Curriculum Vitae
Brenda L. Bass

Personal

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Professional Experience

Distinguished Professor	3/07-present	Department of Biochemistry
Professor	7/99-2/07	University of Utah School of Medicine
Associate Professor	7/95-6/99	Salt Lake City, Utah
Assistant Professor	6/89-6/95	
Adjunct Professor	7/03-present	Department of Human Genetics
Adjunct Assoc. Professor	7/96-6/03	University of Utah School of Medicine Salt Lake City, Utah
Editorial Experience	1995-present	*RNA*, editorial board member
	2004-2007	*Science,* Board of Reviewing Editors
	1998-2002	*Nucleic Acids Research*, editorial board member
	1998-2000	RNA Editing, Frontiers in Molecular Biology series, IRL Press at Oxford University Press, volume editor
	1994-1999	*Current Biology*, editorial board member

Education

Postdoctoral Fellow	8/85-5/89	Department of Genetics Fred Hutchinson Cancer Center Seattle, Washington
Ph.D. in Chemistry	8/85	Graduate student, 9/80-7/85 Department of Chemistry University of Colorado Boulder, Colorado
B.A. in Chemistry	5/77	Colorado College Colorado Springs, Colorado

Honors

2020	NIH Transformative Research Award
2019-present	Jon M. Huntsman Presidential Chair
2017	Honorary Doctor of Science, Colorado College, Colorado Springs
2015-present	National Academy of Sciences (elected member)
2011	NIH Director's Pioneer Award
2011	AAAS fellow (elected)
2010	Distinguished Scholarly and Creative Research Award, University of Utah
2009-2019	H. A. and Edna Benning Presidential Endowed Chair
2007-present	Distinguished Professor of Biochemistry, University of Utah School of Medicine
2007-present	American Academy of Arts & Sciences (elected member)
1994-2009	Howard Hughes Medical Institute, Investigator
1991-1996	David and Lucile Packard Fellowship
1990-1994	Pew Scholars Award
1985-1988	Damon Runyon-Walter Winchell Postdoctoral Fellowship
1983-1984	University of Colorado Doctoral Fellowship
1983-1984	ARCS Recipient (Achievement Rewards for College Scientists)

Memberships in Professional Societies

American Association for the Advancement of Science
American Chemical Society
American Society for Biochemistry and Molecular Biology
RNA Society

Meetings Organized

2019	24th Annual RNA Society meeting, Krakow, Poland, Co-Organizer
2003	Gordon Research Conference on RNA Editing, Co-Chair
2001	Gordon Research Conference on RNA Editing, Co-vice Chair
1996	Gordon Research Conference on Nucleic Acids, Co-organizer
1995	Cold Spring Harbor RNA Processing Meeting, Co-organizer

Study Sections

2022-2023	Chairperson of the Molecular Genetics A/B Study Section
2021	Chairperson of the Molecular Genetics B Study Section
2019-2021	NIH Molecular Genetics B Study Section, Member
2017	NIH Molecular Genetics B Study Section, ad hoc reviewer
2015	NIH New Innovator Award, Editorial Review Panel
2016	NIH New Investigator Maximizing Investigator Research Award (MIRA), reviewer
2004-2005	NIH Molecular Genetics C Study Section, Member
2001-2004	NIH Cell Development and Function 2 Study Section, Member
2000	Damon Runyon Walter Winchell Postdoctoral Fellowships, Ad Hoc Reviewer
1991	NIH Molecular Biology Study Section, Ad Hoc Member

Other Service

2022-present	Mentor, Association of American Medical Colleges, MOSAIC mentor program
2022-present	Co-Chair, National Academies of Sciences, Engineering, and Medicine committee, "Towards Sequencing and Mapping RNA modifications"
2019-2020	Member, National Academy of Sciences, Molecular Biology Award Committee
2017-2023	Section Liaison, National Academy of Sciences, Section 21, Biochemistry
2014	Member, NIGMS Protein Structure Initiative Transition Planning Committee
2009-2011	Panel member, American Academy of Arts and Sciences, Class II, Section 1
2007-2010	Council Delegate, AAAS, Section on Biological Sciences, (elected office)
2007	President, RNA Society (elected office)

