

## SETH B. HERZON

MILTON HARRIS '29 PH.D. PROFESSOR OF CHEMISTRY, YALE UNIVERSITY  
PROFESSOR OF PHARMACOLOGY, YALE SCHOOL OF MEDICINE

### EDUCATION AND TRAINING:

Temple University	Chemistry	BS	2002
Harvard University	Organic Chemistry	PhD	2006
University of Illinois	Organometallic Chemistry	Postdoctoral Training	2006–2008

### PROFESSIONAL APPOINTMENTS:

Graduate Research Assistant	Harvard University	2002–2006
Postdoctoral Fellow	University of Illinois	2006–2008
Assistant Professor of Chemistry	Yale University	2008–2012
Member, Yale Comprehensive Cancer Center	Yale School of Medicine	2011–Present
Member, Developmental Therapeutics Program	Yale School of Medicine	2011–Present
Associate Professor of Chemistry	Yale University	2012–2013
Professor of Chemistry	Yale University	2013–2018
Professor of Pharmacology	Yale School of Medicine	2015–Present
Milton Harris '29 Ph.D. Professor of Chemistry	Yale University	2018–Present

### HONORS AND AWARDS:

Thieme–IUPAC Award, 2018  
Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis by a Young Investigator, 2018  
Tetrahedron Young Investigator Award (Organic Synthesis), 2018  
Defense Science Study Group, Sponsored by the Institute for Defense Analyses, 2018–2019  
Lectureship Award of the Society of Synthetic Organic Chemistry of Japan, 2016 (declined due to conflicting travel obligations)  
Novartis Chemistry Lectureship, 2016  
Natural Products Reports Emerging Investigator Lectureship, 2015  
Arthur C. Cope Scholar Award of the American Chemical Society, 2014  
Eli Lilly Grantee Award, 2013  
Amgen Young Investigator Award, 2013  
Boehringer Ingelheim Pharmaceuticals Creative Synthetic Organic Chemistry Award, 2012  
Camille Dreyfus Teacher–Scholar Award, 2012  
Cottrell Scholar Award of the Research Corporation for Science Advancement, 2012  
Alfred P. Sloan Fellowship, 2012  
NSF CAREER Award, 2012  
Packard Fellowship in Science and Engineering, 2011  
Synthesis/Synlett Journal Award, 2011  
American Cancer Society Research Scholar Award, 2010  
Searle Scholar Award, 2010  
Eli Lilly New Faculty Award, 2008  
National Institutes of Health NRSA Postdoctoral Fellowship, 2006  
Harvard University Certificate of Distinction in Teaching, 2003  
National Science Foundation Graduate Research Fellowship, 2003  
The F. Albert Cotton and Al Tulinsky Prize, 2002  
Philadelphia Section of the American Chemical Society Award, 2002  
Richard Asher Paclin Memorial Prize, 2002  
Elected to Phi Beta Kappa, 2002  
Henry A. Slovirer Student Research Award in Chemistry (2<sup>nd</sup> Year), 2002  
Petroleum Research Fund Undergraduate Research Fellowship, 2001–2002  
Henry A. Slovirer Student Research Award in Chemistry, 2001

