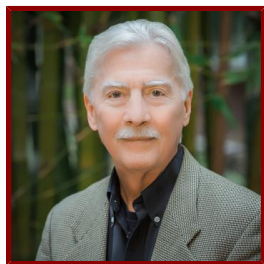


# Stanford

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## Paul Wender

Francis W. Bergstrom Professor of Chemistry and Professor, by courtesy, of Chemical and Systems Biology

### CONTACT INFORMATION

- **Administrative Contact**

Linda Umbertus

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### Bio

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#### BIO

The Wender Group addresses unsolved problems in chemistry, synthesis, biology, medicine, and materials science using new computational tools, new reactions, reagents, strategies and design. Leveraging affiliations with the Medical School, Imaging Center, Chemical Biology Program and Molecular Therapeutics Program as well as numerous internal and external collaborations, the lab emphasizes the use of chemistry, design and synthesis to address problems of significance in biology and medicine, including eradication of HIV/AIDS, overcoming resistant cancer, cancer immunotherapy and treating cognitive disorders such as Alzheimer's disease.

Paul Wender received his B.S. degree from Wilkes University and his Ph.D. in chemistry from Yale University. He was an NIH Postdoctoral Fellow at Columbia University. He served on the faculty at Harvard University and joined the faculty at Stanford University where he is the Francis W. Bergstrom Professor of Chemistry and holds a courtesy appointment in the Department of Chemical and Systems Biology. Professor Wender's research has been recognized with numerous awards including recently the Tetrahedron Prize, Prelog Medal (Swiss Federal Institute of Technology), Arthur Cope Award (American Chemical Society), Cohen Award for Excellence in Medicinal Chemistry (Israel Chemical Society), and Research Award of the German Bioactives and Biotechnology Leibniz Alliance. He has also been recognized with several teaching awards including the Hoagland Prize, Bing Teaching Award, and the Dean's Teaching Award. He is an elected member of the US National Academy of Sciences, a foreign member of the Royal Spanish Academy of Sciences, and a fellow of the American Association for the Advancement of Science and the American Academy of Arts and Sciences.

#### ACADEMIC APPOINTMENTS

- Professor, Chemistry
- Professor (By courtesy), Chemical and Systems Biology
- Member, Bio-X
- Member, Stanford Cancer Institute
- Faculty Fellow, Stanford ChEM-H

#### HONORS AND AWARDS

- Research Award of the German Bioactives and Biotechnology, Leibniz Alliance (2016)
- Arthur C. Cope Award, American Chemical Society (2015)

- Cohen Award for Excellence in Medicinal Chemistry, Israel Chemical Society (2015)
- Office of Technology Licensing Innovator Award, Stanford University (2015)
- Prelog Medal, ETH, Switzerland (2013)
- Tetrahedron Prize for Creativity in Organic Chemistry, Tetrahedron Publications (2012)
- Wilbur Lucius Cross Medal (Yale Graduate Alumni), Yale University (2010)
- The Hamilton Award, University of Nebraska (2008)
- MERIT Award, National Institutes of Health (2006)
- H.C. Brown Award for Creative Research in Synthetic Methods, American Chemical Society (2003)
- MERIT Award, National Institutes of Health (2003)
- Member, National Academy of Science (2003)
- Fellow, American Association for the Advancement of Science (2001)
- Dean's Award for Distinguished Teaching, Stanford University (2000)
- Award for Creative work in Synthetic Organic Chemistry, American Chemical Society (1998)
- Pfizer Research Award for Synthetic Organic Chemistry, American Chemical Society (1995)
- Bing Teaching Award, Stanford University (1992)
- Fellow, American Academy of Arts and Sciences (1992)
- ASSU Teaching Award, Stanford University ASSU (1991)
- Alexander von Humboldt Stiftung Award, Alexander von Humboldt Foundation (1991)
- Hoagland Prize for Undergraduate Teaching, Stanford University (1991)
- Arthur C. Cope Scholar Award, American Chemical Society (1990)
- Ernest Guenther Award, American Chemical Society (1988)
- Stuart Award for Excellence in Chemistry, ICI Pharmaceutical Group (1988)
- Dreyfus Teacher Scholar Award, Camille and Henry Dreyfus Foundation (1980)

