Ms. Divya

PERSONAL DETAILS:

Name: Divya

Gender: Female

Nationality: Indian

Date of birth: 18th May 1993

Contact: ICMR-Senior Research Fellow, Department of Cell and Molecular Biology, Manipal School of Life Sciences, Manipal Academy of Higher Education, Manipal-576104, Karnataka, India.

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SUMMARY:

- ✓ Dedicated, highly organized, detail oriented and self-motivated researcher with about 5 years of research experience with knowledge across the domains of basic and translation research in cell and molecular biology.
- ✓ Research focuses on cancer biology with special emphasize on cell signaling and cancer, metastasis, mitochondrial biology and metabolic preprograming.
- ✓ Regarded to be very compassionate and positive towards achieving assigned goals.

EDUCATION:

2017 - Present: Ph.D., Manipal School of Life Sciences, MAHE, Manipal, India

- **Title:** Role of Double C2 like Domain Containing Protein Beta as a Regulator of Senescence and WNT Signaling
- **Supervisors:** Dr. Shama Prasada K and Prof. K. Satyamoorthy

2014-2016: St. Aloysius College, Mangaluru, Karnataka, India

- M.Sc. in Biochemistry (87.12%)

2011-2014: Bhandarkars' Arts and Science College, Kundapura, Karnataka, India

- B.Sc. in Microbiology, Biochemistry, Botany (92.78%)

2009-2011 – Viveka Pre-University College, Kota, Karnataka, India

- Class XII (PCMB, 87.6%)

2009 - Viveka Girls Highschool, Kota, Karnataka, India

- Class X (92.32%)

WORK EXPERIENCE:

July - December 2016 - Research associate trainee in Syngene International Ltd Bengaluru

- ✓ Generation of monoclonal antibodies using non-conventional techniques such as *in-vitro* immunization and V-gene sequencing
- ✓ Purification of antibodies using Protein G/A resins and quantification using OCTET and ELISA.
- ✓ Antibody characterization by isotyping, ELISA, western blotting, flow cytometry, OCTET and other biochemical methods.

SCIENTIFIC TECHNIQUES:

- ✓ Expert knowledge in techniques such as ELISA, immunofluorescent staining, live imaging, confocal microscopy, western blotting, immuno-precipitation (IP), chromatin immuno-precipitation (ChIP), flowcytometry and mammalian cell culture
- ✓ Experience in performing, magnetic assisted cell sorting (MACS), STR profiling, zymography, mitochondria isolation, oxygraph, mitochondrial RNA isolation, exosome isolation from culture media, antibody purification and characterization, protein purification and characterization, alkaloid extraction from plant sources, thin layer chromatography (TLC), ion exchange and column chromatography
- ✓ Mammalian cell transfection, retro and lentiviral mediated transduction and generation of stable cell lines
- ✓ Molecular biology skill set – PCR, cloning, plasmid DNA isolation, RNA isolation, gel electrophoresis and luciferase reporter assay
- ✓ Well skilled in microbial techniques such as microbial isolation, streaking, biochemical identification of microbes, different microbial staining techniques, chemical competent cell preparation and transformation
- ✓ Trained to operate laboratory equipment such as Octet (Forte Bio, Quantitation and Kinetics), BD FACS-Accuri, Confocal laser scanning microscope (Leica), brightfield and fluorescent microscopes, iBlot, Image Quant, Nano-drop, ELISA Plate Reader, Countees, Gel Doc, etc.
- ✓ Professional knowledge in operating Microsoft office and bioinformatics tools.

RESEARCH EXPERIENCE AND EXPERTISE:

My research expertise and interest are in the area of cancer biology which involves elucidation of molecular mechanisms governed by a methylation regulated tumor suppressor, DOC2B, in the pathophysiology of cervical cancer. **My focused research area includes;**

- deciphering the molecular mechanism by which DOC2B acts as a tumor suppressor in cervical cancer
- role of calcium in regulating the tumor suppressive functions of DOC2B in cervical cancer
- DOC2B mediated mitochondrial dysfunction in cervical cancer
- DOC2B as a sensitizer of anti-cancer properties of metformin in cervical cancer
- effect of Bisphenol A (BPA) on expression of DOC2B and its potential role in cervical cancer progression
- impact of table salt on cervical cancer progression

PROJECTS UNDERTAKEN:

- ✓ Screening, Identification of Radiation (Gamma and UV) resistant Soil microbes from Coastal region and Analysis of biomarkers (2016) - Postgraduation
- ✓ The Effects of Selected Chemical fertilizers on soil micro-organisms (2014) - Under graduation
- ✓ Phytochemical analysis and antimicrobial activity of selected plants (*Annona muricata, Simarouba amara and Pilea pumila*) (2014) – Under graduation

