

Publications

Research Papers: 61; Book Chapters: 4; h-index =28; Citations:3605

1. Divya Chaubey, Dheeraj Chandra Joshi, Sanovar Dayal, Shweta Verma, Chetana Sachidanandan, **Beena Pillai***. [bucky ball mRNA is responsive to the total RNA content in the fertilized zebrafish oocyte](#). Biochemical and Biophysical Research Comm. 2026, 153328 (in press)
2. Joshi Dheeraj, Kadam Aakanksha, Sachidanandan Chetana, **Pillai Beena***. [A comprehensive analysis of the inherited lncRNA and circRNA repertoire of zebrafish](#). Bioinform Adv. 2025 Jun 12;5(1):vbaf139.
3. Dayal Sanovar, Chaubey Divya, Joshi Dheeraj, Ranmale Samruddhi , **Pillai Beena***. [Noncoding RNAs: Emerging regulators of behavioral complexity](#). Wiley Interdisciplinary Reviews: RNA 2024 15 (3), e1847
4. Bandesh K, Pal M, Balakrishnan A, Gautam P, Jha P, Tandon N, **Pillai B***, Bharadwaj D*. [A novel antisense lncRNA, ARBAG harboring an RNA destabilizing GWAS variant for C-peptide dictates the transcript isoforms of GABRA6 in cerebellum](#). Hum Mol Genet. 2023 Sep 16;32(19):2929-2939. (*Co-Communicating Author)
5. Pal Muneesh, Chaubey Divya, Tanwar Mohit, **Pillai Beena***. [A Novel Cis-Regulatory lncRNA, Kalnc2, Downregulates Kalrn Protein-Coding Transcripts in Mouse Neuronal Cells](#). Noncoding RNA. 2023 Jan 13;9(1).
6. Rawat Rohit Singh, Bhambri Aksheev, Pal Muneesh, Roy Avishek, Jain Suman, **Pillai Beena**, Konar Arpita. [Early life stressful experiences escalate aggressive behavior in adulthood via changes in transthyretin expression and function](#). Elife. 2022 Oct 13;11. doi: 10.7554/eLife.77968.
7. Rawat Jyoti, Bhambri Aksheev, Pandey Ujjiti, Banerjee Sanchita, **Pillai Beena**, Gadgil Mughda. [Amino acid abundance and composition in cell culture medium affects trace metal tolerance and cholesterol synthesis](#). Biotechnol Prog. 2022 Aug 24;:e3298.
8. Kathpalia Poorti, Konar Arpita and **Pillai Beena***.[Home laboratory: interactive science from the kitchen](#). Nature. 2021 Aug;596(7873):486. [Correspondence]
9. Bhattacharya Aniket, Jha Vi, Singhal K, Fatima M, Singh D, Chaturvedi G, Dholakia D, Kutum R, Pandey R, Bakken TE, Seth Pankaj, **Pillai Beena**, Mukerji Mitali*. [Multiple Alu Exonization in 3'UTR of a Primate-Specific Isoform of CYP20A1 Creates a Potential miRNA Sponge](#). Genome Biol Evol. 2021 Jan 7;13(1):evaa233.
10. Patel, SS; Zunjarrao, Sanyami; **Pillai Beena***. [Neev, a novel long non-coding RNA, is expressed in chaetoblasts during regeneration of Eisenia fetida](#). Journal of Experimental Biology, 223 (8), 2020
11. Bhambri, Aksheev; Pinto, Akeeth; **Pillai, Beena***. [Interferon mediated neuroinflammation in polyglutamine disease is not caused by RNA toxicity](#). Cell Death and Disease, 11(1):3, 2020.
12. **Pillai, Beena***. What the mother gives..Resonance March 2019, 381-391 [Review article on Maternal inheritance in special issue on International Women's Day]
13. Ramasamy, Soundhar; Sharma, Surbhi; Iyengar, BR.; Vellarikkal, SK.; Sivasubbu, Sridhar; Maiti, Souvik and **Pillai, Beena***. [Identification of novel circadian transcripts in the zebrafish retina](#). Journal of Experimental Biology, 222:jeb192195, 2019
14. Bhambri, Aksheev; Dhaunta, Neeraj; Patel, SS; Hardikar, Mitali; Bhatt, Abhishek; Srikakulam, N. **Pillai, Beena***. [Large scale changes in the transcriptome of Eisenia fetida during regeneration](#). PLoS ONE, 13 (9), e0204234, 2018
15. Sarangdhar, Mayuresh Anant; Chaubey, Divya; Srikakulam, Nagesh; **Pillai, Beena***; [Parentally inherited long non-coding RNA Cyrano is involved in zebrafish neurodevelopment](#); Nucleic acids research; 46 (18), 9726-9735; 2018
16. Sarangdhar, Mayuresh Anant; Chaubey, Divya; **Pillai, Beena***; [Role of Non-coding RNA in Sculpting Neurons](#); Proceedings of the Indian National Science Academy; 84; 2; 493-500; 2018

