

Curriculum Vitae

Gopinath Meenakshisundaram

Dept of Biochemistry, Central food technological research institute
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Date of Birth: 24/04/1979 Nationality: Indian

Areas of research: Epithelial biology, wound healing, Psoriasis, Eczema, chronic ulcers, cancer, non-coding RNAs, nanotechnology (edible nanoparticles).



Education and Employment History:

Principal Scientist CFTRI, Mysore	July 2018- Present
Research Scientist	Apr 2017- July 2018
Senior Research Fellow	Apr 2014-Mar 2017
Research fellow Institute of Medical biology, Singapore	Mar 2009-Mar 2014
Ph.D (Molecular Virology) Indian Institute of Science, India.	Aug 2002- Jan 2009
Masters in Biotechnology Pondicherry University, India	July 2000- July 2002

Honors and Fellowships:

Master of Science Fellowship award (December 1999), Jawaharlal Nehru University, Delhi, India.

Summer Internship (May - July 2001) with Dr. Nahid Ali, Indian Institute of Chemical Biology, Kolkata, India.

Junior/Senior Research Fellowship - National Eligibility Test (December 2001), Council for Scientific and Industrial Research and University Grants Commission (CSIR-UGC), Govt. of India.

Foreign Visiting Research Assistant in Indo-Japan Co-operative Science Program (Nov 2005- February 2006 & December 2006 – Mar 2008) with Prof. Ayae Honda, Faculty of Engineering, Hosei University, Tokyo.

Honorable mention award for my confocal image of cutaneous squamous cell carcinoma tissue section in 2014 Olympus Bioscapes digital imaging competition in 2400 outstanding entries

(<http://www.olympusbioscapes.com/gallery/year/2014>).

Three times winner of IMB-IMU image of the month award between 2015 and 2018 (<https://www.a-star.edu.sg/imb/Tech-Platforms/AMP-Light-Microscopy/Gallery/Images>)

Membership in professional bodies:

Member of The RNA Society, USA (<https://www.rnasociety.org/>)

Member of American Association for the Advancement of Science (AAAS) (<https://www.aaas.org/membercentral/our-community>)

Member of The Skin Research Society, Singapore (<http://www.skinsoc.org.sg/>)

Reviewing activities: Ad hoc reviewer for the journals Cancer growth and metastasis & Biomarkers in cancer, Molecular Cancer, Plos One, Future Oncology and Clinical Cancer Reserch.

Book Chapters:

1. Derryn Xin Xui Chan, Srikanth Nama, **Gopinath Sundaram** and Prabha sampath, (2014). Micro RNA therapeutics to target brain tumor stem cells. In *Cancer Stem Cells* (pp. 403-415). John Wiley & Sons Inc, First edition.

2. Bhukya PL, Laxmivandana R, **Sundaram GM**. NF- κ B role and potential drug targets in Gastrointestinal Cancer. Springer Singapore; 2017. p. 43–69.

Patents:

Granted: A Defective Switch Impedes Healing of Diabetic Ulcers Inventors and Contributors: Prabha Sampath, Sundaram Gopinath, John Common, and Birgitte Lane. International patent no: US9545420 B2

Filed: Squamous cell carcinoma hijacks miR-198/FSTL1 molecular wound healing switch to enhance invasion and metastasis. Inventors: Prabha Sampath and Sundaram Gopinath. Singapore patent application no: 10201604845W

Publications:

19. Gopinath M Sundaram, Shan Quah and Prabha Sampath. 2018. Cancer; the dark side of wound healing. **FEBS J. Jun 15 (In Press).**

18. Gopinath M Sundaram and Prabha Sampath. 2018. Carcinoma cells reprogram the wound healing switch to promote metastasis. **Mol. Cell. Oncol. Sept 20th.**

17: TingDong Yan, Wen Fong Ooi, Aditi Qamra, Alice Cheung, DongLiang Ma, **Gopinath Meenakshi Sundaram**, Chang Xu, Manjie Xing, LaiFong Poon, Jess Hui Jie Ho, Muhammad Khairul Ramlee, Jing Wang, Luay Aswad, Steve G. Rozen, Sujoy Ghosh, Frederic A. Bard, Prabha Sampath, Vinay Tergaonkar, Eyleen Goh, Xuezhi Bi1, Melissa Jane Fullwood, Patrick Tan, and Shang Li. **2018.** HoxC5 and miR-615-3p target newly evolved genomic regions to repress hTERT and inhibit tumorigenesis. **Nature Communications. 9 (1): 100.**

