

## **Dr. SHAILENDER.GUGALAVATH**

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**OBJECTIVE:** To secure a challenging position in a reputable organization to expand my learning's, knowledge, and skills.

### **Post PhD EXPERIENCE:**

**Adhoc Senior Research Fellow - (Equivalent to PDF)** at CART Cell Therapy Centre, ACTREC, Tata Memorial Hospital, TMC, Navi Mumbai, India. (From 01-04-2022 to Present); Mentor: Dr .Gaurav Narula, Project: First –In-Human Clinical Trial Using an Indigenously Developed CD-19 Targeted CAR T-cell.

**Research Associate** at Dept. of mAbs (Cell Culture) & Vaccine Development (R&D), Virchow Biotech Private Limited, Gagilapur, Hyderabad, India. 500081. (From 02-12-2019 to 31-03-2022).

### **PhD & Pre PhD EXPERIENCE:**

**Senior Research Fellow** - DST-EMR Project Entitled “*Exosomal CD151 web proteins early non-invasive diagnostic markers for triple-negative breast cancer*” (As SRF12-12-2017 to 21-08-2019).

Supervisor: Prof: Rama Rao Malla, GITAM Deemed to be University, Vishakhapatnam, India.

**Junior Research Fellow** - DRDO Project, Entitled “*Development of radioprotective siRNA therapeutics using RNAi technology*”. (03-02-2016 to 06-12-2017). Supervisor: Prof: Rama Rao Malla, GITAM Deemed to be University, Vishakhapatnam, India.

**Project Trainee Fellow** - On Support to Molecular Parasitology -Center of Excellence DBT funded project. Jawaharlal Nehru University, School of Life Science, New Delhi, India. (01-02-2014 to 31-07-2014).

Title: *Invitro sensitivity of two isolates of Entamoeba histolytica from NewDelhi to antiamoebic drugs*.

Supervisor: Prof: Jaishree Paul. UGC Research Scientist "C"(Professor)

**Project Student Fellow** - Summer Research Programme 2013 (UGC-RNP), Jawaharlal Nehru University, School of Life Science, New Delhi, India (27-05-2013 to 28-06-2013).

Title: *Cell Culture and Molecular Biology Technique*. Supervisor: Dr.Rana Pratap Singh.

**Project Student** - Department of applied chemistry, Birla Institute of Technology, Mersa, Jharkhand (15 days).

Title: *Drug Resistance Profile by Modelling Studies*. Supervisor: Dr.Ashoke Sharon.

### **LABORATORY SKILLS:**

**Cell Therapy Experiences:** Manufacturing Science and Technology of HCAR-19 Product. Process Development - quality analytics of Cell Therapy Products. Quality Management System - Cell Therapy Products & Clinical Trail Procedure.

**mAbs & Vaccine Experience:** Upstream Process Development of Rituximab and Denosumab Products and their Critical Quality Attributes. Technology Transfer of Sputnik V Product – Production, QC and Stability. Stable cell line development.

**GMP & GLP Documentation:** Literature survey, planning, execution and completion of R&D/PD activities. Drafting and revision of protocol, Compliance data into presentations and prepare technical reports. Maintain inventory, quality, compliance, safety, and lab space through active engagement in accordance with relevant lab procedures.

**Exosome Experiences:** Exosome isolation from Clinical Sample and cell culture media, Immunoprecipitation, Sample preparation for LCMS/MS, Peptide identification by mMass and Mascot software. Bioinformatics studies like Gene Ontology, STRING Analysis. Exosomal uptake by PHK 67 and CFSE Dye.

**Cell Based Assays:** Trypan Blue Assay, MTT assay, LDH assay, DNA damage assays, DCFDA dye staining, Comet assay, ELISA, Cell Migration, Invasion, Angiogenesis (Tube formation Assay).

**Molecular Biology Techniques:** Reverse Transcriptase PCR, Plasmid Isolation, Transfection, Western Blotting, Flowcytometry, Immuno fluorescence microscopy.

**Parasitic Culture Techniques:** Diphasic Media Preparation (In-house Media), Cell Culture Revival, Cryopreservation and Maintenance.

**COMPUTER AND SOFTWARE SKILLS:**

- ❖ Efficient in MASCOT, mMASS, STIRNG, Image J, Image Lab.
- ❖ Daily usage of M.S Office (Word, Power Point and Excel), and Internet proficiency.

