

CURRICULUM VITAE

Irina R. Arkhipova

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[Google Scholar](#) [ResearchGate](#) [Mendeley](#) [Publons](#) [ORCID](#)

Education and Postdoctoral Training:

- 1977-83: BS/MS in Biochemistry, M.V. Lomonosov Moscow State University, Moscow, Russia.
Department of Molecular Biology, Faculty of Biology.
Thesis: Amplification and transcription of mobile dispersed genes in *Drosophila*.
Advisor: Prof. Georgii P. Georgiev.
- 1983-86: Ph.D. in Molecular Biology, Engelhardt Institute of Molecular Biology, Moscow, Russia.
Ph.D. Dissertation: Reverse transcription of mobile dispersed genes in *Drosophila*.
Advisor: Prof. Yuri V. Ilyin.
- 1990-91: Wellcome Trust Postdoctoral Fellow
Institute of Cell and Molecular Biology, University of Edinburgh, Scotland, UK.
Project: Control of transcription of *Drosophila* retrotransposons.
Advisor: Prof. David J. Finnegan.
- 1991-94: Postdoctoral Fellow, Dept. of Biochemistry and Molecular Biology, Harvard University.
Projects: Transcriptional control of *Drosophila* transposons and host genes; gene-dosage compensation.
Advisor: Prof. Matthew S. Meselson.
- 2001: Certificate, MBL Special Topics course "Workshop on Molecular Evolution", Woods Hole, MA.

Professional Positions:

- 1986-1990 Research Scientist, Engelhardt Institute of Molecular Biology, USSR Academy of Sciences, Moscow, Russia
- 1995-2000 Research Associate, Dept. of Molecular and Cellular Biology, Harvard University, Cambridge, MA
- 2000-2009 Staff Scientist, Dept. of Molecular and Cellular Biology, Harvard University, Cambridge, MA
- 2004-2009 Assistant Research Scientist; 2009: Associate Research Scientist
Josephine Bay Paul Center for Comparative Molecular Biology and Evolution
Marine Biological Laboratory, Woods Hole, MA
- 2009-2012 Assistant Scientist, Josephine Bay Paul Center for Comparative Molecular Biology and Evolution,
Marine Biological Laboratory, Woods Hole, MA
- 2010-2013: Assistant Professor (MBL)
Department of Molecular Biology, Cell Biology, and Biochemistry, Brown University, Providence, RI
- 2013-2020: Associate Professor (Adjunct)
Department of Molecular Biology, Cell Biology, and Biochemistry, Brown University, Providence, RI
- 2012-2021: Associate Scientist, Josephine Bay Paul Center for Comparative Molecular Biology and Evolution,
Marine Biological Laboratory, Woods Hole, MA
- 2021-present: Senior Scientist, Josephine Bay Paul Center for Comparative Molecular Biology and Evolution,
Marine Biological Laboratory, Woods Hole, MA

Honors and Awards:

- 1983 Diploma with Distinction (summa cum laude), Moscow State University
- 1987 1st Prize in the Competition of Young Scientists, Moscow, Russia
- 1990 The Wellcome Trust Postdoctoral Fellowship, UK
- 2010 Honorable mention, Olympus BioScapes International Digital Imaging Competition
- 2011 Image of Distinction, Nikon Small World Photomicrography Competition
- 2011 First prize, MBL Photomicrography contest
- 2011 Top ten finalists in photography, NSF Visualization Challenge
- 2013 Image of the Week, October 21, 2013. The Cell: An Image Library
- 2015 Image of the Week, November 2, 2015. The Cell: An Image Library

