Name: Dr. Solomon F.D. Paul

Degree: M.Sc., Ph.D.

Designation:

Professor- Department of Human Genetics

Principal- Faculty of Biomedical Sciences & Technology

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Area of Research Expertise: Biological Dosimetry, Radiobiology & Radiation Genetics

Awards: Young Scientist Award by the Indian Association of Radiation Protection - For outstanding work carried out in the field of Radiation Biology, Biophysics and Environmental Biology in the year 2001.

Visiting Professor:

- **Visiting Research Scientist**, Texas Biomedical Research Institute, San Antonio, Texas, USA on Sabbatical – Professor of Human Genetics, Faculty of Biomedical Sciences, Technology & Research, SRU. Key Contribution:

Genetics of Acanthosis Nigracan a marker for T2D in children using WGS studies. (February 2012 – June 2013)

- **Visiting Scientist**, Indira Gandhi Centre for Atomic Research, Government of India. Key Contribution: Molecular approach to quantify mutation in mutagen exposed samples. HPRT Mutational assay and PCR analysis. (May 1998 - July 1998)
- **Visiting Scientist**, Indira Gandhi Centre for Atomic Research, Government of India. Key Contribution: Development of a sensitive Micronuclei assay using cell synchronization (January 1996 - June1996)

Grants Obtained:

1. **Co-Principal Investigator** - Comparison of Dose-Response Curve, Manual Vs Automated Scoring Of 60Co gamma Ray / X-Ray Induced Cytogenetic Markers, , Duration 2021-24, Funding agency BRNS, Rs. 3247100, Ongoing project.
2. **Co-Principal Investigator** - Identifying hydrogen sulphide role in in vitro modal of inflammatory bowel disease, Duration 2018-21, Funding agency DST, Rs. 2967000, Ongoing project.
3. **Principal Investigator** - A Genetic Epidemiologic Investigation of Latent Auto Immune Diabetes in Adult (LADA) in Indian population, Duration 2018-20, Funding agency ICMR, Rs. 913600, Completed project on 2020.
4. **Principal Investigator** - Genetics of type 2 diabetes in India: A Multicentric population specific family genetic study, Duration 2016-18, Funding agency Indo US ICMR-NIH, Rs. 18000000 + 250000$, Completed project on 2019.
5. **Principal Investigator** - Molecular biomarkers of to quantify Radiation absorbed dose. Duration 2017-19, Funding agency Council for Scientific and Industrial Research (CSIR), New Delhi, Rs. 913600, Completed project on 2019.
6. **Co-Investigator** - Biological effects of low dose alpha particle radiation exposure to blood lymphocytes for Biodosimetry, Duration 2014-17, Funding agency Atomic Energy Regulatory Board, Government of India, Mumbai, Rs. 5078579, Completed project on 2017.
7. **Principal Investigator** - Molecular cytogenetic studies in mental retardation and to provide Genetic services and counselling as an ICMR networking centre on Human Genetics, Duration 2010-13, Funding agency ICMR, India, Rs. 3300000, Completed project on 2013.

8. **Co-Principal Investigator** - Ex-vivo of chondrocytes in a 3D novel thermo gelatin polymer scaffold – characterization and experimental in –vivo transplantation in animal models, Duration 2010-13, Funding agency DST, India, Rs. 3635000, Completed project on 2013.
9. **Principal Investigator** - Study of effects of pulsed electromagnetic field on cultured chondrocytes, Duration 2009, Funding agency DRDO, India, Rs. 992450, Completed project on 2012.
10. **Principal Investigator** - Biological Dosimetry – Preparedness, Duration 2010-13, Funding agency DRDO, India, Rs. 989200, Completed project on 2011.
11. **Co-Investigator** - Genomic Instability In Bystander Human Cells And Their Progeny Exposed To Radiomimetic Drug Using 3-D Cultures, Duration 2007, Funding agency DST, India, Rs. 2292280, Completed project on 2011.
12. **Co-Principal Investigator** - Validation On the Measurement Of Translocation Frequency For Cumulative Dose Estimation, Duration 2002, Funding agency AERB, India, Rs. 1843360, Completed project on 2007.
13. **Principal Investigator** - Somatic Cell Mutational Immunoassay Of Glycophorin A (GPA) Using Monoclonal Antibody For Biological Dosimetry, Duration 2000, Funding agency AERB, India, Rs. 1709420, Completed project on 2004.
14. **Principal Investigator** - Radio-Protective Effect Of 2-Dg In Human Peripheral Blood Lymphocytes From Normal Persons And Cervical Cancer Patients Exposed In-Vivo To High Dose-Rate Gamma Radiation As Indicated By Chromosomal Aberrations And Micronuclei Assay, Duration 2003, Funding agency CSIR, India, Rs. 157997, Completed project on 2003.

