

## Biographical Sketch

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**YANIRA RODRIGUEZ-VALDES**

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### Current Education

B.S. in Chemistry at the University of Puerto Rico-Río Piedras  
(expected grad. date: 05/2018)

### Research Interests

Throughout my three-and-a-half years as a researcher, my research has focused on the development of responsive supramolecular microglobules from self-assembled deoxyguanosine derivatives. By modifying the structure of the guanosine derivatives, we have been able to tune the responsive properties of the system. Currently, our attempts have been focused on developing a hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>)-responsive system by encapsulating H<sub>2</sub>O<sub>2</sub> probes inside of our microglobules (which we call supramolecular hacky sacks).



### Research Experience

2014(Jan)-present Undergraduate researcher (mentor: Dr. José M. Rivera at UPR-RP)

2014(Aug)-present Member of the RISE Program at UPR-RP

2015 (summer) Summer research at Rutgers University's RiSE program (mentor: Dr. Rohit Ramachandran)

### Presentations at Local Meetings

**Rodríguez, Y.;** Prieto, L.; Negrón, L.; Rivera, J. M. Design, Synthesis, and Self-Assembly Studies of Glucose-Responsive Supramolecular G-Quadruplexes. ACS Junior Technical Meeting (JTM)/PRISM 2014, UPR-Cayey, Cayey, PR. March 29<sup>th</sup>, 2014. Oral Presentation.

**Rodríguez, Yanira;** Prieto, Luis A. & Rivera, José M. Design and Synthesis of Sugar-Responsive Supramolecular G-Quadruplexes. ACS JTM/PRISM 2015, UPR-RP, Río Piedras, PR. March 14, 2015. Oral Presentation.

**Rodríguez, Yanira;** Prieto, Luis A.; García, Adlin V. & Rivera, José M. Synthesis of Boronic Esters for the Development of Hydrogen Peroxide-Responsive Supramolecular G-Quadruplexes. ACS JTM 2016, Pontifical Catholic University of Puerto Rico, Ponce, PR. March 5<sup>th</sup>, 2016. Oral Presentation.

**Rodríguez, Yanira;** Prieto, Luis A. & Rivera, José M. Synthesis and pK<sub>a</sub> Studies for Model Compounds Towards the Development of Sugar-Responsive Supramolecular G-Quadruplexes. RISE Conference 2016, San Juan, PR. March 2016. Poster Presentation.

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### Presentations at National Meetings

**Rodríguez, Yanira;** Prieto, Luis A. & Rivera, José M. Synthesis and Self-Assembly of Sugar-Responsive Supramolecular G-Quadruplexes. ABRCMS 2014, San Antonio, TX. November 2014. Poster Presentation.

**Rodríguez, Yanira;** Prieto, Luis A. & Rivera, José M. Synthesis and pK<sub>a</sub> Studies for Model Compounds Towards the Development of Sugar-Responsive Supramolecular G-Quadruplexes. ABRCMS 2015, Seattle, WA. November 2015. Poster Presentation.

**Rodríguez-Valdés, Yanira;** Prieto-Costas, Luis A.; Rivera, José M. Development of benzil-containing hydrogen peroxide-responsive supramolecular G-quadruplexes. ABRCMS 2016, Tampa, FL. November 9-12, 2016.