

Curriculum Vitae
Nelson C. Lau, PhD
Silvio Conte Research Building K-201
617-358-4405
nclau@bu.edu
<https://profiles.bu.edu/Nelson.Lau>
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Academic Training:

1999 BS	University at Albany SUNY, Albany, NY; Summa Cum Laude, Molecular Biology
2004 PhD	Massachusetts Institute of Technology, Cambridge, MA; Biology

Additional Training:

2004-2004	Postdoctoral fellow, David Bartel lab, Whitehead Institute for Biomedical Research, MA
2004-2009	Postdoctoral fellow, Robert Kingston lab, Mass. General Hospital and Harvard Medical School, MA

Academic Appointments:

2009-2017	Assistant Professor, Department of Biology, Brandeis University
2017-present	Associate Professor, Department of Biochemistry & Cell Biology, Boston University Chobanian & Avedisian School of Medicine
2019-present	Director, Boston University Genome Science Institute, Faculty affiliate, Boston University Bioinformatics Program.
2021-present	Faculty affiliate, National Emerging Infectious Disease Laboratory (NEIDL)

Hospital Appointments or Other Employment:

2004-2009	Postdoctoral fellow, Mass. General Hospital and Harvard Medical Center, MA
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Honors:

National

2002	Keystone Symposia Scholarship Award (conference travel award)
2003	AAAS Newcome Cleveland Prize (Together with David Bartel for discovery of microRNAs reported in the AAAS Journal Science)
2004	Helen Hay Whitney Foundation Postdoctoral Fellowship
2008	NIH K99 Pathway to Independence Award
2010	Searle Scholar Award

Major Administrative Responsibilities:

Boston University School of Medicine, Boston, MA, USA

2018-2019	Co-Director, BU Genome Science Institute
2019-present	Director, BU Genome Science Institute

Departmental, School and University Committees:

Brandeis University, Waltham, State

2010-2016	Graduate Admissions Committee, Molecular and Cellular Biology Graduate Program, Waltham, MA
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Boston University School of Medicine, City, State

2018-present	Member, BUSM Graduate Medical Sciences Academic Appointment Committee
2018-2020	Department of Biochemistry Faculty Recruitment Search Committees, Academic Promotions Committee, Animal Research

2020-2022 BUSM K-building COVID19 Research Recovery Committee Co-Chair, Search Committee for the BUSM DATA Science Core Faculty Recruitment, Search Committee for Executive IT Director for BUSM

2022-present Department of Biochemistry and Cell Biology Computer Technology Committee

Boston University, City, State

2019-present Member, Bioinformatics Program Admissions Committee

Teaching Experience and Responsibilities:

2009-present Lectures to undergraduates, medical and graduate students on molecular biology, genetics and genomics

Dates	Title Course	Role	Contact hours/week	Enrollment N
2011-2016	BIO105b Molecular Biology	Co-lead instructor	24 hrs	50
2011, 2014	BISC8a Stem Cells and Regenerative Medicine	Lead instructor	24 hrs	30
2011, 2012	BIOL175b RiboNucleicAcids	Lead instructor	12 hrs	15
2015	BIOL124a Epigenetics	Lead instructor	12 hrs	15
2017-present	FC712-Structure and function of genomes	Guest lectures on RNA biology	6hrs per semester	25
2018-present	MD512- Dental Biochemistry	Guest lectures on DNA biochemistry	6hrs per semester	120
2019-present	BF820- Research Opportunities	Guest lecture genomics bioinformatics	2hrs per semester	15
2021, 2022, 2025	GMS-GE701 Principles of Genetics and Genomics; FC715 Translational Genetics	Guest lectures on Drosophila genetics and RNA therapeutics	6hrs per semester	15

Diversity, Equity, Inclusion, and Belonging Activities:

