# Glenn Christopher Micalizio, Ph.D.

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# **EDUCATION AND EXPERIENCE**

**2013-present:** Dartmouth College, New Hampshire Professor of Chemistry

**2013-present:** Dartmouth Hitchcock Medical Center, Investigator at the Norris Cotton Cancer

Center and Member of the Cancer Biology and Therapeutics Program

**2013-present:** Dartmouth College, Professor

**2008-2013:** The Scripps Research Institute, Associate Professor with Tenure

2003-2008 Yale University, Assistant Professor

2001-2003 Harvard University, Postdoctoral Fellow

**1996-2001** University of Michigan, Ph.D.

1994-1996 Ciba-Geigy/Novartis (Summit, NJ), Drug Discovery

**1992-1996** Ramapo College, B.S. Chemistry

Postdoctoral Mentor: Professor Stuart L. Schreiber

Doctoral Mentor: Professor William R. Roush

### **AWARDS AND HONORS**

2017	Frontiers in Chemistry Lectureship, Western Michigan University
2013	Endowed Chair: New Hampshire Professor of Chemistry at Dartmouth College
2013	Lilly Lecturer, Harvard University
2013	Warner Lambert Lecturer, Wayne State University
2008	Visions in Chemistry Award – Sanofi Aventis
2008	Grandpierre Lecturer, Columbia University
2007	Boehringer Ingelheim New Investigator Award
2007	University of Michigan Kasimir Fajans Award in Chemistry
2007	Lilly Distinguished Lecturer, Colorado State University
2006	Lilly Grantee Award
2006	American Cancer Society Research Scholar Award
2006	Yale University Junior Faculty Fellowship in the Natural Sciences
2005	Beckman Young Investigator Award

2004 Thieme Chemistry Journals Award

2003 Lilly New Faculty Award

2002 Pfizer Fellow of the Natural Products Gordon Research Conference

**2001-2003** Helen Hay Whitney Foundation Postdoctoral Fellowship

2001 NIH Postdoctoral Fellowship (declined)

**2000-2001** Rackham Predoctoral Fellow (University of Michigan)

1999-2000 American Chemical Society Division of Organic Chemistry Fellow

**1999** Roche Award for Excellence in Organic Chemistry

1996 American Institute of Chemists Award1996 American Chemical Society Award

## **PUBLICATIONS**

- (84) R. Karmakar, A. Rheingold, **G. C. Micalizio**, "Studies Targeting Ryanodol Result in an Annulation Reaction for the Synthesis of a Variety of Fused Carbocycles" *Org. Lett.* **2019**, *21*, 6126-6129.
- (83) R. M. Leon, D. Ravi, J. S. An, C. L. del Genio, A. Rheingold, A. B. Gaur, **G. C. Micalizio**, "Synthesis of C14-Desmethylene Corialactone D and the Discovery of Inhibitors of Nerve Growth Factor-Mediated Neurite Outgrowth" *Org. Lett.* **2019**, *21*, 3193-3197.
- (82) W. S. Kim, Z. A. Shalit, S. Nguyen, E. Schoepke, A. Eastman, T. P. Burris, A. B. Gaur, G. C. Micalizio, "A Synthesis Strategy for Tetracyclic Terpenoids Leads to Agonists of ERβ" Nature Commun. 2019, 10, article #2448 (DOI: 10.1038/s41467-019-10415-6).
  - Covered in news stories by: EurkAlert!, Phys.org, 7<sup>th</sup> Space Family Portal, Technology Networks, Lab Manager, Environmental News Network, Long Room, and True Viral News.
  - As of August 15<sup>th</sup>, this manuscript has an Altmetric score of 58, placing it in the 95<sup>th</sup> percentile of the >230,000 tracked articles of similar age.
- (81) A. B. Millham, M. J. Kier, R. M. Leon, R. Karmakar, Z. D. Stempel, **G. C. Micalizio**, "A Complementary Process to Pauson–Khand-type Annulation Reactions for the Construction of Fully Substituted Cyclopentenones" *Org. Lett.* **2019**, *21*, 567-570.
- (80) K. Du, M. J. Kier, A. Rheingold, **G. C. Micalizio**, "Toward the Total Synthesis of Ryanodol via Oxidative Alkyne–1,3-Diketone Annulation: Construction of a Ryanoid Tetracycle" *Org. Lett.* **2018**, *20*, 6457-6461.
  - · Selected as an "ACS Editors' Choice" article.
  - "One of the top ten" most read publication in Organic Letters in October of 2018.
- (79) H. T. Wai, K. Du, J. Anesini, W. S. Kim, A. Eastman, **G. C. Micalizio**, "Synthesis and Discovery of Estra-1,3,5(10),6,8-pentaene-2,16α-diol" *Org. Lett.* **2018**, *20*, 6220-6224.

- (78) *Invited Article in Honor of Professor Gordon Gribble*:
  - Z. A. Shalit, **G. C. Micalizio** "A Highly Chemo-, Regio-, and Stereoselective Metallacycle-Mediated Annulation Between a Conjugated Enyne and an Ene-Diyne" *Arkivoc*, **2018**, 132-138.
- (77) W. S. Kim, K. Du, A. Eastman, R. P. Hughes, **G. C. Micalizio** "Synthetic *nat* or *ent*-steroids in as few as five chemical steps from epichlorohydrin" *Nat. Chem.* **2018**, *10*, 70-77.
  - Covered in news stories by: News-medical.net, Phys.org, drug discovery and development mag, UPI, EurekAlert, Science Codex, Biocompare, technologynetworks.com, Long Room, Science Newsline, The Medical News, Health Medicinet, Bionity, bioengineer.org, bionity.com, Breitbart, Medicalnewser.com, ADC Voice, Iran Daily, BrightSurf.com, and drug target review.
  - Featured on the cover of Nature Chemistry.
- (76) N. F. O'Rourke, Mu A.; H. N. Higgs, A. Eastman, **G. C. Micalizio** "Function-Oriented Studies Targeting Pectenotoxin 2: Synthesis of the GH-Ring System and a Structurally Simplified Macrolactone" *Org. Lett.* **2017**, *19*, 5154-5157.
  - Selected as an ACS Editors' Choice manuscript.
- (75) M. J. Kier, R. M. Leon, N. F. O'Rourke, **G. C. Micalizio** "Synthesis of Highly Oxygenated Carbocycles by Stereoselective Coupling of Alkynes to 1,3- and 14,-Dicarbonyl Systems" *J. Am. Chem. Soc.* **2017**, *139*,12374-12377.
- (74) X. Cheng, **G. C. Micalizio** "The Application of Metallacycle-mediated Cross-coupling to the Synthesis of Neurotrophic *seco-*Prezizaane Natural Products" *invited Chapter in Strategies and Tactics in Organic Synthesis vol.* 13, **2017**, 35-54.
- (73) **G. C. Micalizio**, H. Mizoguchi "The Development of Alkoxide-Directed Metallacycle-Mediated Annulative Cross-Coupling Chemistry" *invited Review* in an issue dedicated to Professors Stuart L. Schreiber and K. C. Nicolaou for their receipt of the Wolf Prize *Isr. J. Chem.* **2017**, *57*, 228-238.
- (72) H. Mizoguchi, **G. C. Micalizio** "Synthesis of Angularly Substituted *trans*-Fused Decalins through a Metallacycle-Mediated Annulative Cross-Coupling Cascade" *Angew. Chem. Int. Ed.* **2016**, *55*, 13099-13103.
- (71) **G. C. Micalizio**, N. F. O'Rourke, M. J. Kier "Metallacycle-mediated Cross-Coupling in Natural Product Synthesis" *invited Report Tetrahedron*, **2016**, *72*, 7093-7123.
- (70) J. S. Cassidy, H. Mizoguchi, **G. C. Micalizio** "Acceleration of Metallacycle-mediated Alkyne–Alkyne Cross-coupling with TMSCI" *Tetrahedron Lett.* **2016**, *57*, 3848-3850.
  - Graphical abstract selected to appear on the cover of the journal.
- (69) C. Aquino, S. N. Greszler, **G. C. Micalizio** "Access to the Cortistatin Pentacyclic Core by Alkoxide-Directed Metallacycle-Mediated Annulative Cross-Coupling" *Org. Lett.* **2016**, *18*, 2624-2627.

