

**Faculty Name, degree:**

Dr. J. VIJAYALAKSHMI , M.Sc., M.Phil, Ph.D

**Designation & Area of Research Expertise with Projects conducted**

**ASSOCIATE PROFESSOR**

Department of Human Genetics,

**CYTOGENETICS:** Completed Ph.D., at Department of Human Genetics, Sri Ramachandra University.

**Completed Projects**

- Biological Dosimetry Preparedness (9.9 lakhs) (**Co-Investigator**)
- Inter laboratory comparison of radiation dose response calibration curve using dicentric assay (14.9 lakhs) (**Co-Investigator**)
- Evaluation of radioprotective efficacy of anti-oxidants by assessing chromosomal aberrations in bone marrow of mice (4.32 lakhs) (**Principal Investigator**)
- Standardization, establishment and inter laboratory comparison of gamma-H2AX assay for triage biodosimetry (24.59 lakhs) (**Co-Investigator**)

**On going projects**

1. Chemoprotective efficacy of resveratrol against Cisplatin and Bleomycin induced chromosome damage in human peripheral blood lymphocytes evaluated by Cytokinesis Blocked Micronucleus (CBMN) and Sister Chromatid Exchange Assay. (**GATE PROJECT**)
2. Cytogenetic and Y chromosome microdeletion screening in infertile men with abnormal spermogram. (**Summer Training Project**)

### **Academics:**

1. Implicated in the development of Syllabus for B.Sc., Allied Health Sciences (Introduction to Human Genetics).
2. Implicated in the development of Syllabus for B.Sc., Biomedical Sciences (Medical Transcription).
3. Archive of files and documents related to Academics/diagnostics/research/AERB.

### **Diagnostics:**

- Team Leader for Cytogenetics investigation.
- Coordinator and responsible for NABL related documents
- Participated in Re-accreditation for AERB Biodosimetry lab held on 27<sup>th</sup> July 2014. (Evidence Enclosed).
- Participated in Re-accreditation's for NABL Audit held in Oct - Nov 2015.
- Genetic Counseling
  - Professor Emeritus/ Visiting Professors, if any **(NONE)**
  - Awards & Recognitions of faculty

### **RESEARCH TOPIC: Genetic studies of Male infertility**

#### **Workshop, training undergone by faculty**

1. Participated in a National Workshop on “ **Prenatal & Postnatal Diagnosis of Genetic Disorders using Molecular methods**” between March 11-25, 2002, Sponsored & Organized by DBT & AIIMS, New Delhi
2. Certificate of completion Participated in a National Workshop on “**DIAGNOGENE**”, 2002 , Organized by Genetics Research Cell, SRMC&RI (DU), Porur, Chennai. 29<sup>th</sup> to 31<sup>st</sup> May, 2002.
3. Certificate of participation: The College of American Pathologist on Laboratory Accreditation Program Seminar, Chennai, India on January 24, 2004., SRMC&RI (DU), Porur, Chennai.
4. Participated in the “Faculty Development Programme” held from 20<sup>th</sup> to 22<sup>nd</sup> July, 2005 at SRMC&RI (DU), Porur, Chennai.

