Pedro Miura
Curriculum Vitae
July, 2023

ADDRESS

Department of Genetics and Genome Sciences
UConn Health
400 Farmington Ave., Farmington, CT, 06030
miura@uchc.edu

ACADEMIC APPOINTMENTS

Associate Professor UConn Health, Department of Genetics and Genome Sciences	07/22- present
Associate Professor University of Nevada, Reno, Department of Biology	07/20- 06/22
Assistant Professor University of Nevada, Reno, Department of Biology	07/14-06/20

EDUCATIONAL BACKGROUND

Postdoctoral Research Fellow Memorial Sloan Kettering Cancer Center, Sloan-Kettering Institute	05/10-07/14
Doctor in Philosophy (Ph.D.) Neuroscience, University of Ottawa, Ottawa, Canada	09/03-05/10
Certificate in Philosophy Dominican College, Ottawa, Canada	09/02-05/03
B.Sc. (honors) Biochemistry, Queen's University, Kingston, Canada	09/97-05/02

PRINT AND ORAL SCHOLARSHIP

1. Publications

(* denotes corresponding or co-corresponding authorship for Miura)

1a. Peer reviewed journal articles

34. Brennan AA, Harrington A, Guo M, Renshaw CP, Tillett RL, Miura P, Tal-Gan Y. Investigating the Streptococcus sinensis competence regulon through a combination of transcriptome analysis and phenotypic evaluation. Microbiology (Reading). 2022 Oct;168(10):001256. doi: 10.1099/mic.0.001256. PMID: 36282148; PMCID: PMC10233337.

33. Knupp, D., Jorgensen, B.G., Al-Shareef, H., Bhat, J.M., Grubbs, J.J., Miura, P.*, van der Linden, A.M. *Loss of circRNAs from the crh-1 gene extends the mean lifespan in C. elegans.* 21(2):e13560. DOI: 10.1111/acel.13560. Aging Cell, 2022.

32. Bae, B., Miura, P.* *CRISPR-mediated knockout of long 3' UTR mRNA isoforms in mESC-derived neurons*. Frontiers in Genetics, 12:789434, 2021.

31. Knupp D., Cooper D.A., Saito Y., Darnell R.B., Miura P.* *NOVA2 regulates neural circRNA biogenesis.* Nucleic Acids Research. 49(12):6849-6862, 2021.

30. Wei, L., Lee, S., Majumdar, S., Zhang, B., Sanfilippo, P., Joseph, B., Miura, P., Soller, M., Lai, E.C. *Overlapping Activities of ELAV/Hu Family RNA Binding Proteins Specify the Extended Neuronal 3' UTR Landscape in Drosophila*. Molecular Cell. 80(1):140-155, 2020.

29. Bae, B., Gruner, H.N., Lynch, M., Feng, T., So, K., Oliver, D., Mastick, G.S., Yan, W., Pieraut, S., Miura, P.* *Elimination of Calm1 long 3' UTR mRNA isoform by CRISPR-Cas9 gene editing impairs dorsal root ganglion development and hippocampal neuron activation in mice*. RNA. 26(10):1414-1430, 2020.

28. Bae, B., and Miura, P.* *Emerging Roles for 3' UTRs in Neurons*. Int J Mol Sci. 21(10): E3413, 2020.

27. Zhang, Z., So, K., Peterson, R., Bauer, M. Ng, H., Zhang, Y., Kim, J.H., Kidd, T., Miura, P.* *Elav-mediated exon skipping and alternative polyadenylation of the Dscam1 gene are required for axon outgrowth.* Cell Reports, 27:3808-3817, 2019.

26. Knupp, D., and Miura, P.* *CircRNA accumulation: A new hallmark of aging?* Mechanisms of Ageing and Development, 173:71-79, 2018.

25. Singh, M., Miura, P., and Renden, R. *Age-related defects in short-term plasticity are reversed by acetyl-L-carnitine at the mouse calyx of held.* Neurobiology of Aging, 67:108-119, 2018.

24. Cortés-López, M., Gruner, M., Cooper, D.A., Gruner, H.N., Voda, A.I., van der Linden, A.M. and Miura, P.* *Global accumulation of circRNAs during aging in Caenorhabditis elegans*. BMC Genomics,19:8, 2018.

23. Hall, H., Medina, P., Cooper, D.A., Escobedo, S.E., Rounds, J., Brennan, K.J., Vincent, C., Miura, P., Doerge, R. and Weake, V.M. *Transcriptome profiling of aging Drosophila photoreceptors reveals gene expression trends that correlate with visual senescence*. BMC Genomics, 18:894, 2017.

