

**Curriculum Vitae**  
**Timothy P. Curran, Ph.D.**

**Address:**

Department of Chemistry  
Trinity College  
Hartford, CT 06106  
Telephone: 860-297-5276  
Email: timothy.curran@trincoll.edu

**Education:**

College of the Holy Cross, Worcester, Massachusetts  
A.B. in Chemistry, in the Honors Program, *Magna Cum Laude* - 1983

Massachusetts Institute of Technology, Cambridge, Massachusetts  
Ph.D. in Organic Chemistry - 1988  
Thesis Advisor: Professor Daniel S. Kemp  
Thesis Title: Models for Nucleation of  $\alpha$ -Helices

**Professional Experience:**

Harvard Medical School  
Postdoctoral Research Fellow - Molecular Biology and Enzymology [1988-1989]  
Research Mentors: Professors Bert L. Vallee and James F. Riordan

Alkermes, Inc.  
Research Scientist - Bioorganic Chemistry [1989-1991]  
Consultant - Bioorganic Chemistry [1991-1994]

College of the Holy Cross  
Assistant Professor of Chemistry [1991-1997]  
Associate Professor of Chemistry [1997-2000]

Trinity College  
Associate Professor of Chemistry [2000-2006]  
Professor of Chemistry [2006-2019]  
Chair, Department of Chemistry [2006-present]  
Vernon K. Kriebel Professor of Chemistry [2019-present]

**Teaching Experience:**

Trinity College [2000-present]

Courses Taught:

Introductory Chemistry I (CHEM-111): [Fall 2007, Fall 2011]  
Introductory Chemistry I Honors (CHEM-111): [Fall 2017]  
Introductory Chemistry II (CHEM-112): [Spring 2002, 2010, 2019]

Elementary Organic Chemistry I (CHEM-211L): [Fall 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2013, 2014, 2015, 2018, 2019, 2020, 2021]  
Elementary Organic Chemistry II (CHEM-212L): [Spring 2001, 2002, 2003, 2005, 2006, 2009, 2010, 2011, 2013, 2014, 2015, 2016, 2019, 2021, 2022]  
Advanced Organic Chemistry (CHEM-403): [Spring 2002, Fall 2020]  
Biological Chemistry (CHEM-404): [Spring 2001, Fall 2004, Fall 2005, Fall 2008, Fall 2011, Fall 2013, Spring 2014, Spring 2015, Fall 2018]  
Biological Chemistry (CHEM-320): [Fall 2021]  
Biological Chemistry Laboratory (CHEM-320): [Summer 2021, Spring 2022]  
Environmental Chemistry (Chem-230/Envs-230): [Spring 2015, 2016, 2018]  
Biochemistry (Biol-317): [Fall 2016]

Science Research Apprenticeship (ISP-118)

Students: Neena Chakrabarti '09 [Spring 2006]  
Adam Boynton '12 [Spring 2009]  
Andy McTeague '12 [Spring 2009]  
Duyen Tran '13 [Spring 2010]  
William McCarthy '14 [Spring 2011]  
Lauren Davidson '16 [Spring 2013]  
Elena-Marie Pedro '17 [Spring 2014]  
Paul Handali '18 [Spring 2015]  
Joseph Sanderson-Brown '18 [Spring 2015]  
Maxwell Ogbiji '22 [Spring 2019]  
Cate Kneebone '24 [Spring 2021]  
Lilly Pubillones '25 [Spring 2022]

Research in Chemistry-Laboratory (CHEM-425):

Students: Alexander Scopton '02 [Fall 2000, Spring 2001, Fall 2001, Spring 2002]  
Arlicia Grant '02 [Spring 2001, Spring 2002]  
Julie MacPhee '03 [Fall 2001]  
Rebecca Lucht IDP [Spring 2002]  
Heather Cooke '03 [Fall 2002, Spring 2003]  
Mark Silva '05 [Fall 2003, Spring 2004, Fall 2004, Spring 2005]  
Brian Volk '05 [Fall 2003, Spring 2004]  
Richard Yoon '05 [Fall 2003, Spring 2004, Fall 2004, Spring 2005]  
Craig Yennie '06 [Spring 2005, Fall 2005, Spring 2006]  
Adam Lesser '06 [Spring 2005, Fall 2005, Spring 2006]  
David Webster '06 [Fall 2005, Spring 2006]  
Whitney Smith '07 [Fall 2005, Spring 2006]  
Jessica Leandre '07 [Fall 2005, Fall 2006, Spring 2007]  
Andrew Rosenau '07 [Fall 2005, Spring 2006]  
Jonathan Weiss '07 [Spring 2006]  
Sarah Pitts '07 [Spring 2006, Fall 2006]  
Julianne Boccuzzi '08 [Fall 2007]  
Emma Handy '08 [Fall 2006, Spring 2007]  
Neena Chakrabarti '09 [Fall 2006, Spring 2007, Spring 2008]  
Peter Hendrickson '09 [Fall 2006, Spring 2007, Fall 2007, Spring 2008, Fall 2008]  
Megan McNamara '09 [Fall 2007, Fall 2008, Spring 2009]  
Zephyr Dworsky '10 [Fall 2008, Spring 2009]  
Allison Lawrence '10 [Fall 2008]  
Michael Lee '10 [Fall 2008, Spring 2009, Fall 2009, Spring 2010]  
Khine Wai '11 [Fall 2008]  
Pamela Hathway '12 [Fall 2009]  
Adam Boynton '12 [Fall 2009, Spring 2010, Fall 2010, Spring 2011]