2004-2006 Board of Directors, RNA Society (elected office)
1998-1999 Council Member, RNA Society (elected office)
1995-1996 Chair, RNA Society Nominations Committee

Mentoring/Advising

Faculty

(4, Current)

Ph.D. thesis committees

22 current; 90 total

Peer-Reviewed Journal Articles

1. Aderounmu AM, Aruscavage PJ, Kolaczkowski B., Bass BL (2023). Ancestral protein reconstruction reveals evolutionary events governing variation in Dicer helicase function. **eLife** 12, 10.7554/elife.85120.
2. Jonely M, Singh RK, Donelick HM, Bass BL, Noriega R (2021). Loquacious-PD regulates the terminus-dependent molecular recognition of Dicer-2 toward double-stranded RNA. **Chem Commun** (Camb), 57(83), 10879-10882.
3. Singh RK, Jonely M, Leslie E, Rejali NA, Noriega R, Bass BL (2021). Transient kinetic studies of the antiviral *Drosophila* Dicer-2 reveal roles of ATP in self-nonself discrimination. **eLife**, 10, 10.7554/eLife.65810.
4. Donelick HM, Talide L, Bellet M, Aruscavage PJ, Lauret E, Aguiar ERGR, Marques JT, Meignin C, Bass BL (2020). In vitro studies provide insight into effects of Dicer-2 helicase mutations in *Drosophila melanogaster*. **RNA**, 26(12), 1847-1861.
5. Shadle SC, Bennett SR, Wong CJ, Karreman NA, Campbell AE, van der Maarel SM, Bass BL, Tapscott SJ (2019). DUX4-induced bidirectional HSATII satellite repeat transcripts form intranuclear double-stranded RNA foci in human cell models of FSHD. **Hum Mol Genet**, 28(23), 3997-4011.
6. Safran SA, Eckert DM, Leslie EA, Bass BL (2019). PKR activation by noncanonical ligands: a 5'-triphosphate requirement versus antisense contamination. **RNA**, 25(9), 1192-1201.
7. Reich DP, Bass BL (2018). Inverted repeat structures are associated with essential and highly expressed genes on *C. elegans* autosome distal arms. **RNA**, 24(12), 1634-1646.
8. Reich DP, Tyc KM, Bass BL (2018). *C. elegans* ADARs antagonize silencing of cellular dsRNAs by the antiviral RNAi pathway. **Genes Dev**, 32(3-4), 271-282.
9. Sinha NK, Iwasa J, Shen PS, Bass BL (2018). Dicer uses distinct modules for recognizing dsRNA termini. **Science**, 359(6373), 329-334.
10. Trettin KD, Sinha NK, Eckert DM, Apple SE, Bass BL (2017). Loquacious-PD facilitates Drosophila Dicer-2 cleavage through interactions with the helicase domain and dsRNA. **Proc Natl Acad Sci U S A**, 114(38), E7939-E7948.
11. Sinha NK, Bass BL (2017). Overexpression and purification of Dicer and accessory proteins for biochemical and structural studies. **Methods**, 126, 54-65.
12. Blango MG, Bass BL (2016). Identification of the long, edited dsRNAome of LPS-stimulated immune cells. **Genome Res**, 26(6), 852-62.
13. Sinha NK, Trettin KD, Aruscavage PJ, Bass BL (2015). Drosophila dicer-2 cleavage is mediated by helicase-and dsRNA termini-dependent states that are modulated by Loquacious-PD. **Mol Cell**, 58 (3), 406-17.
14. Whipple JM, Youssef OA, Aruscavage PJ, Nix DA, Hong C, Johnson WE, Bass BL (2015). Genome-wide profiling of the *C. elegans* dsRNAome. **RNA**, 21(5), 786-800.
15. Youssef OA, Safran SA, Nakamura T, Nix DA, Hotamisligil GS, Bass BL (2015). Potential role for snoRNAs in PKR activation during metabolic stress. **Proc Natl Acad Sci U S A**, 112(16), 5023-8.
16. Kuttan A, Bass BL (2012). Mechanistic insights into editing-site specificity of ADARs. **Proc Natl Acad Sci U S A**, 109(48), E3295-304.

