characterization using complementary tandem Trapped Ion Mobility Spectrometry and FT-ICR MS/MS”, EU FT-ICR MS 9th Short Course: “Complex mixture analysis with FT-ICR MS”, April 19–21, 2022, University of Eastern Finland, Department of Chemistry.
45. **M. Fernandez Rojas**, **K. Dit Fouque**, **M. E. Ridgeway**, **M. A. Park**, **B. A. Garcia**, **F. Fernandez Lima**, “Structural Characterization of Native Proteins Based on HDbX-CIU-TIMS-UVPD-Q-ExD-TOF MS/MS”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9, 2022, Philadelphia, PA. (graduate student poster presentation)
46. **S. A. Miller**, **K. Dit Fouque**, **B. A. Garcia**, **F. Fernandez Lima**, “Characterization Of Positional Isomers Of The H4 Proteolytic Products Using TIMS-Trap-UVPD-TOF MS Workflow”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9,

- 2022, Philadelphia, PA. (graduate student poster presentation)
47. L. Valadares Tose, M. Nouzova, F. Noriega, **F. Fernandez Lima**, “Triglycerides Profiling By LC-TIMS-TOF MS/MS During Larval Developmental Stages in Aedes Aegypti Mosquitoes”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9, 2022, Philadelphia, PA. (post-doc poster presentation)
 48. Y. L. Cintron-Diaz, M. E. Gomez-Hernandez, A. Hawash, I. Jozic, **F. Fernandez Lima**, “Spatial Lipidomic and Proteomic Profiling Of Human Acute And Chronic Wounds”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9, 2022, Philadelphia, PA. (oral presentation)
 49. M. Santos, K. Dit Fouque, **F. Fernandez Lima**, “On the Coupling of Trapped IMS and QIT MSn.”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9, 2022, Philadelphia, PA. (graduate student poster presentation)
 50. C. N. Fuller, K. Dit Fouque, N. Bhanu, B. A. Garcia, **F. Fernandez Lima**, “Following Histone H4 Acetylation Using LC-TIMS-TOF-MS/MS”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9, 2022, Philadelphia, PA. (graduate student poster presentation)
 51. K. Dit Fouque, M. E. Ridgeway, M. A. Park, B. A. Garcia, **F. Fernandez Lima**, “Top-Down Characterization Of Histone H4 Proteoforms Using UVPD-TIMS-Q-CID/ECD-ToF MS/MS”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9, 2022, Philadelphia, PA. (oral presentation)
 52. D. Leyva, M. Usman Tariq, F. Saeed, **F. Fernandez Lima**, “Chemical Fingerprinting Of Dissolved Organic Matter Using CASI-CID FT-ICR MS/MS”, 70th ASMS Conference on Mass Spectrometry and Allied Topics, June 5-9, 2022, Philadelphia, PA. (graduate student poster presentation)
 53. **F. Fernandez-Lima**, “Characterization of histone proteoforms using TIMS-(CID, ExD, UVPD) TOF MS/MS strategies”, FSU-Bruker Virtual Colloquium on Trapped Ion Mobility Spectrometry /Mass Spectrometry (TIMS/MS), March 28-29, 2022. (Invited lecture)
 54. C. A. Olanrewaju, **F. Fernandez-Lima**, “Characterization of common crude oils using API-TIMS-FT-ICR MS”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (graduate student poster presentation)
 55. K. J. Dit Fouque, K. Pham, N. V. Bhanu, B. A. Garcia, **F. Fernandez-Lima**, “Comprehensive Characterization of Intact Histones using Tandem Trapped Ion Mobility, Electron Capture Dissociation, and ToF Mass Spectrometry”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (post-doc oral presentation)
 56. K. J. Dit Fouque, T. T. Le, W. van der Donk, **F. Fernandez-Lima**, “Exploring Lanthipeptide Regioisomer Structural Signatures using TIMS-TOF MS/MS”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (post-doc poster presentation)
 57. S. A. Miller, K. J. Dit Fouque, M. Santos-Fernandez, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, “Integration of TIMS-UVPD-TIMS-q-ECD-TOF MS/MS for top-down proteoform analysis”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (graduate student poster presentation)
 58. M. Santos-Fernandez, K. J. Dit Fouque, L. Su, F. Leng, **F. Fernandez-Lima**, “Structural Characterization of Peptide-Peptide complexes using TIMS-q-ECD-TOF MS/MS”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4,

- 2021, Philadelphia, PA. (graduate student poster presentation)
59. Y. L. Cintron-Diaz, M. E. Gomez-Hernandez, M. M. H. A. Verhaert, P. D. E. M. Verhaert, **F. Fernandez-Lima**, “Spatially resolved neuropeptide characterization from neuropathological FFPE tissue sections by a combination of Imaging MALDI FT-ICR MSHC and LESA-TIMS-MS”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (graduate student poster presentation)
 60. K. N. Pham, K. J. Dit Fouque, **F. Fernandez-Lima**, “Characterization of Histone H2A.1-Peptidic Inhibitor Complexes Using nESI-TIMS-q-EMS-TOF MS/MS”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (post-doc poster presentation)
 61. L. Tose, M. Nouzova, F. G. Noriega, **F. Fernandez-Lima**, “¹³C/²H Stable isotope labelling to follow de novo triglycerides dynamics in female *Aedes aegypti* by LC-TIMS-TOF MS”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (post-doc poster presentation)
 62. C. N. Fuller, K. N. Pham, M. E. Gomez Hernandez, N. V. Bhanu, B. A. Garcia, and **F. Fernandez-Lima**, “Histone Analysis using LC-TIMS-PASEF-MS/MS”, 69th ASMS Conference on Mass Spectrometry and Allied Topics, October 31- November 4, 2021, Philadelphia, PA. (graduate student poster presentation)
 63. **F. Fernandez-Lima**, “Analysis of Complex Mixtures Using TIMS-FT-ICR MS/MS”, Bruker Daltonics MRMS Workshop, June 28-30, 2021. (invited speaker)
 64. **F. Fernandez-Lima**, “Development of analytical strategies based on trapped IMS and MS”, invited Lecture at Dept Chemistry IUPUI, October 14, 2020.
 65. K. N. Pham, C. E. Ramirez, Y. Mamun, **F. Fernandez-Lima**, “Human Histones Characterization using LC-TIMS-TOF MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (post-doc poster presentation)
 66. K. J. Dit Fouque, P. P. Chapagain, **F. Fernandez-Lima**, “Conformational Dynamics of Chaperonin Complexes using nESI-CIA-TIMS-MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (poster presentation)
 67. J. Porter, A. Shvartsburg, **F. Fernandez-Lima**, “Two-Dimensional Differential/Linear Ion Mobility Separations of Protein Conformations”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 68. D. Leyva, R. Jaffé, **F. Fernandez-Lima**, “Structural Determination at the Chemical Formula Level using TIMS-FT-ICR MS/MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 69. E. N. Shoff, C. E. Ramirez, **F. Fernandez-Lima**, “Rapid Detection of Isomeric Fentanyl Analogs at Trace Levels using LC-TIMS-TOF MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 70. L. Tose, C. R. Weisbrod, **F. Fernandez-Lima**, “Following de novo triglyceride dynamics using stable isotope LC-FT-ICR MS/MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (post-doc oral

- presentation)
71. C. A. Olanrewaju, C. E. Ramirez, **F. Fernandez-Lima**, “Comprehensive Screening of polycyclic aromatic hydrocarbon like compounds using GC-APLI-TIMS-TOF MS/GC-EI-MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student oral presentation)
 72. Y. Mamun, K. N. Pham, **F. Fernandez-Lima**, “Characterization of Common Human Histones using nESI-CIA-TIMS-MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 73. Y. L. Cintron-Diaz, A. M. Acanda De La Rocha, A. Castellanos, J. W. Chambers, **F. Fernandez-Lima**, “Following chemotherapeutic drug distribution in three-dimensional cancer cell spheroids using MSI-TOF-SIMS and LESA-TIMS-MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 74. S. N. Sipe, K. J. Dit Fouque, A. Garabedian, F. Leng, **F. Fernandez-Lima**, J. S. Brodbelt, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 75. K. J. Dit Fouque, T. T. Le, J. D. Hegemann, W. Van Der Donk, **F. Fernandez-Lima**, “Lanthipeptide Topoisomer Screening Based on TIMS-MS/MS”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (postdoc poster presentation)
 76. K.Q. Dang, **F. Fernandez-Lima**, “Tandem DT-IMS/TIMS-MS for Accurate Mobility Measurements”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 77. M. U. Tariq, D. Leyva, **F. Fernandez-Lima**, F. Saeed, “Towards a Computational Workflow for the Analysis of DOM Fragmentation Data”, 68th ASMS Reboot Online Conference on Mass Spectrometry and Allied Topics, June 1 - 4, 2020, Houston, Texas. (graduate student poster presentation)
 78. Y. Cintron-Diaz, **F. Fernandez-Lima**, “Mapping chemotherapeutic drug distribution in cancer cell spheroids using 2D-TOF- SIMS and LESA-TIMS-MS”, Graduate Student Forum, Florida International University, 2020. (graduate student oral presentation)
 79. K. Dang, **F. Fernandez-Lima**, “Integration of DT-IMS and TIMS-MS for Accurate Mobility Measurements”, Graduate Student Forum, Florida International University, 2020. (graduate student oral presentation)
 80. D. Leyva, **F. Fernandez-Lima**, “Understanding Dissolved Organic Matter At The Molecular Level”, Graduate Student Forum, Florida International University, 2020. (graduate student oral presentation)
 81. Y. Mamun, **F. Fernandez-Lima**, “Characterization of the Conformational Space of Human Histones using Native Trapped Ion Mobility Spectrometry- Mass Spectrometry”, Graduate Student Forum, Florida International University, 2020. (graduate student oral presentation)
 82. C. Olanrewaju, **F. Fernandez-Lima**, “New workflow for polycyclic aromatic hydrocarbon like compounds screening”, Graduate Student Forum, Florida International University, 2020. (graduate student oral presentation)
 83. J. Porter, **F. Fernandez-Lima**, “Biomolecular structural analysis using tandem IMS-IMS-MS”, Graduate Student Forum, Florida International University, 2020. (graduate student oral presentation)

84. **F. Fernandez-Lima**, “Recent Advances in TIMS-MS”, LAKE LOUISE XXXII 32nd Workshop on Tandem Mass Spectrometry, December 5-7, 2019, Lake Louise, Canada.
85. **F. Fernandez-Lima**. Mapping structural diversity with TIMS-MS: From small molecules to protein complexes.” The 71st Southeastern Regional Meeting of the American Chemical Society October 20-23, 2019 Savannah, GA
86. **F. Fernandez-Lima**. ” Structural micro-heterogeneity of DNA and DNA bound peptide and protein complexes.” The 71st Southeastern Regional Meeting of the American Chemical Society October 20-23, 2019 Savannah, GA
87. **F. Fernandez-Lima**. “Recent Developments in TIMS-MS/MS: Applications to Small Molecule Isomeric Analysis”. 18th Annual USADA Symposium on Anti-Doping Science Hotel Chinzanso Tokyo Amphitheater Tokyo, Japan October 4-October 7, 2019
88. E. Belkin, D. Leyva, F. Fernandez-Lima. “Towards a workflow for characterizing Dissolved Organic Matter using Data Independent Acquisition Mass Spectrometry” FIUMASS, July 19, 2019, Florida International University, Miami.
89. B. Bokor, J. Porter, M. Gomez, A. Catenazzi, **F. Fernandez-Lima**, “The Application of Ion Mobility Spectrometry and Ultrahigh Resolution Mass Spectrometry for Analysis of Peptides in Complex Samples” FIUMASS, July 19, 2019, Florida International University, Miami.
90. R. Harris, K. J. D. Fouque, J. D. Hegemann, T. T. Le, W. van der Donk, **F. Fernandez-Lima**. “Structural Insights from Trapped Ion Mobility Spectrometry – Mass Spectrometry on Lanthipeptide Topoisomers” FIUMASS, July 19, 2019, Florida International University, Miami.
91. M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, “Development of a [CID-TIMS]_x[CID-TIMS]-q-CID-TOF HRMS platform for Discovery and Targeted o-mics Studies”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (poster presentation)
92. J. Porter, K. Jeanne Dit Fouque, **F. Fernandez-Lima**, A. A. Shvartsburg, “Practical Two-Dimensional High-Resolution Ion Mobility Separations by Combining FAIMS with Trapped IMS”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (poster presentation)
93. E. K. Sisley, **F. Fernandez-Lima**, T. Johnson, P. Hall, I. B Styles, H. J. Cooper, “Latest developments of Liquid Extraction Surface Analysis Mass Spectrometry for Top-Down and BottomUp Investigation of Protein Biomarkers in Renal Fibrosis”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (poster presentation)
94. E. N. Shoff, C. E Ramirez, **F. Fernandez-Lima**, “Rapid Detection of Fentanyl Analogs Using GC-APCI-TIMS-TOF MS”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (graduate student oral presentation)
95. K. Jeanne Dit Fouque, C. E. Ramirez, R. L. Lewis, J. P. Koelmel, T. J. Garrett, R. A. Yost, **F. Fernandez-Lima**, “Effective Liquid Chromatography – Trapped Ion Mobility Spectrometry – Mass Spectrometry Separation of Isomeric Lipid Species”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (postdoc poster presentation)
96. J. R. N. Haler, K. Jeanne Dit Fouque, J. C. Molano-Arevalo, F. Leng, **F. Fernandez-Lima** , “Following Conformational Changes in Knot Proteins with nESI-TIMS-MS: Solution vs Gas Phase”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (postdoc poster presentation)

