



**Geeta K Vemuganti, MD, DNB, FAMS, FICP, FARVO**

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**Profile and Research Interests:**

Dr Geeta Vemuganti joined to lead and develop the fledgling School of Medical Sciences at the University of Hyderabad in December 2010 after a long stint as Head of Ophthalmic Pathology Laboratory and Head of Sudhakar and Sreekant Ravi Stem Cell Biology Laboratory at the renowned L V Prasad Eye Institute, Hyderabad. Her experience and expertise is in the area of ocular tumors and stem cell biology, where she has contributed cutting edge research that has led to bench-to-bedside applications. Her current research focuses on cancer stem cells in Retinoblastoma, new animal models, role of mesenchymal stem cells in Leprosy and human lacrimal gland cultures. She held several honorary positions, including an adjunct professorship of ophthalmology in the School of Medicine and Dentistry, University of Rochester, USA. She also served as Chair of the Program Committee, of the AP section and Global Member Committee of the Association for Research in Vision and Ophthalmology (ARVO), and President, Indian Society of Ophthalmic Pathology Indian Society of Ophthalmic Pathology, among other professional and academic affiliations. Dr Vemuganti earned her basic medical degree at the JLN Medical College, Ajmer before completing her MD in Pathology at the Nizam's Institute of Medical Sciences. She has had advanced training in ocular pathology at the Doheny Eye Institute, Los Angeles, USA and has been a visiting pathologist at the Eye and Ear Infirmary and Department of Pathology, University of Illinois, Chicago. She has published widely, authoring more than papers in journals of international repute. She is also a recipient of several national and international awards including the recent Senior Achievement award by American Academy of Ophthalmology and Fellow, ARVO. Dr Vemuganti has received many prestigious academic as well as research grants from national and international agencies and has guided many doctoral students in both basic and applied research projects

Publications: Citations: 6600, H Index: 47 ( Google scholar citation)

**Selected Publications:**

1. Nair RM, Narayana RVL, Gali S, Kallamadi PR, PRabhu V, Manukonda R, Nemani H, Kaliki S, Vemuganti GK. A short-term Chick Embryo in vivo xenograft model to study Retinoblastoma Cancer Stem Cells. In press in Indian J Ophthalmol