17. Warf MB, Shepherd BA, Johnson WE, Bass BL (2012). Effects of ADARs on small RNA processing pathways in *C. elegans*. **Genome Res**, 22(8), 1488-98.
18. Evan Johnson W, Welker NC, Bass BL (2011). Dynamic linear model for the identification of miRNAs in next-generation sequencing data. **Biometrics**, 67(4), 1206-14.
19. Warf MB, Johnson WE, Bass BL (2011). Improved annotation of *C. elegans* microRNAs by deep sequencing reveals structures associated with processing by Drosha and Dicer. **RNA**, 17(4), 563-77.
20. Welker NC, Maity TS, Ye X, Aruscavage PJ, Krauchuk AA, Liu Q, Bass BL (2011). Dicer's helicase domain discriminates dsRNA termini to promote an altered reaction mode. **Mol Cell**, 41(5), 589-99.
21. Eggington JM, Greene T, Bass BL (2011). Predicting sites of ADAR editing in double-stranded RNA. **Nat Commun**, 2, 319.
22. Aruscavage PJ, Hellwig S, Bass BL (2010). Small DNA pieces in *C. elegans* are intermediates of DNA fragmentation during apoptosis. **PLoS ONE**, 5(6), e11217.
23. Welker NC, Pavelec DM, Nix DA, Duchaine TF, Kennedy S, Bass BL (2010). Dicer's helicase domain is required for accumulation of some, but not all, *C. elegans* endogenous siRNAs. **RNA**, 16 (5), 893-903.
24. Parnell KM, Bass BL (2009). Functional redundancy of yeast proteins Reh1 and Rei1 in cytoplasmic 60S subunit maturation. **Mol Cell Biol**, 29(14), 4014-23.
25. Parker GS, Maity TS, Bass BL (2008). dsRNA binding properties of RDE-4 and TRBP reflect their distinct roles in RNAi. **J Mol Biol**, 384(4), 967-79.
26. Hundley HA, Krauchuk AA, Bass BL (2008). *C. elegans* and *H. sapiens* mRNAs with edited 3' UTRs are present on polysomes. **RNA**, 14(10), 2050-60.
27. Hellwig S, Bass BL (2008). A starvation-induced noncoding RNA modulates expression of Dicer-regulated genes. **Proc Natl Acad Sci U S A**, 105(35), 12897-902.
28. Habig JW, Aruscavage PJ, Bass BL (2008). In *C. elegans*, high levels of dsRNA allow RNAi in the absence of RDE-4. **PLoS ONE**, 3(12), e4052.
29. Welker NC, Habig JW, Bass BL (2007). Genes misregulated in *C. elegans* deficient in Dicer, RDE-4, or RDE-1 are enriched for innate immunity genes. **RNA**, 13(7), 1090-102.
30. Macbeth MR, Bass BL (2007). Large-scale overexpression and purification of ADARs from Saccharomyces cerevisiae for biophysical and biochemical studies. **Methods Enzymol**, 424, 319-31.
31. Parker GS, Eckert DM, Bass BL (2006). RDE-4 preferentially binds long dsRNA and its dimerization is necessary for cleavage of dsRNA to siRNA. **RNA**, 12(5), 807-18.
32. Macbeth MR, Schubert HL, Vandemark AP, Lingam AT, Hill CP, Bass BL (2005). Inositol hexakisphosphate is bound in the ADAR2 core and required for RNA editing. **Science**, 309(5740),1534-9.
33. Macbeth MR, Lingam AT, Bass BL (2004). Evidence for auto-inhibition by the N terminus of hADAR2 and activation by dsRNA binding. **RNA**, 10(10), 1563-71.
34. Haudenschild BL, Maydanovych O, Véliz EA, Macbeth MR, Bass BL, Beal PA (2004). A transition state analogue for an RNA-editing reaction. **J Am Chem Soc**, 126(36), 11213-9.
35. Tonkin LA, Bass BL (2003). Mutations in RNAi rescue aberrant chemotaxis of ADAR mutants. **Science**, 302(5651), 1725.
36. Tonkin LA, Saccomanno L, Morse DP, Brodigan T, Krause M, Bass BL (2002). RNA editing by ADARs is important for normal behavior in *Caenorhabditis elegans*. **EMBO J,** 21(22), 6025-35.
37. Knight SW, Bass BL (2002). The role of RNA editing by ADARs in RNAi. **Mol Cell**, 10(4), 809-17.
38. Morse DP, Aruscavage PJ, Bass BL (2002). RNA hairpins in noncoding regions of human brain and *Caenorhabditis elegans* mRNA are edited by adenosine deaminases that act on RNA. **Proc Natl Acad Sci U S A**, 99(12), 7906-11.
39. Knight SW, Bass BL (2001). A role for the RNase III enzyme DCR-1 in RNA interference and germ line development in *Caenorhabditis elegans*. **Science**, 293(5538), 2269-71.