Invited talks since 2012 and upcoming

02/2012 – 3d International Conference "Genomic impact of eukaryotic transposable elements", Asilomar, CA
07/2012 – "Origin and Evolution of Eukaryotic Sex", Fondation des Treilles, Tourtour, France
08/2012 – "Molphy-3" III Int'l Conference on Molecular Phylogenetics, Moscow State University, Russia
10/2013 – "Mobile Genetic Elements", Cold Spring Harbor, NY (Session Chair)
04/2014 – Invited seminar, Department of Ecology and Evolution, The University of Chicago, Chicago, IL
09/2014 – Invited seminar, Department of Biology, Penn State University, University Park, PA
09/2014 – "Molphy-4" IV Int'l Conference on Molecular Phylogenetics, Moscow State University, Russia
09/2015 – "Mobile Genetic Elements: *in silico*, *in vitro*, *in vivo*", Woods Hole, MA
10/2016 – V Biochemical Congress, Sochi, Russia
03/2019 – "Aquaculture 2019" Triennial meeting of the World Aquaculture Society, New Orleans, LA
03/2019 – Invited seminar, Louisiana Cancer Res Ctr, Tulane University School of Medicine, New Orleans, LA
10/2019 – Invited seminar, Dept of Microbiology and Molecular Genetics, University of Vermont, Burlington, VT
09/2020 – 4th Uppsala Transposon Symposium "Integrating transposon and virus identification into evolution and disease research" (opening talk, virtual)
04/2022 – Cold Spring Harbor Meeting "Fifty Years of Reverse Transcriptase", Cold Spring Harbor, NY
06/2022 – FASEB SRC "The Mobile DNA Conference: Evolution, Diversity and Impact", Dublin, Ireland
07/2022 – "The Yin and Yang of chromosomal and extra-chromosomal DNA", ETH Zürich Workshop, Monte Verità Ascona, Lago Maggiore, Switzerland
10/2022 – 6th Uppsala Transposon Symposium, Uppsala, Sweden
10/2022 – Cold Spring Harbor Meeting "Transposable Elements", Cold Spring Harbor, NY

Platform talks since 2012

03/2014 – Keystone symposium "Mobile genetic elements and genome evolution" Santa Fe, NM (poster judge)
06/2015 – 4th FASEB SRC "Mobile DNA in Mammalian Genomes", West Palm Beach, FL
04/2016 – International Congress on Transposable Elements, St. Malo, France
11/2016 – Cold Spring Harbor Meeting "Transposable Elements", Cold Spring Harbor, NY
02/2018 – Keystone symposium "Mobile Genetic Elements & Genome Plasticity" Santa Fe, NM (Session chair)
06/2020 – Society for Molecular Biology and Evolution 2020 Annual Meeting, Québec City, QC (mtg canceled)
08/2021 – EMBO workshop "The mobile genome: genetic and physiological impacts of transposable elements"

Service to the Profession

National Grant Review Panels:

10/2008 NSF: Eukaryotic Genetics Advisory Panel, Arlington, VA
10/2009 NSF: Mechanisms of Heredity Advisory Panel, Arlington, VA
06/2013 NIH: GVE (Genetic Variation and Evolution) Study Section, Washington, DC
10/2014 NIH: CMBG (Cellular and Molecular Biology of Glia) Study Section, Alexandria, VA
07/2015 - 06/21 NIH: Member, Standing GVE (Genetic Variation and Evolution) Study Section
Past and upcoming service dates: 10/2015 (Washington, DC), 06/2016 (San Diego, CA), 02/2017 (Washington, DC), 06/2017 (San Diego, CA); 10/2017 (Bethesda, MD); 02/2018 (virtual); 06/2018 (Bethesda, MD); 02/2019 (virtual); 06/19 (Washington, DC); 02/20 (Bethesda, MD); 06/2020 (virtual); 02/2021 (virtual); 06/21 (virtual).
05/2019 NASA Invertebrate Physiology Review Panel

International Grant Review Panels:

10/2018 – Invited on-site reviewer, Doctoral Programme "Population Genetics", Biological & Medical Sciences, Austrian Science Fund (FWF), Vienna, Austria

Editorial Service:

