

## CURRICULUM VITAE

### Robert Michael Williams, Ph.D.

University Distinguished Professor of Chemistry  
Department of Chemistry, Colorado State University, Fort Collins, CO 80523  
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#### Personal Information:

Date of birth: February 8, 1953  
Married: Jill Janssen Williams  
Children: Ridge Janssen Williams (born February 23, 2001)  
Rainier Valentine Williams (born August 20, 2005)



#### Education:

**B.A.**, Chemistry (with highest distinction), May, 1975. Syracuse University, Syracuse, NY. Thesis under Professor Ei-ichi Negishi on "A Stereoselective Synthesis of Partially Substituted 1,2,3-Butatriene Derivatives via Hydroboration".

**Ph.D.**, Organic Chemistry, June, 1979. Massachusetts Institute of Technology, Cambridge, MA. Thesis advisor, Dr. W. H. Rastetter. Thesis title: "Epidithiapiperazinedione Syntheses".

**Postdoctoral Fellow**, September 1979-September 1980, Harvard University, Cambridge, MA. The late Professor R. B. Woodward group (Y. Kishi, principal investigator). *Total synthesis of erythromycin A*.

#### Honors and Awards:

Organic Synthesis Award, Local Rocky Mountain ACS Section, Reaching New Heights (2012)  
JSPS Invitation Fellowship Program for Research in Japan (Long-Term) 2012-2013  
Ernest Guenther Award in the Chemistry of Natural Products, American Chemical Society (2011)  
Multiple Myeloma Research Foundation Senior Award (2009-2011)  
University Distinguished Professor, Colorado State University (2002)  
Arthur C. Cope Scholar Award, American Chemical Society (2002)  
Japanese Society for the Promotion of Science (JSPS) Fellowship (1999)  
Merck & Co. Academic Development Award (1991-93)  
Fellow of the Alfred P. Sloan Foundation (1986-88)  
Eli Lilly Young Investigator Grantee (1986-88)  
NIH Research Career Development Awardee (1984-89)  
Phi Beta Kappa, Syracuse University (1975)  
Kanner Prize for Chemistry and Physics, Syracuse University (1974)

#### Research and Professional Experience:

Director, Colorado Center for Drug Discovery (C2D2), April 2012 -present  
Co-Director, Infectious Diseases Supercluster in Developmental Therapeutics at CSU  
Co-Director, Cancer Supercluster in Developmental Therapeutics at CSU  
Member, University of Colorado Cancer Center 2004-present  
University Distinguished Professor, Colorado State University 2002-present  
Professor, Colorado State University; Fort Collins, Colorado, January 1988-2002  
Associate Professor, Colorado State University; Fort Collins, Colorado, July 1985-December 1987  
Assistant Professor, Colorado State University; Fort Collins, Colorado, September 1980-June 1985  
Visiting Professor, University of California, Berkeley, CA September 1990-December 1990  
Visiting Professor of Chemistry, Harvard University, Cambridge, Mass. Sept. 15, 1994-Feb. 15, 1995

#### Professional Society Memberships:

American Association for the Advancement of Science  
American Chemical Society  
Japan Antibiotics Research Association  
International Society of Heterocyclic Chemistry  
Phi Beta Kappa

**Editorial:**

- (1) Associate Editor, *Tetrahedron: Asymmetry* (2006-2008)
- (2) Member, Editorial Board "*Chemistry and Biology*" Current Biology, Ltd. (1994-present).
- (3) Member, Editorial Advisory Board for *Mini-Reviews in Organic Chemistry*, Bentham Science Pubs. (2004-2012).
- (4) Co-Editor for the "*Organic Chemistry Series*", Elsevier (Sir J.E. Baldwin co-Ed.) 1997-2012.
- (5) Editor-in-Chief for "*Amino Acids*", Springer-Verlag (1991-1998).
- (6) Acting Associate Editor for the *Journal of the American Chemical Society*; Sept. 1983-Jan. 1984.

