CURRICULUM VITAE

Amit Basu
Associate Professor
Department of Chemistry
Box H
Brown University
Providence, RI 02912

Education

- B.A., Reed College, 1992 (Advisor: Patrick McDougal)

- Ph.D., University of Illinois at Urbana-Champaign, 1996 (Advisor: Peter Beak)
  Dissertation Title: Enantioselective Lateral Lithiation-Substitution of *O*-Ethyl and *O*-Benzyl *N*-Pivaloyl Anilines: Studies of a Pathway of Stereoinformation Transfer.

- Post-doctoral Research, Princeton University 1996-1999 (Advisor: Daniel Kahne)

Professional Appointments

- Associate Professor of Chemistry, Brown University, 2006-present
- Assistant Professor of Chemistry, Brown University, 1999-2006
- Postdoctoral Research Associate, Princeton University, 1996-1999
- Graduate Research Assistant, University of Illinois, 1994-1996
- Graduate Teaching Assistant, University of Illinois, 1992-1994

Awards

- RC Fuson Research Award, 1995
- Department of Education/Chevron Graduate Fellowship, 1994-1995
- Research Innovation Award, 2001-2006
- NSF Faculty Early CAREER Award, 2002-2006
- Mizutani Award in Glycoscience 2005
- Karen T Romer Prize for Undergraduate Advising & Mentoring, 2014
- Fudan University State Key Laboratory Senior Visiting Scholar, 2016-2017

Publications

31. Hoshing, Raghuraj, Blaise W. Leeber, Helene Kuhn, David Caianiello, Brandon Dale, Michael Saladino, Robert Lusi, Natalie Palaychuk, Sarah Weingarten, and Amit Basu. "The Chirality of Aggregated Yariv Reagents Correlates with Their AGP-Binding Ability**." *ChemBioChem*, October 27, 2021, cbic.202100532. https://doi.org/10.1002/cbic.202100532; Preprint: doi.org/10.26434/chemrxiv.13154261.v1
30. Muzulu, Janet, and Amit Basu. "Detection of Ligand Binding to Glycopolymers Using Saturation Transfer Difference NMR." *Physical Chemistry Chemical Physics* 23, no. 38 (2021): 21934–40. https://doi.org/10.1039/D1CP03410C; Preprint: https://doi.org/10.26434/chemrxiv.13154147.v1

29. Haubrich, B. A., Nayyab, S., Williams, C., Whitman, A., Zimmerman, T., Li, Q., Chen, Y., Zhou, C.-Z., Basu, A., and Reid, C. W. (2020) Inhibition of Streptococcus pneumoniae autolysins highlight distinct differences between chemical and genetic inactivation. bioRxiv 13, e1006934–15.
28. An Improved Protocol for the Synthesis and Purification of Yariv Reagents Raghuraj Hoshing, Michael Saladino, Helene Kuhn, David Caianiello, Robert F. Lusi, and Amit Basu The Journal of Organic Chemistry Article J. Org. Chem. 2020, 85, 16236−16242. DOI: 10.1021/acs.joc.0c01812; Preprint: doi.org/10.26434/chemrxiv.12525284.v1
27. Diamide inhibitors of the Bacillus subtilis *N*-acetylglucosaminidase LytG that exhibit anti-bacterial activity. Saman Nayyab, Mary O'Connor, Jennifer Brewster, James Gravier, Mitchell Jamieson, Ethan Magno, Ryan Miller, Drew Phelan, Keyana Roohani, Paul Williard, Amit Basu, and Christopher W. Reid. *ACS Infect. Dis.* **2017***, 3 421–427.*
26. "Glycopolymers Prepared by Ring-Opening Metathesis Polymerization Followed by Glycoconjugation Using a Triazole-Forming "Click" Reaction" Okoth, R. Basu, A. *Methods in molecular biology.* **2016** *1367* 29-37.
25. Galactan synthesis in a single step via oligomerization of monosaccharides M. Dräger and A. Basu *Beilstein J. Org. Chem*. **2014**, 10, 2658–2663;
24. Anti-bacterial glycosyl triazoles – Identification of an N-acetyl glucosamine derivative with bacteriostatic activity against Bacillus H. Kuhn, D. Gutelius, E. Black, C. Nadolny, A. Basu, and C. Reid *Med. Chem. Commun*. **2014**, 5, 1213-1217.
23. A rapid, inexpensive, and semi-quantitative method for determining pollen tube extension using fluorescence E. Hartman, C. Levy, D. M. Kern, M. Johnson, and A. Basu *Plant Methods* **2014**, 10:3; doi:10.1186/1746-4811-10-3
22. End-Labeled Amino Terminated Monotelechelic Glycopolymers Generated by ROMP and Cu(I)-Catalyzed Azide – Alkyne Cycloaddition R. Okoth and A. Basu, *Beilstein J. Org. Chem.* **2013**, 9, 608-612.
21. Synthesis, characterization, and lectin-binding studies of carbohydrate-functionalized silica nanoparticles J. Zhao, Y. Liu, H-J. Park, J. M. Boggs, and A. Basu. *Bioconjugate Chem*. **2012**, *23*, 1166-1173.
20. Photo- and Biophysical Studies of Lectin-Conjugated Fluorescent Nanoparticles: Reduced Sensitivity in High Density Assays Y. Wang, J. C. Gildersleeve, A. Basu, M. B. Zimmt, *J. Phys. Chem. B*, **2010**, *114*, 14487-14494
19. Participation of Myelin Glycosphingolipids, Galactosylceramide and Sulfatide, in Glycosynapses between Oligodendrocyte or Myelin Membranes J. M. Boggs, W. Gao, J. Zhao, H. Park, Y. Liu, and A. Basu. *FEBS Letters* **2010**, *584*, 1771-1778.
18. "Core Functionalization of Hollow Polymer Nanocapsules." X. Liu and A. Basu. *J. Am. Chem. Soc.* **2009**, *131*, 5718-5719.
17. "Probing the lactose•GM3 carbohydrate-carbohydrate interaction with glycodendrimers" N. Seah, P.V. Santacroce and A. Basu. *Org. Lett.* **2009***, 11, 559-562.*