16: Federica Pascale, Srikanth Nama, Manish Muhuri, Shan Quah, Hisyam Ismail, Derryn Chan, **Gopinath M Sundaram**, Rajkumar Ramalingam, Brian Burke and Prabha Sampath. **2018.** C/EBP β mediates RNA polymerase III-driven transcription of oncomiR-138 in malignant gliomas. **Nucleic Acids Res. 46 (1): 336-349.**

15. Gopinath M Sundaram *. 2017. Circulating non-coding RNA biomarkers for Diabetes Mellitus. **Curr. Res. Diabetes & Obes. J. 3 (5): 1-12. * Corresponding author.**

14. Tan, D.S.W., Chong F. T., Leong H.S., Toh D., Lau D.P., Kwang X.L., Zhang X., **Gopinath M Sundaram**, Tan G.S., Chang M.M., Chua B.T., Lim W.T., Tan E. H., Ang M. K., Lim T.K.H, Sampath P., Chowbay B., Skanderup A. J., Dasgupta R. and Gopalakrishna Iyer. **2017**. EGFR-AS1 long non-coding RNA mediates Epidermal Growth Factor Receptor addiction in squamous cell carcinoma. **Nature Medicine. 23 (10): 1167-1175.**

13. Gopinath M. Sundaram, Hisyam M. Ismail, Mohsin Bashir, Manish Muhuri, Srikanth Nama, Candida Vaz, Ghim Siong Ow, Ivshina Anna Vladimirovna, Rajkumar Ramalingam, John E. A. Common, Brian Burke, Vivek Tanavde, Vladimir Kuznetsov, E. Birgitte Lane, and Prabha Sampath. **2017**. EGF-driven micro circuitry hijacks microRNA-198/FSTL1 wound healing switch and steers a two pronged pathway towards metastasis. **J. Exp. Med. 214 (10): 1-12.**

13a: Previewed in J. Exp. Med insights: A wound-healing program is hijacked to promote cancer metastasis. **J. Exp. Med, 13th Sep 2017.**

12. Gopinath M.Sundaram*., Veera Bramha Chari. **2017** Molecular interplay of pro-inflammatory transcription factors and non-coding RNAs in esophageal squamous cell carcinoma. **Tumor Biology. 39 (6): 1-12 * Corresponding author.**

11. Gopinath, M and Shaila, M.S. **2015**. Evidence for N7 guanine methyl transferase activity encoded within the modular domain of RNA dependent RNA polymerase L of a Morbillivirus. **Virus Genes. 3 (13): 356-360.**

10. Aliaksandr Yarmishyn, Arsen Batagov, Jovina Tan, **Gopinath Sundaram**, Prabha Sampath, Vladimir Kuznetsov and Igor Kurochkin. **2014**. HOXD-AS1 is a novel lncRNA encoded in HOXD cluster and a marker of neuroblastoma progression revealed via integrative analysis of non-coding transcriptome. **BMC genomics, 15 (Suppl 9): S7.**

9. Gopinath, M Sundaram and Prabha Sampath. **2013** Regulation of context-specific gene expression by posttranscriptional switches. **Transcription Sep-Dec; 4(5): p213-216.**

8. Zacharias A. D. Pramono, Xuejun Mo, Emily Y. Gan, Ellen B. Lane, John E. Comon, **Gopinath Sundaram**, Prabha Sampath, Mark B. Y. Tang. **2013**. Identification and elucidation of roles of microRNAs in atopic dermatitis. **J. Dermatol. Sci. 69(2): e12.**

7. Gopinath, M Sundaram*, John E. A. Common*, Felicia E. Gopal, Srikantha, S., Lakshman, K., Declan, P. Lunny, Thiam C. Lim, Vivek Tanavde, E. Birgitte Lane and Prabha Sampath. **2013** 'See-saw' expression of microRNA-198 and FSTL1 from a single transcript in wound healing. **Nature , 495: 103-106 (* equal contribution)**

7a: Science editors Choice: See-Saw gene expression. 2013 **Science, 339: 1253.**