**Consulting Activities:**

- Cetya Therapeutics, Fort Collins, Colorado (2012-present)
- Sapientia Therapeutics, Philadelphia, Pennsylvania (2012-present)
- Arch Therapeutics, Cambridge, Massachusetts (2010-present)
- HemaQuest Pharmaceuticals, Boston, Massachusetts (2006-2014)
- Ajinomoto Co., Yokohama Japan (2002-2013)
- Xcyte Therapies, Inc., Seattle, Washington (1996-2006)
- NewBiotics, Inc., San Diego, California (2001-2002)
- Cubist Pharmaceutical Co., Cambridge, Massachusetts (2000-2003)
- Microcide Pharmaceuticals, Mountainview, California (1993-1998)
- Boehringer Ingelheim Pharmaceuticals, Ridgefield, Connecticut (1992-1993)
- Hoffmann-La Roche, Inc., Nutley, New Jersey (1989-1992)
- EPIX Medical, Cambridge, Massachusetts (1993-1997)
- W.R. Grace Company, Columbia, Maryland (1985-1990)
- G.D. Searle Co., St. Louis, Missouri (1988-1990)
- Nutrasweet Co., Skokie, Illinois (1990-1991)
- Symphony Pharmaceutical Co., Philadelphia, Pennsylvania (1991-1993)

**Venture Capital Corporate Boards and Scientific Advisory Boards:**

- (1) Founding Scientist, Acting President, Member of the Board of Directors and Member of the Scientific Advisory Board of Cetya Therapeutics, Fort Collins, Colorado 2012-present.
- (2) Founding Scientist and Member of the Scientific Advisory Board for Sapientia Therapeutics (2012-present).
- (3) Consultant and Member of the Scientific Advisory Board for Arch Therapeutics, Cambridge, Mass. 2010-present.
- (4) Founding Scientist, Acting Vice-President of Discovery Chemistry, consultant and Member of the Scientific Advisory Board of HemaQuest, Seattle, Washington. 2006-present.
- (5) Founding Scientist and Member of the Corporate Board of Directors for Xcyte Therapies, Seattle, Washington. 1996-2006.
- (6) Scientific Advisory Board Member of Xcyte Therapies, Seattle, Washington. 1996-2006.
- (7) Scientific Advisory Board Member of NewBiotics, Inc., San Diego, CA. 2001-2004.
- (8) Founding Scientist and Scientific Advisory Board Member for Microcide Pharmaceuticals, Inc., Mountainview, California 1993-1998.

**Advisory Boards:**

- Member of the Advisory Board of the Los Alamos Stable Isotope Resource (1999-2007)
- Member of the Advisory Board for the *Puerto Rico Alliance for the Advancement of Biomedical Research Excellence* (PRAABRE) (2006-present)

## Teaching

### Graduate

C651 - "Molecular Basis for Drug Action and Design: Mechanism-Based Enzyme Inhibitors"  
C651 - "Total Synthesis of Natural Products"  
C651 - "Biosynthesis of Primary and Secondary Metabolites"  
C541 - "Spectroscopic Methods"  
C545 - "Advanced Organic Synthesis I"  
C549 - "Advanced Organic Synthesis II"  
C-547 - "Chemical Biology"

### Undergraduate

C340H - "Honors Organic Chemistry I"  
C341 - "Organic Chemistry I"  
C343 - "Organic Chemistry II"  
C245 - "Organic and Biological Chemistry"  
C345 - "Organic Chemistry I"  
C346 - "Organic Chemistry II"  
Chem 17 (Harvard University, 1994 - 1995)