Thomas McTeague '12 [Fall 2009, Spring 2010, Fall 2010, Spring 2011]  
Alicia Rodriguez-Acosta '12 [Fall 2010]  
Panida Pollawit '12 [Spring 2011, Fall 2011]  
Shawna Berk '13 [Fall 2012, Spring 2013]  
Mark Chesson '13 [Spring 2012]  
Amelia Mostovoy '13 [Spring 2013]  
William McCarthy '14 [Fall 2011]  
Sebastiano Buccheri '14 [Fall 2011, Spring 2012, Fall 2012]  
Taylor Murtaugh '14 [Spring 2013, Fall 2014]  
Woojung (O) Ji '15 [Spring 2013, Fall 2013, Spring 2014]  
Edgar Soto '15 [Spring 2013, Fall 2013, Spring 2014, Spring 2015]  
Niranjana Pokharel '15 [Fall 2013, Spring 2014]  
Lauren Davidson '16 [Fall 2013, Spring 2014, Fall 2015, Spring 2016]  
Ashira Anderson '16 [Fall 2015, Spring 2016]  
Shawn McCoy '16 [Fall 2015, Spring 2016]  
Florence Dou '16 [Fall 2014, Fall 2015, Spring 2016]  
Elena-Marie Pedro '17 [Fall 2014, Spring 2015, Fall 2015]  
Vu Nguyen '17 [Spring 2016, Fall 2016]  
Ian Langer '17 [Fall 2016, Spring 2017]  
Paul Handali '18 [Fall 2015, Spring 2016]  
Joseph Sanderson-Brown '18 [Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017]  
Cosmic Gober '18 [Fall 2016, Spring 2017, Spring 2018]  
Josephine Frempong '18 [Fall 2016]  
Michael Phillip '19 [Fall 2016, Spring 2017, Fall 2017, Spring 2018, Spring 2020]  
Thanh Nguyen '19 [Fall 2017, Fall 2018, Spring 2020]  
Anna Maria Imwalle '20 [Spring 2019]  
Uyen Doan '21 [Fall 2018, Spring 2019]  
Maxwell Ogbiji '22 [Spring 2019]  
Evan Neu '22 [Fall 2019, Spring 2020, Fall 2021]  
Haoyu Yang '22 [Spring 2021, Fall 2021, Spring 2022]  
Cate Kneebone '24 [Spring 2021]

Senior Thesis (CHEM-499):

Students: Alexander Scopton '02 [2001-02]  
Heather Cooke '03 [2002-03]  
Mark Silva '05 [2004-05]  
Richard Yoon '05 [2004-05]  
Adam Lesser [2005-06]  
Andrew Roseanau [2006-07]  
Whitney Smith [2006-07]  
Jonathan Weiss [2006-07]  
Emma Handy [2007-08]  
Rebecca Lucht [2007-08]  
Neena Chakrabarti [2008-09]  
Allison Lawrence [2009-10]  
Zephyr Dworsky [2009-10]  
Adam Boynton [2011-12]  
Thomas McTeague [2011-12]  
Francis Herman [2013-14]  
John Stiller [2013-14]  
Woojung Ji [2014-15]  
Niranjana Pokharel [2014-15]

Josephine Frempong [2017-18]

College of the Holy Cross [1991-2000]

Courses Taught:

Atoms and Molecules (CHEM-001): [Fall 1991, 1993]  
Organic Chemistry I (CHEM-021): [Spring 1992, 1993, 1995, 1996, 2000]  
Organic Chemistry II (CHEM-022): [Fall 1992, 1994, 1995, 1996, 1999]  
Introduction to Equilibrium and Reactivity (CHEM-031): [Spring 1997]  
Bioorganic Chemistry (CHEM-110): [Spring 1992, Fall 1993, Spring 1995, Fall 1996, Fall 1999]  
Biochemistry II Laboratory (BIOL-104): [Spring 1996, 1997, 1999, 2000 - Team Taught with Professor Mary E. Morton]  
Reactions (FYPR-007): [Fall 1998]  
Synthesis (FYPR-017): [Spring 1999]  
Undergraduate Investigation in Chemistry (CHEM-106)  
General Honors Research (CHEM-108)  
College Honors Thesis (CISS-291, CISS-292)  
Fenwick Scholar Project (CISS-312)

Honors Theses Supervised [for graduates, advanced degrees and present position given in brackets]:

Fenwick Scholar Thesis:

Jason F. Hall '96 [MD - Harvard Medical School; Physician]

College Honors Program Thesis:

Michael C. Hewitt '97 [PhD in Organic Chemistry - MIT; Research Scientist - Sepracor, Inc.]