17. Iyengar, Bharat Ravi; **Pillai, Beena**; Venkatesh, KV; Gadgil, Chetan J; [Systematic comparison of the response properties of protein and RNA mediated gene regulatory motifs](#); Molecular BioSystems; 13; 6; 1235-1245; 2017
18. Sarangdhar, Mayuresh A; Chaubey, Divya; Bhatt, Abhishek; KM, Monisha; Kumar, Manish; Ranjan, Shashi; **Pillai, Beena***; [A novel long non-coding RNA, durga modulates dendrite density and expression of kalirin in Zebrafish](#); Frontiers in molecular neuroscience; 10; ; 95; 2017
19. Roshan, Reema; Choudhary, Ashwani; Bhambri, Aksheev; Bakshi, Bhawani; Ghosh, Tanay; **Pillai, Beena***; [microRNA dysregulation in polyglutamine toxicity of TATA-box binding protein is mediated through STAT1 in mouse neuronal cells](#); Journal of neuroinflammation; 14; 1; 155; 2017
20. Bhambri, Aksheev; Dhaunta, Neeraj; Patel, Surendra Singh; Hardikar, Mitali; Srikakulam, Nagesh; Shridhar, Shruti; Vellarikkal, Shamsudheen; Suryawanshi, Hemant; Pandey, Rajesh; Jayarajan, Rijith; Verma, Ankit; Kumar, Vikram; Bhatt, Abhishek; Gautam, Pradeep; Rai, Manish; Khan, Jameel Ahmed; Fromm, Bastian; Peterson, Kevin J; Scaria, Vinod; Sivasubbu, Sridhar; **Pillai, Beena*** [Insights into regeneration from the genome, transcriptome and metagenome analysis of Eisenia fetida](#)"; bioRxiv; 180612; 2017
21. Sharma, Shweta; Hussain, Showket; Soni, Kartik; Singhal, Pallavi; Tripathi, Richa; Ramachandran, VG; Sharma, Sonal; Das, Shukla; **Pillai, Beena**; Bharadwaj, Mausumi*; [Novel MicroRNA signatures in HPV-mediated cervical carcinogenesis in Indian women](#); Tumor Biology; 37; 4; 4585-4595; 2016
22. Dey, Rakesh; Soni, Kartik; Saravanan, Shanmugam; Balakrishnan, Pachamuthu; Kumar, Vikram; Boobalan, Jayaseelan; Solomon, Sunil Suhas; Scaria, Vinod; Solomon, Suniti; Brahmachari, Samir K; **Pillai, Beena***; [Anti-HIV microRNA expression in a novel Indian cohort](#); Scientific reports; 6; ; 28279; 2016
23. Dhamija, Neeru; Choudhary, Deepika; Ladha, Jayashree S; **Pillai, Beena**; Mitra, Debashis; [Tat predominantly associates with host promoter elements in HIV1 infected Tcells—regulatory basis of transcriptional repression of c?Rel](#); The FEBS journal; 282; 3; 595-610; 2015
24. Dey, R; **Pillai, Beena**; [Cell-based gene therapy against HIV](#); Gene therapy; 22; 11; 851; 2015
25. Suryawanshi, Hemant; Sarangdhar, Mayuresh Anant; Vij, Manika; Roshan, Reema; Singh, Vijay Pal; Ganguli, Munia; **Pillai, Beena***; [A Simple Alternative to Stereotactic Injection for Brain Specific Knockdown of miRNA](#); Journal of visualized experiments: JoVE; ; 106; ; 2015
26. Agarwal, Parul; Garg, Varsha; Gautam, Taru; **Pillai, Beena**; Kanoria, Shaveta; Burma, Pradeep Kumar; [A study on the influence of different promoter and 5' UTR \(URM\) cassettes from Arabidopsis thaliana on the expression level of the reporter gene beta glucuronidase in tobacco and cotton](#); Transgenic research; 23; 2; 351-363; 2014
27. Iyengar, Bharat Ravi; Choudhary, Ashwani; Sarangdhar, Mayuresh Anant; Venkatesh, KV; Gadgil, Chetan J; **Pillai, Beena***; [Non-coding RNA interact to regulate neuronal development and function](#); Frontiers in cellular neuroscience; 8; ; 47; 2014
28. Roshan, Reema; Shridhar, Shruti; Sarangdhar, Mayuresh A; Banik, Arpita; Chawla, Mrinal; Garg, Manali; Singh, Vijay Pal; **Pillai, Beena***; [Brain-specific knockdown of miR-29 results in neuronal cell death and ataxia in mice](#); RNA; 20; 8; 1287-1297; 2014
29. Walawalkar, Yogesh D; Phadke, Ravindra; Noronha, Santosh; Patankar, Swati; **Pillai, Beena**; [Engineering whole-cell biosensors to evaluate the effect of osmotic conditions on bacteria](#); Annals of microbiology; 63; 4; 1283-1290; 2013
30. Soni, Kartik; Choudhary, Ashwani; Patowary, Ashok; Singh, Angom Ramcharan; Bhatia, Shipra; Sivasubbu, Sridhar; Chandrasekaran, Shanti; **Pillai, Beena***; [miR-34 is maternally inherited in Drosophila melanogaster and Danio rerio](#); Nucleic acids research; 41; 8; 4470-4480; 2013
31. Jovicic Ana; Roshan, Reema; Moiso, Nicoleta; Pradervand, Sylvain; Moser, Roger; **Pillai, Beena***; Luthi-Carter, Ruth*; [Comprehensive expression analyses of neural cell-type-specific miRNAs identify new](#)