I have a track record for training women and underrepresented minorities (URM) in my lab to learn about RNAi biology. Five female postdocs (Matts, Zeng, Sytnikova, Yang, Bandyopadhyay) have successfully completed postdoctoral training with first author publications. I have also maintained a gender-balanced group of lab members, with currently 3 women and 5 men. I graduated one MS student, Charlotte Logan, a Native American who is a Linguistics doctoral candidate at Cornell University. I have trained two Hispanic technicians Christina Post and Austin Rivera who each were authors on two papers in my lab (Post et al 2014, Sytnikova et al 2014) and (Rivera et al 2025, Alizada et al 2025). another former technician, Jasmine Pierre, is an African American graduate of UMASS Amherst and is a contributing author on our recent paper (Srivastav et al, 2019). One doctoral student graduated from my lab, Josef Clark, who is an author on three manuscripts (Post et al 2014, Sytnikova et al, 2014, Clark et al, Clark et al 2017) and is now a senior staff scientist at University of Wisconsin.

Finally, in my role as the Director of the Boston University School of Medicine Genome Science Institute, I serve as a conduit in communicating to potential mentors (GSI members) of trainees interested in genomics research. I serve a key role connecting prospective candidates interested in

genomics data analysis to the GSI research community by supporting education initiatives like linking data scientists with our other programs in genetics, genomics and bioinformatics.

Mentoring Activities:

Mentee, degree(s)	Dates	Manuscript or product produced	Mentee Last Known Position
Students			
Charlotte Logan	2010-2012	Masters thesis	PhD candidate in Linguistics at Cornell University, Ithaca NY
Connor Murphy	2011-2014	Undergraduate senior thesis	Postdoctoral Fellow, MaineHealth Institute for Research, Scarborough, ME
Sally Demirdjian	2013-2014	Masters thesis	Staff scientist, Gilead Pharmaceuticals
Ignatius Ang	2013-2015	Undergraduate senior thesis and co-author on manuscript # PMC5340914 (Toombs et al)	DO, Psychiatry at Everett Behavioral Health, Everett WA
Abhay Kanodia	2015-2016	Masters thesis and co-author on manuscript #PMC4678822 (Rahman et al)	PhD candidate at SUNY Stony Brook University, Stony Brook, NY
Josef Clark	2012-2016	PhD thesis and co-author on manuscripts # PMC5611886 (Clark et al), #PMC4238361 (Post et al), #PMC4248314 (Sytnikova et al), #PMC4248790 (Clark & Lau)	Senior research staff scientist, University of Wisconsin – Madison, Madison WI
Linda Yang, BS	2017-2019	Co-author on manuscript #PMC11361183 (Rivera et al)	Physician Resident in Family Medicine at Hoboken University Medical Center, NJ
Erik Matson, BS	2019 rotation	Co-author on manuscript #PMC10903936 (Ma et al)	PhD candidate in PJ Maglione lab, BUCAMED
Tong Tong, BS	2021 rotation	Co-author on manuscript #PMC11462757 (Azad et al)	PhD candidate in L. Farrer lab, BUCAMED
Varun Raghuraman, BS	2021 summer	BMSIP internship project completion	Senior Associate Scientist at Pfizer
William Dorst	2021-2022 summer	Undergraduate Research, undergraduate research thesis	MD candidate, Yale School of Medicine
Manseeb Hossain, BS	2025 summer	BMSIP internship project completion	Research Associate at Pfizer
Bradley Jenner, BS	2025 rotation	Bioinformatics Graduate Wet lab rotation	PhD candidate, BU Bioinformatics
Post-Doc/Fellows			
Jessica Matts	2010-2012	Co-author on manuscript #PMC4036803 (Matts et al), #PMC4654475 (Chirn et al), #PMC4250274 (Arnold et al)	Freelance Science Communications Consultant

