

CURRICULUM VITAE

Elizabeth R. Gavis

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EDUCATION

1982 B.S., Dept. of Biology, Yale University
1990 Ph.D., Dept. of Biochemistry, Stanford University Medical Center
1990 M.D., Stanford University Medical School

RESEARCH AND PROFESSIONAL EXPERIENCE

1978–1980 Undergraduate Summer Fellowship, Carnegie Institute of Washington, Dept. of Embryology, Laboratory of Dr. Steven L. McKnight
1981 Summer Research Assistant, Johns Hopkins University School of Medicine, Laboratory of Dr. Gary S. Hayward
1981–1982 Senior Thesis Research, Department of Biology, Yale University, Laboratory of Dr. Joseph G. Gall
1982–1990 Medical Scientist Training Program, Dept. of Biochemistry, Stanford University Medical Center, Laboratory of Dr. David S. Hogness
1990–1994 Post-doctoral Fellow, Whitehead Institute, Laboratory of Dr. Ruth Lehman
1994–2001 Assistant Professor, Dept. of Molecular Biology, Princeton University
2001–2008 Associate Professor, Dept. of Molecular Biology, Princeton University
2006–2007 Sabbatical, Laboratory of Dr. Andrea Brand, Cambridge University, UK
2008–present Professor, Dept. of Molecular Biology, Princeton University
2011–2022 Associate Faculty, Princeton Neuroscience Institute
2014–present Director of Undergraduate Studies, Department of Molecular Biology
2022–present Associate Faculty, Quantitative and Computational Biology, Princeton University

AWARDS AND HONORS

1982 Edgar J. Boell Biology Prize (Senior Thesis Research), Yale University
1982 Summa cum laude, Yale University
1982 Phi Beta Kappa, Yale University
1982–1989 Medical Scientist Training Program Trainee, Stanford University
1990–1993 Postdoctoral Fellow, Jane Coffin Childs Memorial Fund for Cancer Research
1993–1994 Postdoctoral Associate, Howard Hughes Medical Institute
1995–1999 NSF Early Career Development Award
1997–2000 Beckman Young Investigator Award
2006–2007 Clare Hall Visiting Fellow, Cambridge UK
2007–present Clare Hall Life Member, Cambridge UK
2009 Larry Sandler Memorial Award for best Drosophila Ph.D. thesis to T. Weil
2011–2012 President, The North American Drosophila Board of Directors
2014 Department of Molecular Biology Innovation Award
2016 Damon B. Pfeiffer Endowed Professorship in the Life Sciences
2020 President's Award for Distinguished Teaching
2021 Dean for Research Innovation Award for New Ideas in the Natural Sciences

SOCIETIES

American Society for Cell Biology

American Society for Developmental Biology
Genetics Society of America

SERVICE

Departmental

1995 Planning Committee for new Cellular Biochemistry course
1995–1996 Media Committee
1996 Chair, Departmental Seminar Series
1996 Faculty Advisor, "RNA Today" Symposium (Graduate Program-sponsored symposium)

1996–1997 Special Opportunities Job Search Committee
1997, 1998 Departmental Retreat Co-chair
2002–2005 Undergraduate Committee
2002–2011 Princeton Director, Princeton/RWJMS/UMDNJ (Joint) MD/PhD Program
2003 Committee on Tenure and Retention
2003–2011 Admissions Committee, Joint MD/PhD Program
2004–2005 Departmental Representative, Seniors
2006–2011 Steering Committee, Joint M.D./Ph.D. Program
Academic Affairs Committee, Joint M.D./Ph.D. Program
Curriculum Committee, Joint MD/PhD Program

2010–present Departmental Graduate Curriculum Committee
2010–2011 Developmental Biology Search Committee
2011–2012 Chair, Developmental Biology Search Committee
2012–present Advisory Committee, Princeton/RWJMS/UMDNJ MD/PhD Program
2012–2018 Faculty Supervisor, Confocal Microscopy Facility
2013–present Chair, Undergraduate Curriculum Committee
2014–present Director of Undergraduate Studies
2014–present Executive Committee
2015–2016 Chair, Cellular Dynamics and Development faculty search
2016–2017 Development and Cell Biology faculty search committee
2018–present Faculty Supervisor, Drosophila Media Facility