- [determinants of the specification and maintenance of neuronal phenotypes](#); Journal of Neuroscience; 33; 12; 5127-5137; 2013
32. Soni, Kartik; Gupta, Shivani; Gokhale, Sachin S; Dey, Rakesh; Gunjal, Anita D; Kumar, Vijayanti A; **Pillai, Beena***; [Detection and knockdown of microRNA-34a using thioacetamido nucleic acid; Nucleic acid therapeutics](#); 23; 3; 195-202; 2013
33. Pore, Subrata Kumar; Choudhary, Ashwani; Rathore, Bhowmira; Ganguly, Anirban; Sujitha, Pombala; Kumar, C Ganesh; Agawane, Sachin Bharat; Kumar, Jerald Mahesh; Scaria, Vinod; **Pillai, Beena**; Banerjee Rajkumar* [Hsp90-targeted miRNA-liposomal formulation for systemic antitumor effect](#); Biomaterials; 34; 28; 6804-6817; 2013
34. Roshan, Reema; Ghosh, Tanay; Gadgil, Mugdha; **Pillai, Beena***; [Regulation of BACE1 by miR-29a/b in a cellular model of Spinocerebellar Ataxia 17](#); RNA biology; 9; 6; 891-899; 2012
35. Bargaje, Rhishikesh; Alam, Mohammad Parwez; Patowary, Ashok; Sarkar, Maharnob; Ali, Tamer; Gupta, Shivani; Garg, Manali; Singh, Meghna; Purkanti, Ramya; Scaria, Vinod; Sivasubbu, Sridhar; Brahmachari, Vani; **Pillai Beena***; [Proximity of H2A. Z containing nucleosome to the transcription start site influences gene expression levels in the mammalian liver and brain](#); Nucleic acids research; 40; 18; 8965-8978; 2012
36. Bargaje, Rhishikesh; Gupta, Shivani; Sarkeshik, Ali; Park, Robin; Xu, Tao; Sarkar, Maharnob; Halimani, Mahantappa; Roy, Soumya Sinha; Yates, John*; **Pillai, Beena***; [Identification of novel targets for miR-29a using miRNA proteomics](#); PLoS One; 7; 8; e43243; 2012
37. Khan, Jameel Ahmad; Mandal, Tarun Kumar; Das, Taposh Kumar; Singh, Yogendra; **Pillai, Beena**; Maiti, Souvik*; [Magnetite \(Fe₃O₄\) nanocrystals affect the expression of genes involved in the TGF-beta signalling pathway](#); Molecular BioSystems; 7; 5; 1481-1486; 2011
38. Gokhale, Sucheta A; Roshan, Reema; Khetan, Vivek; Pillai, Beena; Gadgil, Chetan J*; [A kinetic model of TBP auto-regulation exhibits bistability](#); Biology direct; 5; 1; 50; 2010
39. Roshan, Reema; Ghosh, Tanay; Scaria, Vinod; **Pillai, Beena***; [MicroRNAs: novel therapeutic targets in neurodegenerative diseases](#); Drug discovery today; 14; 23-24; 1123-1129; 2009
40. Bargaje, Rhishikesh; Hariharan, Manoj; Scaria, Vinod; **Pillai, Beena***; [Consensus miRNA expression profiles derived from interplatform normalization of microarray data](#); RNA; 2009
41. Ahluwalia, Jasmine K; Hariharan, Manoj; Bargaje, Rhishikesh; **Pillai, Beena**; Brahmachari, Vani*; [Incomplete penetrance and variable expressivity: is there a microRNA connection?](#); Bioessays; 31; 9; 981-992; 2009
42. Ahluwalia, Jasmine K; Khan, Sohrab Zafar; Soni, Kartik; Rawat, Pratima; Gupta, Ankit; Hariharan, Manoj; Scaria, Vinod; Lalwani, Mukesh; **Pillai, Beena**; Mitra, Debashis; Brahmachari SK* [Human cellular microRNA hsa-miR-29a interferes with viral nef protein expression and HIV-1 replication](#); Retrovirology; 5; 1; 117; 2008
43. Ghosh, Tanay; Soni, Kartik; Scaria, Vinod; Halimani, Mahantappa; Bhattacharjee, Chaitali; **Pillai, Beena***; [MicroRNA-mediated up-regulation of an alternatively polyadenylated variant of the mouse cytoplasmic beta-actin gene](#); Nucleic acids research; 36; 19; 6318-6332; 2008
44. Sandhu, Kuljeet Singh; Pandey, Sunil; Maiti, Souvik; **Pillai, Beena***; [GASCO: genetic algorithm simulation for codon optimization](#); In silico biology; 8; 2; 187-192; 2008
45. Khan, Jameel Ahmad; **Pillai, Beena**; Das, Taposh Kumar; Singh, Yogendra; Maiti, Souvik; [Molecular effects of uptake of gold nanoparticles in HeLa cells](#); ChemBiochem; 8; 11; 1237-1240; 2007
46. Scaria, Vinod; Hariharan, Manoj; **Pillai, Beena**; Maiti, Souvik; Brahmachari, Samir K*; [Host-virus genome interactions: macro roles for microRNAs](#); Cellular microbiology; 9; 12; 2784-2794; 2007
47. Scaria, Vinod; Hariharan, Manoj; Brahmachari, Samir K; Maiti, Souvik; **Pillai, Beena***; [microRNA: an emerging therapeutic](#); ChemMedChem: Chemistry Enabling Drug Discovery; 2; 6; 789-792; 2007