5. Indo-Australian Symposium on Pharmacogenomics, Department of Biotechnology, KMC, MAHE, Manipal, INDIA. March 10, 2006. Sponsored by Australian Education International. Australian High Commission; Manipal Academy of Higher Education, Manipal, TIFAC-CORE.
6. Participated in a International Workshop on “**ICOGENE**”, **2007**”, Organized by Department of Human Genetics, Sri Ramachandra University, Porur, Chennai 600-116. The Basics and Diagnosis of Genetic Disorders, February 1<sup>st</sup> and 2<sup>nd</sup> , 2007.
7. Participated in a International Workshop on “**ICOGENE**”, **2007**”, Organized by Department of Human Genetics, Sri Ramachandra University, Porur, Chennai 600-116. The Basics and Diagnosis of Genetic Disorders, February 3<sup>rd</sup> and 4<sup>th</sup> , 2007.
8. Certification of Participation at 5<sup>th</sup> International Symposium on Genetics, Health and Disease held at Guru Nanak Dev University, Amristar, February 17-19, 2008.
9. Management development Programme on “ Performance Management for Competitive Advantage” on 28<sup>th</sup> and 29<sup>th</sup> August, 2009 at Sri Ramachandra College of Management, Sri Ramachandra University, Porur, Chennai 600 116.
10. Participated in Workshop on “**Assays in Toxicology**” (**WAT 2009**) **Biomarkers in Toxicology and Disease**, Organized by Loyola Institute of Frontier Energy (LIFE), Loyola College from 2<sup>nd</sup> to 13<sup>th</sup> February 2009. (Served as resource person)
11. Attended the Indo-US CITI Workshop on “ Promoting Research Ethics Education in India” organized by Sri Ramachandra University, Chennai , India and CITI, University of Miami, USA on 24<sup>th</sup> and 25<sup>th</sup> November 2009. This programme offers “Eight International Credit Hours”.
12. Participated in the CME on “ Stem Cells, Regenerative Medicine in Orthopedic Applications” organized by Department of Biomedical Sciences held on 23<sup>rd</sup> January 2012 at Sri Ramachandra University, Chennai 600 116.
13. Attended SRLS CME’ 2010 held on 30<sup>th</sup> April, 2010 organized by Sri Ramachandra Laboratory Services, Sri Ramachandra University, Porur, Chennai 600 116.
14. Attended “Biotechnology for Safe Health & Secure Environment” organized by Faculty of Biomedical Sciences, Technology & Research and Biotechnology Alumini Association of Sri Ramachandra University, September 23<sup>rd</sup>. 2010.
15. Participated in International Conference on Radiation Biology, Nanotechnology, Imaging and Stem Cell Research in Radiaton Oncology (ICRB-NISRRO) as Delegate. A 12 credits hours has been awarded for this programme. November 15-17, 2010, at Sri Ramachandra University, Chennai 600 116.
16. Participated in Satellite Symposium of International Conference on Radiation Biology, Nanotechnology, Imaging and Stem Cell Research in Radiaton Oncology (ICRB-NISRRO),

Organized by Indira Gandhi Center for Atomic Research (IGCAR) In association with Sri Ramachandra University (SRU), and 10<sup>th</sup> Biennial meeting of Indian Society for Radiation Biology (ISRB), November 18, 2010, Anupuram, Kalpakkam. The Symposium of ICRB-NISSRO 2012 entitled "Emerging Techniques, Tools and Probes in Radiobiology (ETTTPR) held at Anupuram, Kalpakkam as delegate. A 4 credits hours has been awarded for this programme. November 15-17, 2010.

17. Participated in the CME/Debate on "International Day Against drug Abuse and Illicit Trafficking" Organized jointly by Department of Biomedical Sciences and Department of Psychiatry, on 24<sup>th</sup> June, 2011 held at Sri Ramachandra University, Porur, Chennai 600 116. 2 credits hours has been awarded for this programme

18. Second meeting of Clinical practice Guidelines in Oncology, Highlights of ESMO 2012, 22<sup>nd</sup> December, 2012 The Raintree Hotel, Anna Salai, Chennai

19. Recent Trends in Haematopathology, Delegate; 10<sup>th</sup> January , 2013; SRU, Porur

20. Skills in Governance; 8<sup>th</sup> March, 2013; Sri Ramachandra Centre for Women's Advancement; Seminar Hall , II Floor , SRU.

21. Participated in the CME on "Clinical Promises of Tissue Engineering" organized by Department of Biomedical Sciences Held on 7<sup>th</sup> January 2016.