2. Manjandavida FP, Honavar SG, Murthy R, Das S, Vemuganti GK, Mulay K, Reddy VAP. Does Multimodal Treatment Improve Eye and Life Salvage in Adenoid Cystic Carcinoma of the Lacrimal Gland? *Ophthalmic Plast Reconstr Surg*. 2021 Dec 6.
3. Narayana RVL, Jana P, Tomar N, Prabhu V, Nair RM, Manukonda R, Kaliki S, Coupland SE, Alexander J, Kalirai H, Kondapi AK, Vemuganti GK. Carboplatin- and Etoposide-Loaded Lactoferrin Protein Nanoparticles for Targeting Cancer Stem Cells in Retinoblastoma In Vitro. *Invest Ophthalmol Vis Sci*. 2021 Nov 1;62(14):13.
4. Manukonda R, Pujar A, Ramappa G, Vemuganti GK, Kaliki S. Identification of novel RB1 genetic variants in Retinoblastoma patients and their impact on clinical outcome. *Ophthalmic Genet*. 2021 Oct 13:1-9.
5. Vemuganti GK. Viral etiology in retinoblastoma. *Indian J Ophthalmol*. 2021 Aug;69(8):1990. doi: 10.4103/ijo.IJO\_1801\_21
6. Singh S, Naidu GC, Vemuganti G, Basu S. Morphological variants of meibomian glands: correlation of meibography features with histopathology findings. *Br J Ophthalmol*. 2021 Aug 20;bjophthalmol-2021-318876. doi: 10.1136/bjophthalmol-2021-318876.
7. Nandyala S, Mohamed A, Chaurasia S, Kaliki S, Ramappa M, Vemuganti GK. Ocular Features in a Large Cohort of Indians With Xeroderma Pigmentosum. *Cornea*. 2021 May 1;40(5):571-577
8. Singh S, Mishra DK, Shanbhag S, Vemuganti G, Singh V, Ali MJ, Basu S. Lacrimal Gland Involvement in Severe Dry Eyes after Stevens-Johnson Syndrome. *Ophthalmology*. 2021 Apr;128(4):621-624.
9. Vest SD, Mikkelsen LH, Holm F, Rasmussen PK, Hindso TG, Knudsen MKH, Coupland SE, Esmali B, Finger PT, Graue GF, Grossniklaus HE, Honavar SG, Mulay K, Sjö LD, Sniegowski MC, Vemuganti GK, Thuro BA, Heegaard S. Lymphoma of the Lacrimal Gland - An International Multicenter Retrospective Study. *Am J Ophthalmol*. 2020 Nov;219:107-120.
10. Hindsø TG, Esmali B, Holm F, Mikkelsen LH, Rasmussen PK, Coupland SE, Finger PT, Graue GF, Grossniklaus HE, Honavar SG, Khong JJ, McKelvie PA, Mulay K, Sjö LD, Vemuganti GK, Thuro BA, Heegaard S. International multicentre retrospective cohort study of ocular adnexal marginal zone B-cell lymphoma. *Br J Ophthalmol*. 2020 Mar;104(3):357-362.
11. Chévez-Barríos P, Eagle RC, Krailo M, Piao J, Albert D, Xia C, Gao Y, **Vemuganti G**, Javed A, Khetan V, Honavar SG, O'Brien J, Leahey A, Matthay K, Meadows A, Chintagumpala M. A Study of Unilateral Retinoblastoma With and Without Histopathologic High-Risk Features and the Role of Adjuvant Chemotherapy-A Children's Oncology Group (COG) study. *J of Clin Oncology J Clin Oncol*. 2019 Nov 1;37(31):2883-2891
12. Tiwari S, Nair RM, Vamadevan P, Ali MJ, Naik MN, Honavar SG, **Vemuganti GK**. Establishing and characterizing lacrispheres from human lacrimal gland for potential clinical application. *Graefes Arch Clin Exp Ophthalmol*. 2018 Apr;256(4):717-727
13. A Nair RM, Balla MMS, Khan I, Kalathur, RKR, Kondaiah P, **Vemuganti GK**. In vitro characterization of CD133lo Cancer stem cells in Retinoblastoma Y79 cell line. *BMC Cancer*. 2017 Nov 21;17(1):779.
14. Kirkegaard MM, Rasmussen PK, Coupland SE, Esmali B, Finger PT, Graue GF, Grossniklaus HE, Honavar SG, Khong JJ, McKelvie PA, Mulay K, Prause JU, Ralfkiaer E, Sjö LD, Toft PB, Vemuganti GK, Thuro BA, Curtin J, Heegaard S. Conjunctival Lymphoma-An International Multicenter Retrospective Study. *JAMA Ophthalmol*. 2016 Feb 18.
15. Tiwari S, Bhatt A, Nagamodi J, Ali MJ, Ali H, Naik MN, Reddy VAP, **Vemuganti GK**. Aqueous Deficient Dry Eye Syndrome Post Orbital Radiotherapy: A 10-Year Retrospective Study. *Transl Vis Sci Technol*. 2017 Jun 15;6(3):19.

