Curriculum vitae

Shruthy Suresh

Date of Birth: February 4, 1992

CSIR-Institute of Genomics and Integrative Biology
Mathura Road, New Delhi, 110025

Phone: +91-9710053619
Email:Shruthy.sa@igib.res.in

Education and Employment

October 2023- Present	**Scientist** CSIR-Institute of Genomics and Integrative Biology, Delhi
January 2023- May 2023	**Assistant Professor** Trivedi School of Biosciences Ashoka University, Sonepat
January 2020- November 2022	**Postdoctoral Fellow** Memorial Sloan Kettering Cancer Center Laboratory of Dr. Richard White
June 2019- October 2019	**Postdoctoral Fellow** Department of Molecular Biology UT Southwestern Medical Center, Dallas, Texas Laboratory of Dr. Kathryn O'Donnell
August 2013- May 2019	**Ph.D. in Cancer Biology** UT Southwestern Medical Center, Dallas, Texas Laboratory of Dr. Kathryn O'Donnell HHMI Mechanisms of Disease and Translational Science Track
August 2009- May 2013	**Bachelor of Technology in Biotechnology** Department of Biotechnology Indian Institute of Technology Madras

Publications

1. **Suresh S,** Rabbie R,..White RM (2023). Identifying the Transcriptional Drivers of Metastasis Embedded within Localized Melanoma. ***Cancer Discov***. 2023 Jan 9;13(1):194-215. doi: 10.1158/2159-8290.
2. Lumaquin-Yin, D., Montal,.., **Suresh S**, White RM (2023). Lipid droplets are a metabolic vulnerability in melanoma. ***Nat Commun*** 14, 3192. https://doi.org/10.1038/s41467-023-38831-9
3. Tagore M, Hergenreder E, …,**Suresh S**….,White RM (2023). GABA regulates electrical activity and tumor initiation in melanoma. ***Cancer Discov*** (https://doi.org/10.1158/2159-8290.CD-23-0389).
4. Montal E, Lumaquin D, Ma Y, **Suresh S**, White RM (2023). Modeling the effects of genetic- and diet-induced obesity on melanoma progression in zebrafish. ***Dis Model Mech***. 2023 Jan 1;16(1): dmm049671.
5. Weiss JM, Lumaquin-Yin D, Montal E, **Suresh S**, Leonhardt CS, White RM. Shifting the focus of zebrafish toward a model of the tumor microenvironment (2022). ***Elife***. 2022 Dec 20;11:e69703.
6. Montal E*, **Suresh S***, Ma Y*, Tagore M, White RM (2021). Cancer Modeling by Transgene Electroporation in Adult Zebrafish. ***Methods Mol Biol*** (in press, * co-first authors)
7. Baggiolini A, Callahan SJ…., **Suresh S**,…White RM (2021). Developmental chromatin programs determine oncogenic competence in melanoma. ***Science***. 2021 Sep 3;373(6559):eabc1048.
8. **Suresh S**, O'Donnell KA. Translational Control of Immune Evasion in Cancer (2021). ***Trends Cancer***. May 7:S2405-8033(21)00082-0. doi: 10.1016/j.trecan.2021.04.002.
9. **Suresh S**…, Minna JD, Mendell JT, O'Donnell KA (2020). eIF5B drives integrated stress response-dependent translation of PD-L1 in lung cancer. ***Nat Cancer*** 1, 533–545 (2020).
10. O'Donnell KA, Guo Y, **Suresh S**, Updegraff BL, Zhou X (2019). Ex vivo Transposon-Mediated Genetic Screens for Cancer Gene Discovery. ***Methods Mol Biol***, 1907:145–157
11. Zhou X,.., **Suresh S**,.., O'Donnell KA (2018). Modulation of mutant KrasG12D-driven lung tumorigenesis in vivo by gain or loss of PCDH7function. ***Mol Cancer Res***, 18-0739