97. K. Q. Dang, K. Jeanne Dit Fouque, **F. Fernandez-Lima**, “Mobility Calibration of Trapped Ion Mobility Spectrometry -Mass Spectrometry Experiments”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (graduate student oral presentation)
98. Y. L. Cintron-Diaz, M. E. Gomez Hernandez, J. Dziedzic, T. R. Guilarte, **F. Fernandez-Lima**, “Protein Screening of Native Brain Sections Using LESA-TIMS-MS”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (graduate student poster presentation)
99. B. Bokor, J. Porter, M. E. Gomez-Hernandez, A. Catenazzi, **F. Fernandez-Lima**, “De Novo Peptide Sequencing Using TIMS- MS/MS for Amphibian Skin Peptides”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (undergraduate student poster presentation)
100. J. Moreno, K. Jeanne Dit Fouque, **F. Fernandez-Lima**, “Exploring the Conformational Space of Growth Hormone-Releasing Hormone Analogs using Dopant Assisted Trapped Ion Mobility Spectrometry”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (undergraduate student poster presentation)
101. N. deHaseth, J. Porter, **F. Fernandez-Lima**, “Ergodic and Non-Ergodic Mobility Selected Fragmentation of Isomeric Model Peptides”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (undergraduate student poster presentation)
102. A. Castellanos, I. Jozic, F. Fernandez-Lima, “Analysis of Human Skin Wound Healing Process Using 2D-TOF-SIMS”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (graduate student poster presentation)
103. J. Porter, P. Maître, F. Leng, **F. Fernandez-Lima**, “Characterization of the Intrinsically Disordered ATHook Peptides Using Mobility-Selected MS/MS and Action Infrared Spectroscopy”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (graduate student poster presentation)
104. D. Leyva, L. V. Tose, J. Porter, J. Wolff, R. Jaffé, **F. Fernandez-Lima**, “Understanding the Structural Complexity of Dissolved Organic Matter: Isomeric Diversity”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (graduate student poster presentation)
105. C. A. Olanrewaju, C. E. Ramirez, **F. Fernandez-Lima**, “Increasing Analytical Separation of Polycyclic Aromatic Hydrocarbons from Crude Oils Using GC-TIMS-MS”, 67th ASMS Conference on Mass Spectrometry and Allied Topics, June 2 - 6, 2019, Atlanta, Georgia. (graduate student poster presentation)
106. **F. Fernandez-Lima**, “On the coupling of Gas and Liquid Chromatography with trapped IMS-MS: challenges and advantages”, 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida. (invited oral presentation)
107. E. Shoff, “Rapid Detection and Separation of Isomeric Fentanyl Analogs Using GC-APCITIMS-TOF MS”, 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida. (graduate student oral presentation)
108. D. Leyva, “Unraveling the Structural Complexity and Diversity of Dissolved Organic Matter using TIMS-FT-ICRMS”, 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida. (graduate

- student oral presentation)
109. J. Haler, “Lipid Identification Workflow for Fast Lipid Tissue Screening using LESA-FTICR-MS” “Molecular level characterization of crude oil by gas chromatography followed by Trapped ion mobility- Mass Spectroscopy” 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida. (post-doc oral presentation)
 110. C. A. Olanrewaju, “Molecular level characterization of crude oil by gas chromatography followed by Trapped ion mobility- Mass Spectroscopy”, 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida. (graduate student oral presentation)
 111. **F. Fernandez-Lima**, “Extending the analytical capabilities of Trapped Ion Mobility Spectrometry-Mass Spectrometry towards Mega Dalton Protein Complexes”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (invited talk)
 112. Jacob Porter, “Characterization of intrinsically-disordered AT-Hook Peptide Structural Motifs Using Mobility-Selected MS/MS and Action IRMPD”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (graduate student oral presentation)
 113. K. Dang, “Alternative Mobility Calibration Frameworks for Trapped Ion Mobility Spectrometry”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (graduate student oral presentation)
 114. D. Leyva, “Unraveling the Structural Complexity and Diversity of Dissolved Organic Matter using TIMS-FT-ICRMS.”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (graduate student oral presentation)
 115. E. Shoff, “Rapid Detection and Separation of Isomeric Fentanyl Analogs Using GC-APCI-TIMS-TOF MS”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (graduate student oral presentation)
 116. J. Haler, “Lipid Identification Workflow for Fast Lipid Tissue Screening using LESA-FT-ICR-MS” 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (postdoc oral presentation)
 117. K. Jeanne Dit Fouque, “Structural Insights from Tandem Mass Spectrometry, Ion mobility-Mass Spectrometry and Infrared/Ultraviolet Spectroscopy: Lasso vs. Branched-cyclic Topoisomers” 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (postdoc oral presentation)
 118. A. Castellanos, “Following Skin Wound Healing using 2D Mass Spectrometry Imaging”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (graduate student oral presentation)
 119. Y. Cintron-Diaz, M. E. Gomez Hernandez, J. Dziejcz, T. Guilarte, **F. Fernandez-Lima**, “Protein screening of native brain sections using LESA-TIMS-MS”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (graduate student poster presentation)
 120. C. Olanrewaju, J. Porter, C. Ramirez, **F. Fernandez-Lima**, “Molecular level characterization of crude oil by gas chromatography followed by trapped ion mobility mass spectroscopy”, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida. (graduate student poster presentation)
 121. K. Jeanne Dit Fouque, A. Garabedian, F. Leng, Y.C. Tse-Dinh, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima** “New Electrode TIMS Geometry for High Mass Structural Studies”, 12th North American FT MS Conference, Key west, Florida, April 28- May 2,

2019. (poster presentation)
122. K. Jeanne Dit Fouque, V. Scutelnic, J. D. Hegemann, S. Zirah, S. Rebuffat, P. Maître, T. R. Rizzo, **F. Fernandez-Lima** “Structural Insights from Tandem Mass Spectrometry, Ion Mobility-Mass Spectrometry And Infrared/Ultraviolet Spectroscopy on Sphingonodin I: Lasso Vs. Branched-Cyclic Topoisomers”, 12th North American FT MS Conference, Key west, Florida, April 28- May 2, 2019. (post-doc poster presentation)
123. J. Porter, P. Maître, **F. Fernandez-Lima**, “Characterization of AT-Hook Peptide Structural Motifs Using Mobility selected MS/MS and Action IRMPD”, 12th North American FT MS Conference, Key west, Florida, April 28- May 2, 2019. (graduate student poster presentation)
124. D. Leyva, L. V. Tose, J. Porter, J. Wolff, R. Jaffé, **F. Fernandez-Lima**, “Unraveling the Structural Complexity and Diversity of Dissolved Organic Matter Using TIMS-FTt-ICR MS”, 12th North American FT MS Conference, Key west, Florida, April 28- May 2, 2019. (graduate student poster presentation)
125. B. Bokor, J. Porter, A. Catenazzi, **F. Fernandez-Lima**, “The Application of Ion Mobility Spectrometry and Ultrahigh Resolution Spectrometry for Analysis of Anti-Microbial Peptides from Frog Skin Secretions” Conference for Undergraduate Research at FIU, April 8th, 2019 (undergraduate student poster presentation)
126. J. Moreno, K. Jeanne Dit Fouque, **F. Fernandez-Lima**, “Exploring the Conformational Space of Growth Hormone-Releasing Hormone Analogs using Dopant Assisted Trapped Ion Mobility Spectrometry – Mass Spectrometry” Conference for Undergraduate Research at FIU, April 8th, 2019 (undergraduate student poster presentation)
127. S. Hernandez, J. R. N. Haler, K. Jeanne Dit Fouque, J. C. Molano-Arevalo, F. Leng, **F. Fernandez-Lima**, “Investigating the Structural Complexity of the UCH Knot Protein using Trapped Ion Mobility Spectrometry-Mass Spectrometry”, Conference for Undergraduate Research at FIU, April 8th, 2019 (undergraduate student poster presentation)
128. Y. Cintron-Diaz, “Fast, Ambient, Protein Screening of Native Brain Sections using LESA-TIMS-MS” Graduate Student Appreciation Week Scholarly Forum, April 1st, 2019, Florida International University, (graduate student poster presentation)
129. C. Olanrewaju, “Coupling GC-APLI-TIMS-MS for the analysis of PAH in crude oils” Graduate Student Appreciation Week Scholarly Forum, April 1st, 2019, Florida International University, (graduate student poster presentation)
130. D. Leyva, “Unraveling the Structural Complexity and Diversity of Dissolved Organic Matter using TIMS-FT-ICRMS” Graduate Student Appreciation Week Scholarly Forum, April 1st, 2019, Florida International University, (graduate student poster presentation)
131. J. Porter, “Characterization of the Intrinsically Disordered AT-Hook Peptides using Mobility-selected MS/MS” Graduate Student Appreciation Week Scholarly Forum, April 1st, 2019, Florida International University, (graduate student poster presentation)
132. K. Dang, “Alternative Mobility Calibration Frameworks for Trapped Ion Mobility Spectrometry” Graduate Student Appreciation Week Scholarly Forum, April 1st, 2019, Florida International University, (graduate student poster presentation)
133. A. Castellanos, “Following skin wound healing using 2D Mass Spectrometry Imaging” Graduate Student Appreciation Week Scholarly Forum, April 1st, 2019, Florida International University, (graduate student poster presentation)
134. Elisa Shoff. “Analysis and Identification of Isomeric Fentanyl Analogs Using GC-APCI-TIMS-TOF MS” Graduate Student Appreciation Week Scholarly Forum, April 1st,

- 2019, Florida International University, (graduate student poster presentation)
135. **F. Fernandez-Lima**. “Applications of native nESI-TIMS-MS for structural biology”, Symposia Advances in Ion Mobility Spectrometry, ACS Spring meeting, March 30-April 1, 2019, Orlando USA. (invited candidate oral presentation)
136. K. Jeanne Dit Fouque, F. Leng, **F. Fernandez-Lima**. “Applications of native nESI-TIMS-MS for structural biology”, Symposia Advances in Ion Mobility Spectrometry, ACS Spring meeting, March 30-April 1, 2019, Orlando USA. (invited postdoctoral oral presentation)
137. **F. Fernandez-Lima**, “TIMS-MS: new developments for structural biology”, 31st Workshop on Tandem Mass Spectrometry, Lake Louise, Nov 29-Dec 1, 2018. (invited candidate oral presentation)
138. **F. Fernandez-Lima**, “From solution to the gas-phase. What can we learn on the structure, dynamics and distribution of biomolecules?”, ACS 41st Senior Technical Meeting, Puerto Rico, November 10-11, 2018. (invited candidate oral presentation)
139. **F. Fernandez-Lima**, “Mass Spectrometry Imaging and Trapped Ion Mobility - Mass Spectrometry to solve biological problems”, Bruker Daltonics, Billerica, October 30, 2018. (invited candidate oral presentation)
140. **F. Fernandez-Lima**, “New developments in native nESI-Trapped Ion Mobility Spectrometry - Mass Spectrometry” Scix FACS Atlanta, October 24, 2018. (invited candidate oral presentation)
141. **F. Fernandez-Lima**, “Applications of Ion Mobility - Mass Spectrometry to biological problems”, Waters Corporation, Manchester, October 8, 2018. (invited candidate oral presentation)
142. **F. Fernandez-Lima**, “New developments in biological mass spectrometry”, Second Symposium on New Advances in Biological Mass Spectrometry, University of Birmingham, September 19, 2018. (invited candidate oral presentation)
143. **F. Fernandez-Lima**. “Current trends in Trapped Ion Mobility Mass Spectrometry”, 39th BMSS Annual meeting, September 10-13, 2018, Cambridge, UK. (invited candidate oral presentation)
144. K. Jeanne Dit Fouque, M. Hamza, J. D. Hegemann, S. Zirah, S. Rebuffat, **F. Fernandez-Lima**, “Structural Signatures of BI-32169 Using Trapped Ion Mobility Spectrometry–Mass Spectrometry and Tandem Mass Spectrometry”, SRI Mini-Symposium (SRI Summer Program), August 10, 2018, Miami, Florida, (undergraduate student oral presentation).
145. K. Jeanne Dit Fouque, V. Bisram, J. D. Hegemann, S. Zirah, S. Rebuffat, **F. Fernandez-Lima**, “Structural Signatures of BI-32169 Using Trapped Ion Mobility Spectrometry–Mass Spectrometry and Tandem Mass Spectrometry”, FSTAR Symposium, July 26, 2018, Miami, Florida, (undergraduate student poster presentation).
146. K. Jeanne Dit Fouque, R. Cavero, M. Ridgeway, M. Park, **F. Fernandez-Lima**, “Extending the Mobility Calibration Framework for Trapped Ion Mobility Spectrometry”, SRI Mini-Symposium (FIUMass Summer Program), August 10, 2018, Miami, Florida, (undergraduate student oral presentation).
147. K. Jeanne Dit Fouque, J. Moreno, L. M. Salgueiro, R. Cai, W. Sha, A. V. Schally, **F. Fernandez-Lima**, “Exploring the Conformational Space of Growth Hormone-Releasing Hormone Analogs using Dopant Assisted Trapped Ion Mobility Spectrometry”, SRI Mini-Symposium (FIUMass Summer Program), August 10, 2018, Miami, Florida, (undergraduate