University

1997 Panel participant, Women in Science and Engineering Panel for incoming Freshman

2000–2004 Freshman/Sophomore Adviser, Mathey College
2001–2006 Radiation Safety Committee
2003 Princeton University Freshman Parents Day panel participant
2003–2004 President's Task Force on Health and Well-Being
2005–2006 Committee on Postdoctoral Research Staff
2005–2007 Fellow, Rockefeller College
2006 Childcare Working Group
2007–2015 Chair, Radiation Safety Committee
2007–present Fellow, Whitman College
2007–2008 UHS Executive Director Search Committee
2008–2010 Healthier Princeton Advisory Board
2008 Panelist, "Many Faces of Science"
2010 Committee on Postdoctoral Appointments
2011–present Student Health Plan Advisory Board
2012–2013 Dean of Faculty Online Course Committee
2012–2015 Campus Recreation Committee
2013 Women in Science Colloquium, Keynote Speaker
2015–2016 President's Task Force on General Education

2017–present Curriculum Committee, Center for Statistics and Machine Learning
 2017–present HPA Committee on the Health Professions
 2018–2021 Faculty Committee on the Course of Study
 2019 Selection Committee for President’s Award for Distinguished Teaching
 2019–2022 President’s Advisory Committee on Architecture
 2020–2021 Faculty Advisory Committee on Diversity
 2022 CST Women in STEM Panel participant
 2023 Alumni-Faculty Forum (Princeton Reunions 2023), Moderator
 2023 Reviewer, 2023 Dean for Research Innovation Fund for New Ideas in the Natural Sciences

Extramural

1996–2002 American Society for Cell Biology Education Committee, Graduate Education Subcommittee
 9/99 Panelist, Career Day Program, Roland Park Country School
 2000 American Society for Cell Biology Program Committee
 2001 Consultant, New York State Board of Education
 2001–2003 Temporary member, NIH Genetics Study Section
 2002–2009 Faculty of 1000
 2004 NSF Animal Developmental Mechanisms Review Panel
 2006 Riverside Elementary School Science Day Participant
 2007 Ph.D. Viva Examiner, Gurdon Institute, Cambridge University
 2007 External Ph.D. Thesis Examiner, University of Toronto
 2007 External Ph.D. Thesis Examiner, Skirball Institute, NYU Medical School
 2007–2010 Mid-Atlantic Representative, The North American Drosophila Board
 2009–2010 Hunter College HHMI Faculty Development Program Mentor
 2010–2011 Mentor, The College of New Jersey Advancement Program (NSF-funded)
 2010–2011 President-elect, The North American Drosophila Board
 2010–2013 Mid-Atlantic Representative, Society of Developmental Biology Board of Directors
 2011–2012 President, The North American Drosophila Board
 2011 External reviewer, Harvard MCO Graduate Program
 2011 Ad Hoc reviewer, Endocrinology, Metabolism, Nutrition and Reproductive Sciences review panel (NIH)
 2012 DEV2 Review panel temporary member (NIH)
 2012–2014 Chair, Drosophila Board Communications Committee
 2013–2015 Genetics Society of America Communications Committee
 2014–2018 Organizing Committee, EMBO Crete Drosophila Conference
 2016 Ad hoc member, NIGMS Council
 2018 Intramural site visit team member, NCI Laboratory of Cellular and Molecular Biology
 2022–present LSRF Peer Review Committee

Other (Current)

Associate Editor, G3: Genes, Genomes, Genetics
 Editorial Boards: RNA Biology, Current Opinion in Genetics & Development
 Reviewer: Nature journals, Science journals, Cell journals, Curr. Biol., Development, Dev. Biol., EMBO Journals, PNAS, PLoS, RNA, Genetics, Mech. Dev., Dev. Dynam., ELife
 Ad hoc reviewer: NIH, NSF

