

Jeremy E.B. McCallum

Department of Chemistry and Biochemistry
Loyola Marymount University
Los Angeles, CA 90045-2659
(310) 338-1785
jmccallu@lmu.edu

EDUCATION

- 2005 **Ph.D.**, University of California, Los Angeles, CA
Department of Chemistry and Biochemistry
Dissertation Title: "Photosensitized Oxidation of 8-oxo-7,8-dihydroguanine
Derivatives and Investigation into Singlet Oxygen Production from the
Irradiation of Antibodies."
Committee Members: Christopher S. Foote (Chair), Michael E. Jung, Jon M.
Fukuto
- 1996 **B.A.**, Princeton University, Princeton, NJ
Department of Chemistry
Advisor: Jeffrey Schwartz
Minor: Environmental Studies

ACADEMIC EMPLOYMENT

- 2011 - **Associate Professor**
Loyola Marymount University
Department of Chemistry and Biochemistry
- 2005 - 2011 **Assistant Professor**
Loyola Marymount University
Department of Chemistry and Biochemistry
- 2005 **Lecturer**
University of California, Los Angeles
Department of Chemistry and Biochemistry
- 2004 - 2005 **Adjunct Faculty**
California State University, Fullerton
Department of Chemistry and Biochemistry

PROFESSIONAL EXPERIENCE

- 1996 - 2000 **Research Chemist**
Unilever Research, Edgewater, NJ

TEACHING/ADVISING

Courses taught:

General Chemistry I and II (CHEM 110, 112)
Organic Chemistry I and II (CHEM 220, 222)
Organic Chemistry Laboratory I and II (CHEM 221, 223)
Forensic Chemistry (CHEM 380)
Advanced Organic Chemistry (CHEM 420, CHEM 560)
Advanced Organic Chemistry Laboratory (CHEM 421)
Chemistry Seminar (CHEM 390, 391, 490, 491)

SCHOLARSHIP

Peer-Reviewed Publications:

Phillips, J.A.; McCallum, J.E.; Clemmer, K.W.; Zachariah, T.M. "A Problem-Solving Framework to Assist Students and Teachers in STEM Courses," *Journal of College Science Teaching*, **2017**, 46 (4), 33-39.

Ramirez, M.G.; McCallum, J.E.B.; Landry, J.M.; Vallin, V.A.; Fukui, S.A.; Gergus, H.E.; Torres, J.D.; Sy, C.L. "Biological consequences of heavy metal bioaccumulation by banded garden spiders *Argiope trifasciata* (Araneae, Araneidae)" *Ecotoxicology and Environmental Safety*, **2011**, 74 (4), 1081-1088.

McCallum, J.E.B.; Huston, K.G.; McSweeney, J.M.; Rucker, B.G. "Synthesis of Lipophilic N9-Benzylguanine Derivatives." *SYNLETT*, **2010**, 19, 2871-2874.

McCallum, J.E.B.; Amare, S.; Nolan, R. "G-Octamer Formation from N9-Modified Guanine Derivatives." *Nucleosides, Nucleotides, and Nucleic Acids*, **2010**, 29, 801-808.

Chin, K.K.; Trevithick-Sutton, C.C.; McCallum, J.E.B., Jockusch, S.; Turro, N.J.; Scaiano, J.C.; Foote, C.S.; Garcia-Garibay, M.A. "Quantitative Determination of Singlet Oxygen Generated by Excited State Aromatic Amino Acids, Proteins, and Immunoglobulins." *J. Am. Chem. Soc.* **2008**, 130, 6912-6913.

McCallum, J.E.B.; Kuniyoshi, C.Y.; Foote, C.S. "Characterization of 5-Hydroxy-8-oxo-7,8-dihydroguanosine in the Photosensitized Oxidation of 8-Oxo-7,8-Dihydroguanosine and its Rearrangement to Spiroiminodihydantoin." *J. Am. Chem. Soc.* **2004**; 126(51), 16777-16782.

Madison, S.A.; McCallum, J.E.B.; Rojas Wahl, R.U. "Hydroperoxide formation in model collagens and collagen type I." *Int. J. Cosmetic Sci.* **2002**, 24, 43-52.

Madison, S.A.; McCallum, J.E.B.; Rojas Wahl, R.U. "Peroxynitrite as a novel stain bleaching reagent." *Text. Res. Journal* **2001**, 71(1), 38-41.

Das, S.; Kamat, P.V.; McCallum, J.E.B.; Rojas Wahl, R.U.; Madison, S.A. "Role of hydroxypropylcellulose in free radical induced reactions of the anthraquinone based textile dye, Uniblue A." *Text. Res. Journal* **2000**, 70(12), 1046-1052.

McCallum, J.E.B.; Madison, S.A.; Alkan, S.; DePinto, R.L.; Rojas Wahl, R.U. "Analytical Studies on the Oxidative Degradation of the Reactive Textile Dye Uniblue A." *Environ. Sci. Technol.* **2000**, 34, 5157-5164.