- student oral presentation).
148. N. deHaseth, J. Porter, **F. Fernandez-Lima**, “Structural Characterization of Three Model Isomeric Peptides using nESI-TIMS-ToF-MS/MS”, REU Mini-Symposium, July 27, 2018, Miami, Florida, (undergraduate student poster presentation).
 149. A. Duruewuru, A. Castellanos, **F. Fernandez-Lima**, “Development of Analytical Tools for the Study of Aedes Aegypti Exposure to Common Pesticides”, REU Mini-Symposium, July 27, 2018, Miami, Florida, (graduate student poster presentation).
 150. **F. Fernandez-Lima**, “Current trends during TIMS analysis of biomolecules”. 27th Annual ISIMS Conference, Calgary, 22-27 July, 2018 (invited candidate oral presentation)
 151. A. Garabedian, J. C. Molano-Arevalo, K. Jeanne Dit Fouque, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, “Pushing the Mobility Sensitivity, Resolution and Range with New Electrode Geometries in Trapped Ion Mobility Spectrometry”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California, (candidate oral presentation)
 152. J. C. Molano-Arevalo, K. Jeanne Dit Fouque, D. Gimeno, F. Leng, **F. Fernandez-Lima**, “Structural characterization of the knot protein YibK using TIMS-MS and molecular dynamics”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (graduate student poster presentation)
 153. A. Garabedian, D. Butcher, F. Leng, M. E. Gomez-Hernandez, **F. Fernandez-Lima**, “Structural Characterization of HMGA2 and HMGA2-DNA interactions Using LC-HDX-TIMS-MS/MS”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (graduate student poster presentation)
 154. A. A. McKenzie-Coe, C. E. Ramirez, V. Michalkova, M. Nouzova, F. Noriega, **F. Fernandez-Lima**, “Liquid Chromatography-Trapped Ion Mobility-Mass Spectrometry (HPLC-TIMS-MS) for the Analysis of Juvenile Hormone III from Insects”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (graduate student poster presentation)
 155. L. Tose, P. Benigni, D. Leyva, A. Sundberg, C. E. Ramirez, M. E. Ridgeway, M. A. Park, R. Jaffé, **F. Fernandez-Lima**, “Analysis of Dissolved Organic Matter from Subtropical Wetlands Using Tandem Trapped Ion Mobility Spectrometry and FT-ICR MS”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (graduate student poster presentation)
 156. D. Butcher, J. Miksovská, **F. Fernandez-Lima**, “From Solution Additives to Gas-Phase Dopants: Effect of the Molecular Environment on the Conformational Space of Heme Proteins”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (postdoctoral poster presentation)
 157. K. J. Dit Fouque, J. D. Hegemann, S. Zirah, S. Rebuffat, P. Maitre, **F. Fernandez-Lima**, “Identification of Lasso and Branched-Cyclic Topoisomers Using Trapped Ion Mobility Spectrometry– Mass Spectrometry and Ion Spectroscopy”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (postdoctoral poster presentation)
 158. C. E. Ramirez, K. J. Adams, A. Castellanos, A. Garabedian, **F. Fernandez-Lima**, “Towards High-Throughput Identification and Quantitation of Lipids Using LC-TIMS-MS/MS”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (graduate student poster presentation)
 159. J. Porter, K. J. Dit Fouque, M. A. Baird, A. A. Shvartsburg, P. Maitre, M. E. Ridgeway,

- M. A. Park, **F. Fernandez-Lima**, “Separation and Structural Characterization of Middle Down Proteoforms Using Linear Trapped IMS-FT-ICR MS/MS”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (graduate student poster presentation)
160. A. Castellanos, M. E. Gomez-Hernandez, V. Michalkova, M. Nouzova, F. Noriega, **F. Fernandez-Lima**, “Lipid dynamics in Mosquito Ovaries Using Mass Spectrometry Imaging”, 66TH ASMS Conference on Mass Spectrometry and Allied Topics, June 3 - 7, 2018, San Diego, California. (graduate student poster presentation)
161. A. McKenzie, “Implementing high performance liquid chromatography-trapped ion mobility mass spectrometry (HPLC-TIMS-MS) for the analysis of juvenile hormone III”, GSAW 2018, March 20, 2018. (graduate student oral presentation)
162. A. Castellanos, “De novo lipid synthesis in *Aedes aegypti*”, GSAW 2018, March 19, 2018. (graduate student oral presentation)
163. J. Porter, “Conformer-specific Structural Analysis of Peptides With Mobility-Selected TIMS-FTICR MS/MS and Action IRMPD”, GSAW 2018, March 19, 2018. (graduate student oral presentation)
164. L. Tose, “Analysis of Dissolved Organic Matter from Subtropical Wetlands using tandem Trapped Ion Mobility Spectrometry (TIMS) and FT-ICR MS”, GSAW 2018, March 19, 2018. (graduate student poster presentation)
165. J. Moreno, K. J. Dit Fouque, J. D. Hegemann, S. Zirah, S. Rebuffat, **F. Fernandez-Lima**, “Structural Elucidation of Lasso and Branched-Cyclic Topoisomers Using Trapped Ion Mobility Spectrometry – Mass Spectrometry”, 2018 Conference for Undergraduate Research at FIU, March 27-28, 2018. (undergraduate student poster presentation)
166. **F. Fernandez-Lima**. “New generation analytical tools for complex mixture analysis and structural biology”, 8th Annual Spencer Symposium. Florida Southern College, January 26, 2018. (invited candidate oral presentation)
167. F. Fernandez-Lima. “Application of native nESI-TIMS-MS for screening and structural biology”, LAKE LOUISE XXX, 30th Workshop on Tandem Mass Spectrometry, November 30- December 2, 2017 Canada, (invited candidate oral presentation)
168. **F. Fernandez-Lima**. “Trapped Ion Mobility Spectrometry for Structural Biology Applications”, Bruker Daltonics: Explore the recent innovations in mass spectrometry. Atlanta, Georgia, October 11, 2017. (invited candidate oral presentation)
169. J. P. Lopez, A. Garabedian, **F. Fernandez-Lima**. “Characterization of HMGA2 and HMGA2-DNA complexes by nanoESI-HDX-TIMS-MS”, Summer research internship mini-symposium, August 11, 2017, FIU. (high school student oral presentation)
170. M. Perez, J. Moreno, J. Hegemann, S. Zirah, K. J. Dit Fouque, **F. Fernandez-Lima** “Signature of Mechanically Interlocked Lasso Peptides Using Tandem Mass Spectrometry and Trapped Ion Mobility Spectrometry – Mass Spectrometry”, Summer research internship mini-symposium, August 11, 2017, FIU. (high school student oral presentation)
171. A. Garabedian, P. P. Chapagain, F. Leng, **F. Fernandez-Lima**, “Structural Characterization of AT-Hook Peptides and their DNA complexes using NanoESI-TIMS-MS and Molecular Modeling”, 1st Advancing Mass Spectrometry for Biophysics and Structural Biology Meeting, July 28– August 1, 2017, Ann Arbor, MI (graduate student poster presentation)
172. **A. Garabedian**, “TIMS-MS Applications for the Characterization of Biomolecules and Biomolecular Complexes”, July 28, Bruker User Meeting, Ann Arbor, MI. (graduate student

- oral presentation)
173. **F. Fernandez-Lima**. “Recent developments in trapped ion mobility spectrometry coupled to mass spectrometry” 26th Annual ISIMS Conference, July 23-27, 2017, Warsaw, Poland. (candidate oral presentation)
 174. J. Colombani, D. Butcher, A. Tangar, J. Miksovska, **F. Fernandez-Lima**, “Conformational analysis of neuroglobin using nESI-TIMS-MS”, FSTAR REU Program, July 27, 2017 FIU. (undergraduate student poster presentation)
 175. A. Sundberg, P. Benigni, L. Valadares Tose, D. Leyva, C. Ramirez, R. Jaffe, **F. Fernandez Lima**, “Development of New Analytical Tools for the Study of Dissolved Organic Matter”, NSF CREST REU Symposium, July 21, 2017 FIU. (undergraduate student oral presentation)
 176. J. Porter, A. Garabedian, **F. Fernandez-Lima**, “Structural Characterization of multi-stranded DNA topologies using nanoESI-CIA-TIMS-MS”, 65th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 4-8, 2017 (graduate student poster presentation)
 177. P. Benigni, **F. Fernandez-Lima**, “Towards small molecule unsupervised structural assignment using TIMS-FT-ICR MS datasets”, 65th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 4-8, 2017 (candidate oral presentation)
 178. A. Garabedian, A. Bolufer, P. Chapagain, F. Leng, **F. Fernandez-Lima**, “Structural Characterization of HMGA2 and HMGA2-DNA complexes using nanoESI-CIA-HDX-TIMS-MS”, 65th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 4-8, 2017 (graduate student poster presentation)
 179. A. Castellanos, Q. Vanbellingen, P. Benigni, V. Michalkova, M. Nouzova, F. Noriega, **F. Fernandez-Lima**, “Characterization of diet-induced molecular changes in ovarian reserves of *Aedes aegypti* using 3D-MSI-TOF-SIMS and MALDI FT-ICR MS”, 65th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 4-8, 2017 (graduate student oral presentation)
 180. K. J. Dit Fouque, L. M. Salgueiro, R. Cai, W. Sha, A. V. Schally, **F. Fernandez-Lima** “Conformational sampling of GHRH 1-29 peptide analogs using CIA-TIMS-MS”, 65th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 4-8, 2017 (student presentation)
 181. P. Benigni, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, “Understanding the structural space of hydrocarbons in crude oil using TIMS-FT-ICR MS”, 65th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 4-8, 2017 (graduate student oral presentation)
 182. K. J. Adams, C. E. Ramirez, R. H. Gomer, **F. Fernandez-Lima**, “Discovery and Targeted Monitoring of *D. discoideum* Lipids using Multidimensional LC-TIMS-MS/MS Separations”, 65th ASMS Conference on Mass Spectrometry and Allied Topics, Indianapolis, IN, June 4-8, 2017 (graduate student oral presentation)
 183. **F. Fernandez-Lima**, “From solution to the gas-phase. What can we learn on the structure, dynamics and distribution of biomolecules?”, Emerging Young Investigators, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (invited candidate oral presentation)
 184. **F. Fernandez-Lima**, “Elucidating Biomolecule Structural Motifs using TIMS-MS, IRMPD Spectroscopy, and Molecular Dynamics”, Physical Chemistry Speaker, 93rd Florida

- Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (candidate oral presentation)
185. J. Porter, **F. Fernandez-Lima**, “Study of the Conformational Dynamics and Intramolecular Network of DNA Oligomers using Trapped Ion Mobility Spectrometry -Mass Spectrometry”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (graduate student oral presentation)
 186. K. J. Adams, C. E. Ramirez, R. H. Gomer, **F. Fernandez-Lima**, “Discovery and Targeted Monitoring of Lipids under Different Cell Conditions using a Multidimensional Analytical Approach”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (graduate student oral presentation)
 187. K. J. Dit Fouque, L. M. Salgueiro, R. Cai, W. Sha, A. V. Schally, **F. Fernandez-Lima**, “Conformational Dynamics of Growth Hormone – Releasing Hormone Peptide Analogs Using Collision Induced Activation – Trapped Ion Mobility – Mass Spectrometry”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (postdoctoral oral presentation)
 188. N. Hernandez, J. Porter, **F. Fernandez-Lima**, “Crude oil characterization using SARA fractionation and GC-MS”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (undergraduate student poster presentation)
 189. D. Gimeno, J.C. Molano-Arevalo, **F. Fernandez-Lima**, “Molecular modeling of conformational space of the knot protein YibK”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (undergraduate student poster presentation)
 190. C. Acosta, P. Benigni, **F. Fernandez-Lima**, “Software Assisted Molecular Elucidation Based on TIMSFT-ICR MS/MS Analysis of Complex Mixtures”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (undergraduate student poster presentation)
 191. J. C. Molano-Arevalo, W. Gonzales, K. J. Dit Fouque, J. Miksovská, P. Maitre, **F. Fernandez-Lima**, “Insights from TIMS-MS, IRMPD Spectroscopy, and Molecular Dynamics on Nicotinamide Adenine Dinucleotide Structural Dynamics: NAD⁺ vs NADH”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (graduate student poster presentation)
 192. P. Benigni, **F. Fernandez-Lima**, “Unraveling the Structural Complexity of Crude Oils using TIMS-FT-ICR MS”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (graduate student oral presentation)
 193. A. Castellanos, Q. Vanbellinghen, P. Benigni, V. Michalkova, M. Nouzova, F. Noriega, **F. Fernandez-Lima**, “Characterization of diet-induced molecular changes in ovarian reserves of *Aedes aegypti* using 3D-MSI-TOF-SIMS and MALDI FT-ICR MS”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (graduate student oral presentation)
 194. A. Garabedian, A. Bolufer, P. Chapagain, F. Leng, **F. Fernandez-Lima**, “Structural Characterization of the Intrinsically Disordered HMGA2 protein and their DNA complexes using nanoESI-TIMS-MS”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (graduate student oral presentation)
 195. A. Bolufer, A. Garabedian, **F. Fernandez-Lima**, “Peptide Sequence Influence on the Conformational Dynamics of the Intrinsically Disordered ATHP 3 Peptide”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (undergraduate student poster presentation)

