

Julien BRIOCHE, Ph.D.

Maître de Conférences — Assistant Professor

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Experience

- Since Sept. 2015** Maître de Conférences — Assistant Professor (IRCOF-Rouen, UMR 6014 CNRS-COBRA, FR)
• *Fluorinated Biomolecules team*, directed by Prof. Xavier Pannecoucke
- Jan. 2014-Aug. 2015** Postdoctoral Associate / University of Manchester (Manchester, UK)
Advisors: **Prof. Jonathan Clayden**
• *Conformation Control of polypeptides for Transmembrane communication*
- Nov. 2011-Oct. 2013** Postdoctoral Associate / École Supérieure de Physique et de Chimie Industrielles (Paris, FR)
Advisors: **Prof. Janine Cossy** and **Dr. Christophe Meyer**
• *Development of new chemical transformations using ynamides*
- Nov. 2010-Oct. 2011** Postdoctoral Associate / École Polytechnique (Palaiseau, FR)
Advisor: **Prof. Samir Zard**
• *Preparation of unsaturated motives by a process of radical transfer/elimination reaction using xanthates as radical precursors and total synthesis of natural products*
- Jan. 2009-Oct. 2010** Postdoctoral Associate / Institut de Chimie des Substances Naturelles (Gif sur Yvette, FR)
Advisors: **Prof. Jieping Zhu** and **Dr. Géraldine Masson**
• *Development of isocyanide-based multi-component reactions under oxidative conditions and asymmetric organocatalyzed multi-component reactions*
- Oct. 2005-Oct. 2008** Graduate Research Assistant / University of Sheffield (Sheffield, UK)
Advisor: **Prof. Joseph Harrity**
• *Synthesis of functionalized pyrans from epoxides and application in total synthesis of natural products*
• *Development of a palladium-catalyzed [1,3]-O-to-C rearrangement of pyrans towards functionalized cyclohexanones*
- Oct. 2004-Jul. 2005** Undergraduate Research Assistant / University of Rennes 1 (Rennes, FR)
Advisor: **Dr. René Grée**
• *Design and synthesis of a new class of PPAR agonists*
- Mar. 2004-Aug. 2004** Industrial Placement / Eli Lilly (Mont-Saint Guibert, BE)
Advisor: **Dr. Alfio Borghese**
• *Development of alternative routes to a candidate molecule for clinical tests*
- May 2003-Jun. 2003** Undergraduate Research Opportunities Program / University of Rennes 1 (Rennes, FR)
Advisors: **Prof. Pierre-Henri Dixneuf** and **Dr. Cédric Fischmeister**
• *Synthesis of Imidazolium salts and their application as Arduengo Carbenes in olefins metathesis*

Education

- 2005-2008** Ph.D. in Organic Chemistry / University of Sheffield (Sheffield, UK)
2004-2005 Master Research in Organic Chemistry / University of Rennes 1 (Rennes, FR)
2003-2004 Maîtrise de Chimie Organique / University of Rennes 1 (Rennes, FR)
2002-2003 Licence de Chimie Organique / University of Rennes 1 (Rennes, FR)
2000-2002 DEUG Science de la Matière / University of Rennes 1 (Rennes, FR)

Conferences

- Sept. 2013** Journée de Chimie Organique, **Poster** (Palaiseau, FR)
Mar. 2011 9^{èmes} Rencontres de Chimie Organique, **Poster** (Versailles, FR)
Aug. 2010 Groupe d'Étude de Chimie Organique, **Lecture** (La Grande Motte, FR)
Jun. 2009 XII Symposium-ICSN, **Poster**, (Gif sur Yvette, FR)
Sept. 2008 GlaxoSmithKline Case Award, **Lecture** (GSK-Tonbridge, UK)
Jul. 2008 11th Belgian Organic Synthesis Symposium, **Poster** (Gent, BE)
Nov. 2007 International Conference J-NOST, **Lecture**, (Amritsar, IN)
Oct. 2007 AstraZeneca Medicinal Chemistry Course, **Lecture** (AZ-Charnwood, UK)

Publications

- [8] **Brioche, J.**; Pike, J. S.; Tshepelevitsh, S.; Leito, I.; Morris, G. A.; Webb, S. J.; Clayden, J. J. *Am. Chem. Soc.* **2015**, *137*, 6680-6691: *Conformational Switching of a Foldamer in a Multi-Component system by pH-Filtered Selection between Competing Non-Covalent Interactions*
- [7] **Brioche, J.**; Courant, T.; Alcaez, L.; Stocks, M.; Furber, M.; Zhu, J.; Masson, G. *Adv. Synth. Cat.* **2014**, *356*, 1719-1724: *Chiral Phosphoric Acid-Catalyzed Enantioselective Three-Component Aza-Diels-Alder Reactions of Aminopyrroles and Aminopyrazoles*
- [6] **Brioche, J.**; Meyer, C.; Cossy, J. *Org. Lett.*, **2013**, *15*, 1626-1629: *Synthesis of Functionalized Allenamides from Ynamides by Enolate Claisen Rearrangement*
- [5] **Brioche, J.**; Michalak, M.; Quiclet-Sire, Zard, S. Z. *Org. Lett.*, **2011**, *13*, 6296-6299: *Elimination Versus Ring Opening: A Convergent Route to Alkylidene Cyclobutenes*
- [4] **Brioche, J. C. R.**; Barker, T. A.; Whatrup, D. J.; Barker, M. D.; Harrity, J. P. A. *Org. Lett.* **2010**, *12*, 4832-4835: *Palladium-Catalyzed [1,3]-O-to-C Rearrangement of Pyrans towards Functionalized Cyclohexanones*
- [3] **Brioche, J.**; Masson G.; Zhu, J. *Org. Lett.* **2010**, *12*, 1432-1435: *Passerini Three-Component Reaction of Alcohols under Catalytic Aerobic Oxidative Conditions*
- [2] **Brioche, J. C. R.**; Goodenough, K. M.; Whatrup, D. J.; Harrity, J. P. A. *J. Org. Chem.* **2008**, *73*, 1946-1953: *Investigation of an Organomagnesium Based [3+3] Annulation to Pyrans and its Application in the Synthesis of Rhopaloic Acid A*
- [1] **Brioche, J. C. R.**; Goodenough, K. M.; Whatrup, D. J.; Harrity, J. P. A. *Org. Lett.* **2007**, *9*, 3941-3943: *A [3+3] Annulation Approach to (+)-Rhopaloic Acid B*

Review

- [1] Lalli, L.; **Brioche, J.**; Bernadat, G.; Masson, G. *Curr.Org. Chem.* **2011**, *24*, 4108-4127:
Catalytic Enantioselective Cycloaddition with Chiral Lewis Bases

Patent

- [1] Servier Industry; Grée, R.; Liutuks, M.; Caijo, F.; **Brioche, J.**; Jannequin, T.; Dacquet, C.; Ktorza, A.; Caignard, D.-H WO2007FR0195 20071129; Publication Date: 10-07-2008: *Novel Heterocyclic Derivatives, Methods for Preparing them and Pharmaceutical Compositions Containing them*

Expertise and Skills

Organic Chemistry	Multi-steps synthesis, total synthesis of natural products, organometallic chemistry, free radical chemistry, multi-component chemistry, organo-catalysis, organometallic-catalysis, chemistry of ynamides, synthesis of polypeptides.
Analytic Methods	NMR: 1D, 2D, NOESY, VT / HPLC / GC / GCMS / LCMS / IR.
Language	French (mother tongue) and English (fluent).