## INDEPENDENT PUBLICATIONS

1. Directed C–H bond oxidation of (+)-pleuromutilin. Xiaoshen Ma, Roman Kucera, Olivia Goethe, Stephen K. Murphy and Seth B. Herzon *J. Org. Chem.* **2018**, Under Revision.
2. DNA repair: Unconventional lesions require unconventional repair. Seth B. Herzon *Biochemistry* **2018**, *57*, 1057, DOI: 10.1021/acs.biochem.7b01241.
3. ClbS is a cyclopropane hydrolyase that confers colibactin resistance. Prabhanshu Tripathi, Emilee E. Shine, Alan R. Healy, Chung Sub Kim, Seth B. Herzon, Steven D. Bruner and Jason M. Crawford *J. Am. Chem. Soc.* **2017**, *139*, 17719, DOI: 10.1021/jacs.7b09971.
4. Development of a modular synthetic route to (+)-pleuromutilin, (+)-12-*epi*-mutilins, and related structures. Mingshuo Zeng, Stephen K. Murphy and Seth B. Herzon *J. Am. Chem. Soc.* **2017**, *139*, 16377, DOI: 10.1021/jacs.7b09869.
5. The mechanism of action of (–)-lomaiviticin A. Seth B. Herzon *Acc. Chem. Res.* **2017**, *50*, 2577, DOI: 10.1021/acs.accounts.7b00347
6. Scalable synthesis of a key intermediate for the production of pleuromutilin-based antibiotics. Stephen K. Murphy, Mingshuo Zeng and Seth B. Herzon *Org. Lett.* **2017**, *19*, 4980, DOI: 10.1021/acs.orglett.7b02476.
7. Molecular basis of gut microbiome-associated colorectal cancer: A synthetic perspective. Alan R. Healy and Seth B. Herzon *J. Am. Chem. Soc.* **2017**, *139*, 14817, DOI: 10.1021/jacs.7b07807.
8. Structure and functional analysis of ClbQ, an unusual intermediate-releasing thioesterase from the colibactin biosynthetic pathway. Naga Sandhya Guntaka, Alan R. Healy, Jason M. Crawford, Seth B. Herzon and Steven D. Bruner *ACS Chem. Biol.* **2017**, *12*, 2598, DOI: 10.1021/acscchembio.7b00479.
9. A modular and enantioselective synthesis of the pleuromutilin antibiotics. Stephen K. Murphy, Mingshuo Zeng and Seth B. Herzon *Science* **2017**, *356*, 956, DOI: 10.1126/science.aan0003.
10. A complex stereochemical relay approach to the antimalarial alkaloid ocimicide A<sub>1</sub>. Evidence for a Structural Revision. Herman Nikolayevskiy, Maung Kyaw Moe Tun, Paul R. Rablen, Choukri Ben Mamoun and Seth B. Herzon *Chem. Sci.* **2017**, *8*, 4867, DOI: 10.1039/c7sc01127j.
11. Hydroheteroarylation of unactivated alkenes using *N*-methoxyheteroarenium salts. Xiaoshen Ma, Hester Dang, John A. Rose, Paul R. Rablen and Seth B. Herzon *J. Am. Chem. Soc.* **2017**, *139*, 5998, DOI: 10.1021/jacs.7b02388.
12. Domain-targeted metabolomics delineates the heterocycle assembly steps of colibactin biosynthesis. Eric P. Trautman, Alan R. Healy, Emily E. Shine, Seth B. Herzon and Jason M. Crawford *J. Am. Chem. Soc.* **2017**, *139*, 4195, DOI: 10.1021/jacs.7b00659.
13. A mechanistic model for colibactin-induced genotoxicity. Alan R. Healy, Herman Nikolayevskiy, Jaymin R. Patel, Jason M. Crawford and Seth B. Herzon *J. Am. Chem. Soc.* **2016**, *138*, 15563, DOI: 10.1021/jacs.6b10354.
14. Mechanism of nucleophilic activation of (–)-lomaiviticin A. Mengzhao Xue and Seth B. Herzon *J. Am. Chem. Soc.* **2016**, *138*, 15559, DOI: 10.1021/jacs.6b09657.
15. Synthesis of ketones and esters from heteroatom-functionalized alkenes by cobalt-mediated hydrogen atom transfer. Xiaoshen Ma and Seth B. Herzon *J. Org. Chem.* **2016**, *81*, 8673, DOI: 10.1021/acs.joc.6b01709.
16. Stereoselective multicomponent reactions using zincate nucleophiles:  $\beta$ -dicarbonyl synthesis and functionalization. Stephen K. Murphy, Mingshuo Zeng and Seth B. Herzon *Org. Lett.* **2016**, *18*, 4880, DOI: 10.1021/acs.orglett.6b02320.