- (68) N. F. O'Rourke, **G. C. Micalizio** "Cyclopropenes in Metallacycle-Mediated Cross-Coupling with Alkynes: Convergent synthesis of highly substituted vinylcyclopropanes" *Org. Lett.* **2016**, *18*, 1250-1253.
  - Selected by the Editorial Board to be featured in *Synfacts*: **2016**, *12*(05): 0521 (DOI: 10.1055/s-0035-1561993).
  - Included in ACS Organic Chemistry Highlights (Dec. 12, 2016 <a href="https://www.organic-chemistry.org/Highlights/2016/12December.shtm">www.organic-chemistry.org/Highlights/2016/12December.shtm</a>).
- (67) X. Cheng, **G. C. Micalizio** "Synthesis of Neurotrophic Seco-prezizaane Sesquiterpenes (1R,10S)-2-oxo-3,4-dehydroneomajucin, (2S)-hydroxy-3,4-dehydroneomajucin, and (–)-ijadifenin" J. Am. Chem. Soc. **2016**, 138, 1150-1153.
  - Featured J. Am. Chem. Soc. Spotlight: <a href="http://pubs.acs.org/doi/pdf/10.1021/jacs.6b00793">http://pubs.acs.org/doi/pdf/10.1021/jacs.6b00793</a>.
  - Selected by the Editorial Board to be featured in *Synfacts*: 2016, 12(04): 0336 (DOI: 10.1055/s-0035-1561830).
- (66) H. Mizoguchi, **G. C. Micalizio** "Synthesis of Highly Functionalized Decalins via Metallacycle-Mediated Cross-Coupling" *J. Am. Chem. Soc.* **2015**, *137*, 6624-6628.
- (65) **G. C. Micalizio**, S. Hale "Reaction Design, Discovery, and Development as a Foundation to Function-Oriented Synthesis" *Acc. Chem. Res. (invited)*, **2015**, *48*, 663-673.
- (64) <u>Invited Article in Honor of the Memory of Professor Harry Wasserman:</u>
  - W. S. Kim, C. Aquino, Mizoguchi, H.; **G. C. Micalizio** "LiOO*t*-Bu as a Terminal Oxidant in a Titanium-Mediated [2+2+2] Reaction Cascade" *Symposium-in-Print, Tetrahedron Lett.* **2015**, *56*, 3557-3559.
- (63) X. Cheng, **G. C. Micalizio** "An Annulation Reaction for the Synthesis of Cross-Conjugated Triene-containing Hydroindanes from Acyclic Precursors" *Org. Lett.* **2014**, *16*, 5144-5147.
  - Selected by the Editorial Board to be featured in *Synfacts*: **2015**, *11*(01): 0071 (DOI: 10.1055/s-0034-1379649).
- (62) V. Jeso, C. Aquino, X. Cheng, H. Mizoguchi, M. Nakashige, **G. C. Micalizio**, "Direct Synthesis of Angularly Substituted Trans-fused Hydroindanes by Convergent Coupling of Acyclic Precursors" *J. Am. Chem. Soc.* **2014**, *136*, 8209-8212.
  - Highlighted as a JACS Spotlight: J. Am. Chem. Soc. 2014, 136, 8837-8838.
- (61) Invited review: Comprehensive Organic Synthesis II
  - **G. C. Micalizio** "Early Transition Metal-Mediated Reductive Coupling Reactions" In: Comprehensive Organic Synthesis, 2<sup>nd</sup> edition; Gary A. Molander and Paul Knochel (eds.), Oxford: Elsevier; **2014**; Vol. 5; pp. 1660-1737.
- (60) X. Li, V. Jeso, S. Heyward, G. S. Walker, R. Sharma, **G. C. Micalizio**, M. D. Cameron, "Characterization of T-5 N-oxide Formation as the First Highly Selective Measure of CYP3A5

- Activity" Drug Metabolism and Disposition, 2014, 42, 334-342.
- (59) D. P. Canterbury, O. Kubo, K. N. Scott, J. L. Cleveland, **G. C. Micalizio**, "Synthesis of C11-Desmethoxy Soraphen A<sub>1a</sub>: A natural product analog that inhibits acetyl-CoA carboxylase" *ACS Med. Chem. Lett.* **2013**, *4*, 1244-1248.
- (58) D. Yang, **G. C. Micalizio**, "Stereochemical Lability of Azatitanacyclopropanes and an Efficient Dynamic Kinetic Reoslution in Reductive Cross-Coupling Reactions with Allylic Alcohols" *Chem. Commun.* **2013**, *49*, 8857-8859.
- (57) V. Jeso, S. Iqbal, P. Hernandez, M. D. Cameron, H. Park, P. V. LoGrasso, **G. C. Micalizio** "Synthesis of Benzoquinone Ansamycin-Inspired Macrocyclic Lactams from Shikimic Acid" *Angew. Chem. Int. Ed.* **2013**, *52*, 4800-4804.
- (56) V. Jeso, C. Yang, M. D. Cameron, J. L. Cleveland, **G. C. Micalizio** "Synthesis and Structure—Activity Relationships of Lehualide B A Marine-derived Natural Product with Potent Anti-Multiple Myeloma Activity" *ACS Chemical Biology*, **2013**, *8*, 1241-1252.
- (55) V. Jeso, **G. C. Micalizio** "Relay catalysis at a boron centre" *Nature* (News and Views) **2013**, *494*, 179-181.
- (54) M. Sarkar, B. D. Pascal, C. Steckler, C. Aquino, G. C. Micalizio, T. Kodadek, M. J. Chalmers "Decoding Split-and-Pool Combinatorial Libraries with Electron Transfer Dissociation Tandem Mass Spectrometry" J. Am. Soc. Mass Spec. 2013, 24, 1026-1036.
- (53) O. Kubo, D. P. Canterbury, **G. C. Micalizio** "Synthesis of the C1-C26 Hexacyclic Subunit of Pectenotoxin 2" *Org. Lett.* **2012**, *14*, 5748-5751.
- (52) D. Yang, **G. C. Micalizio** "Synthesis of Alkaloid (–)-205B via Stereoselective Reductive Cross-Coupling and Intramolecular [3+2] Cycloaddition" *J. Am. Chem. Soc.* **2012**, *134*, 15237-15240.
  - Included in ACS-Organic Chemistry Highlights (April 29, 2013; <a href="http://www.organic-chemistry.org">http://www.organic-chemistry.org</a>).
  - Selected by the Editorial Board to be featured in *Synfacts*: **2012**, *8*(12): 1281 (DOI: 10.1055/s-0032-1317548).
- (51) P. S. Diez, **G. C. Micalizio** "Convergent Synthesis of Deoxypropionates" *Angew. Chem. Int. Ed.* **2012**, *51*, 5152-5156.
  - Included in ACS-Organic Chemistry Highlights (February 25, 2013; http://www.organic-chemistry.org).
- (50) S. N. Greszler, H. A. Reichard, **G. C. Micalizio**, "Asymmetric Synthesis of Dihydroindanes by Convergent Alkoxide-Directed Metallacycle-Mediated Bond Formation" *J. Am. Chem. Soc.* **2012**, *134*, 2766-2774.
- (49) M. Z. Chen, **G. C. Micalizio** "Three-Component Coupling Sequence for the Regiospecific Synthesis of Substituted Pyridines" *J. Am. Chem. Soc.* **2012**, *134*, 1352-1356.
  - Included in ACS-Organic Chemistry Highlights (October 15, 2012; <a href="http://www.organic-">http://www.organic-</a>