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PROFESSIONAL RECOGNITION (AWARDS AND HONORS):

- ✓ Selected for DIALAB STAR Student Program – Worked as an intern in Biomedical Research Institute, National Institute of Industrial Science and Technology (AIST), Japan - 2019
- ✓ Reviewed research papers for Cell Death and Diseases journal (Springer Nature)
- ✓ ICMR – Senior Research Fellowship – 2019 – till date
- ✓ Qualified GATE-2019 (Life Science, Gate score – 483, All India Rank – 1015)
- ✓ 2nd Prize - Oral presentation in ICHTR-2018, organized by MAHE, Manipal – 2018
- ✓ Selected as Meritorious Alumnus for the BOS meeting in Department of PG studies and Research in Biochemistry, St. Aloysius College, Mangaluru – 2017-2018
- ✓ Best Poster Award in the National Conference on “Frontiers in Genetics and Genomics” organized by the Department of Genomic Science, Central University of Kerala -2016
- ✓ Secured 1st Rank in M.Sc. Biochemistry - 2016
- ✓ Smt. Carmine Lobo Gold Medal in B.Sc. Microbiology, Mangaluru University, Karnataka - 2015
- ✓ Prof. J.V. Bhat Memorial Cash Prize in B.Sc. Microbiology, Mangaluru University, Karnataka – 2015
- ✓ Editor of JIVAS (a science bulletin, published by Life Science Departments, Bhandarkars’ College, Kundapura) - 2012-2014
- ✓ District Young Scientist Award by Department of IT, BT and Science & Technology, Govt of Karnataka and Rajya Vijnana Parishath -2009
- ✓ Life member of Indian Society of Human Genetics
- ✓ Internship – in Manipal Centre for Virus Research (MCVR), Manipal, Poornaprajna Institute of Scientific Research (PPISR) Bengaluru, Pharmaceutical Chemistry Laboratory of SDM Centre for Research in Ayurveda and Allied Sciences, Udupi, and Microbiology laboratory of Fisheries College, Mangaluru.

- ✓ Participated in more than 15 state level competitions including science model, seminar, debate, classical dance, elocution etc.

PUBLICATIONS:

Total citations – 52 (Google Scholar)

H-index – 4 (Google Scholar)

i10index – 1 (Google Scholar)

Research Gate Score – 19.1

PROFILE LINK:

https://scholar.google.com/citations?user=QoVK-58AAAAJ&hl=en

https://www.researchgate.net/profile/Divya-Adiga-3

PUBLISHED PAPERS:

- Bhat, S*., **Adiga, D*.,** Shukla, V., Guruprasad, K.P., Kabekkodu, S.P. and Satyamoorthy, K., 2021. Metastatic suppression by DOC2B is mediated by inhibition of epithelial-mesenchymal transition and induction of senescence. Cell Biology and Toxicology, pp.1-22. Impact Factor – 6.69, Q1 (* Equal Contribution)
- **Adiga, D.,** Eswaran, S., Pandey, D., Sharan, K. and Kabekkodu, S.P., 2020. Molecular landscape of recurrent cervical cancer. Critical Reviews in Oncology/Hematology, p.103178. Impact Factor – 6.3, Q1
- **Adiga, D.,** Radhakrishnan, R., Chakrabarty, S., Kumar, P. and Kabekkodu, S.P., 2020. The role of calcium signaling in regulation of epithelial-mesenchymal transition. Cells Tissues Organs, pp.1-23. Impact Factor – 2.4, Q2
- Bhat, S., Kabekkodu, S.P., **Adiga, D.,** Fernandes, R., Shukla, V., Bhandari, P., Pandey, D., Sharan, K. and Satyamoorthy, K., 2021. ZNF471 modulates EMT and functions as methylation regulated tumor suppressor with diagnostic and prognostic significance in cervical cancer. Cell Biology and Toxicology, pp.1-19. Impact Factor: 6.69, Q1
- Dsouza, V.L*., **Adiga, D***., Sriharikrishnaa, S., Suresh, P.S., Chatterjee, A. and Kabekkodu, S.P., 2021. Small nucleolar RNA and its potential role in breast cancer–A comprehensive review. Biochimica et Biophysica Acta (BBA)-Reviews on Cancer, p.188501. Impact Factor- 10.6, Q1 (* Equal Contribution)
- Afzal, S., Garg, S., **Adiga, D.,** Ishida, Y., Terao, K., Kaul, S.C. and Wadhwa, R., 2020. Anti-Stress, Glial-and Neuro-Differentiation Potential of Resveratrol: Characterization by Cellular, Biochemical and Imaging Assays. Nutrients, 12(3), p.671. Impact factor – 5.717, Q1

