THOMAS H. TUGWELL, M.S.

Phone: **(225) 276-6678**
Email: **thtugwell@gmail.com**

CORE COMPETENCIES

- **Scientific expertise:** seven years of research and development experience, both in groups and on individual projects
- **Creative problem solver:** ability to find innovative solutions to complex issues in a timely manner to optimize work processes
- **Effective communicator:** able to convey complex material and ideas to groups of varying experience levels and expertise by adapting language to fit the needs of the target audience
- **Outstanding leadership skills:** demonstrates capacity to work with and advise a diverse group with ease
- **Strong work ethic and adaptability:** works with integrity; easily adapts to changes in workplace environment

EXPERIENCE

Graduate Research/Teaching Assistant (2015 - 2018)

University of Pittsburgh, Pittsburgh
Advisor: Xinyu Liu, Ph. D.

- Six semesters experience of teaching complex scientific subject matter to students of varying knowledge levels
- Developed a new biochemistry lab course for advanced undergraduate students on the discovery of new and novel antibiotic compounds
- Mastery of carbohydrate chemical reactions and manipulations
- Devised and accomplished pilot total synthesis of A and B blood antigens with terminal linker for DoD funded project (*patent filings expected soon*)
- Scaled A and B-antigen synthesis to gram-scale quantities for use in commercial applications
- Mastery of many chemical characterization techniques, including: NMR spectroscopy (various 1D & 2D methods), Mass spectroscopy, GPC (Gel Permeation Chromatography), Polarimetry for finding optical rotation, IR spectroscopy, and X-Ray Crystallography

Undergraduate Research Assistant (2011 - 2015)

Louisiana State University, Baton Rouge
Advisor: Rendy Kartika, Ph.D.

- Developed a novel versatile method of chlorination using a mixture of triphosgene and pyridine
- Assisted in the investigation into the reactivity of oxyallyl, 2-oxypentadienyl, and 2-oxyhexadienyl alcohols and their applications towards direct carbon-carbon bond formation with indoles

Pennington Biomedical Research Center, Baton Rouge (2010-2011)

Director: *William Cefalu, MD*

- Participated in several human clinical trials, both as an undergraduate student researcher and a test participant
- Learned the process through which new drugs are discovered and approved

SCHOLARSHIPS AND AWARDS

- Safford Award for Excellence, 2017
- TOPS Honors Scholarship Award, 2010-2014
- National Scholars Award, 2010-2014
- Chancellor's Student Aide Award, 2010-2014
- Dean's List, Fall 2011 & Spring 2011

PUBLICATIONS

- Villalpando, A., Saputra, M., **Tugwell, T.**, Kartika, R., "Triphosgene-Pyridine Mediated Stereoselective Chlorination of Acyclic Aliphatic 1,3-Diols". *Chemical Communications* (Cambridge, England). 51, **2015**.
- R. Stepherson, J., Ayala, C., **Tugwell, T.**, Henry, J., R. Fronczek, F., Kartika, R., "Carbazole Annulation via Cascade Nucleophilic Addition-Cyclization Involving 2-(Silyloxy)pentadienyl Cation". *Org. Letters*, 18, 3002-3005, **2016**.

EDUCATION

Masters of Science in Organic Chemistry

University of Pittsburgh, Pittsburgh
G.P.A: 3.32
Degree Conferred: December 2018
Advisor: Dr. Xinyu Liu, Ph. D.

Bachelor of Science in Chemistry

Louisiana State University, Baton Rouge
Cumulative G.P.A. 3.36; Chemistry G.P.A. 3.65
Degree Conferred: May 2015
Advisor: Rendy Kartika, Ph.D.