

## T. ROSS KELLY

THOMAS A. AND MARGARET A. VANDERSLICE PROFESSOR OF

1989-2019  
1996-2003  
**CHEMISTRY**

1996

1998-2002

### Education

2007

B.S. (Honors) Holy Cross College 1964

2014 Ph.D. University of California, Berkeley 1968

2021

11/84

### Experience and Awards

Summer Research Chemist Lawrence Radiation Laboratory, 1964  
Livermore, CA

N.S.F. Trainee, University of California, Berkeley 1965-68

N.I.H. Postdoctoral Fellow, Brandeis University 1968-69

Assistant Professor, Boston College 1969-74

Associate Professor, Boston College 1974-80

Professor, Boston College 1980-89

N.I.H. Research Career Development Award 1975-80

Member (ad hoc) N.I.H. Medicinal Chemistry, 1977-79

Bioorganic and Natural Products and Special Study Sections 1981, 1983, 1986-88

1992, 1994

Visiting Associate Professor, University of California, Berkeley 1/78-3/78

Medicinal Chemist, Pfizer Inc., Groton, CT (sabbatical) 9/81-5/82

Chairman, Department of Chemistry, Boston College 7/83-6/86

Editor, Tetrahedron Symposia-in-Print #17 "Recent Aspects of  
Anthracycline Chemistry," \_\_\_\_\_

Member (regular) of Chemotherapy and Hematology "Study Section,"

Gravitational Illusions

(<https://www.youtube.com/>

2021

## Publications

- T. R. Kelly, "Cool project: Wood in nearly three dimensions," Fine Woodworking Blog, March 2, 2021 (to access, google [Fine Woodworking Blog] and scroll to March 2, 2021).
- T. R. Kelly, "Organic Chemistry and Tree Fruit: The Control of Ethylene-Induced Ripening of Fruit in Cold Storage Warehouses," Chemical Education Xchange, Saturday 12/19/2020 in Blogs.
- T. R. Kelly and M.L. Snapper "NEWS & VIEWS. A Molecular Assembler." *Nature* 2017, 549, 336-337.
- M.D. Markey and T. R. Kelly, "Synthesis of Cribrostatin 6." *J. Org. Chem.* 2008, 73, 7441-7443. This paper was highlighted by the Editors as a "Featured Article."
- M.D. Markey and T. R. Kelly, "Troubleshooting a Molecular Motor: A Remarkably Stable N-Acyl Pyridinium Salt." (invited paper) *Tetrahedron* 2008, 64, 8381-8388.
- M.D. Markey, Y. Fu, and T. R. Kelly, Synthesis of Santiagonamine." *Org. Lett.* 2007, 9, 3255-3257.
- T.R. Kelly, X. Cai, F. Damkaci, S.B. Panicker, B.Tu, S.M. Bushell, I. Cornella, M.J. Piggott, R. Salives, M. Cavero, Y. Zhao, S. Jasmin, "Progress toward a Rationally Designed, Chemically Powered Rotary Molecular Motor." *J. Am. Chem. Soc.* 2007, 129, 376-386.
- M.M. O'Malley, F. Damkaci and T.R. Kelly, "Synthesis of Pterocellin A." *Org. Lett.* 2006, 8, 2651-2652.
- T.R. Kelly, E.L. Elliott, R. Lebedev and J. Pagalday, Synthesis of the Pyrazolo[4,3-e][1,2,4]triazine Family of Natural Products: Nostocine A, Fluviol A, and Pseudoiodinine." *J. Am. Chem. Soc.* 2006, 128, 5646-5647.
- T.R. Kelly (Editor) "Molecular Machines," Topics in Current Chemistry, Springer Verlag, Heidelberg, 2005, Vol. 262.
- A. Scopton and T.R. Kelly, "Synthesis of HKI 0231B." *J. Org. Chem.* 2005, 70, 100004-10012.
- T.R. Kelly, "Molecular Motors: Synthetic DNA-Based Walkers Inspired by Kinesin." *Angew. Chem. Int. Ed.* 2005, 44, 4124-4127.
- E.L. Elliott, S. M. Bushell, M. Cavero, B. Tolan and T. R. Kelly, "Total Synthesis of Nigellicine and Nigeglanine Hydrobromide." *Org. Lett.* 2005, 7, 2449-2451.
- T.R. Kelly, X. Cai, B. Tu, E. L. Elliott, G. Grossmann and P. Laurent, "Asymmetric Synthesis of the AB Ring System of Lactonamycin." *Org. Lett.* 2004, 6, 4953-4956.
- A. Scopton and T. R. Kelly, "Synthesis of Azacridone A." *Org. Lett.* 2004, 6, 3869-3871.
- I. Cornella and T. R. Kelly, "Synthesis of Porritoxin," *J. Org. Chem.* 2004, 69, 2191-2193.
- S. Hou, T. Sagara, D. Xu, T. R. Kelly and E. Ganz, "Investigation of Triptycene-Based Surface-Mounted Rotors." *Nanotechnology* 2003, 14, 566-570.
- J.M. Beierle, E. B. Osimboni, C. Metallinos, Y. Zhao and T. R. Kelly, "Synthesis of Louisianin C." *J. Org. Chem.* 2003, 68, 4970-4972.
- T.R. Kelly and R. L. Lebedev, "Synthesis of Some Unsymmetrical Bridged Terpyridines." *J. Org. Chem.* 2002, 67, 2197-2205.



