Dr. Tulimilli Venkata Subba Rao M. Pharm, Ph.D.

[Citations: 503; h-Index: 8; i10-index: 8]

Assistant Professor, Department of Pharmacology,

KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada, Andhra Pradesh, India.

Indian Passport Number: AM771531 | subbaraotulimilli23@gmail.com | +91-891-915-9878

Google Scholar | ResearchGate | ORCID | NCBI Search ID: SubbaRao V. Tulimilli

EDUCATION

Jan 2020 – Dec 2025	Ph.D. in Pharmaceutical Sciences, JSS Medical College, JSS Academy of Higher Education & Research, Mysuru, Karnataka, India.
Sept 2014 – Nov 2016	Master of Pharmacy (Pharmacology), University College of Pharmaceutical Sciences, Acharya Nagarjuna University, Guntur, Andhra Pradesh, India. (9.4 CGPA)
Oct 2010 – April 2014	Bachelor of Pharmacy, University College of Pharmaceutical Sciences, Acharya Nagarjuna University, Guntur, Andhra Pradesh, India. (77%)

CURRENT POSITION

Mar 28th 2026 – Till date	Working as Assistant Professor in the Department of Pharmacology, KVSR Siddhartha College of Pharmaceutical Sciences, Vijayawada, Andhra Pradesh, India.

RESEARCH EXPERIENCE

Nov 2019 – Dec 2025 (6.1 years)

Ph.D. Scholar and Senior Research Fellow (ICMR Funded Project)

Centre of Excellence in Molecular Biology & Regenerative Medicine (CEMR) Laboratory, Department of Biochemistry, JSS Medical College, JSS Academy of Higher Education & Research, Mysuru, Karnataka, India.

Topic: Targeting Hydroxy prostaglandin Dehydrogenase (HPGD) Expression Using Small Molecule Modulators for the Treatment of Cervical Cancers (*Pharmacology & Therapeutics* 2025, IF-12.5)

Research activities:

1. Identified downregulation of HPGD (tumor suppressor protein) in cervical cancer tissues.
2. Demonstrated that pro-inflammatory cytokines produced from activated tumor associated macrophages contribute for the downregulation of HPGD in cervical cancer tissues.
3. Reported the involvement of Nrf2-HPGD axis in cervical cancers.

Engaged in multiple collaboration projects:

1. Contributed in the development of EAC induced solid tumors in STZ & high-fat diet induced diabetes model in *Swiss albino* mice (*Plos one* 2025, IF-2.3)
2. Actively involved in the evaluation of Folate targeting self-limiting hyperthermic nanoparticles for controlled photothermal therapy in HeLa cells (*Journal of Materials Chemistry B* 2023, IF-5.7)
3. Participated in the assessment of clinical profile and treatment outcomes in vaccinated & unvaccinated SARS-CoV-2 infected patients (*Vaccines* 2022, IF-3.4, *Diseases* 2024, IF-3.0)

Feb 2018 – May 2018 (3 months)

Project Assistant (Grade III) (GAP Project)

Dr. Srigiridhar Kotamraju's Lab, Principal Scientist, Department of Applied Biology, CSIR- Indian Institute of Chemical Technology, Hyderabad, Telangana, India.

Topic: Role of AMPK in Vascular Aging

Research activities:

1. Screening of compounds in ovarian (SK-OV-3), pancreatic (MIA PaCa-2), prostate (DU145) and breast (MDA-MB-231) cancer cell lines.
2. Assisted in development of orthotopic mouse model of breast cancer in SCID mice by implanting MDA-MB-231 cells (stably expressing either GFP alone or MTDH-Wt or MTDHΔ7) into the mammary fat pad. (Acknowledged in *Oncogene* 2020, IF-7.3).

Dec 2015 – Oct 2016 (10 months)

Master's Research Project

Dr. Amitava Das's Lab, Chief Scientist, Department of Applied Biology, CSIR-IICT (Indian Institute of Chemical Technology), Hyderabad, Telangana, India.

Topic: Development of Thioacetamide-Induced *in vivo* and *in vitro* Models of Liver Fibrosis

Research activities:

1. Contributed in generation of hepatic fibrosis in C57BL/6J mice by administering TAA and evaluating biochemical, histological, immunological and gene expression studies in liver samples.

