



GREGORY RONALD BOYCE

Department of Chemistry
Florida Gulf Coast University
Fort Myers, FL 33965
<http://faculty.fgcu.edu/gboyce/>

EDUCATION

Ph.D. in Synthetic Organic Chemistry; University of North Carolina, Chapel Hill, NC 2011
ACS-Certified B.S. in Chemistry; Emory University, Atlanta, GA 2006
High School Diploma; Saint Thomas Aquinas High School, Fort Lauderdale, FL 2002

PROFESSIONAL EXPERIENCE

Sabbatical at the University of St Andrews, Host: Prof. Andrew D. Smith, Scotland 2020-2021
Associate Professor of Chemistry, Florida Gulf Coast University 2018-present
Assistant Professor of Chemistry, Florida Gulf Coast University 2013-2018
Postdoctoral Researcher, Florida Atlantic University 2012-2013
Visiting Assistant Professor, Mercyhurst University; Erie, PA 2011-2012
Graduate Research with Professor Jeffrey S. Johnson; University of North Carolina, NC 2006-2011
Undergraduate Research with Professor Craig Hill; Emory University, Atlanta, GA 2005-2006

HONORS AND MEMBERSHIPS

President-Elect of the Gamma Sigma Epsilon National Chemistry Honor Society 2019-2021
FGCU Faculty Excellence Award in Mentoring 2019
FGCU Lucas Fellow for Faculty Development 2018-2020
FGCU Junior Faculty Scholarship Excellence Award 2018
Member of Association for Chemoreceptive Sciences (AChemS) 2018-2019
Member of the American Association for the Advancement of Science (AAAS) 2018-present
Executive Member of the Gamma Sigma Epsilon National Chemistry Honor Society 2017-2019
ACS National Organic Symposium Faculty Travel Award 2017
FAME Faculty Travel Award 2017
FGCU Faculty Excellence Award in Mentoring 2017
Associate Member of the Graduate Faculty at Florida Gulf Coast University 2015-present
NSF SPARCT FGCU Grant Awardee 2013-2014
Member of the American Chemical Society 2011-present
Graduate Assistance in Areas of National Need (GAANN) Teaching Fellowship 2009-2010
Francis P. Venable Fellowship (UNC) 2006
Outstanding Undergraduate TA Award for General Chemistry (Emory) 2006

PUBLICATIONS

FGCU Undergraduate Names are in Bold

- 8) **Weeks, K. L.**; Williams, J. D.; Boyce, G. R. "A three-step total synthesis of both enantiomers of α -thujone." *In Preparation for Chem. Commun.*
- 7) **Weeks, K. L.**; **Rutkowski, K. R.**; **Morales Loyola, A. A.**; Boyce, G. R. "Utilization of pyridoxal acetal salts as water-triggered, slow-release pro-fragrances" *New J. Chem.* **2018**, *42*, 15538-15540. *Featured as journal's back cover art.*
- 6) **Yazarians, J. A.**; **Jiménez, B. L.**; Boyce, G. R. "A regioselective etherification of pyridoxine via an *ortho*-pyridinone methide intermediate" *Tetrahedron Letters*, **2017**, *58*, 2258-2260.

- 5) Williams, J. D.; **Yazarians, J. A.**; **Almeyda, C. C.**; Anderson, K. A.; Boyce, G. R. "Detection of the Previously Unobserved Stereoisomers of Thujone in the Essential Oil and Consumable Products of Sage" *J. Agric. Food Chem.*, **2016**, *64*, 4319-4326.