40. Lehmann KA, Bass BL (2000). Double-stranded RNA adenosine deaminases ADAR1 and ADAR2 have overlapping specificities. **Biochemistry**, 39(42), 12875-84.
41. Domeier ME, Morse DP, Knight SW, Portereiko M, Bass BL, Mango SE (2000). A link between RNA interference and nonsense-mediated decay in *Caenorhabditis elegans*. **Science**, 289(5486), 1928-31.
42. Ohman M, Kallman AM, Bass BL (2000). In vitro analysis of the binding of ADAR2 to the pre-mRNA encoding the GluR-B R/G site. **RNA**, 6(5), 687-97.
43. Aruscavage PJ, Bass BL (2000). A phylogenetic analysis reveals an unusual sequence conservation within introns involved in RNA editing. RNA, 6(2), 257-69.
44. Hough RF, Lingam AT, Bass BL (1999). *Caenorhabditis elegans* mRNAs that encode a protein similar to ADARs derive from an operon containing six genes. **Nucleic Acids Res**, 27(17), 3424-32.
45. Lehmann KA, Bass BL (1999). The importance of internal loops within RNA substrates of ADAR1. **J Mol Biol**, 291(1), 1-13.
46. Morse DP, Bass BL (1999). Long RNA hairpins that contain inosine are present in *Caenorhabditis elegans* poly(A)+ RNA. **Proc Natl Acad Sci U S A**, 96(11), 6048-53.
47. Finerty PJ Jr, Bass BL (1999). Subsets of the zinc finger motifs in dsRBP-ZFa can bind double-stranded RNA. **Biochemistry**, 38(13), 4001-7.
48. Saccomanno L, Bass BL (1999). A minor fraction of basic fibroblast growth factor mRNA is deaminated in Xenopus stage VI and matured oocytes. **RNA**, 5(1), 39-48.
49. Polson AG, Ley HL 3rd, Bass BL, Casey JL (1998). Hepatitis delta virus RNA editing is highly specific for the amber/W site and is suppressed by hepatitis delta antigen. **Mol Cell Biol**, 18(4), 1919-26.
50. Paul MS, Bass BL (1998). Inosine exists in mRNA at tissue-specific levels and is most abundant in brain mRNA. **EMBO J**, 17(4), 1120-7.
51. Finerty PJ Jr, Bass BL (1997). A Xenopus zinc finger protein that specifically binds dsRNA and RNA-DNA hybrids. **J Mol Biol**, 271(2), 195-208.
52. Morse DP, Bass BL (1997). Detection of inosine in messenger RNA by inosine-specific cleavage. **Biochemistry**, 36(28), 8429-34.
53. Hough RF, Bass BL (1997). Analysis of Xenopus dsRNA adenosine deaminase cDNAs reveals similarities to DNA methyltransferases. **RNA**, 3(4), 356-70.
54. Polson AG, Bass BL, Casey JL (1996). RNA editing of hepatitis delta virus antigenome by dsRNA-adenosine deaminase. **Nature**, 380(6573), 454-6.
55. Hurst SR, Hough RF, Aruscavage PJ, Bass BL (1995). Deamination of mammalian glutamate receptor RNA by Xenopus dsRNA adenosine deaminase: similarities to in vivo RNA editing. **RNA**, 1(10), 1051-60.
56. Polson AG, Bass BL (1994). Preferential selection of adenosines for modification by double-stranded RNA adenosine deaminase. **EMBO J**, 13(23), 5701-11.
57. Saccomanno L, Bass BL (1994). The cytoplasm of Xenopus oocytes contains a factor that protects double-stranded RNA from adenosine-to-inosine modification. **Mol Cell Biol**, 14(8), 5425-32.
58. Bass BL, Hurst SR, Singer JD (1994). Binding properties of newly identified Xenopus proteins containing dsRNA-binding motifs. **Curr Biol**, 4(4), 301-14.
59. Hough RF, Bass BL (1994). Purification of the Xenopus laevis double-stranded RNA adenosine deaminase. **J Biol Chem**, 269(13), 9933-9.
60. Polson AG, Crain PF, Pomerantz SC, McCloskey JA, Bass BL (1991). The mechanism of adenosine to inosine conversion by the double-stranded RNA unwinding/modifying activity: a high-performance liquid chromatography-mass spectrometry analysis. **Biochemistry**, 30(49), 11507-14.
61. Sharmeen L, Bass B, Sonenberg N, Weintraub H, Groudine M (1991). Tat-dependent adenosine-to-inosine modification of wild-type transactivation response RNA. **Proc Natl Acad Sci U S A**, 88(18), 8096-100.