2. To study the cellular and molecular pathophysiology in *in vitro* model of liver fibrosis was developed by treating HepG2 cells with TAA and its conditioned media was collected to assess the activation profile of hepatic stellate cells (HSCs). (*Canadian journal of physiology and pharmacology* 2018, IF-1.3).

TECHNICAL SKILLS

- **Cell biology techniques:** Experienced in handling various cancer and normal cell lines (adherent and suspension cultures) from human and mouse origin; generation of modified cell lines with overexpression, knockdown models using Lipofectamine and nucleofection methods; differentiation of monocytes to activated macrophages using cancer cell conditioned media.
- **Cell based assays:** *In vitro* compound screening in 96 well plate format using SRB, MTT and MTS assays, dual acridine orange and ethidium bromide (AO/EtBr) staining for determining cell death using fluorescent microscopy, DAPI staining for cell cycle analysis using NC-3000 apparatus, wound healing assay for determination of migratory potential of cancer cells.
- **Protein expression studies:** Western blotting, Immunohistochemistry (IHC), Immunofluorescence (IF), Competitive and Sandwich ELISA.
- **Bacterial culture techniques:** Preparation of bacterial culture media; isolation of bacteria using streak plate, spread plate, and pour plate methods; preparation of chemically competent cells using $CaCl_2$; preparation of bacterial freeze stocks; transformation, isolation, purification of plasmid.
- ***In vivo* techniques:** small animal (mice, rat, and guinea pig) handling, dosing (oral, intraperitoneal, intramuscular), blood collection (retroorbital, tail vein, cardiac puncture), anesthetization (Ketamine/Xylazine), euthanization and dissection and collection of vital organs (brain, heart, stomach, pancreas, liver, kidneys, spleen, tumors).
- ***In vivo* models:** Development of diabetes (using STZ & high-fat diet) and Ehrlich Ascites Carcinoma (EAC) induced solid tumors in *Swiss albino* mice. Development of orthotopic mouse model of breast cancer in SCID mice. Development of chemical induced liver fibrosis models in C57BL/6J mice.
- **Imaging techniques:** Fluorescent, light and inverted microscopy.
- **Scientific writing:** Authored as primary and co-author in fourteen articles.
- **IT and software skills:** MS Office, GraphPad Prism, ImageJ, EndNote, Scientific images creation using BioRender.

PUBLICATIONS [Journal Impact Factor (IF) as of 2025]

1. **SubbaRao V. Tulimilli**, et al. "Recent advancements in the application of artificial intelligence-based approaches for screening, diagnosis, prognosis and treatment of cervical cancer." ***Oncology Reviews***, (2026), **[IF-5.2]**
2. Karnik, Medha, **SubbaRao V. Tulimilli**, et al. "An Overview of the Mechanisms of HPV-Induced Cervical Cancer: The Role of Kinase Targets in Pathogenesis and Drug Resistance." ***Cancers***, (2026), **[IF-4.4]**
3. Bettada, Vidya G., Chaithanya G. Basavaraju, Shalini H, **SubbaRao V. Tulimilli**, et al. "Vitamin D3 reduces the viability of cancer cells in vitro and retard the EAC tumors growth in mice." ***PloS one***, (2025), **[IF-2.3]**
4. **SubbaRao V. Tulimilli** et al. The tumor suppressor role and epigenetic regulation of 15-hydroxyprostaglandin dehydrogenase (15-PGDH) in cancer and TME. ***Pharmacology & Therapeutics*** (2025), **[IF-12.5]**
5. Dallavalasa, Siva, **SubbaRao V. Tulimilli**, et al. Vitamin D in cancer prevention and treatment: A review of epidemiological, preclinical, and cellular studies. ***Cancers***, (2024), **[IF-4.4]**
6. C, Pras, Siva D., **SubbaRao V. Tulimilli**, et al. SARS-CoV-2 Infection Positively Correlates with Hyperglycemia and Inflammatory Markers in COVID-19 Patients: A Clinical Research Study. ***Diseases***, (2024), **[IF-3.0]**
7. Dallavalasa, Siva, **SubbaRao V. Tulimilli**, et al. COVID-19: diabetes perspective—pathophysiology and management. ***Pathogens***, (2023), **[IF-3.3]**
8. George, Sharon, Asha Srinivasan, **SubbaRao V. Tulimilli**, et al. Folate targeting self-limiting hyperthermic nanoparticles for controlled photothermal therapy. ***Journal of Materials Chemistry B***, (2023), **[IF-5.7]**
9. **SubbaRao V. Tulimilli**, et al. Variants of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and vaccine effectiveness. ***Vaccines***, (2022), **[IF-3.4]**
10. Korishettar, Ganesh, Prashanth C, **SubbaRao V. Tulimilli**, et al. Assessment of clinical profile and treatment outcome in vaccinated and unvaccinated SARS-CoV-2 infected patients. ***Vaccines***, (2022), **[IF-3.4]**
11. Beeraka, Narasimha M., **SubbaRao V. Tulimilli**, et al. COVID-19 effects on geriatric population and failures of aminoquinoline therapy: compilation of studies from EU, USA, and China; Safety and efficacy of vaccines in the prevention and treatment of COVID-19. ***Current Medicinal Chemistry***, (2022), **[IF-3.5]**
12. Dallavalasa, Siva, Narasimha M. Beeraka, Chaithanya G. Basavaraju, **SubbaRao V. Tulimilli**, et al. The role of tumor associated macrophages (TAMs) in cancer progression, chemoresistance, angiogenesis and metastasis-current status. ***Current Medicinal Chemistry***, (2021), **[IF-3.5]**