Mentee, degree(s)	Dates	Manuscript or product produced	Mentee Last Known Position
Mei Zeng	2010-2013	Co-author on manuscript #PMC3966114 (Zeng et al) and #PMC4654475 (Chirn et al)	Business Development Manager at Medicilon
Reazur Rahman	2013-2017	Co-author on manuscripts #PMC4678822 (Rahman et al), #PMC5611886 (Clark et al), #PMC4654475 (Chirn et al), #PMC8893327 (Yang et al), #PMC6917496 (Srivastav et al), #PMC4248314 (Sytnikova et al),	Staff scientist at Vertex Pharmaceuticals.
Saptarni Bandyopadhyay	2017-2020	Co-author on manuscripts #PMC8496256 (Bandyopadhyay et al), #PMC6917496 (Srivastav et al)	Staff scientist at Pillar Biosciences
Nachen Yang	2016-2021	Co-author on manuscripts #PMC8893327 (Yang et al), #PMC5611886 (Clark et al)	Staff scientist at Pillar Biosciences
Zheng Zhu	2021-2022	Co-author on manuscripts #PMC9260120 (Feitosa-Suntheimer et al) #PMC11185646 (Gupta et al)	Staff scientist at Gatehouse Bio
Rohit Sharma	2022-present	Co-author on preprint #PMC11185646 (Gupta et al)	Currently still in Lau lab
Md Fakhrul Azad	2023-present	Co-author on manuscript #PMC11462757 (Azad et al)	Currently still in Lau lab

Other Professional Activities:

Professional Societies: Memberships, Offices, and Committee Assignments:

American Association for the Advancement of Science

2007-present Member

The RNA Society

2008-present Member

Genetics Society of America

2015-present Member

American Society of Biochemistry and Molecular Biology

2021-present Member

Editorial Boards:

2023-present Associate Editor, *Mobile DNA journal*

2024-present Special Collections Editor - *The Cis-Regulatory Impact of Transposable Elements on Gene Expression, Mobile DNA journal*
<https://www.biomedcentral.com/collections/TCRITEGE>

2014-2015 Guest Editor, *PLoS Genetics*

Ad Hoc Reviewing

2009-present Nature, Cell, Molecular Cell, Proceedings National Academy of Science, Nature Structure and Molecular Biology, Developmental Cell, Cell Reports, Current Biology, eLife, Genetics, PLoS Biology, PLoS Genetics, Genome Research,

CV—Nelson C. Lau, PhD

Genome Biology, PLoS ONE, Molecular Systems Biology, Molecular Cellular Biology, G3 journal, Nucleic Acids Research, RNA, Genome Biology and Evolution, Nature Communications, Nature Genetics, Nature Ecology & Evolution, Molecular Biology and Evolution, Mobile DNA, Scientific Reports, FasebJ, Open Biology, Journal Molecular Evolution.

Recent tally:

2018: 8 manuscripts (mans), 2019: 10 mans., 2020: 8 mans., 2021: 10 mans., 2022: 9 mans., 2023: 4 mans. 2024: 10 mans. 2025: 9 mans.

Major Committee Assignments:

Federal Government:

None.

Foundations: Reviewer for National and International Grant programs

2010	Academica Sinica Program, The Charles King Trust Fellowship of The Medical Foundation
2012	Human Frontiers Science Program
2015	European Research Council
2016	Deutsche Forschungsgemeinschaft (DFG) German Research Foundation, The Charles King Trust Fellowship of The Medical Foundation
2017	NSERC Discovery Grant applications, Canada
2022	Polish National Science Center, Poland, Wellcome Trust Discovery Program, UK, ANR-IRIS Program of the Agence Nationale de la Recherche, France, Boehringer Ingelheim Foundation, Germany.
2025	Wellcome Trust Discovery Program, UK

Industry:

None.

State:

None.

Study Sections:

National Institutes of Health:

2010	Ad Hoc Reviewer, Molecular Genetics-C study section
2021	ZRG_GGG_F Study Section on R24 Resources Grants
2022	ZRG1 Special Emphasis Panel Review of F30/F31/F32 NRSA Fellowship Grants
2023-2024	NIH Study Sections Reviewer ZRG1 BTC-J (55), ZRG1 MGG-E (55), and ZRG1 BTC-Y (55)
2025	NIH Study Sections Reviewer, MIRA0MRAA_ZRG1MGG-D(07/25)*, MG (10/25-rescheduled to 01/26 from government shutdown)

National Science Foundation:

2019, 2023, 2024 National Science Foundation grant reviewer,
MCB Genetic Mechanisms Division

Other Support:

Current:

2022-2027	R01-AG078930 PI: Nelson Lau, "Transposable Element (TE) RNA regulation via small RNA pathways in aging cells, neurodegeneration and Alzheimer's disease",
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CV—Nelson C. Lau, PhD

Total Cost: \$442,000/yr
Role: Principal Investigator

Past:

- 2020-2024 R01-GM135215-01A1 PI: Nelson Lau, "THE INTERPLAY BETWEEN TRANSPOSONS AND PIRNA PATHWAYS.", Total Cost: \$ 434,011/yr
Role: Principal Investigator (No Cost Extension to March 2025)
- 2021-2026 R01-AR078306-01 PI: Vladimir Botchkarev, Co-I: Andrey Sharov, Nelson Lau, "Transposable elements in the keratinocyte genome and their regulation during skin development and epidermal differentiation.", Total Cost: \$ 506,307/yr
Role: Co-Investigator, 1 month effort
- 2023-2026 R15- AI171800-01A1 PI: Vanessa Macias, University of North Texas (Nelson Lau Subcontract PI) "Small RNA interactions with transgenes in genetically modified mosquito lines". Subcontract Cost \$88,463
- 2023-2023 BUSM Sexual Medicine Award PI: Nelson Lau; Co-I Joseph Zaia. Proteomic discovery of transcription factors. \$75,000.
- 2021-2023 R21-AG072069 PI: Jennifer Luebke. Effects of normal aging on the transcriptomic and physiological profiles of layer 3 pyramidal neurons in diverse neocortical areas of the monkey. Total Cost: \$453,750.
Role: Collaborator, 1 month effort.
- 2022-2022 BUSM Wing-Tat Lee Award
PI: Nelson Lau, Tick Small RNA Genomics (TSRG) resource. \$40,000.
- 2016-2022 R01AG052465-02 PI: Nelson Lau, "Transposon landscapes and transcriptome diversity in aging neurons", Total Cost: \$ 318,871/yr (NCE 4/2021- 3/2022)
Role: Principal Investigator
- 2021-2021 BUSM Wing-Tat Lee Award PI: Nelson Lau, Determining the in vivo RNA secondary structures of viruses in mosquito cell cultures using Structure-Seq. \$45,000.
- 2017-2020 R21HD088792-01 PI: Nelson Lau, "The impact of Piwi associated transcripts in Xenopus germ cell development.", Total Cost: \$220,362/yr (NCE 3/2019-05/2020)
Role: Principal Investigator
- 2010-2013 10-SSP-157 Searle Scholar Award PI: Nelson Lau, "Germline genome regulation by Piwi proteins and small RNAs.", Total Cost: \$330,000
Role: Principal Investigator
- 2009-2012 R00HD057298-03 PI: Nelson Lau, "The impact of Piwi associated transcripts in Xenopus germ cell development.", Total Cost: \$706,052
Role: Principal Investigator

Invited lectures, invited conference presentations and workshops:

Regional:

- 2009-Dec "Piwi-interacting RNAs: dissecting a gonadal transposon regulator in animals", Josephine Bay Paul Center, Marine Biology Lab, MA [*Invited Lecture*]