PUBLICATIONS

1. McKnight, S.L. and **Gavis, E.R.** (1980) Expression of the herpes thymidine kinase gene in *Xenopus laevis* oocytes: an assay for the study of deletion mutants constructed *in vitro*. *Nucleic Acids Research* 8, 5931–5940.
2. McKnight, S.L., **Gavis, E.R.**, Kingsbury, R., and Axel, R. (1981) Analysis of transcriptional regulatory signals of the HSV thymidine kinase gene: identification of an upstream control region. *Cell* 25, 385–398.
3. Hayward, G.S., Reyes, G.R., **Gavis, E.R.**, and McKnight, S.L. (1981) Identification, cloning and sequencing of the herpes simplex virus thymidine kinase genes. In *Herpesvirus DNA: Recent Studies on the Internal Organization and Replication of the Viral Genome*. (ed. V. Becker) Amsterdam: Martinus Nijhoff Publishers.
4. Reyes, G.R., **Gavis, E.R.**, Buchan, A., Raj, N.B.K., Hayward, G.S., and Pitha, P.M. (1982) Expression of human β -interferon cDNA under the control of a thymidine kinase promoter from herpes simplex virus. *Nature* 297, 598–601.
5. Jamrich, M., Mahon, K.A., **Gavis, E.R.**, and Gall, J.G. (1984) Histone RNA in amphibian oocytes visualized by *in situ* hybridization to methacrylate-embedded tissue sections. *EMBO Journal* 9, 1939–1943.
6. Hogness, D.S., Lipshitz, H.D., Beachy, P.A., Peattie, D.A., Saint, R.B., Goldschmidt-Clermont, M., Harte, P.J., **Gavis, E.R.**, and Helfand, S.L. (1985) Regulation and products of the *Ubx* domain of the bithorax complex. *Cold Spring Harbor Symposia on Quantitative Biology* 50, 181–194.
7. Beachy, P.A., Krasnow, M.A.*, **Gavis, E.R.***, and Hogness, D.S. (1988) An *Ultrabithorax* protein binds sequences near its own and the *Antennapedia* P1 promoters. *Cell* 55, 1069–1081. (*Equal contributors.)
8. **Gavis, E.R.** and Hogness, D.S. (1991) Phosphorylation, expression and function of the *Ultrabithorax* protein family in *Drosophila melanogaster*. *Development* 112, 1077–1093.
9. **Gavis, E.R.** and Lehmann, R. (1992) Localization of *nanos* RNA controls embryonic polarity. *Cell* 71, 301–313.
10. **Gavis, E.R.** and Lehmann, R. (1994) Translational regulation of *nanos* by RNA localization. *Nature* 369, 315–318.
11. **Gavis, E.R.** and Lehmann, R. (1994) RNA localization during oogenesis in *Drosophila*. In *Advances in Developmental Biology*, Vol. 3 (Greenwich: JAI Press), pp. 115–136.
12. Rongo, C., **Gavis, E.R.**, and Lehmann, R. (1995) Localization of *oskar* RNA regulates *oskar* translation and requires Oskar protein. *Development* 121, 2737–2746.
13. **Gavis, E.R.** (1995) *Gurken* meets *torpedo* for the first time. *Current Biology* 5, 1252–1254.
14. **Gavis, E.R.**, Curtis, D., and Lehmann, R. (1996) Identification of *cis*-acting sequences that control *nanos* RNA localization. *Developmental Biology* 176, 36–50.
15. **Gavis, E.R.**, Lunsford, L., Bergsten, S.E., Lehmann, R. (1996) A conserved 90 nucleotide element mediates translational repression of *nanos* RNA. *Development* 122, 2791–2800.
16. **Gavis, E.R.** (1997) Expeditions to the pole: RNA localization in *Xenopus* and *Drosophila*. *Trends in Cell Biology* 7, 485–492.
17. Bergsten, S.E. and **Gavis, E.R.** (1999) Role for mRNA localization in translational activation but not spatial restriction of *nanos* RNA. *Development* 126, 659–669.
18. Crucis, S., Chatterjee, S., and **Gavis, E.R.** (2000) Overlapping but distinct RNA elements control translational repression and activation of *nanos* mRNA. *Molecular Cell* 5, 457–467.
19. Clark, I., Wyckoff, D., and **Gavis, E.R.** (2000) Synthesis of the posterior determinant Nanos is spatially restricted by a novel co-translational regulatory mechanism. *Current Biology* 10, 1311–1314.
20. Bergsten, S.E., Huang, T., Chatterjee, S., and **Gavis, E.R.** (2001) Recognition and long range interactions of a minimal RNA localization signal element. *Development* 128, 427–435.
21. **Gavis, E.R.** (2001) Over the rainbow to translational control. *Nature Structural Biology* 8, 387–390.