13. Bandi, Deepa R., **SubbaRao V. Tulimilli**, et al. HCQ Exhibits Better Binding to the Main Protease (Mpro) Compared to Spike Protein (S protein) of SARS-CoV-2: An In-silico Analysis. ***Clinical Cancer Drugs***, (2021).
14. Beeraka, Narasimha M., **SubbaRao V. Tulimilli**, et al. The current status and challenges in the development of vaccines and drugs against SARS-CoV-2. ***BioMed Research International***, (2021), **[IF-2.3]**
15. Mekala, Sowmya, **SubbaRao V. Tulimilli**, et al. Cellular crosstalk mediated by platelet-derived growth factor BB and transforming growth factor β during hepatic injury activates hepatic stellate cells. ***Canadian Journal of Physiology and Pharmacology***, (2018), **[IF-1.3]**

FELLOWSHIP, AWARDS & RECOGNITIONS

1. **Distinguished Alumnus Award:** representing University College of Pharmaceutical Sciences on the occasion of **Golden Jubilee Celebrations (1976 - 2026) of Acharya Nagarjuna University**, Guntur, Andhra Pradesh, India (Sep 2026).
2. **First Best Oral Presentation Award:** Research Scholars Conferences - 2025 in Health Sciences and Life Sciences, conducted by Research division, JSS AHER, Mysuru, Karnataka, India (Feb 2025).
3. **Travel grant from JSS AHER:** for presenting poster in 44th International Conference of the Indian Association for Cancer Research (IACR-2025), at Chittaranjan National Cancer Institute (CNCI), Kolkata, West Bengal, India (Jan 2025).
4. Qualified Joint **CSIR-UGC NET-LS** (Lectureship) conducted by CSIR with All India Rank **(AIR) 60** (Jun 2018).
5. Awarded with Graduate Pharmacy Aptitude Test **(GPAT) fellowship** of **Rs.12,400/month** from All India Council for Technical Education (AICTE) for **2 years** while pursuing Master of Pharmacy (from Oct 2014 to Oct 2016).
6. Qualified **GPAT entrance exam** conducted by AICTE with **AIR 2005** (2nd time) in 2015.
7. Qualified **NIPER-JEE** (National Institute of Pharmaceutical Education and Research Joint Entrance Examination) conducted by NIPER-Mohali with **AIR 360** in 2014.
8. Qualified **GPAT entrance exam** conducted by AICTE with **AIR 3377** (1st time) in 2014.
9. Secured **1st prize in quiz competition** conducted by Nirmala College of Pharmaceutical Sciences, Guntur district, Andhra Pradesh, India (2013).
10. Secured **3rd prize** in regional (Guntur district) level **quiz competition** conducted by MYBO Group (2012).

