

Desire Ortiz Torres (she/her)

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EDUCATION

- Ph.D.** **University of Illinois at Chicago; 2017-present**
Organic Chemistry
Stephen G. DiMagno Laboratory | Daesung Lee Laboratory
Additional coursework: 2022 UCSF-Stanford Center of Excellence in Regulatory Science and Innovation (CERSI) Immersion Course in Drug Discovery, Development, and Regulation
- B.S.** **University of Puerto Rico, Rio Piedras; 2017**
Chemistry; cum laude
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RESEARCH EXPERIENCE

- 2017-Present** **Stephen DiMagno | Daesung Lee Laboratory, UIC; Synthesis of novel fatty acid synthase (FASN)-specific PET tracers for improved prostate cancer diagnostics**
- Synthesis of FASN inhibitors: cold ligands as standards and diaryliodonium salts precursors for radiolabeling.
- Characterization of cold ligands and precursors via H-NMR, C-NMR and Mass Spectrometry.
- 2015-2017** **Lopez-Stelzer Laboratory | Crystal Design Institute (CDI), UPR-Molecular Science Research Center; Revealing polymorphism in crystalline solid dispersions for accurate determination of phase diagrams and critical quality attributes of formulations**
- Control of polymorphism during polymer-based continuous pharmaceutical formulation process
- 2015** **Michael D. Ward | Bart Kahr Laboratory, NYU; Revealing polymorphism in crystalline solid dispersions for accurate determination of phase diagrams and critical quality attributes of formulations**
- Revealing polymorphism as consequence of hot melt extrusion process in continuous pharmaceutical formulations
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RESEARCH SKILLS

- NMR** H-NMR, C-NMR and F-NMR for characterization and monitoring reactions of cold-ligand standards and small molecules precursors for radiolabeling.
- Mass Spectrometry** Matrix-assisted laser desorption/ionization (MALDI) for characterization of cold-ligand standards and small molecules precursors for radiolabeling.
- Air-free chemistry** Synthesis and handling of air/moisture sensitive compounds – (e.g., diaryliodonium salts).
- Analytical techniques** Powder X-Ray Diffraction (PXRD), Raman spectroscopy, UV-Vis spectroscopy, FT-IR spectroscopy, Hot-Stage Microscopy (HSM), Differential Scanning Calorimetry (DSC), Thermogravimetric Analysis (TGA) for characterization of polymorphic forms of active pharmaceutical ingredients (APIs).
- Laboratory skills** Organic synthesis, column chromatography, thin-layer chromatography, laboratory safety.
- Structural analysis** Qualitative and quantitative use of ChemDraw, Chem3D, Topspin and MestreNova software.
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TEACHING EXPERIENCE AND COMMUNITY INVOLVEMENT

- 2017-present** **Teaching Assistant**
- Serve as instructor to undergraduate students taking the organic, inorganic and general chemistry course for science majors in class and laboratory settings; UIC.
- 2022** **Mentor Judge**
- Sever as mentor and judge for undergraduate student's poster presentations at the SACNAS 2022 Conference.
- 2022** **Laboratory Coordinator**
- Oversee completion of daily laboratories, lab equipment maintenance, preparation of chemicals/materials, and ensure safety regulations; UIC.
- 2022** **Instructor**
- Summer Instructor for the Summer Enrichment Chemistry Workshop; UIC.
- 2018-2019, 2012** **Instructor/Volunteer**
- Science talk and demonstration for high school students at the "Exploring STEM Pathways for Latinx Program"; UIC.

2016

- Science demonstration for elementary school students at the “Demo Day Fair”; UIC.
 - Science demonstration for general public at the “Nano Days Fair”; UPR-Rio Piedras
- Science Mentor/Tutor**
- Serve as mentor and tutor to lower-level undergraduates taking the Instrumental Chemistry course for chemistry majors; UPR- Rio Piedras.