16. "Cross-linked polynorbornene-coated gold nanoparticles – Dependence of particle stability on cross-linking position and cross-linker structure." X. Liu and A. Basu. *Langmuir*, **2008**, *24*, 11169-11174.
15. "Colorimetric Sensing and Biosensing using Functionalized Conjugated Polymers" A. Basu. *Molecular Recognition Using Polymers.* John Wiley & Sons. **2008** Ed. V. Rotello & S. Thayumanavan.
14. "Carbohydrate-carbohydrate interactions." N. Seah and A. Basu. *Encyclopedia of Chemical Biology*, John Wiley & Sons. **2008** Ed. T. Begley.
13. "Reagentless functionalization of gold nanoparticles via a 3 + 2 Huisgen cycloaddition" *J. Coll. Interfac. Sci.* **2008**, 318, 140-144. W. Limapichat and A. Basu
12. "Model Systems." Basu, A. and Schneider, J. *Curr. Opin. Chem. Biol.* **2006**, *10*, 527–528.
11. "Olefin Metathesis on Nanostructures." Liu, X. and Basu, A. *J. Organomet. Chem.* **2006**, *691*, 5148-5154. (Invited Submission, Special Issue on Alkene Metathesis)
10. "Two Polymerizable Derivatives of 2,2'-Azino-bis(3-ethylbenzthiazoline-6-sulfonic acid)" J. Fei, A. Basu, F. Xue, G. T. R. Palmore *Org. Lett.* **2006**; *8*, 3-6.
9. "Glycosidase Inhibition by 1-Glycosyl-4-Phenyl Triazoles" L. L. Rossi and A. Basu. *Bioorg. Med. Chem. Lett*. **2005**, 15, 3596-3599.
8. "Synthesis of the glycosphingolipid β-galactosyl ceramide and analogs via olefin cross metathesis." A. N. Rai and A. Basu. *J. Org. Chem.* **2005**, *70*, 8228-8230.
7. "Studies of the Carbohydrate-Carbohydrate Interaction Between Lactose and GM_3 using Langmuir Monolayers and Glycolipid Micelles" P. V. Santacroce and A. Basu. *Glycoconjugate J.* **2004**. *21*, 89-95. (Invited Submission, Special Issue on Carbohydrate-Carbohydrate Interactions)
6. "Sphingolipid synthesis via olefin cross metathesis: Preparation of a differentially protected building block and application to the synthesis of D-*erythro*-ceramide." A. N. Rai and A. Basu *Org Lett*. **2004**, *6*, 2861-2863.
5. "Lipopolysaccharide identification with functionalized polydiacetylene liposome sensors." M. Rangin and A. Basu. *J. Am. Chem. Soc.* **2004**, *126*, 5038-5039.
4. "3-Methoxycarbonyl-5-nitrophenyl boronic acid: High affinity diol recognition at neutral pH." H. R. Mulla, N. J. Agard and A. Basu *Bioorg. Med. Chem. Lett.* **2004**, *14*, 25-27.
3. "A Rapid and Efficient Method for *para*-Methoxybenzyl Ether Formation with Lanthanum Triflate." A. N. Rai and A. Basu. *Tetrahedron. Lett.* **2003***, 44,* 2267-2269.
2. "Probing Specificity in Carbohydrate-Carbohydrate Interactions with Micelles and Langmuir Monolayers." P. V. Santacroce and A. Basu. *Angew. Chem. Int. Ed. Engl.* **2003**, *42*, 95-98.
1. "Configurational Stability and Stereoinformation Transfer in the Reactions of Enantioenriched Organolithium Reagents." A. Basu and S. Thayumanavan *Angew. Chem. Int. Ed. Engl.* **2002**, *41*, 716-738.