48. Singh, Sunanda R; **Pillai, Beena**; Balakrishnan, Bindu; Naorem, Aruna; Sadhale, Parag P*; [Relative levels of RNA polIII subunits differentially affect starvation response in budding yeast](#); Biochemical and biophysical research communications; 356; 1; 266-272; 2007
49. Ghosh, Tanay; Pandey, Neeraj; Maitra, Arindam; Brahmachari, Samir K; **Pillai, Beena***; [A role for voltage-dependent anion channel Vdac1 in polyglutamine-mediated neuronal cell death](#); PLoS One; 2; 11; e1170; 2007
50. Venkatesh, P; Jaiprakash, M; Prasad, P; **Pillai, Beena**; Sadhale, PP*; Sinkare, VP*; Flavonoid biosynthesis in tea (*Camellia sinensis*); 2007
51. Scaria, Vinod; Hariharan, Manoj; Maiti, Souvik; **Pillai, Beena**; Brahmachari, Samir K*; [Host-virus interaction: a new role for microRNAs](#); Retrovirology; 3; 1; 68; 2006
52. Kumar, Arun; John, Lijo; Alam, Md Mahmood; Gupta, Ankit; Sharma, Gayatri; **Pillai, Beena**; Sengupta, Shantanu*; [Homocysteine-and cysteine-mediated growth defect is not associated with induction of oxidative stress response genes in yeast](#); Biochemical journal; 396; 1; 61-69; 2006
53. Harish, Nagarajan; Gupta, Rekha; Agarwal, Parul; Scaria, Vinod; **Pillai, Beena***; [DyNAVacs: an integrative tool for optimized DNA vaccine design](#); Nucleic acids research; 34; suppl_2; W264-W266; 2006
54. Hariharan, Manoj; Scaria, Vinod; **Pillai, Beena**; Brahmachari, Samir K*; [Targets for human encoded microRNAs in HIV genes](#); Biochemical and biophysical research communications; 337; 4; 1214-1218; 2005
55. John, Lijo; Sharma, Gayatri; Chaudhuri, Santanu Pal; **Pillai, Beena***; [Cigarette smoke extract induces changes in growth and gene expression of *Saccharomyces cerevisiae*](#); Biochemical and biophysical research communications; 338; 3; 1578-1586; 2005
56. Banerjee, Dibyendu; **Pillai, Beena**; Karnani, Neerja; Mukhopadhyay, Gauranga; Prasad, Rajendra*; [Genome-wide expression profile of steroid response in *Saccharomyces cerevisiae*](#); Biochemical and biophysical research communications; 317; 2; 406-413; 2004
57. Singh, Sunanda R; Rekha, Nambudiry; **Pillai, Beena**; Singh, Vijender; Naorem, Aruna; Sampath, Vinaya; Srinivasan, N; Sadhale, Parag P*; [Domainal organization of the lower eukaryotic homologs of the yeast RNA polymerase II core subunit Rpb7 reflects functional conservation](#); Nucleic acids research; 32; 1; 201-210; 2004
58. Jaiprakash, Maya Rani; **Pillai, Beena**; Venkatesh, Purna; Subramanian, N; Sinkar, Vilas P; Sadhale, Parag P*; [RNA isolation from high-phenolic freeze-dried tea \(*Camellia sinensis*\) leaves](#); Plant Molecular Biology Reporter; 21; 4; 465-466; 2003
59. **Pillai, Beena**; Verma, Jiyoti; Abraham, Anju; Francis, Princy; Kumar, Yadunanda; Tatu, Utpal; Brahmachari, Samir K; Sadhale, Parag P*; [Whole genome expression profiles of yeast RNA polymerase II core subunit, Rpb4, in stress and non-stress conditions](#); Journal of Biological Chemistry; 278; 5; 3339-3346; 2003
60. **Pillai, Beena**; Sampath, Vinaya; Sharma, Nimisha; Sadhale, Parag*; [Rpb4, a Non-essential Subunit of Core RNA Polymerase II of *Saccharomyces cerevisiae* Is Important for Activated Transcription of a Subset of Genes](#); Journal of Biological Chemistry; 276; 33; 30641-30647; 2001
61. **Pillai, Beena**; Brahmachari, Samir K; Sadhale, Parag P*; [Genome-wide expression profile of RNA polymerase II subunit mutant of yeast using microarray technology](#); Current Science 81; 5; 574-577; 2001