Prior to FGCU

- 4) Boyce, G. R.; Johnson, J. S. "An Asymmetric Vinylogous Michael Cascade of Silyl Glyoximides, Vinyl Grignard, and Nitroalkenes via Long Range Stereoinduction." *J. Org. Chem.* **2016**, *81*, 1712-1717. *Highlighted in Synfacts*, **2016**, *12*, 0409.
- 3) Boyce, G. R.; Greszler, S. N.; Johnson, J. S.; Linghu, X.; Malinowski, J. T.; Nicewicz, D. A.; Satterfield, A. D.; Steward, K. M. "Silyl Glyoxylates. Conception and Implementation of Simple but Useful New Reagents for Multicomponent Coupling." *J. Org. Chem.* **2012**, *77*, 4503-4515.
- 2) Boyce, G. R.; Liu, S.; Johnson, J. S. "Construction of Cyclopentanol Derivatives via Three-Component Coupling of Silyl Glyoxylates, Acetylides, and Nitroalkenes." *Org. Lett.* **2012**, *14*, 652-655. *Highlighted in Synfacts* *8*, 0435.
- 1) Boyce, G. R.; Johnson, J. S. "Three-Component Coupling Reactions of Silyl Glyoxylates, Vinyl Grignard Reagent, and Nitroalkenes: An Efficient, Highly Diastereoselective Approach to Nitrocyclopentanol." *Angew. Chem. Int. Ed.* **2010**, *49*, 8930-8933.

REVIEWS, BOOKS, AND BOOK CHAPTERS

FGCU Undergraduate Names are in Bold

Klootwyk, B. M.; Boyce, G. R. "Tetrachlorocyclopropene" *Encyclopedia of Reagents for Organic Synthesis [Online]*, John Wiley and Sons Ltd. 2019

Weeks, K. L.; Boyce, G. R. "Tris(Dimethylamino)Sulfonium Difluorotrimethylsilicate" *Encyclopedia of Reagents for Organic Synthesis [Online]*, John Wiley and Sons Ltd. 2019

Rutkowski, K. R.; Boyce, G. R. "Copper(2+), [(4S,4'S)-2,2'-(1-methylethylidene)bis[4,5-dihydro-4-phenyloxazole-kN3]]-, bis[(OC-6-11)-hexafluoroantimonate(1-)] and Copper(2+), [(4S,4'S)-2,2'-(1-methylethylidene)bis[4-(1,1-dimethylethyl)-4,5-dihydrooxazole-kN3]]-,bis[tetrafluoroborate(1-)]" *Encyclopedia of Reagents for Organic Synthesis [Online]*, John Wiley and Sons Ltd. 2018

Boyce, G. R.; Johnson, J. S. "tert-Butyl 2-(tert-butyldimethylsilyl)-2-oxoacetate" *Encyclopedia of Reagents for Organic Synthesis [Online]*, John Wiley and Sons Ltd. 2013

INVITED PRESENTATIONS

19 th FloHet, Gainesville, FL	3/2020
18 th FloHet, Gainesville, FL	3/2018
University of South Alabama	2/2018
SoFLACS Keynote Speaker	2/2018
Georgia State University, Atlanta, GA	11/2017
University of West Florida, Pensacola, FL	9/2017
93 rd FAME Conference, Tampa, FL	5/2017
253 rd ACS Meeting; San Francisco, CA (Chair of Session in Organic Chem.)	4/2017

STUDENT PRESENTATIONS AND POSTERS

FGCU Undergraduate Names are in Bold

Quiroz, D. R.; **Foster, J. R.**; Boyce, G. R. "Efforts towards the Total Synthesis of γ -Curcumene" FloHet, Gainesville, FL 3/2020

Lee, R. M.; Boyce, G. R. "Efforts towards the Direct γ -Functionalization of Cyclopentenones" FloHet, Gainesville, FL 3/2020

Pingale, R. S.; Boyce, G. R. "Efforts toward the Total Synthesis of Umbellulone" FloHet, Gainesville, FL 3/2020

Bozor, M. X.; Boyce, G. R. "An Investigation of the azo-Diels-Alder Reaction of Pyridoxal HCl with Imidates"