12. **Suresh S**, Durakoglugil D, Stashi E, York B, Xing C, Xie XJ, O'Malley BW, O'Donnell KA (2017). SRC-2-mediated coactivation of anti-tumorigenic target genes suppresses MYC-induced liver cancer. ***PLoS Genetics***, 13(3): e1006650
13. Sreelatha, S, Kandhasamy S, Dinesh R, **Suresh S**, Shweta S, Mukesh, D, Karunagaran D, Balaji R, Mathivanan N, Perumal, PT (2014). Synthesis and SAR study of novel anticancer and antimicrobial naphthoquinone amide derivatives. ***Bioorg Med Chem Lett***, 24(15):3647-51
14. **Suresh S**, Raghu, D, Karunagaran,D (2013). Menadione (Vitamin K3) induces apoptosis of human oral cancer cells and reduces their metastatic potential by modulating the expression of epithelial to mesenchymal transition markers and inhibiting migration**.** ***Asian Pac J Cancer Prev***, (9), 5461-5465

Honors and Awards

2022	INSPIRE Faculty Award, Department of Science & Technology, India
2020	Melanoma Research Foundation **Career Development Award**: *Among **70** applicants including faculty, the sole recipient to receive the award as a postdoctoral fellow*
2020	Memorial Sloan Kettering Translational Research in Oncology Training fellow
2019	Best Student Talk Travel Award at the Cancer Biology Program Retreat, Simmons Comprehensive Cancer Center, Dallas, Texas.
2019	Runner-up Best Poster at the National Center for In vivo Metabolism Conference, Dallas, Texas
2015,2017	Best Student Poster Travel Award at the Cancer Biology Program Retreat, Simmons Comprehensive Cancer Center, Dallas, Texas.
2017	Cancer Prevention Research Institute of Texas (CPRIT) Training Grant
2014	Howard Hughes Medical Institute Clinical to Grad Fellowship
2012	Khorana Scholars Fellow, University of Wisconsin Madison, and Government of India
2009	IIT-JEE All India Rank **3244**
2009	AIEEE All India Rank **2987** and State Rank **72**

Funding (as **Principal Investigator**)

• CSIR Seed Grant	2024-2026	~₹96,00,000
• INSPIRE Faculty Fellowship 2022	2022-2027	~₹35,00,000
• Melanoma Research Foundation Career Development Award	2020-now	~₹80,00,000
• MSK Translational Research in Oncology Training grant	2020-2022	~₹80,00,000

Other Research Support

• CPRIT Training Grant RP140110 and RP160157	2015-2019	~₹25,00,000
• NIH T32 Training grant 1T32GM10977601	2014-2015	~₹22,00,000
• HHMI Med into Grad Grant 2014-2015 56006776	2014-2015	~₹22,00,000

Select research projects in the lab:

1. *Modeling patient tumor alterations and developing zebrafish avatars of metastatic cancer.*

This project will harness the power of patient derived organoids to annotate candidate driver alterations in metastasis and utilize 1) a transparent zebrafish strain to functionally test the role of these genes in metastasis *in vivo and* 2) CRISPR based screening to interrogate these genes in a high throughput manner.

2. *Role of KIF1A as a metastasis suppressor in melanoma.*

KIF1A, a motor transport protein is critical for anterograde transport of cargo in neurons. Its role in melanoma remains elusive. *Kif1a* loss in zebrafish melanomas accelerate metastasis *in vivo.* We are interested to elucidate the role of KIF1A as a metastasis suppressor in human melanoma.

Select Invited Talks:

2024:
- "Identifying the Seeds of Cancer Metastasis". Women in Systems Oncology Symposium, July 2024, IBAB, Bangalore, India.
- "Identifying the Seeds of Cancer Metastasis". NIBMG-IGIB Conclave, April 2024, New Delhi.

2023:
- "Identifying the Seeds of Cancer Metastasis". CDRI Lucknow, April 2023.

2022:
- "Identification of transcriptional drivers of metastasis in localized melanomas". CSHL Mechanisms & Models of Cancer Meeting, August 2022.