196. A. McKenzie, **F. Fernandez-Lima**, “Introducing Gas Modifiers to the TIMS-MS Workflow”, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017 (graduate student oral presentation)
197. **F. Fernandez-Lima**, “On the Coupling of Trapped Ion Mobility Spectrometry and Ultrahigh Resolution of Ft-ICR-MS”, 11th North American FT MS Conference, Key West, FL, April 23-27, 2017 (candidate oral presentation)
198. P. Benigni, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, “Hydrocarbons Conformational Space Trends using TIMS-FT-ICR MS”, 11th North American FT MS Conference, Key West, FL, April 23-27, 2017 (graduate student poster presentation)
199. J. Porter, P. Benigni, A. Garabedian, K. J. Dit Fouque, P. V. Shliaha, O. N. Jensen, A. A. Shvartsburg, **F. Fernandez-Lima**, “Advances of TIMS-FT-ICR MS/MS for the Structural Characterization of Post-Translational Modifications of Histone Tails”, 11th North American FT MS Conference, Key West, FL, April 23-27, 2017 (graduate student poster presentation)
200. K. J. Dit Fouque, P. Benigni, S. Zirah, P. Maître, S. Rebuffat, **F. Fernandez-Lima**, “Characterization of Mechanically Interlocked Lasso Peptides using TIMS-MS/MS and IR Spectroscopy”, 11th North American FT MS Conference, Key West, FL, April 23-27, 2017 (postdoctoral poster presentation)
201. K. J. Adams, C. E. Ramirez, R. H. Gomer, **F. Fernandez-Lima**, “Discovery and Targeted Monitoring of Lipids under Different Cell Conditions using a Multidimensional Analytical Approach”, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017, (graduate student oral presentation)
202. A. Garabedian, A. Bolufer, P. Chapagain, F. Leng, **F. Fernandez-Lima**, “Characterization of the intrinsically disordered DNA binding protein HMGA2 using nanoESI-TIMS-MS”, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017, (graduate student oral presentation)
203. A. Castellanos, Q. Vanbellingen, P. Benigni, V. Michalkova, M. Nouzova, F. Noriega, **F. Fernandez-Lima**, “Characterization of diet-induced molecular changes in ovarian reserves of *Aedes aegypti* using 3D-MSI-TOF-SIMS and MALDI FT-ICR MS”, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017, (graduate student oral presentation)
204. P. Benigni, **F. Fernandez-Lima**, “” Exploring the Structural Space of Hydrocarbons”, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017, (graduate student poster presentation)
205. J. Porter, **F. Fernandez-Lima**, “” The Gas-phase Dynamics of a DNA hexad Structure”, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017, (graduate student oral presentation)
206. J. C. Molano-Arevalo, W. Gonzales, K. J. Dit Fouque, J. Miksovska, P. Maitre, **F. Fernandez-Lima**, “Insights from TIMS-MS, IRMPD Spectroscopy, and Molecular Dynamics on Nicotinamide Adenine Dinucleotide Structural Dynamics: NAD⁺ vs NADH”, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017, (graduate student poster presentation)
207. A. McKenzie, **F. Fernandez-Lima**, “Introducing Gas Modifiers to the TIMS-MS Workflow”, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017, (graduate student oral presentation)
208. C. Acosta, P. Benigni, **F. Fernandez-Lima**, “Software Assisted Molecular Elucidation Based on TIMSFT-ICR MS/MS Analysis of Complex Mixtures”, Conference for

- Undergraduate Research at Florida International University, March 29th, 2017.
(undergraduate poster presentation)
209. V. Velasco, J.C. Molano-Arevalo, **F. Fernandez-Lima**, “Molecular Modeling of the Conformational Space of the Knot Protein Dehl”, Conference for Undergraduate Research at Florida International University, March 29th, 2017. (undergraduate poster presentation)
 210. D. Gimeno, J.C. Molano-Arevalo, **F. Fernandez-Lima**, “Molecular modeling of conformational space of the knot protein YibK”, Conference for Undergraduate Research at Florida International University, March 29th, 2017. (undergraduate poster presentation)
 211. N. Hernandez, J. Porter, **F. Fernandez-Lima**, “Crude oil characterization using SARA fractionation and GC-MS”, Conference for Undergraduate Research at Florida International University, March 29th, 2017. (undergraduate poster presentation)
 212. N. Smith, K. J. Adams, **F. Fernandez-Lima**, “Analysis of Hydroxylated Polychlorinated Biphenyls using nESI-TIMS-MS”, Conference for Undergraduate Research at Florida International University, March 29th, 2017. (undergraduate poster presentation)
 213. A. Bolufer, A. Garabedian, **F. Fernandez-Lima**, “Peptide Sequence Influence on the Conformational Dynamics of the Intrinsically Disordered ATHP 3 Peptide”, Conference for Undergraduate Research at Florida International University, March 29th, 2017. (undergraduate poster presentation)
 214. P. Benigni, M. E. Ridgeway, M. A. Park, and **F. Fernandez-Lima**, “Towards structural molecular analysis of complex samples using TIMS-FT-ICR MS”. Emerging Researchers National Conference in Washington D.C. March 2-4 2017 (Candidate Oral presentation)
 215. **F. Fernandez-Lima**, “From solution to the gas-phase. What can we learn on the structure, dynamics and distribution of biomolecules?”, Department of Chemistry, University of Georgia in Athens, March 1st, 2017. (invited candidate oral presentation)
 216. J. C. Molano-Arevalo, W. Gonzales, K. Jeanne Dit Fouque, J. Miksovska, P. Maître, and **F. Fernandez-Lima**, “Insights from Ion Mobility – Mass Spectrometry, Infrared Spectroscopy, and Molecular Dynamics on Nicotinamide Adenine Dinucleotide Structural Dynamics: NAD⁺ vs NADH”, Gordon Research Conference “Gaseous Ions: Structures, Energetics & reactions”, Ventura, California, February, 12-17, 2017. (candidate poster presentation).
 217. A. L. Garabedian, P. Benigni, C. E. Ramirez, T. Liu, E. S. Baker, R. D. Smith, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**. “Strategies for discovery and targeted analysis using nESI-TIMS-TOF MS and nESI-TIMS-FT-ICR MS”, 29th ASMS Sanibel Conference on Mass Spectrometry, January 19-22, 2017 (candidate oral presentation)
 218. **F. Fernandez-Lima**, “TIMS-MS for complex mixture analysis and structural biology”, 6th BrMASS, 1st Ibero American Conference in Mass Spectrometry, Rio de Janeiro, December 10-14, 2016. (invited candidate oral presentation)
 219. **F. Fernandez-Lima**. “Advantages of TIMS-TOF MS and TIMS-FT-ICR MS for Complex Mixture Analysis and Structural Biology”. LAKE LOUISE XXIX. 29th Workshop on Tandem Mass Spectrometry, Canada, December 1-3, 2016. (invited candidate oral presentation)
 220. **F. Fernandez-Lima**. “Development of TIMS-MS strategies for complex mixture analysis and structural biology”, 2nd International Conference on Innovations in Mass Spectrometry, Moscow, November 7-11, 2016 (invited candidate oral presentation)
 221. P. Benigni, **F. Fernandez-Lima**. “Structural Characterization of molecules in complex samples using TIMS coupled to FT-ICR MS”, Novel Instrumentation in Mass Spectrometry

- and Ion Mobility, Asilomar, October 14 - 18, 2016. (graduate student oral presentation)
222. **F. Fernandez-Lima**, “Trapped Ion Mobility Spectrometry”, Ecole Thematique du CNRS, Cabourg, October 17-20, 2016 (invited candidate oral presentation)
223. **F. Fernandez-Lima**, “From single cells to biomolecule structure and dynamics. What can we learn using mass spectrometry based tools?” Tenure and Promotion Seminar, Florida International University, September 2, 2016. (candidate oral presentation)
224. **P. Benigni, F. Fernandez-Lima**, “Optimizing analytical tools for the structural characterization of molecules in complex samples by using High resolution IMS and FT-ICR MS” 21st International Mass Spectrometry Conference. Toronto, Canada. August 20-26, 2016. (graduate student poster presentation)
225. **A. Castellanos, Q. Vanbellinggen, M. Rodriguez- Silva, I. Paudel, J. Chambers, F. Fernandez-Lima**, “Drug delivery quantitation in single cells with sub micrometric spatial resolution TOF-SIMS.” 21st International Mass Spectrometry Conference. Toronto, Canada. August 20-26, 2016. (graduate student oral presentation)
226. **P. O’Shea, P. Benigni, J. Porter, F. Fernandez-Lima**. “New Tools for the Analysis of Dissolved Organic Matter: OSA-TIMS- FT-ICR MS”, Summer Research Internship, Mini-Symposium, Florida International University, August 12, 2016. (high school student poster presentation)
227. **F. Calero, A. Castellanos, F. Noriega, F. Fernandez-Lima**. “Monitoring Live Single Cell Dynamics using nanoESI-TIMS MS”. Summer Research Internship, Mini-Symposium, Florida International University, August 12, 2016. (high school student poster presentation)
228. **F. Fernandez-Lima**. “Decoupling the mobility and time domain during IMS-MS: applications of TIMS for environmental, structural biology and complex mixture analysis”; 25th International Conference on Ion Mobility Spectrometry, July 24-28, 2016 in Boston, Massachusetts. (candidate oral presentation)
229. **K. Adams, D. DeBord, C. E. Ramirez, R. H. Gomer, F. Fernandez-Lima**. “Localization and Identification of Biomarkers During Cell Differentiation using MSI-IMS-MS/MS” 25th International Conference on Ion Mobility Spectrometry, July 24-28, 2016 in Boston, Massachusetts. (graduate student poster presentation)
230. **J. C. Molano-Arevalo, K. Pham, J. Miksovska, M. E. Ridgeway, M. A. Park, F. Fernandez-Lima**, “Characterization of Cytochrome c intramolecular interactions using nanoESI-HDX-TIMS-MS and molecular dynamics.” 25th International Conference on Ion Mobility Spectrometry, July 24-28, 2016 in Boston, Massachusetts. (graduate student poster presentation)
231. **A. Garabedian, D. Butcher, J. L. Lippens, J. Miksovska, P. Chapagain, D. Fabris, M. E. Ridgeway, M. A. Park, F. Fernandez-Lima**, “Characterization of i-motif DNA kinetically trapped folding intermediates using nanoESI-TIMS-MS and molecular dynamics.” 25th International Conference on Ion Mobility Spectrometry, July 24-28, 2016 in Boston, Massachusetts. (graduate student poster presentation)
232. **F. Fernandez-Lima (keynote speaker)**, “Decoupling the Time Scale In the IMS Analysis: Gas Phase Ion Trapping and Applications to Structural Biology”, Bruker Users Meeting at ASMS 2016, June 4, 2016, St. Antonio, TX. (invited candidate oral presentation)

***application for promotion to Associate Professor and tenure at FIU**

233. **Q. P. Vanbellinggen, A. Castellanos, M. Nouzova, F. G. Noriega, F. Fernandez-Lima**, “Sub micrometric 3D analysis of mosquito ovaries using TOF-SIMS imaging.” ASMS 2016,

- June 5 - 9, 2016, St. Antonio, TX. (postdoctoral poster presentation)
234. P. Benigni, R. Marin, K. Sandoval, C. Thompson, M. E. Ridgeway, M. A. Park, P. Gardinali, **F. Fernandez-Lima**. "Understanding the oxygenation mechanism of hydrocarbons in the ocean utilizing SA-TIMS-FT-ICR MS". ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
235. R. Marin, P. Benigni, **F. Fernandez-Lima**. "Unsupervised tridimensional chemical structure assignment based on SA-TIMS-FTICR MS accurate mass and mobility measurements for oxygenation products of hydrocarbons in the ocean." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (undergraduate student poster presentation)
236. K. Adams, D. DeBord, C. E. Ramirez, R. H. Gomer, **F. Fernandez-Lima**. "Localization and Identification of Biomarkers During Cell Differentiation using MSI-IMS-MS/MS" ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
237. J. Rosenberg, A. Garabedian, F. Leng, **F. Fernandez-Lima**, J. Brodbelt. "Characterization of a Protein-DNA Complex by Native Mass Spectrometry and Ultraviolet Photodissociation." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
238. R. A. Villacob, P. Benigni, **F. Fernandez-Lima**, "Development of ultra-high resolution NP- FT-ICR SIMS for surface analysis." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
239. J. Porter, A. Garabedian, P. Benigni, J. Miksovska, **F. Fernandez-Lima**, "Characterization of kinetically trapped intermediates of Microperoxidase-11 using TIMS-MS/MS and molecular modeling." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
240. J. C. Molano-Arevalo, W. Gonzales, J. Miksovska, P. Maître, **F. Fernandez-Lima**, "Insights from TIMS-MS, IR spectroscopy and molecular dynamics on Nicotinamide Adenine Dinucleotide structural dynamics: NAD⁺ vs NADH." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (candidate oral presentation)
241. J. C. Molano-Arevalo, K. Pham, J. Miksovska, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, "Characterization of Cytochrome c intramolecular interactions using nanoESI-HDX-TIMS-MS and molecular dynamics." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
242. A. Castellanos, Q. Vanbelling, **F. Fernandez-Lima**, "Methodology for drug delivery quantitation in single cells using TOF-SIMS." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
243. A. Garabedian, D. Butcher, J. L. Lippens, J. Miksovska, P. Chapagain, D. Fabris, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, "Characterization of i-motif DNA kinetically trapped folding intermediates using nanoESI-TIMS-MS and molecular dynamics." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
244. A. McKenzie, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, "Decomposition Pathways during Explosive Analysis using TIMS-MS and molecular dynamics." ASMS 2016, June 5 - 9, 2016, St. Antonio, TX. (graduate student poster presentation)
245. P. Benigni, **F. Fernandez-Lima**. "Structural characterization using high resolution IMS coupled to FT-ICR MS." 92nd Florida Annual Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student poster presentation)
246. A. Garabedian, F. Leng, P. Chapagain, **F. Fernandez-Lima**, "Folding pathways of the DNA binding protein HMGA2: AT-hook peptide-DNA complexes." 92nd Florida Annual

- Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student oral presentation)
247. J. C. Molano-Arevalo, W. Gonzales, J. Miksovská, P. Maître, **F. Fernandez-Lima**, “Insights from TIMS-MS, IR spectroscopy and molecular dynamics on Nicotinamide Adenine Dinucleotide structural dynamics: NAD⁺ vs NADH.” 92nd Florida Annual Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student oral presentation)
248. A. Castellanos, Q. Vanbellingen, M. Rodriguez-Silva, I. Paudel, J. Chambers, **F. Fernandez-Lima**, “Drug Delivery Quantitation and Localization at the Single Cell Level.” 92nd Florida Annual Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student oral presentation)
249. J. Porter, A. Garabedian, P. Benigni, J. Miksovská, **F. Fernandez-Lima**, “Structural analysis of Microperoxidase-11.” 92nd Florida Annual Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student oral presentation)
250. R. A. Villacob, P. Benigni, F. Fernandez-Lima, “development of ultra-high resolution surface characterization mass spectrometry instrumentation.” 92nd Florida Annual Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student poster presentation)
251. K. Adams, R. H. Gomer, **F. Fernandez-Lima**. “Lipid Characterization of Dictyostelium discoideum Cells during Chemotaxis.” 92nd Florida Annual Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student oral presentation)
252. A. McKenzie; M. E. Ridgeway; M. A. Park, **F. Fernandez-Lima**, “Mapping reaction landscape during explosive analysis using TIMS-MS and theoretical tools”. 92nd Florida Annual Meeting and Exposition, Tampa, Florida. May 5-7, 2016. (graduate student poster presentation)
253. K. Adams. “Localization, Identification and Quantification of Biomarkers During Cell Development”. Statewide Graduate Student Competition, University of Florida, Florida. April 22nd, 2016. (graduate student poster presentation)
254. A. Castellanos. “Drug delivery quantitation and localization at the single cell level”. Statewide Graduate Student Competition, University of Florida, Florida. April 22nd, 2016. (graduate student poster presentation)
255. C. Molano. “Characterization of intramolecular interactions of cytochrome c using nanoESI-HDX-TIMS-MS and molecular dynamics”. Statewide Graduate Student Competition, University of Florida, Florida. April 22nd, 2016. (graduate student poster presentation)
256. D. Montero, K. J. Adams, D. Aga, **F. Fernandez-Lima**, “Characterization of poly-Brominated Diphenyl Ethers using nanoESI-TIMS-MS and molecular modeling”. 10th Annual Southeast Cell Science Undergraduate Research Symposium, April 23rd, 2016, St Thomas University, Florida. (undergraduate student oral presentation)
257. C. Ly, A. McKenzie-Coe, F. Noriega, **F. Fernandez-Lima**, “Detection and Quantification of isomers in biological molecules using TIMS-MS”. 10th Annual Southeast Cell Science Undergraduate Research Symposium, April 23rd, 2016, St Thomas University, Florida. (undergraduate student oral presentation)
258. P. Benigni, R. Marin, K. Sandoval, C. Thompson, M. E. Ridgeway, M. A. Park, P. Gardinali, **F. Fernandez-Lima**. “Understanding the oxygenation mechanism of hydrocarbons in the ocean utilizing SA-TIMS-FT-ICR MS”. 12th European Fourier Transform Mass Spectrometry Conference, Matera, Italy. April 5-8, 2016. (graduate student oral presentation)
259. J. Castro, A. Castellanos, **F. Fernandez-Lima**, “Development of single-cell imaging

- protocols for 3D-TOF-SIMS". 2016 Conference for Undergraduate Research at FIU, March 30-31, 2016, FIU MMC Campus, Miami, Florida. (undergraduate student oral presentation)
260. D. Montero, K. J. Adams, D. Aga, **F. Fernandez-Lima**, "Characterization of poly-Brominated Diphenyl Ethers using nanoESI-TIMS-MS and molecular modeling". 2016 Conference for Undergraduate Research at FIU, March 30-31, 2016, FIU MMC Campus, Miami, Florida. (undergraduate student oral presentation)
261. R. Marin, P. Benigni, K. Sandoval, C. Thompson, P. Gardinali, **F. Fernandez-Lima**, "Monitoring the photo transformation of crude oils using SA-TIMS-FT-ICR MS". 2016 Conference for Undergraduate Research at FIU, March 30-31, 2016, FIU MMC Campus, Miami, Florida. (undergraduate student oral presentation)
262. C. Ly, A. McKenzie-Coe, F. Noriega, **F. Fernandez-Lima**, "Detection and Quantification of isomers in biological molecules using TIMS-MS". 2016 Conference for Undergraduate Research at FIU, March 30-31, 2016, FIU MMC Campus, Miami, Florida. (undergraduate student oral presentation)
263. A. Castellanos. "Drug delivery quantitation and localization at the single cell level". FIU Graduate Student Association Week, March 28-29, 2016, FIU MMC Campus, Miami, Florida. (graduate student poster presentation)
264. C. Molano. "Characterization of intramolecular interactions of cytochrome c using nanoESI-HDX-TIMS-MS and molecular dynamics". FIU Graduate Student Association Week, March 28-29, 2016, FIU MMC Campus, Miami, Florida. (graduate student poster presentation)
265. A. Garabedian. "Folding pathways of the DNA binding protein HMGA2: AT-hook peptide-DNA complexes". FIU Graduate Student Association Week, March 28-29, 2016, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
266. K. Adams. "Localization, Identification and Quantification of Biomarkers During Cell Development". FIU Graduate Student Association Week, March 28-29, 2016, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
267. A. McKenzie-Coe. "Decomposition Pathways during Explosive Analysis using TIMS-MS and molecular dynamics". FIU Graduate Student Association Week, March 28-29, 2016, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
268. P. Benigni. "Optimizing analytical tools for the structural characterization of biomolecules using High resolution IMS and FT-ICR MS". FIU Graduate Student Association Week, March 28-29, 2016, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
269. J. Porter. "Characterization of kinetically trapped intermediates of Microperoxidase-11 using TIMS-MS/MS and molecular modeling". FIU Graduate Student Association Week, March 28-29, 2016, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
270. K. J. Adams, J. D. DeBord, R. H. Gomer, C. Thompson, **F. Fernandez-Lima**. "Single Cell Molecular Differentiation during Dictyostelium discoideum Chemotaxis". 18th Annual Biomedical and Comparative Immunology Symposium. March 3-4, 2016, Miami, Florida. (graduate student oral presentation)
271. A. Castellanos, Q. Vanbellingen, **F. Fernandez-Lima**. "Towards drug quantitation in single-cell systems using TOF-SIMS". 18th Annual Biomedical and Comparative Immunology Symposium. March 3-4, 2016, Miami, Florida. (graduate student oral presentation).
272. A. Garabedian, D. Butcher, J. L. Lippens, J. Miksovska, P. Chapagain, D. Fabris, M. E.

- Ridgeway, M. A. Park, **F. Fernandez-Lima**. "Characterization of kinetically trapped i-motif DNA folding intermediates using nanoESI-TIMS-MS and molecular dynamics". 18th Annual Biomedical and Comparative Immunology Symposium. March 3-4, 2016, Miami, Florida. (graduate student oral presentation)
273. J. C. Molano-Arevalo, K. Pham, J. Miksovská, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**. "Characterization of intramolecular interactions of globular proteins using nanoESI-HDX-TIMS-MS and molecular dynamics". 18th Annual Biomedical and Comparative Immunology Symposium. March 3-4, 2016, Miami, Florida. (graduate student oral presentation)
274. J. Castro, A. Castellanos, **F. Fernandez-Lima**. "Development of single-cell imaging protocols for 3D-TOF-SIMS". 18th Annual Biomedical and Comparative Immunology Symposium. March 3-4, 2016, Miami, Florida. (undergraduate student poster presentation)
275. A. Garabedian, F. Leng, P. Chapagain, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, "Folding pathways of the DNA binding protein HMGA2: AT-hook peptide-DNA complexes", ASMS Sanibel Conference "Characterization of Protein Therapeutics by Mass Spectrometry", January 21 - 24, 2016, Florida. (graduate student oral presentation)
276. C. Harrilal, R. Almeida, A. Garabedian, J. C. Molano-Arevalo, E. Schenk, J. Miksovská, **F. Fernandez-Lima**, "HDX-TIMS-MS reveals kinetic intermediates of globin proteins", Session Title: Advances in Analytical Ion Mobility Separations, The International Chemical Congress of Pacific Basin Societies, December 15-20, 2015, Honolulu. (candidate oral presentation)
277. P. Benigni, K. Sandoval, C. Thompson, M. E. Ridgeway, M. A. Park, P. Gardinali, **F. Fernandez-Lima**, "Understanding solar induced transformation of crude oils using high resolution ion mobility spectrometry coupled to FT-ICR MS". Session Title: Symposium on Petroleomics: Molecular Level Understanding of Petroleum for Environmental Science and Petroleum Engineering. The International Chemical Congress of Pacific Basin Societies, December 15-20, 2015, Honolulu. (candidate oral presentation)
278. **F. Fernandez-Lima**, "Unwinding the biological complexity: Mass spectrometry-based technologies for surface interrogation and structural assignment" December 3rd, 2015, Department of Chemistry at the New Mexico State University. (invited candidate oral presentation)
279. **F. Fernandez-Lima**, "Development of mass spectrometry-based technologies for surface interrogation and structural assignment" November 12, 2015, Department of Chemistry at the Florida State University. (invited candidate oral presentation)
280. **F. Fernandez-Lima**, "From Solution to the Gas-Phase: Characterization of Kinetic Intermediates of Biomolecules. What Can We Learn on the Structure and Dynamics from Single Molecule Studies?" October 5th, 2015, Department of Chemistry at the University of North Carolina at Chapel Hill. (invited candidate oral presentation)
281. A. Castellanos, R. Gomer, **F. Fernandez-Lima**. "3D-SIMS Characterization of Dictyostelium Discoideum during Chemotaxis." 20th International Conference on Secondary Ion Mass Spectrometry, Seattle, September 13-18, 2015. (candidate oral presentation)
282. A. Castellanos, D. Calligaris, N. Agar, **F. Fernandez-Lima**. "Drug Delivery Mapping in Cancer Cells using Subcellular Topological Markers and 3D-TOF-SIMS". 20th International Conference on Secondary Ion Mass Spectrometry, Seattle, September 13-18, 2015. (graduate student oral presentation)
283. D. Gimeno, P. Benigni, **F. Fernandez-Lima**, "FTICR Analysis of Oils", Summer

- Research Internship, Mini-Symposium, August 7, 2015 (high school student oral presentation)
284. T. O'Connor, A. Castellanos, D. Caligaris, N. Agar, **F. Fernandez-Lima**. "Development of subcellular strategies for tridimensional molecular mapping". Florida International University, Summer Research Internship, Mini-Symposium, August 7, 2015. (high school student oral presentation)
285. A. E. Thomsen, P. Benigni, R. Marin, K. Sandoval, C. Thompson, M. E. Ridgeway, M. A. Park, P. Gardinali, **F. Fernandez Lima**. "Study of the photo-oxidation pathways of the C₁₃H₉N series of the water accommodated fraction of crude oil with ion mobility spectrometry coupled to FT-ICR MS". Florida International University, Research Experience for Undergraduates Symposium, July 24, 2015. (undergraduate student oral presentation)
286. J. Cheeves, A. Garabedian, Q. Zhou, **F. Fernandez-Lima**, Y. Tse-Dinh. "Analyzing Bacterial Topoisomerase I to Study Lysine Acetylation using nanoESI-TIMS-MS". Florida International University, Research Experience for Undergraduates Symposium, July 24, 2015. (undergraduate student oral presentation)
287. P. Benigni, R. Marin, A. E. Thomsen, K. Sandoval, C. Thompson; M. E. Ridgeway; M. A. Park; P. Gardinali; **F. Fernandez Lima**. "Steps towards direct structural assignment of single compounds in complex mixtures using gas-phase, post-ionization separation and theoretical tools". Annual Meeting of the International Society for Ion Mobility Spectrometry, Cordoba, Spain, July 26-29. (candidate oral presentation)
288. P. Benigni, K. Sandoval, C. Thompson, M. Ridgeway, M. A. Park, P. Gardinali, **F. Fernandez Lima**. "Monitoring the photo transformation of crude oils using SAIMS-FT-ICR MS". ASMS 2015, May 31 - June 4, 2015, St. Louis, MO. (graduate student oral presentation)
289. A. Castellanos; R. Gomer; **F. Fernandez-Lima**. "3D-SIMS characterization of intra/extra cellular molecular expression during Dictyostelium discoideum chemotaxis". ASMS 2015, May 31 - June 4, 2015, St. Louis, MO. (graduate student poster presentation)
290. E. Schenk; F. Nau; G. Gozo; M. Ridgeway; M. A. Park; F. Leng; **F. Fernandez Lima**. "HDX-TIMS-MS and molecular dynamics reveal folding pathways in DNA-binding proteins". ASMS 2015, May 31 - June 4, 2015, St. Louis, MO. (candidate oral presentation)
291. **F. Fernandez-Lima**, "Mass Spectrometry Based Tools for Biological Surface Interrogation and Structural/Conformational Assignment: Unwinding the Biological Complexity", May 1, 2015, Department of Biochemistry and Molecular Biology at the University of Miami Miller School of Medicine. (invited candidate oral presentation)
292. K. J. Adams, R. H. Gomer, **F. Fernandez-Lima**, "Fast Separation, Identification and Quantification of Biological Compounds in Single Cells" Statewide GPC, April 24, 2015, Orlando, Florida. (graduate student oral presentation)
293. P. Benigni, C. Thompson, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, "Targeted high resolution ion mobility separation coupled to ultrahigh resolution mass spectrometry of endocrine disruptors in complex mixtures", 10th North American FT MS Conference, April 12-16, 2015, Key West, Florida. (graduate student oral presentation)
294. R. Villacob, P. Benigni, **F. Fernandez-Lima**, "Development of novel interrogation tools for surface analysis using ultrahigh resolution mass spectrometry", 10th North American FT MS Conference, April 12-16, 2015, Key West, Florida. (graduate student poster presentation)
295. P. Benigni, K. Sandoval, C. Thompson, M. E. Ridgeway, M. A. Park, P. Gardinali, **F. Fernandez Lima**, "Understanding solar induced transformation of crude oil using ion