17. Intermolecular hydropyridylation of unactivated alkenes. Xiaoshen Ma and Seth B. Herzon *J. Am. Chem. Soc.* **2016**, *138*, 8718, DOI: 10.1021/jacs.6b05271.
18. Convergent and modular synthesis of candidate precolibactins. Structural revision of precolibactin A. Alan R. Healy, Maria I. Vizcaino, Jason M. Crawford and Seth B. Herzon *J. Am. Chem. Soc.* **2016**, *138*, 5426, DOI: 10.1021/jacs.6b02276.
19. Characterization of cardiac glycoside natural products as potent inhibitors of DNA double-strand break repair by a whole cell double immunofluorescence assay. Yulia V. Surovtseva, Vikram Jairam, Ahmed F. Salem, Ranjini K. Sundaram, Ranjit S. Bindra and Seth B. Herzon *J. Am. Chem. Soc.* **2016**, *138*, DOI: 10.1021/jacs.6b00162.
20. Structural basis for DNA cleavage by the potent antiproliferative agent (–)-lomaiviticin A. Christina M. Woo, Zhenwu Li, Eric K. Paulson and Seth B. Herzon *Proc. Natl. Acad. Sci. U. S. A.* **2016**, *113*, 2851, DOI: 10.1073/pnas.1519846113.
21. Non-classical selectivities in the reduction of alkenes by cobalt-mediated hydrogen atom transfer. Xiaoshen Ma and Seth B. Herzon *Chem. Sci.* **2015**, *6*, 6250, DOI: 10.1039/C5SC02476E.
22. Synthesis of 1,3-aminoalcohols, 1,3-diols, amines, and carboxylic acids from terminal alkynes. Mingshuo Zeng and Seth B. Herzon *J. Org. Chem.* **2015**, *80*, 8604, DOI: 10.1021/acs.joc.5b01220.
23. A concise synthesis of (+)-batzelladine B from simple pyrrole-based starting materials. Brendan T. Parr, Christos Economou and Seth B. Herzon *Nature* **2015**, *525*, 507, DOI: 10.1038/nature14902.
24. Mechanism of action studies of lomaiviticin A and the monomeric lomaiviticin aglycon. Selective and potent activity toward DNA double-strand break repair-deficient cell lines. Laureen C. Colis, Denise C. Hegan, Miho Kaneko, Peter M. Glazer and Seth B. Herzon *J. Am. Chem. Soc.* **2015**, *137*, 5741, DOI: 10.1021/ja513117p.
25. The discovery of a novel route to highly-substituted  $\alpha$ -tropolones enables expedient entry to the core of the gukulenins. Roman Kats-Kagan and Seth B. Herzon *Org. Lett.* **2015**, *17*, 2030, DOI: 10.1021/acs.orglett.5b00841.
26. Multigram synthesis of 1-O-acetyl-3-O-(4-methoxybenzyl)-4-N-(9-fluorenylmethoxycarbonyl)-4-N-methyl-L-pyrrolosamine. Matthew Burk, Nolan Wilson and Seth B. Herzon *Tetrahedron Lett.* **2015**, *56*, 3231, DOI:10.1016/j.tetlet.2014.12.073.
27. Ruthenium-catalyzed anti-Markovnikov hydration and reductive hydration of terminal alkynes. Mingshuo Zeng and Seth B. Herzon *Aldrichimica Acta* **2014**, *47*, 55.
28. Substrate-modified functional group reactivity: Hasubanan and acutumine alkaloid syntheses. Sandra M. King and Seth B. Herzon *J. Org. Chem.* **2014**, *79*, 8937, DOI: 10.1021/jo501516x.
29. Analysis of diazofluorene DNA binding and damaging activity. DNA cleavage by a synthetic monomeric diazofluorene. Christina M. Woo, Nihar Ranjan, Dev P. Arya and Seth B. Herzon *Angew. Chem., Int. Ed.* **2014**, *53*, 9325, DOI: 10.1002/anie.201404137.
30. Broad-spectrum catalysts for the ambient temperature anti-Markovnikov hydration of alkynes. Le Li, Mingshuo Zeng and Seth B. Herzon *Angew. Chem., Int. Ed.* **2014**, *53*, 7892, DOI: 10.1002/anie.201404320.
31. Scope and limitations of 2-deoxy and 2,6-dideoxyglycosyl bromides as donors for the synthesis of  $\beta$ -2-deoxy and  $\beta$ -2,6-dideoxyglycosides. Miho Kaneko and Seth B. Herzon *Org. Lett.* **2014**, *16*, 2776, DOI: 10.1021/ol501101f.
32. A method for the selective hydrogenation of alkenyl halides to alkyl halides. Sandra M. King, Xiaoshen Ma and Seth B. Herzon *J. Am. Chem. Soc.* **2014**, *136*, 6884, DOI: 10.1021/ja502885c.