- (Study conceived, planned and written by me, executed by PhD scholar, lead author of the manuscript with 80% contribution)
16. Tiwari S, Ali MJ, Balla MM, Naik MN, Honavar SG, Reddy VA, **Vemuganti GK**. Establishing human lacrimal gland cultures with secretory function. PLoS One. 2012;7(1):e29458.  
(Study conceived, planned and written by me, executed by PhD scholar, lead author of the manuscript with 70% contribution)
  17. Sangwan VS, Basu S, **Vemuganti GK**, Kunjal S, Subramaniyam S, Sannapaneni K, Gaddipati S, Tiwari S, Dorairajan B. Clinical Outcome of Xeno-Free Autologous Cultivated Limbal Epithelial Transplantation: A Ten Year study. Br J Ophthalmol. 2011 Nov;95(11):1525-9  
Study conceived, planned and executed by me, contributed to manuscript writing, analysis with inputs from others-50% contribution)
  18. Mariappan I, Maddileti S, Savy S, Tiwari S, Gaddipati S, Fatima A, Sangwan VS, Balasubramanian D, **Vemuganti GK** In vitro culture and expansion of human limbal epithelial cells. Nat Protoc. 2010 Aug;5(8):1470-9. Epub 2010 Jul 29.  
(Study conceived, planned and executed by me, led the manuscript writing by the first author, - 50% contribution)
  19. Manderwad GP, Gopinathan G, Khosla S, **Vemuganti GK**, Kannabiran C, Honavar SH. Hypomethylation of the *DNMT3L* Promoter in Ocular Surface Squamous Neoplasia (OSSN) Arch Pathol Lab Med. Arch Pathol Lab Med. 2010 Aug;134(8):1193-6.  
(Study conceived, planned and executed by by PhD Scholar, manuscript writing by scholar with myinputs--40% contribution)
  20. Balla MM, **Vemuganti GK**, Kannabiran C, Honavar SG, Murthy R. Phenotypic Characterization of Retinoblastoma for the Presence of Putative Cancer Stem-like Cell markers by Flow Cytometry. Invest Ophthalmol Vis Sci. 2008 Nov 21.  
(Study conceived, planned, written by me, executed by my PhD scholar, analysis, manuscript writing- contribution-70% contribution)
  21. Polisetty N, Fatima N, Madhira S, Sangwan VS, **Vemuganti GK**. Mesenchymal cells from limbal stroma of the eye. Mol Vis. 2008 Mar 4;14:431-42  
(Study conceived, planned by me, executed by my PhD scholar and other students, manuscript writing with inputs from others-70% contribution)
  22. **Vemuganti GK**, Naik M, Honavar SG, GC Shekar. Rapid Intraoperative Diagnosis of Tumors of the Eye and Orbit by Squash and Imprint Cytology. Ophthalmology 2004 May;111(5):1009-1015.  
(Study conceived, planned and executed by me, manuscript writing with inputs from others-60% contribution)
  23. **Vemuganti GK**, Kashyap S, Sangwan VS, Singh S. *Ex-vivo* potential of cadaveric and fresh limbal tissues to regenerate cultured epithelium. Indian J Ophthalmol 2004;52:113-20.  
(Study conceived, planned and executed by by Phd student under by guidance, manuscript writing with inputs from others-70% contribution)
  24. **Vemuganti GK**, Garg Prashant, Gopinathan U, Naduvilath TJ, John RK, Rajeev B, Rao GN. Evaluation of agent and host factors in progression of Mycotic keratitis: a histological and microbiological study of 167 buttons. Ophthalmology 2002 Aug;109(8):1538-1546.  
(Study conceived, planned, executed and analyzed by me, manuscript writing with inputs from others-70% contribution)

#### **Selected Awards and Honors**

1. Delivered Dr. V.R.Khanolkar Oration of National Academy of Medical Sciences, October 2021
2. Invited by the International Agency for Cancer Research as the member of the Editorial Board of 5<sup>th</sup> Edition of WHO Blue book on Classification of Eye Tumors
3. Interviewed by Nature Group to comment on the paper on Organoids of Lacimal gland, March 2021