22. Liu, W., Klose, A., Forman, S., Paris, N.D., Wei-LaPierre, L., Cortés-Lopéz, M., Tan, A., Flaherty, M., Miura P., Dirksen, R.T., Chakkalakal, J.V. *Loss of adult skeletal muscle stem cells drives age-related neuromuscular junction degeneration*. Elife, 6. pii: e264642017, 2017.

21. Sanfilippo P., Miura P., Lai E.C. *Genome-wide profiling of the 3' ends of polyadenylated RNAs.* Methods, 126:86-94. 2017.

20. Gruner, H., Cortés-López, M., Cooper, D.A., Bauer, M., and Miura, P.* *CircRNA accumulation in the aging mouse brain*. Scientific Reports. 6:38907, 2016.

19. Cortés-López, M., and Miura, P.* *Emerging functions of circular RNAs.* The Yale Journal of Biology and Medicine, 89:527–537, 2016.

18. Shenker, S., Miura, P., Sanfilippo, P and Lai, E.C. *IsoSCM: Improved and alternative UTR annotation using multiple change-point inference.* RNA. 21(1):14-27, 2015.

17. Westholm, J.O, Miura, P., Olson, S., Shenker, S., Joseph, B., Sanfilippo, P., Celniker, S.E., Graveley, B.J., and Lai, E.C. *Genomewide analysis of Drosophila circular RNAs reveals their structural and sequence properties and age-dependent neural accumulation.* Cell Reports, 9(5):1966-1980, 2014.

16. Miura, P., Shenker, S., Sanfilippo P, and Lai E.C. *Alternative polyadenylation in the nervous system: to what lengths will 3' UTR extensions take us?* Bioessays. 36(8):766-777, 2014.

15. Amirouche, A., Tadesse, H., Miura, P., Belanger G., Lunde, J., Côté, J., Jasmin, B.J. *Converging Pathways Involving MicroRNA-206 and the RNA-Binding Protein KSRP Control Post-transcriptionally Utrophin A Expression in Skeletal Muscle.* Nucleic Acids Research. 42(6):3982-3997, 2013.

14. Miura, P., Shenker, S., Andreu-Agullo, C., Westholm, J.O., and Lai, E.C. *Widespread and extensive lengthening of 3' UTRs in the mammalian brain.* Genome Research. 23(5):812-825, 2013.

13. Smibert, P., Miura P., Westholm, J.O., Shenker, S., May, G., Duff, M.O., Zhang, D., Eads, B.D., Carlson, J., Brown B.,Eisman, R.C., Andrews, J., Kaufman, C., Cherbas, P., Celniker, S.E., Graveley, B.J., and Lai, E.C. *Global patterns of tissue-specific alternative polyadenylation in Drosophila.* Cell Reports. 1(3):277-289, 2012.

12. Corinaldi J, Nasrallah R, Clark J, Paris G, Miura P., Jasmin BJ, Hébert RL. *Troglitazone induces extracellular matrix and cytoskeleton remodeling in mouse collecting duct cells.* J Biomed Biotechnol. 2012:507057, 2012.

11. Miura, P., Amirouche, A., Clow, C., Bélanger, G., Jasmin B.J. *Brain-derived neurotrophic factor expression is repressed during myogenic differentiation by miR-206.* J Neurochem. 120(2):230-238, 2012.

10. Ljubicic V., Miura P., Burt M., Boudreault L., Khogali S., Lunde J.A., Renaud J.M., Jasmin B.J. *Chronic AMPK activation evokes the slow, oxidative myogenic program and triggers beneficial adaptations in mdx mouse skeletal muscle.* Hum Mol Genet. 20(17):3478-3493, 2011.

9. Nasrallah, R., Clark, J., Corinaldi J., Paris, G., Miura, P., Jasmin, B.J., Hébert, R.L. *Thiazolidinediones alter growth and epithelial cell integrity, independent of PPARγ and MAPK activation, in mouse M1 Cortical Collecting Duct Cells.* Am J Physiol Renal Physiol. 298: F1105–F1112, 2010.

8. Miura, P., Coriati, A., Bélanger, G., Lee, J., Holcik, M., Kothary, R., Jasmin, B.J. *The utrophin A 5'UTR drives cap-independent translation exclusively in skeletal muscles of transgenic mice and interacts with eEF1A2.* Hum Mol Genet. 19(7):1211-1220, 2010.