NOBBChe, St. Louis, MO	11/2019
Quiroz, D. R.; Foster, J. R.; Boyce, G. R. “ <i>Total Synthesis of Curcumene</i> ”	11/2019
Gamma Sigma Epsilon Centennial Convention, Davidson College, Davidson, NC	
Bozor, M. X.; Boyce, G. R. “ <i>Investigation of the Inverse Electron Demand Diels-Alder Chemistry with Pyridoxal HCl</i> ” National Organic Symposium 2019, Bloomfield, IN	6/2019
Klootwyk, B. M.; Muir, J. E.; Boyce, G. R. “ <i>Utilizing Cyclopropanones in Strain-Releasing Methodologies</i> ”	
257 th ACS National Meeting, Orlando, FL	4/2019
Quiroz, D. R.; Foster, J. R.; Boyce, G. R. “ <i>Total Synthesis of γ-Curcumene</i> ”	
257 th ACS National Meeting, Orlando, FL	4/2019
Bozor, M. X.; Boyce, G. R. “ <i>Efforts towards Cycloadditions with Pyridoxal via an ortho-Pyridinone Methide Intermediate</i> ” 257 th ACS National Meeting, Orlando, FL	4/2019
Klootwyk, B. M.; Boyce, G. R. “ <i>Synthesis of Heterofunctionalized Cyclopropanones and Investigation of their Reactivity</i> ” 18 th FLoHet, Gainesville, FL	Best Undergraduate Poster
Steele, J. H.; Boyce, G. R. “ <i>The Fischer Esterification of trans-Cinnamic Acid to Methyl Cinnamate</i> ”	
18 th FLoHet, Gainesville, FL	3/2018
Weeks, K. L.; Boyce, G. R. “ <i>Progress towards the Enantioselective Synthesis of Thujone</i> ”	
18 th FLoHet, Gainesville, FL	3/2018
Martinez, K. L.; Boyce, G. R. “ <i>Enantioselective Synthesis of Thujone</i> ”	
46 th National Organic Symposium, UC Davis, CA	6/2017
Rutkowski, K. R.; Boyce, G. R. “ <i>Endgame for the Total Synthesis of Khusiol</i> ”	
93 rd FAME Conference, Tampa, FL	Picked as Top 5 Undergraduate Poster
Coury, S. A.; Yazarians, J. A.; Boyce, G. R. “ <i>Favorskii-Type Green Synthesis of Acrylates from Cyclopropanones</i> ” 68 th SERMACS; Colombia, SC	10/2016
Jiménez, B. L.; Boyce, G. R. “ <i>Synthesis of 4'-Substituted Amino Derivatives of Pyridoxine</i> ”	
68 th SERMACS, Colombia, SC	10/2016
Rutkowski, K. R.; Boyce, G. R. “ <i>Efforts towards the Concise Total Synthesis of Khusiol</i> ”	
68 th SERMACS, Colombia, SC	10/2016
Williams, J. D.; Yazarians, J. A.; Anderson, K. A.; Boyce, G. R. “ <i>Variations in the enantiomeric composition of thujone-containing essential oils</i> ” 252 nd ACS Meeting; Philadelphia, PA	08/2016
Jiménez, B. L.; Bracken, A.; Boyce, G. R. “ <i>Efforts towards the γ-functionalization of cyclopentenones</i> ”	
SERMACS; Memphis, TN	11/2015
Coury, S. A.; Tokamov, S.; Boyce, G. R. “ <i>Overcoming Aromaticity: Progress Towards the Cyclization of Cyclopropanones</i> ” SERMACS; Memphis, TN	11/2015
Yazarians J. A.; Boyce, G. R. “ <i>Synthesis of Ginkgotoxin and Related Ether Analogs</i> ”	
SERMACS; Memphis, TN	11/2015
Yazarians, J. A.; Almeyda, C. C.; Williams, J.; Boyce, G. R. “ <i>Total Synthesis of Thujone</i> ”	
Gamma Sigma Epsilon Biannual Meeting; University of Pittsburgh at Greensburg, PA	10/2015
Williams, J.; Yazarians, J. A.; Boyce, G. R. “ <i>Ginkgo Biloba: A New Look at an Old Plant</i> ”	
250 th ACS Meeting; Boston, MA	08/2015

MEETINGS ATTENDED

19 th FloHet, Gainesville, FL	3/2020
Centennial Convention of Gamma Sigma Epsilon, Davidson, NC (Planning Committee)	11/2019
257 th ACS National Meeting, Orlando, FL	4/2019
18 th Ischia Advanced School of Organic Chemistry, Naples, Italy	9/2018
22 nd International Conference on Organic Synthesis, Florence, Italy	9/2018
ACChemS XL, Bonita Springs, FL	4/2018
18 th FloHet, Gainesville, FL	3/2018
Gamma Sigma Epsilon Biennial Meeting; Niagara University, NY	10/2017
46 th ACS National Organic Symposium, UC Davis, CA	6/2017
93 rd FAME Conference, Tampa, FL	5/2017
253 rd ACS National Meeting; San Francisco, CA	4/2017
68 th SERMACS; Colombia, SC	10/2016
NSF Chemistry Early CAREER Workshop, Washington, D.C.	3/2016
67 th SERMACS; Memphis, TN	11/2015