22. Clark, I., Dobi, K., Duchow, H., Vlasak, A. and **Gavis, E.R.** (2002) A common translational control mechanism functions in axial patterning and endocrine signaling in *Drosophila*. *Development* *129*, 3325-3334.
23. Forrest, K.M. and **Gavis, E.R.** (2003) Live imaging of endogenous RNA reveals a diffusion and entrapment mechanism for *nanos* mRNA localization in *Drosophila*. *Current Biology* *13*, 1159-1168.
24. Ye, B., Petritsch, C., Clark, I.E., **Gavis, E.R.**, Jan, L.Y., and Jan, Y.N. (2004) *Nanos* and *pumilio* are essential for dendrite morphogenesis in *Drosophila* peripheral neurons. *Current Biology* *14*, 314-321.
25. Forrest, K.M., Clark, I.E., Jain, R.A., and **Gavis, E.R.** (2004) Temporal complexity within a translational control element in the *nanos* mRNA. *Development* *131*, 5753-5761.
26. **Gavis, L.** and Hughson, F. (2004) Dual(ing) academic careers In: *Career Advice for Life Scientists II* (American Society for Cell Biology) pp. 16-19.
27. Meyer, E.L. and **Gavis, E.R.** (2005) Staufen does double duty. *Nature Structural and Molecular Biology* *12*, 292-292.
28. Bassler, B.L., Flint, J., and **Gavis, E.R.** (2005) Women can do science, if encouraged. (Invited Op-Ed) *Philadelphia Inquirer*, Jan. 23, p. D7.
29. Duchow, H.K., Brechbiel, J.L., Chatterjee, S., and **Gavis, E.R.** (2005) The *nanos* translational control element represses translation in somatic cells by a Bearded box-like motif. *Developmental Biology* *282*, 207-217.
30. Kalifa, Y., Huang, T., Rosen, L.N., Chatterjee, S., and **Gavis, E.R.** (2006) Glorund, a *Drosophila* hnRNP F/H homolog, is an ovarian repressor of *nanos* translation. *Developmental Cell* *10*, 291-301.
31. Weil, T.T., Forrest, K.M., and **Gavis, E.R.** (2006) Localization of *bicoid* mRNA in late oocytes is maintained by continual active transport. *Developmental Cell* *11*, 251-262.
32. **Gavis, E.R.**, Singer, R.H., and Hüttelmaier, S. (2007) Localized translation through messenger RNA localization. In *Translational Control*, J.W.B, Hershey, M.B. Mathews, and N. Sonenberg, eds. (Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press). pp. 687-717.
33. Lipshitz, H.D. and **Gavis, E.R.** (2007) Positional cloning to positional information: the bithorax project in the Hogness lab. The 23rd International Prize for Biology Symposium.
34. **Gavis, E.R.**, Chatterjee, S., Ford, N.R., and Wolff, L.J. (2008) Dispensability of *nanos* mRNA localization for abdominal patterning but not for germ cell development. *Mechanisms of Development* *125*, 81-90.
35. Jain, R.A. and **Gavis, E.R.** (2008) The *Drosophila* hnRNP M homolog, Rumpelstiltskin, regulates *nanos* mRNA localization. *Development* *135*, 973-982.
36. Jaramillo, A.M., Weil, T.T., Goodhouse, J., **Gavis, E.R.**, and Schüpbach, T. (2008) The dynamics of fluorescently labeled endogenous *gurken* mRNA in *Drosophila*. *Journal of Cell Science* *121*, 887-894. PMC2327291
37. Brechbiel, J.L. and **Gavis, E.R.** (2008) Spatial regulation of *nanos* activity is required for its function in dendrite morphogenesis. *Current Biology* *18*, 745-750. PMC2474551
38. Weil, T.T., Parton, R., Davis, I., and **Gavis, E.R.** (2008) Changes in *bicoid* mRNA anchoring highlight conserved mechanisms during the oocyte-to-embryo transition. *Current Biology* *18*, 1055-1061. PMC2581475
39. Kalifa, Y., Armenti, S.T., and **Gavis, E.R.** (2009) Glorund interactions in the regulation of *gurken* and *oskar* mRNAs. *Developmental Biology* *326*, 68-74. PMID: PMC2839899
40. Menon, K., Andrews, S., Murthy, M., **Gavis, E.R.** and Zinn, K. (2009) The translational repressors Nanos and Pumilio have divergent effects on presynaptic terminal growth and postsynaptic glutamate receptor subunit composition. *Journal of Neuroscience* *29*, 5558-5572. PMC2750846
41. Becalska, A.N. and **Gavis, E.R.** (2009) Lighting up mRNA localization in *Drosophila* oogenesis. *Development* *136*, 2493-2503. PMC2709059
42. Weil, T.T., Xanthakis, D., Parton, R., Dobbie, I., Rabouille, C., **Gavis, E.R.***, and Davis, I. (2010) Distinguishing direct from indirect roles for *bicoid* mRNA localization factors. *Development* *137*, 169-176. (*Corresponding author) PMC2796925