T.R. Kelly, A. Szabados and Y.-J. Lee, "Total Synthesis of Garcifuran B," *J. Org. Chem.* 1997, 64, 428.

T.R. Kelly, C. Martinez and R.J. Mears, "Synthesis of (Z)-3, 4-Dihydro-2-Oxo-3-(Phenyl-Methylene)-2H-1, 4-Benzoxazine-5-Carboxylic Acid, A Naturally Occuring Inhibitor of Glutathione S-Transferase," *Heterocycles.* 1997, 45, 87.

T.R. Kelly and F. Lang, "Total Synthesis of Dimethyl Sulfomycinamate," *J. Org. Chem.* 1996, 61, 4623.

T.R. Kelly and F. Lang, "Synthesis of Thiazole Compounds via Lithiation: An Unexpected Rearrangement," *Tetrahedron Lett.* 1995, 36, 9293.

T.R. Kelly and F. Lang, "Total Synthesis of Dimethyl Sulfomycinamate," *Tetrahedron Lett.* 1995, 36, 5319.

G. Bringmann, R. Gtz, P. A. Keller, R. Walter, P. Henschel, M. Schaffer, M. Stablein, T. R. Kelly, and M. R. Boyd, "First Total Synthesis of Korupensamines A and B," *Heterocycles.* 1994, 39, 503.

T.R. Kelly, A. Garcia, F. Lang, J.J. Walsh, K.V. Bhaskar, M.R. Boyd, R. Gtz, P.A. Keller, R. Walter, and G. Bringmann, "Convergent Total Synthesis of the Michellamines," *Tetrahedron Lett.* 1994, 34, 7621.

T.R. Kelly and M.H. Kim, "Relative Binding Affinity of Carboxylate and Its Isoteres: Nitro, Phosphate, Phosphonate, Sulfonate, and d-Lactone," *J. Am. Chem. Soc.* 1994, 116, 7072.

T.R. Kelly, M.C. Bowyer, K.V. Bhaskar, D. Bebbington, A. Garcia, F. Lang, M. Kim, and M.P. Jette, "A Molecular Brake," *J. Am. Chem. Soc.* 1994, 116, 3657-3658

T.R. Kelly, Z. Ma, and W. Xu, "Revision of the Structure of Alatinone to Emodin," *Phytochemistry*, 1994, 36, 253.

T.R. Kelly, "A Simple, Colorful Demonstration of Solubility and Acid/Base Extraction Using a Separatory Funnel," *J. Chem. Education.* 1993, 70, 848. (The journal's cover illustration is drawn from this article.)

T.R. Kelly, M.H. Kim, and A.D.M. Curtis, "Structure Correction and Synthesis of the Naturally Occurring Benzothiazinone BMY 40662," *J. Org. Chem.* 1993, 58, 5855.

T.R. Kelly, W. Xu, and J. Sundaresan, "Maxonine: Structure Correction and Synthesis," *Tetrahedron Lett.* 1993, 34, 6173.

T.R. Kelly, W. Xu, Z. Ma, Q. Li, and V. Bhushan, "Syntheses of the Benzo[a]naphthacenequinone Pigments G-2N and G-2A," *J. Am. Chem. Soc.* 1993, 115, 5843.

T.R. Kelly, Z. Ma, and W. Xu, "Revision of the Structure of Przewalskinone B," *Tetrahedron Lett.* 1992, 33, 7713.

T.R. Kelly and J.J. Walsh, "The Synthesis of Cerpegin," *J. Org. Chem.* 1992, 57, 6657.

T.R. Kelly and M.H. Kim, "Synthesis of Schumanniohytine and Isoschumanniohytine," *J. Org. Chem.* 1992, 57, 1593.

T.R. Kelly, C.T. Jagoe and Z. Gu, "Synthesis of Micrococcinic Acid," *Tetrahedron Lett.* 1991, 32, 4263.

T.R. Kelly, G.J. Bridger and C. Zhao, "Bisubstrate Reaction Templates. Examination of the Consequences of Identical Versus Different Binding Sites," *J. Am. Chem. Soc.* 1990, 112, 8024.

T.R. Kelly, P. Meghani and V.S. Ekkundi, "Diels-Alder Reactions: Rate Acceleration Promoted by a Biphenylene Diol," *Tetrahedron Lett.* 1990, 31, 3381.





T.R. Kelly, "A Dramatic and Relevant Demonstration of Ring Strain," J. Chem. Ed. 1977, 54,