7. Miura, P., Chakkalakal, J.V., Boudreault, L., Bélanger, G., Hébert, R.L., Renaud, J.M., Jasmin, B.J. *Pharmacological activation of PPARβ/δ stimulates utrophin A expression in skeletal muscle fibers and restores sarcolemmal integrity in mature mdx mice.* Hum Mol Genet. 18(23):4640-4649, 2009.

6. Miura, P., Andrews, M., Holcik, M., Jasmin, B.J. *IRES-Mediated Translation of Utrophin A is Enhanced by Glucocorticoid Treatment in Skeletal Muscle Cells.* PLoS ONE. 3(6):e2309, 2008.

5. Chakkalakal, J.V., Miura, P., Bélanger G., Michel, R.N., Jasmin, B.J. *Modulation of Utrophin A mRNA stability in fast versus slow muscles via an AU-rich Element and Calcineurin Signaling*. Nucleic Acids Res. 36:826-38, 2008.

4. Miura P., and Jasmin B.J. *Utrophin upregulation for treating Duchenne or Becker muscular dystrophy: How close are we?* Trends Mol Med. 12:122-9, 2006.

3. Miura, P., Thompson, J., Chakkalakal, J.V., Holcik, M., Jasmin, B.J. *The Utrophin A 5'UTR Confers IRES-Mediated Translational Control During Regeneration of Skeletal Muscle Fibers*. J Biol Chem. 280, 32997-33005, 2005.

2. Stocksley, M.A., Chakkalakal, J.V., Bradford, A., Miura, P., De Repentigny, Y., Kothary, R., Jasmin, B.J. *A 1.3 kb promoter fragment confers spatial and temporal expression of utrophin A mRNA in mouse skeletal muscle fibers.* Neuromuscul Disord. 15, 437-449, 2005.

1. Vaughan, P.S., Miura, P., Henderson, M., Byrne, B., and Vaughan, K.T. *A role for regulated binding of p150(Glued) to microtubule plus ends in organelle transport.* J Cell Biol. 158, 305-319, 2002.

1b. Book chapters

1. Cooper D.A., Cortés-López M., and Miura, P.* *Genome-Wide circRNA Profiling from RNA-seq Data*. Methods in Molecular Biology, 1724:27-41, 2018.

2. Oral Presentations

a. Invited presentations

i. At professional conferences

12. Society for Neuroscience Annual meeting 11/09/2021
(Virtual)

11. CSHL Eukaryotic mRNA Processing meeting 08/24/2021
(Virtual)

10. Crete Workshop on Molecular & Developmental Biology of Drosophila 11/22/2020
(Virtual)

9. FASEB RNA Localization and Local Translation Conference 07/02/2019
Snowmass, CO

8. Biennial Canadian Drosophila Research Conference 06/11/2019
Toronto, Canada

7. Society for Neuroscience 48th annual meeting 11/04/2018
San Diego, CA

6. Entomological Society of America Pacific Branch Meeting 05/11/2018
Reno, NV

5. CSHL Regulatory & Noncoding RNAs meeting 05/17/2018
Cold Spring Harbor, NY

4. Neurobiology Meeting of the Mexican Society for Biochemistry 10/14/2017
Querétaro, Mexico

3. Drosophila Research Conference 03/29/2017
San Diego, CA

2. COBRE CNTN Annual Meeting 10/08/2016
Las Vegas, NV

1. Biennial Canadian Drosophila Research Conference 06/24/2015
Montreal, Canada

ii. At another college or university or scholarly institution

14. University of Chicago, Dept. of Molecular Genetics and Cell Biology 11/11/2021
Chicago, IL

13. UConn Health, Dept. of Genetics and Genome Sciences 09/27/2021
Farmington, CT

12. UCSF, Bruneau lab 20th Anniversary Symposium 03/19/2021
(Virtual)

11. Purdue University, Department of Biochemistry 10/29/2019
Lafayette, IN

10. University of New Mexico School of Medicine 03/21/2019
Albuquerque, NM

9. Okinawa Institute of Science and Technology 11/21/2018
Okinawa, Japan

8. University of Southern Mississippi Biological Sciences Seminar Series 02/02/2018
Hattiesburg, MS

7. UC Davis Entomology and Nematology Seminar Series 02/15/2017
Davis, CA

6. UCSF Gladstone Institute for Cardiovascular Disease 01/10/2017
San Francisco, CA

5. UCSC Molecular, Cell and Developmental Biology Seminar Series 10/02/2015
Santa Cruz, CA

4. UNAM, Frontiers in Genomics Seminar Series 09/07/2015
Cuernavaca, Mexico

3. University of Ottawa, Advances in Biomedical Research Seminar Series 06/30/2015
Ottawa, Canada

2. Trent University, Dept. of Biology 06/13/2013
Peterborough, Canada

1. St. Thomas University, Dept. of Biology 11/15/2013
St. Paul, MN

c. Poster presentations-

i. Peer reviewed

(*only poster abstracts as presenting or corresponding author listed*)