Patents

Patent Application US20180290967A1 *Novel N-Acetylglucosaminidase Inhibitors and Uses Thereof* Amit Basu, Christopher W. Reid, Mary Margaret O'Connor, Ethan Lindsay Magno, Mitchell Evan Jamieson, Ryan Daniel Miller
Issued Nov 10, 2020 - U.S. Patent No. 10,829,440

Patent Application WO2018237268A1 *Novel antibacterial compounds and methods of making and using same*, Amit Basu, Christopher W. Reid, Michael Saladino

Patent Application US 201962878561 Diamide Anti-Microbial Agents Amit Basu, Christopher W. Reid, Nola Camille Iwasaki, Joseph Prete

Presentations (last 10 yrs)

Invited –

83. Davidson College Chemistry Dept., Feb 18, 2020
82. Vanderbilt University Chemistry Dept, Nov. 5, 2018
81. U Mass Lowell Chemistry Dept., Mar. 23, 2018
80. Fudan University, Shanghai, China, May 23, 24, 2016
79. Johnson and Johnson, Ethicon Division, Raritan NJ, Oct. 28, 2014.
78. Department of Chemistry, University of Arkansas, Fayetteville, Apr. 21, 2014.
77. Department of Chemistry, University of Pittsburgh, Mar. 27, 2014
76. Department of Chemistry, University of Rhode Island, Mar. 24, 2014
75. Invited Speaker, Frontiers in the Chemistry and Biology of Oligosaccharides, IISER Pune, India, Jan 2014
74. Invited Speaker, 27th International Carbohydrate Symposium, Bangalore, India, Jan 2014
73. Department of Chemistry & Biochemistry, University of Southern California, Nov. 19, 2013
72. Department of Chemistry & Biochemistry, University of Delaware, Oct. 30, 2013
71. University of Massachusetts @ Dartmouth, Sep. 18, 2013
70. Department of Chemistry & Biochemistry, Seton Hall University, Sep. 10, 2013.
69. Invited Speaker, Gordon Conference on Carbohydrates, VT, June 2013
68. Department of Chemistry, University of Toledo, April 3, 2013
67. "Molecules and Materials for Carbohydrate Recognition" Wayne State University, Nov. 2012
66. "Cutting Carbohydrates" Roger Williams University, Bristol RI, Oct 2012
65. "Molecules and Materials for Carbohydrate Recognition" Bogazici University, Istanbul Turkey, May 2012
64. "Cutting Carbohydrates" Colgate University, NY, Feb. 21, 2012.
63. “Probing carbohydrate-carbohydrate interactions with multivalent glycoconjugates” University of Missouri @ St. Louis, Jan. 2012.

62. "Probing carbohydrate-carbohydrate interactions with multivalent glycoconjugates" Northeastern University, Jan. 2012.

***Submitted**– (last 5 years, presenting author is in **boldface**)*

51. NMR insights into carbohydrate-carbohydrate interactions. **Muzulu, Janet**; Basu, Amit; Leeber, Blaise; Abstracts of Papers, 260th ACS National Meeting & Exposition, San Francisco, CA, United States, August 23-27, 2020, CARB-0024.

50. Sulfo-galactose (SGal) - aromatic interactions in solution: An NMR study. **Muzulu, Janet**; Basu, Amit; Abstracts of Papers, 260th ACS National Meeting & Exposition, San Francisco, CA, United States, August 23-27, 2020, CARB-0046.

49. Synthesis and purification of the Yariv reagent; a plant proteoglycan binding dye. **Hoshing, Raghuraj**; Basu, Amit; Abstracts of Papers, 260th ACS National Meeting & Exposition, San Francisco, CA, United States, August 23-27, 2020, CARB-0050.

48. Tautomerism in a supramolecular triphenyl azo dye. **Hoshing, Raghuraj**; Basu, Amit Abstracts of Papers, 260th ACS National Meeting & Exposition, San Francisco, CA, United States, August 23-27, 2020, ORGN-0165

47. Correlation between the chirality of supramolecular aggregates of an azo dye to its plant proteoglycan binding ability. **Hoshing, Raghuraj**; Leeber, Blaise; Kuhn, Helene; Saladino, Mike; Caianiello, David; Dale, Brandon; Lusi, Robert; Palaychuk, Natalie; Weingarten, Sarah; Basu, Amit; Abstracts of Papers, 260th ACS National Meeting & Exposition, San Francisco, CA, United States, August 23-27, 2020, ORGN-0159.

46. Sulfo-galactose (SGal) - aromatic interactions in solution: NMR study **Janet Muzulu**, Blaise Leeber, Amit Basu. Poster presented at the 259th ACS National Meeting Philadelphia, PA, March, 2020.

45. Correlation between the chirality of supramolecular aggregates of an azo dye to its plant proteoglycan binding ability **Raghuraj Hoshing**, Blaise Leeber, Helene Kuhn, David Cainiello, Brandon Dale, Robert Lusi, Michael Saladino, Sarah Weingarten, Natalie Palaychuk, Amit Basu Oral presentation at 259th ACS National Meeting Philadelphia, PA, March, 2020.

44. NMR insights into carbohydrate-carbohydrate interactions. **Janet Muzulu**, Blaise Leeber, Amit Basu. Oral presentation at 259th ACS National Meeting Philadelphia, PA, March, 2020.

43. Carbohydrate-carbohydrate interactions of supramolecular glycopolymers – recognition with a twist Amit Basu Poster presented at the Gordon Research Conference on Carbohydrates, Hong Kong, June 2019.

42. Microwave-assisted organic synthesis (MAOS) of diamides for antimicrobial structure-activity study in Gram-positive pathogens **Rochefort, Lauren**; Haubrich, Brad; Saladino, Michael; Basu, Amit; Reid, Christopher. Poster presented at 256th ACS National Meeting Boston, MA, August, 2018.

41. AccesSARizing the teaching laboratory **Haubrich, Brad**; Rochefort, Lauren; Saladino, Michael; Basu, Amit; Reid, Christopher. Poster presented at 256th ACS National Meeting Boston, MA, August, 2018.