Meredith A. Brown '00 [Research Assistant - Vertex Pharmaceuticals]

Department of Chemistry Honors Theses (CHEM-108):

Michael B. Smith '93 [M.S. in Organic Chemistry - University of Chicago]

Patrick M. McEnaney '94 [M.D. - University of Massachusetts; Surgeon]

Campbell G. Rowe '94 [Consultant - Associates for International Research]

Nicole M. Chandler '95 [M.D. - University of Massachusetts; Physician]

Michael P. Pollastri '95 [PhD in Organic Chemistry-Brown; Research Scientist - Pfizer, Inc.]

Meghan T. Keaney '96 [MPH - Boston University]

Robert J. Kennedy '96 [PhD in Organic Chemistry - MIT; Postdoctoral Fellow - MIT]

Joseph D. Hewitt '97 [PhD in Analytical Chemistry - Duke University; Sales - Varian Instruments]

Amanda R. Ottoson '98 [Nursing School Student]

Biochemistry Concentration/Department of Chemistry Honors Thesis (CHEM-108):

Lisa A. Marcaurelle '97 [PhD in Organic Chemistry - University of California-Berkeley; Research Scientist - Infinity Pharmaceuticals]

Anne R. Smith '99 [Medical School Student - Georgetown University]

Jesse Affonso '00 [Medical Student - University of Massachusetts]

Department of Chemistry Research Theses (CHEM-106):

Karen M. Guzzetta '92 [M.D. - Vanderbilt University; Physician]

Theresa A. McCollum '92 [MBA - University of North Carolina; Marketing Manager - Cambridge Scientific Computing]

Minh Tran '92 [D.O. - University of Southern Maine; Osteopath]

Moftah El-Ghadi '94 [D.M.D. - University of Pennsylvania; Dentist]

Gregory W. Hewitt '94 [Ph.D. in Organic Chemistry - SUNY/Stony Brook; Research Scientist - Beta Chemicals]

Kathleen M. O'Sullivan '96 [J.D. - University of Pennsylvania; Attorney]

Michael D. Loconzolo '97 [Programmer - Cambridge Scientific Computing]

Marie H. Tanzer '00 [Jesuit Volunteer Corps]

Emily E. Cavanagh '01 [Research Assistant - Genzyme, Inc.]

Robert J. Moreau '02 [Graduate Student in Organic Chemistry-University of Pennsylvania]

Biochemistry Concentration/Department of Chemistry Research Theses (CHEM-106):

Kerry P. Mahon '98 [Graduate Student in Chemistry - Boston College]

Audra M. Dalton '99 [MS in Organic Chemistry-MIT; ArQule, Inc.]

Terra B. Potocky '99 [Graduate Student in Chemistry - University of Wisconsin-Madison]

Bradley C. Carofino '00 [Medical Student - University of Connecticut]

Segufta I. Bilimoria '01 [Research Assistant - Pfizer, Inc.]

### Summer Undergraduate Student Researchers Supervised:

College of the Holy Cross:

1992: Patrick M. McEnaney '94 , Campbell G. Rowe '94 and Michael P. Pollastri '95

1993: Patrick M. McEnaney '94 , Campbell G. Rowe '94 , Nicole M. Chandler '95 and Michael P. Pollastri '95

1994: Nicole M. Chandler '95, Michael P. Pollastri '95, Jason F. Hall '96, Meghan T. Keaney '96 and Robert J. Kennedy III '96

1995: Jason F. Hall '96, Meghan T. Keaney '96, Robert J. Kennedy III '96, Kathleen M. O'Sullivan '96, Joseph D. Hewitt '97 and Michael C. Hewitt '97

1996: Joseph D. Hewitt '97, Michael C. Hewitt '97, Lisa A. Marcaurelle '97 and Amanda R. Ottoson '98

1997: Kerry P. Mahon '98, Amanda R. Ottoson '98, Lynn C. Usher '98 and Anne R. Smith '99

1998: Anne R. Smith '99, Joi C. Carter '99, Terra B. Potocky '99 and Jesse Affonso '00

1999: Jesse Affonso '00, Patrick J. Barrett '00, Meredith A. Brown '00 and Emily E. Cavanagh '01

2000: Jaimie Bertino '01, Segufta I. Bilimoria '01, Emily E. Cavanagh '01, Rusmir Music '01, and Robert J. Moreau '02

Trinity College:

2001: Arlicia L. Grant '02, Kevin A. Marques '03, Rebecca A. Lucht IDP

2002: Heather C. Cooke '02, Kevin A. Marques '03, Rebecca A. Lucht IDP

2003: Mark Silva '05, Morghan Warner '05, Richard Yoon '05

2004: Mark Silva '05, Craig Yennie '06, Richard Yoon '05, Lilia Zhahalyak IDP

2005: Craig Yennie '06, Adam Lesser '06, David Webster '06, Jessica Leandre '07, Whitney Smith '07

2006: Jessica Leandre '07, Whitney Smith '07, Andrew Rosenau '07, Sarah Pitts '07, Jonathan Weiss '07, Emma Handy '08, Neena Chakrabarti '09, Peter Hendrickson '09

2007: Emma Handy '08, Julianne Boccuzzi '08, Neena Chakrabarti '09, Peter Hendrickson '09

2008: Neena Chakrabarti '09, Peter Hendrickson '09, Carrie Disa '09, Khine Wai '11