- mobility spectrometry coupled to FT-ICR MS”, April 12-16, 2015, Key West, Florida. (candidate poster presentation)
296. J. C. Molano-Arevalo, **F. Fernandez-Lima**, “Analysis of Cytochrome C inter- and intra-molecular interactions”, FIU Graduate Student Association Week, April 6-7, 2015, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
297. P. Benigni, K. Sandoval, C. Thompson, M. E. Ridgeway, M. A. Park; P. Gardinali, **F. Fernandez Lima**, “Understanding solar induced transformation of Crude Oil using Ion Mobility Spectrometry and FT-ICR MS”, FIU Graduate Student Association Week, April 6-7, 2015, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
298. K. J. Adams, **F. Fernandez-Lima**, “Fast Separation and Identification of Targeted Compounds in Complex Mixtures”, FIU Graduate Student Association Week, April 6-7, 2015, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
299. A. L. Garabedian, Y. Tse-Dinh, **F. Fernandez-Lima**. “Lipid response in E. COLI cells under antibiotic stress”, FIU Graduate Student Association Week, April 6-7, 2015, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
300. A. Castellanos, R. Gomer, **F. Fernandez-Lima**, “3D molecular characterization of intra/extra cellular expression during Dictyostelium discoideum chemotaxis”, FIU Graduate Student Association Week, April 6-7, 2015, FIU MMC Campus, Miami, Florida. (graduate student oral presentation)
301. C. Harrilal, J. Miksovska, **F. Fernandez-Lima**, “Conformational kinetics study of MP-11 using TIMS-MS and molecular dynamics”, FIU Undergraduate Research Conference March 17 and 18, 2015 (undergraduate student poster presentation)
302. S. Alvarado, J. D. DeBord, C. Thompson, P. Gardinali, **F. Fernandez-Lima**. “Development of gas-phase pre-separation tools for higher sensitivity in the molecular characterization of biodiesel mixtures”. FIU Undergraduate Research Conference March 17 and 18, 2015 (undergraduate student poster presentation)
303. **F. Fernandez-Lima**, “Kinetic intermediates of peptides and proteins using HDX-TIMS-MS”, Pittcon 2015 Conference and Expo, March 8 - 12, 2015, New Orleans (candidate oral presentation)
304. **F. Fernandez-Lima**. “Challenges during biological surfaces interrogation and structural/conformational assignment “, March 2-3, 2015, Texas A&M University. (invited candidate oral presentation)
305. **F. Fernandez-Lima**, “Probing kinetic intermediates of peptides and proteins with HDX-TIMS-MS”, Gordon Conference: Gaseous Ions Structures, Energetics & Reactions, February 22-27, 2015, Galveston TX. (candidate poster presentation)
306. A. McKenzie, J. D. DeBord, M. Ridgeway, M. Park, G. Eiceman, **F. Fernandez-Lima**, “Adduct Formation of Explosives and Separation from Complex Mixtures Using Trapped Ion Mobility Spectrometry- Mass Spectrometry”, Sanibel Conference: Security and Forensic Applications of Mass Spectrometry, January 22-25, 2015 Clearwater Beach, FL (graduate student poster presentation).
307. C. Harrilal, J. Miksovska, **F. Fernandez-Lima**, “Conformational kinetics study of MP-11 using TIMS-MS and molecular dynamics”, FIU McNair Scholars Research Conference, October 16-18, 2014. (undergraduate student poster presentation)
308. S. Alvarado, J. D. DeBord, C. Thompson, P. Gardinali, **F. Fernandez-Lima**. “Development of gas-phase pre-separation tools for higher sensitivity in the molecular characterization of biodiesel mixtures”. FIU McNair Scholars Research Conference, October

- 16-18, 2014. (undergraduate student poster presentation)
309. J. C. Molano-Arévalo, D. R. Hernández, W. G. González, J. Miksovská, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**. “Flavin Adenine Dinucleotide structural motifs: from solution to gas-phase” International Society for Ion Mobility Spectrometry 2014, Asheville (graduate student oral presentation).
310. P. Benigni, C. Thompson, J. Wolff, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**, “Analysis of endocrine disruptors compounds from biological matrices using Ion Mobility Spectrometry-Mass Spectrometry”, International Society for Ion Mobility Spectrometry 2014, Asheville (graduate student oral presentation).
311. A. Mckenzie, J. D. DeBord, M. Ridgeway, M. Park, G. Eiceman, **F. Fernandez-Lima**, “Trapped Ion Mobility Spectrometry-Mass Spectrometry of familiar explosives compounds” International Society for Ion Mobility Spectrometry 2014, Asheville (graduate student oral presentation).
312. E. R. Schenk, R. Almeida, M. Ridgeway, M. Park, J. Miksovská, **F. Fernandez-Lima**. “A systematic approach for protein structure elucidation by TIMS and molecular dynamic simulations: a case study of holo and apomyoglobin”. International Society for Ion Mobility Spectrometry 2014, Asheville (postdoctoral oral presentation).
313. E. Schenk, G. Gozo, M. Ridgeway, M. A. Park, **F. Fernandez Lima**. “AT-hook protein isomerization dynamics: solution vs gas-phase”. International Society for Ion Mobility Spectrometry 2014, Asheville (candidate oral presentation).
314. A. Garabedian, E. R. Schenk, D. R. Hernandez, C. J. Thompson, Y. Tse-Dinh, **F. Fernandez-Lima**. “Molecular differentiation of Escherichia coli strains as a function of antibiotic stress”. 62nd ASMS Conference on Mass Spectrometry & Allied Topics. June 15 - 19, 2014. (graduate student poster presentation)
315. K. J Adams, J. D. DeBord, R. Gomer, C. Thompson, **F. Fernandez-Lima**.” Starvation-induced changes in the lipid composition of Dictyostelium discoideum cells”. 62nd ASMS Conference on Mass Spectrometry & Allied Topics. June 15 - 19, 2014. (graduate student poster presentation)
316. E. R. Schenk, F. Nau, G. Gozo, M. E. Ridgeway, M. A. Park, F. Leng, **F. Fernandez-Lima**. “AT-hook peptide and protein isomerization dynamics: solution vs. gas-phase”. 62nd ASMS Conference on Mass Spectrometry & Allied Topics. June 15 - 19, 2014 (candidate poster presentation)
317. J. C. Molano-Arevalo, D. R. Hernandez, W. Gonzales, J. Miksovská, M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**. “Conformational Dynamics of Flavin Adenine Dinucleotide”. Florida Annual Meeting and Exposition, Tampa, Florida, May 9-10, 2014. (graduate student oral presentation)
318. A. Mckenzie, J. D. DeBord, M. Ridgeway, M. Park, G. Eiceman, **F. Fernandez-Lima**, “Explosives characterization and separation from complex mixtures using trapped ion mobility spectrometry – mass spectrometry”, Florida Annual Meeting and Exposition, Tampa, Florida, May 9-10, 2014. (graduate student oral presentation)
319. P. Benigni, J. D. DeBord, C. Thompson, P. Gardinali, **F. Fernandez-Lima**, “Coupling of gas-phase separation to high resolution mass spectrometry in the molecular characterization of crude oils”, Florida Annual Meeting and Exposition, Tampa, Florida, May 9-10, 2014. (graduate student oral presentation)
320. R. Villacob, J. D. DeBord, **F. Fernandez-Lima**, “Development of Surface Interrogation Tools for Mass Spectrometry Imaging”. Florida Annual Meeting and Exposition, Tampa,

- Florida, May 9-10, 2014. (graduate student oral presentation)
321. K. Adams, J. D. DeBord, C. J. Thompson, R. H. Gomer, **F. Fernandez-Lima**. “Starvation-induced changes in the lipid composition of Dictyostelium discoideum cells”. Florida Annual Meeting and Exposition, Tampa, Florida, May 9-10, 2014. (graduate student oral presentation)
322. A. Garabedian, E. Schenk, D. R. Hernandez, Y. C. Tse-Dinh, **F. Fernandez-Lima**, “Molecular differentiation of Escherichia coli strains as a function of antibiotic stress”. Florida Annual Meeting and Exposition, Tampa, Florida, May 9-10, 2014. (graduate student oral presentation)
323. A. McKenzie, J. D. DeBord, M. Ridgeway, M. Park, G. Eiceman, **F. Fernandez-Lima**, “Unambiguous Trace Explosives Characterization: Challenges and Perspectives”. Third Annual IFRI Forensic Science Symposium, Florida International University, April 30-May 1, 2014. (graduate student poster presentation)
324. K. Adams, J. D. DeBord, C. J. Thompson, R. H. Gomer, **F. Fernandez-Lima**. “Dictyostelium discoideum as a model for cell response and accumulation studies”. Third Annual IFRI Forensic Science Symposium, Florida International University, April 30-May 1, 2014. (graduate student oral presentation)
325. K. Diaz, E. Schenk, A. P. Benaduce, L. Kos, **F. Fernandez-Lima**, “Towards lipid analysis using secondary ion mass spectrometry at the single cell level”, 9th Annual Southeast Cell Science Undergraduate Research Symposium, St. Thomas University, Miami, Florida, April 26th, 2014 (undergraduate student poster presentation)
326. **F. Fernandez-Lima**, “Mass spectrometry imaging of Dictyostelium Discoideum cells”, Desorption 2014, April 14-16, 2014, Montreal, Canada. (candidate oral presentation)
327. J. C. Molano-Arevalo; D. R. Hernandez; W. Gonzales; J. Miksovskaja; M. E. Ridgeway, M. A. Park, **F. Fernandez-Lima**.” Conformational dynamics of Flavin Adenine Dinucleotide: solution vs gas-phase”. Graduate Student Appreciation Week, Florida International University, March31-April 4, 2014. (graduate student oral presentation)
328. P. Benigni, J. D. DeBord, C. Thompson, P. Gardinali, **F. Fernandez-Lima**, “Development of gas-phase analytical methods for increased sensitivity in the molecular characterization of crude oils”, Graduate Student Appreciation Week, Florida International University, March31-April 4, 2014. (graduate student oral presentation)
329. K. Adams, J. D. DeBord, C. J. Thompson, R. H. Gomer, **F. Fernandez-Lima**. “Starvation-induced changes in the lipid composition of Dictyostelium discoideum cells”. Graduate Student Appreciation Week, Florida International University, March31-April 4, 2014. (graduate student oral presentation)
330. A. McKenzie, J. D. DeBord, M. Ridgeway, M. Park, G. Eiceman, **F. Fernandez-Lima**, “Explosives Characterization and Separation from complex mixtures using Trapped Ion Mobility Spectrometry- Mass Spectrometry”, Graduate Student Appreciation Week, Florida International University, March31-April 4, 2014. (graduate student oral presentation)
331. A. Garabedian, E. Schenk, D. R. Hernandez, Y. C. Tse-Dinh, **F. Fernandez-Lima**, “Molecular differentiation of Escherichia coli strains as a function of antibiotic stress”, Graduate Student Appreciation Week, Florida International University, March31-April 4, 2014. (graduate student oral presentation)
332. A. Blanco, E. Schenk, K. Kellersberger, M. Smotherman, **F. Fernandez-Lima**; “Study of the lipid distribution on brain section of *Tadarida brasiliensis* using Mass Spectrometry Imaging”, February 13-15, 2014, Jacksonville, FL, FGLSAMP EXPO 2014 (undergraduate

- student poster presentation)
333. K. Diaz, E. Schenk, A. P. Benaduce, L. Kos, **F. Fernandez-Lima**, “Towards lipid analysis using secondary ion mass spectrometry at the single cell level”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
334. G. Gozo, E. Schenk, F. Leng, **F. Fernandez-Lima**, “Characterization of the AT-Hook Motifs of HMGA2”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster)
335. R. Almeida, E. Schenk, J. Miksovska, **F. Fernandez-Lima**, “Characterization of Holo- and Apo- Myoglobin conformational dynamics”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
336. C. Harrilal, J. Miksovska, **F. Fernandez-Lima**, “Conformational kinetics study of MP-11 using TIMS-MS and molecular dynamics”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
337. F. Nau, E. Schenk, A. P. Benaduce, L. Kos, **F. Fernandez-Lima**, “Macromolecular differentiation of melanoma cells using high resolution mass spectrometry”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
338. R. Villacob, J. D. DeBord, **F. Fernandez-Lima**, “Development of Novel Interrogation Tools for Mass Spectrometry Imaging”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
339. A. Castellanos, D. R. Hernandez, J. D. DeBord, M. Ridgeway, M. Park, **F. Fernandez-Lima**, “Structural Characterization of Polycyclic Aromatic Hydrocarbons using TIMS-MS”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
340. A. Blanco, E. Schenk, K. Kellersberger, M. Smotherman, **F. Fernandez-Lima**; “Study of the lipid distribution on brain section of *Tadarida brasiliensis* using Mass Spectrometry Imaging”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
341. S. Alvarado, J. D. DeBord, C. Thompson, P. Gardinali, **F. Fernandez-Lima**. “Development of gas-phase pre-separation tools for higher sensitivity in the molecular characterization of biodiesel mixtures”, February 21-22, 2014, Miami, FL, FURC 2014 (undergraduate student poster presentation)
342. C. Lydon, E. Schenk, J. D. DeBord, M. Smotherman, **F. Fernandez-Lima**; “MSI MALDI-MS for Direct Lipid Profiling of Intact Tissues”, August 4-8, 2013, Indianapolis, IN, Microscopy and Microanalysis 2013. A07 Mass Spectrometry Imaging (MSI): Applications, Current Challenges and Perspectives. (graduate student poster presentation)
343. E. Schenk, M. Smotherman, C. Morgan, **F. Fernandez-Lima**; “A Mass Spectrometry Imaging study of lipid differentiation in model systems”, August 4-8, 2013, Indianapolis, IN, Microscopy and Microanalysis 2013. A07 Mass Spectrometry Imaging (MSI): Applications, Current Challenges and Perspectives. (postdoctoral oral presentation)
344. J. D. DeBord, R. Gomer, E. A. Schweikert, **F. Fernandez-Lima**; “Multi-probe mass spectrometry imaging of Dictyostelium Discoideum cells.” August 4-8, 2013, Indianapolis, IN, Microscopy and Microanalysis 2013. A07 Mass Spectrometry Imaging (MSI): Applications, Current Challenges and Perspectives. (candidate oral presentation)
345. E. Schenk, J.D. DeBord, M. Ridgeway, M. Park, J. Miksovska, **F. Fernandez-Lima**, “Conformational dynamics of hexa-coordinated hemoglobins using TIMS-MS”, July 21-26, 2013, Boppard, Germany, 22nd International Conference on Ion Mobility Spectrometry. (postdoctoral oral presentation)