List of Publications (RECENT THREE YEARS):

1. Kumar GG, Paul SFD, Molia C, Manickavasagam M, Ramya R, Rani GU, Ganesan N. Mary AF. The association between CYP17A1, CYP19A1, and HSD17B1 gene polymorphisms of estrogen synthesis pathway and ovarian cancer predisposition Meta Gene 31, 100985. https://doi.org/10.1016/j.mgene.2021.100985
2. Deepashree GA, Ramprasad E, Jayakumar M, Paul SFD, Gnanasambandan R. ACE ID gene polymorphism contributes to chronic kidney disease progression but not NOS3 gene among Type 2 diabetes with nephropathy patients. Endocrine and

Metabolic Science. 2021 Sep 30; 4: 100100. https://doi.org/10.1016/j.endmts.2021.100100

3. Magatha LS, Scott JX, Subramaniam G, Chandrasekaran T, Paul SFD, Koshy T. Cytogenetic and Fluorescence in situ Hybridization Profile of Pediatric Acute Lymphoblastic Leukemia in a University Hospital in South India. Medical Principles and Practice. 2021 Dec;30(5):401-8. https://doi.org/10.1159/000518280
4. Gowtham Kumar G, Paul SFD, Martin J, Manickavasagam M, Sundersingh S, Ganesan N, Ramya R, Usha Rani G, Andrea Mary F. Association between RAD51, XRCC2 and XRCC3 gene polymorphisms and risk of ovarian cancer: a case control and an in silico study. Molecular Biology Reports. 2021 May;48(5):4209-20. https://doi.org/10.1007/s11033-021-06434-6
5. Ramalingam R, Kaur H, Scott JX, Sneha LM, Arun Kumar GP, Srinivasan A, Paul SFD. Pharmacogenetic evaluation of 6-mercaptopurine-mediated toxicity in pediatric acute lymphoblastic leukemia patients from a South Indian population. Pharmacogenomics. 2021 May; 22(7):401-11. https://doi.org/10.2217/pgs-2020-0193
6. Raju GT, Bhaskar LV, Gurramkonda VB, Hussain SA, Paul SFD. Genetic variations at 10q26 regions near FGFR2 gene and its association with non-syndromic cleft lip with or without cleft palate. International Journal of Pediatric Otorhinolaryngology. 2021 Apr 1;143:110648. https://doi.org/10.1016/j.ijporl.2021.110648
7. Balunathan N, Venkatesen V, Chauhan J, Reddy SN, Perumal V, Paul SFD. Role of MTHFR Gene Polymorphisms in Male Infertility. International Journal of Infertility & Fetal Medicine. 2021 Apr 1;12(1):7-12. https://doi.org/10.5005/jp-journals-10016-1213
8. Raju GT, Bhaskar LV, Murthy J, Paul SFD. Parental transmission effect of PDGF-C gene variants on non-syndromic cleft lip with or without cleft palate. Meta Gene. 2020 Jun 1; 24: 100669. https://doi.org/10.1016/j.mgene.2020.100669
9. Raavi V, Perumal V, Paul SFD. Potential application of γ-H2AX as a biodosimetry tool for radiation triage. Mutation Research/Reviews in Mutation Research. 2021 Jan 1;787:108350. https://doi.org/10.1016/j.mrrev.2020.108350
10. Damodaran M, Paul SFD, Venkatesan V. Genetic polymorphisms in miR-146a, miR-196a2 and miR-125a genes and its association in prostate cancer. Pathology

& Oncology Research. 2020 Jan;26(1):193-200. https://doi.org/10.1007/s12253-018-0412-x