2019:

- "A stress response pathway regulates PD-L1 in human lung cancer". **Best Student Talk**, Cancer Biology Retreat, UT Southwestern Medical Center, Dallas, January 2019.
- "A stress response pathway regulates *PD-L1* translation in human lung cancer". **Invited** talk at Keystone Symposium on Cancer Immunotherapy: Mechanistic Insights to Improve Clinical Benefits, Whistler, British Columbia, March 2019.

2018:

- "A stress response pathway regulates PD-L1 in human lung cancer". **Invited** talk at LUNG SPORE Meeting, UT Southwestern Medical Center, Dallas, June 2018.

Select Posters:

2022:

- **Suresh S,..,** White RM. Identification of transcriptional drivers of metastasis in localized melanomas. Society for Melanoma Research Congress, October 2022.
- Thomas-Jardin S, Stein E, **Suresh S,…,** O'Donnell KA. The integrated stress response pathway regulates PD-L1 and CD155 translation in lung cancer. CSHL Mechanisms & Models of Cancer Meeting, August 2022

2019:

- **Suresh S,** Golden R, Chen B, Xie Y, Peyton M, Minna JD, Mendell JT, O'Donnell KA. A Stress Response Pathway regulates PD-L1 in human lung cancer. **Best Poster Runner-Up** prize at National Center for *In Vivo* Metabolism Conference, January 2019.
- **Suresh S,** Golden R, Chen B, Xie Y, Peyton M, Minna JD, Mendell JT, O'Donnell KA. A Stress Response Pathway regulates PD-L1 in human lung cancer, presented at the Keystone Symposium on Cancer Immunotherapy: Mechanistic Insights to Improve Clinical Benefits, at Whistler, British Columbia, March 2019.

2017:

- **Suresh S,** Golden R, Chen B, Xie Y, Peyton M, Minna JD, Mendell JT, O'Donnell KA. Dissecting novel mechanisms of PD-L1 regulation in lung cancer. **Best Student Poster** at Cancer Biology Program Annual Retreat, at UT Southwestern Medical Center, September 2017.
- **Suresh S,** Durakoglugil D, Zhou X, Zhu B, Comerford S, Xing C, Xie XJ, York B, O'Donnell KA. SRC-2-mediated Coactivation of Anti-tumorigenic Target Genes Suppresses MYC-induced Liver Cancer. CPRIT's Innovations in Cancer Prevention and Research Conference, Renaissance Arboretum Hotel, Austin, Texas, November 2017.

2015:

- **Suresh S**, Durakoglugil D, O'Donnell KA. Characterization of SRC-2 as a tumor suppressor in liver cancer. **Best Student Poster** at Cancer Biology Program Annual Retreat at UT Southwestern Medical Center, May 2015.

Professional Memberships, Leadership Roles & Teaching

2024	Thesis Advisor: 3 PhD students and DAC member of 6 PhD students at IGIB
2023	Instructor, Disease Biology Course, Ashoka University
2015-2016	Organizing member, Student Emerging as Leaders in Science Workshop series: ○ DISC personality assessment ○ Conflict management and Negotiation at the workplace ○ Teamwork and Mentor- Mentee relationship building
2015-2021	Mentored seven Graduate Rotation Students

References

1. Dr. Richard White, Associate Professor, Cancer Biology & Genetics and Department of Medicine, Memorial Sloan Kettering Cancer Center (whiter@mskcc.org)
2. Dr. Kathryn O'Donnell, Associate Professor, Department of Molecular Biology, UT Southwestern Medical Center (Kathryn.ODonnell@utsouthwestern.edu)
3. Dr. Joshua Mendell, Professor and Vice-Chair, Department of Molecular Biology, UT Southwestern Medical Center (Joshua.Mendell@utsouthwestern.edu)
4. Dr. Steven Kliewer, Professor, Department of Molecular Biology, UT Southwestern Medical Center (Steven.Kliewer@utsouthwestern.edu)