33. A highly active and air-stable ruthenium complex for the ambient temperature anti-Markovnikov reductive hydration of terminal alkynes. Mingshuo Zeng, Le Li, and Seth B. Herzon *J. Am. Chem. Soc.* **2014**, *136*, 7058, DOI: 10.1021/ja501738a.
34. The cytotoxicity of (–)-lomaiviticin A arises from induction of double-strand breaks in DNA. Laureen C. Colis, Christina M. Woo, Denise C. Hegan, Peter M. Glazer and Seth B. Herzon *Nat. Chem.* **2014**, *6*, 504, DOI: 10.1038/nchem.1944.
35. Temporal separation of catalytic activities allows anti-Markovnikov reductive functionalization of terminal alkynes. Le Li and Seth B. Herzon *Nat. Chem.* **2014**, *6*, 22, DOI: 10.1038/nchem.1799.
36. Development of enantioselective synthetic routes to the hasubanan and acutumine alkaloids. Nicholas A. Calandra, Sandra M. King and Seth B. Herzon *J. Org. Chem.* **2013**, *78*, 10031, DOI: 10.1021/jo401889b.
37. Insights into lomaiviticin biosynthesis. Isolation and structure elucidation of (–)-homoseongomycin. Christina M. Woo, Shivajirao L. Gholap and Seth. B. Herzon *J. Nat. Prod.* **2013**, *76*, 1238, DOI: 10.1021/np400355h.
38. A practical method for regiocontrolled one-carbon ring contraction. Matthew J. Mitcheltree, Zef A. Konst and Seth B. Herzon *Tetrahedron* **2013**, *69*, 5634, DOI: 10.1016/j.tet.2013.04.027.
39. Direct synthesis of *N*-glycosides by the reductive glycosylation of azides using protected and native carbohydrate donors. Jianbin Zheng, Kaveri Balan Urkalan and Seth B. Herzon *Angew. Chem., Int. Ed.* **2013**, *52*, 6068, DOI: 10.1002/anie.201301264.
40. Total syntheses of (–)-acutumine and (–)-dechloroacutumine. Sandra M. King, Nicholas A. Calandra, and Seth B. Herzon *Angew. Chem., Int. Ed.* **2013**, *52*, 3642, DOI: 10.1002/anie.201210076.
41. Regioselective reductive hydration of alkynes to form branched or linear alcohols. Le Li and Seth B. Herzon *J. Am. Chem. Soc.* **2012**, *134*, 17376, DOI: 10.1021/ja307145e.
42. Synthesis of (*R*)-(+)-4-methyl-cyclohex-2-ene-1-one. Maung Kyaw Moe Tun and Seth B. Herzon *J. Org. Chem.* **2012**, *77*, 9422, DOI: 10.1021/jo3017956.
43. Development of enantioselective synthetic routes to (–)-kinamycin F and (–)-lomaiviticin aglycon. Christina M. Woo, Shivajirao L. Gholap, Liang Lu, Miho Kaneko, Zhenwu Li, P.C. Ravikumar and Seth B. Herzon *J. Am. Chem. Soc.* **2012**, *134*, 17262, DOI: 10.1021/ja307497h.
44. Isolation of lomaiviticins C–E. Transformation of lomaiviticin C to lomaiviticin A, complete structure elucidation of lomaiviticin A, and structure–activity analyses. Christina M. Woo, Nina E. Beizer, Jeffrey E. Janso and Seth. B. Herzon *J. Am. Chem. Soc.* **2012**, *134*, 15285, DOI: 10.1021/ja3074984.
45. The pharmacology and therapeutic potential of (–)-huperzine A. Maung Kway Moe Tun and Seth B. Herzon *J. Exp. Pharmacol.* **2012**, *4*, 113, DOI: 10.2147/JEP.S27084.
46. Room temperature, palladium-mediated *P*-arylation of secondary phosphine oxides. Aaron J. Bloomfield and Seth B. Herzon *Org. Lett.* **2012**, *14*, 4370, DOI: 10.1021/ol301831k.
47. Real time kinetics of surfactant molecules transfer between emulsion particles probed by in situ second harmonic generation spectroscopy. Yumeng You, Aaron J. Bloomfield, Jian Liu, Li Fu, Seth B. Herzon and Elsa C. Y. Yan *J. Am. Chem. Soc.* **2012**, *134*, 4264 DOI: 10.1021/ja2104608.
48. Characterization of a reductively-activated elimination pathway relevant to the biological chemistry of the kinamycins and lomaiviticins. Seann P. Mulcahy, Christina M. Woo, Weidong Ding, George A. Ellestad and Seth B. Herzon *Chem. Sci.* **2012**, *3*, 1070, DOI: 10.1039/C2SC00854H.
49. The diazofluorene antitumor antibiotics: Structural elucidation, biosynthetic, synthetic, and chemical biological studies. Seth B. Herzon and Christina M. Woo *Nat. Prod. Rep.* **2012**, *29*, 87, DOI: 10.1039/C1NP00052G.