62. Bass BL, Weintraub H (1988). An unwinding activity that covalently modifies its double-stranded RNA substrate. **Cell**, 55(6), 1089-98.
63. Bass BL, Weintraub H (1987). A developmentally regulated activity that unwinds RNA duplexes. **Cell**, 48(4), 607-13.
64. Bass BL, Cech TR (1986). Ribozyme inhibitors: deoxyguanosine and dideoxyguanosine are competitive inhibitors of self-splicing of the Tetrahymena ribosomal ribonucleic acid precursor. **Biochemistry**, 25(16), 4473-7.
65. Bass BL, Cech TR (1984). Specific interaction between the self-splicing RNA of Tetrahymena and its guanosine substrate: implications for biological catalysis by RNA. **Nature**, 308(5962), 820-6.

Review Articles

1. Cottrell KA, Andrews RJ, Bass BL (2024). The competitive landscape of the dsRNA world. **Mol Cell,** in press.
2. Reich DP, Bass BL (2019). Mapping the dsRNA World. **Cold Spring Harb Perspect Biol**, 11(3).
3. Hansen SR, Aderounmu AM, Donelick HM, Bass BL (2019). Dicer's Helicase Domain: A Meeting Place for Regulatory Proteins. **Cold Spring Harb Symp Quant Biol**, 84, 185-193.
4. Hundley HA, Bass BL (2010). ADAR editing in double-stranded UTRs and other noncoding RNA sequences. **Trends Biochem Sci**, 35(7), 377-83.
5. Bass BL (2006). How does RNA editing affect dsRNA-mediated gene silencing? **Cold Spring Harb Symp Quant Biol**, 71, 285-92.
6. Bass BL (2002). RNA editing by adenosine deaminases that act on RNA. **Annu Rev Biochem**, 71, 817-46.
7. Bass BL (1997). RNA editing and hypermutation by adenosine deamination. **Trends Biochem Sci**, 22(5), 157-62.
8. Bass BL (1995). Double-stranded RNA binding proteins and their substrates. **Nucleic Acids Symp Ser**, (33), 13-5.
9. Bass BL (1992). The dsRNA unwinding/modifying activity: fact and fiction. **Semin Dev Biol**, 3, 425-33.
10. Cech TR, Bass BL (1986). Biological catalysis by RNA. **Annu Rev Biochem**, 55, 599-629.

Edited Books

1. Bass BL (Ed.) (2001). RNA Editing: Frontiers in Molecular Biology. Oxford University Press.

Book Chapters

1. Hough RF, Bass BL (2001). Adenosine deaminases that act on RNA. In Bass BL (Ed.), RNA Editing: Frontiers in Molecular Biology (pp. 77-108). Oxford University Press.
2. Bass BL, Öhman M (1998). RNA Editing. In Söll D, Nishimura S, Moore P (Eds.), Comprehensive Natural Products Chemistry, Vol. 6: Prebiotic Chemistry, Molecular Fossils, Nucleosides and RNA (pp. 97-108). Elsevier Science Ltd.
3. Bass BL (1993). RNA editing: New uses for old players in the RNA world. In Gesteland R, Atkins J (Eds.), The RNA World (pp. 383-418). Cold Harbor Laboratory Press.
4. Bass BL (1992). The double-stranded RNA unwinding/modifying activity. In Murray JAH (Ed.), Antisense RNA and DNA (pp. 159-74). New York, NY: Wiley-Liss.