40. One strep at a time: Chemogenomic screening of antimicrobial diamides in Streptococcus pneumoniae. **Nayyab, Saman**; Haubrich, Brad; Saladino, Michael; Belval,

John; Symington, Steven; Basu, Amit; Reid, Christopher Poster presented at 256th ACS National Meeting Boston, MA, August, 2018.

39. Communicating science - reactions in action and chemical etymology Amit Basu, Poster presented at the 255th National ACS Meeting, New Orleans, LA, March, 2018.

38. "Carbohydrate-carbohydrate interactions in plant cell walls and myelin" **Amit Basu** Poster presented at the Gordon Research Conference on Carbohydrates, Mt Snow Resort, Vermont, June 2017.

37. What's in a name? The etymology of the names of the eight hexoses. Ella Cohen, **Amit Basu**, Poster presented at the Gordon Research Conference on Carbohydrates, Mt Snow Resort, Vermont, June 2017

36. "Probing the sulfogalactose-galactose and Yariv-arabinogalactan carbohydrate-carbohydrate interactions using glycopolymer systems" **Blaise Leeber**, Helene Kuhn, David Caianiello, Brandon Dale, Robert Lusi, Natalie Palaychuk, Sarah Weingarten, and Amit Basu, Poster presented at the Gordon Research Conference on Polymers, Mt Holyoke College, MA, June 2017

35. "Probing Gram-positive cell wall physiology with small molecule inhibitors of bacterial N-acetylglucosaminidases" Saman Nayyab, Keyana Roohani, Mary O'Connor, Amit Basu, **Christopher W. Reid** Poster presented at the Gordon Research Conference on Carbohydrates, Mt Snow Resort, Vermont, June 2017

34. "Carbohydrate recognition in plant cell walls, myelin, and peptidoglycan" **Amit Basu** Poster presented at the Bioorganic Chemistry Gordon Research Conference, Proctor Academy, NH, June 2017.

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Service

i) To the Department/University:

Web Development Project (with Prof. C. Rose-Petruck) – Spring 2000 ~ Spring 2001
Potter Prize Committee – Spring 2000, Spring 2001
Dept. Fellowship Committee – Fall 2000
Organized revision of Graduate Third Year Research Proposal Requirements, 2000
Organic Seminar/Colloquium Committee – July 1999 ~ June 2002
Office of International Programs – Faculty Host for Visiting Scholar from University of Tanzania, Spring 2003
Organized revision of Organic Graduate Curriculum and Preliminary Examination Requirements, Spring 2004
Departmental Poster Prize Committee, 2005
Organic Search Committee – 2000–2006
University Science Education Committee 2006-2007
University General Education Task Force 2007-2008
Development of Chemical Biology/Materials Chemistry Track
Departmental Mentor to Assistant Professor Bazemore-Walker (2006 – present)
Annual Review Committee for Assistant Professor Bazemore-Walker (2007-present)
Faculty Advising Fellow (2008 ~ 2011)
Reappointment Committee Chair for Assistant Professor Jason Sello (2008)
Member, Biophysical Chemistry Search Committee (2008)

Panelist, Dean of the College Presentation on UTRA opportunities (2008)
OVPR ad hoc Restricted Submission Evaluation Committee (2009)
Coordinator - Undergraduate studies focus group for departmental external review (2009)
Transfer credit coordinator
Sheridan Center Panelist on UTRAs and teaching (2009)
Member of Sheridan Center Discussion Group on Teaching in the Sciences (2009)
Participant, Faculty Forum on Writing (2009)
Panelist, Meiklejohn Orientation (2010)
Participant, Wayland Collegium Discussion Group on Introductory Science/Pre-medical Curriculum (2010)
Speaker Sheridan Center – Integrating Research in the Undergraduate Laboratory (2010)
Reappointment Committee (Chair) for Lecturer Kathleen Hess (2011)
Tenure Evaluation Committee for Assistant Professor Jason Sello (2011)
Assistant Professor Classroom Peer Observation (2011)
New Scientist Program Faculty Lunch Participant (2011)
Sheridan Center Associate Director Interviews (2011)
ad hoc Curriculum Committee (2011)
Chair, Reappointment Committee for Lecturer Kathleen Hess
Development of ScB Thesis Guidelines
Member of Sheridan Center Discussion Group on Teaching in the Sciences
Office of International Programs – Faculty Host for Visiting Scholar from Bogazici University, Turkey, Spring 2012
Chair, Promotion Committee for Lecturer Kathleen Hess
Team Enhanced Advising and Mentoring (TEAM) member (2013 – 2014, 2020 - present)
New Faculty Orientation Faculty Panelist – 2013
Chemistry Concentration Advisor/Director of Undergraduate Studies – Spring 2003 ~ present (23 current advisees)
Chemistry Representative at Annual Concentration Fairs
Faculty Member in Charge of Departmental Solvent Delivery System
Science Center Advisory Board Member (2008 - 2016)
Randall Advisor (2011-present)
Sophomore and Freshman Advisor
Departmental Safety Committee (2012 – 2016, Chair 2012-2014, 2019 - present)
Panelist, Sheridan Center Certificate Workshop on Effective Assessments (Dec. 2014)
Organic Chemistry Search Committee (Fall 2014)
Participated in searches for Sheridan Center Associate Director, STEM (2014)
Karen T Romer Advising Prize Selection Committee (2015, 2016)
Coordinated revision of graduate curriculum (2015 – 16)
Chair, Organic Chemistry Search Committee (Fall 2016)
Orientation Speaker, Science Center Catalyst/MOSAIC Program (2016)
Chair – Reappointment Committee for Senior Lecturer K. Hess (2017/18)
Contributing Author – 2017 Departmental Self Study
Organic Student Seminar Coordinator (2017 – 18)
Coordinating Member, Science Friday Lunches (2018 - present)
UTRA Review Panel, Spring 2018
Review Panel for HHMI CURE course proposals, Fall 2018, Spring 2019