- 2010-Nov “Dissecting the Molecular Function of Piwi Proteins and piRNAs”, Non-coding RNA Meeting, New York Academy of Science, NY *[Invited Presentation]*
- 2011-Oct “Transgenic RNAi gene-knockdown in Xenopus with small hairpin RNAs”, Xenopus Community Resource Meeting, Marine Biology Lab, MA *[Invited Presentation]*
- 2012-May “Piwi-interacting RNAs (piRNAs) and Small hairpin RNAs (shRNAs), Complexities of gene silencing by small RNAs”, RNAi, MicroRNAs, Single Cell Biology Meeting, Waltham, MA *[Invited Presentation]*
- 2012-Oct “The evolution and regulatory potential of small RNAs in animal germline cells.”, - UMASS Boston Biology Department, Boston, MA *[Invited Presentation]*
- 2013-Apr “Targeting and silencing capacity of Piwi proteins and piRNAs.”, University at Albany Biology Department, Albany, NY *[Invited Presentation]*
- 2014-Oct “Transposons and PIWI/piRNA Regulation Impacts LncRNA and Gene Expression Diversity”, Boston Area Gene Expression Meeting, Boston, MA *[Invited Presentation]*
- 2015-Feb “Transposon landscape dynamics and the Evolution of Piwi-interacting RNA (piRNA) Clusters.”, Brown University Biology Department, Providence, RI *[Invited Presentation]*
- 2015-Sept “Transposons and PIWI/piRNA Regulation Impacts LncRNA and Gene Expression Diversity”, Mobile DNA Meeting, Marine Biology Lab, MA *[Invited Presentation]*
- 2016-Jan “Genome and transcriptome regulation by the Piwi/piRNA pathway”, BIDMC Cancer Center/Harvard Medical School, Boston, MA *[Invited Presentation]*
- 2016-Jan “Genome and transcriptome regulation by the Piwi/piRNA pathway”, New England Biolabs, Ipswich, MA *[Invited Presentation]*
- 2016-Mar “Surfing the waves of transposon and piRNA diversity with genomics and - Marbioinformatics”, Stonehill College Biology Department, North Easton, MA *[Invited Presentation]*
- 2016-Mar “Surfing the waves of transposon and piRNA diversity with genomics and bioinformatics”, Boston College Biology Department, Chestnut Hill, MA *[Invited Presentation]*
- 2017-Sep “Measuring Transposons Landscape Diversity during *Drosophila* Aging”, Mobile DNA Meeting, Marine Biology Lab, MA *[Invited Presentation]*
- 2018-Nov “Can we bioinformatically predict piRNA precursor transcripts?”, BU Systems Biology Seminar Series, BU Bioinformatics Program *[Invited Presentation]*

2019-Aug	“Har-P, a short P-element variant, weaponizes P-transposase to severely impair Drosophila development”, Mobile DNA Meeting, Marine Biology Lab, MA [<i>Invited Presentation</i>]
2020-June	“The short P-element variant, <i>Har-P</i> , collaborates with P transposase to impact Drosophila gonad development.”, Boston Area Drosophila Meeting, Boston University (Virtual). [<i>Speaker and Co-Organizer</i>]
2024-May	“Traffic jam directly regulates the Drosophila piRNA cluster flamenco and the Piwi gene network to ensure transposon silencing and female fertility.”, Boston Area Drosophila Meeting, UMass Chan Medical School Worcester [<i>Invited Speaker</i>]
2024-Jul	Special Symposium to Celebrate Bob Kingston’s Career at Cold Spring Harbor - Labs [<i>Invited Speaker</i>]
2025-Mar	“The battle between piRNAs and transposons & viruses” University of New Hampshire, Durham, NH [<i>Invited Speaker</i>]
National:	
2012-May	“Evolution and gene silencing capacity of Piwi-interacting RNAs”, 17 th RNA Society Meeting, University of Michigan, MI [<i>Conference Presentation</i>]
2012-Aug	“Mechanisms for PIWI protein interactions with natural and artificial piRNA targets”, CSHL Noncoding RNA meeting, Cold Spring Harbor Labs, NY [<i>Conference Presentation</i>]
2014-Jul	“Transposons and PIWI Regulation Impacts LncRNA and Gene Expression Diversity in Drosophila Ovarian Cell Cultures”, Chromatin Biology Gordon Research Conference, Waltham, MA [<i>Invited Presentation</i>]
2015-Mar	“The evolution of Drosophilid piRNA generating clusters is extremely rapid and variable.”, 56 th Annual Drosophila Genetics Meeting, Chicago, IL [<i>Session Chair and speaker</i>]
2016-Nov	“Nascent RNA elongation factors affects PIWI target silencing of transposon”, CSHL Transposable Elements meeting, Cold Spring Harbor Labs, NY [<i>Conference Presentation</i>]
2018-Feb	“Changing Transposon Landscapes in single generations of aging Drosophila genomes”, Keystone Symposum, Santa Fe, NM [<i>Conference Presentation selected but canceled due to recent death in immediate family</i>]
2018-Nov	“The short P-element variant, Har-P, collaborates with P transposase to impact Drosophila gonad development.”, CSHL Transposable Elements meeting 2018, Cold Spring Harbor Labs, NY [<i>Conference Presentation</i>]
2020-Oct	“Transposon landscape changes in aging Drosophila.”, CSHL Mechanisms of Aging meeting 2020 (Virtual), Cold Spring Harbor Labs, NY [<i>Conference Presentation</i>]