## PROFESSIONAL EDUCATION

- Ph.D., Yale University , Chemistry (1973)
- B.S., Wilkes College , Chemistry (1969)

## PATENTS

- Paul Wender, Jung-Min Kee, Jeffrey Warrington. "United States Patent 8,067,632 A Process to Produce Prostratin and Structural or Functional Analogs Thereof", Leland Stanford Junior University, Nov 29, 2011
- Christina Cooley, Erika Geihe Stanzl, Robert Waymouth, Paul Wender. "United States Patent 61,531,495 Amphipathic Co-Oligomers for the Delivery of SIRNA", Leland Stanford Junior University, Sep 11, 2011
- Paul Wender, Lars Heumann, Rainer Kramer, Carolyn Gauntlett, Elizabeth Beans. "United States Patent 12/839,808 Prostratin Analogs, Bryostatins Analogs, Prodrugs, Synthetic Methods, and Methods of Use", Leland Stanford Junior University, Jul 20, 2010

## LINKS

- The Wender Group: <http://www.stanford.edu/group/pawender/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Molecular imaging, therapeutics, drug delivery, drug mode of action, synthesis

## Teaching

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### COURSES

#### 2018-19

- Science Innovation and Communication: CHEM 28N (Aut)
- Structure and Reactivity of Organic Molecules: CHEM 33 (Win)

#### 2017-18

- Advanced Organic Chemistry: CHEM 225 (Spr)
- Science Innovation and Communication: CHEM 28N (Aut)
- Structure and Reactivity of Organic Molecules: CHEM 33 (Win)

#### 2016-17

- Science Innovation and Communication: CHEM 28N (Aut)

#### 2015-16

- Advanced Organic Chemistry: CHEM 225 (Spr)
- Science Innovation and Communication: CHEM 28N (Aut)
- Structure and Reactivity: CHEM 33 (Win)

### STANFORD ADVISEES

#### Doctoral Dissertation Reader (AC)

Anna Elleman, Balint Gal, Holly Hajare, Stephen Sarno

#### Postdoctoral Faculty Sponsor

Ryan Hemming, Alok Ranjan, David Walton

#### Doctoral Dissertation Advisor (AC)

Nancy Benner, Clayton Hardman, Quang Luu-Nguyen, Jack Sloane

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Chemical and Systems Biology (Phd Program)

## Publications

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### PUBLICATIONS

- **Impact of treatment interruption on HIV reservoirs and lymphocyte subsets in individuals who had initiated antiretroviral therapy during the early phase of infection.** *The Journal of infectious diseases*  
Huiting, E. D., Gittens, K., Justement, J. S., Shi, V., Blazkova, J., Benko, E., Kovacs, C., Wender, P. A., Moir, S., Sneller, M. C., Fauci, A. S., Chun, T.  
2019
- **Local delivery of OX40L, CD80, and CD86 mRNA kindles global anti-cancer immunity.** *Cancer research*  
Haabeth, O. A., Blake, T. R., McKinlay, C. J., Tveita, A. A., Sallets, A., Waymouth, R. M., Wender, P. A., Levy, R.  
2019
- **A Phosphoramidite Analogue of Cyclotriphosphate Enables Iterative Polyphosphorylations.** *Angewandte Chemie (International ed. in English)*  
Singh, J., Steck, N., De, D., Hofer, A., Ripp, A., Captain, I., Keller, M., Wender, P. A., Bhandari, R., Jessen, H. J.  
2019
- **mRNA vaccination with charge-altering releasable transporters elicits human T cell responses and cures established tumors in mice.** *Proceedings of the National Academy of Sciences of the United States of America*