2009: Michael Lee '10, Adam Boynton '12, Andy McTeague '12

2010: Adam Boynton '12, Andy McTeague '12, Duyen Tran '13

2011: Adam Boynton '12, Andy McTeague '12, William McCarthy '14, Sebastiano Buccheri '14

2012: Mark Chesson '13, Shawna Berk '13, Sebastiano Buccheri '14, Varun Konanki '15

2013: John Stiller '14, Edgar Soto '15, Lauren Davidson '16

2014: Edgar Soto '15, Niranjana Pokharel '15, Lauren Davidson '16, Elena-Marie Pedro '17

2015: Elena-Marie Pedro '17, Vu Nguyen '17, Paul Handali '18, Joe Sanderson-Brown '18

2016: Elena-Marie Pedro '17, Vu Nguyen '17, Paul Handali '18, Joe Sanderson-Brown '18,

Cosmic Gober '18, Jack Sutor (Univ of Edinburgh)  
2017: Paul Handali '18, Joe Sanderson-Brown '18, Cosmic Gober '18, Josephine Frempong '18,  
Michael Phillip '19, Thanh Nguyen '19  
2018: Michael Phillip '19, Thanh Nguyen '19, Uyen Doan '21, Rebecca Lee (Glastonbury High School).  
2019: Anna Maria Imwalle '20, Jeanvier Soungwah '21, Maxwell Ogbiji '22  
2021: Haoyu Yang '22, Cate Kneebone '24  
2022: Cate Kneebone '24, Tara Tweedy '24, Lilly Pubillonones '25

### Professional Memberships:

American Chemical Society  
American Peptide Society  
Project Kaleidoscope-Faculty for the 21st Century

### Awards:

2010: Thomas Church Brownell Prize in Teaching  
2019: Trustee Award for Faculty Excellence

### Grants:

American Heart Association, Massachusetts Affiliate - Research Fellowship, "Metal Role in Angiotensin Converting Enzyme", \$16,000, 4-1-88 to 3-31-89.  
NIH-National Research Service Award, "Metal Function in Angiotensin Converting Enzyme", \$16,000, 7-11-88 to 7-10-89.  
NIH-AREA, "Towards Rationally Designed Immunosuppressants", \$110,847, 5-1-92 to 4-30-96.  
ACS-PRF - Type G Starter Grant, "Development of a Robust Prolyl-Proline Dipeptide  $\alpha$ -Helix Template", \$18,000, 9-1-92 to 8-31-96.  
Research Corporation - Cottrell College Science Award, "Modelling  $\beta$ -Sheet Formation Using an Alkynyl Bis-Amino Acid", \$27,500, 1-1-95 to 12-31-98.  
NSF-RUI, "Neighboring Group Effects in Intramolecular Reactions", \$124,000, 2-1-95 to 1-31-98  
Pfizer, Inc. - Undergraduate Summer Research Fellowship [Holy Cross student Michael P. Pollastri], \$5,000, 2-18-94 to 12-31-94.  
New England Consortium for Undergraduate Science Education, Student Travel Award - Attracting and Maintaining Women and Minorities in Science Programs [Holy Cross student Nicole M. Chandler], \$1,025, 1-20-94 to 12-31-94.  
NIH-AREA, "Binding to and Inhibition of CD26 by Cis-Prolines", \$110,847, 5-1-97 to 10-31-01.  
Pfizer, Inc. - Undergraduate Summer Research Fellowship [Holy Cross student Anne R. Smith], \$5,000, 4-30-98 to 12-31-98.  
Henry Dreyfus Teacher-Scholar Award: "Creating Peptide Tertiary Structures by Linking Enforced Peptide Secondary Structures", \$60,000, 11-1-98 to 10-31-03.  
NSF-RUI, "Nucleating Peptide Secondary Structures via Metal-Alkyne Coordination", \$146,000, 6-1-04 to 5-31-06.  
Bristol-Myers Squibb, Undergraduate Research Awards in Organic Chemistry, "Use of Ferrocene to Nucleate  $\beta$ -Turns", \$5,000, 6-1-04 to 5-31-05.

Pfizer-CBIA, Undergraduate Summer Research Fellowship [Trinity student Adam B. Lesser], \$5,000, 4-1-05 to 3-31-06.

Bristol-Myers Squibb, Undergraduate Research Awards in Organic Chemistry, "Synthesis of a Tricyclicdipeptide-A Potential  $\alpha$ -Helix Template", \$5,000, 6-1-06 to 5-31-07.

Pfizer-CBIA, Undergraduate Summer Research Fellowship [Trinity student Emma Handy], \$5,000, 6-1-06 to 5-31-07.

NSF-MRI, "Acquisition of a Bruker Avance 400 MHz NMR Spectrometer", \$308,000, 8-1-06 to 7-31-07. [Co-PI Richard Prigodich]

Bristol-Myers Squibb, Undergraduate Research Awards in Organic Chemistry, " $\alpha$ -Helix Nucleation via Crosslinking of Amino Acid Side Chains with 1,1'-Diaminoferrrocene", \$5,000, 6-1-07 to 5-31-08.

Pfizer-CBIA, Undergraduate Summer Research Fellowship [Trinity students Neena Chakrabarti and Julianne Boccuzzi], \$10,000, 6-1-07 to 5-31-08.