346. J.D. DeBord, A. McKenzie, M. Ridgeway, M. Park, **F. Fernandez-Lima**, “Applications of TIMS-MS in Forensic Sciences: trace analysis in complex mixtures”, July 21-26, 2013, Boppard, Germany, 22nd International Conference on Ion Mobility Spectrometry. (postdoctoral oral presentation)
347. **F. Fernandez-Lima**. “Ion Dynamics in TIMS-MS: Theory vs Experiment.”, July 21-26, 2013, Boppard, Germany, 22nd International Conference on Ion Mobility Spectrometry. (candidate oral presentation)
348. E.R. Schenk, R. Almeida, L. Astudillo, J. Miksovska, M. Ridgeway, M. Park, **F. Fernandez-Lima**, “Study of conformational dynamics of hexa-coordinated hemoglobins using TIMS-MS”, July 13-17, 2013, Lisbon, Portugal, 9th European Biophysics Congress. (candidate poster presentation)
349. E.R. Schenk, C. Harrilal, R. Almeida, J.D. DeBord, J. Miksovska, **F. Fernandez-Lima**. “Protein conformational dynamics studies using TIMS-MS and theoretical calculations”, June 9-13, 2013, Minneapolis, MN, 61st Annual Conference ASMS. (candidate poster presentation)
350. **F. Fernandez-Lima**. “Analysis of complex mixtures of heteroatom hydrocarbons using TIMS-MS”, April 7-11, 2013, New Orleans, LA, 245th ACS National Meeting. (candidate oral presentation)
351. E.R. Schenk, J.D. DeBord, C. Lydon, A. McKenzie, **F. Fernandez-Lima**, “High resolution gas-phase, MS-based post-ionization separation for molecular imaging and conformational dynamics”, March 13-15, 2013, FIU, FL, FIU Forensic Workshop (undergraduate student poster presentation)
352. **F. Fernandez-Lima**. “Multi-probe imaging alternatives for Mass Spectrometry based bio-imaging.” March 4-5, 2013, Orlando FL. FLAVSM-FSM. (candidate oral presentation)
353. **F. Fernandez-Lima**. “Ion Dynamics and current challenges in TIMS-MS”, July 20-27, 2012, 2012, Orlando, FL, 21st International Conference on Ion Mobility Spectrometry. (candidate oral presentation)

Chemistry/Biochemistry Graduate Program Recruitment Talks:

1. **F. Fernandez-Lima**, “From solution to the gas-phase. What can we learn on the structure, dynamics and distribution of biomolecules?”, ACS 41st Senior Technical Meeting, Puerto Rico, November 10-11, 2018.
2. **F. Fernandez-Lima**. “Mass Spectrometry based bio-imaging. Current challenges and perspectives”. University of Puerto Rico-Mayaguez, 1/24/2014
3. **F. Fernandez-Lima**. “Mass Spectrometry based bio-imaging. Current challenges and perspectives”. University of Puerto Rico-Humacao, 1/23/2014
4. **F. Fernandez-Lima**. “Mass Spectrometry based bio-imaging. Current challenges and perspectives”. University of Puerto Rico-Rio Piedras, 1/22/2014
5. **F. Fernandez-Lima**. “Mass Spectrometry based bio-imaging. Current challenges and perspectives”. Barry University, 10/31/2012

Grant Proposals pending

- F. Fernandez-Lima (Role co-PI), “Investigate mechanisms of HIV infection, replication, latency, and pathogenesis in the context of opioid use disorders”, NIH RFA-DA-25-011, 4/1/2025-3/31/2029, \$5M

F. Fernandez-Lima (Role co-PI), Supplement "Acquisition of a high-resolution analytical platform for small molecule/trace detection" to "CREST Phase II: Center for Aquatic Chemistry and Environment (CREST-CACHÉ)", 5/1/2024 - 4/30/2029, \$500,000"

FUNDED RESEARCH

as PI: \$7,991,852, as collaborative work PI: \$19,816,646, **Total: \$27,808,498**

- F. Fernandez-Lima (Role co-PI), FIU-Diversity Center for Genomic Research, 07/2024-6/2031, \$ 11,384,154
- F. Fernandez-Lima (Role PI), Development of biological structural tools for the study of protein-DNA complexes, NIH R35 MIRA, 04/2024-03/2029, \$1,954,038
- F. Fernandez-Lima (Role PI), "How can mosquitoes develop and reproduce in the complete absence of juvenile hormone?", NIAID R21AI167849, 01/2022-12/2023, \$368,750
- F. Fernandez-Lima (Role PI), Development of multidimensional IMSn-FT- ICR MSn tools for the characterization of complex mixtures, NSF CHEM 2304837, 09/2023-08/2026, \$500,000
- F. Fernandez-Lima (Role co-PI), Supplement "Thematic network for remote/onsite analysis of complex environmental samples" to "CREST Phase II: Center for Aquatic Chemistry and Environment (CREST-CACHÉ)", NSF- HRD-1547798, Sept 2021- Aug 2026, \$100,000
- F. Fernandez-Lima (Role-co-PI), "A Nanoanalytical Approach to Unraveling Differences Between Physiological and Pathological Mineralization", Florida Heart Research Foundation, Feb 1, 2023- Jan 31, 2026, \$450,000.
- F. Fernandez-Lima (Role co-PI), "Pharmacokinetic, pharmacodynamic, and toxicological interactions among Opioids and Cabotegravir", NIH R01DA057145, 09/2022-08/2027, \$1,879,756
- F. Fernandez-Lima (Role PI), "Analysis of the nucleotide- and methionine cycle metabolite abundance in Drosophila intestine during aging", Dec 2022- May 2023, NIGMS \$4,400
- F. Fernandez-Lima (Role PI), Supplement to "Development of Multidimensional, Linear and Differential Ion Mobility MS Separations for Middle-Down Proteoforms", NIH-R01GM134247-03S1, Sept 2019 – Aug 2023, \$158,790
- F. Fernandez-Lima (Role co-PI), "CREST Phase II: Center for Aquatic Chemistry and Environment (CREST-CACHÉ)", Sept 2021- Aug 2026, \$5,000,000
- F. Fernandez-Lima (Role co-PI), "Multimodal Machine-Learning and High-Performance Computing Strategies for Big MS Proteomics Data", NIH- R01GM134384, June 2020 – May 2023, \$965,875
- F. Fernandez-Lima (Role PI), "Study of biomarkers in non-healing chronic wounds", Subaward University of Miami, PhRMA Foundation Sept 2019-Aug 2020, \$30,000

***application for promotion to Full Professor at FIU**

- F. Fernandez-Lima (Role PI), "Development of Multidimensional, Linear and Differential Ion Mobility MS Separations for Middle-Down Proteoforms", NIH-R01GM134247, Sept 2019 – Aug 2024, \$1,612,999
- F. Fernandez-Lima (Role PI), Research Supplement "Implementation of IR action spectroscopy on a Bruker Quadrupole Ion Trap" to "CAREER: Development of gas-phase, post-ionization structural tools for the study of DNA-protein complexes", NSF, March 2019-

- February, 2020. Amount to the candidate: \$15,000.
- Fernandez-Lima (Role PI), “Understanding mosquito ovary dynamics and reproductive fitness using Mass Spectrometry Imaging”, NIH- R21AI135469, Role PI, July 2017 – June 2020. \$402,875
 - Fernandez-Lima (Role PI), “Acquisition of an EVOQ Premium GC TQ”, Bruker Daltonics Inc., Role PI, July 2018. \$150,000
 - Fernandez-Lima (Role PI), “Acquisition of an HPLC - Amazon SL Ion Trap”, Bruker Daltonics Inc., Role PI, July 2018. \$90,000
 - F. Fernandez-Lima (Role PI), Research Experience for Undergraduates Supplement to “CAREER: Development of gas-phase, post-ionization structural tools for the study of DNA-protein complexes”, NSF, March 2018- February 2019. Amount to the candidate: \$8,000.
 - F. Fernandez-Lima (Role PI), “Mass Spectrometry tools for active learning, hands on teaching and research”, FIU Technology Fee, Sept 2017-Aug 2019. Amount to the candidate: \$423,000.
 - F. Fernandez-Lima (Role PI), “Development of a Mass Spectrometry research and reference center at FIU: Project 3. Exhibit C”, Bruker Daltonics Inc., January 2018 - October 2019. Amount to the candidate: \$175,000.

***application for promotion to Associate Professor and tenure at FIU**

- F. Fernandez-Lima (Role PI), “CAREER: Development of gas-phase, post-ionization structural tools for the study of DNA-protein complexes”, NSF, March 2017- February 2022. Amount to the candidate: \$600,000.
- F. Fernandez-Lima (Role PI, subcontract), “Development of high-throughput analytical tools for the identification and quantification of juvenile hormone levels of expression using fast, gas post-ionization separations.”, NIH 5R01AI045545-16 (PI: F. Noriega, Florida International University, \$511,777), July 2016 - June 2017. Amount to the candidate: \$146,000.
- F. Fernandez-Lima (Role co-PI), “Impact of μ -opioid receptor (MOR) splice variant interactions with the chemokine receptor CCR5 in the context of morphine and HIV-1 entry inhibitor therapy”, NIH R21DA041287, PI: Nazira El-Hage, July 2016 - June 2018. Amount to the candidate: \$100,000.
- F. Fernandez-Lima (Role PI), “Development of a Mass Spectrometry research and reference center at FIU: Project 3. Exhibit B”, Bruker Daltonics Inc., January 2016 - December 2018. Amount to the candidate: \$300,000.
- F. Fernandez-Lima (Role PI), “Mass Spectrometry Imaging of Anti-inflammatory Peptide Analogs of GHRH, LHRH and GRP for Alzheimer’s Disease.” NSF-CAKE and Neuroscience Centers of Florida Foundation, Inc. (NSCFF), September 2015- June 2016. Amount to the candidate: \$55,000.
- F. Fernandez-Lima (Role PI), “Evaluation of gas-phase ion mobility separations for higher throughput and more sensitive global and targeted cancer proteomics measurements”, Leidos Biomedical Research, Inc. No:14X233, October 2014 – June 2016. Amount to the candidate: \$90,000.
- F. Fernandez-Lima (Role PI), “Mass Spectrometry based molecular imaging of native biological nanodomains”, NIH/NIGMS R00 Award (R00GM106414), September 2012 - June 2016. Amount to the candidate: \$737,000.
- F. Fernandez-Lima (Role PI, subcontract), “Development of high-throughput analytical tools

for the identification and quantification of juvenile hormone levels of expression using fast, gas post-ionization separations.”, NIH 2R01AI045545-15 (PI: F. Noriega, Florida International University, \$505,827), September 2015 - June 2016. Amount to the candidate: \$104,361.

- F. Fernandez-Lima (Role PI), “Development of a Mass Spectrometry research and reference center at FIU, Project 1 and 2, Exhibit A”, Bruker Daltonics Inc., July 2012 - July 2015. Amount to the candidate: \$150,000.
- F. Fernandez-Lima (Role PI, subcontract), “Oil droplet toxicity”, BP exploration and Production Inc. (PI: P. Gardinali, Florida International University, \$800,000) January 2014 - December 2015. Amount to the candidate: \$50,000.
- F. Fernandez-Lima (Role PI, subcontract), “Aquatic toxicology of single PAH compounds”, BP exploration and Production Inc. (PI: P. Gardinali, Florida International University, \$1,400,000), January 2014 - December 2015. Amount to the candidate: \$50,000.
- F. Fernandez-Lima (Role PI, subcontract) “Development of radio ligand for assay of angiotensin-converting enzyme-2 (ACE-2)”, NIH 1R15HL113905 (PI: R. Speth, Nova Southeastern University, \$393,677), January 2013 - April 2014. Amount to the candidate: \$36,500.

Before FIU

- F. Fernandez-Lima (Role PI), “Mass Spectrometry based molecular imaging of native biological nanodomains”, NIH/NIGMS K99 Award (1K99RR030188-01), September 2010- July 2012, Amount to the candidate: \$147,000.

PATENT DISCLOSURES, APPLICATIONS, AND AWARDS

2019 US Patent # US 10,386,372 (granted on 08/20/19) “Materials and Methods for Screening Topoisomers”

2019 FIU Top Scholar for Research and Creative Activities

2017-2022 NSF CAREER Award

2012 - 2016 NIH Pathway to Independence Award (R00).