19. Bae. B, Miura, P.*, *CRISPR-mediated knockout of neuronal long 3'UTRs in mESC-derived neurons*. CSHL Eukaryotic mRNA Processing meeting. Virtual Poster, 08/24/2021

18. Knupp, D. Saito, Y., Cooper, D., Darnell, R.B., Miura, P.* *NOVA2-mediated regulation of circRNAs during mammalian neural development*. 84th Cold Spring Harbor Laboratory Symposium on Quantitative Biology: RNA control and regulation. Cold Spring Harbor, NY, 05/30/19

17. Zhang Z., Peterson, R., So, K., Bauer, M., Ng, H. Zhang, Y., Kim. J.K., Kidd, T, Miura, P.* *Coordinated alternative splicing and alternative polyadenylation of Dscam1 regulated by Elav is essential for neural development in Drosophila*. Gordon Research Conference Post-Transcriptional Gene Regulation. Newry, ME, 07/15/2018

16. Bae, B., Gruner, H., Lynch, M., Oliver, D., So, K., Zhang, Z., Mastick, G.S., Yan, W., Miura, P.* *Methodologies for studying the biological roles of neural-extended 3´ UTR isoforms*. RNA Society Meeting. Berkeley, CA, 05/2018

15. Zhang, Z., So, K., Peterson, R., Bauer, M. Ng, H., Zhang, Y., Kim, J.H., Kidd, T., Miura, P.* *Coordinated alternative splicing and alternative polyadenylation of Dscam1 regulated by ELAV is essential for neural development in Drosophila*. RNA Society Meeting. Berkeley, CA, 05/2018

14. Cooper, D.A., and Miura, P.* *Circular RNAs in Aging and Alzheimer's Disease*. RNA Society Meeting. Berkeley, CA, 05/2018

13. Knupp, D., Cooper, D.A., Pieraut, S., and Miura, P.* *NOVA2-mediated regulation of circRNAs during mammalian neurogenesis*. RNA Society Meeting. Berkeley, CA, 05/2018

12. So, K., Cooper, D.A., Gruner, H., Miura, P.* *Regulation of circRNA biogenesis in the Drosophila brain*. West Coast Biological Sciences Undergraduate Research Conference. Santa Clara, CA. 04/22/17

11. Miura, P.*, Jordan, H., So, K. *Mechanisms of Circular RNA accumulation in the aging Drosophila brain.* Keystone Symposia– Epigenetic and Metabolic Regulation of Aging and Aging-Related Diseases. Santa Fe, NM, 05/01/2016

10. Gruner, H. Cortés-López, M., Bauer, M., Miura, P.* *Accumulation of Circular RNAs in the aging mouse brain*. Keystone Symposia: Noncoding RNAs in Health and Disease. Santa Fe, NM, 02/22/16

9. Miura, P., Westholm, J., Celniker, S., Graveley, B., Lai, E.C. *Widespread accumulation of circRNAs during aging*. Annual Meeting of the RNA Society. 05/05/14

8. Miura, P., Clow, C., Jasmin, B.J. *MicroRNA-206 Regulates BDNF Expression During Myogenic Differentiation.* FASEB- Making Muscle in the Embryo and Adult, New York, NY, 05/2009.

7. Miura, P., Coriati, A., Sarkar, M., Andrews, M., Holcik, M., Jasmin, B.J. *Regulation of Utrophin A IRES-Mediated Translation by Glucocorticoid Treatment in Skeletal Muscle Cells.* Association Française contre les Myopathies (AFM) International Congress of Myology, Marseille, France, 05/ 2008.

6. Miura, P., Andrews, M., Holcik, M., Jasmin, B.J. *IRES-Mediated Translation of Utrophin A is Enhanced by Glucocorticoid Treatment in Skeletal Muscle Cells.* Keystone Symposia on Translational Regulatory Mechanisms, Coeur D'Alene, Idaho. 01/2008.

5. Miura, P., Andrews, M., Ungureanu, N., Lunde, J., Shaver, A., Holcik, M.H., Jasmin, B.J. *IRES Mediated Translation of Utrophin A is Enhanced by Glucocorticoid Treatment in Muscle Cells*. The 20th Anniversary of the DMD Gene Discovery: Impact on Muscle Biology, Disease and Therapy. Ottawa, Canada. 05/2007.