Rojas Wahl, R.U.; Madison, S.A.; McCallum, J.E.B. "Mechanistic studies on 3-N-morpholinopyridone (SIN-1) as a new precursor molecule for the fabric bleach." *Tenside Surf. Det.* **2000**, 37, 83-89.

Dosa, P.; Kronish, I.; McCallum, J.; Schwartz, J.; Barden, M.C. "Titanium Complex-Catalyzed Borohydride Reduction of Azobenzenes." *J. Org. Chem.* **1996**, 61(15), 4886-4887.

Patent:

Madison, S.A.; McCallum, J.E.B.; Rojas Wahl, R.U. "Peroxynitrite based bleaching systems." U. S. Patent 5,914,305, **1999**.

External Grants Awarded:

"Problem-solving Examples with Narration for Students (PENS)," Jeff Phillips (PI), Jeremy McCallum (Co-PI), Thomas Zachariah (Co-PI), Katharine Clemmer (Co-PI), National Science Foundation (NSF) Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics (TUES), 2011, \$159,035.

"Ballona Wetlands Research," Merck/AAAS Undergraduate Science Research Program. Cathy McElwain, Kam Dahlquist, Rachel Adams, Lambert Doezema, John Dorsey, Phillipa Drennan, Gary Kuleck, Jim Landry, Jeremy McCallum, David Moffet, Martin Ramirez, Carl Urbinati, 2006-2008, \$60,000.

Videos:

<https://www.youtube.com/user/jmccallu>
Created youtube channel of more than 30 organic chemistry videos
More than 250,000 total views

LMU Undergraduate Research students:

Chris Berberian (class of 2007)
Garth Huston (class of 2007)

Kyle Paben (class of 2007)
Heine Aguilar (class of 2008)

Joe Devitis (class of 2008)	Daniel Sun (class of 2013)
Meghan Hart (class of 2008)	Evan Yates (class of 2013)
Jaqueline Hovhannessian (class of 2008)	Noah Bergeron (class of 2014)
Brandi Rucker (class of 2008)	Michelle Blemker (class of 2014)
Charisse Sy (class of 2008)	Coralie Eilers (class of 2014)
Jaclyn Torres (class of 2008)	Makenna Elliot (class of 2014)
Joel Diaz (class of 2009)	Rachel Fry (class of 2014)
Cassra Arbabi (class of 2009)	James Sekab (class of 2014)
Abigail Fall (class of 2009)	Blake Titterington (class of 2014)
Rebecca Nolan (class of 2009)	Khalyd Clay (class of 2015)
Elyse Paterson (class of 2009)	Seth Coldren (class of 2015)
Vivian Vallin (class of 2009)	Alex Santiago (class of 2015)
David Harrison (class of 2010)	Nicole Baghdasaryan (class of 2016)
Bobak Seddighzadeh (class of 2010)	Chris Coyle (class of 2016)
Solomon Amare (class of 2011)	Steven Gigli (class of 2016)
Tibor Forai (class of 2011)	Alexandra Horvath (class of 2016)
Sarah Fukui (class of 2011)	Samuel Lardy (class of 2016)
Heide Gergus (class of 2011)	Vincent Ovalle (class of 2016)
Meg Groom (class of 2011)	Lauen Thurlow (class of 2016)
Erin Keyes (class of 2011)	Oliver Valle (class of 2016)
Elyse London (class of 2011)	Mali McGuire (class of 2017)
Jacqueline McSweeney (class of 2011)	Elanna Radomyshefsky (expected 2017)
Morgan Oliver-Allen (class of 2011)	Sarah Roa (class of 2017)
Taylor Fletcher (class of 2011)	Jillian Dawley (expected 2018)
Joe DeMaria (class of 2012)	Ryan Elson (expected 2018)
Francesca Medina (class of 2012)	Zachary Goldstein (expected 2018)
Johnny Perkins (class of 2012)	Nick Ventigan (expected 2018)
Brandon Robledo (class of 2012)	Scott Clark (expected 2019)
Mariana Rosillo (class of 2012)	Vincent Hayward (expected 2019)
Alexis Foster (class of 2013)	William Mahony (expected 2019)
Bryant Hammershaimb (class of 2013)	Madeline Miller (expected 2019)
Andrew Isho (class of 2013)	
Spencer Robertson (class of 2013)	

AWARDS AND AFFILIATIONS

Member of American Chemical Society, 2000 - present
 The Elizabeth and Michael Rudinica Prize for Teaching and Advising, Seaver College of Science and Engineering, Loyola Marymount University, 2011
 Sigma Phi Epsilon, Teacher Appreciation Award, 2009
 NIH/NRSA Chemistry and Biology Training Grant, UCLA, 2001-2002
 Excellence in Teaching Award, UCLA, 2001
 Excellence in First Year Academics and Research, UCLA, 2001