### Ph.D. Theses Directed:

Robert W. Armstrong	(1984)	Chester Yuan	(1997)	Xiangna Jia	(2009)
Andrew O. Stewart	(1987)	Bradley Herberich	(1999)	Daniel A. Gubler	(2009)
Peter J. Sinclair	(1987)	Jeffrey Cao	(2000)	Tenaya Newkirk	(2009)
Lynn K. Maruyama	(1987)	Kathleen M. Halligan	(2000)	Cameron Burnett	(2009)
Paul P. Ehrlich	(1989)	Jack D. Scott	(2001)	Brandon J. English	(2010)
Myeong-Nyeo Im	(1991)	Emily M. Stocking	(2001)	Jennifer M. Finefield	(2011)
James A. Hendrix	(1992)	Paul R. Sebahar	(2003)	Timmy McAfoos	(2011)
Sean C. Esslinger	(1993)	Ted C. Judd	(2003)	Ryan J. Rafferty	(2011)
Glenn J. Fegley	(1993)	Steven R. Lenger	(2003)	Guojun Pan	(2011)
Gregory F. Miknis	(1993)	Duane E. DeMong	(2003)	Paul T. Schuber	(2011)
Timothy D. Cushing	(1993)	Brian K. Albrecht	(2003)	Guojun Pan	(2011)
Mark E. Flanagan	(1995)	Ryan E. Looper	(2004)	Timothy R. Welch	(2011)
Steve Rubenstein	(1996)	Yuyin Chen	(2006)	Jennifer M. Guerra	(2012)
Jennifer Travers	(1995)	Alan W. Grubbs	(2006)	Aaron Pearson	(2013)
Samuel B. Rollins	(1997)	Siyuan Chen	(2007)	Alberto Jimenez	(2013)
Scott R. Rajski	(1997)	Chandele Gray	(2008)	Michelle Sanchez	(2014)
				Vy Le	(2017)

### Masters Theses Directed:

Tracy N. Tippie	(1995)	Christie Kosogof	(2001)	Annie Youngman	(2009)
Paul B. Gansle	(1997)	Meriah W.N. Valente	(2006)	Andrea Geiser	(2009)
David M. Bender	(1998)	Nick Gearhart	(2008)	Tatyana Sabodash	(2011)
				Marie Trujillo	(2013)

### Reviewer for Journals:

*Journal of the American Chemical Society*  
*Chemical Society Reviews*  
*Journal of Organic Chemistry*  
*Canadian Journal of Chemistry*  
*Archives of Biochemistry and Biophysics*  
*Bioorganic and Medicinal Chemistry Letters*  
*Bioorganic and Medicinal Chemistry*  
*Amino Acids*

*Science*  
*Tetrahedron*  
*Tetrahedron Letters*  
*Synthesis*  
*Organic Letters*  
*Chemistry & Biology*  
*Accounts of Chemical Research*  
*Chemical Communications*

*Angewandte Chemie*  
*Chemical Reviews*  
*Syn. Lett.*  
*Nature Protocols*  
*Nature Chemistry*

## Reviewer for Proposals:

National Institutes of Health Synthetic and Biological Chemistry B (SBCB) Study Section 2005  
National Institutes of Health Medicinal Chemistry Study Section (MCHA) (2002-2005)  
National Science Foundation  
National Institutes of Health Medicinal Chemistry Study Section (Feb. 1987)  
National Institutes of Health BNP Study Section (Feb. 1989)  
Research Corporation  
Petroleum Research Fund (ACS)  
State Board of Education, Idaho  
Ad-hoc reviewer for the Medicinal Chemistry Study Section (MCHA) February, 1987  
Ad-hoc reviewer for the Bioorganic and Natural Products Chemistry Study Section (BNP) Feb., 1990  
Member, NIH T-32 Chemistry / Biology Interface Training Grant Study Section, 1993  
Ad-hoc reviewer for the Medicinal Chemistry Study Section (MCHA) October, 1996

## Committee Memberships (Colorado State University)

Mis-conduct in Science Investigation Committee  
Council of Research Associate Deans  
University Distinguished Professors Selection Committee  
Colorado State University Patent Committee  
Graduate Operations Committee, Department of Chemistry  
Graduate Admissions Committee, Department of Chemistry  
Colorado State University Biosafety Committee  
Promotion and Tenure Committee, Department of Chemistry  
Executive Committee, Department of Chemistry  
Industrial Liaison Committee, Department of Chemistry  
Awards Committee, Department of Chemistry