2009-2019 *Mobile DNA* (Editorial Board Member)
2006-present *Rebase Reports* (Editorial Board Member)
2011-2017 *The Scientific World Journal* (Editorial Board Member, Genetics)
2017-present *Molecular Biology and Evolution* (Associate Editor)
2019-2020 *Mobile DNA* (Associate Editor)
2019-2020 *Genes* (Basel), Special Issue "Selected papers, Mobile Genetic Elements" (Guest Editor)
2020 *Science Advances* (Guest Editor)
2020-present *Mobile DNA* (Editor-in-Chief)

Meeting organization:

04/2007, 09/2009, 09/2011 Northeast Mobile Genetic Element Meeting, Woods Hole, MA (with W. Reznikoff)
07/2010 SMBE symposium "Horizontal Transfer in Eukaryotic genome evolution", Lyon, FR (with C.Feschotte)
10/2013 "Mobile Genetic Elements", Cold Spring Harbor, NY (with R. Martienssen)
09/2015 "Mobile Genetic Elements: *in silico, in vivo, in vitro*", Woods Hole, MA (with P. Rice)
09/2017 "Mobile Genetic Elements", MBL, Woods Hole, MA (with P. Rice, W. Reznikoff)
09/2019 "Mobile Genetic Elements", MBL, Woods Hole, MA (with C. Feschotte, W. Reznikoff, F. Rodriguez)
12/2019 Member, Keystone Symposia Study Group for the planning of 2021-2022 conference portfolio
03/2022 Keystone Symposium "Transposable elements at the crossroads of evolution, health and disease"
(with K. Burns, H. Malik; postponed to 2023)

Ad hoc grant application reviewer:

2006: NSF (BIO/DBI: Biological Infrastructure)
2007, 2009, 2010-2013, 2017: NSF (BIO/MCB: Molecular and Cellular Biosciences)
2007: NSF (BIO/DEB: Environmental Biology)
2011: ANR – Agence Nationale de la Recherche (Biochimie, biologie moléculaire et structurale), France
2011, 2013: DFG – Deutsche Forschungsgemeinschaft, Germany
2011: NWO – Netherlands Organization for Scientific Research, The Netherlands
2012: NSF (BIO/IOS: Symbiosis, Defense, and Self-Recognition)
2013, 2021: ANR – Agence Nationale de la Recherche (Biodiversité, évolution, écologie et agronomie), France
2019: CONICYT – National Commission for Scientific and Technological Research (FONDECYT grants), Chile
2020, 2021: FWF – Austrian Science Fund (Biological and Medical Sciences), Austria
2022: Czech Science Foundation, Czech Republic
2022: ANR– Agence Nationale de la Recherche (Environnement, Ecosystèmes & Ressources Biologiques)

Ad hoc manuscript reviewer:

BioEssays, BMC Biology, BMC Evolutionary Biology, BMC Ecology, BMC Genomics, BMC Molecular Biology, Database, Developmental Dynamics, Genetics, Genetica, Gene, Genome Biology, Genome Research, Genome Biology & Evolution, Genome Dynamics & Stability, Genomics, eLife, Heredity, In Silico Biology, Insect Molecular Biology, Journal of Experimental Zoology, FEMS Microbiology & Ecology, Journal of Molecular Biology, Marine Drugs, mBio, Microbiology & Molecular Biology Reviews, Mobile DNA, Mobile Genetic Elements, Molecular Biology & Evolution, Molecular Ecology, Molecular & General Genetics, Molecular Genetics & Genomics, Nature Reviews Genetics, Nature Protocols, Nucleic Acids Research, Plasmid, PLoS Biology, PLoS Genetics, PLoS One, PNAS, Science, Science Advances, Scientific Reports, Systematic Biology, Toxicological Sciences, Trends in Genetics, Virus Research, Virology, Yale Journal of Biology & Medicine, Zebrafish.

