

Biographical Sketch

Candido Diaz, Jr.

Professional Preparation

- Undergraduate Institution: Poughkeepsie, NY; Physics, B.A.; Astronomy, B.A.; Vassar College, 2011.
- Graduate Institution: Akron, OH; Integrated Bioscience, Ph.D.; The University of Akron, 2018
- Postdoctoral Institution: Poughkeepsie, NY; Vassar College, 2019 – Present
- Postdoctoral Institution 2: Boca Raton, Florida; Florida Atlantic University 2023- Present

Appointments

- 2019 to 2020: Adjunct Professor, Department of Biology, Marist College
- 2019 to present: Postdoctoral Researcher, Department of Biology, Vassar College
- 2019 to present: Adjunct Professor, Department of Biology, Vassar College

Products

Diaz Jr, C., Baker, R., Hiyashi, C., Long, J. “Connecting Materials, Performance, and Evolution: A Case Study of the Glue of Moth-Catching Spiders (Cyrtarachninae).” *Journal of Experimental Biology*. JEXBIO/2021/243271

Diaz, C., Maksuta, D., Amarpuri, G., Tanikawa, A., Miyashita, T., Dhinojwala, A., & Blackledge, T. A. (2020). The moth specialist spider *Cyrtarachne akirai* uses prey scales to increase adhesion. *Journal of the Royal Society Interface*, 17(162), 20190792.

Diaz C., Tanikawa A., Miyashita T., Amarpuri G., Jain D., Dhinojwala A., Blackledge T.A. (2018). Supersaturation with water explains the unusual adhesion of aggregate glue in the webs of the moth-specialist spider, *Cyrtarachne akirai*. *The Journal of the Royal Society Open Science*. 5:181296. <http://dx.doi.org/10.1098/rsos.181296>

Diaz, C., Tanikawa, A., Miyashita, T., Dhinojwala, A., & Blackledge, T.A. (2018). Silk structure rather than tensile mechanics explains web performance in the moth-specialized spider, *Cyrtarachne*. *Journal of Experimental Zoology Part A: Ecological and Integrative Physiology*, 329(3), 120-129.

Amarpuri, G., Zhang, **Diaz Jr, C.,** Opell, B. D., Blackledge, T. A., & Dhinojwala, A. (2015). Spiders tune glue viscosity to maximize adhesion. *ACS Nano*, 9(11), 11472-11478.

Bradley, D., **Diaz Jr, C.,** Snow, E. (2014). Improved sound field reverberance and diffusivity in a reverberation chamber through implementation of resonant-diffusing wall panels. *Acta Acustica united with Acustica*, 101(1), 181-189.

Porter, M. E., **Diaz Jr, C.,** Sturm, J. J., Grotmol, S., Summers, A. P., & Long Jr, J. H. (2014). Built for speed: strain in the cartilaginous vertebral columns of sharks. *Zoology*, 117(1), 19-27.

Biographical Sketch

Max VanDyck

Professional Preparation

- High School: Saratoga Springs, NY; Advanced Regents Diploma; Saratoga Springs High School, 2019.
- Undergraduate Institution: Poughkeepsie, NY; Biochemistry; Vassar College, 2019-2023.

Appointments

- 2023 to 2024: Research Assistant, Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School
- 2022 to 2022: Research Assistant, Department of Molecular Therapeutics, Columbia Vagelos College of Physicians and Surgeons
- 2021 to 2023: Research Intern, Department of Biology, Vassar College
- 2020 to 2021: Research Intern, Department of Biochemistry, Vassar College

Products

Perry-Hauser, Nicole A., **Max W. VanDyck**, Kuo Hao Lee, Lei Shi, and Jonathan A. Javitch. "Disentangling Autoproteolytic Cleavage from Tethered Agonist-Dependent Activation of the Adhesion Receptor ADGRL3." *Journal of Biological Chemistry* 298, no. 12. doi.org/10.1016/j.jbc.2022.102594

VanDyck, M., Diaz, C. "Uncovering the Biochemical Distribution of the Low Molecular Mass Compounds in the Aggregate Glue of Moth Specialist Spiders." Senior Thesis. Vassar College. May 21st, 2023.

VanDyck, M., Cicena M., Zaheer A. "Michaelis-Menten Kinetics and Inhibition of Calf Intestinal Alkaline Phosphatase." Biochemistry Laboratory. Vassar College. December 7th, 2021.

VanDyck, M., Stella, H. "Purification and Characterization of Green Fluorescent Protein." Biochemistry Laboratory. Vassar College. October 15th, 2021.

VanDyck, M. "Comparing the Thermodynamic Stability of the Possible Major Organic Products of an E1 Reaction." Computational Chemistry Laboratory. Vassar College. May 2021.