7b: Editors Choice: The healing Switch. 2013 **Science Signaling, 6 (267): ec66.**

7c. **Cited in Faculty of 1000:** Kern J and Nyström A: F1000Prime Recommendation of [Sundaram GM et al., Nature 2013, 495(7439):103-6]. In F1000Prime, 29 Apr 2013; DOI: 10.3410/f.718001022.793475086

6. Chan, X. H., Nama, S., Gopal, F., Rizk, P., Ramasamy, S., **Gopinath M Sundaram**, Ow, G. S., Vladimirovna, I. A., Tanavde, V., Haybaeck, J., Kuznetsov, V and Sampath, P. **2012** Targeting glioma stem cells by functional inhibition of a prosurvival oncomiR-138 in malignant gliomas. **Cell Reports. 2:1-12.**

5. **Gopinath, M., Raju. S and Shaila, M.S. 2010** Host factor Ebp1 inhibits Rinderpest virus transcription in vivo. **Arch. Virol. 155: 455-462.**
4. **Gopinath, M and Shaila, M. S. 2009.** RNA triphosphatase and guanylyl transferase activities are associated with the RNA polymerase protein L of Rinderpest virus. **J. Gen. Virol. 90: 1748-1756.**
3. **Gopinath, M and Shaila , M.S. 2008.** Recombinant L and P protein complex of Rinderpest virus catalyses mRNA synthesis in vitro. **Virus. Res.135(1): 150-154.**
2. Saikia, P., **Gopinath, M and Shaila, M. S. 2008.** Phosphorylation status of the phosphoprotein P of Rinderpest virus modulates transcription and replication in vitro. **Arch. Virol. 153: 615-626**
1. Afrin, F., Rajesh, R., Anam, K., **Gopinath, M., Pal, S and Ali, N. 2002.** Characterization of Leishmania donovani antigens encapsulated in liposomes in inducing protective immunity in BALB/c mice. **Infect. Immun. 70: 6697-6706**

Conferences:

Poster presentations:

1. **Gopinath. M and Shaila., M.S.** *An in vitro transcription system for Rinderpest virus using recombinant proteins of polymerase complex*, **Asian conference on transcription X, Indian Institute of Science, Bangalore, India, January, 2008.**
2. **Gopinath. M, John E.A.Common, Birgitte E. Lane and Prabha Sampath.** *A defective switch impedes healing of diabetic ulcer wounds.* **Cold Spring Harbor laboratory meeting on Translational control, CSHL, USA, September 2012.**
3. **Gopinath. M, John E.A.Common, Birgitte E. Lane and Prabha Sampath.** *A see-saw expression of microRNA 198 and FSTL1 protein from a single mRNA pivots on KSRP and TGF- β .* **UK-Singapore Translational Skin Biology symposium, Singapore, December 2012 (Winner of best poster award).**
4. **Gopinath. M, John E.A.Common, Birgitte E. Lane and Prabha Sampath.** *“See-saw expression of microRNA-198 and FSTL1 protein from a single mRNA in cutaneous wound healing.* **Gordon Research Conference on epithelial differentiation and keratinization, held in Italy, May 2013.**
5. **Gopinath. M, John E. A. Common, Ismail, M. H., Srikanth, N., Birgitte E. Lane and Prabha Sampath.** *“Cutaneous squamous cell carcinoma hijacks a molecular switch required for wound healing to promote invasion.* **6th Dunes Scientific Symposium, Duke-NUS medical school, October 2014.**
6. **Gopinath. M, John E. A. Common, Ismail, M. H., Srikanth, N., Birgitte E. Lane and Prabha Sampath.** *Cutaneous squamous cell carcinoma hijacks a molecular switch required for wound healing to promote invasion.* **Gordon conference on Translational machinery in healthy and disease, California, USA, Feb 2015.**
7. **Gopinath. M, and Prabha Sampath.** *EGF driven micro-circuitry hijacks a wound healing switch in squamous cell carcinoma.* **Singapore international conference on skin research, held in Singapore, April 2016.**
8. **Gopinath. M, and Prabha Sampath.** *Head and neck squamous cell carcinoma exploits miR-198/FSTL1 molecular switch for activating a two pronged metastasis pathway through wnt signaling.* **Australia-Singapore partnership in skin cancer biology, held in Singapore, March 2017.**