Division of Organic Chemistry Travel Award (40th National Organic Symposium), \$600, 6-1-07 to 6-30-07.

NSF-ARI, "Renovation of Chemistry Research Laboratories at Trinity College", \$746,231, 9-15-10 to 8-31-12.

American Chemical Society-Division of Organic Chemistry Summer Undergraduate Research Fellowship [Trinity student Adam Boynton], \$5,000, 5-15-11 to 5-14-12.

NSF-RUI, "Investigations of a Novel, Bimetallic Ring System for Nucleating  $\beta$ -Sheets, \$234,957, 8-1-15 to 7-31-19.

## Publications:

### Publications From Independent Academic Research (Undergraduate Student Co-authors are in Bold):

"Parallel Arrangement of Peptides Appended to a Rigid, Bimetallic Constrained Ring System", T. P. Curran, A. Marrone, **L. M. Davidson**, **N. Pokharel**, **J. F. Frempong**, I. Tolbatov, **M. L. Phillip**, **C. B. Gober**, **H. Yang** and J. Stewart, *Pept. Sci.*, e24286. <https://doi.org/10.1002/pep2.24286> (2022).

"Cyclic and Non-Cyclic Pi Complexes of Tungsten", T.P. Curran, in *Comprehensive Organometallic Chemistry IV*, (eds. Gerard Parkin, Karsten Meyer, Dermot O'Hare), 257-377 (2022).

"Controlling Peptide Conformation Using Tungsten Alkyne Coordination", T.P. Curran, in *Advances in Bioorganometallic Chemistry* (eds. T. Hirao and T. Moriuchi), 95-112 (2019).

"Conformationally Rigid Cyclic Tungsten Bis-Alkyne Complexes Derived from 1,1'-Dialkynylferrocenes", T. P. Curran, **A. P. Lawrence**, **T. S. Murtaugh**, **W. Ji**, **N. Pokharel**, **C. B. Gober** and **J. Sutor**, *J. Organometallic Chem.*, 846, 24 (2017).

"Synthesis and Conformational Behavior of Metallacyclicdipeptides Derived from Coordination of Side Chain Alkynylamino Acids to Tungsten", T. P. Curran, **T. A. McTeague**, **V. D. Nguyen**, **C. J. Yennie**, **P. R. Handali**, **J. P. Sanderson-Brown** and **Z. D. Dworsky**, *J. Organometallic Chem.*, 806, 12 (2016).

"Introducing Aliphatic Substitution with a Discovery Experiment Using Competing Nucleophiles", T. P. Curran, **A. J. Mostovoy**, **M. E. Curran** and **C. Berger**, *J. Chem. Educ.*, 93, 757 (2016).

"Alkynyl  $\beta$ -Sheet Peptidomimetics Retain Their Anti-Parallel Sheet Conformation When Coordinated to Tungsten", T. P. Curran, **A. N. Boynton**, **S. M. Berk** and **E.-M. Pedro**, *J. Organometallic Chem.*, **782**, 31 (2015).

"Conformational Behavior of Symmetrical and Unsymmetrical Mono(Alkynylpeptide)-Tungsten Complexes", T. P. Curran, **W. E. Smith** and **P. C. Hendrickson**, *J. Organometallic Chem.*, **711**, 15 (2012).

"A  $3_{10}$ -Helix Single Turn Enforced by Crosslinking of Lysines with 1, 1'-Ferrocenedicarboxylic Acid", T. P. Curran and **E. L. Handy**, *J. Organometallic Chem.*, **694**, 902 (2009).

"Turn Conformations in a Metallacyclotriptide and a Metallacyclotetrapeptide Induced by Tungsten-Alkyne Coordination", T. P. Curran, **A. B. Lesser** and **R. S. H. Yoon**, *J. Organometallic Chem.*, **692**, 1243 (2007).

"Bis(Amino Acid) Derivatives of 1,4-Diamino-2-butyne that Adopt a  $C_2$ -Symmetric Turn Conformation", T. P. Curran, **K. A. Marques** and **M. V. Silva**, *Org. Biomol. Chem.*, **3**, 4134 (2005).

"A Simple, High Yield Route to *cis*-4-(N-Alkylamino)-L-Prolines", T. P. Curran, **K. A. Marques** and **S. I. Bilimoria**, *Lett. Org. Chem.*, **2**, 15 (2005).

"N-Terminus to C-Terminus Metallacyclicpeptides Employing Tungsten-Alkyne Coordination", T. P. Curran, **R. S. H. Yoon** and **B. R. Volk**, *J. Organometallic Chem.*, **689**, 4837 (2004).

" $\pi$ -Ligands for Generating Transition Metal-Peptide Complexes: Coordination of Amino Acid Derivatives to Tungsten Utilizing Alkyne Ligands", T. P. Curran, **A. L. Grant**, **R. L. Lucht**, **J. C. Carter** and **J. Affonso**, *Org. Lett.*, **4**, 2917 (2002).

"A Short Synthesis of Bicyclic Dipeptides Corresponding to Xxx-L-Pro and Xxx-D-Pro Having Constrained *Trans*-Proline Amides", T.P. Curran, **Lisa A. Marcaurelle** and **K.M. O'Sullivan**, *Org. Lett.*, **1**, 1225 (1999).