**AWARDS:**

- ❖ ICMR- Senior Research Fellowship Award, Project Entitled “*Sensitization of metastatic tumor cells and protection of normal cells against the radiation induced metastasis and oxidative stress by silencing MMPs*” (No: 2017-2754).
- ❖ Best oral presentation award at “*National Seminar on Recent trends in Animal Biotechnology*” Dept. of Zoology, Kakatiya University, Warangal, Telangana, India.
- ❖ ABH All India level Talent & General Knowledge Test (Jr) 2003.

**EDUCATION:**

Year	Course/Degree	Discipline	Institution	Percentage
2007	Board Secondary Education	Mathematics, Science, Social Studies.	Vijaya High School, Nirmal, Telangana, India	82%
2007-2009	Board of Intermediate Education	Biology, Physics & Chemistry	Guntur Vikas Jr.College, Hyderabad, Telangana, India	85%
2009-2014	5 Years Integrated M.Sc.	Biotechnology	Kakatiya University Dept. of. Biotechnology, Warangal, Telangana, India.	81%
2015-2020	Doctor of Philosophy	Biochemistry	GITAM Deemed to be University, Vizag, Andhra Pradesh, India.	-

**PhD in Biochemistry**

**PhD thesis title:** “*Study on Effect of MMP2 Gene Silencing in Protection of Human Normal Dermal Fibroblasts and Sensitization of MCF-7 Breast Cancer Cells from Ionizing Radiation.*”

**Mentor:** Prof. Rama Rao Malla, Dept. of Biochemistry, GITAM Deemed to be University, Visakhapatnam, Andhra Pradesh, India.

**Salient features of Thesis**

The finding of my PhD will redound to the benefit of society considering at radiobiological aspects in the protection of the healthy cells and killing of the cancer cells during the radiation-based therapy. Evidence-based research suggested that Matrix MetalloProteinases-2 (MMP-2) as the highly expressed gene during radiation exposure. RNAi technology was used for silencing MMP-2 gene using a plasmid-based vector (pMMP-2). pMMP-2 protected the HDF cells from radiation induced DNA damage and repair, cell cycle arrest, loss of mitochondrial membrane potential and apoptosis whereas the opposite effect was seen in MCF-7 cells. Molecular mechanism of the opposite effect of pMMP-2 was investigated resulted in differential mode pMMP-2 action in healthy and cancer cells.

**ORAL / POSTER PERSENTATION / CONFERENCES:**

- ❖ Poster presentation at APBMT (Asia-Pacific Blood and Marrow Transplantation) Conference 2022 at Cochin, Kerala, India on “Comparative Efficacies of Point of Care Endotoxin Assays for Quality Control of CAR T Cell Products” October 06-09, 2022.
- ❖ Poster presentation on “Establishment and Validation of In Process Controls for Critical Stages of Cell Based Manufacturing” at Goa, India from 02-03 February 2023.
- ❖ Oral presentation at “National Seminar on Recent trends in Animal Biotechnology” Department of Zoology, Kakatiya University, Warangal, Telangana. on “*Entamoeba histolytica* infections in patients from New Delhi: Culture methods and Response to antiamebic drugs”.
- ❖ Oral presentation at 1<sup>st</sup> International conference on Biotechnology and Biological Sciences- Biospectrum 2017 organized by University of Engineering and Management, Kolkata on 25<sup>th</sup> & 26<sup>th</sup> August 2017. **Shailender G** and Rama Rao Malla. “MMP-2 shRNA protects human dermal fibroblasts from radiation induced DNA damage”.

- ❖ Poster presentation at APSC-2017 on “Ionizing Radiation Induces Proliferation of Human Dermal Fibroblasts” at Amaravathi Andhra Pradesh.
- ❖ Poster presentation at 102<sup>nd</sup> Indian Science Congress held at University of Mumbai, Mumbai. On “Invitro drugsensitivity of two isolates of *Entamoeba histolytica* from New Delhi to antiamoebic drugs.”
- ❖ Poster presentation at APSC-2019 on “TNBC patient derived exosomal CD151 induces angiogenesis in HUVEC cells” at Dr. BR Ambedkar University, Srikakulam.
- ❖ **Shailender G** and Rama Rao Malla. Ionization Radiation Induces proliferation of Human Dermal Fibroblasts. AP Science Congress, 2016 held at Vijayawada organized by Acharya Nagarjuna University, Dr. NTR University of Health Sciences and Krishna University.
- ❖ **Shailender G** and Rama Rao Malla. RNAi Technology: A Promising Approach of Radiation Protection. National Seminar on Recent Trends in Applied Biology (NSRTAB) organized by School of Life & Health Sciences, Adikavi Nannaya University, Rajamahendravaram, 16<sup>th</sup> & 17<sup>th</sup> August, 2018.
- ❖ Seemakumari, Deepak Kakara G K, **Shailender G**, Prasuja R and Rama Rao Malla. Environmental factors associate with cancer on set. International conference on “Water, Sanitation and Hygiene-2019 (WASH-2019), organized by Dr. B.R. Ambedkar University, Srikakulam. 23<sup>rd</sup>-24<sup>th</sup> February, 2019.
- ❖ Gavara Murali Mohan, B. Anil Kumar, **G. Shailender**, Seema Kumari and M. Rama Rao. Small molecule Inhibitor, 2-thio-6 azauridine (TUA) Inhibits Proliferation of Triple Negative Breast Cancer cells. AP Science Congress organized by Andhra Pradesh Akademi of Sciences and Andhra University, Visakhapatnam from 7<sup>th</sup>-9<sup>th</sup> November, 2017.