43. Becalska, A.N. and **Gavis, E.R.** (2010) Bazooka regulates microtubule organization and spatial restriction of germ plasm assembly in the *Drosophila* oocyte. *Developmental Biology* 340, 528–538. PMC2854266
44. Becalska, A.N., Kim, Y.R., Belletier, N.G., Lerit, D.A., Sinsimer, K.S., and **Gavis, E.R.** (2011) Aubergine is a component of a *nanos* mRNA localization complex. *Developmental Biology* 349, 46–52. PMC2993811
45. Lerit, D.A. and **Gavis, E.R.** (2011) Transport of germ plasm on astral microtubules directs germ cell development in *Drosophila*. *Current Biology* 21, 439-448. PMC3062663
46. Andrews, S.A., Snowflack, D.S., Clark, I.E., and **Gavis, E.R.** (2011) Multiple mechanisms collaborate to repress *nanos* translation in the *Drosophila* ovary and embryo. *RNA* 17, 967-977. PMC3078745
47. Sinsimer, K.S., Jain, R.A., Chatterjee, S., and **Gavis, E.R.** (2011) A late phase of germ plasm accumulation during *Drosophila* oogenesis requires Lost and Rumpelstiltskin. *Development* 138, 3431-3440. PMC3143563
48. JayaNandan, N., **Gavis, E.R.**, Riechmann, V., and Leptin, M. (2011) A genetic *in vivo* system to detect asymmetrically distributed RNA. *EMBO Reports* 12, 1167-1174. PMC3207103
49. Olesnick, E.C., Bhogal, B., and **Gavis, E.R.** (2012) Combinatorial use of translational co-factors for cell type specific regulation during neuronal morphogenesis in *Drosophila*. *Developmental Biology* 365, 208-218. PMC3642870
50. Thanawala, S., Rister, J., Goldberg, G., Zuskov, A., Olesnick, E.C., Flowers, J., Purugganan, M., **Gavis, E.R.**, Desplan, C. and Johnston, R. (2013) Regional modulation of a stochastically expressed factor determines ommatidial subtypes in the *Drosophila* retina. *Developmental Cell* 25, 93-105. PMC3660048
51. Xu, X., Brechbiel, J.L., and **Gavis, E.R.** (2013) Dynein-dependent transport of *nanos* RNA in class IV dendritic arborization neurons requires Rumpelstiltskin and the germ plasm organizer Oskar. *Journal of Neuroscience* 33, 14791-14800. PMC3771026
52. Dunn, J.G., Foo, C.K., Belletier, N.G, **Gavis, E.R.**, and Weissman, J.S (2013) Ribosome profiling reveals pervasive and regulated stop codon readthrough in *Drosophila melanogaster*. *eLife* 2:e01179. PMC3840789
53. Sinsimer, K.S., Lee, J.J., and **Gavis, E.R.** (2013) Germ plasm anchoring is a dynamic state that requires persistent trafficking. *Cell Reports* 5, 1169–1177. PMC4149184
54. Olesnick, E.C., Killian, D.J., Rathjen, A.R., Garcia, E., Sola, I.E., and **Gavis, E.R.** (2014) Extensive use of RNA binding proteins in *Drosophila* sensory neuron dendrite morphogenesis. *G3: Genes, Genomes, Genetics* 4, 297-306. PMC3931563
55. Little, S.C., Sinsimer, K.S., Lee, J.J., Wieschaus, E.F. and **Gavis, E.R.** (2015) Independent and coordinate trafficking of single *Drosophila* germ plasm mRNAs. *Nat. Cell Biol.* 17, 558-568. PMC4417036
56. López-Panadès, E., **Gavis, E.R.**, and Casacuberta, E. (2015) Specific localization of the *Drosophila* telomere transposon proteins and RNAs, give insight in their behavior, control and telomere biology in this organism. *PLoS ONE* 10(6):e0128573. PMC4467039
57. Abbaszadeh, E.K. and **Gavis, E.R.** (2016) Fixed and live visualization of RNAs in *Drosophila* oocytes and embryos. *Methods* 98, 34-41. PMC4808400
58. Bhogal, B., Plaza-Jennings, A. and **Gavis, E.R.** (2016) Nanos-mediated repression of *hid* protects *Drosophila* larval sensory neurons after a global switch in sensitivity to apoptotic signals. *Development* 143, 2147-2159. PMC4920170
59. Misra, M., Edmund, H., Schlueter, M.A., Marot, J.E., Tambasco, J., Ennis, D., Barlow, I., Sigurbjornsdottir, S., Mathew, R., Vallés, A.M., Davis, I., Leptin, M., and **Gavis, E.R.** (2016) Genome-wide screen for dendritically localized RNAs identifies genes required for dendrite morphogenesis. *G3: Genes, Genomes, Genetics* 6, 2397-2405. PMC4978894
60. Trovisco, V., Belaya, K., Nashchekin, D., Irion, U., Sirinakis, G., Butler, R., Lee, J.J., **Gavis, E.R.**, St Johnston, D. (2016) *bicoid* mRNA localises to the *Drosophila* oocyte anterior by random Dynein-mediated transport and anchoring. *eLife* 2016;5:e17537. PMC5125753