"A Novel Pyrrole Synthesis: One-Pot Preparation of Ethyl 5-Methylpyrrole-2-carboxylate", T.P. Curran and **M.T. Keaney**, *J. Org. Chem.*, **61**, 9068 (1996).

"Ordered Conformations in Bis(Amino Acid) Derivatives of 1,1'-Ferrocenedicarboxylic Acid", R.S. Herrick, R.J. Jarret, T.P. Curran, **D.R. Dragoli**, **M.B. Flaherty**, **S.E. Lindyberg**, **R.A. Slate** and **L.C. Thornton**, *Tetrahedron Lett.*, **37**, 5289 (1996).

"N- $\alpha$ -Benzoyl-*Cis*-4-Amino-L-Proline: A  $\gamma$ -Turn Mimetic", T.P. Curran, **N.M. Chandler**, **R.J. Kennedy** and **M.T. Keaney**, *Tetrahedron Lett.*, **37**, 1933 (1996).

"A Short Synthesis of Bicyclic Dipeptides Corresponding to Xxx-L-Pro and Xxx-D-Pro Having Constrained *Cis*-Proline Amides", T.P. Curran and **P.M. McEnaney**, *Tetrahedron Lett.*, **36**, 191 (1995).

"Loss of the *tert*-Butyloxycarbonyl (Boc) Protecting Group Under Basic Conditions", T.P. Curran, **M.P. Pollastri**, S.M. Abelleira, R.J. Messier, **T.A. McCollum** and **C.G. Rowe**, *Tetrahedron Lett.*, **35**, 5409 (1994).

"*Cis*-3,5-Dimethyl-3,5-Piperidinedicarboxylic Acid, An Amino Diacid Variant of Kemp's Triacid", T.P. Curran, **M.B. Smith**, and **M.P. Pollastri**, *Tetrahedron Lett.*, **35**, 4515 (1994).

#### **Publications from Independent Research at Alkermes, Inc.:**

"Intramolecular Acylolysis of Amide Derivatives of Kemp's Triacid: Strain Effects and Reaction Rates", T.P. Curran, C.W. Borysenko, S.M. Abelleira and R.J. Messier, *J. Org. Chem.*, **59**, 3522 (1994).



"Diastereomer-Free Incorporation of Reduced Amide (-CH<sub>2</sub>NH-) Pseudodipeptides in Solid Phase Peptide Synthesis", T.P. Curran, S.M. Abelleira, R.J. Messier and G.F. Musso, in *Proceedings of the 12th American Peptide Symposium* (eds. J.A. Smith and J.E. Rivier), p. 573-575 (1992).

#### **Publications from Postdoctoral Work at Harvard Medical School:**

"Modulation of the Activity of Angiogenin by Mutagenesis at Aspartic Acid-116", T.P. Curran, R. Shapiro, J.F. Riordan and B.L. Vallee, *Biochem. Biophys. Acta*, **1202**, 281 (1993).

"Alteration of the Enzymatic Specificity of Human Angiogenin by Site-Directed Mutagenesis", T.P. Curran, R. Shapiro, and J.F. Riordan, *Biochemistry*, **32**, 2307 (1993).

#### **Publications from Graduate Work at MIT:**

"A Macrocyclic Triproline-Derived Template for Helix Nucleation", D.S. Kemp, J.H. Rothman, T. P. Curran and D.E. Blanchard, *Tetrahedron Lett.*, **36**, 3809 (1995).

"Studies of N-Terminal Templates for  $\alpha$ -Helix Formation. Synthesis and Conformational Analysis of Peptide Conjugates of (2S,5S,8S,11S)-1-Acetyl-1,4-diaza-3-keto-5-carboxy-10-thia-tricyclo-[2.8.0<sup>4,8</sup>]-tridecane (Ac-Hel<sub>1</sub>-OH)", D.S. Kemp, T.P. Curran, J.G. Boyd and T.J. Allen, *J. Org. Chem.*, **56**, 6672 (1991).

"Studies of N-Terminal Templates for  $\alpha$ -Helix Formation. Synthesis and Conformational Analysis of (2S,5S,8S,11S)-1-Acetyl-1,4-diaza-3-keto-5-carboxy-10-thia-tricyclo-[2.8.0<sup>4,8</sup>]-tridecane (Ac-Hel<sub>1</sub>-OH)", D.S. Kemp, T. P. Curran, W. M. Davis, J. G. Boyd and C. Muendel, *J. Org. Chem.*, **56**, 6683 (1991).

"Approaches to the Protein Folding Problem Through Study of Peptide-Template Conjugates", D.S. Kemp, J.G. Boyd, T.P. Curran and N. Fotouhi in *Proceedings of the 11th North American Peptide Symposium* (eds. J.E. Rivier and G.M. Marshall) p. 861-864 (1990).

"(2S,5S,8S,11S)-1-Acetyl-1,4-diaza-3-keto-5-carboxy-10-thia-tricyclo-[2.8.0<sup>4,8</sup>]-tridecane, 1. The Preferred Conformation of 1 (1 =  $\alpha$ Temp-OH) and its Peptide Conjugates  $\alpha$ Temp-L-(Ala)<sub>n</sub>-OR (n=1 to 4) and  $\alpha$ Temp-L-Ala-L-Phe-L-Lys( $\epsilon$ Boc)-L-Lys( $\epsilon$ Boc)-NHMe. Studies of Templates for  $\alpha$ -Helix Formation", D.S. Kemp and T.P. Curran, *Tetrahedron Lett.*, **29**, 4935 (1988).

