



Name: Dr. Ganesh Venkatraman

Degree: M.Sc., Ph. D

Designation: Professor- Department of Human Genetics

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Area of Research Expertise with Projects conducted: Cancer Biology, Nano Biology

1. Cancer Biology: P21 activated Kinase 1 (Pak1), Nuclear receptor coregulators
2. Mouse models of Human disease: Human tumor xenografts, Infectious disease and acute neuropathy models
3. Drug discovery: Bioactivity screening of Small molecule Inhibitors.
4. Nanobiology: Drug delivery & Physical therapy applications
5. Monoclonal and Polyclonal antibody production: Diagnostic applications

Visiting Professor:

1. Project Consultant, Department of Biotechnology, IIT Madras.
2. Project Consultant, Emerging Technologies, Resil Chemicals, Bangalore.

Awards:

1. Best Research Publication, Sri Ramachandra Institute of Higher Education and Research (DU) on 18/09/2021
2. Shri.R.Dakshinamurthy and Smt. Adhilakshmiammal Best research publication gold medal, Sri Ramachandra Institute of Higher Education and Research (DU) on 18/09/2019

3. Certification of merit for publication with impact factor 5.21, Sri Ramachandra University on 18/09/2018
4. Certification of merit for publication with impact factor 3.92, Sri Ramachandra University on 18/09/2018
5. Certification of appreciation- Editorial Board member, University Newsletter, Sri Ramachandra University on 18/09/2018
6. Certification of merit for publication with impact factor 4.798, Sri Ramachandra University on 19/09/2017
7. Certification of merit for publication with impact factor 9.269, Sri Ramachandra University on 19/09/2017
8. National best teacher award, C.V.S Krishna Murthy Theja Charities, Tirupati on 11/10/2017
9. Dr. Vinod Kumar Bhargava award, Best Research Publication, National Academy of Medical Sciences (India) on 22/09/2016
10. Shri.R.Dakshinamurthy and Smt. Adhilakshmiammal Best research publication gold medal, Sri Ramachandra university on 16/06/2016

Membership:

1. Member - Institutional Ethics committee
2. BRNS RTAC TPDM committee Invited Expert Member; 2013-16
3. Indian Institute of Technology, Madras (IIT M) Technical Committee
4. DAE External Expert for monitoring CARRT & MAC Facility at Mangalore University
5. Member- Sri Ramachandra International Liaisons Committee

List of Publications (RECENT THREE YEARS):

1. Rajendran S, Swaroop SS, Roy J, Inemai E, Murugan S, Rayala SK, Venkatraman G. p21 activated kinase-1 and tamoxifen–A deadly nexus impacting breast cancer

outcomes. *Biochimica et Biophysica Acta (BBA)-Reviews on Cancer*. 2021 Dec 9;188668.doi: 10.1016/j.bbcan.2021.188668

2. Vuttaradhi VK, Ezhil I, Ramani D, Kanumuri R, Raghavan S, Balasubramanian V, Saravanan R, Kanakarajan A, Joseph LD, Pitani RS, Sundaram S. Inflammation-induced PELP1 expression promotes tumorigenesis by activating GM-CSF paracrine secretion in the tumor microenvironment. *Journal of Biological Chemistry*. 2022 Jan 1;298(1). doi: 10.1016/j.jbc.2021.101406.

3. Biswal J, Jayaprakash P, Rayala SK, Venkatraman G, Rangaswamy R, Jeyaraman J. WaterMap and Molecular Dynamic Simulation-Guided Discovery of Potential PAK1 Inhibitors Using Repurposing Approaches. *ACS omega*. 2021 Oct 5;6(41):26829-45. <https://doi.org/10.1021/acsomega.1c02032>

4. Yadav P, Sharma P, Sundaram S, Venkatraman G, Bera AK, Karunakaran D. SLC7A11/xCT is a target of miR-5096 and its restoration partially rescues miR-5096-mediated ferroptosis and anti-tumor effects in human breast cancer cells. *Cancer letters*. 2021 Dec 1;522:211-24.doi: 10.1016/j.canlet.2021.09.033.

5. Balasubramanian V, Saravanan R, Joseph LD, Dev B, Gouthaman S, Srinivasan B, Dharmarajan A, Rayala SK, Venkatraman G. Molecular dysregulations underlying the pathogenesis of endometriosis. *Cellular Signalling*. 2021 Dec 1;88:110139. doi: 10.1016/j.cellsig.2021.110139.

6. Kanumuri R, Chelluboyina AK, Biswal J, Vignesh R, Pandian J, Venu A, Vaishnavi B, Leena DJ, Jeyaraman J, Ganesan K, Aradhyam GK. Small peptide inhibitor from the sequence of RUNX3 disrupts PAK1–RUNX3 interaction and abrogates its phosphorylation-dependent oncogenic function. *Oncogene*. 2021 Aug;40(34):5327-41.