- Haabeth, O. A., Blake, T. R., McKinlay, C. J., Waymouth, R. M., Wender, P. A., Levy, R.  
2018
- **Functional DNA Delivery Enabled by Lipid-Modified Charge-Altering Releasable Transporters (CARTs)** *BIOMACROMOLECULES*  
Benner, N. L., Near, K. E., Bachmann, M. H., Contag, C. H., Waymouth, R. M., Wender, P. A.  
2018; 19 (7): 2812–24
  - **Characterization of designed, synthetically accessible bryostatin analog HIV latency reversing agents** *VIROLOGY*  
Marsden, M. D., Wu, X., Navab, S. M., Loy, B. A., Schrier, A. J., DeChristopher, B. A., Shimizu, A. J., Hardman, C. T., Ho, S., Ramirez, C. M., Wender, P. A., Zack, J. A.  
2018; 520: 83–93
  - **Enhanced mRNA delivery into lymphocytes enabled by lipid-varied libraries of charge-altering releasable transporters.** *Proceedings of the National Academy of Sciences of the United States of America*  
McKinlay, C. J., Benner, N. L., Haabeth, O. A., Waymouth, R. M., Wender, P. A.  
2018; 115 (26): E5859–E5866
  - **REDOR NMR Reveals Multiple Conformers for a Protein Kinase C Ligand in a Membrane Environment** *ACS CENTRAL SCIENCE*  
Yang, H., Staveness, D., Ryckbosch, S. M., Axtman, A. D., Loy, B. A., Barnes, A. B., Pande, V. S., Schaefer, J., Wender, P. A., Cegelski, L.  
2018; 4 (1): 89–96
  - **Delivery of Inorganic Polyphosphate into Cells Using Amphipathic Oligocarbonate Transporters** *ACS Cent. Sci.*  
Fernandes Cunha, G., McKinlay, C., Vargas, J., Jessen, H., Waymouth, R., Wender, P.  
2018
  - **A dual function antibiotic-transporter conjugate exhibits superior activity in sterilizing MRSA biofilms and killing persister cells.** *Journal of the American Chemical Society*  
Antonoplis, A., Zang, X., Huttner, M. A., Chong, K., Lee, Y. B., Co, J. Y., Amieva, M., Kline, K., Wender, P. A., Cegelski, L.  
2018
  - **Gilbert Stork (1921-2017) Chemist who revolutionized molecular synthesis** *NATURE*  
Wender, P. A.  
2017; 551 (7682): 566
  - **Ynol Ethers as Ketene Equivalents in Rhodium-Catalyzed Intermolecular [5+2] Cycloaddition Reactions** *ORGANIC LETTERS*  
Wender, P. A., Ebner, C., Fennell, B. D., Inagaki, F., Schroeder, B.  
2017; 19 (21): 5810–13
  - **Retrosynthetic Reaction Prediction Using Neural Sequence-to-Sequence Models** *ACS CENTRAL SCIENCE*  
Liu, B., Ramsundar, B., Kawthekar, P., Shi, J., Gomes, J., Quang Luu Nguyen, Ho, S., Sloane, J., Wender, P., Pande, V.  
2017; 3 (10): 1103–13
  - **Scalable synthesis of bryostatin 1 and analogs, adjuvant leads against latent HIV** *SCIENCE*  
Wender, P. A., Hardman, C. T., Ho, S., Jeffreys, M. S., Maclaren, J. K., Quiroz, R. V., Ryckbosch, S. M., Shimizu, A. J., Sloane, J. L., Stevens, M. C.  
2017; 358 (6360): 218–22
  - **Bryostatin and its synthetic analog, picolog rescue dermal fibroblasts from prolonged stress and contribute to survival and rejuvenation of human skin equivalents.** *Journal of cellular physiology*  
Khan, T. K., Wender, P. A., Alkon, D. L.  
2017
  - **Charge-altering releasable transporters (CARTs) for the delivery and release of mRNA in living animals** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
McKinlay, C. J., Vargas, J. R., Blake, T. R., Hardy, J. W., Kanada, M., Contag, C. H., Wender, P. A., Waymouth, R. M.  
2017; 114 (4): E448–E456
  - **Vault Nanoparticles: Chemical Modifications for Imaging and Enhanced Delivery** *ACS NANO*  
Benner, N. L., Zang, X., Buehler, D. C., Kickhoefer, V. A., Rome, M. E., Rome, L. H., Wender, P. A.  
2017; 11 (1): 872–881