Member, Search Committee for Senior-level Organic Chemist, 2018-19
Member, Team Enhanced Advising and Mentoring (TEAM) in STEM 2018-21
Member, Faculty-Coaches Advising Community, 2020
Chair, Annual Review Committee for Lecturer E. Victor (Fall 2019)
Chair, Reappointment Committee for Lecturer E. Victor (Fall 2020)
Member, Annual Review Committee for Lecturer C. Morton (Fall 2019)
Member, Reappointment Committee for Lecturer C. Morton (Fall 2020)
Member, ad hoc Departmental Curriculum Committee (2019)
Chair, Departmental Curriculum Committee (2019-present)
Member, Brown University Committee on Academic Standing (Fall 2019 - present)
Course Facilitator – Sheridan Center ANCHOR Course for Online/Hybrid Instruction (Summer 2020)
Director of Undergraduate Studies (2021 –)
Chair, Annual Review Committee for Visiting Lecturer J.Morin (2021)
Member, Annual Review Committee for C. Morton (2021)

Ph.D. Thesis Final Defense Committees (last 5 years)

2016 Philip Lukulay
Jian He
2017 Chang Liu
2018 Blaise Leeber
Chen Fang
2019 Xuefeng Guo
2020 Huan Pang
2021 Janet Muzulu
Philip Caffrey

3rd Year Research Proposal Committees (last 5 years)

2017 – David Garcia
2018 – Michael Saladino
Philip Caffrey
Janet Muzulu
2019 – Raghuraj Hoshing
2020 – Adam Garlow
Luke Wilzcek
Katelyn Rioux
Treshaun Sutton
2021 – Akil Hamsath
Audra Woodside

2nd Year Research Project Description Committees (last 5 years)

2017 Huan Pang
Michael Saladino
2018 Philip Caffrey
Janet Muzulu

2019 Adam Garlow
Luke Wilzcek
2020 Treshaun Burton
Akil Hamsath
2021 Audra Woodside

Undergraduate Theses

First Reader

2009 – Shane Mulligan (Sc.B. Chem)
Jason Becker (Sc.B. Chem)
2010 – Shannon Stone (Sc.B. Chem)
2011 – Spencer Clark (Sc.B. Chem)
Madeleine Heldman (Sc.B. Chem)
2012 – Emily Hartman (Sc.B. Chem)
2013 – Kachapol Sinprasert (Sc.B. Chem)
Harry Wanar (Sc.B. Chem)
2014 – Jordan Beck (Sc.B. Chem)
Conan Huang (Sc.B. Chem. Eng.)
David Caianiello (Sc.B. Chem)
2015 - Ethan Magno (Sc.B. Chem)
Sarah Weingarten (Sc.B. Biochem)
Stephen Sarno (Sc.B. Chem)
Robert Lusi (Sc.B. Chem)
2016 Mitchell Jamieson (Sc. B. Chem)
Mary O'Connor (Sc.B. Chem)
2017 Natalie Palaychuk (Sc.B. Chem)
Brandon Dale (A.B. Ethnopharmacognosy)
Salina Moon (Sc.B. Biochem)
Nancy Zhou (Sc.B. Chem)
2018 Megan Hauptman (Sc.B. Biochem)
2019 Cadence Pearce (Sc. B Chem)
David Ryffel (Sc. B. Chem)
2020 Nola Iwasaki (Sc. B Chem)
2021 Kaushik Yeturu (Sc.B Chem)
Keerthi Sreenivasan (Sc. B. Chem)

Second Reader

2008 – Anna Levine
2010 – Sophia Wang
2011 – Claire Levy

Sophomore Advisor (last 5 years)

2015-16: 2 advisees
2016-17: 11 advisees
2017-18: 17 advisees
2018-19: 14 advisees
2019-20: 10 advisees

2020-21: 9 advisees
2021-22: 10 advisees

Freshman Advisor (last 5 years)
2015-16: 0 advisees
2016-17: 6 advisees
2017-18: 6 advisees
2018-19: 6 advisees
2019-20: 5 advisees
2020-21: 5 advisees
2021-22: 5 advisees

ii) To the Profession:

American Chemical Society, Organic and Carbohydrate Divisions
Reviewer:
Manuscripts for –
Journal of the American Chemical Society; Angewandte Chemie; Journal of Organic Chemistry; Organic Letters; ChemBioChem; Organometallics; Tetrahedron Letters; ChemPhysChem; European Journal of Organic Chemistry; Synlett; Bioconjugate Chemistry; Carbohydrate Research; Nanomedicine: Nanotechnology, Biology and Medicine; Journal of Biological Chemistry; Chemistry- An Asian Journal; Chemistry of Materials; Nature Chemical Biology; Molecular Reproduction and Development, Organic and Biological Chemistry
Proposals for –
National Science Foundation; American Chemical Society – Petroleum Research Fund; Research Corporation; City University of New York; National Institutes of Health (ad hoc); United States – Israel Binational Agricultural Research and Development Fund; Department of Energy; Qatar National Research Foundation
Book Proposal Reviewer for WH Norton, WH Freeman
Co-coordinator, Encouraging Tomorrow's Chemists, 1994-1996
Chair, 1996 Monsanto Organic Symposium Committee
Session Chair, Gordon Conference on Carbohydrates, June 2003
Session Chair, 226th ACS National Meeting, New York, NY, September 10, 2003. POLY Symposium on Molecular Recognition using Polymeric Materials.
Session Chair, 230th ACS National Meeting, Washington, MA, August 29, 2005. POLY Symposium on Molecular Recognition using Polymers.
Guest Editor, December 2006 Issue of Current Opinion in Chemical Biology
Session Chair, Gordon Research Conference on Carbohydrates, June 2015
Proposal Review Panel, CHE Division, NSF, 2016
Co-organizer, New England Glycoscience Meeting, Boston MA, Jun 2018, 2019, 2020, 2021, 2022)
External examiner, Dept. of Chemistry Ph.D dissertation, Tufts University, 2018
External examiner, Dept. of Chemistry BA thesis, Bates College, 2020

iii) To the Community:

Brown Learning Community (Chemistry) Summers 1999, 2000, 2001; Fall 2003
Scholar in Residence, Moses Brown School, Providence RI 2002-2003

Chemistry Outreach, Montessori Centre, Barrington RI, 2007, 2008, 2009
Guest Speaker on Prebiotic Chemistry, Seminar on Scientific Thought, Moses Brown School, 2009
Co-organizer and Participant – Math & Science Night, Primrose Hill Elementary, Barrington, RI, 2009
Speaker at GK-12 Conference at MLK Elementary School, 2010
Summer Science Lunch Presenter at Science Center, 2010
New Scientist Program Guest Speaker, 2010
Speaker at Nano/Bio Engineering Summer School for HS students, 2010
Presentation to K and 3rd grade classes, Primrose Hill Elementary School, 2010
Speaker at GK-12 Conference at MLK Elementary School, 2011
Workshop Presenter, NSF RITES Workshop for high-school teachers, URI, 2012
Mentoring workshop panelist, RI-INBRE Summer Meeting, Aug 2016
Science Outreach Workshop – Vartan Gregorian School, Jun 2013, Jun 2015, Jun 2017, Jun 2018, May 2019, May 2020

Activities

Invited Participant
NSF Workshop in Physical Organic Chemistry, LaSalle, IL, June 2-5, 2001.
Invited ad hoc Study Section Member
NIH Bioorganic and Natural Products Study Section, Feb. 20-21, 2003
Invited Participant
DARPA/NIH/Juvenile Diabetes Research Foundation Workshop on Diabetic Wound Healing, Sep. 22-23, 2003.
Invited Participant
NSF Workshop in Materials Science, St. Louis, MO, Oct. 12-15, 2006
Invited ad hoc Study Section Member
NIH SBIR/STTR Special Emphasis Panel, Mar 2008
NSF CHE Panel Reviewer, Fall 2008
Invited ad hoc Study Section Member
NIH SBIR/STTR Special Emphasis Panel, July 2009
Invited ad hoc Study Section Member
NIH SBCA Study Section, Oct 2009
Permanent member, NIH SBCA Study Section (2010-14)
NSF CHE Panel Reviewer, Fall 2016
Elected member-at-large, ACS CARB Division Executive Committee (2012-14, 18-19)
ad hoc Study Section Member
NIH Fellowship Application Review Study Section Mar, Jul, Nov 2017, July 2018, Nov 2019, Mar 2020, July 2020, Nov 2020, Mar 2021, Mar 2022
Editorial Board Member, Journal of Carbohydrate Chemistry (2018 – present)

Teaching (last 10 years, enrollments in parentheses)

2012 – 2013: Fall - Chem 2410 (6) / Chem 0970 (4) / Chem 2980 (4)
Spring – Chem 0350 (191) / Chem 0970 (3) / Chem 2980 (5)
2013 – 2014: Fall – Chem 2410 (4) / Chem 0970 (5) / Chem 2970 (5)
Spring – Chem 1450 (13) / Chem 0980 (6) / Chem 2970 (5)