- Shenoy, U.S., **Adiga, D.**, Kabekkodu, S.P., Hunter, K.D. and Radhakrishnan, R., 2021. Molecular implications of HOX genes targeting multiple signaling pathways in cancer. Cell Biology and Toxicology, pp.1-30. Impact Factor - 6.69, Q1
- Khan, N.G., Correia, J., **Adiga, D.,** Rai, P.S., Dsouza, H.S., Chakrabarty, S. and Kabekkodu, S.P., 2021. A comprehensive review on the carcinogenic potential of bisphenol A: clues and evidence. Environmental Science and Pollution Research, pp.1-21. Impact Factor: 4.2, Q2
- Meneur, C., Eswaran, S., **Adiga, D.,** NK, G., Mallya, S., Chakrabarty, S. and Kabekkodu, S.P., 2021. Analysis of Nuclear Encoded Mitochondrial Gene Networks in Cervical Cancer. Asian Pacific Journal of Cancer Prevention: APJCP, 22(6), pp.1799-1811. Impact Factor – 1.583, Q2
- Kabekkodu, S.P., Shukla, V., Varghese, V.K., **Adiga, D.,** Vethil Jishnu, P., Chakrabarty, S. and Satyamoorthy, K., 2020. Cluster miRNAs and cancer: Diagnostic, prognostic and therapeutic opportunities. Wiley Interdisciplinary Reviews: RNA, 11(2), p.e1563., Impact Factor – 6.8, Q1
- Shukla, V., **Adiga, D.,** Jishnu, P.V., Varghese, V.K., Satyamoorthy, K. and Kabekkodu, S.P., 2020. Role of miRNA clusters in epithelial to mesenchymal transition in cancer. Front Biosci (Elite Ed), 12, pp.48-78. Impact Factor – 2.349, Q3
- **Adiga, D.,** Eswaran, S., Sriharikrishnaa, S., Khan, G.N. and Kabekkodu, S.P., 2020. Role of epigenetic changes in reproductive inflammation and male infertility. Chemical Biology Letters, 7(2), pp.140-155. Q3
- Sriharikrishnaa, S., Shukla, V., Khan, G.N., Eswaran, S., **Adiga, D.** and Kabekkodu, S.P., 2021. Integrated bioinformatic analysis of miR-15a/16-1 cluster network in cervical cancer. Reproductive biology, 21(1), p.100482. Impact Factor – 2.3, Q1
- Sangavi Eswaran, **Divya Adiga,** Nadeem Khan G, Sriharikrishnaa S, Shama Prasada Kabekkodu, "Comprehensive Analysis of the Exocytosis Pathway Genes in Cervical Cancer", Accepted in American Journal of Medical Sciences, Impact factor – 1.962, Q2
- Amoolya Kandettu*, **Divya Adiga*,** Vasudha Devi, Padmanaban S Suresh, Sanjiban Chakrabarty, Raghu Radhakrishnan, Shama Prasada Kabekkodu, "Deregulated miRNA Clusters in Ovarian Cancer: Diagnostic, Prognostic and Therapeutic Significance", Accepted in Genes and diseases, Impact Factor – 7.1, Q1 (* Equal Contribution)

MANUSCRIPT SUBMITTED AND UNDER VARIOUS STAGES OF REVISION:

- Divyani Nayak*, **Divya Adiga*,** Nadeem Khan G, Padmalatha S Rai, Herman Sunil Dsouza, Sanjiban Chakrabarty, Natalie R Gassman and Shama Prasada Kabekkodu, "Bisphenol A – An Evolving Menace to Mitochondrial Functions", Under revision in Toxicology, Impact Factor – 4.221, Q1 (* Equal Contribution)
- Raviprasad Kuthethur, Vaibhav Shukla, Sandeep Mallya, **Divya Adiga,** Shama Prasada Kabekkodu, Lingadakai Ramachandra, PU Prakash Saxena, Kapaettu Satyamoorthy, Sanjiban Chakrabarty, "Expression analysis and function of mitochondrial genome encoded microRNAs", Under revision in Journal of Cell Science, Impact Factor – 5.28, Q1

BOOK CHAPTERS:

- Vaibhav Shukla, Jishnu Padacherri Vethil, Vinay Koshy Varghese, **Divya Adiga,** Sanjiban Chakrabarty, Shama Prasada Kabekkodu, "Confocal Microscopy: Fundamentals and Applications in Life Sciences", Book – Advanced Microscopy, Publisher – Apple Academic Press – Accepted
- **Divya Adiga,** Nadeem Khan G, Sangavi Eswaran, Sriharikrishnaa S, Sanjiban Chakrabarty, Padmalatha S Rai, Shama Prasada Kabekkodu, "Bisphenol A (BPA) Associated Signaling Pathways in Human Diseases", Book – Bisphenol A: A multi-model endocrine disruptor, Publisher – Royal Society of Chemistry – Accepted
- **Divya Adiga,** Shama Prasada Kabekkodu, "Biobanking in Cancer Research: Significance and Future Directions", Book - Bio banking for affordable healthcare practices and research, Publisher – Manipal Universal Press – Accepted
- **Divya Adiga,** Sangavi Eswaran, Nadeem Khan G, Sriharikrishnaa S, Shama Prasada Kabekkodu, "Epigenetics of Alzheimer's disease: Past, Present and Future", Publisher - Bentham Sciences - Invited

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CONFERENCE PRESENTATIONS:

- ✓ **Divya Adiga,** Kapaettu Satyamoorthy and Shama Prasada Kabekkodu, "DOC2B-Calcium-EMT-Senescence Axis Negatively Regulates Cervical Cancer Cell Metastasis", Cell la vie – Online edition, 4th biennial international conference organized by French Society of Cell Biology (SBCF) and British Society for Cell Biology (BSCB), France, September 23rd, 2021 (Poster)
- ✓ **Divya Adiga,** Vaibhav Shukla and Shama Prasada Kabekkodu, "Metastatic Suppression by DOC2B Requires Calcium for Inhibition of Epithelial-Mesenchymal Transition and Senescence Induction", 45th Annual meeting of Indian Society of Human Genetics, Sri Ramachandra Institute of Higher Education and Research, Chennai, India, February 13-15th, 2020 (Shortlisted for Young Scientist Awards presentation)
- ✓ **Divya Adiga,** Vaibhav Shukla, Kapaettu Satyamoorthy, Shama Prasada Kabekkodu, "Double C2 like Domain containing protein β (DOC2B) and its Potential Role in WNT Signaling and Senescence", International Symposium on Genome Instability: from bench to bedside, Manipal School of Life Sciences, Manipal Academy of Higher Education, Manipal, January 28–29th 2020 (Poster)
- ✓ **Divya Adiga,** Vaibhav Shukla, Shama Prasada Kabekkodu and Kapaettu Satyamoorthy, "Role of Double C2 like Domain Containing Protein β as a Regulator of Senescence and WNT Signaling", DAILAB CAFE PLUS Series 2019-2020, Biomedical Research Institute, AIST, Japan, June 21st, 2019 (Oral)
- ✓ **Divya Adiga,** Vaibhav Shukla, Shama Prasada Kabekkodu and Kapaettu Satyamoorthy, "Regulation of Senescence and Wnt Signaling by DOC2B in Cervical Cancer", 87th Annual Conference, SBCI-2018, SOLS, MAHE, Manipal, November 25-27th, 2018 (Poster)
- ✓ **Divya Adiga,** Vaibhav Shukla, Shama Prasada Kabekkodu and Kapaettu Satyamoorthy, "Regulation of Senescence and Epithelial to Mesenchymal Transition by DOC2B in Cervical cancer", ICHTR-2018, MAHE, Manipal, October 29-31st, 2018 (Oral)

- ✓ **Divya Adiga,** Vaibhav Shukla, Shama Prasada Kabekkodu and Kapaettu Satyamoorthy, "Double C2 like domain containing protein Beta (DOC2B) and its Potential Role in Senescence", NGBT-2018, Jaipur, Rajasthan, 30th September -2nd October, 2018 (Poster)
- ✓ **Divya Adiga,** Vaibhav Shukla, Jeevitha D Souza, Shama Prasada Kabekkodu and Kapaettu Satyamoorthy, Double C2 like domain containing protein Beta (DOC2B) as an Inhibitor of Epithelial to Mesenchymal Transition (EMT) in Cervical Cancer, Manipal research Colloquium, MAHE, Manipal, Karnataka, April 3-5th, 2018 (Oral)

DECLARATION:

I hereby solemnly affirm that all the details provided above are true to the best of my knowledge and belief and that at all times, I shall carry myself in a manner that lends dignity to the organization and worthy enough of the person.

Place: Manipal

Date: 27.10.2021

Divya.

Divya