Review of P&T Dossiers:

06/2011 SUNY at Albany, Promotion to Full Professor
09/2011 University of Texas at Arlington, Promotion to Associate Professor/Tenure
12/2015 Rensselaer Polytechnic Institute, Promotion to Associate Professor/Tenure
08/2016 University of Missouri St. Louis, Promotion to Associate Professor/Tenure
08/2018 University of Houston, Promotion to Associate Professor/Tenure

Membership in Professional Societies

1995-present Genetics Society of America
2009-present Society for Molecular Biology and Evolution (Gratis membership as MBE Editor)
2014-present American Association for the Advancement of Science

Service to the MBL

2008-present Member, MBL Corporation (since 2013 - MBL Society)
2007-present Founding Member, Mobile Genetic Element Cluster at the MBL
2011-2012 Chair, Fall/Spring Bay Paul Center Seminar Series
11/2015 Member, Ad hoc working group on bridge funding policy at the MBL
2015-2016 Member, MBL Radiation Safety Committee
2017-present Chair, MBL Radiation Safety Committee
2021 Member, ad hoc Promotion Committee (Assistant to Associate Scientist)

Service to the community

2012, 2017 Judge, Falmouth Public Schools Science Fair, Falmouth High School
2020 Mentor, Nevaeh Benoit, Upper Cape Cod Regional Tech High School intern, BEIP Program

Teaching and Mentoring

2012-present: Trainer in the Molecular and Cellular Biology Graduate Program, Brown University
2014-present: Mentor in the Brown-MBL LINK/SEW Internship Program, MBL-Brown University
2015-present: Mentor in the Metcalf Summer Internship Program, MBL-University of Chicago
2016-present: Mentor in the NSF REU Program “Biological Discovery in Woods Hole”, MBL

Classroom teaching:

1995,2004 – Harvard University, Teaching Fellow, BS14/BS50 (Introductory Genetics)
2001,2002 – Harvard University, Teaching Fellow, MCB42 (Chromosomes)
2003,2006 – Harvard University, Co-Instructor, MCB142 (Major Advances in Classical & Molecular Genetics)
2019 – Guest lectures, University of Vermont; BCOR101 (Genetics); HCOL185E (Viruses)

Post-Doctoral Scientists:

Dr. Eugene Gladyshev (MBL, 2009-2010) – currently Group Leader (G5), Pasteur Institute, Paris, France
Dr. Ataúlfo Martínez (Visiting Scholar, MBL, 2010-2011) – currently Associate Professor at UANL, Monterrey
Dr. Fernando Rodríguez (MBL 2010-2015; Research Associate 2015-2018; Research Scientist 2018-present)
Dr. Irina Yushenova (MBL, 2011-2018; Research Scientist 2019-present)

Graduate Students:

Anupriya Dutta, Brown-MBL graduate program – thesis committee member (graduated in December 2012)
Kosmo Yan, JUSTL Fellow, Hong Kong Univ. of Science and Technology – summer research mentor (2011)
Sally Warring, New York University – thesis committee member (2013-2014)
Daniel DiCorpo, Brown University, MCB program – advisor, summer rotation (June-August 2013)

Undergraduate Students:

Aubrey Kenefick (NSF REU, 2014)	B.A.'16, Williams College; MD candidate, Indiana U Med Sch
Tatsiana Mello (NSF REU, 2015)	B.S.'18, Wellesley College; now at Takeda Pharmaceuticals
Samantha Spear (NSF REU, 2016)	B.S.'16, Brown University; now at Life Sci, Verana Health
Vishok Srikanth (Metcalf SURF Fellow, 2016)	B.S.'17, U. of Chicago; PhD candidate, Yale University
Brandon M. Lê (Rosenthal LINK intern, 2016; returned as NSF REU intern, 2017)	B.S.'18, Brown University; PhD candidate, Duke University
Laura Swain (Metcalf SURF Fellow, 2017)	B.A.'20, U. of Chicago; MD-PhD candidate, Yale Med. Sch.
Jonathan Dow (Rosenthal LINK intern, 2017)	B.S.'18, Brown University; PhD candidate, Yale University
Katherine Dunham (LINK/SEW awardee, 2017)	B.S.'19, Brown University; MPH candidate, Yale Sch Pub Hlt
Bria Metzger (Rosenthal LINK intern, 2018)	B.S.'20, Brown University; now RA II at the MBL
Samuel Maffa (Rosenthal LINK intern, 2019)	B.S.'22, Brown University; applying to grad schools
Matthew Dunn (BEIP remote intern, 2020)	B.S.'21, University of Massachusetts Amherst; MS candidate
Dakarai Barnard-Pratt (BEIP intern, 2020)	B.S.'21, University of Massachusetts Dartmouth
Bridget Beaudoin (BEIP remote intern, 2020)	B.S.'23, University of Massachusetts Amherst
Rachel Urban (NSF REU intern, 2021)	B.S.'23, Butler University
Anton Tarazi (Rosenthal LINK intern, 2021)	B.S.'23, Brown University
Ahmad Alkhatib (Rosenthal LINK intern, 2021)	B.S.'23, Brown University
Daniel Pugatch (BEIP intern, 2022)	B.S.'23, University of Massachusetts Amherst

Funding:

a. Current grants

NIH: R01GM111917 “Horizontal Gene Transfer as a Source of Evolutionary Innovation in eukaryotes”

Role: PI; Location: Marine Biological Laboratory

Duration: 2014-08-01 to 2022-06-30

NSF: MCB-2139001 “EAGER: Elucidating the basis of retrotransposon target preference”

Role: PI; Location: Marine Biological Laboratory

Duration: 2021-08-01 to 2023-07-31

b. Completed grants

NSF: MCB-1121334 "Reverse Transcriptase-Related Genes and their Biological Significance"

Role: PI; Location: Marine Biological Laboratory

Duration: 2011-09-01 to 2016-09-30

MBL-UChicago collaborative grant "Structural investigation of a protein-primed reverse transcriptase"

Role: PI (with Phoebe A. Rice, Co-PI); Location: Marine Biological Laboratory

Duration: 2015-02-20 to 2016-02-19

NSF: MCB-0821956 "Mobile Genetic Elements in Sexual and Ancient Asexual Taxa"

Role: PI; Location: Marine Biological Laboratory

Duration: 2008-09-15 to 2013-08-31

Brown-MBL Partnership Seed Funding: Fungal RNA Viruses and Genome Defense

Role: PI; Location: Marine Biological Laboratory

Duration: 2010-07-15 to 2012-07-14

NSF: MCB-0614142 "Mobile Genetic Elements in Sexual and Ancient Asexual Taxa"

Role: co-PI; Location: Marine Biological Laboratory

Duration: 2005-11-01 to 2008-09-30

Publications (in chronological order)

a. Peer-reviewed publications

Arkhipova, I.R., Gorelova, T.V., Ilyin, Y.V., Schuppe, N.G. (1984). Reverse transcription of *Drosophila* mobile dispersed genetic element RNAs: detection of intermediate forms. *Nucl. Acids Res.* 12: 7533-48.

Ilyin, Y.V., Schuppe, N.G., Lyubomirskaya, N.V., Gorelova, T.V., Arkhipova, I.R. (1984). Circular copies of mobile dispersed genetic elements in cultured *Drosophila melanogaster* cells. *Nucl. Acids Res.* 12:7517-31.

Arkhipova I.R., Mazo A.M., Cherkassova V.A., Gorelova T.V., Schuppe N.G., Ilyin Y.V. (1986). The steps of reverse transcription of *Drosophila* mobile dispersed genetic elements and the U3-R-U5 structure of their LTRs *Cell* 44: 555-563.