- 2020-Nov “Integrated small RNA genomics of mosquito cells reveal dynamic evolutionary responses to viruses and transposons.”, CSHL Transposable Elements meeting 2020 (Virtual), Cold Spring Harbor Labs, NY [*Conference Presentation*]
- 2021-Jun “Transposable element landscape changes are buffered by RNA silencing in aging *Drosophila*.”, FASEB Mobile DNA Conference 2021 (Virtual), FASEB, SRC NY [*Conference Presentation*]
- 2024-Oct “Transposable element small RNAs and long RNAs in human brains during aging and Huntington’s and Parkinson’s Disease.”, CSHL Transposable Elements meeting 2024, Cold Spring Harbor Labs, NY [*Conference Presentation*]
- 2026-Mar “Transposable elements regulation in *Drosophila* During Aging (and fertility).”, 67th Annual *Drosophila* Genetics Meeting, Chicago, IL [*Invited speaker*]
- International:**
- 2015-Jul “Transposon landscape dynamics and the Evolution of Piwi-interacting RNA (piRNA) Clusters.”, 15th Society Molecular Biology and Evolution Meeting, Vienna, Austria [*Invited Presentation*]
- 2016-Mar “Nascent RNA elongation affects PIWI target silencing”, EMBO Meeting Multiple functions of piRNAs and PIWI proteins, Montpellier, France [*Invited Presentation*]
- 2016-Apr “Genome and transcriptome regulation by the Piwi/piRNA pathway”, Max Delbruck Center, Berlin, Germany [*Invited Presentation*]
- 2017-May “*Drosophila* PAF1 modulates Piwi silencing capacity”, 12th IMBA Microsymposium, Vienna, Austria [*Invited Presentation*]
- 2022-Feb “Transposable element landscape changes are buffered by RNA silencing in aging *Drosophila*.”, TRANSPOSABLE ELEMENTS AT THE CROSSROADS OF EVOLUTION, HEALTH AND DISEASE Keystone Symposia 2022 (In Person), Whistler, Canada [*Conference Presentation Abstract Selected but Conference Postponed from COVID19 Omicron Surge*]
- 2022-Apr “Genomics of piRNAs and small RNAs in mosquito and man: harbingers of persistent viruses and transposon activation.” Virtual Meeting. EMBO Workshop: Piwi proteins and piRNAs. [*Conference Presentation*]
- 2024-Apr “What can a Zodiac of piRNAs teach us?” International Meeting on Piwi proteins and piRNAs. CNRS Genopolys, Montpellier France [*Invited Presentation*]
- 2025-July “Transposable Element Small RNAs and Long RNAs in Human Brains During Aging and in Neurodegenerative Disorders (Huntington’s, Parkinson’s and Alzheimer’s Disease)” FASEB Science Research Conferences, Mobile DNA: Mechanisms and Health Impact. Porto, Portugal [*Conference Presentation*]

Bibliography:

ORCID: <https://orcid.org/0000-0001-9907-1404>

MyNCBI hotlink: <http://www.ncbi.nlm.nih.gov/sites/myncbi/nelson.lau.1/bibliography/40770091/public/>