- **Comparative analysis of the anti-chikungunya virus activity of novel bryostatin analogs confirms the existence of a PKC-independent mechanism.** *Biochemical pharmacology*  
Abdelnabi, R., Staveness, D., Near, K. E., Wender, P. A., Delang, L., Neyts, J., Leyssen, P.  
2016; 120: 15-21
- **Inhibition of Chikungunya Virus-Induced Cell Death by Salicylate-Derived Bryostatin Analogues Provides Additional Evidence for a PKC-Independent Pathway** *JOURNAL OF NATURAL PRODUCTS*  
Staveness, D., Abdelnabi, R., Near, K. E., Nakagawa, Y., Neyts, J., Delang, L., Leyssen, P., Wender, P. A.  
2016; 79 (4): 680-684
- **Simplified Bryostatin Analogues Protect Cells from Chikungunya Virus-Induced Cell Death** *JOURNAL OF NATURAL PRODUCTS*  
Staveness, D., Abdelnabi, R., Schrier, A. J., Loy, B. A., Verma, V. A., DeChristopher, B. A., Near, K. E., Neyts, J., Delang, L., Leyssen, P., Wender, P. A.  
2016; 79 (4): 675-679
- **Cell-Penetrating, Guanidinium-Rich Oligophosphoesters: Effective and Versatile Molecular Transporters for Drug and Probe Delivery.** *Journal of the American Chemical Society*  
McKinlay, C. J., Waymouth, R. M., Wender, P. A.  
2016; 138 (10): 3510-3517
- **Cell-Penetrating, Guanidinium-Rich Oligophosphoesters: Effective and Versatile Molecular Transporters for Drug and Probe Delivery** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
McKinlay, C. J., Waymouth, R. M., Wender, P. A.  
2016; 138 (10): 3510-3517
- **Bioorthogonal Catalysis: A General Method To Evaluate Metal Catalyzed Reactions in Real Time in Living Systems Using a Cellular Luciferase Reporter System** *BIOCONJUGATE CHEMISTRY*  
Hsu, H., Trantow, B. M., Waymouth, R. M., Wender, P. A.  
2016; 27 (2): 376-382
- **Cellular delivery and photochemical release of a caged inositol-pyrophosphate induces PH-domain translocation in cellulo.** *Nature communications*  
Pavlovic, I., Thakor, D. T., Vargas, J. R., McKinlay, C. J., Hauke, S., Anstaett, P., Camuña, R. C., Bigler, L., Gasser, G., Schultz, C., Wender, P. A., Jessen, H. J.  
2016; 7: 10622-?
- **Tetramethyleneethane Equivalents: Recursive Reagents for Serialized Cycloadditions** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Wender, P. A., Jeffreys, M. S., Raub, A. G.  
2015; 137 (28): 9088-9093
- **Studies on the regio- and diastereo-selective epoxidation of daphnanes and tiglanes** *TETRAHEDRON LETTERS*  
Boudreault, P., Mattler, J. K., Wender, P. A.  
2015; 56 (23): 3423-3427
- **Toward a Biorelevant Structure of Protein Kinase C Bound Modulators: Design, Synthesis, and Evaluation of Labeled Bryostatin Analogues for Analysis with Rotational Echo Double Resonance NMR Spectroscopy** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Loy, B. A., Lesser, A. B., Staveness, D., Billingsley, K. L., Cegelski, L., Wender, P. A.  
2015; 137 (10): 3678-3685
- **Guanidinium-Rich, Glycerol-Derived Oligocarbonates: A New Class of Cell-Penetrating Molecular Transporters That Complex, Deliver, and Release siRNA.** *Molecular pharmaceuticals*  
Wender, P. A., Huttner, M. A., Staveness, D., Vargas, J. R., Xu, A. F.  
2015; 12 (3): 742-750
- **Function through Synthesis-Informed Design** *ACCOUNTS OF CHEMICAL RESEARCH*  
Wender, P. A., Quiroz, R. V., Stevens, M. C.  
2015; 48 (3): 752-760
- **Catalytic Efficiency Is a Function of How Rhodium(I) (5+2) Catalysts Accommodate a Conserved Substrate Transition State Geometry: Induced Fit Model for Explaining Transition Metal Catalysis** *ACS CATALYSIS*  
Mustard, T. J., Wender, P. A., Cheong, P. H.  
2015; 5 (3): 1758-1763