61. Tenenbaum, C.M. and **Gavis, E.R.** (2016) Removal of *Drosophila* muscle tissue from larval fillets for immunofluorescence analysis of sensory neurons and epidermal cells. *Journal of Visualized Experiments* 117, e54670, doi:10.3791/54670. PMC5226124
62. Lerit, D.A., Shebelut, C., Lawlor, K., Rusan, N., **Gavis, E.R.**, Schedl, P., and Deshpande, G. (2017). Germ cell-less promotes centrosome segregation to induce germ cell formation. *Cell Reports* 18, 831-839. PMC5327791
63. Tamayo, J.V., Teramoto, T., Chatterjee, S., Hall, T.M.T., and **Gavis, E.R.** (2017) The *Drosophila* hnRNP F/H homolog Glorund uses two distinct RNA-binding modes to diversify target recognition. *Cell Reports* 19, 150–161. PMC5392723
64. Aguilera-Gomez, A., Zacharogianni, M., van Oorschot, M.M., Genau, H., Grond, R., Veenendaal, T., Sinsimer, K.S., **Gavis, E.R.**, Behrends, C., Rabouille, C. (2017) Phospho-Rasputin stabilization by Sec16 is required for stress granule formation upon amino acid starvation. *Cell Reports* 20, 935–948. PMC6064189
65. Tenenbaum, C.M., Misra, M., Alizzi, R.A., and **Gavis, E.R.** (2017) Enclosure of dendrites by epidermal cells restricts branching and permits coordinated development of spatially overlapping sensory neurons. *Cell Reports* 20, 3043-3056. PMC5662031
66. Niepielko, M.G., Eagle, W.V.I., and **Gavis, E.R.** (2018) Stochastic seeding coupled with mRNA self-recruitment generates heterogeneous *Drosophila* germ granules. *Current Biology* 18, 1872-1881. PMC6008217
67. Eagle, W.V.I, Yeboah-Kordieh, D.K., Niepielko, M.G., and **Gavis, E.R.** (2018) Distinct cis-acting elements mediate targeting and clustering of *Drosophila* polar granule mRNAs. *Development* 145, dev164657s. PMC6262787
68. Eichler, C.E., Hakes, A.C., Hull, B., and **Gavis, E.R.** (2020) Compartmentalized *oskar* degradation in the germ plasm safeguards germline development. *eLife* 2020;9:e49988. PMC6986870
69. Trcek, T., Douglas, T.E., Grosch, M., Yin, Y., Eagle, V.I.E., **Gavis, E.R.**, Shroff, H., Rothenberg, E., Lehmann, R. (2020) Sequence independent self-assembly of germ granule mRNAs into homotypic clusters. *Molecular Cell* 78, 941-950.. PMC7325742
70. Alizzi, R.A., Xu, D., Tenenbaum, C.M., Wang, W., and **Gavis, E.R.** (2020) The ELAV/Hu protein Found in neurons regulates cytoskeletal and ECM adhesion inputs for space-filling dendrite growth. *PLoS Genetics* 16, e1009235. PMC7793258