22. Participated as Guest speaker in the CME entitled "The ABC of Chromosomal Analysis" held on 22.09.2015 at Karpagam Faculty of Medical Sciences & Research, Coimbatore. (10 Credit Hours)

23. Participated in the CME on "Yogic Management of Disease" conducted at Sri Ramachandra University on 28<sup>th</sup> & 29<sup>th</sup> June, 2016. (8 Credit Hours)

**Membership in Committees etc., (NONE)**

### **List of Publications**

1. Bleomycin-induced genotoxicity in vitro in human peripheral blood lymphocytes evidenced as complex chromosome- and chromatid-type aberrations Aswathy S. Lal, S. Kauser Begum, Sraddha S. Bharadwaj, Lalitha V., Vijayalakshmi J., Solomon F.D. Paul, Ravi Maddaly<sup>1</sup>. Toxicology in Vitro. Volume 54, February 2019, Pages 367-374.
2. Occupational Heat Stress, DNA damage and Heat Shock Protein (2018). Medical Research Archives vol 6 Issue 1. January Issue. Medical Research Author. Vidhya Venugopal et al. Manikandan Krishnamoorthy<sup>1</sup>, Vidhya Venugopal<sup>1\*</sup>, Vettriselvi Venkatesan<sup>2</sup>, Vijayalakshmi Jagannathan<sup>2</sup> and Paul S.F.D.<sup>2</sup> Association between

occupational heat stress and DNA damage in lymphocytes of workers exposed to hot working environments in a steel industry in Southern India Vidhya Venugopal, Manikandan Krishnamoorthy, Vettriselvi Venkatesan, Vijayalakshmi Jaganathan, Rekha Shanmugam, Karthik Kanagaraj. 346-359 Accepted 07 Jun 2019, Published online: 22 Jul 2019 Download citation <https://doi.org/10.1080/23328940.2019.1632144>

3. Ganesh K, Selvan GT, Ganga S, Paul SF, Ramesh A, **Vijayalakshmi J.** Cytokinesis-blocked micronucleus assay as biomarker for risk of lung cancer. *Indian J Health Sci.* 2016;(9):202-6.
4. Raavi Venkateswarlu, Selvan G. Tamizh, Manivannan Bhavani, Arun Kumar, Amit Alok, Kanagaraj Karthik, Namita Kalra, J. Vijayalakshmi, Solomon F. D. Paul, N. K. Chaudhury, Perumal Venkatachalam. Mean frequency and relative fluorescence intensity measurement of gamma. An inter-and intra laboratory comparison and its relevance for its radiation triage. *Cytometry A*; (2015). 87(12): 1138-46.
5. Anandpriya, Darling Chellathai, Seethalakshmi S, Vijayalakshmi. J. Evaluation of genetic and molecular toxic effects of Ciprofloxacin. *Int J of Phar & Therapeutics*; (2013). 4(4) 265-269.
6. G Tamizh Selvan, M Bhavani, **J Vijayalakshmi**, F D Paul Solomon, N K Chaudhury, P Venkatachalam. Delayed mitogenic stimulation decreases DNA damage assessed by micronucleus assay in human peripheral blood lymphocytes after (60)co irradiation. Dose Response. (2014). 4;12(3) 498-508.
7. Bhavani M, Tamizh Selvan G, Kaur H, Adhikari J, Vijayalakshmi J, Venkatachalam P, Chaudhury NK. Dicentric chromosome aberration analysis using giemsa and centromere specific fluorescence in-situ hybridization for biological dosimetry: An inter- and intra-laboratory comparison in Indian laboratories. *Applied Radiat Isot*; (2014). (92) 85-90.
8. **J. Vijayalakshmi**, Venkatachalam P, Sanjeeva Reddy, Usha Rani G and Manjula. G. Microdeletions of AZFc Region in Infertile Men with Azoospermia and Oligoasthenoteratozoospermia; *Int. J Hum Genet*; (2013). 13(4): 183-187.
9. **J. Vijayalakshmi**; P Venkatachalam; Solomon F.D. Paul., Chromosomal anomalies in patients with azoospermia and oligoasthenoteratozoospermia. *Int J Hum Genet*; (2011). 11(2): 117-121.
10. **J Vijayalakshmi**, Teena Koshy, Harpreet Kaur et al., 2010. Cytogenetics of patients with Primary Amenorrhea. *Int J Hum Genet*; (2010) 10(1-3): 71-76.