"(2S,5S,8S,11S)-1-Acetyl-1,4-diaza-3-keto-5-carboxy-10-thia-tricyclo-[2.8.0<sup>4,8</sup>]-tridecane, 1. Synthesis of Prolyl-Proline-Derived, Peptide-Functionalized Templates for  $\alpha$ -Helix Formation ", D.S. Kemp and T.P. Curran, *Tetrahedron Lett.*, **29**, 4931 (1988).

"Base-Catalyzed Epimerization Behavior and Unusual Reactivity of N-Substituted Derivatives of 2,5-Dicarbalkoxyproline. Preparation of a Novel Mixed Carbamic Carbonic Anhydride by a 4-(Dimethylamino)pyridine-Catalyzed Acylation", D.S. Kemp and T.P. Curran, *J. Org. Chem.*, **53**, 5729 (1988).

"Peptide Synthesis by Prior Thiol Capture -- IV: Amide Bond Formation: The Effect of Side-Chain Substituent on the Rates of Intramolecular O,N-Acyl Transfer", D.S. Kemp, N.G. Galakatos, S. Dranginis, C. Ashton, N. Fotouhi and T.P. Curran, *J. Org. Chem.*, **51**, 3320 (1986).

"Stereoselective Decarboxylation of a Geminal Dicarboxylic Acid. Synthesis of *cis*-5-(Hydroxymethyl)-D-proline Derivatives", D.S. Kemp and T.P. Curran, *J. Org. Chem.*, **51**, 2377 (1986).

## Publications from Undergraduate Research at the College of the Holy Cross:

"Reaction of HCl with Photoproduced Base-Substituted Manganese Carbonyl Radicals", B.H. Byers, T.P. Curran, M.J. Thompson and L.H. Sauer, *Organometallics*, **2**, 459 (1983).

## Presentations:

### Lectures:

"Preparation and Evaluation of an  $\alpha$ -Helix Template", Clark University, Department of Chemistry Seminar Series, March 16, 1992.

"Conformationally Constrained Peptides for Cis-Proline Amides and  $\beta$ -Sheets", Connecticut College Lecture Series in Chemistry, Connecticut College, Department of Chemistry, February 28, 1995.

"Controlling Conformation Using Proline Derivatives", Invited Lecture to the staff at Ares Advanced Technology, Inc., Randolph, MA, May 2, 1997.

"Making Proline Sit Still", Department of Chemistry Seminar Series, College of the Holy Cross, Worcester, MA, October 20, 2000.

"Tungsten-Peptide Complexes", Invited Lecture, Symposium on Metal-Peptide Complexes, 221st National Meeting of the American Chemical Society, San Diego, CA, April 4, 2001.

" $\pi$ -Ligands for Generating Transition Metal-Peptide Complexes: Coordination of Amino Acid Derivatives to Tungsten Utilizing Alkyne Ligands", Oral Presentation, 2nd International Symposium on Bioorganometallic Chemistry, Zurich, Switzerland, July 15, 2004.

"Synthesis and Conformation of Metallacyclicpeptides", Oral Presentation, 234th National Meeting of the American Chemical Society, Boston, MA, August 23, 2007.

"A  $3_{10}$ -Helix Single Turn Enforced by Crosslinking of Lysines with 1,1'-Ferrocenedicarboxylic Acid", 4th International Symposium on Bioorganometallic Chemistry, Missoula, MT, July 9, 2008.

"Controlling Peptide Conformation Using Tungsten-Alkyne Coordination", 242nd National Meeting of the American Chemical Society, Denver, CO, August 30, 2011.

" $\beta$ -Sheets Bearing an Organometallic Moiety: Peptide Derivatives of 2-Amino-2'-carboxyphenylacetylene Coordinated to Tungsten", 6th International Symposium on Bioorganometallic Chemistry, Toronto, ON, Canada, July 10, 2012.

"A 1, 1'-Ferrocenedialkynyldiamide Adopts a van Staveren Conformation Upon Coordination of Both Alkynes to Tungsten", 7th International Symposium on Bioorganometallic Chemistry, Vienna, Austria, July 25, 2014.

"Surprises and Challenges with Organometallic Peptides", Connecticut College Lecture Series in Chemistry, Connecticut College, Department of Chemistry, October 7, 2014.

"Synthesis and Conformational Analysis of Peptides Appended to a Novel, Rigid, Cyclic, Bimetallic Ring System", 253rd National Meeting of the American Chemical Society, San Francisco, CA, April 4, 2017.

"Syn and Anti Isomerism in Acyclic and Cyclic Tungsten Bis-Alkyne Complexes with Applications to Peptide Chemistry", 43<sup>rd</sup> Boston Regional Inorganic Colloquium, University of Connecticut, Storrs, CT, June 10, 2017.