4. Advisor, Optometry Council of India (OCI), December 2020
5. Member of Board of Studies for PG Diploma in Stem Cell Technology and Regenerative Biolog, MAHE, Manipal, 15<sup>th</sup> October 2020
6. Dr K S Ratnakar Memorial Oration at Global Health Education and Research Foundation, 16<sup>th</sup> November 2020
7. Member of National Apex Committee, Stem Cell Research, Dept of Health Research, ICMR, Sept 2020
8. Invited talk at the Ames Research Centre, NASA, 9<sup>th</sup> May 2019
9. Honored as Fellow of Association of Research in Vision and Ophthalmology, ARVO 2019
10. Member of Technical Expert Committee on Stem cells and Regenerative medicine, Department of Biotechnology, India
11. Member of TAS - Sectional Committee in " Medical, Health and Pharmaceuticals Sciences" August 2018
12. Member of Ethics and Regulations in Human Research Committee, ARVO(2017-2020)
13. Member of ICMR- Expert Group on Stem Cell Research & Therapy August 2018
14. The Women in Eye and Vision Research (WEAVR) initiative of ARVO selected Geeta K Vemuganti to feature several women who have made significant contributions to the field of eye and vision research as part of the International Women's Day celebration in March.- for her role as a pioneer in culturing human limbal epithelial stem cells for clinical transplantation in India.
15. Elected fellow of Telangana State Academy of Sciences, January 2018
16. Invited expert of the WHO consensus and Editorial Board meeting for Classification of Eye Tumors, Lyon, France, 11-13<sup>th</sup> of January 2018
17. Vishishta Puruskar 2017 by Dr Ramineni Foundation, USA
18. Member of Task Force on "Stem Cell Research and Regenerative Medicine" Department of Biotechnology, N Delhi
19. American Academy of Ophthalmology Senior Achievement Award 2017
20. Mentor in the Pilot Women Leadership Development Program of ARVO 2017
21. Distinguished Lecture at the **1<sup>st</sup> Middle East Ophthalmic Oncology Conference, Dec 15-16<sup>th</sup> 2016, Cairo, Egypt**
22. Member of National Apex Committee- Stem Cell Research and Therapy
23. Keynote address at the Women in Eye and Vision Research (WEAVR) at Association of Research in Vision and Ophthalmology, 1-5<sup>th</sup> May, 2016 Seattle, USA
24. **Distinguished Lecture at Central University Orissa on Eye diseases: bench to bedside journey'** 25<sup>th</sup> April 2016
25. 9<sup>th</sup> Indian College of Pathology Oration 2015 on 5<sup>th</sup> December at IAPM meeting, Kochi, Kerala.
26. Distinguished Lecture Schepen's Eye Research Institute, Harvard Medical School, Boston, May 2014 on "Human lacrimal gland cultures: progress and promise"
27. Member of Expert Group for Stem Cell Task Force, ICMR
28. Awarded the 2013 ARVO/Merck Collaborative Research Fellowship Award by ARVO Foundation for Eye Research and the Association for Research in Vision and Ophthalmology (ARVO) through a grant from Merck for the proposal entitled " Effect of Androgens on Human Lacrimal Gland Cells In-vitro."
29. Invited to deliver the Lt Gen M A Baig Shaheed Memorial lecture on Stem cell therapy at the 11<sup>th</sup> Biennial meeting of SAARC Academy of Ophthalmology and 16<sup>th</sup> Islamabad Congress of Ophthalmology at Bhurban, Pakistan 3-6<sup>th</sup> October 2013

30. National Academy of Medical Sciences Amritsar Award 2007 given at the NAMS meeting, Patiala, 31<sup>st</sup> October 2010
31. Shri Shyam Lal Saksena Memorial Award for year 2010 from National Academy of Medical Sciences

Ongoing Projects

1. ICMR grant in collaboration with NIMS team on Characterizing the Primary and induced Schwann Cells cultures for myelination: in vitro and In-vivo model. Sanctioned
2. ICMR grant in collaboration with LVPEI, IIT Roorkee on Evaluating the role of circulating extracellular vesicles in retinoblastoma tumor progression and metastasis. Grant sanctioned
3. SERB Grant entitled "Elucidating the molecular mechanisms and biomarkers associated with progression and prognosis of retinoblastoma" In collaboration with LVPEI. Amount: 59 lakhs
4. IoE Research Grant 3 (UOH-IOE-RC3-21-026 )entitled "*Role of tumor microenvironment in Retinoblastoma*"- Rs 49.6 Lakhs
5. IoE Research Grant (UOH-IOE-RC4-21-006) en titled " Simple cost effective in vivo xenograft model for cancer research and drug testing – Rs 44.28lakhs
6. SERB grant on "Exploring the potential of lacrimal gland stem cells in restoring the damaged function through cell therapy". Approved for 32 lakhs

Other Links:

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