TEACHING AND ADMINISTRATION EXPERIENCE

Jan 2020 – June 2024	**Taught Biochemistry for MBBS, Medical BSc. & MSc. course** students as a part of teaching program for PhD scholars (4.5 years).
June 2018 – Aug 2019 (15 months)	Worked as **Assistant Professor of Pharmacology** (full time) at Green Royal Academy of Pharmaceutical Education and Sciences, West Godavari district, Andhra Pradesh, India. *Duties:* **Taught Pharmacology**, **Medicinal Chemistry**, **Pharmacognosy & Phytochemistry**, and **Chemistry of Natural Products** for B. Pharmacy students.
Dec 2016 – Jan 2018 (14 months)	Worked as **Assistant Professor of Pharmacology** (full time) at Green Royal Academy of Pharmaceutical Education and Sciences, West Godavari district, Andhra Pradesh, India. *Duties:* **Taught Human Anatomy & Physiology**, **Pharmacology**, and **Microbiology** for B. Pharmacy students. Worked as **examination cell in-charge**. Acted as **observer** and **examiner** for UG & PG exams, lab exams conducted by Jawaharlal Nehru Technological University, Kakinada. **Initiated GPAT entrance exam coaching** (with my own special interest) for 3rd & 4th year B. Pharmacy students (~n=25) and aided in getting 2 AIR ranks in 2018 GPAT entrance exam.

SELECTED ORAL AND POSTER PRESENTATIONS

1. **SubbaRao V. Tulimilli** et al., Expression of 15-Prostaglandin Dehydrogenase (15-PGDH) Inhibited the Progression of EAC Solid Tumors in *Swiss albino* mice and Induced Death Signaling in Cervical Cancer Cells. Oral presentation in Research Scholars Conference in Health Sciences and Life Sciences – 2025 at JSS AHER, Mysuru, Karnataka, India, 27th & 28th February, 2025.
2. **SubbaRao V. Tulimilli** et al., Expression of 15-prostaglandin dehydrogenase (15-PGDH) induced apoptosis in cervical cancer cells *in vitro* and inhibited EAC solid tumors *in vivo*. Poster presentation in 44th Annual Meeting and International Conference of the Indian Association for Cancer Research (IACR) at Chittaranjan National Cancer Institute (CNCI), Kolkata, India, 16th to 18^{th,} January, 2025.
3. **SubbaRao V. Tulimilli** et al., Targeting Hydroxy Prostaglandin Dehydrogenase (HPGD) Expression Using Hydroxy Chloroquine (HCQ) Inhibits the Viability by Apoptosis Induction and Retards the Migration of Cervical Cancer Cells *In Vitro*. Poster presentation in 41st Annual Conference of Indian Association for Cancer Research (IACR) at Amity University, Noida, Uttar Pradesh, India, 2nd to 5th March, 2022.
4. **SubbaRao V. Tulimilli** et al., Repurposing anti-malarial drug for the treatment of cervical cancers. E-poster presentation in National Symposium on Translation Research on Future Pharmaceuticals at JSS College of Pharmaceutical Sciences, Ooty, Tamil Nadu, India, 4th & 5th November, 2022.

5. Sushmitha Adishesha, **SubbaRao V. Tulimilli** et al., *In silico* and *in vitro* evaluation of reported 15-PGDH activators for the inhibition of cancer cell growth. Oral presentation in National Scientific Conclave on Interdisciplinary Research at SDU AHER, Kolar, Karnataka, India, 4th & 5th February, 2025.
6. Medha Karnik, **SubbaRao V. Tulimilli** et al., Pharmacological and genetic ablation of nuclear factor erythroid2-related factor 2 (NRF2) retards cervical cancer cells growth by promoting the expression of anti-inflammatory tumor suppressor protein hydroxyprostaglandin dehydrogenase (HPGD). E-Poster presentation in International Conference on Global Collaboration in Pharmaceuticals Bridging Borders, Breaking Barriers at JSS College of Pharmacy, Ooty, Tamil Nadu, India, 15th to 17th March, 2024.
7. Medha Karnik, **SubbaRao V. Tulimilli** et al., Oxidative stress regulatory networks in cervical cancer: Establishing the connection between NRF2 and HPGD. Oral presentation in National Conference on Current Progress in Biochemistry at Karnataka University, Dharwad, Karnataka, India, 24th & 25th January, 2024
8. Medha Karnik, Venugopal R. Bovilla, **SubbaRao V. Tulimilli** et al., Expression profile of proinflammatory cytokines IL-6 and IL-8 in the cervicovaginal lavage collected from healthy and cervical cancer patients in comparison with established cervical cancer cell lines exposed or not exposed to anti-inflammatory agents. Poster presentation in 42nd Annual Conference of Indian Association for Cancer Research (IACR) at Advanced Centre for Treatment, Research and Education in Cancer (ACTREC), Mumbai, India, 12th to 16th January, 2023.