[Ilyin, Y.V., Shuppe, N.G., Lyubomirskaya, N.V., Gorelova, T.V., Arkhipova, I.R. (1984). Circular DNA of mobile dispersed genes in *D. melanogaster* cell culture. *Genetika (Russ.)* 20: 1763-1771.]*

[Ilyin, Y.V., Arkhipova, I.R., Gorelova, T.V., Shuppe, N.G. (1985). Detection of intermediates of RNA reverse transcription for mobile dispersed MDG1 and MDG3 genes in *Drosophila* cells. *Mol. Biol. (Mosk.)* 19:162-72.]*

[Mazo, A.M., Arkhipova, I.R., Cherkassova, V.A., Gorelova, T.V., Shuppe, N.G., Ilyin, Y.V. (1986). Fine structure of long terminal repeats and stages of reverse transcription of mobile dispersed genes in *Drosophila*. *Genetika (Russ.)* 22: 378-389.]*

[Ilyin, Y.V., Shuppe, N.G., Bayev, A.A., Gorelova, T.V., Arkhipova, I.R., Dzhumagaliev, E.B., Kakpakov, V.T., Lyubomirskaya, N.V. (1985). Organization and transposition of *Drosophila* mobile dispersed genes. In: *Molecular mechanisms of genetic processes*, p.20-27. Nauka, Moscow.]*

[Dzhumagaliev, E.B., Mazo, A.M., Baev, A.A., Gorelova, T.V., Arkhipova, I.R., Shuppe, N.G., Il'in, I.V. (1986). Structure of long terminal repeats of transcriptionally active and inactive copies of the mobile dispersed gene MDG3 in *Drosophila melanogaster*. *Genetika (Russ.)* 22: 368-377.]*

[Arkhipova, I.R., Krichevskaya, A.A., Cherkassova, V.A., Il'in, I.V. (1987). Virus-like particles containing MDG sequences in cultured media of *Drosophila* cell lines. *Dokl. Akad. Nauk USSR* 292: 212-215.]*

[Arkhipova, I.R. (1988). Mechanisms of retroposition in eukaryotes (review). *Advances in Biological Chemistry (Moscow)* 29: 44-83.]*

[Arkhipova, I.R., Lyubomirskaya, N.V., Il'in, Y.V., Aslanian, M.M., Kim, A.I. (1990). Structural organization and high transcriptional activity of the mobile genetic element MDG4 in unstable *Drosophila melanogaster* mutants. *Dokl. Akad. Nauk SSSR* 310: 1236-1239.]*

[Lyubomirskaya, N.V., Arkhipova, I.R., Il'in, I.V., Kim, A.I. (1990). Cloning and molecular analysis of retrotransposon mdg4 from two *Drosophila melanogaster* strains differing in genetic instability. *Genetika (Russ.)* 26: 2101-2110.]*

[Lyubomirskaya, N., Arkhipova, I.R., Ilyin, Y. (1990). Transcription of *Drosophila* MDG4 mobile element under hyperthermic conditions. *Genetika (Russ.)* 26: 1720-1728.]*

*[Publications in Russian]

