

# B.S.

## BACHELOR OF SCIENCE IN BIOCHEMISTRY

*Explore the intricacies of the biomolecular symphony we call life.*

Studying biochemistry is the study of life itself - at the molecular level. It is an interdisciplinary field with foundations in both chemistry and biology.

### Program Overview

- Bachelor of Science
- Major

Stetson's biochemistry program offers a comprehensive instructional program supported by modern laboratory instrumentation, with an emphasis of small class size and close attention to your needs and interests. Studies in the major include macromolecular structure and function, catalytic strategies of enzymes, DNA replication and repair and the molecular understanding of complex processes including development, disease and aging.

We have an outstanding record of placing students beyond Stetson, with students pursuing postgraduate study in a wide range of areas, including physical, biological and forensic sciences and business, law, medical, dental and pharmacy school. As a biochemistry major, you will also be well-prepared to directly enter the workforce as a government, environmental or industrial lab researcher.

### Program Highlights

#### Making a Difference

We are extremely proud of our graduates. Here are a few recent examples of co-authored published works from our alumni:

- **Lacey Lux** - Heat-treatment of metal-organic frameworks for green energy applications, Lux, Lacey and Williams, Kia and Ma, Shengqian; *CrystEngComm* (The Royal Society of Chemistry) 2015 17 (1), 10-22. DOI: 10.1039/C4CE01499E
- **Mary Jane Simpson** - Spatial Localization of Excitons and Charge Carriers in Hybrid Perovskite Thin Films, Mary Jane Simpson, Benjamin Doughty, Bin Yang, Kai Xiao, and Ying-Zhong Ma, *The Journal of Physical Chemistry Letters* 2015 6 (15), 3041-3047. DOI: 10.1021/acs.jpcllett.5b01050
- **Jacob B. Geri** - A Proton-Switchable Bifunctional Ruthenium Complex That Catalyzes Nitrile Hydroboration, Jacob B. Geri and Nathaniel K. Szymczak, *Journal of the American Chemical Society* 2015 137 (40), 12808-12814. DOI: 10.1021/jacs.5b08406

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### Career Significance

Over the last five years, 53 percent of our graduates have continued on to reputable graduate, medical, dental or other health science postgraduate master's and doctoral programs, and 27 percent have entered directly into the workforce.

Our alumni teach in high schools, colleges and universities. Others work in environmental labs and for manufacturers of healthcare and consumer products. Recent alumni have matriculated in postgraduate programs at:

- Notre Dame University
- Duke University
- Georgetown University
- Vanderbilt University
- Colorado State, Massachusetts Institute of Technology
- University of Florida Pharmacy, Dental, Medical and Veterinary Schools
- Johns Hopkins Medical School
- University of Wisconsin
- Stetson University College of Law
- Ohio State University
- University of California – San Francisco
- University of Michigan

## STETSON UNIVERSITY

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- **Jacob B. Geri** - Testing the Push–Pull Hypothesis: Lewis Acid Augmented N<sub>2</sub> Activation at Iron, Jacob B. Geri, James P. Shanahan, and Nathaniel K. Szymczak, *Journal of the American Chemical Society* 2017 139 (16), 5952-5956. DOI: 10.1021/jacs.7b01982
- **Daniel T. Infield** - Formulation of meningococcal capsular polysaccharide vaccine-loaded microparticles with robust innate immune recognition, Ruhi V. Ubale, Martin J. D'souza, Daniel T. Infield, Nael A. McCarty & Susu M. Zughaier (2013) *Journal of Microencapsulation*, 30 (1), 28-41. DOI: 10.3109/02652048.2012.692402
- **Darash Desai** - Rapid and Specific Drug Quality Testing Assay for Artemisinin and Its Derivatives Using a Luminescent Reaction and Novel Microfluidic Technology, Nga T. Ho, Darash Desai, Muhammad H. Zaman, *The American Journal of Tropical Medicine and Hygiene* (2015), 92 (6), 24 – 30. DOI: <https://doi.org/10.4269/ajtmh.14-0392>
- **S.R. Burket** - Determination of nicotine and its metabolites accumulated in fish tissue using hydrophilic interaction liquid chromatography coupled with tandem mass spectrometry, Chang, Y.-W., Nguyen, H. P., Chang, M., Burket, S. R., Brooks, B. W. and Schug, K. A. (2015), *Journal of Separation Science*, 38: 2414–2422. DOI:10.1002/jssc.201500235

## Faculty

Our leading faculty members are highly regarded among Stetson University students and graduates alike.

**W. Tandy Grubbs**, Ph. D., Duke University

**Ramee Indralingam**, Ph. D., University of Florida

**Delphine Prevote Pinet**, Ph. D., University Paul Sabatier, Toulouse, France

**Harry Price**, Ph. D., University of Illinois

**John York**, Ph. D., University of Minnesota

**Paul Sibbald**, Ph. D., University of Washington