7. Kumar A, Sundaram S, Rayala SK, Venkatraman G. UnPAKIng RUNX3 functions–Both sides of the coin. *Small GTPases*. 2019 Jul 4;10(4):264-70. doi: 10.1080/21541248.2017.1322667.

8. Vignesh R, Sjölander A, Venkatraman G, Rayala SK, Aradhyam GK. Aberrant environment and PS-binding to calnuc C-terminal tail drives exosomal packaging and its metastatic ability. *Biochemical Journal*. 2021 Jun 25;478(12):2265-83. doi: 10.1042/BCJ20210016. PMID: 34047336.
9. Kanumuri R, Ezhil I, Sampangi JK, Kremerskothen J, Rayala SK, Venkatraman G. KIBRA connects Hippo signaling and cancer. *Experimental Cell Research*. 2021 Jun 15;403(2):112613.. doi: 10.1016/j.yexcr.2021.112613.
11. Biswal J, Jayaprakash P, Rayala SK, Venkatraman G, Rangasamy R, Poopandi S, Jeyakanthan J. Water Mapping and Scoring approaches to predict the role of Hydration sites in Binding Affinity of PAK1 inhibitors. *Comb Chem High Throughput Screen*. 2021 Mar 7. doi: 10.2174/1386207324666210308110646.
12. Venu A, Archana B, Kanumuri R, Vuttaradhi VK, D'Cruze L, Murugan S, Ganesh K, Prathiba D, Dymova MA, Rayala SK, Venkatraman G. Clinical evaluation of P21 Activated Kinase 1 (PAK1) activation in gliomas and its effect on cell proliferation. *Cancer Investigation*. 2021 Feb 2;39(1):98-113. Doi: 10.1080/07357907.2020.1858097.
13. Padmavathy KP, Vuttaradhi VK, Venu A, D'Cruze L, Saravanan R, Pitani R, Ganesh K, Pacharla H, Rayala SK, Prathiba D, Venkatraman G. Clinical Evaluation of Proline, Glutamic acid, and Leucine-Rich Protein 1 Expression in Astrocytomas and Correlations with the Proliferation Marker Ki-67. *Journal of Molecular Neuroscience*. 2021 Apr;71(4):724-33. doi: 10.1007/s12031-020-01690-w.
14. Kanumuri R, Saravanan R, Pavithra V, Sundaram S, Rayala SK, Venkatraman G. Current trends and opportunities in targeting p21 activated kinase-1 (PAK1) for therapeutic management of breast cancers. *Gene*. 2020 Nov 15;760:144991. doi: 10.1016/j.gene.2020.144991.
15. John GS, Vuttaradhi VK, Takeuchi S, Pitani RS, Venkatraman G, Rayala SK. Facile synthesis and nanoscale features of a nanostructured nordihydroguaiaretic acid

analog for therapeutic applications. Journal of Nanobiotechnology. 2020 Dec;18(1):1-6. doi: 10.1186/s12951-020-00628-z.

16. Mala John GS, Takeuchi S, Venkatraman G, Rayala SK. Nordihydroguaiaretic acid in therapeutics: beneficial to toxicity profiles and the search for its analogs. Current Cancer Drug Targets. 2020 Feb 1;20(2):86-103. doi: 10.2174/1568009619666191022141547.

17. Simondurairaj C, Krishnakumar R, Sundaram S, Venkatraman G. Interleukin-6 receptor (IL-6R) expression in human gastric carcinoma and its clinical significance. Cancer Investigation. 2019 Aug 9;37(7):293-8. doi: 10.1080/07357907.2019.1638395.

18. Anuj, Arivazhagan L, Venkatraman G, Rayala SK. Increased expression of MicroRNA 551a by c-Fos reduces focal adhesion kinase levels and blocks tumorigenesis. Molecular and Cellular Biology. 2019 Mar 19;39(7):e00577-18. doi: 10.1128/MCB.00577-18.

19. Biswal J, Jayaprakash P, Kumar RS, Venkatraman G, Poopandi S, Rangasamy R, Jeyaraman J. Identification of Pak1 inhibitors using water thermodynamic analysis. Journal of Biomolecular Structure and Dynamics. 2019 Feb 17. doi: 10.1080/07391102.2019.1567393.

20. Kumar A, Sundaram S, Rayala SK, Venkatraman G. UnPAKing RUNX3 functions—Both sides of the coin. Small GTPases. 2019 Jul 4;10(4):264-70. doi: 10.1080/21541248.2017.1322667.

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Google Scholar : <https://scholar.google.com/citations?user=Q-Q3EWcAAAAJ&hl=en>

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