# chemistry.org).

- Selected by the Editorial Board to be featured in *Synfacts*: **2012**, *8*(03): 0253 (DOI: 10.1055/s-0031-1290283).
- Highlighted in ChemistryViews: http://www.chemistryviews.org/details/news/1425891/New Route to Pyridines.html
- (48) C. Aquino, M. Sarkar, M. J. Chalmers, K. Mendez, T. Kodadek, **G. C. Micalizio** "A Biomimetic Polyketide-Inspired Approach to Small Molecule Ligand Discovery" *Nature Chem.* **2012**, *4*, 99-104.
  - Highlighted in *Nature Chemistry* as a News & Views article: J. Aubé, "Small-molecule libraries: Naturally inspired oligomers" *Nature Chem.* **2012**, *4*, 71-72.
  - Highlighted in SciBX **4**(48): "High throughput identification of chiral oligomers of pentenoic amides (COPAs) as protein ligands" doi: 10.1038/scibx.2011.1362.
  - Selected and Highlighted by the Faculty of 1000 (F1000).
  - Highlighted in Chemical & Engineering News "A Look Back", December 23, 2013, pg 32-35.
- (47) <u>Invited review</u>: Science of Synthesis Knowledge Updates 2012/4
  - **G. C. Micalizio** "Titanium-Mediated Reductive Cross-Coupling (Intermolecular Metallacycle-Mediated C–C Bond Formation)" *Science of Synthesis*, **2012**, 33-97.
- (46) D. Yang, **G. C. Micalizio**, "Convergent and Stereodivergent Synthesis of Complex 1-Aza-7-Oxabicyclo[2.2.1]heptanes" *J. Am. Chem. Soc.* **2011**, *133*, 9216-9219.
- (45) M. A. Tarselli, K. M. Raehal, A. K. Brasher, C. Groer, M. D. Cameron, L. M. Bohn, G. C. Micalizio, "Synthesis of Conolidine, a Potent Non-Opioid Analgesic for Tonic and Persistent Pain" *Nature Chem.* 2011, 3, 449-453.
  - Highlighted in *Nature* (News & Views): S. E. Reisman, "New Lead for Pain Treatment" *Nature* **2011**, *473*, 458-459.
  - Recognized as a Top 10 Science Business Story for 2011 Science Business: http://sciencebusiness.technewslit.com/?p=7618 (ranked #2).
- (44) V. Jeso, L. Cherry, T. K. Macklin, S. C. Pan, P. V. LoGrasso, **G. C. Micalizio** "Convergent Synthesis and Discovery of a Natural Product-Inspired Paralog-Selective Hsp90 Inhibitor" *Org. Lett.* **2011**, *13*, 5108-5111.
- (43) D. P. Canterbury, **G. C. Micalizio**, "Convergent Route to the CDEF Tetracycle of Pectenotoxin-2" *Org. Lett.* **2011**, *13*, 2384-2387.
- (42) *Invited Perspective Article:* 
  - H. A. Reichard, **G. C. Micalizio**, "Metallacycle-Mediated Cross-Coupling with Substituted and Electronically Unactivated Alkenes" *Chem. Sci.* **2011**, *2*, 573-589.
- (41) Invited Article in Honor of Professor Harry Wasserman:
  - D. Yang, J. K. Belardi, G. C. Micalizio, "Generation of guaternary centers by reductive cross-

- coupling: shifting of regioselectivity in a subset of allylic alcohol-based coupling reactions" *Tetrahedron Lett.* **2011**, *52*, 2144-2147.
- (40) M. Z. Chen, M. McLaughlin, M. Takahashi, M. A. Tarselli, D. Yang, S. Umemura, G. C. Micalizio, "Preparation of Stereodefined Homoallylic Amines from the Reductive Cross-Coupling of Allylic Alcohols with Imines" J. Org. Chem. 2010, 75, 8048-8059.
- (39) V. Jeso, **G. C. Micalizio**, "Total Synthesis of Lehualide B by Allylic Alcohol–Alkyne Reductive Cross-Coupling" *J. Am. Chem. Soc.* **2010**, *132*, 11422-11424.
  - Included in ACS-Organic Chemistry Highlights (May 30, 2011; http://www.organic-chemistry.org).
- (38) P. S. Diez, **G. C. Micalizio**, "Chemoselective Reductive Cross-Coupling of 1,5-Diene-3-ols with Alkynes: A Facile Entry to Stereodefined Skipped Trienes" *J. Am. Chem. Soc.* **2010**, *132*, 9576-9578.
  - Included in ACS-Organic Chemistry Highlights (May 30, 2011; http://www.organic-chemistry.org).
- (37) D. P. Canterbury, **G. C. Micalizio**, "Polyketide Assembly by Alkene–Alkyne Reductive Cross-Coupling: Spiroketals Through the Union of Homoallylic Alcohols" *J. Am. Chem. Soc.* **2010**, *132*, 7602-7604.
  - Included in ACS-Organic Chemistry Highlights (November 29, 2010; http://www.organic-chemistry.org).
- (36) T. K. Macklin, **G. C. Micalizio**, "Convergent and Stereospecific Synthesis of Skipped Polyenes and Polyunsaturated Fatty Acids" *Nature Chem.* **2010**, *2*, 638-643.
  - Highlighted in Chemical & Engineering News Concentrates, May 31, 2010, pg 51.
- (35) M. Takahashi, **G. C. Micalizio**, "Concerning the Potential Reversibility of Carbometalation in Akoxide-directed Ti(O*i*-Pr)<sub>4</sub>-mediated Reductive Cross-Coupling of Homoallylic Alcohols with Aromatic Imines" *Chem. Commun.* **2010**, *46*, 3336-3338.
- (34) Invited Article in Honor of Professor Brian Stoltz (Tetrahedron Young Investigator Award):
  - A. U. Barlan, **G. C. Micalizio**, "The Regio- and Stereochemical Course of Reductive Cross-Coupling Reactions Between 1,3-Disubstituted Allenes and Vinylsilanes: Synthesis of *Z*-Dienes" *Tetrahedron*, **2010**, *66*, 4775-4783.
- (33) H. A. Reichard, M. McLaughlin, M. Z. Chen, **G. C. Micalizio**, "Regioselective Reductive Cross-Coupling Reactions of Unsymmetrical Alkynes" *Eur. J. Org. Chem.* **2010**, 391-409.
- (32) D. Yang, **G. G. Micalizio**, "A Convergent Stereoselective Synthesis of Quinolizidines and Indolizidines: Chemoselective Coupling of 2-Hydroxymethyl Substituted Allylic Silanes with Imines" *J. Am. Chem. Soc.* **2009**, *131*, 17548-17549.
  - Selected by the Editorial Board to be featured in Synfacts: 2010(02): 0205 (DOI: 10.1055/s-