Commentary

1. Greider C, Hopkins N, Steitz J, Amon A, Asai D, Barres B, Bass B, Bassler B, Birgeneau R, Bjorkman P, Botchan M, Brugge J, Cech T, Colwell R, Craig N, deLange T, Eisen M, Gottesman S, Green R, Handelsman J, Kimble J, King M-C, Lehmann R, Marder E, Mullins D, O'Shea E, Schmid S, Seydoux G, Spradling A, Storz G, Szostak J, Telesnitsky A, Tilghman S, Tjian R, Vale R, Wolberger C, Zakian V. (2017). Not just Salk. Science (New York, NY). 357, 1105–6. **Science**, 357 1105-1106.

2. Bass BL (2015). Twenty years: a very short sequence in the RNA world. **RNA**, 21(4), 490-1.
3. Habig JW, Dale T, Bass BL (2007). miRNA editing--we should have inosine this coming. **Mol Cell**, 25(6), 792-3.
4. Bass BL, Hellwig S, Hundley HA (2005). A nuclear RNA is cut out for translation. **Cell**, 123(2), 181-3.
5. Bass BL (2001). RNA interference. The short answer. **Nature**, 411(6836), 428-9.
6. Bass BL (2000). Double-stranded RNA as a template for gene silencing. **Cell**, 101(3), 235-8.
7. Bass BL (1995). RNA editing. An I for editing. **Curr Biol**, 5(6), 598-600.
8. Bass BL (1991). RNA editing. Splicing: the new edition. **Nature**, 352(6333), 283-4.
9. Bass BL (1991). RNA editing. Physarum--C the difference? **Nature**, 349(6308), 370-1.

Letters

1. Bass BL, Nishikura K, Keller W, Seeburg PH, Emeson RB, O'Connell MA, Samuel CE, Herbert A (1997). A standardized nomenclature for adenosine deaminases that act on RNA. [Letter to the editor]. **RNA**, 3(9), 947-9.
2. Bass BL, Weintraub H, Cattaneo R, Billeter MA (1989). Biased hypermutation of viral RNA genomes could be due to unwinding/modification of double-stranded RNA. [Letter to the editor]. **Cell**, 56(3), 331.

Oral Presentations

Keynote/Plenary Lectures

International

2018 Aptamers in Boulder, Keynote Speaker
2017 RNA Modifications and Epitranscriptomics, Cold Spring Harbor Asia, Suzhou, China, Keynote Speaker
2017 1st Symposium on Nucleic Acid Modifications, Mainz, Germany, Keynote Speaker
2015 Gordon Research Seminar, Lucca, Italy, Keynote speaker, (student invited)
2012 The 17th Annual Meeting of the RNA Society, Ann Arbor, Michigan, Keynote Speaker
2004 Society for Neuroscience 34th Annual Meeting, Presidential Special Lecturer
2003 Ribo-Club, University of Sherbrooke, Québec, Canada, Student Choice-Speaker of the Year

National

2018 Colorado College Molecular Biology Day
2012 MCB Graduate Student Symposium, Univ. of Washington / Fred Hutchinson Cancer Center
2010 Bollum Symposium, University of Minnesota, Minneapolis
2008 Department of Biochemistry Retreat, Univ. of Texas Southwestern Medical Center, Keynote Speaker
2006 Department of Biochemistry and Molecular Biophysics Research Retreat, Univ. of Arizona, Keynote Speaker
2003 West Coast Biological Sciences Undergraduate Research Conference, Colorado College, Colorado Springs, Keynote Speaker

Meeting Presentations

International

2023 RNA Worlds: Past, Present, and Future, Boulder, Colorado
2023 ASBMB, RNA Binding Proteins and Disease, Seattle, Washington
2022 NetRNA meeting in honor of Eric Westheimer
2021 NCI, 2021 RNA Biology Symposium (virtual)
2021 5th Annual RNA Symposium, University of Michigan (virtual)
2019 FASEB Conference on Helicases and Nucleic Acid-Based Machines
2019 Gordon Research Conference, Nucleic Acids
2019 Cold Spring Harbor Quantitative Biology, RNA Control and Regulation
2019 Gordon Research Conference on RNA editing, Session Chair

