

Curriculum Vitae
Brenda L. Bass

Personal

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Citizenship: USA

Professional Experience

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| Distinguished Professor | 3/07-present | Department of Biochemistry, University of Utah |
| Professor | 7/99-2/07 | School of Medicine, Salt Lake City, Utah |
| Associate Professor | 7/95-6/99 | |
| Assistant Professor | 6/89-6/95 | |
| Adjunct Professor | 7/03-present | Department of Human Genetics, University of Utah |
| Adjunct Associate Professor | 7/96-6/03 | School of Medicine, Salt Lake City, Utah |
| Investigator | 5/94-8/09 | Howard Hughes Medical Institute |
| Editorial Experience | 1995-present | <i>RNA</i> , editorial board member |
| | 2004-2007 | <i>Science</i> , Board of Reviewing Editors |
| | 1998-2002 | <i>Nucleic Acids Research</i> , editorial board member |
| | 1998-2000 | RNA Editing, <i>Frontiers in Molecular Biology</i> series, IRL Press at Oxford University Press, volume editor |
| | 1994-1999 | <i>Current Biology</i> , editorial board member |

Education

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| 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

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

Professional Community Activities

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| 1991 | NIH Molecular Biology Study Section, Ad Hoc Member |
| 1995 | Cold Spring Harbor RNA Processing Meeting, Co-organizer |
| 1995-1996 | RNA Society, Nominations Committee, Chair |
| 1996 | Gordon Research Conference on Nucleic Acids, Co-organizer |
| 1998-1999 | RNA Society, Council Member (elected office) |
| 2000 | Damon Runyon Walter Winchell Postdoctoral Fellowships, Ad Hoc Reviewer |
| 2001 | Gordon Research Conference on RNA Editing, Co-vice Chair |
| 2001-2004 | NIH Cell Development and Function 2 Study Section, Member |
| 2003 | Gordon Research Conference on RNA Editing, Co-Chair |
| 2004-2005 | NIH Molecular Genetics C Study Section, Member |
| 2004-2006 | RNA Society, Board of Directors (elected office) |
| 2007 | RNA Society, President (elected office) |
| 2007-2010 | AAAS, Council Delegate, Section on Biological Sciences, (elected office) |
| 2009-2011 | American Academy of Arts and Sciences, Class II, Section 1 panel member |
| 2010 | NIH Special Emphasis Panel/Scientific Review Group, ad hoc reviewer |
| 2012 | NIH Molecular Genetics A Study Section, ad hoc reviewer |
| 2013-14 | NIH New Innovator Award, Phase 1 Reviewer |
| 2014 | NIGMS Protein Structure Initiative Transition Planning Committee |
| 2015 | NIH New Innovator Award, Editorial Review Panel |
| 2016 | NIH New Investigator Maximizing Investigator Research Award (MIRA), reviewer |
| 2017-present | Section Liaison, National Academy of Sciences, Section 21, Biochemistry |
| 2017 | NIH Molecular Genetics B Study Section, ad hoc reviewer |
| 2019-present | National Academy of Sciences, Molecular Biology Award Committee |
| 2019 | 24th Annual RNA Society meeting, Krakow, Poland, Co-Organizer |
| 2019-present | NIH Molecular Genetics B Study Section, Member |
| 2021-2023 | Chairperson of the Molecular Genetics B Study Section |

Complete List of Published Work in MyBibliography (please paste URL into browser):

<https://www.ncbi.nlm.nih.gov/myncbi/brenda.bass.1/bibliography/public/>

Selected Publications:

- 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-nonsel discrimination. **eLife**.10:e65810.
- 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**. 26:1847–1861.
- Safran SA, Eckert DM, Leslie EA, Bass BL. (2019) PKR activation by noncanonical ligands: a 5'-triphosphate requirement versus antisense contamination. **RNA**. 25:1192–1201.