- 0029-1219211).
- (31) S. Umemura, M. McLaughlin, **G. C. Micalizio**, "Convergent Synthesis of Stereodefined Exoalkylidene-γ-Lactams from β-Halo Allylic Alcohols" *Org. Lett.* **2009**, *11*, 5402-5405.
- (30) M. Z. Chen, **G. C. Micalizio**, "A Two-Step, Three-Component Coupling Process for the Synthesis of Highly Substituted Piperidines: Exploring the Utility of a Unique Regioselective Cross-Coupling Reaction of Conjugated Alkynes" *Org. Lett.* **2009**, *11*, 4982-4985.
- (29) M. A. Tarselli, **G. C. Micalizio**, "Aliphatic Imines in Titanium-Mediated Reductive Cross-Coupling: Unique Reactivity of Ti(O*i*-Pr)<sub>4</sub>/*n*-BuLi" *Org. Lett.* **2009**, *11*, 4596-4599.
  - Selected by the Editorial Board to be featured in *Synfacts*: 2010(01): 0083 (DOI: 10.1055/s-0029-1218435).
- (28) <u>Featured Article Journal of Organic Chemistry</u>:
  - L. J. Perez, H. L. Shimp, **G. C. Micalizio**, "Stereoselective Synthesis of Trisubstituted (*E,E*)-1,3-Dienes by the Site-Selective Reductive Cross-Coupling of Internal Alkynes with Terminal Alkynes: A New Fragment Coupling Reaction for Natural Product Synthesis" *J. Org. Chem.* **2009**, *74*, 7211-7219.
- (27) H. L. Shimp, **G. C. Micalizio**, "A Formal Total Synthesis of Dictyostatin" *Tetrahedron*, **2009**, *65*, 5908-5915.
- (26) M. Takahashi, M. McLaughlin, G. C. Micalizio, "Complex Allylation by the Direct Cross-Coupling of Imines with Unactivated Allylic Alcohols" *Angew. Chem. Int. Ed.* 2009, 48, 3648-3652.
  - Selected by the Editorial Board to be featured in *Synfacts*: **2009**(07): 0750 (DOI: 10.1055/s-0029-1217281).
- (25) T. K. Macklin, **G. C. Micalizio**, "Total Synthesis and Structure Elucidation of (+)-Phorbasin C" *J. Am. Chem. Soc.* **2009**, *131*, 1392-1393.
  - Included in ACS-Organic Chemistry Highlights (January 13, 2009; http://www.organichemistry.org).
  - Selected by the Editorial Board to be featured in *Synfacts*: **2009**(08): 0826 (DOI: 10.1055/s-0029-1217577).
- (24) J. K. Belardi, **G. C. Micalizio**, "Conversion of Allylic Alcohols to Stereodefined Trisubstituted Alkenes: A Complementary Process to the Claisen Rearrangement" *J. Am. Chem. Soc.* **2008**, *130*, 16870-16872.
  - Included in ACS-Organic Chemistry Highlights (June 8, 2009).
  - Selected by the Editorial Board to be featured in *Synfacts*: 2009(03): 0312 (DOI: 10.1055/s-0028-1087706).
- (23) H. A. Reichard, J. C. Rieger, **G. C. Micalizio**, "Total Synthesis of Callystatin A by Titanium-mediated Reductive Alkyne–Alkyne Cross-Coupling" *Angew. Chem. Int. Ed.* **2008**, *47*, 7837-

7840.

- Selected by the Editorial Board to be featured in Synfacts: 2009(04): 0355 (DOI: 10.1055/s-0028-1088082).
- (22) J. K. Belardi, **G. C. Micalizio**, "Total Synthesis of Macbecin I" *Angew. Chem. Int. Ed.* **2008**, 47, 4005-4008.
  - Selected by the Editorial Board to be featured in *Synfacts*: **2008**(11): 1131 (DOI: 10.1055/s-0028-1083421).
- (21) <u>Invited Article in Honor of Professor John Hartwig</u> (Tetrahedron Young Investigator Award):
  - H. L. Shimp, A. Hare, M. McLaughlin, **G. C. Micalizio**, "Allene-alkyne cross-coupling for stereoselective synthesis of substituted 1,4-dienes and cross-conjugated trienes" *Tetrahedron*, **2008**, *64*, 3437-3445 and 6831-6837.
- (20) Cluster Article Invited by Professor Hisashi Yamamoto:
  - M. McLaughlin, H. L. Shimp, R. Navarro, **G. C. Micalizio** "Regio- and Stereoselective Direct Cross-Coupling of Imines with Allenic Alcohols" *Synlett*, **2008**, 735-738.
- (19) Feature Article Invited by Professor Dr. Dieter Enders:
  - L. Perez, **G. C. Micalizio** "Titanium-Mediated Fragment Union Processes in Complex Molecule Synthesis: Development of a Branched Reaction Pathway of High Step Economy for the Synthesis of Complex and Diverse Polyketides" *Synthesis*, **2008**, 627-648.
- (18) F. Kolundzic, **G. C. Micalizio**, "Synthesis of Substituted 1,4-Dienes by Direct Alkylation of Allylic Alcohols" *J. Am. Chem. Soc.* **2007**, *129*, 15112-15113.
  - Selected by the Editorial Board to be featured in *Synfacts*: **2008**(03): 0301 (DOI: 10.1055/s-2008-1042735).
- (17) M. Takahashi, **G. C. Micalizio**, "Regio- and Stereoselective Cross Coupling of Substituted Olefins and Imines. A Convergent Stereoselective Synthesis of Saturated 1,5-Aminoalcohols and Substituted Piperidines" *J. Am. Chem. Soc.* **2007**, *129*, 7514-7516.
  - Included in ACS-Organic Chemistry Highlights (November 12, 2007; http://www.organic-chemistry.org).
  - Selected by the Editorial Board to be featured in *Synfacts*: **2007**(09): 0951 (DOI: 10.1055/s-2007-968847).
- (16) H. L. Shimp, **G. C. Micalizio**, "An Alkoxide-Directed Alkyne–Allene Cross-Coupling for Stereoselective Synthesis of 1,4-Dienes" *Chem. Commun.* **2007**, 4531-4533.
- (15) M. McLaughlin, M. Takahashi, **G. C. Micalizio**, "An Alkoxide Directed Intermolecular [2+2+1] Annulation: A Three-Component Coupling Reaction for the Synthesis of Tetrasubstituted  $\alpha,\beta$ -Unsaturated  $\gamma$ -Lactams" *Angew. Chem. Int. Ed.* **2007**, *46*, 3912-3914.

- (14) H. A. Reichard, **G. C. Micalizio**, "A Site- and Stereoselective Intermolecular Alkene–Alkyne Coupling Process" *Angew. Chem. Int. Ed.* **2007**, *46*, 1440-1443.
- (13) J. K. Belardi, **G. C. Micalizio**, "Studies on the Syntheses of Benzoquinone Ansamycin Antibiotics. Syntheses of the C(5)-C(15) Subunits of Macbecin I, Geldanamycin and Herbimycin A" *Org. Lett.* **2006**, *8*, 2409-2412.
  - Highlighted in ACS-Organic Chemistry Highlights (February 26, 2007).
- (12) A. B. Bahadoor, **G. C. Micalizio**, "Studies in Macrolide Antibiotic Synthesis: The Role of Tethered Alkoxides in Titanium Alkoxide-mediated Regioselective Reductive Coupling Reactions" *Org. Lett.* **2006**, *8*, 1181-1184.
- (11) J. Ryan and **G. C. Micalizio**, "An Alkoxide-directed Carbometalation of Internal Alkynes" *J. Am. Chem. Soc.* **2006**, *128*, 2764-2765.
  - Selected by the Editorial Board to be featured in *Synfacts*: **2006**(05): 0491 (DOI: 10.1055/s-2006-934422).
- (10) H. L. Shimp and **G. C. Micalizio**, "Group 4 Metals in Polyketide Synthesis: A Convergent Strategy for the Synthesis of Polypropionate-Derived (*E,E*)-Trisubstituted 1,3-Dienes" *Org. Lett.* **2005**, *7*, 5111-5114.
- (9) A. B. Bahadoor, A. Flyer, **G. C. Micalizio**, "A Pentenyl Dianion-based Strategy for Convergent Synthesis of Ene-1,5-diols" *J. Am. Chem. Soc.* **2005**, *127*, 3694-3695.