"Intramolecular Hydrogen Bonding Between Peptide Strands Directed by a Rigid, Bimetallic Ring System", 255th National Meeting of the American Chemical Society, New Orleans, LA, March 18, 2018.

"Nucleation of  $\beta$ -Sheets by Attachment of Peptides to a Rigid, Bimetallic Ring System", 28<sup>th</sup> International Conference on Organometallic Chemistry, Florence, Italy, July 16, 2018.

"Beta-Sheet Nucleation by Alkynylpeptides Linked to a Bimetallic, Rigid Ring System", 9<sup>th</sup> International Symposium on Bioorganometallic Chemistry, York, England, July 29, 2019.

"Using a Rigid, Organometallic Ring System to Nucleate  $\beta$ -sheets", ACS Virtual National Meeting, August, 2020.

"A Rigid, Organometallic Ring System for Nucleation of  $\beta$ -Sheets", Invited Seminar (virtual), Oakland University Department of Chemistry, March 3, 2021.

#### **Poster Presentations:**

"Synthetic Progress Toward a Covalently Constrained Cis-Proline Dipeptide", Gordon Research Conference - Bioorganic Chemistry, Plymouth State College, Plymouth, NH, June 22-26, 1992.

"Synthesis and Spectroscopic Characterization of a Heterocyclic Variant of the Kemp Triacid", 207<sup>th</sup> National Meeting of the American Chemical Society, San Diego, CA, March 1994.

"Constrained Cis-Proline Amide Dipeptides", National Institutes of Health - Academic Research Enhancement Award Conference, Indianapolis, IN, April, 1995.

"Cis-4-Amino-L-Proline: a  $\beta$ -Turn Template", 210<sup>th</sup> National Meeting of the American Chemical Society, Chicago, IL, August, 1995.

"Constrained Cis-Proline Dipeptides as Biochemical Probes", 213<sup>th</sup> National Meeting of the American Chemical Society, San Francisco, CA, April 1997.

"Synthesis of Constrained Trans-Proline Dipeptides", 216<sup>th</sup> National Meeting of the American Chemical Society, Boston, MA, August 1998.

"Synthesis and Characterization of Mono- and Bis-Alkynylpeptide Tungsten Complexes", 16<sup>th</sup> American Peptide Symposium, Minneapolis, MN, June 1999.

"Synthesis and Conformational Properties of Organometallicpeptides Derived From Tungsten-Alkyne Coordination", 40<sup>th</sup> National Organic Symposium, Duke University, Durham, NC, June 2007.

"Constrained Peptides Constructed by Coordination of Propargylcysteines with Tungsten", 5<sup>th</sup> International Symposium on Bioorganometallic Chemistry, Bochum, Germany, July 2010.

“Use of Organometallics to Organize and Control Peptide Conformation”, 6<sup>th</sup> Protein Engineering Meeting, Atlanta, GA, October 2012.

**Service:**

Trinity College:

Committees:

Ann Plato Fellowship Search Committee

Terms: Academic Years 2000-01, 2001-02, 2002-03, 2004-05

Appointments and Promotions Committee

Terms: Academic Years 2008-09, 2009-10, 2014-15, 2015-16 (Chair)

Appointments and Promotions Appeals Board

Terms: Academic Years 2013-14 (Chair), 2017-present.

Faculty Research Committee

Terms: Academic Years 2001-02, 2002-03, 2004-05, 2005-06

(Co-chair Spring 2002, Spring 2006; Chair Fall 2002, Spring 2003, Fall 2005)

Educational Policy Committee

Term: Academic Year 2005-06

Formal Hearing Panel

Term: Summer 2011 (Chair)

Athletic Advisory Committee

Term: Fall 2003

Howard Hughes Medical Institute Grant Steering Committee

Term: Academic Years 2004-05, 2005-06, 2006-07, 2007-08

Academic Dishonesty Appeals Board

Term: Academic Years 2004-05, 2005-06, 2006-07

Science Facilities Planning Committee

Term: Fall 2005

Science Summer Programming Committee

Term: Academic Years 2008-09, 2009-10, 2010-11, 2011-12, 2012-13

Jury Panel

Term: Fall 2012-Spring 2016

Planning and Budget Council

Term: Fall 2013-2014

Financial Affairs Committee

Term: Fall 2013-2014

First Year Program Steering Committee

Term: Fall 2014-2017

CFO Search Committee

Term: Fall 2015-Spring 2016

Faculty Liaison, Cross Country and Track and Field Teams

Term: Fall 2015-present

Summit Facilities Planning Committee

Term: Spring 2018-present

**Other Professional Activities:**

Manuscript Peer Review:

*Bioorganic and Medicinal Chemistry Letters*

*Chemical Reviews*

*European Journal of Inorganic Chemistry*  
*International Journal of Biological Macromolecules*  
*Journal of Organic Chemistry*  
*Microchemical Journal*  
*Organic Letters*  
*Phytochemistry*  
*SynLett*  
*Tetrahedron*  
*Tetrahedron Letters*  
*Journal of the American Chemical Society*  
*Letters in Organic Chemistry*  
*Chemistry: A European Journal*  
*Chemistry: An Asian Journal*  
*Journal of Organometallic Chemistry*

Grant Application Peer Review:  
Research Corporation  
Petroleum Research Fund  
National Science Foundation