- **Function through bio-inspired, synthesis-informed design: step-economical syntheses of designed kinase inhibitors** †Dedicated to Max Malacria, a friend and scholar whose science and creative contributions to step-economical synthesis have inspired us all and moved the field closer to the ideal. ‡Electronic supplementary information (ESI) available: Synthetic procedures and spectral data. See DOI: 10.1039/c4qo00228h Click here for additional data file. *Organic chemistry frontiers : an international journal of organic chemistry*  
Wender, P. A., Axtman, A. D., Golden, J. E., Kee, J., Sirois, L. E., Quiroz, R. V., Stevens, M. C.  
2014; 1 (10): 1166-1171
- **Reactivity and Chemoselectivity of Allenes in Rh(I)-Catalyzed Intermolecular (5+2) Cycloadditions with Vinylcyclopropanes: Allene-Mediated Rhodacycle Formation Can Poison Rh(I)-Catalyzed Cycloadditions** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Hong, X., Stevens, M. C., Liu, P., Wender, P. A., Houk, K. N.  
2014; 136 (49): 17273-17283
- **Computer-Guided Design, Synthesis, and Protein Kinase C Affinity of a New Salicylate-Based Class of Bryostatin Analogs** *ORGANIC LETTERS*  
Wender, P. A., Nakagawa, Y., Near, K. E., Staveness, D.  
2014; 16 (19): 5136-5139
- **Computer-guided design, synthesis, and protein kinase C affinity of a new salicylate-based class of bryostatin analogs.** *Organic letters*  
Wender, P. A., Nakagawa, Y., Near, K. E., Staveness, D.  
2014; 16 (19): 5136-5139
- **Improved protein kinase C affinity through final step diversification of a simplified salicylate-derived bryostatin analog scaffold.** *Organic letters*  
Wender, P. A., Staveness, D.  
2014; 16 (19): 5140-5143
- **Improved Protein Kinase C Affinity through Final Step Diversification of a Simplified Salicylate-Derived Bryostatin Analog Scaffold** *ORGANIC LETTERS*  
Wender, P. A., Staveness, D.  
2014; 16 (19): 5140-5143
- **Cell-penetrating, guanidinium-rich molecular transporters for overcoming efflux-mediated multidrug resistance.** *Molecular pharmaceutics*  
Vargas, J. R., Stanzl, E. G., Teng, N. N., Wender, P. A.  
2014; 11 (8): 2553-2565
- **Bioengineered Vaults: Self-Assembling Protein Shell-Lipophilic Core Nanoparticles for Drug Delivery** *ACS NANO*  
Buehler, D. C., Marsden, M. D., Shen, S., Toso, D. B., Wu, X., Loo, J. A., Zhou, Z. H., Kickhoefer, V. A., Wender, P. A., Zack, J. A., Rome, L. H.  
2014; 8 (8): 7723-7732
- **Propargyltrimethylsilanes as allene equivalents in transition metal-catalyzed [5 + 2] cycloadditions.** *Organic letters*  
Wender, P. A., Inagaki, F., Pfaffenbach, M., Stevens, M. C.  
2014; 16 (11): 2923-2925
- **Structural complexity through multicomponent cycloaddition cascades enabled by dual-purpose, reactivity regenerating 1,2,3-triene equivalents** *NATURE CHEMISTRY*  
Wender, P. A., Fournogerakis, D. N., Jeffreys, M. S., Quiroz, R. V., Inagaki, F., Pfaffenbach, M.  
2014; 6 (5): 448-452
- **Toward the ideal synthesis and molecular function through synthesis-informed design** *NATURAL PRODUCT REPORTS*  
Wender, P. A.  
2014; 31 (4): 433-440
- **Function through bio-inspired, synthesis-informed design: step-economical syntheses of designed kinase inhibitors** *ORGANIC CHEMISTRY FRONTIERS*  
Wender, P. A., Axtman, A. D., Golden, J. E., Kee, J., Sirois, L. E., Quiroz, R. V., Stevens, M. C.  
2014; 1 (10): 1166-1171
- **Fifteen Years of Cell-Penetrating Guanidinium-Rich Molecular Transporters: Basic Science, Research Tools, and Clinical Applications** *ACCOUNTS OF CHEMICAL RESEARCH*  
Stanzl, E. G., Trantow, B. M., Vargas, J. R., Wender, P. A.  
2013; 46 (12): 2944-2954
- **Toward the ideal synthesis and transformative therapies: the roles of step economy and function oriented synthesis** *TETRAHEDRON*  
Wender, P. A.