# Publications as a Graduate Student and Postdoctoral Fellow: (not including PhD thesis)

- (8) J.-N. Heo, **G. C. Micalizio**, W. R. Roush, "Enantio- and Diastereoselective Synthesis of Cyclic β-Hydroxy Allylsilanes via Sequential Aldehyde γ-Silylallylboration and Ring Closing Metathesis Reactions" *Org. Lett.* **2003**, *5*, 1693.
- (7) **G. C. Micalizio** and S. L. Schreiber, "An Alkynylboronic Ester Annulation: Development of Synthetic Methods For Application to Diversity-Oriented Organic Synthesis" *Angew. Chem. Int. Ed.* **2002**, *41*, 3272.
- (6) **G. C. Micalizio** and S. L. Schreiber, "A Boronic Ester Annulation Strategy for Diversity-Oriented Organic Synthesis" *Angew. Chem. Int. Ed.* **2002**, *41*, 152.
- (5) **G. C. Micalizio** and W. R. Roush, "Studies on the Synthesis of Pectenotoxin II: Synthesis of a C(11)-C(26) Fragment Precursor via [3+2]-Annulation Reactions of Chiral Allylsilanes" *Org. Lett.* **2001**, *3*, 1949.
- W. R. Roush, A. N. Pinchuk, **G. C. Micalizio**, "[(E)- $\gamma$ -(Dimethylphenylsilyl)-allyl]diisopinocampheylborane: a highly enantioselective reagent for the synthesis of *anti*- $\beta$ -hydroxy-allylsilanes" *Tetrahedron Lett.* **2000**, *41*, 9413.
- (3) **G. C. Micalizio**, W. R. Roush, and A. N. Pinchuk, "Synthesis of the C(29)-C(45) E-F Bis-Pyran Subunit of Spongistatin 1 (Altohyrtin A)" *J. Org. Chem.* **2000**, *65*, 8730.

- (2) **G. C. Micalizio** and W. R. Roush, "A Three-Component Coupling Strategy for Tetrahydrofuran Synthesis: Application of the Diisopropyl Tartrate Modified (E)- $\gamma$ -Dimethylphenylsilylallylboronate as an  $\alpha$ , $\gamma$ -Allyl Dianion Equivalent" *Org. Lett.* **2000**, *2*, 461.
- (1) **G. C. Micalizio** and W. R. Roush, "Towards the Synthesis of Spongistatin 1: Diastereoselective Synthesis of the C(36)-C(45) Subunit" *Tetrahedron Lett.* **1999**, *40*, 3351.

### PATENT APPLICATIONS FILED:

- (5) Novel Steroids, C19 Scaffolds, and Methods of Manufacture. *Provisional Patent Application Filed September 11, 2018* (Application #: 62/728,163).
- (4) Novel Steroids and Methods of Manufacture. *Patent Application Filed August 16, 2018* (Application #: PCT/IB2018/056205)
- (3) Methods of Making and Using Synthetic Enantiodefined Polycyclic Ring Compounds. *Provisional Patent Application filed August 16, 2017* (Ref. #: 107231-000004 / Dartmouth-004-PRO; Application #: 62/605,551).
- (2) 61/531,810 filed 9/7/11: Chiral Compounds of Varying Conformational Rigidity and Methods of Synthesis PCT, Int. Appl. (2013), US20140271488 A1, WO 2013036753 A1 20130314 (licensed by Opko and GlaxoSmithKline).
- (1) 61/426,023 filed 12/22/10: Synthesis of Conolidine and Discovery of a Potent Non-Opioid Analgesic for Pain, Int. Appl. (2012), WO 2012088402 A1 20120628.

## **PATENTS GRANTED:**

(1) Micalizio, G. C.; Kodadek, T.; Sarkar, M. *Chiral Oligomeric Pentenoate Amides as Bio-Oligomer Mimetics*; US 9,963,481 B2 – Issued May 8, 2018.

# **CONSULTING:**

- (1) Covington & Burling LLP: Pharmaceutical Intellectual Property (2016-present)
- (2) Locke Lord LLP: Pharmaceutical Intellectual Property (2017-present)

## PHARMACEUTICAL COLLABORATIONS:

(1) GlaxoSmithKline – (2016 – present) DNA encoded libraries of novel oligomers

## **COMPLETE RESEARCH FUNDING HISTORY**

**Grants as Principal Investigator:** 

# **Current Funding:**

• NIH-R01 GM124004 "Studies in Natural Product Synthesis"

\$1,152,181

Role: PI

National Institutes of Health – NIGMS R01 (GM124004) (2017-2021)

# • NIH-R01 GM080266 "Stereoselective Synthesis via Metallacycle-Mediated Bond Construction"

Role: PI

National Institutes of Health – NIGMS R01 (GM80266) (2016-2020)

\$1,393,204

# Pending:

# NIH-R35 (MIRA: Maximizing Investigators' Research Award)

\$5,901,925

"Metallacycle-mediated Coupling in Stereoselective Synthesis"

Role: PI

NIH-R01: GM133844-01

\$2,050,00

Targeting the IKK-Binding Domain of NEMO for Inhibitor Discovery

Role: Co-Investigator (PI: Pelligrini)

# **Previous Funding:**

National Institutes of Health – NIGMS R01 (GM80266) (2012-2016)
 Stereoselective Synthesis via Metallacycle-Mediated Bond Construction
 Role: PI

\$1,623,600

• "Synthesis and Validation of Novel Cyclin Dependent Kinase Inhibitors as Potential Anticancer Drugs"

Role: PI (along with Alan Eastman, Scott Gerber, and Dale Mierke) Munck-Pfefferkorn Grant (Dartmouth College)

\$100,000

Norris Cotton Cancer Center Seed Funding (Geisel School of Medicine)

\$50,000

"Synthesis and Anticancer Activity of Novel Pectenotoxins" (2016 – 2018)
 Role: PI (along with Alan Eastman from Geisel)

\$193,954

Provost Seed Funding – Dartmouth College

Mr. Donald Bell (philanthropic donation)

Fall 2010 and Spring 2017, interest in any

\$20,000

Fall 2016 and Spring 2017 – interest in small molecule neurotrophic agents

\$25,000

Norris Cotton Cancer Center – Seed funding (2015 - 2016)
 National Cancer Institute "Synthesis and Anticancer Activity of Novel Pectenotoxins"
 Role: PI (along with Alan Eastman from Geisel)

 James and Esther King Biomedical Research Foundation (10KG-09) (2010-2013)

\$1,199,600

A Future for Natural Product-Inspired Hsp90 Inhibitors in the Search For Clinically Relevant Chemotherapeutic Agents

Role: PI

• Fidelity Biosciences Research Initiative (2011-2013)

\$532,000

Role: PI

<ul> <li>National Institutes of Health – NIGMS R01 (GM80266) (2007- 2012)</li> <li>Class II Directed Carbometalation Processes for Heterocycle Synthesis</li> <li>Role: PI</li> </ul>	\$1,408,218
National Institutes of Health – NIGMS R01 (GM80266-04S1) (2009-2010) Role: PI	\$318,019
<ul> <li>Pfizer – SFP (2009-2010)</li> <li>Dissociated Modulators of the Glucocorticoid Receptor (funds for a postdoctoral associate for one year)</li> <li>Role: PI</li> </ul>	\$46,250
<ul> <li>American Cancer Society Research Scholar Award (2006)</li> <li>A High-order Hetero-oligomerization for Polyketide Synthesis</li> <li>Role: PI</li> </ul>	\$720,000
Lilly Grantee Award (2006)     Unrestricted Research Grant	\$100,000
Boehringer Ingelheim New Investigator Award (2007)     Research grant to support a postdoctoral associate for two years	\$70,000
Boehringer Ingelheim Award (2006)     Unrestricted Research Grant	\$25,000
<ul> <li>American Chemical Society, Petroleum Research Fund – Award Type G (2006)         Metal Alkoxide-Mediated Regio- and Stereoselective C–C Bond         Forming Reactions for Complex Molecule Synthesis         Role: PI</li> </ul>	\$35,000
Beckman Young Investigator Award (2005)     Stereochemically-Gated Polycyclization Reactions for Fused Polyether     Synthesis	\$264,000
Boehringer Ingelheim Award (2005)     Unrestricted Research Grant	\$25,000
Lilly New Faculty Award (2003)     Unrestricted Research Grant	\$10,000

