

## Jason A. Carr, Ph.D - *Curriculum Vitae*

### **Work Experience**      2018 - 2020 Lecturer at Augusta University

- Lecturer of General and Organic Chemistry

### **2011 – 2018 Associate Professor and Dept Chair of Chemistry, Nazarbayev University**

- Served as department Chair (2011-2016) and was responsible for curriculum development and implementation, establishing a department with research-active faculties and modern instrumentation.
- Served as active member of faculty senate, serving as chair of CFRR (Committee on Faculty Rights and Responsibilities)
- Engage students in undergraduate research leading to peer-reviewed publication
- Developed an array of new courses with focus on problem-based solving with a focus on incorporating research with teaching

### **2008- 2011 Assistant Professor of Chemistry, University of Louisiana at Monroe**

- Lecturer of Organic Chemistry, Biochemistry and upper-level Chemical sciences
- Principal Investigator in the development of targeted therapeutics targeting infectious diseases and life-threatening illnesses.
- Serve on several University Committees such as the Curriculum Committee, University Research Committee, University Reaccreditation Committee

### **2006-2008 Assistant Professor of Chemistry, PHCC**

### **2005- 2006 Scientist I (Post-Doc)– Roskamp Institute, Florida**

- Design and synthesis of compounds novel pharmacologically active chemicals
- Solid-phase synthesis of peptidomimetics
- Solution-phase synthesis of hetero-cycles as lead compounds
- Worked on lead identification and organic molecules design towards therapeutics and to validate novel mechanisms for treating Alzheimer's disease.
- Applied synthetic and mechanistic organic chemistry principles supplemented with knowledge of medicinal chemistry for design of novel proprietary compounds.

### **Education**      1999 – 2004 University of South Florida, Tampa, Florida

### **Ph. D. – Synthetic Bio-Organic Chemistry**

Dissertation "The Utilization of Enzymes in the Synthesis and Modification of Natural and Non-natural compounds: A chemo-enzymatic Approach to Enantiomerically Pure Compounds"

**1997 – 1999 New College of Florida, Sarasota, Florida**

**B.A. - Chemistry**

**Professional  
Membership**

- Member of the Quachita Parish division of the American Chemical Society; serve as local chair 2010-2011
- Member of the American Chemical Society (Organic division)
- Member of the Younger Chemist Society (ACS)
- Member of IUPAC (International Union of Pure and Applied Chemistry)

**Technical Skills**

- Experience in solid-phase and solution-phase synthesis
- Adept user of Bruker X-Win NMR software (automation and manual); Nicolet FT-IR and UV/Visible spectrometers (CARY -1) and related spectral analysis software.
- User of Varian Inova 500-MHz NMR (both software as well as instrument maintenance) and 300MHz/500MHz JEOL NMR spectrometer. Skilled at basic instrument maintenance.
- Developing standard operating procedures and laboratory practices in a research laboratory environment.
- Skilled at working in air/moisture sensitive materials
- Practical experience with CN soil analyzer for elemental analysis.
- Skilled at using Agilent HPLC for substance purification.
- Experienced user of molecular modeling packages (Hyperchem, Chem 3D).
- Knowledge of chemical databases and retrieval methods
- Excellent working knowledge in computers: of MS-DOS, Windows XP, word processing (MS-Word and Word-Perfect), data-retrieval and several chemical drawing packages.

**Grants Awarded**

- University of Louisiana Start-Up Grant - \$20,000 USD (2008)
- Nazarbayev University Start-Up Grant - \$25,000 USD (2011)
- ORAU Grant – "Novel Catalyst from macrocyclic pillar[n]arenes - \$717,000 USD (2012)

**Abstracts  
& Selected  
Publication**

- Panda, Siva S.; Carr, Jason A. 2020 "Bicyclic 6-6 systems with one bridgehead (ring junction) nitrogen atom: four extra heteroatoms 2:2" Comprehensive Heterocyclic Chemistry IV, Elsevier Science.
- Sembayeva, Aliya; Berhaine, Ben; Carr, Jason A. 2017 "Lipase-mediated regioselective modification of macrolactonic sophorolipids" *Tetrahedron*, 77, 14, 1873-1880.
- Sembayeva, Aliya; Carr, Jason A. 2015 "Lipase-mediated modification of peracylated macrolactonic sophorolipids" ACS National Meeting and Exposition, Denver CO.
- Junk, T., Carr, J.A. 2013 "Preparation of deuterium-labeled biotransformation products of 2,4,6-trinitrotoluene" *Journal of Labelled Compounds and Radiopharmaceuticals*, 56(7), 344-346.
- Zehnder, R.A., Renn, R.A., Pippin, E., Zeller, M., Wheeler, K.A., Carr, J.A., Fontaine, N., McMullen, N.C. 2011 "Network dimensionality and ligand flexibility in lanthanide terephthalate hydrates." *Journal of Molecular Structure*, 985, 109-119.

- Broutin, Pierre-Emmanuel F.-X.; Laporte, Vincent; Lincoln, Christopher M.; Carr, Jason A.; Mullan, Michael; Bakshi, Pansham. **2006** "Novel gamma-secretase transition state analogs as A $\beta$  inhibitors" Abstracts of Papers, 231st ACS National Meeting, Atlanta, GA, United States, March 26-30, 2006.
- Carr J.A., Al-Azemi T.F., Long T.E., Shim J.Y., Coates C.M., Turos E, Bisht K.S. **2003** "Lipase-Catalyzed Resolution of 4-Aryl-Substituted  $\beta$ -Lactams: Effect of Substitution on the 4-Aryl Ring" *Tetrahedron*, 59, 9147.
- Carr J.A., Bisht K.S. **2003** "Enzyme-Catalyzed Regioselective Transesterification of Peracylated Sophorolipids." *Tetrahedron*, 59, 7713.
- Carr J.A., Bisht K.S. **2004** "Enantioselective Synthesis of Imperanene via Enzymatic Asymmetrization of an Intermediary 1,3-Diol." *Organic Letters*, 6, 3297, 2004.
- Carr J.A., Bisht K.S., Long T.F., Turos E. **2002** "Lipase-Catalyzed Resolution of 4-Aryl-Substituted  $\beta$ -Lactams: Effect of Substitution on the 4-Aryl Ring" *223rd ACS National Meeting*, Orlando, FL.
- Carr J.A., Bisht K.S. **2003** "Enzyme-Catalyzed Regioselective Transesterification of Peracylated Sophorolipids" Third annual Raymond Castle Research Conference, Tampa, FL.
- Carr J.A. **2006** "Chemo-enzymatic synthesis of Imperanene, a natural anticoagulant" 227rd ACS National Meeting, Anaheim, CA
- Carr J.A. **2002** "Lipase-Catalyzed Resolution of 4-Aryl-Substituted  $\beta$ -Lactams: Effect of Substitution on the 4-Aryl Ring" *223rd ACS National Meeting*, Orlando, FL.
- Carr J.A. **2003** "Synthesis of Carbocyclic Nucleoside as Potential Antiviral Agents" 1st annual Raymond Castle Research Conference, Tampa, FL.