2013; 69 (36): 7529-7550

- **Highly potent, synthetically accessible prostratin analogs induce latent HIV expression in vitro and ex vivo** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Beans, E. J., Fournogerakis, D., Gauntlett, C., Heumann, L. V., Kramer, R., Marsden, M. D., Murray, D., Chun, T., Zack, J. A., Wender, P. A.  
2013; 110 (29): 11698-11703
- **Lead Diversification through a Prins-Driven Macrocyclization Strategy: Application to C13-Diversified Bryostatin Analogues** *SYNTHESIS-STUTTGART*  
Wender, P. A., Billingsley, K. L.  
2013; 45 (13): 1815-1824
- **Mechanistic and Computational Studies of Exocyclic Stereocontrol in the Synthesis of Bryostatin-like Cis-2,6-Disubstituted 4-Alkylidenetetrahydropyrans by Prins Cyclization** *JOURNAL OF ORGANIC CHEMISTRY*  
Ogawa, Y., Painter, P. P., Tantillo, D. J., Wender, P. A.  
2013; 78 (1): 104-115
- **Designed, synthetically accessible bryostatin analogues potently induce activation of latent HIV reservoirs in vitro** *NATURE CHEMISTRY*  
DeChristopher, B. A., Loy, B. A., Marsden, M. D., Schrier, A. J., Zack, J. A., Wender, P. A.  
2012; 4 (9): 705-710
- **Effect of Histone Deacetylase Inhibitors on HIV Production in Latently Infected, Resting CD4(+) T Cells From Infected Individuals Receiving Effective Antiretroviral Therapy** *JOURNAL OF INFECTIOUS DISEASES*  
Blazkova, J., Chun, T., Belay, B. W., Murray, D., Justement, J. S., Funk, E. K., Nelson, A., Hallahan, C. W., Moir, S., Wender, P. A., Fauci, A. S.  
2012; 206 (5): 765-769
- **Designed guanidinium-rich amphipathic oligocarbonate molecular transporters complex, deliver and release siRNA in cells** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Geihe, E. I., Cooley, C. B., Simon, J. R., Kiesewetter, M. K., Edward, J. A., Hickerson, R. P., Kaspar, R. L., Hedrick, J. L., Waymouth, R. M., Wender, P. A.  
2012; 109 (33): 13171-13176
- **A molecular method for the delivery of small molecules and proteins across the cell wall of algae using molecular transporters** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Hyman, J. M., Geihe, E. I., Trantow, B. M., Parvin, B., Wender, P. A.  
2012; 109 (33): 13225-13230
- **Bryostatin analogue-induced apoptosis in mantle cell lymphoma cell lines** *EXPERIMENTAL HEMATOLOGY*  
Lopez-Campistrous, A., Song, X., Schrier, A. J., Wender, P. A., Dower, N. A., Stone, J. C.  
2012; 40 (8): 646-656
- **Ligand Effects on Rates and Regioselectivities of Rh(I)-Catalyzed (5+2) Cycloadditions: A Computational Study of Cyclooctadiene and Dinaphthocyclooctatetraene as Ligands** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Xu, X., Liu, P., Lesser, A., Sirois, L. E., Wender, P. A., Houk, K. N.  
2012; 134 (26): 11012-11025
- **Taxol-oligoarginine conjugates overcome drug resistance in-vitro in human ovarian carcinoma** *GYNECOLOGIC ONCOLOGY*  
Wender, P. A., Galliher, W. C., Bhat, N. M., Pillow, T. H., Bieber, M. M., Teng, N. N.  
2012; 126 (1): 118-123
- **Beyond Cell Penetrating Peptides: Designed Molecular Transporters.** *Drug discovery today. Technologies*  
Wender, P. A., Cooley, C. B., Geihe, E. I.  
2012; 9 (1): e49-e55
- **Rhodium Dinaphthocyclooctatetraene Complexes: Synthesis, Characterization and Catalytic Activity in [5+2] Cycloadditions** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*  
Wender, P. A., Lesser, A. B., Sirois, L. E.  
2012; 51 (11): 2736-2740
- **"Picolog," a Synthetically-Available Bryostatin Analog, Inhibits Growth of MYC-Induced Lymphoma In Vivo** *ONCOTARGET*  
DeChristopher, B. A., Fan, A. C., Felsher, D. W., Wender, P. A.  
2012; 3 (1): 58-66