*Shared Authorship

†Corresponding author

Mentees names are underlined**Original, Peer Reviewed (empirical) Articles:**

1. **Lau NC**, Lim LP, Weinstein EG, Bartel DP. An abundant class of tiny RNAs with probable regulatory roles in *Caenorhabditis elegans*. **Science**. **2001** Oct 26;294 (5543):858-62.
2. Landthaler M, Begley U, **Lau NC**, Shub DA. Two self-splicing group I introns in the ribonucleotide reductase large subunit gene of *Staphylococcus aureus* phage Twort. **Nucleic Acids Res**. **2002** May 1;30(9):1935-43.
3. *Lim LP, ***Lau NC**, *Weinstein EG, *Abdelhakim AH, Yekta SO, Rhoades MW, Burge CB, Bartel DP. The MicroRNAs of *Caenorhabditis elegans*. *Genes Dev*. 2003 Apr 15;17(8):991-1008. Epub 2003 Apr 02.
4. Bergman NH, **Lau NC**, Lehnert V, Westhof E, Bartel DP. The three-dimensional architecture of the class I ligase ribozyme. **RNA**. **2004** Feb;10(2):176-84.
5. Landthaler M, **Lau NC**, Shub DA. Group I intron homing in *Bacillus* phages SPO1 and SP82: a gene conversion event initiated by a nicking homing endonuclease. *J Bacteriol*. 2004 Jul;186(13):4307-4314.
6. Lim LP, **Lau NC**, Garrett-Engele P, Grimson A, Schelter JM, Castle J, Bartel DP, Linsley PS, Johnson JM. Microarray analysis shows that some microRNAs downregulate large numbers of target mRNAs. **Nature**. **2005** Feb 17;433(7027):769-73. Epub 2005 Jan 30.
7. Abbott AL, Alvarez-Saavedra E, Miska EA, **Lau NC**, Bartel DP, Horvitz HR, Ambros V. The let-7 MicroRNA family members mir-48, mir-84, and mir-241 function together to regulate developmental timing in *Caenorhabditis elegans*. **Dev Cell**. **2005** Sep;9(3):403-14.
8. Li M, Jones-Rhoades MW, **Lau NC**, Bartel DP, Rougvie AE. Regulatory mutations of mir-48, a *C. elegans* let-7 family MicroRNA, cause developmental timing defects. **Dev Cell**. **2005** Sep;9(3):415-22.
9. ***Lau NC**, *Seto AG, Kim J, Kuramochi-Miyagawa S, Nakano T, Bartel DP, Kingston RE. Characterization of the piRNA complex from rat testes. **Science**. **2006** Jul 21;313(5785):363-7. Epub 2006 Jun 15.
10. Miska EA, Alvarez-Saavedra E, Abbott AL, **Lau NC**, Hellman AB, McGonagle SM, Bartel DP, Ambros VR, Horvitz HR. Most *Caenorhabditis elegans* microRNAs are individually not essential for development or viability. **PLoS Genet**. **2007** Dec;3(12):e215.
11. **Lau NC***†, Robine N*, Martin R, Chung WJ, Niki Y, Berezikov E, Lai EC. Abundant primary piRNAs, endo-siRNAs and microRNAs in a *Drosophila* ovary cell line. **Genome Research**. **2009**. Oct;19(10):1776-85. †Co-corresponding Author.
12. **Lau NC**, Uohsumi T, Borowsky ML, Kingston RE, Blower MD. Systematic and single cell analysis of *Xenopus* Piwi-interacting RNAs and Xiwi. **EMBO Journal**. **2009**. Oct 7;28(19):2945-58
13. Robine N*, **Lau NC***†, Balla S*, Jin Z, Okamura K, Kuramochi-Miyagawa S, Blower MD, Lai EC. A broadly conserved pathway generates 3' UTR-directed primary piRNAs. **Current Biology**. **2009**. Dec 29;19(24):2066-76. †Co-corresponding Author.
14. Wu Q, Luo Y, Lu R, **Lau N**, Lai EC, Li WX, Ding SW. Virus discovery by deep sequencing and assembly of virus-derived small silencing RNAs. **Proc Natl Acad Sci U S A**. **2010** Jan 26; 107(4):1606-11.
15. Hall, S.E.†, Chirn, G., **Lau, N.C**†. and Sengupta, P. RNAi pathways contribute to developmental history-dependent phenotypic plasticity in *C. elegans*. **RNA**. **2013** Mar;19(3):306-19. †Co-corresponding Author.
16. Zeng, M., Kuzirian M.S., Harper, L., Paradis, S., and **Lau, N.C**†. Organic small hairpin RNAs (OshR): a Do-It-Yourself platform for transgene-based gene silencing. **Methods**. **2013** Sep 15; 63(2):101-9. PMID:23707624