#### **WORKSHOPS ATTENDED:**

- ❖ 1<sup>st</sup> International School on Radiation Research-2017 (2-4 February 2017). Annamalai University, Tamil Nadu.
- ❖ 1<sup>st</sup> International Conference on Biotechnology and Biological Sciences, BIOSPECTURM 2017, University of Engineering and Management, Kolkata.
- ❖ International conference on AP-BIO-2017, GITAM Deemed to be University, Andhra Pradesh.
- ❖ Participant of 99<sup>th</sup> Indian Science Congress, KIIT University, Bhubaneswar, Odisha.
- ❖ Participant of 102<sup>nd</sup> Indian Science Congress, University of Mumbai, Mumbai.
- ❖ Participant of 103<sup>rd</sup> Indian Science Congress, University of Mysore, Mysuru.
- ❖ Participant of two International conferences, Department of Biotechnology, Kakatiya University, Warangal, Telangana.
- ❖ Attended a work shop on Software in Chemical Science Education and Research” conducted by The Department of Applied Chemistry, Birla Institute of Technology, Mersa on October 3, 2013.
- ❖ Attended a work shop on “Uses of Recombinant DNA Technology in Modern Health Care” organized by Department of Zoology, Kakatiya University, Warangal, Telangana.
- ❖ World Cancer Day-2018, Cancer Biology Lab, Department of Biochemistry, GITAM, Visakhapatnam, AP.

#### **WORKSHOP/ CONFERENCES ORGANISED:**

- ❖ Scientific Committee Member of “One day Symposium on GMP Analytical & Automated Cell Therapy Systems” Organized at CTCTC, ACTREC, Navi Mumbai. December 16<sup>th</sup> 2022.
- ❖ Scientific Member of “Series On Advancements of Cell Therapy -2022” An International Symposium and Hands-Workshop Series to held on 6<sup>th</sup> January 2023 at ACTREC, TMC, Navi Mumbai.

#### **EXTRA CURRICULAR ACTIVITIES:**

Annual member of Indian Science Congress Association, 2014-2015 and 2015-2016.

#### **PERSONAL PROFILE:**

Name : Shailender. Gugalavath  
 Father name : Dasharath Naik.  
 Date of Birth : 26 January 1991.  
 Language known : English, Hindi and Telugu.  
 Category : Scheduled Tribe