2018 EMBO|EMBL Symposium: The Complex Life of RNA
2018 Keystone Symposia on Mobile Genetic Elements and Genome Plasticity, Session Chair
2017 Eukaryotic mRNA Processing, CSHL
2017 Science Symposium on Biological Complexity: RNA Biology, Salk Institute, Fondation IPSEN
2016 RNA symposium, RNA Biology Centre, Cancer Science Institute of Singapore, National University of Singapore
2016 Gordon Research Conference on Post-Transcriptional Gene Regulation
2016 EMBL Conference: The Epitranscriptome
2015 Gordon Research Conference on Nucleosides, Nucleotides and Oligonucleotides
2015 Gordon Research Conference on RNA Editing
2014 RNA-EDITING WORKSHOP, Ein-Gedi, ISRAEL
2014 Ribo West, 10th Annual Meeting, University of Lethbridge, Alberta, Canada
2011 62th Mosbacher Kolloquium-Mechanisms of RNA-mediated regulation, Mosbach, Germany
2010 Keystone Symposium on RNA Silencing: Mechanism, Biology and Application
2009 Albany 2009: Conversation 16
2009 Gordon Research Conference on RNA Editing
2008 Gordon Research Conference on Biology of Post-Transcriptional Gene Regulation, Waterville, ME
2008 Nucleic Acid Enzymes, FASEB Meeting, Saxtons River, VT
2007 Institute of Molecular Biology Retreat, Taipei, Taiwan
2007 Gordon Research Conference on RNA Editing
2007 Federation of European Biochemical Societies, Workshop on DNA and RNA Modification Enzymes, Aussois, France
2006 Cold Spring Harbor Symposium on Regulatory RNAs, Cold Spring Harbor, New York
2006 Multiple Functions of RNA in Gene Regulation, Conférences Jacques-Monod, Roscoff, France
2005 Gordon Research Conference on RNA Editing
2003 Horizon Symposia, Understanding the RNAissance, Aventis and The Nature Publishing Group
2003 Gordon Research Conference on Nucleic Acids
2003 8th Annual International RNA Congress, Vienna, Austria
2003 Structure, function and dynamics of RNA-protein complexes, Göttingen, Germany
2003 Gordon Research Conference on Molecular Cell Biology
2002 Nucleic Acid Enzymes: Structures, Mechanisms and Novel Applications, FASEB Meeting
2001 Gordon Research Conference on RNA Editing
2000 Workshop on Chemical Biology, Sandhamn, Sweden
2000 RNA Silencing: Functions, Mechanisms and Applications, Banbury Center, Cold Spring Harbor
1999 Gordon Research Conference on RNA Editing
1998 Nucleic Acids Enzymes: Mechanisms and Disease, FASEB Meeting
1996 DNA Base-Flipping: How and Why, Banbury Center, Cold Spring Harbor, New York
1994 Nucleic Acid Protein Interactions, Keystone Symposia
1994 RNA Editing, Albany Conference
1994 Mechanisms of Antisense Mediated Gene Silencing, Ringberg Castle, Germany
1994 Gordon Research Conference on Nucleic Acids
1993 Gordon Research Conference on Nucleic Acids
1991 Gene Regulation by Antisense RNA and DNA, Keystone Symposia
1991 Molecular Recognition: RNA-Protein Interactions, Urbino, Italy
1990 Nucleic Acids, Gordon Research Conference
1989 Joint Meeting of American Society for Biochemistry and Molecular Biology and The Society of Cell Biology, San Francisco, California

National

2020 Midwinter Conference of Immunologists, Asilomar
2019 RNA Revolution: Beyond the Central Dogma, CMG Symposium, University of CA, San Diego (Student Organized)

2016 High-Risk, High-Reward Research Symposium, NIH Common Fund
2013 2013 NIH Common Fund High-Risk High-Reward Research Symposium
2013-23 Annual Weintraub Meeting on Biological Regulatory Mechanisms
2005 Biological Sciences Dean's Symposium, University of California, San Diego
2002 RNA and Antisense Symposium, Eli Lilly and Company
1995 Symposium on RNA Biology, North Carolina State University
1992 The RNA World, Markey Symposium, UCLA
1990 Catalytic RNA as an Anti-HIV Agent: Design and Delivery to Cells, San Diego, California
1989 Self-Cleaving RNA as an Anti-HIV Agent, Rockville, Maryland