# **INVITED PRESENTATIONS**

1)	June 1999	Hoffman-La Roche – Nutley, NJ (Excellence in Organic Chemistry –
		Mini Symposium)
2)	June 2001	37 <sup>th</sup> National Organic Symposium – Bozeman, MT
3)	July 2002	51st Natural Products Gordon Research Conference – Tilton, NH
4)	September 2002	ACS ProSpectives Conference–Combinatorial Chemistry – Leesburg, VA
5)	November 2002	Massachussetts Institute of Technology – Cambridge, MA
6)	November 2002	Boston College – Newton, MA
7)	December 2002	University of Chicago – Chicago, IL

8) December 2002 University of Illinois - Urbana-Champagne, IL Harvard University - Cambridge, MA 9) December 2002 University of California. Irvine - Irvine. CA 10) January 2003 Merck Research Laboratories - West Point, PA 11) January 2003 12) June 2005 Crompton Corporation – ACS– local section – Middlebury, CT 13) August 2005 Beckman Young Investigator Symposium – Irvine, CA Brown University - Providence, RI 14) May 2006 15) May 2006 Bayer Pharmaceuticals - West Haven, CT 16) June 2006 Eli Lilly Pharmaceuticals - Indianapolis, IN 17) June 2006 Gordon Research Conference: Stereochemistry - Newport, RI 18) July 2006 Gordon Research Conference: *Heterocycles* – Newport, RI 19) July 2006 Eisai Research Institute - Andover, MA 20) July 2006 Gordon Research Conference: Natural Products - Tilton, NH 21) August 2006 Beckman Young Investigator Symposium - Irvine, CA 22) September 2006 Connecticut College - New London, CT University of Connecticut - Storres, CT 23) September 2006 University of Michigan – Ann Arbor, MI 24) October 2006 Wayne State University - Detroit, MI 25) October 2006 26) October 2006 Wesleyan University - Middletown, CT Monmouth University – West Long Branch, NJ 27) October 2006 Bristol Myers-Squibb - Wallingford, CT 28) February 2007 29) May 2007 University of Delaware - Newark, DE 30) May 2007 Scripps Research Institute – Jupiter, FL 31) June 2007 NSF Workshop on Organic Synthesis – Estes Park, CO 32) August 2007 Boehringer Ingelheim – Ridgefield, CT 33) August 2007 American Chemical Society, Young Investigator Symposium – Boston, MA The Scripps Research Institute – La Jolla, CA 34) September 2007 Ohio State University - Columbus, OH 35) September 2007 University of Utah - Salt Lake City, UT 36) October 2007 37) October 2007 Memorial Sloan-Kettering Cancer Center - New York, NY Florida State University - Tallahassee, FL 38) October 2007 39) October 2007 CalTech - Pasadena, CA 40) November 2007 University at Buffalo - SUNY - Buffalo, NY UT Southwestern - Dallas, TX 41) November 2007 42) December 2007 Merck - Rahway, NJ 43) February 2008 Amgen - Cambridge, MA Schering-Plough - NJ 44) February 2008 45) March 2008 Cornell University - Ithaca, NY 46) March 2008 University of Illinois - Urbana, IL 47) April 2008 University of Rochester – Rochester, NY 48) April 2008 Pfizer - Groton, CT 49) April 2008 University of Colorado - Boulder, CO 50) May 2008 Bristol Myers-Squibb – Princeton, NJ 51) May 2008 Merck – West Point, PA 52) July 2008 Gordon Research Conference – Stereochemistry – Newport, RI 53) October 2008 Georgia Tech – Atlanta, GA Northwestern University - Evanston, IL 54) April 2009 55) June 2009 Johnson & Johnson – SanDiego, CA 56) June 2009 Roche - Nutley, NJ

The University of Pennsylvania – Philadelphia, PA (student invited speaker)

University of Miami - Coral Gables, FL

Florida Atlantic University – Boca Raton, FL

57) October 2009 58) December 2009

59) January 2010

60) September 2010 Emory University – Atlanta, GA 61) September 2010 University of South Florida - Tampa, FL 62) February 2011 Boston University - Boston, MA Florida American Chemical Society Meeting - Innisbrook, FL 63) May 2011 64) June 2011 Amgen - Thousand Oaks, CA University of California, Santa Barbara - Santa Barbara, CA 65) June 2011 Florida State University - Tallahassee, FL 66) March 2012 67) March 2012 FAMU - Tallahassee, FL 68) April 2012 Brigham Young University - Provo, UT Rutgers University - New Brunswick, NJ 69) April 2012 The Scripps Research Institute - La Jolla, CA 70) May 2012 71) July 2012 Gordon Research Conference - Natural Products - Andover, NH 72) October 2012 Dartmouth College - Hanover, NH 73) October 2012 University of Houston – Houston, TX 74) November 2012 University of Florida - Gainesville, FL Dartmouth College - Hanover, NH 75) November 2012 76) March 2013 AbbVie Pharmaceuticals - Chicago, IL 77) June 2013 Gordon Research Conference – Heterocycles – Newport, RI 78) September 2013 DuPont - Newark, DE 79) October 2013 Loyola University - Chicago, IL University of Illinois at Chicago - Chicago, IL 80) October 2013 Virginia Tech, Highlands in Chemistry Seminar – Blacksburg, VA 81) November 2013 GlaxoSmithKline Pharmaceuticals - Waltham, MA 82) June 2014 83) October 2015 Fairfield University - Fairfield, CT 84) December 2015 Binghamton University (SUNY) - Binghamton, NY The Ohio State University - Columbus, OH 85) February 2016 University of Louisville - Louisville, KY 86) March 2016 87) December 2016 University of California, Merced - Merced, CA Clark University - Worcester, MA 88) March 2017 89) November 2017 Baylor University - Waco, TX University de Montréal - Montréal, Canada 90) November 2018 University of Nevada - Reno, NV 91) November 2018 Miami University of Ohio - Oxford, OH 92) May 2019 Geisel School of Medicine, bioMT (institute for biomolecular targeting) – 93) June 2019 Hanover, NH 94) October 2019 University of North Carolina - Chapel Hill, NC College of the Holy Cross – Worcester, MA

# Named Lectureships and Symposia:

95) November 2019

96) January 2007	Connecticut Organic Chemistry Symposium – New Haven, CT
97) March 2007	Ziegler Symposium, Yale University – New Haven, CT
98) September 2007	Lilly Distinguished Lecturer, Colorado State University – Ft. Collins, CO
99) March 2008	Lilly Grantee Symposium, Eli Lilly – Indianapolis, IN
100) April 2008	Grandpierre Lecturer, Columbia University – New York, NY
101) May 2008	Visions in Chemistry Symposium, Sanofi-Aventis – Bridgewater, NJ
102) October 2008	Pfizer Symposium, University of Toronto – Toronto, ON Canada
103) October 2008	Fajans Award Colloquium, University of Michigan – Ann Arbor, MI
104) April 2010	"Organic Chemistry Day" Symposium, University of Missouri –
	Columbia, MO
105) March 2013	Warner Lambert Lecturer, Wayne State University – Detroit, MI