2014 – 2015: Fall – Chem 0360 (38) / Chem 0970 (6) / Chem 2970 (4)
Spring – Chem 1450 (8)
2015 – 2016: Fall – Sabbatical;
Spring Chem 0350 (246) / Chem 0980 (4) / Chem 2980 (2)
2016 – 2017: Fall Chem 0970 (6) / Chem 2970 (2)
Spring Chem 1450 (5) / Chem 0980 (5) / Chem 2980 (3)
2017 – 2018: Fall Chem 2420 (8) / Chem 0970 (2) / Chem 2970 (3)
Spring Chem 1450 (15) / Chem 0970 (2) / Chem 2980 (2)
2018 - 2019: Fall Chem 2410 (6) / Chem 0970 (4) / Chem 2970 (3)
Spring Chem 1450 (11) / Chem 0980 (6) / Chem 2980 (3)
2019 – 2020: Fall Chem 0360 (262) / Chem 0970 (7) / Chem 2970 (3)
Spring Chem 0910 (3) / Chem 0980S (5) / Chem 2980 (3)
2020 – 2021: Fall Chem 2410 (3) / Chem 0980S (3) / Chem 2981 (2)
Spring Chem 1450WRIT (11) / Chem 0980S (3) / Chem 2981 (3)
2021 – 2022: Fall Chem 2420 (1) / Chem 0980S (1) / Chem 2981 (2)
Spring Chem 1450WRIT (14) / Chem 0980S (1) / Chem 2981 (1)

Students Supervised/Advised:

UTRA (Undergraduate Teaching and Research Assistantship) Award Mentor

2005 Mentee – Christine Clancy
2006 Mentee – Olivia Partyka
2007 Mentees – Jason Becker, Shang Song, Laurel Wright, David Kern,
collaborative TEAM UTRA with Prof. Mark Johnson (MCB Dept.)
2008 Mentees – Shannon Stone, David Kern
collaborative TEAM UTRA with Prof. Mark Johnson (MCB Dept.)
2009 Mentees – Emmy Hartman, Spencer Clark, Clara Levy, Sophia Wang
collaborative TEAM UTRA with Prof. Mark Johnson (MCB Dept.)
2010 Mentees – Spencer Clark, Clara Levy, Sophia Wang
collaborative TEAM UTRA with Prof. Mark Johnson (MCB Dept.)
Madeleine Heldman
2011 Mentees – Julie Diamond, Sumitha Raman, Rute Silva, Kachapol Sinprasert
collaborative TEAM UTRA with Prof. Mark Johnson (MCB Dept.)
2012 Mentees – Harry Wanar (joint UTRA – NASA award)
2013 Mentees – Heather Aruffo & Conan Huang (Team UTRA)
2014 Mentees – Robert Lusi & Sarah Weingarten (Team UTRA); Ethan Magno
2017 Mentees – Ella Cohen (Teaching UTRA); Cadence Pearce (Research
UTRA)
2018 Mentee – Kyra Svoboda
2019 Mentee – Zach Kapner (Teaching UTRA); Nola Iwasaki
2020 Mentee – Kaushik Yeturu, Lucas Sanchez
2021 Mentee – Ainsley Baker

Leadership Alliance Summer Research Internship Mentor

2006 Mentee – Amalia Avila Figueroa
2008 Mentee – Andrew Alexander

NASA Space Grant Mentor
- 2009-2010 Mentee – Shannon Stone
- 2014 Mentee – Ethan Magno

Pfizer Summer Undergraduate Research Fellowship Mentor
- 2005 Mentee – Keri Ann Backus (joint with Prof. B. Moulton)

Program in Liberal Medical Education Summer Research Fellowship
- 2013 Mentee – Jordan Beck

Royce Fellowship Mentor
- 2004-2005 Mentee – Walrati Limapichat
- 2008-2009 Mentee – Shane Mulligan

ACS Summer Undergraduate Research Fellowship Mentor
- 2009 Mentee – Shannon Stone

ACS Summer Undergraduate Research Fellowship Mentor
- 2011 Mentee – Emily Hartman

Brown LINK Internship Mentor
- 2015 Mentee – Mitchell Jamieson

Presidential Scholar Research Mentor
- 2019 Mentee – Lucas Sanchez (2020 Goldwater Fellow)

Graduate Students Supervised
- Paul Santacroce (8/99 – 3/05)
  - Dept. of Education GAANN Fellow 1999-2000, 2001-2003
  - Brown University Dissertation Fellow Fall 2004
  - Ph.D. awarded May 2006
- Lauren Dufort (1/01 – 7/06)
  - GAANN Graduate Fellowship, 2001-2002
  - NASA RI Space Grant Fellow 2003-2004
  - King Prize for Excellence in Teaching, 2004
  - Metcalf Graduate Fellowship, Spring 2005
  - Ph.D. defended July 2006
- Nicole Seah (4/04 – 5/09)
  - King Prize for Excellence in Teaching, 2005
- Navin Rajagopalan
  - M. Sc. May 2006
- Xiang Liu (12/04 – 8/09)
  - Wernig Graduate Fellowship 07-08
  - Dissertation Fellowship Fall 08
- Dezhi Fu (12/04 – 5/06)
  - M. Sc. May 2007
- Naomi Kim (12/05 – 3/07)

Adam Pangilinan (12/05 – 1/08)
M.A May 2008
Jingsha Zhao (12/06 – 8/11)
Ronald Okoth (12/09 – 8/14)
Marius Dräger (1/11 – 6/15)
Helene Kuhn (1/11 – 12/15)
Philip Lukulay (1/12 – 9/16)
Blaise Leeber (1/13 – 1/18)
Ph.D defended January 2018
Michael Saladino (6/16 – 12/18)
M. Sc. May 2019
Janet Muzulu (12/16 – 8/21)
Raghuraj Hoshing (5/18 – present)
Adam Garlow (1/19 – 8/20)
Sebastian Rueda (1/21 – present)