71. Doherty, C.A., Diegmiller, R., Kapasiawala, M., **Gavis, E.R.***, and Shvartsman, S.Y*. (2020) Coupled oscillators coordinate collective germline growth. *Developmental Cell* 56, 860–870. (*Co-corresponding authors)
 Highlighted: <https://www.simonsfoundation.org/2021/03/22/fruit-fly-egg-takes-an-active-hand-in-its-own-growth-highlighting-parallels-to-mammals>
72. Doherty, C.A., Amargant, F., Shvartsman, S.Y., Duncan, F.E., and **Gavis, E.R.** (2021) Bidirectional communication in oogenesis: A dynamic conversation in mice and *Drosophila*. *Trends in Cell Biology* 32, 311-323. PMC8917990
73. Valentino, M., Ortega, B.M., Ulrich, B., Doyle, D.A., Farnum, E.D., Joiner, D.A., **Gavis, E.R.**, and Niepielko, M. (2022) Computational modeling offers new insight into *Drosophila* germ granule development. *Biophysical Journal* 121, 1465-1482. PMC35288123
74. Li, H. and **Gavis, E.R.** (2022) The *Drosophila* fragile X mental retardation protein modulates the neuronal cytoskeleton to limit dendritic arborization. *Development* 149, dev200379.
75. Peng, Y. and **Gavis, E.R.** (2022) The *Drosophila* hnRNP F/H homolog Glorund recruits dFMRP to inhibit *nanos* translation elongation. *Nucleic Acids Research* 50, 7067-7083. PMC9262583
76. Li, H. and **Gavis, E.R.** (2022) *Drosophila* FMRP controls miR-276-mediated regulation of *nejire* mRNA for space filling dendrite development. *G3: Genes, Genomes, Genetics* doi.org/10.1093/g3journal/jkac239
77. Breznak, S.†, Peng, Y.†, Deng, L., Kotb, N.M., Flamholz, Z., Rapisarda, I.T., Martin, E.T., LaBarge, K.A., Fabris, D., **Gavis, E.R.***, Rangan, P.* (2023) Pseudouridine-dependent ribosome biogenesis regulates translation of polyglutamine proteins during *Drosophila* oogenesis. *Science Advances*, in press. (†Co-first authors; *Co-corresponding authors)

78. Hakes, A.C. and **Gavis, E.R.** (2023) Plasticity of *Drosophila* germ granules during germ cell development. PLoS Biology, in press.
79. Siddiqui, N.U., Karaiskakis, A., Goldman, A.L., Eagle, W.V.I., Smibert, C.A., Gavis, E.R., and Lipshitz, H.D. (2023) The Smaug RNA-binding protein regulates germ plasm synthesis and primordial germ cell number in *Drosophila* embryos by repressing the *oskar* and *bruno 1* mRNAs. bioRxiv 2023.02.27.530189.