- [Arkhipova, I.R. (1990). Retrotransposons. In: Genetic Encyclopedia. Soviet Encyclopedia: Moscow.]*
- [Arkhipova, I.R. (1990). Mobile Genetic Elements. In: Genetic Encyclopedia. Soviet Encyclopedia: Moscow.]*
- [Arkhipova, I.R., Il'in, I.V. (1991). Organization of promoter regions in *Drosophila* retrotransposons. *Mol. Biol. (Mosk.)* 25: 69-76.]*
- [Abramyan, L.G., Arkhipova, I.R., Ambartsumyan, N.S. (1993). Long terminal repeats of *Drosophila* mobile elements direct transcription in *E. coli* cells. *Mol. Biol. (Mosk.)* 27: 358-362.]*
- [Agamalyan, N.S., Arkhipova, I.R., Surkov, S.A., Ilyin, Y.V. (1996). Regulating polyadenylation of *jockey* mobile genetic element transcripts belonging to the LINE class, in *Drosophila* cell culture. *Mol. Biol. (Mosk.)* 30: 818-828.]*
- Lyubomirskaya, N.V., Arkhipova, I.R., Ilyin, Y.V., Kim, A.I. (1990). Molecular analysis of the gypsy (mdg4) retrotransposon in two *Drosophila melanogaster* strains differing by genetic instability. ***Mol. Gen. Genet.*** 223: 305-309.
- Arkhipova I.R., Ilyin Y.V. (1991). Properties of promoter regions of mdg1 *Drosophila* retrotransposon indicate that it belongs to a specific class of promoters. ***EMBO Journal*** 10: 1169-1177.
- Arkhipova I.R., Ilyin Y.V. (1992). Control of transcription of *Drosophila* retrotransposons. ***BioEssays*** 14:161-8.
- Lyubomirskaya, N.V., Arkhipova, I.R., Ilyin, Y.V. (1993). Transcription of *Drosophila* mobile element gypsy (mdg4) in heat-shocked cells. ***FEBS Lett.*** 325: 233-236.
- Arkhipova, I.R. (1995). Promoter elements in *Drosophila melanogaster* revealed by sequence analysis. ***Genetics*** 139: 1359-1369.
- Arkhipova, I.R. (1995). Complex patterns of transcription of a *Drosophila* retrotransposon *in vivo* and *in vitro* by RNA polymerases II and III. ***Nucl. Acids Res.*** 23: 4480-4487.
- Arkhipova, I.R., Lyubomirskaya, N.V., and Ilyin, Y.V. (1995). *Drosophila* Retrotransposons. R.G. Landes Co., Georgetown, TX; Springer-Verlag, Heidelberg. 134pp.
- Udomkit, A., Forbes, S., McLean, C., Arkhipova, I.R., Finnegan, D.J. (1996). Control of expression of the I factor, a LINE-like transposable element in *Drosophila melanogaster*. ***EMBO Journal*** 15: 3174-3181.
- Arkhipova, I.R., Li, J., Meselson, M. (1997). On the mode of gene-dosage compensation in *Drosophila*. ***Genetics*** 145: 729-736.
- Danilevskaya, O.N., Arkhipova, I.R., Traverse, K.L., Pardue, M.L. (1997) Promoting in tandem: the promoter for telomere transposon HeT-A and implications for the evolution of retroviral LTRs. ***Cell*** 88: 647-655.
- Arkhipova, I., Meselson, M. (2000). Transposable elements in sexual and ancient asexual taxa. ***Proc. Natl. Acad. Sci. USA*** 97: 14473-14477.
- Arkhipova, I.R. (2000). Transposable elements in the animal kingdom. ***Mol. Biol. (Mosk.)*** 35: 1-12.
- Arkhipova, I.R. (2001). Retrotransposons. In: Encyclopedia of Genetics, E.C.R. Reeve, ed.; Fitzroy Dearborn Publishers, London.
- Wu, C.H., Madabusi, L., Nishioka, H., Emanuel, P., Sypes, M., Arkhipova, I., Gilmour, D.S. (2001). Analysis of core promoter sequences located downstream from the TATA element in the hsp70 promoter from *Drosophila melanogaster*. ***Mol. Cell. Biol.*** 21: 1593-1602.
- Arkhipova, I.R., Morrison, H.G. (2001). Three retrotransposon families in the genome of *Giardia lamblia*: two telomeric, one dead. ***Proc. Natl. Acad. Sci. USA*** 98: 14497-14502 (Cover story; commentary p.14195-97).
- Arkhipova, I.R., Pyatkov, K.I., Meselson, M., Evgen'ev, M.B. (2003). Retroelements containing introns in diverse invertebrate taxa. ***Nature Genetics*** 33:123-124.
- Pyatkov K.I., Arkhipova I.R., Malkova N.V., Finnegan D.J., Evgen'ev M.B. (2004). Reverse transcriptase and endonuclease activities encoded by *Penelope*-like retroelements. ***Proc. Natl. Acad. Sci. USA*** 101:14719-24
- Arkhipova, I.R., Meselson, M. (2005). Diverse DNA transposons in rotifers of the Class Bdelloidea. ***Proc. Natl. Acad. Sci. USA*** 102: 11781-11786.
- Arkhipova, I.R., Meselson, M. (2005). Deleterious transposable elements and the extinction of asexuals. ***BioEssays*** 27: 76-85.
- Arkhipova, I.R. (2005). Mobile genetic elements and sexual reproduction. In: *Retrotransposable elements and genome evolution*, J.-N. Volff, ed.: Karger AG, Basel. ***Cytogenet. Genome Res.*** 110(1-4): 372-382.