Undergraduate Researchers Supervised (*last 5 years)* –

Spring 2010
Shannon Stone (NASA Fellow)
Spencer Clark
Emily Hartman
Harry Wanar
Madeleine Heldman

Summer 2010
Spencer Clark (UTRA)
Harry Wanar
Madeleine Heldman (UTRA)

Fall 2010
Spencer Clark
Harry Wanar
Madeleine Heldman
Emily Hartman

Spring 2011
Spencer Clark
Harry Wanar
Madeleine Heldman
Emily Hartman
Natcha Wattanatorn
Kachapol Sinprasert
Julie Diamond

Summer 2011
Harry Wanar
Emily Hartman (ACS Div. Org. Chem. Fellowship)
Kachapol Sinprasert (UTRA)
Julie Diamond (UTRA)

Fall 2011
Emily Hartman

Natcha Wattanatorn
Kachapol Sinprasert
Julie Diamond
Andrew Silverman
Cyril Gary

Spring 2012
Emily Hartman
Kachapol Sinprasert
Julie Diamond
Cyril Gary
Heather Aruffo

Summer 2012
Harry Wanar
Heather Aruffo

Fall 2012
Heather Aruffo
Jordan Beck
Kachapol Sinprasert
Harry Wanar
Conan Huang
Robert Lusi

Spring 2013
Heather Aruffo
Jordan Beck
Kachapol Sinprasert
Harry Wanar
Conan Huang
Robert Lusi

Summer 2013
Heather Aruffo
Jordan Beck
Conan Huang

Fall 2013
Heather Aruffo
Jordan Beck
David Caianiello
Conan Huang
Robert Lusi
Tess Carter

Spring 2014
Jordan Beck
David Caianiello
Conan Huang
Robert Lusi
Tess Carter
Ethan Magno

Stephen Sarno
Summer 2014
Robert Lusi
Ethan Magno
Sarah Weingarten
Fall 2014
Robert Lusi
Ethan Magno
Stephen Sarno
Aida Feng
Mary O'Connor
Sarah Weingarten
Spring 2015
Robert Lusi
Ethan Magno
Stephen Sarno
Aida Feng
Mary O'Connor
Sarah Weingarten
Brandon Dale
Chance Dunbar
Mitchell Jamieson
Michael Sielski
Summer 2015
Mitchell Jamieson
Nataliya Palaychuk
Fall 2015
Nataliya Palaychuk
Evan Lunt
Chance Dunbar
Mitchell Jamieson
Michael Sielski
Brandon Dale
Spring 2016
Nataliya Palaychuk
Mitchell Jamieson
Brandon Dale
Nancy Zhou
Salina Moon
Summer 2016
Salina Moon
Fall 2016
Nataliya Palaychuk
Brandon Dale
Nancy Zhou
Salina Moon

David Ryffel

Spring 2017

Nataliya Palaychuk
Brandon Dale
Nancy Zhou
Salina Moon
David Ryffel
Megan Hauptman
Cadence Pearce

Summer 2017

Ella Cohen
Megan Hauptman
Cadence Pearce

Fall 2017

David Ryffel
Megan Hauptman
Cadence Pearce
Kyra Svoboda

Spring 2018

David Ryffel
Megan Hauptman
Cadence Pearce
Kyra Svoboda
Kaushik Yeturu
Nola Iwasaki

Summer 2018

David Ryffel
Kyra Svoboda
Cadence Pearce

Fall 2018

David Ryffel
Megan Hauptman
Cadence Pearce
Kyra Svoboda
Kaushik Yeturu
Nola Iwasaki

Spring 2019

David Ryffel
Keerthi Sreenivasan
Cadence Pearce
Kyra Svoboda
Kaushik Yeturu
Nola Iwasaki
Lucas Sanchez

Summer 2019

Nola Iwasaki

Lucas Sanchez
Zachary Kapner

Fall 2019
Kyra Svoboda
Kaushik Yeturu
Nola Iwasaki
Lucas Sanchez
Maisy Meyer
Keerthi Sreenivasan
JP Moise
Julia Johnston

Spring 2020
Kyra Svoboda
Kaushik Yeturu
Nola Iwasaki
Maisy Meyer
Keerthi Sreenivasan
JP Moise
Julia Johnston

Summer 2020
Lucas Sanchez
Kaushik Yeturu

Fall 2020
Lucas Sanchez
Kaushik Yeturu
Maisy Meyer

Spring 2021
Kaushik Yeturu
Lucas Sanchez
Maisy Meyer
Keerthi Sreenivasan
Habesha Petros

Summer 2021
Ainsley Baker
William Richardson

Fall 2021
Ainsley Baker
William Richardson
Maisy Meyer

Spring 2022
Jaehun Seo
Ainsley Baker
Maisy Meyer

Host, Visiting International Scholar/Sabbatical Visitor
Stephen Samwel, University of Tanzania (March 2006 – July 2006)

Prof. Venkat Eswaran, St. Stephen's College, New Delhi India (Oct – Nov 2006)
Prof. Amitav Sanyal, Bogazici University, Turkey (May 2012)
Prof. Rivka Elbaum, Hebrew University of Jerusalem (Fall 2014)
Prof. Ayse Uzgoren-Baran, Haceteppe University (Fall 2019 – present)