- **Function oriented synthesis: preparation and initial biological evaluation of new A-ring-modified bryologs** *TETRAHEDRON*  
Wender, P. A., Reuber, J.  
2011; 67 (51): 9998-10005
- **Gateway synthesis of daphnane congeners and their protein kinase C affinities and cell-growth activities** *NATURE CHEMISTRY*  
Wender, P. A., Buschmann, N., Cardin, N. B., Jones, L. R., Kan, C., Kee, J., Kowalski, J. A., Longcore, K. E.  
2011; 3 (8): 615-619
- **Total Synthesis of Bryostatin 9** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Wender, P. A., Schrier, A. J.  
2011; 133 (24): 9228-9231
- **Design, synthesis, and evaluation of potent bryostatin analogs that modulate PKC translocation selectivity** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Wender, P. A., Baryza, J. L., Brenner, S. E., DeChristopher, B. A., Loy, B. A., Schrier, A. J., Verma, V. A.  
2011; 108 (17): 6721-6726
- **Translating Nature's Library: The Bryostatins and Function-Oriented Synthesis** *ISRAEL JOURNAL OF CHEMISTRY*  
Wender, P. A., Loy, B. A., Schrier, A. J.  
2011; 51 (3-4): 453-472
- **Electronic and Steric Control of Regioselectivities in Rh(I)-Catalyzed (5+2) Cycloadditions: Experiment and Theory** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Liu, P., Sirois, L. E., Cheong, P. H., Yu, Z., Hartung, I. V., Rieck, H., Wender, P. A., Houk, K. N.  
2010; 132 (29): 10127-10135
- **Highly Efficient, Facile, Room Temperature Intermolecular [5+2] Cycloadditions Catalyzed by Cationic Rhodium(I): One Step to Cycloheptenes and Their Libraries** *ORGANIC LETTERS*  
Wender, P. A., Sirois, L. E., Stemmler, R. T., Williams, T. J.  
2010; 12 (7): 1604-1607
- **Special delivery: One-step oligomerization of oligocarbonate molecular transporters and biological evaluation of uptake and delivery**  
Cooley, C. B., Trantow, B. M., Kiesewetter, M. K., Nederberg, F., Hedrick, J. L., Waymouth, R. M., Wender, P. A.  
AMER CHEMICAL SOC.2010
- **A Metal-Catalyzed Intermolecular [5+2] Cycloaddition/Nazarov Cyclization Sequence and Cascade** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Wender, P. A., Stemmler, R. T., Sirois, L. E.  
2010; 132 (8): 2532-?
- **The Diene Effect: The Design, Development, and Mechanistic Investigation of Metal-Catalyzed Diene-yne, Diene-ene, and Diene-allene [2+2+1] Cycloaddition Reactions** *EUROPEAN JOURNAL OF ORGANIC CHEMISTRY*  
Croatt, M. P., Wender, P. A.  
2010; 19-32
- **Apoptolidins E and F, New Glycosylated Macrolactones Isolated from Nocardioopsis sp.** *ORGANIC LETTERS*  
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