**ADDRESS FOR COMMUNICATION:** H.No:13-176/1, Rajeev Nagar, Khanapur, Nirmal, Telangana, 504203.

**PATENT FILED** (Status: Approved for IPR facilitation services by NRDC under PIII )

***“CD 151 Positive Exosomes and Use There of In the Diagnosis of Triple Negative Breast Cancer.”***

**File No: NRDC/IPFC-VSKP/PA/038/2019. Dated 01.10.2019.**

## **LIST OF PUBLICATION**

1. Shailender, Gugalavath, et al. "Effect of MMP-2 gene silencing on radiation-induced DNA damage in human normal dermal fibroblasts and breast cancer cells." *Genes and Environment* 41.1 (2019):16. <https://doi.org/10.1186/s41021-019-0131-x>. (Impactfactor:2.08)
2. Shailender, Gugalavath, et al. "shRNA-mediated matrix metalloproteinase-2 gene silencing protects normal cells and sensitizes cancer cells against ionizing-radiation induced damage" *Journal of Cellular Biochemistry*.doi:10.1002/jcb.29369 (Impact factor: 4.4).
3. Gugalavath S., Malla R.R. (2020) Cellular and Molecular Response for Sensitising Cancer Cells and Protecting the Normal Cells from Radiation Induced Damages. In: Sadhukhan P., Premi S.(eds) *Biotechnological Applications in Human Health*. Springer, Singapore.
4. Iyer, Lakshmi Rani, Neha Banyal, Shailender Naik, and Jaishree Paul. "Antioxidant enzyme profile of two clinical isolates of *Entamoeba histolytica* varying in sensitivity to antiamoebic drugs." *World Journal of Clinical Infectious Diseases* 7,no.2(2017):21-31.
5. Devi GV, Badana AK, Madhuri Ch, Murali Mohan P, Naik S, et al. (2017) Knockdown of CD151 Gene Expression Reduces Survival of Estrogen Receptor Positive Breast Cancer Cells. *J Clin Exp Oncol* 6:3.
6. Kumari, Seema, Anil Kumar Badana, G. Murali Mohan, G. Shailender Naik, and Rama Rao Malla. "Synergistic effects of coralyne and paclitaxel on cell migration and proliferation of breast cancer cell lines." *Biomedicine & Pharmacotherapy* 91(2017):436-445. (Impact factor: 3.7).
7. Badana, Anil Kumar, Madhuri Chintala, Murali Mohan Gavara, Shailender Naik, Seema Kumari, Vijaya Rachel Kappala, Bhaskar Reddy Iska, and Rama Rao Malla. "Lipid raft disruption induces apoptosis by attenuating expression of LRP6 and survivin in triple negative breast cancer." *Biomedicine & Pharmacotherapy* 97(2018):359-368. (Impact factor: 3.7)
8. Gavara, Murali Mohan, Kunal Zaveri, Anil Kumar Badana, Shailender Gugalavath, Krishna Chaitanya Amajala, Kiranmayi Patnala, and Rama Rao Malla. "A novel small molecule inhibitor of CD151 inhibits proliferation of metastatic triple negative breast cancer cell lines." *Process biochemistry* 66 (2018): 254-262. (Impact factor: 2.88)
9. Kumari, Seema, Anil Kumar Badana, Shailender G and Rama Rao Malla. "Reactive oxygen species: a key constituent in cancer survival." *Biomarker insights* 13(2018):1177271918755391.
10. Malla, Rama Rao, Seema Kumari, K. G. K. Deepak, Murali Mohan Gavara, Shailender Gugalavath, and Prasuja Rokkam. "Terpenoids as Potential Targeted Therapeutics of Pancreatic Cancer: Current Advances and Future Directions." In *Breaking Tolerance to Pancreatic Cancer Unresponsiveness to Chemotherapy*, pp. 111- 116. Academic Press, 2019.
11. Malla, Rama Rao, Seema Kumari, Murali Mohan Gavara, Anil Kumar Badana, Shailender Gugalavath, Deepak Kakara Gift Kumar, and Prasuja Rokkam. "A perspective on the diagnostics, prognostics, and therapeutics of microRNA triple-negative breast cancer." *Biophysical reviews* 11,no.2(2019):227-234.
12. Kumari, S, Mohan, MG, Shailender, G, Badana, AK, Malla, RR. Synergistic enhancement of apoptosis by coralyne and paclitaxel in combination on MDA-MB-231 a triple-negative breast cancer cell line. *J Cell Biochem*. 2019;120:1810418116. <https://doi.org/10.1002/jcb.29114>. (Impact factor: 3.4).
13. Deepak KGK, Seema Kumari, Shailender G, Rama Rao Malla "Marine natural compound cyclo(L-leucyl-L-prolyl) peptide inhibits migration of triple negative breast cancer cells by disrupting interaction of CD151 and EGFR signaling". *Chemico-Biological Interactions*. 2019. <https://doi.org/10.1016/j.cbi.2019.108872>. (Impact Factor: 2.5)
14. Prasuja Rokkam, Shailender Gugalavath, Deepak KGK, Rahul Kumar Vempati and Rama Rao Malla\*, "Prognostic Role of Hedgehog GLI1 Signaling Pathway in Aggressive and Metastatic Breast Cancers", *Current Drug Metabolism* (2020) 21:1. (Impact Factor: 2.97).
15. Malla RR, Shailender G, Kamal MA. Exosomes: Critical mediators of tumour microenvironment reprogramming. *Curr Med Chem*. 2020 Dec 16. doi: 10.2174/0929867328666201217105529. (Impact Factor: 4.18)
16. Shailender Gugalavath et al., Book Chapter Title: New Era Of CAR T Cells For Infectious Viral Diseases. Volume I- Emerging Human Viral diseases; Respiratory and Haemorrhagic Fever viral Infections, Springer Nature (Accepted)

**Date: 14 August 2023**

*Shailender*  
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