Research achievements: Sanjeev Galande (2015 to 2024)

Extent of the contributions:

Out of the publications listed below, the four red colored entries are the most significant recent publications from my group in 2023-24 that have a direct translational/public health impact. Preprint # 2 which will be published shortly reports work done mostly in my lab, with clinical collaborators for obtaining samples from the human trial. This is the most relevant and important translational contribution from my group. Publications #8 and #12 have been conceived and supervised by me along with the collaborator, hence we are co-corresponding authors. The work described in the paper published in Frontiers in Neuroscience (# 8 Mahajan et al., 2023) is done as a collaboration with Dr. Nixon Abraham of IISER Pune. Here, the entire project was conceived by me during the pandemic. Since none of the labs could order any strains of mice from overseas, I thought of generating the line in-house. The entire planning and execution of the knockout strategy was done by me. Dr. Nixon's lab performed the phenotyping of the lab. I supervised the entire project. This is one of the most significant contributions for research on COVID. Another significant paper of this year is the paper published in Journal of Developmental Origins of Health and Disease ((# 12 Khare et al., 2023). This is a result of the long-standing collaboration with the diabetes research unit of KEM hospital, Pune. Dr. Yajnik's group built the cohort and collected the samples while my laboratory performed the cellular and molecular work as well as data analysis. I supervised this part of the project and it was under the Centre of Excellence Program of DBT. The results of this study have profound implications on the strategies towards dietary interventions for the malnourished population in India.

The blue colored entries are the next set of significant recent publications from my laboratory that report fundamental discoveries (Basic science). All other publications wherein I am the corresponding author, the ideas and projects were conceived by me along with the PhD students or postdoctoral fellows. I provided the supervision, contributed to data analysis, wrote/edited the manuscripts and also dealt with the revision process. The funding to support this work was also obtained by me from various agencies.

Certified that I have not received any award for the research work (2015-2024) listed above.

Sanjeev Galande

Research Contributions in past 9 years:

All the awards that I have received are based on the work done prior to 2015. The list of papers published in the past 9 years is given below (in reverse chronological order):

Publications: *Equal contribution #Corresponding author

1. Sharma A., Dsilva G.J., Deshpande G.[#] and **Galande S.**[#] 2024. Exploring the Versatility of Zygotic Genome Regulators: A Comparative and Functional Analysis. *Cell Reports* 43(9): 1-15. https://doi.org/10.1016/j.celrep.2024.114680.

2. Tripathi S., Gupta E., Naik N., Khare K., Mir R., Desai S., Humane S., Yadav S., Bal M., Saklani A., Patil P., Kamat S., and **Galande S.**[#] 2024. Statins attenuate Wnt/β-catenin signaling by targeting SATB family proteins in colorectal cancer. *bioRxiv*. https://www.biorxiv.org/content/10.1101/2024.08.23.609189v1

   (Under advanced stage of review in a reputed cancer journal)

3. Tripathi S.*, Gupta E.*, **Galande, S.**[#] 2024. Statins as anti-tumor agents: A paradigm for repurposed drugs. *Cancer Reports* 7:e2078. https://doi.org/10.1002/cnr2.2078.

4. Sawant, A.A., Tripathi S., **Galande, S**. and Sudha Rajamani.[#] 2024. A Prebiotic Genetic Nucleotide as an Early Darwinian Ancestor for Pre-RNA Evolution. *ACS Omega* https://doi.org/10.1021/acsomega.3c09949.

5. Dsilva G J and **Galande S**.[#] 2024. From Sequence to Consequence: Deciphering the Complex cis-regulatory landscape. *J Biosciences* 49:46. DOI: 10.1007/s12038-024-00431-0.

6. Suresh V., Bhattacharya, B., Tshuva, R. Y., Gotthold, M. D., Olender, T., Bose, M., Pradhan, S. J., Zeev, B. B., Smith, R. S., Tole, S., **Galande, S**., Harwell, C., Baizabal, J. M., Reiner, O.[#] 2024. PRDM16 co-operates with LHX2 to shape the human brain *Oxford Open Neuroscience* 3:1-16. https://doi.org/10.1093/oons/kvae001.

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8. Suresh V. *, Muralidharan, B. *, Pradhan, S. J. *, Bose, M., D'Souza, L., Parichha, A., Reddy, P. C., **Galande, S**.[#] and Tole, S.[#] 2023. Regulation of chromatin accessibility and gene expression in the developing hippocampal primordium by LIM-HD transcription factor LHX2. *PLoS Genetics* 19(8):e1010874.doi: 10.1371/journal.pgen.1010874.

9. Mahajan S., Sen S., Sunil A., Srikanth P., Marathe S.D, Shaw K., Sahare M., **Galande S.**[#], and Abraham N.A.[#] 2023. Knockout of ACE2 receptors lead to morphological aberrations in rodent olfactory centers and dysfunctions associated with sense of smell. *Frontiers in Neuroscience*, 17:1180868. doi: 10.3389/fnins.2023.1180868

10. Gungi, A., Saha, S., Pal, M. and **Galande, S.**[#], 2023. H4K20me1 plays a dual role in transcriptional regulation of regeneration and axis patterning in Hydra. *Life Science Alliance*, 6(5).

11. Chee, J.M., Lanoue, L., Clary, D., Higgins, K., Bower, L., Flenniken, A., Guo, R., Adams, D.J., Bosch, F., Braun, R.E., Brown, S.D., H.-J. Genie Chin, Dickinson, M.E., Hsu C.-W., Dobbie M., Gao X., **Galande S.**, Grobler A., Heaney J.D., Herault Y., de Angelis M.H., Mammano F., Nutter L.M.J., Parkinson H., Qin C., Shiroishi T., Sedlacek R., Seong J.-K., Xu Y., The International Mouse Phenotyping Consortium, Brooks B., McKerlie C., Lloyd K.C.K., Westerberg H. and Moshiri A. 2023. Genome-wide screening reveals the genetic basis of mammalian embryonic eye development. *BMC Biology*, 21(1), pp.1-15.

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17. Pandit P, **Galande S**[#], Iris F. (2021) Maternal malnutrition and anaemia in India: dysregulations leading to the 'thin-fat' phenotype in newborns. *J Nutr Sci*. 10:e91. doi: 10.1017/jns.2021.83. eCollection 2021. PMID: 34733503

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