- Reich DP, Tyc KM, Bass BL. (2018). *C. elegans* ADARs antagonize silencing of cellular dsRNAs by the antiviral RNAi pathway. **Genes Dev.** **32**:271–82.
- Sinha NK, Iwasa J, Shen PS, Bass BL. (2018). Dicer uses distinct modules for recognizing dsRNA termini. **Science.** **359**:329–34.
- 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 USA.** **114**:E7939–48.
- Blango, M.G., Bass, B.L. 2016. Identification of the long, edited dsRNAome of LPS-stimulated immune cells. **Genome Research.** **26**:852–62.
- Sinha, N.K., Trettin, K.D., Aruscavage, P.J., and Bass, B.L. 2015. *Drosophila* Dicer-2 cleavage is mediated by helicase- and dsRNA termini-dependent states that are modulated by Loquacious-PD. **Mol Cell** 58:406–417.
- Whipple, J.M., Youssef, O.A., Aruscavage, P.J., Nix, D.A., Hong, C., Johnson, W.E., and Bass, B.L. 2015. Genome-wide profiling of the *C. elegans* dsRNAome. **RNA** 21:786–800.
- Kuttan, A., and Bass, B.L. 2012. Mechanistic insights into editing-site specificity of ADARs. **Proc Natl Acad Sci USA** 109:E3295–3304.
- Welker, N.C., Maity, T.S., Ye, X., Aruscavage, P.J., Krauchuk, A.A., Liu, Q., and Bass, B.L. 2011. Dicer's helicase domain discriminates dsRNA termini to promote an altered reaction mode. **Mol Cell** 41:589–599.
- Hundley, H.A., Krauchuk, A.A., and Bass, B.L. 2008. *C. elegans* and *H. sapiens* mRNAs with edited 3' UTRs are present on polysomes. **RNA** 14:2050–2060.
- Hellwig, S., and Bass, B.L. 2008. A starvation-induced noncoding RNA modulates expression of Dicer-regulated genes. **Proc Natl Acad Sci USA** 105:12897–12902.
- Welker, N.C., Habig, J.W., and Bass, B.L. 2007. Genes misregulated in *C. elegans* deficient in Dicer, RDE-4, or RDE-1 are enriched for innate immunity genes. **RNA** 13:1090–1102.
- Parker, G.S., Eckert, D.M., and Bass, B.L. 2006. RDE-4 preferentially binds long dsRNA and its dimerization is necessary for cleavage of dsRNA to siRNA. **RNA** 12:807–818.
- Macbeth, M.R., Schubert, H.L., Vandemark, A.P., Lingam, A.T., Hill, C.P., and Bass, B.L. 2005. Inositol hexakisphosphate is bound in the ADAR2 core and required for RNA editing. **Science** 309:1534–1539.
- Tonkin, L.A., and Bass, B.L. 2003. Mutations in RNAi rescue aberrant chemotaxis of ADAR mutants. **Science** 302:1725.
- Tonkin, L.A., Saccomanno, L., Morse, D.P., Brodigan, T., Krause, M., and Bass, B.L. 2002. RNA editing by ADARs is important for normal behavior in *Caenorhabditis elegans*. **EMBO J** 21:6025–6035.
- Morse, D.P., Aruscavage, P.J., and Bass, B.L. 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 USA** 99:7906–7911.
- Knight, S.W., and Bass, B.L. 2002. The role of RNA editing by ADARs in RNAi. **Mol Cell** 10:809–817.
- Knight, S.W., and Bass, B.L. 2001. A role for the RNase III enzyme DCR-1 in RNA interference and germ line development in *Caenorhabditis elegans*. **Science** 293:2269–2271.
- Bass, B.L. 2000. Double-stranded RNA as a template for gene silencing. **Cell** 101:235–238.
- Aruscavage, P.J., and Bass, B.L. 2000. A phylogenetic analysis reveals an unusual sequence conservation within introns involved in RNA editing. **RNA** 6:257–269.
- Paul, M.S., and Bass, B.L. 1998. Inosine exists in mRNA at tissue-specific levels and is most abundant in brain mRNA. **EMBO J** 17:1120–1127.
- Polson, A.G., Bass, B.L., and Casey, J.L. 1996. RNA editing of hepatitis delta virus antigenome by dsRNA-adenosine deaminase. **Nature** 380:454–456.
- Polson, A.G., and Bass, B.L. 1994. Preferential selection of adenosines for modification by double-stranded RNA adenosine deaminase. **EMBO J** 13:5701–5711.
- Bass, B.L., and Weintraub, H. 1988. An unwinding activity that covalently modifies its double-stranded RNA substrate. **Cell** 55:1089–1098.