17. Ghiretti AE, Moore AR, Brenner RG, Chen LF, West AE, **Lau NC**, Van Hooser SD, Paradis S. (2014) Rem2 is an activity-dependent negative regulator of dendritic complexity in vivo. **J Neurosci.** Jan 8;34(2):392-407. PMID: 24403140 PMCID: PMC3870928.
18. Arnold CD, Gerlach D, Spies D, Matts JA, Sytnikova YA, Pagani M, **Lau NC**, Stark A. (2014). Quantitative genome-wide enhancer activity maps in five *Drosophila* species reveal the extent of functional enhancer conservation and turnover during cis-regulatory evolution. **Nature Genetics**, Jul;46(7):685-92. PMID: 24908250 PMCID: PMC425027
19. Sytnikova, Y., Rahman, R., Chirn, G.W., Post, C., Clark, J., and **Lau, N.C.†** (2014). Transposable element dynamics and PIWI regulation impacts lncRNA and gene expression diversity in *Drosophila* ovarian cell cultures. **Genome Research**. 2014 Dec;24(12):1977-90. PMID: 25267525. PMCID: PMC4248314
20. Post, C, Clark, J, Sytnikova, Y., Chirn, G.W., and **Lau, N.C.†** (2014). The capacity of target silencing by the *Drosophila* Piwi protein and piRNAs. **RNA**. 2014 Dec;20(12):1977-86. PMID: 25336588. PMCID: PMC4238361.
21. Chirn, GW, Rahman, R, Sytnikova, YA, Matts, JA, Zeng, M, Gerlach, D, Yu, M, Berger, B, Kile, BT, and **Lau, NC.†** (2015) Conserved piRNA expression from a distinct set of piRNA cluster loci in Eutherian mammals. **Plos Genetics** 11 (11): e1005652. doi:10.1371/ journal.pgen.1005652. PMCID: PMC4654475.
22. Rahman, R., Chirn, GW, Kanodia, A, Sytnikova, Y., Brembs, B, Bergman, CM, **Lau, NC. †** (2015) Unique transposon landscapes are pervasive across *Drosophila melanogaster* genomes. **Nucleic Acids Research**. Dec 15;43(22):10655-72. doi: 10.1093/nar/gkv1193. PMCID: PMC4678822.
23. Madison-Villar, M., Sun, C., **Lau, NC**, Settles, M., Mueller, RL. Small RNAs from a big genome: the piRNA pathway and transposable elements in the salamander species *Desmognathus fuscus*. (2016). **J Mol Evol**. Oct;83(3-4):126-136. Epub 2016 Oct 14.
24. Toombs, T., Sytnikova, Y., Ang, I., Chirn, GW, **Lau, NC*†**, Blower, MD*. *Xenopus* Piwi proteins interact with a broad proportion of the oocyte transcriptome. **RNA**. (2017) Apr;23(4):504-520. doi: 10.1261/rna.058859.116. Epub 2016 Dec 28. *Co-corresponding Author.
25. Clark, J.P. Rahman, R., Yang, N., Yang, LY, **Lau, NC. †** *Drosophila* PAF1 modulates PIWI silencing capacity. **Current Biology**. (2017) Sep 11;27(1):1-9. PMID: 28844648 PMCID: PMC5611886
26. Kozeretska IA, Shulha VI, Serga SV, Rozhok AI, Protsenko OV, **Lau NC**. (2018) A rapid change in P-element-induced hybrid dysgenesis status in Ukrainian populations of *Drosophila melanogaster*. **Biol Lett**. 2018 Aug;14(8). pii: 20180184. doi: 10.1098/rsbl.2018.0184.
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None

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Congressional Testimony:

None

Selected Media: Newspapers, Video, Radio, TV, Blogs,
None

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