50. Enantioselective syntheses of (–)-kinamycin F and (–)-lomaiviticin aglycon. Seth B. Herzon *Synlett* **2011**, 2105, DOI: 10.1055/s-0030-1261147.
51. A robust and scalable synthesis of the potent neuroprotective agent (–)-huperzine A. Maung Kway Moe Tun, Daniel-Joachim Wüstmann and Seth B. Herzon *Chem. Sci.* **2011**, 2, 2251, DOI:10.1039/C1SC00455G.
52. Efficient entry to the hasubanan alkaloids. First enantioselective total syntheses of (–)-hasubanonine, (–)-runanine, (–)-delavayine, and (+)-periglaucine B. Seth B. Herzon, Nicholas A. Calandra and Sandra M. King *Angew. Chem., Int. Ed. Engl.* **2011**, 50, 8863, DOI: 10.1002/anie.201102226.
53. 11-Step enantioselective synthesis of (–)-lomaiviticin aglycon. Seth B. Herzon, Liang Lu, Christina M. Woo and Shivajirao L. Gholap *J. Am. Chem. Soc.* **2011**, 133, 7260, DOI: 10.1021/ja200034b.
54. Single-step synthesis of secondary phosphine oxides. Aaron J. Bloomfield, Jack M. Qian and Seth B. Herzon *Organometallics* **2010**, 29, 4193, DOI: 10.1021/om100571w.
55. Development of a convergent entry to the diazofluorene antitumor antibiotics: Enantioselective synthesis of kinamycin F. Christina M. Woo, Liang Lu, Shivajirao L. Gholap, Devin R. Smith and Seth B. Herzon *J. Am. Chem. Soc.* **2010**, 132, 2540, DOI: 10.1021/ja910769j.
56. Synthesis of the fully glycosylated cyclohexenone core of lomaiviticin A. Shivajirao L. Gholap, Christina M. Woo, P. C. Ravikumar and Seth B. Herzon *Org. Lett.* **2009**, 11, 4322, DOI: 10.1021/ol901710b.

#### SUPERVISED PUBLICATIONS:

57. Hydroaminoalkylation of unactivated olefins with dialkylamines. Seth B. Herzon and John F. Hartwig *J. Am. Chem. Soc.* **2008**, 130, 14940, DOI: 10.1021/ja806367e.
58. Direct, catalytic hydroaminoalkylation of unactivated olefins with *N*-alkyl arylamines. Seth B. Herzon and John F. Hartwig *J. Am. Chem. Soc.* **2007**, 129, 6690, DOI: 10.1021/ja0718366.
59. Evidence for the rapid conversion of stephacidin B into the electrophilic monomer avrainvillamide in cell culture. Jeremy E. Wulff, Seth B. Herzon, Romain Siegrist and Andrew G. Myers *J. Am. Chem. Soc.* **2007**, 129, 4898, DOI: 10.1021/ja0690971.
60. Enantioselective synthesis of stephacidin B. Seth B. Herzon and Andrew G. Myers *J. Am. Chem. Soc.* **2005**, 127, 5342, DOI: 10.1021/ja0510616.
61. Identification of a novel Michael acceptor group for the reversible addition of oxygen- and sulfur-based nucleophiles. Synthesis and reactivity of the 3-alkylidene-3*H*-indole 1-oxide function of avrainvillamide. Andrew G. Myers and Seth B. Herzon *J. Am. Chem. Soc.* **2003**, 125, 12080, DOI: 10.1021/ja0372006.
62. Convenient preparations of 2,4-methanopyrrolidine and 5-carboxy-2,4-methanopyrrolidines. Grant R. Krow, Guoliang Lin, Seth B. Herzon, Andrew M. Thomas, Keith P. Moore, Qiuli Huang and Patrick J. Carroll *J. Org. Chem.* **2003**, 68, 7562, DOI: 10.1021/jo0348672.
63. The rearrangement route to 2-azabicyclo[2.1.1]hexanes. Solvent and electrophile control of neighboring group participation. Grant R. Krow, Gouliang Lin, Deepa Rapolu, Yuhong Fang, Walden S. Lester, Seth B. Herzon and Philip E. Sonnet *J. Org. Chem.* **2003**, 68, 5292, DOI: 10.1021/jo034394z.
64. Complex-induced proximity effects. Temperature-dependent regiochemical diversity in lithiation-electrophilic substitution reactions of *N*-*boc*-2-azabicyclo[2.1.1]hexane. 2,4- And 3,5-methanoproline. Grant R. Krow, Seth B. Herzon, Gouliang Lin, Feng Qiu and Philip E. Sonnet *Org. Lett.* **2002**, 4, 3151, DOI: 10.1021/ol026509b.
65. Synthesis of novel 2-azabicyclo[2.2.0]- and [2.1.1]hexanols. Grant R. Krow, Walden S. Lester, Nian Liu, Jing Yuan, Amanda Hiller, Jinqi Duo, Seth B. Herzon, Yen Nguyen and Kevin Cannon *J. Org. Chem.* **2001**, 66, 1811, DOI: 10.1021/jo001558s.