2010 - 2012 NIH Pathway to Independence Award (K99).

2003 Annual Award of the Cuban Academy of Sciences.

2003 Informatics' Education Top Award, IX International Fair of Informatics, Automation and Communications, Cuba.

2000 Becquerel Award, Cuba.

2000 Max Planck Award, Cuba.

PROFESSIONAL HONORS, PRIZES, FELLOWSHIPS

2023 Research Award, College of Arts, Sciences and Education, FIU

2020 Research Award, College of Arts, Sciences and Education, FIU

2018 Institute of Advance Studies Vanguard Fellow, University of Birmingham, UK

2017 Research Award, College of Arts, Sciences and Education, FIU

2017 American Chemical Society Emerging Investigator, Florida Section

2016 - 2018 Bruker Daltonics Inc., Life Sciences Division, Research Fellow.

2015 Emerging Investigator for the American Society for Mass Spectrometry

2014 Carl Storm Underrepresented Minority (CSURM) Fellowship
2012 - 2015 Bruker Daltonics Inc., Life Sciences Division, Research Fellow.
2006 Brazilian Agency CNPq Post-doctoral Fellow.
2004 Best year results in the New Materials Development, University of Havana, Cuba.
2003 - 2006 Physic's Latin-American Center Pre-doctoral Fellowship (3 years), Brazil.
2001 Physic's Latin-American Center Fellowship (6 month), Brazil.
1991 3rd Place in Mathematical-Physical International Olympiad, Dubna, Russia.

OFFICES HELD IN PROFESSIONAL SOCIETIES

2022-present, Mentor for the Females in Mass Spectrometry Association
2021- present, President of the Hispanic Faculty Association at Florida International University
2020 - 2022, Member at Large for Digital Communications, American Society for Mass Spectrometry
2017 – 2019, Member Diversity Committee, American Society for Mass Spectrometry
2015 - 2017 Board Member, International Society for Ion Mobility Spectrometry
2013 - present member American Biophysical Society (ABS).
2012 - present member American Heart Association (AHA).
2011 - present member American Physical Society (APS).
2011 - present member International Society for Ion Mobility Spectrometry (ISIMS).
2007 - present member American Chemical Society (ACS).
2007 - present member American Society for Mass Spectrometry (ASMS).

OTHER PROFESSIONAL ACTIVITIES AND PUBLIC SERVICE

2023 - present Faculty Representative on the Board of Directors of the Florida International University Research Foundation, Inc., (FIU-RF Board)
2023 – present FIU Minority Community College Transfer Review Committee
2012 – present FIU Director Mass Spectrometry Program
2012 - present member of the editorial board of Modern Instrumentation.
2012 - present Director, Advance Mass Spectrometry Facility, Florida International University.

CONFERENCE ORGANIZATION:

- 33rd International Conference on Ion Mobility Spectrometry, July 20-26, 2024, Miami.
- Session Chair “Mass Spectroscopy”, 98th Florida Annual Meeting and Exposition, August 4-6, 2022, Tampa, FL.
- Session Chair “Ion Mobility: Structure”, 67th Conference on Mass Spectrometry and Allied Topics, Atlanta, 2019.
- Workshop Organizer: New trends in high spatial resolution 2D and 3D Mass Spectrometry analysis, 67th Conference on Mass Spectrometry and Allied Topics, Atlanta, 2019.
- Workshop Organizer: 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida.
- Symposium Organizer: Ion Mobility Mass Spectrometry, ACS Spring National Meeting & Exposition, March 31-April 1, 2019, Orlando.

- Workshop Organizer: New trends in high spatial resolution 2D and 3D Mass Spectrometry analysis, 66th Conference on Mass Spectrometry and Allied Topics, San Diego, 2018.
- Workshop Organizer: New trends in high spatial resolution 2D and 3D Mass Spectrometry analysis, 65th Conference on Mass Spectrometry and Allied Topics, Indianapolis, 2017.
- International Scientific Committee, 20th International Conference on Secondary Ion Mass Spectrometry, Seattle, 2015.
- Session Organizer: FIB-SIMS + MeV SIMS, 20th International Conference on Secondary Ion Mass Spectrometry, Seattle, 2015.
- Session Organizer: Imaging: Fundamentals, instrumentation and method development, Annual Conference of the American Society for Mass Spectrometry, 2014.
- Session Organizer: A07 Mass Spectrometry Imaging (MSI): Applications, Current Challenges and Perspectives, Microscopy and Microanalysis, 2013.

Research Advisor and Postgraduate Scholar Sponsors:

High Scholl Research Experience: Daniel Gimeno (2014), Helen Gall (2014), Teddie O'Connor (2015), Fernando Calero (2016), Patrick O'Shea (2016), Muhammad Hamza (2018), Tatiana Ramos (2022), Rozmeen Siddiqui (2024), Hari Muhunthan (2024), Charles A Dehaseth (2024).

Total Number of High School Students advised: 10

Research Experience for Undergraduates: Vivian Iglesias (2013), Alaina McDonnell (2014), Cynthia McCord (2014), Jasmine Cheeves (2015), Alessandra Thomsen (2015), Marshall Rebecca (2016), Melanie Perez (2017), Juan Lopez (2017), Abigail Sundberg (2017), Noa Dehaseth (2018), Javier Moreno (2018), Alexander Fernandez (2018), Anthony Duruewuru (2018), Renzo Caverio (2018), Ra'Mal Harris (2019), Rhyisa Armbrister (2019), Christopher Donohue (2019), Jessica Courson (2021)

Total Number of REU Students advised: 18

Undergraduate Students: Santiago Gusman (2024), Miriam S. Amador (2024), Anelis E. Roque (2024), Lourdemaelle Sama (2024), Adam Nau (2024), Benjamin Bokor (2020), Erica Belkin (2020), Shirley Hernandez(2020), Lina Galeano (2015), Javier Moreno (2020), Nathalie Smith (2015), Nicholas Hernandez (2015), Daniel Gimeno (2016), Virgilio Velasco (2016), Alex Bolufer (2016), Denise Montero (2015), Rebecca Marin (2015), Gretel Rodriguez (2015), Jeremy Castro (2015), Marco Filipovic (2015), Jorman Garcia (2015), Cindy Ly (2015), Alexandra Blanco (2014, AML Diagnostics), Genevieve Gozo (2014, Coating Place Inc.), Carlos Bravo (2014, Pharmacy School), Freddy Vega (2014), Krystal Diaz (2014, Penn State, PhD student), Raybel Almeida (2014, Sandia National Laboratory), Natasha Fernandez (2014, UM-Miller), Kiana Smith (2014), Stephanie Alvarado (2014), Chris Harrilal (2014, Purdue, PhD student), Frederic Nau (2014, Miami Central Senior High), Raul Villacob (2013, Baylor, PhD student), Alan McKenzie (2013, FIU, PhD student), Paolo Benigni (2013, FIU, PhD student), and Anthony Castellanos (2013, FIU, PhD student)

Total Number of Undergraduate Students advised: 35**Current Graduate Students:**

Miguel Santos (Fall 2020-present, PhD student, CREST fellow)

Cassandra Fuller (Fall 2020-present, PhD student, CREST fellow)

Andre Forero (Fall 2022-present, PhD student)

Marissa Carter (Fall2024-present, PhD student)

Moshfiqur Rahman (Fall2023-present, PhD student)

Former Graduate Students:

1. Raul Villacob (MSc, Fall 2013-Spring 2015, PhD student at Baylor University)
2. Paolo Benigni (PhD, Spring 2014-Fall 2017, Scientist at Trace Ability)
3. Kendra Adams (PhD, Fall 2013-Spring 2018, Postdoc at Duke University)
4. Alyssa Garabedian (PhD, Fall 2013-Spring 2018, Postdoc at Univ of Alabama)
5. Juan Camilo Molano Arevalo (PhD, Fall 2013-Spring 2018, Scientist at Intel)
6. Lilian Tose Valadares (PhD, Spring 2017- Spring 2018, Postdoc at FIU)
7. Alan McKenzie (PhD, Fall 2013-Spring 2019, Postdoc at Univ of Maryland)
8. Jefferson Pereira e Silva (PhD, Fall 2018-Spring 2019, PhD visiting student)
9. Anthony Castellanos (PhD, Fall 2014-Fall 2019, Scientist at Bruker Detection Group)
10. Jacob Porter (PhD, Fall 2015-Summer 2020, Postdoc at UCLA).
11. Gerald Kirk (MSc, Fall 2019-Summer 2021, Miami Dade College Instructor)
12. Yarixa Cintron Diaz (PhD, Fall 2018-Fall 2021, Shimadzu Application Scientist)
13. Clement Olanrewaju (Fall 2018-Summer 2022, Scientist at Intel)
14. Dennys Leyva (Fall 2018-present, Summer 2022, Themo Research Scientist)
15. Samuel Miller (Fall 2020-Summer 2024, Postdoc FIU)

Total Number of Graduate Students advised: 19

Postdoctoral Fellows: Emily Schenk (2012 - 2014, Agronomy Department at Agri Analysis, Inc), Diana R. Hernandez (2013 - 2014, UM Miller School of Medicine), Quentin Vanbellinggen (2016 – 2017, CNRS), Kevin Jeanne Dit Fouque (2016 -2022, FIU), David Butcher (2017-2018, NHML), Jean Haler (2018-2019, Fulbright Fellow), Lilian Valadares Tose (2019-2023), Khoa Pham (2019-2022), Pablo Oliveira (2023-present), Samuel Miller (2024-present) , Md Shofiul Alam (2024-present)

Total Number of Postdoctoral Scholars Sponsored: 11**Dr. Fernandez-Lima's group Student Research Awards:**

- Tatiana Ramos, 2nd Place, August 12, 2022 FIU SRI Symposium, “Analytical approach in Aedes aegypti female mosquito analysis”

- Elisa Shoff, 1st place winner, Best Student Oral Presentation, 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida
- Clement Olanrewaju, 3rd place winner, Best Student Oral Presentation, 15th Annual Workshop on LC/MS/MS Applications in Environmental Analysis and Food Safety, May 29 - 31, 2019, Miami, Florida
- Clement Olanrewaju, winner, Best Poster Presentation, 95th Florida Annual Meeting and Exposition, May 9-11, 2019, Tampa, Florida.
- Clement Olanrewaju, 1st place winner, Best Poster Presentation, "Chemistry of Life: From Small to Macromolecules", Chemical Sciences Symposium, South Florida Section American Chemical Society, April 12-13, 2019
- Jacob Porter, Poster Award Presentation, 12th North American FT MS Conference, Key west, Florida, April 28- May 2, 2019
- Jacob Porter, 3rd place winner, Best Poster Presentation, Graduate Student Appreciation Week 2019, Florida International University, April 1-5, 2019
- Alan McKenzie Coe, 1st place winner, Best Oral Presentation, Graduate Student Appreciation Week 2018, Florida International University, March 28-April 1, 2018
- Lilian V Tose, 1st place winner, Best Poster Presentation, Graduate Student Appreciation Week 2018, Florida International University, March 27-April 1, 2018
- Alexander Bolufer, 2nd place winner, Best Undergraduate Poster Presentation, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017
- Anthony Castellanos, 2nd place winner, Best Graduate Poster Presentation, 93rd Florida Annual Meeting and Exposition, Tarpon Spring, FL, May 4-6, 2017
- Nathalie Smith, winner of 2017 Zaida C. Morales-Martinez and Howard E. Moore Chemistry Awards.
- Kendra Adams, 1st place winner, Best Oral Presentation, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017
- Alan McKenzie, 2nd place winner, Best Oral Presentation, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017
- Anthony Castellanos, 2nd place winner, Best Oral Presentation, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017
- Alyssa Garabedian, 3rd place winner, Best Oral Presentation, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017
- Juan Molano-Arevalo, 2nd place winner, Best Poster Presentation, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017
- Paolo Benigni, 3rd place winner, Best Poster Presentation, Graduate Student Appreciation Week 2017, Florida International University, March 27-28, 2017
- Alyssa Garabedian, 2016 Best Poster Presentation, 25th International Conference on Ion Mobility Spectrometry, Boston, 2016.
- Kendra Adams, 2nd Place in the Biology Poster Category, Florida Graduate Statewide Symposium 2016, Gainesville.
- Alyssa Garabedian, 2016 Biomedical Research Initiative Summer Research Award, MBRS-RISE.
- Dennise Montero, winner of 2016 Zaida C. Morales-Martinez and Howard E. Moore Chemistry Awards.
- Kendra Adams, 1st Place in the Chemistry Oral Category, GSAW 2016, Miami.

- Anthony Castellanos, 1st Place in the Chemistry Poster Category, GSAW 2016, Miami.
- Juan Camilo Molano Arevalo, 1st Place in the Biology and Biochemistry Poster Category, GSAW 2016, Miami.
- Alyssa Garabedian, 2015 Biomedical Research Initiative Summer Research Award, MBRS-RISE.
- Juan Camilo Molano Arevalo, 2015 Biomedical Research Initiative Summer Research Award, MBRS-RISE.
- Kendra Adams, 1st Place in the Chemistry Oral Category, GSAW 2015, Miami.
- Juan Camilo Molano Arevalo, 2nd Place in the Biology and Biochemistry Oral Category, GSAW 2015, Miami.
- Paolo Benigni, 1st Place Student Award, 10th FT MS Conference 2015, Key West
- Stefanie Alvarado, 2nd Place in Natural Sciences, FIU McNair Scholars Research Conference 2014, Miami.
- Alan McKenzie, 2nd Place in Chemistry Category, GSAW 2014, Miami.