SELECTED WORKSHOPS AND CONFERENCES ORGANIZED

1. **Resource Person:** 6-days **DST-PURSE** supported **workshop** on "Molecular Methods and Bioinformatics". Organized by Center of Excellence in Molecular Biology and Regenerative Medicine (CEMR) Laboratory, Department of Biochemistry, JSS Medical College, JSS AHER, Mysuru, between 10th – 15th November, 2025.
2. **Organizing Committee Member:** 3-days **Indo-Swedish Conference** on "Air pollution exposure and respiratory toxicology" & **Workshop** on "Methods of assessing cytotoxicity, anti-oxidant, anti-inflammatory and reactive oxygen species (ROS)". Organized by the Department of Respiratory Medicine and Biochemistry, CEMR Laboratory, JSS AHER, Mysore, Karnataka, India, Department of Environmental Science and Engineering, IIT Bombay, Mumbai, Maharashtra, India, and Institute of Environmental Medicine, Karolinska Institute, Stockholm, Sweden, between 2nd and 4th January, 2024.
3. **Organizing Committee Member: DST-SERB** Sponsored **International Conference** on "Genetics and Epigenetics of Cancer." Organized by Division of Biochemistry, School of Life Sciences, JSS AHER, Mysuru, between 30th and 31st October, 2023.
4. **Demonstrator: Workshop** on "Cell Culture & Cytotoxicity Assessment." Organized by the Department of Biochemistry, JSS Medical College, and JSS AHER as a part of the 9th International Congress of the Society for Ethnopharmacology, India, on 21st April, 2022.
5. **Organizing Committee Member:** 7-days **Indo-US Workshop** on "Molecular epidemiology of infectious diseases: Translational research from bench to bedside and to the field." Organized by the Departments of Biochemistry, JSS Medical College, JSS AHER, in association with the University of Arizona, USA; University of Toledo, USA; and Public Health Research Institute of India, India, between 21st to 27th March 2022. Supported in part by NIH-Fogarty International, NIH, USA; DST under STUTI scheme and DRDO, Govt. of India.
6. **Organizing Committee Member:** 2-days **Indo-Swedish Conference** on "Clinical, Epidemiological and Experimental Approaches to Assess Air Pollution Related Chronic Health Effects". Organized by the Department of Respiratory Medicine and Biochemistry, JSS Medical College, and JSS AHER in association with Karolinska Institute, Sweden, on 6th & 7th January, 2020.

REFEREES

Dr. Ravindra P. Veeranna (Mentor)
Dean and Professor,
(Microbiology and Immunology),
Xavier University School of Veterinary Medicine and
Xavier University School of Medicine,
Aruba, Aruba, AWS.
Phone: +91-974-197-2957
Email: raviravindra1@gmail.com

Dr. M. N. Suma (PhD Guide)
Dean (Academics) - II,
Professor & Dean, Faculty of Biomedical Sciences,
CEMR Laboratory, Department of Biochemistry,
JSS Medical College, JSS Academy of Higher
Education & Research, Mysuru, Karnataka, India.
Phone: +91- 810-568-7797
Email: mnsuma@jssuni.edu.in

Dr. M.V.S.S.T. SubbaRao (PhD Supervisor)
Professor of Cellular and Molecular Biology,
CEMR Laboratory,
Department of Biochemistry, JSS Medical College,
JSS Academy of Higher Education & Research,
Mysuru-570015, Karnataka, India.
Phone: +91- 810-527-8621
E-mail: mvsstsubbarao@jssuni.edu.in

Dr. Amitava Das (Master's dissertation supervisor)
Chief Scientist,
Department of Applied Biology,
CSIR-IICT (Indian Institute of Chemical Technology),
Ministry of Science & Technology, Government of India,
Hyderabad-500007, Telangana, India.
Phone: +91-961-865-8585
Email: amitavadas@iict.res.in