66. Azabicyclo[2.1.1]hexanes. 2. Substituent effects on the bromine-mediated rearrangement of 2-azabicyclo[2.2.0]hex-5-enes. Grant R. Krow, Yoon B. Lee, Walden S. Lester, Nian Liu, Jing Yuan, Jinqi Duo, Seth B. Herzon, Yen Nguyen and David Zacharias *J. Org. Chem.* **2001**, 66, 1805, DOI: 10.1021/jo0015570.

#### BOOK CHAPTERS:

1. Sandra M. King and Seth B. Herzon, Hasubanan and acutumine alkaloids. In *The Alkaloids: Chemistry and Biology*, Hans-Joachim Knölker, Ed.; Elsevier: Boston, 2014, Vol. 73, p. 161.
2. Seth B. Herzon, The kinamycins. In *Total Synthesis of Natural Products. At the Frontiers of Organic Chemistry*, J. Jack Li and E. J. Corey, Eds.; Springer Berlin–Heidelberg: Berlin, 2012, p. 39.
3. John F. Hartwig and Seth B. Herzon Amido complexes of the early transition metals. *Organotransition Metal Chemistry*, 1<sup>st</sup> Ed., University Science Books: Sausalito, California, 2010, p. 152.

#### PROFESSIONAL SERVICES:

Scientific Consultant, Novartis (2016)  
Scientific Consultant, Biscayne Pharmaceuticals (2016–Present)  
Scientific Consultant, Genentech (2014)  
Scientific Consultant, BASF (2014)  
Scientific Consultant, Merck (2014, 2016–Present)  
Scientific Consultant, Abbvie (2013)  
Editorial Advisory Board, *Natural Products Reports* (2012–Present)  
Member, Scientific Advisory Board, Insero Health, Inc., Miami, FL (2012–present)  
Member-At-Large, Division of Organic Chemistry, The American Chemical Society (2011–2013)  
Scientific Consultant, Biomedisyn Incorporated, Woodbridge, CT (2011)  
Scientific Consultant, Satori Pharmaceuticals, Cambridge MA (2008–2013)  
Member, Scientific Advisory Board, JustBIO, Québec, Canada (2008–present)

#### EXTERNAL FUNDING:

1R01CA215553-01A1 (Herzon/Crawford) 12/11/2017 - 11/30/2022  
National Cancer Institute/NIH/DHHS  
Chemical approaches toward the identification, functional analysis, and biosynthesis of small molecule cyclomodulins

128352-RSG-15-197-01 (Bindra) 1/1/2016 - 12/31/2019  
American Cancer Society, Inc.  
Pre-clinical Development of Mibefradil as a Novel Glioma Radiosensitizer  
The major goal of this project is to evaluate mibefradil and synthetic derivatives for clinical treatment of glioma.  
Role: Collaborator

2R01GM090000-06 (Herzon, Seth) 5/1/2016 - 4/30/2020  
NIH  
Synthetic, Chemical Biological, and Preclinical Studies of Antitumor Natural Products and Their Derivatives  
The goal of this application is to perform synthetic, chemical biological and preclinical studies of several antitumor natural products, along with their derivatives

1R01GM110506-01A1 (Herzon, Seth) 9/8/2015 - 5/31/2019  
NIH  
Synthesis and Study of Complex Antiproliferative and Antimalarial Natural Products  
The major goal of this project are to complete syntheses of the natural products the gukulenins and ocimyquines, conduct structure-function analysis, and elucidate their mechanism of action.

C152059 (Herzon, Seth) 5/1/2012 - 4/30/2018  
Dreyfus Foundation  
Synthesis and Study of Complex Antiproliferative Natural Products  
The major goal of this project is completion of the synthesis of the complex antiproliferative agent gukulenin A.

**PERSONAL:**

Born July 26<sup>th</sup>, 1979, Philadelphia, PA.

Married to Alison M. Sweeney, Assoc. Prof. of Physics, Department of Physics and Astronomy, The University of Pennsylvania