106) April 2013	Lilly Lecturer, Harvard University – Cambridge, MA
107) July 2014	Keynote Speaker – 26 <sup>th</sup> International Conference on Organometallic Chemistry
	Sapporo, Japan
108) July 2014	"Organometallics: A Key for Innovation in Organic Synthesis" Symposium at
	Okayama University, Okayama, Japan
108) May 2016	University of the Basque Country – Workshop on Asymmetric Synthesis and
	Catalysis – Bilbao, Spain (cancelled)
110) July 2016	Enabling Technology for Reactions and Processes – Telluride Science
	Research Center, Telluride, CO
111) November 2017	Frontiers in Chemistry Lectureship (sponsored by Kalexsyn) – Western
	Michigan University, Kalamazoo, MI
112) May 2019	Dreyfus Symposium (honoring Professors Gordon Gribble and Peter A. Jacobi)
	Dartmouth College, Hanover, NH
113) March 2020	Florida Heterocyclic and Synthetic Conference – Gainesville, FL

# **TEACHING**

Fall 2003 Fall 2004 Spring 2005 Fall 2005 Spring 2006 Fall 2006 Spring 2007 Fall 2008 Fall 2009 Fall 2010 Fall 2011 Fall 2013 Winter 2014 Spring 2014 Winter 2015 Winter 2015 Spring 2015 Fall 2015 Fall 2015 Winter 2016 Spring 2016 Winter 2017 Winter 2017 Spring 2017 Winter 2017 Spring 2017 Winter 2018 Spring 2018 Spring 2018 Fall 2018 Winter 2019	Chemistry 423/523 Chemistry 423/523 Chemistry 125 Chemistry 423/523 Chemistry 221 Chemistry 423/523 Chemistry 221 Chemistry 227 Chemistry 227 Chemistry Chemistry Chemistry Chemistry Chemistry Chemistry 103 Chemistry 58 Chemistry 262 Chemistry 157 Chemistry 262 Chemistry 58 Chemistry 152 Chemistry 153 Chemistry 153 Chemistry 153 Chemistry 262 Chemistry 58 Chemistry 153 Chemistry 58 Chemistry 153 Chemistry 58 Chemistry 153 Chemistry 58 Chemistry 262 Chemistry 58 Chemistry 58 Chemistry 153 Chemistry 262 Chemistry 58 Chemistry 153 Chemistry 153 Chemistry 153 Chemistry 153 Chemistry 153	"Synthetic Methods in Organic Chemistry" (Yale) "Synthetic Methods in Organic Chemistry" (Yale) "Freshman Organic Chemistry" (Yale) "Synthetic Methods in Organic Chemistry" (Yale) "The Organic Chemistry of Life Processes" (Yale) "Synthetic Methods in Organic Chemistry" (Yale) "The Organic Chemistry of Life Processes" (Yale) "Comprehensive Organic Chemistry II" (Yale) "Modern Organic Synthesis" (TSRI, with Dale Boger) "Modern Organic Synthesis" (TSRI, with Dale Boger) "Modern Organic Synthesis" (TSRI, with Dale Boger) "Special Topics: Organic Synthesis" "Honors Organic Chemistry II" "Seminar in Organic Chemistry" "Special Topics: Natural Product Synthesis" "Seminar in Organic Chemistry II" "Advanced Organic Synthesis and Mechanism" "Seminar in Organic Chemistry II" "Natural Product Synthesis" "Honors Organic Chemistry II" "Natural Product Synthesis" "Seminar in Organic Chemistry II" "Seminar in Organic Chemistry II" "Seminar in Organic Chemistry II" "Seminar in Organic Chemistry" "Honors Organic Chemistry II" "Seminar in Organic Chemistry" "Honors Organic Chemistry II" "Seminar in Organic Chemistry" "Honors Organic Chemistry"
Spring 2019	Chemistry 58	"Honors Organic Chemistry II"

# **COMMITTEES AND SERVICE**

2003-2007 2003-2007 2004-2007 2005-2007 2005-2006 2005-2008 2005-2007 2006-present	Graduate Student Admissions Committee (Yale) Instrument Committee (Yale) Safety Committee (Yale) Chairman of the Connecticut Organic Chemistry Symposium Committee (Yale) Junior Faculty Search Committee (Yale) Co-director of the Center for Genomics and Proteomics (Yale) Organic Seminar Series Coordinator (Yale) Alumni Advisory Board to the School of Theoretical and Applied Sciences of Ramapo College of New Jersey
2008	NIH Study Section – SBCA: ad hoc member
2008-2013	Graduate Student Admissions Committee (TSRI)
2010-2013	Florida Theme Committee (TSRI)
2012-2019	External Advisory Committee for the Florida A&M University Research Centers in Minority Institutions (RCMI) Program
2013-2014	Faculty Search Committee (Dartmouth College)
2013-2015	Chair of the Safety Committee - Chair (Dartmouth College)
2013-2016	Department of Chemistry Space Allocation Committee (Dartmouth College)
2014-present	Freshman advising (Dartmouth College)
2014-2015	Department of Chemistry Strategic Planning Committee (Dartmouth College)
2014	NIH Study Section – SBCB: ad hoc member
2014	NSF Review Panel
2015	NSF Review Panel (CAREER award panel)
2015-2016	Committee on the Faculty <sup>†</sup> (Dartmouth College)
2015-2016	Department of Chemistry Graduate Student Advising Committee (GSAC)
2016-2019 2016	Committee on the Faculty Procurement Task Force (Dartmouth College)  NIH Study Section – ZRG1 BCMB-T: ad hoc member (July)
2016-2019	Department of Chemistry Budget, Facilities & Planning Committee (Dartmouth)
2010-2019	Apparatus Shop Committee (ad hoc member)
2017-2018	Scholarly Innovation and Advancement Awards Committee
2017-2018	Environmental Health & Safety Search Committee for Senior Associate Director
2017-2019	Senior Faculty Search Committee – Department of Chemistry (Chair)
2017-2019	Department of Chemistry Curriculum Committee
2018	Evaluator for ACS Petroleum Research Fund
2018	NSF Review Panel (January 2018)
2018	NIH special emphasis panel for review of R01 applications (July 2018)
2018-present	Committee on Priorities <sup>††</sup> (Dartmouth College)
2019	Campus Climate and Culture Initiative (C3I) "Policies in Action" working group
2019	(appointed by the Provost) NSF Center for Selective C-H Functionalization, Site Visit Panel (Emory University)

<sup>&</sup>lt;sup>†</sup> The <u>Committee on the Faculty</u> has as its main charge: "To review matters regarding compensation, leave programs, sponsored activities, institutional support for faculty research and scholarship, use of faculty time, and other matters which affect the professional development and well-being of the Faculty."

<sup>&</sup>lt;sup>††</sup> The <u>Committee on Priorities</u> has as its main charge: "To formulate, articulate, and promote the Faculty's priorities in relation to the allocation of resources, the objectives on which resource allocation is based, and those commitments or expenditures that have significant budgetary effects."