AWARDS AND HONORS

- Midwestern Association of Graduate Schools (MAGS) 2022 Three Minute Thesis Regional Competition - 2nd place
- 2022 Three Minute Thesis Competition, UIC – 1st place
- GREATS Scholarship – NSF Innovations in Graduate Education Program, UIC
- Teaching Assistant Appreciation Award, UIC
- Research Initiative for Scientific Enhancement (RISE) Program, UPR-Rio Piedras
- NYU-MRSEC Research Experiences for Undergraduates Fellowship, NYU
- Dean’s List of the College of Natural Sciences, UPR-Rio Piedras

PUBLICATIONS AND PRESENTATIONS

1. Ortiz Torres, D. “A smoother road to prostate cancer diagnosis”, *Council of Graduate Schools (CGS) Annual Meeting – Three Minute Thesis: People’s Choice Competition, San Francisco, CA, USA, Dec 10, 2022*, competition/oral presentation.
2. Ortiz Torres, D. “A smoother road to prostate cancer diagnosis”, *78th Annual Meeting of the Midwestern Association of Graduate Schools – Three Minute Thesis Regional Competition, Milwaukee, WI, USA, April 8, 2022*, competition/oral presentation; 2nd place.
3. Ortiz Torres, D. “A smoother road to prostate cancer diagnosis”, *UIC’s 2022 Three Minute Thesis Competition, UIC, Chicago, IL, USA, March 11, 2022*, live Zoom competition/oral presentation; 1st place.
4. Ortiz, K. S., Espinell, J. R. H., Ortiz Torres, D., López-Mejías, V., & Stelzer, T. (2019). Polymorphism in Solid Dispersions. *Crystal Growth & Design*. doi: 10.1021/acs.cgd.9b01138
5. Ortiz Torres, D., DiMagno, S., Linstad, E., Semani, B., Babich, J. “Synthesis of Novel, FASN-Specific PET Tracers”, *MIKIW 2019 Lawrence, KS, USA, April 13, 2019*, poster.
6. Ortiz Torres, D., López-Mejías, V., Stelzer, T. “Polymorphism in Polymer-based Continuous Pharmaceutical Formulation”, *Annual Biomedical Research Conference for Minority Students (ABRCMS) Tampa, FL, USA, November 10, 2016*, poster.
7. Ortiz Torres, D., Hernández Espinell, J.R., López-Mejías, V., Stelzer, T. “Polymorphism in Polymer-based Solid Dosage Formulations”, *51st Junior Technical Meeting & 36th Puerto Rico Interdisciplinary Scientific Meeting, Pontifical Catholic University of Puerto Rico, Ponce, PR, March 5, 2016*, presentation.
8. Ortiz Torres, D., López-Mejías, V., Stelzer, T. “Polymorphism in Continuous Pharmaceutical Formulation”, *INTERPHEX Puerto Rico, San Juan, PR, October 15-16, 2015*, poster.
9. Ortiz Torres, D., López-Mejías, V., “Polymorphism in Continuous Pharmaceutical Formulation”, *Chemistry Graduate Seminar, University of Puerto Rico Rio Piedras, San Juan, PR, September 14, 2015*, presentation.
10. Ortiz Torres, D., López-Mejías, V., Stelzer, T., “Polymorphism in Continuous Pharmaceutical Formulation”, *2015 Summer Research Program Oral Presentation and Poster Exhibit, New York University School of Engineering and New York University Materials Research Science and Engineering Center, USA, August 6-7, 2015*, presentation and poster.
11. Ortiz Torres, D., “How to fight nitrosamine in cured meats?”, *Organic Chemistry Poster Symposia, University of Puerto Rico Rio Piedras, San Juan, PR, May 8, 2014*, poster.

LANGUAGES

- Fluent in English and Spanish.
- Elementary proficiency in American Sign Language (ASL) and Puerto Rican Sign Language (PRSL).