Invited/Visiting Professor Presentations

International

2018 University of Strasbourg, France
2018 University of Saskatchewan
2017 University of Toronto
2017 ETH Zurich, Swiss NCCR RNA and Disease Seminar Series
2017 University of Bern, Swiss NCCR RNA and Disease Seminar Series
2017 Gordon Research Conference on RNA editing, Invited Speaker
2010 Université de Montréal
2003 Louis Pasteur University, Strasbourg, France
1998 Vienna Biocenter, University of Vienna
1994 Biozentrum, University of Basel, Switzerland

National

2023 Columbia University, Microbiology and Immunology Department
2023 Case Western Reserve University, Department of Biochemistry, *Merton F. Utter Distinguished Lecture*
2023 Washington University St Louis, Microbiology Seminar series
2022 University of Michigan, Department of Chemistry, *Gomberg Lecture*
2022 Yale University, *Joseph Coleman Memorial Lecture*
2022 Utah State University, *R. Gaurth Hansen Seminar*
2022 Ohio State University, Molecular Life Sciences Seminar
2021 University of Oregon (virtual)
2020 LCDB Seminar Series, National Institutes of Health
2019 University of Michigan, CMB Short Course, Messing with the Messenger: The Role of RNA Modifications in Biology.
2019 Boston University
2019 University of Texas, Southwestern
2019 Johns Hopkins University
2018 Maxigroup, University of Wisconsin, Madison
2018 University of Colorado, Boulder
2018 University of Colorado, Denver
2018 New England Biolabs
2018 Baylor College of Medicine, Houston
2016 University of Chicago
2016 University of Utah, Department of Human Genetics
2015 Nationwide Children’s Hospital, Columbus (student elected speaker)
2014 University of California, Davis
2013 Portland State University
2013 The Jackson Laboratory
2012 Pennsylvania State University
2012 Stanford University
2011 Yale University
2011 University of Utah School of Medicine, *Benning Lecturer*

2010 Columbia University Medical Center
2010 University of California, Irvine
2009 Carnegie Mellon University, Pittsburg
2009 University of Wisconsin, Madison
2008 University of Georgia, Athens
2008 University of Massachusetts School of Medicine, Worcester
2007 University of Oregon, Eugene
2007 University of California, San Francisco
2007 Duke University
2006 Yale University
2006 Harvard Medical School, Children's Hospital, Boston
2006 Johns Hopkins University School of Medicine
2005 University of Washington, Seattle
2005 Marquette University, Milwaukee, Wisconsin
2005 MD Anderson Cancer Center, Houston, Texas
2004 Sirna Therapeutics, Boulder, Colorado
2004 Fred Hutchinson Cancer Center, Seattle, Washington
2004 Mayo Clinic College of Medicine
2004 Massachusetts Institute of Technology
2003 Isis Pharmaceuticals, San Diego
2003 University of Wisconsin, Madison
2002 University of Colorado, Boulder
2002 Yale University
2002 St. Louis University
2002 Washington University
2002 University of Colorado School of Medicine
2002 University of Florida College of Medicine
2002 Brandeis University
2001 Michigan State University
2001 University of Illinois, Champaign-Urbana
2001 Columbia University
2000 University of Pittsburgh
2000 University of California, Santa Cruz
2000 University of California, Santa Barbara
1999 University of Colorado, Boulder
1999 University of Wisconsin, Madison
1999 University of Texas, Southwestern Medical Center
1998 University of Montana
1998 Emory University
1997 University of Nebraska, Lincoln
1997 Arizona State University
1997 University of Wyoming
1997 University of Arizona
1997 University of Chicago
1996 Vanderbilt University, Nashville
1996 University of Alabama, Birmingham
1996 State University of New York, Buffalo
1995 Fred Hutchinson Cancer Research Center, Seattle
1995 University of Washington
1994 Yale University, New Haven
1994 University of California, San Francisco
1994 University of California, Berkeley
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