## **RESEARCH GROUP MEMBERS**

**Graduate Students**: (current)

(1) Matthew Kier B.S. Goucher College, M.S. University of California—Irvine

(2) Robert Leon B.S. Boston College

(3) Adam Millham B.A. Holly Cross

(4) Zachary Shalit B.S. Keene State University

(5) Htoo Tint Wai B.A. Smith College

(6) Chinmay Bhatt B.S. University of California—Davis

(7) Zachary Stempel B.S. University of Connecticut

(8) Lauren Markham B.S. Baylor University

Postdoctoral Students: (current)

(1) Kang Du Ph.D. 2016 Shanghai Institute of Organic Chemistry, Chinese Academy

of Sciences (Mentor: Professor Wenjun Tang)

(2) Rajdip Karmakar Ph.D. 2017 University of Illinois, Chicago

(Mentor: Professor Daesung Lee)

(3) Wan Shin Kim Ph.D. 2019 Dartmouth College

(Mentor: Professor Glenn C. Micalizio)

<u>Undergraduate Students</u>: (current)

(1) Lucas C. Valdes (2017-present) (2) Zachary Milestone (2018-present)

#### Former Graduate Students:

(1) Adilah Bahadoor, Ph.D. Ph.D. 2007: Yale University

2005-2006: Novartis Graduate Student Fellow 2006-2007: Pfizer Graduate Student Fellow

2007 - present: Infinity Pharmaceuticals

(2) Justin Belardi, Ph.D. Ph.D. 2009: Yale University

2009-2012: Merck Research Laboratories

2012 - present: Knopp Biosciences

(3) James Cassidy, M.S. M.S. 2018: Dartmouth College 2018 – present: Gilead Sciences, Inc. (4) Ming Chen, Ph.D. Ph.D. 2012: The Scripps Research Institute 2012-2014: NIH Postodoctoral Fellow at the University of Pennsylvania with Professor Amos Smith Pfizer Inc. 2014-present: M.S. 2008: Yale University (5) Richard Hughes, M.S. 2008 - present: Novartis (6) Laszlo Hunyadi, M.S. M.S. 2006: Yale University 2006-2007: Research Associate. Rib-X Pharmaceuticals DVM 2011: College of Veterinary Medicine at Cornell University 2011-2015: Resident equine medicine – UC Davis 2015-present: Equine Veterinarian in Weatherford, TX (7) Wan Shin Kim, Ph.D. Ph.D. 2019: **Dartmouth College** Postdoctoral associate 2019-present: (Micalizio laboratory, Dartmouth College) (8) Ken-Shing Law, M.S. M.S. 2006: Yale University (9) Martin McLaughlin, Ph.D. Ph.D. 2010: Yale University NIH Postdoctoral Fellow with Professor Erick Carreira 2010-2012: 2012 - present: BASF (Germany) (10) Lark Perez, Ph.D. Ph.D. 2008: Yale University **Novartis Graduate Student Fellow** 2006-2007: 2008-2012: Postdoctoral study with Professor Semmelhack at Princeton University 2012 – present: Associate Professor Rowan University (11) Holly Reichard, Ph.D. Ph.D. 2010: Yale University 2010-2012: **Envoy Pharmaceuticals** 2012 - present: Takeda Pharmaceuticals M.S. 2007: (12) Jude Rieger, M.S. Yale University 2007 – present: Fairfield, CT – High school teacher (13) Maria Ruggiero, M.S. M.S. 2006: Yale University 2006 – present: Fairfield, CT – High school teacher (14) Jamie Ryan, M.S. M.S. 2006: Yale University 2010 - present: Unilever HPC (15) Heidi Shimp, Ph.D. Ph.D. 2008: Yale University Bristol Myers-Squibb Graduate Student Fellow 2006-2007:

2008 – present: Bristol Myers-Squibb

(16) Masayuki Takahashi, Ph.D.

Ph.D. 2010: Yale University

2010-2012: NIH Postdoctoral Fellow with Professor William R.

Roush (TSRI)

2012 - present: Otsuka Pharmaceuticals

# Former Postdoctoral Associates:

(1) Claudio Aquino 2009-2016

Ph.D. 2008 Universitá Degli Studi Di Napoli Federico II

(Mentor: Professor Ettore Novellino) 2016-present: DiCE Molecules

(2) Allan Barlan, Ph.D. 2008-2009

Ph.D. 2008: University of Chicago

(Mentor: Professor Hisashi Yamamoto)

2010 – present: Defense Intelligence Agency

(3) Daniel Canterbury, Ph.D. 2010-2013

Ph.D. 2008: University of Rochester

(Mentor: Professor Alison Frontier)

2013 – present: Pfizer Inc.

(4) Xiayun Cheng, Ph.D. 2013-2015

Ph.D. 2013 University of Vermont

(Mentor: Professor Stephen P. Waters)

2015 – present Pfizer Inc.

(5) Stephen Greszler, Ph.D. 2010-2012

Ph.D. 2010: University of North Carolina

(Mentor: Professor Jeffrey Johnson)

2012 - present: AbbVie

(6) Valer Jeso, Ph.D. 2010-2014

Ph.D. 2009: The Scripps Research Institute

(Mentor: Professor K. C. Nicolaou)

2014-present GlaxoSmithKline

(7) Ozora Kubo, Ph.D. 2011-2013 JSPS-sponsored postdoctoral fellow

Ph.D. 2011 Osaka University

(Mentor: Professor Hiromichi Fujioka)

2013 - present: Rohto Pharmaceuticals

(8) Todd Macklin, Ph.D. 2007-2010

Ph.D. 2007: Queens University

(Mentor: Professor Victor Snieckus)

2010-2012: Envoy Pharmaceuticals 2012-2014: Takeda Pharmaceuticals

2017 - present: Kirkland & Ellis LLP (scientific advisor)

(9) Haruki Mizoguchi 2013-2017

Ph.D. 2013 Hokkaido University (Japan)

(Mentor: Prof. Hideaki Oikawa and Prof. Hiroki Oguri) 2017 – present: Assistant Professor Okayama University (Japan)

(10) Natasha O'Rourke 2015 – 2018

Ph.D. 2014 University of Victoria (Canada) (Mentor: Professor Jeremy E. Wulff) 2018 – present: Takeda Pharmaceuticals

(11) Subhas Chandra Pan, Ph.D.

2010-2011

Ph.D. 2008: Max-Planck-Institut Für Kohlenforschung, Mülheim an

der Ruhr

(Mentor: Professor Benjamin List)

2008-2009: Postdoctoral at Harvard University with Professor

E.J. Corey)

2011 - present: Assistant Professor IIT - Guwahati

(12) Matthew Scheideman, Ph.D.

2005-2007

Ph.D. 2005: University of Michigan

(Mentor: Professor Edwin Vedejs)

2005-2007: Rudolph Anderson Postdoctoral Fellow

2007-2013: Rib-X Pharmaceuticals 2013 – 2016: Otsuka Pharmaceuticals

2016 - present: Cooley LLP

(13) Rosa Taboada, Ph.D. 2004-2005

Ph.D. 2004: University of Connecticut

(Mentor: Professor Amy Howell)

2004-2005: Rudolph Anderson Postdoctoral Fellow

(14) Michael Tarselli, Ph.D. 2009-2010

Ph.D. 2009: University of North Carolina

(Mentor: Professor Michael Gagné)

2011-2014: Principal Scientist at Biomedisyn 2014 – present: Novartis – Information Technology

(15) Emily Tarsis, Ph.D. 2011-2012

Ph.D. 2011: Duke University (Mentor: Professor Don Coltart)
2012 – 2014: Assistant Professor Nova Southeastern University –

Boca Raton, FL

2015 – present: Lecturer in Chemistry, Connecticut College

(16) Dexi Yang, Ph.D. 2009-2014

Ph.D. 2008: The Ohio State University

(Mentor: Professor David J. Hart)

2014-current Merck Research Laboratories

Former Undergraduate Students:

(1) Alec Flyer, Ph.D. 2003-2004

B.S. 2004 Yale University

Ph.D. 2009 Department of Chemistry and Chemical Biology,

Harvard University (Mentor: Andrew G. Myers)

2009 - present: Research Scientist at Novartis

currently: Investigator III, Global Discovery Chemistry, Novartis

Institutes for Biomedical Research

(2) Brian Trantow, Ph.D. 2006-2007 Pfizer Undergraduate Summer Fellowship (2006)

B.S. 2007 Yale University

Ph.D. 2013 Chemistry, Stanford University

(Mentor: Paul A. Wender)

2013: Putnam Associates, Inc. (Life Sciences Consultant)

currently: BluePrint Research Group

(3) Raul Navarro, Ph.D. 2006-2008

B.S. 2008: Yale University

2006: STARS Undergraduate Summer Fellowship

Ph.D. 2013 California Institute of Technology

(Mentor: Sarah Reisman)

2013 – 2017: Postdoctoral Fellow, Stanford University

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