Evgen'ev, M.B., Arkhipova, I.R. (2005). *Penelope*-like elements - a new class of retroelements: Distribution, function, and possible evolutionary significance. In: *Retrotransposable elements and genome evolution*, J.-N. Volff, ed.: Karger AG, Basel. **Cytogenet. Genome Res.** 110(1-4): 510-521.

Schön, I., Arkhipova, I.R. (2006). Two families of non-LTR retrotransposons, *Syrinx* and *Daphne*, from the Darwinulid ostracod, *Darwinula stevensoni*. **Gene** 371(2): 296-307.

Arkhipova, I.R. (2006). Distribution and phylogeny of *Penelope*-like elements in eukaryotes. **Syst. Biol.** 55(6): 875-885.

Gladyshev, E.A., Meselson, M., Arkhipova, I.R. (2007). A deep-branching clade of retrovirus-like retrotransposons in bdelloid rotifers. **Gene** 390(1-2): 136-145.

Gladyshev, E.A., Arkhipova, I.R. (2007). Telomere-associated endonuclease-deficient *Penelope*-like retroelements in diverse eukaryotes. **Proc. Natl. Acad. Sci. USA** 104(22): 9352-9357. (Cover story; commentary *ibid.* p. 9107-9108)

Schostak, N., Pyatkov, K., Zelentsova, E., Arkhipova, I., Shagin, D., Mudrik, E., Blintsov, A., Clark, I., Finnegan, D.J., Evgen'ev M.B. (2008). Molecular dissection of *Penelope* transposable element regulatory machinery. **Nucl. Acids Res.** 36(8): 2522-2529.

Gladyshev, E.A., Meselson, M., Arkhipova, I.R. (2008). Massive horizontal gene transfer in bdelloid rotifers. **Science** 320: 1210-1213.

Gladyshev, E.A., Arkhipova, I.R. (2009) A single-copy IS5-like transposon in the genome of the bdelloid rotifer *Adineta vaga*. **Mol. Biol. Evol.** 26(8): 1921-1929.

Gladyshev, E.A., Arkhipova, I.R. (2009) Rotifer rDNA-specific R9 retrotransposable elements generate an exceptionally long target site duplication upon insertion. **Gene** 448(2): 145-50.

Gladyshev, E.A., Arkhipova, I.R. (2010). A subtelomeric non-LTR retrotransposon Hebe in the bdelloid rotifer *Adineta vaga* is subject to inactivation by deletions but not 5' truncations. **Mob. DNA** 1:12.

Gladyshev, E.A., Arkhipova, I.R. (2010). Genome structure of bdelloid rotifers: shaped by asexuality or desiccation? **J. Hered.** 101: S85-S93.

Gladyshev, E.A., Arkhipova, I.R. (2010). Bdelloid rotifers. In: *McGraw Hill 2010 Yearbook of Science and Technology*, pp.37-39, McGraw Hill Inc., New York, NY.

Garbuz D.G., Astakhova L.N., Zatschina O.G., Arkhipova I.R., Nudler E., Evgen'ev M.B. (2011). Functional organization of the *Hsp70* cluster in camel (*Camelus dromedarius*) and other mammals. **PLoS One** 6:e27205.

Gladyshev, E.A., and Arkhipova, I.R. (2011). A widespread class of reverse transcriptase-related cellular genes. **Proc. Natl. Acad. Sci. USA** 108: 20311-20316.

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