Gamma Sigma Epsilon Biennial Meeting; Greensburg, PA	10/2015
249 th ACS Meeting; Denver, CO	3/2015
66 th SERMACS; Atlanta, GA	11/2013

GRANT ACQUISITION

NSF-MRI for Acquisition of a Single Crystal X-Ray Diffractometer, 2019	(co-PI)	\$170,000
NSF-MRI for Acquisition of 400 MHz NMR, 2015	(co-PI)	\$293,600
Seidler Summer Research Fellowship, 2019	(Internal)	\$5,000
FGCU Professional Development Fund, 2018	(Internal)	\$2,700
Seidler Summer Research Fellowship, 2018	(Internal)	\$6,740
Seidler Summer Research Fellowship, 2017	(Internal)	\$9,500
FGCU Small Grant for Preliminary Study, 2016	(Internal)	\$4,500
FGCU Professional Development Fund Grant, 2016	(Internal)	\$1,425

PROFESSIONAL SERVICE

I.) Service to the Discipline

- ❖ Manuscript Reviewer: *ACS Catalysis*, *Tetrahedron*, *Tetrahedron Letters*, *Current Catalysis* and *Current Organic Chemistry*

II.) Service to the Department and University

Founding Faculty Advisor for Gamma Sigma Epsilon National Chemistry Honor Society	2015-present
Research Lab Coordinator for Seidler-422 and Seidler-423	2015-present
Author and Editor of FGCU's <i>Organic Chemistry Lab Manual</i>	2013-present

OUTREACH AND BROADER IMPACTS

NBC News Story "RSW Rental Car Fire Resulted in Potential Contamination of about 50 Acres" April 15, 2020
<https://www.nbc-2.com/story/42012335/rsw-rental-car-fire-resulted-in-potential-contamination-of-about-50-acres>

NBC News Story "Experts say hand sanitizer should not be left in your car"
<https://www.nbc-2.com/story/41939898/experts-say-hand-sanitizer-should-not-be-left-in-your-car> March 26, 2020

FGCU360 Story "Undergraduate Research not just an Experiment at FGCU" June 3, 2019
<https://fgcu360.com/2019/06/03/undergraduate-research-not-just-experiment-fgcu/>

WINK News Story on our research as on vitamin-based chemical delivery March 7, 2019
<https://www.winknews.com/2019/03/07/fgcu-professor-and-students-patent-discovery-that-could-change-medicine/>

WINK News Story on our research as "Molecular Architects" July 25, 2018
<https://www.winknews.com/2018/07/25/fgcu-students-are-creating-molecules-to-help-medication-development/>

Faculty Advisor for FGCU's Global Medical Brigade to Nicaragua (9 days, 21 students) 05/2015

- Highlighted on FGCU360 [<https://360.fgcu.edu/service-learning-students-bring-health-aid-to-nicaragua/>]

Mentor for Samantha Coury who was profiled by *Naples Daily News* for her research in our group 06/2016

- <http://www.naplesnews.com/news/education/graduate-of-distinction-samantha-coury-estero-high-school-33387672-068b-1e54-e053-0100007fc470-381726001.html>

- Research Mentor for 8th Grader Caylee Hill on the *Extraction of Vincristine from Periwinkle* Fall 2014
- Southwest Florida Regional Science Fair "Best of Fair Award" Junior Class 2015
 - Florida State Science Fair "Best of Fair Award" Junior Class 2015
 - Highlighted on NBC-2 News
[<http://www.nbc-2.com/story/28743685/murdock-middle-school-student-honored-statewide-for-work#.Var57PIVhBc>] 2015
 - Highlighted in FGCU's Pinnacle Magazine Article Summer 2015 Issue
- Organized Invasive Plant Species Removal Projects in Koreshan State Park
- Sansevieria Trifasciata* (Chemistry Honor Society Event) May 2015
 - Dioscorea Bulbifera* and *Mimosa Tenuiflora* June 2014