4. Miura P., Chakkalakal J.V., Lunde, J., Shaver, A., Belanger, G., Jasmin, B.J. *Activation of PPARδ stimulates utrophin A expression in skeletal muscle cells.* FASEB Experimental Biology meeting. Washington D.C. 04/2007.

3. Miura P., Lee, J., Holcik, M., Jasmin, B.J. *Functional Characterization of the Utrophin A IRES and Identification of the Eukaryotic Elongation Factor 1A-2 (eEF1A-2) as a potential IRES Trans-Activating Factor*. CSHL meeting on translational control. Cold Spring Harbor, New York, 11/ 2006.

2. Miura P., Thompson J., Chakkalakal J.V., Holcik M. and Jasmin B.J. *Utrophin A is Translationally Regulated in Regenerating Skeletal Muscle via an IRES Dependent Mechanism.* Canadian Student Health Research Forum. Winnepeg, Manitoba, 05/2005.

1. Miura P., Thompson J., Chakkalakal J.V., Holcik M. and Jasmin B.J. *Utrophin A is Translationally Regulated in Regenerating Skeletal Muscle via an IRES Dependent Mechanism.* Association Française contre les Myopathies (AFM) International Congress on Myology. Nantes, France, 05/2005.

OTHER PROFESSIONAL ACCOMPLISHMENTS

I) TEACHING & ADVISING

(A) Classroom based teaching

Graduate teaching (full semester instructor):

CMB 790- Graduate Seminar (1hr/week)	Fall '16 & '21
BIOL 792- Special Topics: RNA Biology (3hr/week)	Spring '20
BIOL 792- Special Topics: Next Generation Sequencing (3hr/week)	Spring '18 & '19

Undergraduate teaching (full semester instructor)**:**

BIOL 315- Cell Biology (3hr/week)	Fall 2016-2021
BIOL 456/656 Molecular Basis of Epigenetics (3hr/week)	Fall '14, Fall '15

(B) Advising

Postdoctoral fellow/Research Associate supervision:

Zhiping Zhang	07/16-
Brian Jorgensen (co-supervised with van der Linden)	02/20-05/21
Jaffar Bhat (co-supervised with van der Linden)	02/19-10/19
Daphne Cooper	03/16-11/18
Kelly Phelps	03/15-01/16

PhD Student Supervision:

David Knupp	(UNR, Cellular and Molecular Biosciences; PhD awarded)	08/16-12/21
Bong Min Bae	(UNR, Cellular and Molecular Biosciences; PhD awarded)	08/16-12/21
Hannah Gruner	(UNR, Cellular and Molecular Biosciences; PhD awarded)	01/15-08/18

Masters Student Supervision:

Lauryn Eggleston	(UNR, Cellular and Molecular Biosciences; MSc awarded)	08/18-05/20
Ryan Peterson	(UNR, Neuroscience; MSc awarded)	08/15-12/17

II) SERVICE

(A) Professional Service:

Grant Review Service:

NIH Molecular Genetics (MG)- permanent member	02/2022- present
NIH Molecular Genetics B (MGB)	10/2021

NIH F03A (Fellowships)	05/2021
NIH Molecular Genetics B (MGB)	10/2020
NIH Molecular Neurogenetics (MNG)	06/2020
NIH Molecular Neurogenetics (MNG)	02/2020
NSF Integrative Organismal Systems	03/2017

Manuscript Review Service:

Ad hoc reviewer for: Cell Reports, Development, Genes & Development, Genome Research, Nature Cell Biology, Nature Communications, Nature Neuroscience, Nucleic Acids Research, PLoS Genetics, PNAS, RNA, and many others.

Guest editor: Plos Genetics.

(B) Department/College/University Service at University of Nevada, Reno:

Organizer, UNR Molecular, Cellular and Developmental Biology club	2021
Faculty Mentor, student club: “Community Innervation Club”	2020-2021
Faculty Mentor, student club: Out in STEM (OSTEM)	2019-2021
Committee Member, Biology Special Programs committee	2015-2021
Tissue Culture Core Director. Fleishman Agriculture Building	2017-2021
Committee Member, “Cell/Molecular Biologist” search committee	2019-2020
Committee Member, Molecular Biosciences graduate program	2019-2020
Organizer, UNR Fly Club	2015-2019
Committee Chair, Neuroscience Scholarship Committee	2018
Committee Member, Computational Neuroscientist” search committee	2016-2018
Committee Chair, Integrative Neuroscience Graduate Program	2016
Committee Member, “Animal Physiologist” search committee	2015

(C) Outreach:

Biannual visits to Hug High school to present on research topics	2015-2021