Book Chapters:

1. Dheeraj Chandra Joshi, Surendra Singh Patel, Beena Pillai, Transcriptome Profiling, Spatial Transcriptomics, 2022, 1 st ed., Chap. 7 (ISBN 978-0-323-91810-7)
2. Beena Pillai and Mayuresh Sarangdhar, "MicroRNA: Perspectives in Health and Diseases" (2017) ed. J. Paul and R. Muthuswamy, in press, CRC press Taylor and Francis group, 2017
3. Beena Pillai, "Non-coding RNA" in Gene and its Engineering, (2015) ed. H. K. Das, Wiley Publications

4. Mitali Mukerji, Beena Pillai, Somdatta Sinha & S. K. Brahmachari. Textbook of Biotechnology, (2005) ed. H. K. Das, Wiley Publications, Specific contribution: Contributed the section titled "Functional genomics using Microarray Technology". Currently in the 5th ed.

Non-SCI publications

1. She is a scientist. Invited article in Indian Express about bringing equity to scientific research in India. In print version on October 6, 2020; electronic version: [click here](#)
2. REDUCE: development of a vermicomposting solution for urban household waste.
3. Editing our own genes. Beena Pillai and Monisha K. M. TRUMP magazine.
4. Venkatesh P, Jaiprakash M, Prasad P, Pillai Beena, Sadhale PP, Sinkar VP. (2015) Flavonoid biosynthesis in tea (*Camellia sinensis*). International Journal of Tea Science : 6
5. Aditya A, Bhattacharya A, Singh A, Pande A, Ray A, Ghosh A, Mehani B, Kumar B, Paul D, Suneja G. REDUCE-development of a vermicomposting solution for urban household waste.