## Current Research Funding:

### Active Grants (Robert M. Williams, PI: all projects)

- |     |   |   |
|-----|---|---|
| (1) | 2R01 CA70375-13 (NIH/NCI)<br>Title: <i>"Total Synthesis and Biosynthesis of Bioactive Substances"</i> | 08/01/14 – 07/31/19<br><br>\$268,515 Annual Amount<br>\$1,292,938 Total Award |
| (2) | 1R41HL136068-01<br>Title: <i>"Novel HDAC Inhibitors for Treatment of Hemoglobinopathies"</i>          | 09/01/17 – 08/31/18<br><br>\$241,742.00 Total Award                           |

## Chair, Organizer or Co-organizer of Scientific Meetings

*Robert M. Williams, Professor of Chemistry*

- (1) The 1987 NSF Workshop on Environmental Chemistry, Stanford Sierra Camp, Lake Tahoe, California, Sept. 25-27, 1987.
- (2) The 1989 Chemical Congress of Pacific Basin Societies, Honolulu, Hawaii, December 17-22, 1989. Co-organizer of a Symposium entitled: *"Recent Developments in the Chemistry of Amino Acids"*.
- (3) Special Bilateral U.S.-Britain Workshop entitled: *"Asymmetric Synthesis"* July 3-8, 1990. Pingree Park, Colorado. Co-organizer of this workshop.
- (4) NSF-JSPS Bilateral Seminar entitled: *"Selectivity in Synthetic and Bio-Organic Chemistry"*, Tokyo, Japan, June 3-7, 1991. Co-organizer of this bilateral seminar.
- (5) The 3rd International Congress on Amino Acids, Vienna, Austria, August 23-27, 1993. Title: *"Asymmetric Synthesis of Non-proteinogenic Amino Acids via Chiral Glycinates"*. Co-organizer of this meeting.
- (6) The John K. & Dolores Stille Symposium on *"Biological Chemistry"*, September 12, 1997. Organizer of this symposium.
- (7) The 60<sup>th</sup> Birthday Celebration for Professor Yoshito Kishi, Harvard University. April 13, 1997, Harvard University. Co-organizer of this symposium and reception.
- (8) The PacifiChem 2000 Conference, Honolulu, Hawaii, December 14-19, 2000. Organizer of a Symposium entitled: *"Frontiers in Antibiotics: Synthesis, Design and Mode of Action"*.
- (9) *The 19th International Congress of Heterocyclic Chemistry*, Fort Collins, Colorado. August, 2003. Vice-President, Chairman and Organizer of this meeting.
- (10) The PacifiChem 2005 Congress, Honolulu, Hawaii, December 15-20, 2005. Co-Chair, Symposium entitled: *"Total Synthesis of Natural Products"*
- (11) The 70<sup>th</sup> Birthday Celebration for Professor Yoshito Kishi, Harvard University. April 13, 2007, Harvard University. Co-organizer of this symposium and reception.
- (12) *The Albert & Joan Meyers Symposium*. October 24, 2008, Colorado State University. Co-organizer of this symposium and reception.
- (13) *The PacifiChem 2010 Conference*, Honolulu, Hawaii. Organizer of a Symposium entitled: *"Natural Products Synthesis"*
- (14) *Robert Burns Woodward Memorial Symposium*. National ACS Meeting in Boston, Massachusetts, August 22-26, 2010. Principal Co-organizer.
- (15) *Robert Burns Woodward Centennial Symposium*. National ACS Meeting in Washington, DC, August 21-25, 2017. Principal Co-organizer.
- (16) *Symposium in Celebration of Professor Yoshito Kishi's 80<sup>th</sup> Birth Year: Organic Synthesis Directed Toward Drug Discovery*. Nagoya University, Nagoya, Japan, April 14, 2018. Principal Co-organizer.

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