11. Subramanian N, Ramanathan S, Paul SFD, Venkatesan V, Koshy T. A case-control association of RANTES (-28C> G) and CCR5-Delta32 polymorphisms with Parkinson's disease in Indians. Neuroscience Letters. 2020 Nov 20; 739: 135404. https://doi.org/10.1016/j.neulet.2020.135404
12. Lopez-Alvarenga JC, Chittoor G, Paul SFD, Puppala S, Farook VS, Fowler SP, Resendez RG, Hernandez-Ruiz J, Diaz-Badillo A, Salazar D, Garza DD. Acanthosis nigricans as a composite marker of cardiometabolic risk and its complex association with obesity and insulin resistance in Mexican American children. PloS one. 2020 Oct 15;15(10): e0240467. https://doi.org/10.1371/journal.pone.0240467
13. Raju GT, Bhaskar LV, Murthy J, Paul SFD. Parental transmission effect of PDGF-C gene variants on non-syndromic cleft lip with or without cleft palate. Meta Gene. 2020 Jun 1; 24: 100669. https://doi.org/10.1016/j.mgene.2020.100669
14. Damodaran M, Paul SFD, Venkatesan V. Genetic polymorphisms in miR-146a, miR-196a2 and miR-125a genes and its association in prostate cancer. Pathology & Oncology Research. 2020 Jan;26(1):193-200. https://doi.org/10.1007/s12253-018-0412-x
15. Ramanathan G., Harichandana B., Kannan S., Elumalai R., and Paul SFD. Association between end-stage diabetic nephropathy and MTHFR (C677Tand A1298C) gene polymorphisms. Nephrology 24: (2019) 155–159. https://doi.org/10.1111/nep.13208
16. Venugopal V., Krishnamoorthy M., Venkatesan V., Jaganathan V., Shanmugam R., Kanagaraj K. and Paul SFD (2019) Association between occupational heat stress and DNA damage in lymphocytes of workers exposed to hot working environments in a steel industry in Southern India. Temperature (Austin) 6(4):346-359. https://doi.org/10.1080/23328940.2019.1632144
17. Venugopal V., Krishnamoorthy M., Venkatesan V., Paul SFD, Jaganathan V. and Shanmugam R., (2019) Occupational Heat Stress and DNA damage among steelworkers in Southern India. Environmental Epidemiology 3: 411. https://doi.org/10.1097/01.EE9.0000610604.92959.e9
18. Karthik K, Rajan V, Pandey BN, Sivasubramanian K, Paul SFD, Venkatachalam P. (2019) Direct and bystander effects in human blood lymphocytes exposed to

241Am alpha particles and the relative biological effectiveness using chromosomal aberration and micronucleus assay. Int J Radiat Biol. 95(6):725-736. https://doi.org/10.1080/09553002.2019.1589018

19. Raavi V, Surendran J, Karthik K, Paul SFD, Thayalan K, Arunakaran J, Venkatachalam P. (2019) Measurement of γ-H2AX foci, miRNA-101, and gene expression as a means to quantify radiation-absorbed dose in cancer patients who had undergone radiotherapy. Radiat Environ Biophys. 58(1):69-80. https://doi.org/10.1007/s00411-018-0767-0
20. Ramu D, Perumal V, Paul SFD. (2019) Association of common type 1 and type 2 diabetes gene variants with latent autoimmune diabetes in adults: A meta-analysis. J Diabetes. 11(6):484-496. https://doi.org/10.1111/1753-0407.12879
21. Lal AS, Begum SK, Bharadwaj SS, V L, J V, Paul SFD, Maddaly R. (2019) Bleomycin-induced genotoxicity in vitro in human peripheral blood lymphocytes evidenced as complex chromosome- and chromatid-type aberrations. Toxicol In Vitro. 54:367-374. https://doi.org/10.1016/j.tiv.2018.10.013
22. Palanissami G, Paul SFD. (2019) RAGE and Its Ligands: Molecular Interplay Between Glycation, Inflammation, and Hallmarks of Cancer-a Review. Horm Cancer. 9(5):295-325. https://doi.org/10.1007/s12672-018-0342-9
23. Vettriselvi Venkatesan, Juan C. Lopez-Alvarenga, Rector Arya, Teena Koshy, Umarani Ravichandran, Surendra Sharma, Sailesh Lodha, Amaresh Reddy Ponnala, Krishna Kumar Sharma, Mahaboob Vali Shaik, Roy G. Resendez, Deepika Ramu, Priyanka Venugopal, Parthasarathy R., Noelta S., Juliet A. Ezeilo, Cynthia A. Bejar, Srinivas Mummidi, Chidambaram Natesan, John Blangero, Krishna M. Medicherla, Sadagopan Thanikachalam, Thyagarajan Sadras Panchatcharam, Dileep Kumar K., Rajeev Gupta, Dharambir K. Sanghera, Ravindranath Duggirala, Paul SFD: 1717-P: Burden Of Type 2 Diabetes And Its Genetic Determinants In Indian Populations: Findings From The INDIGENIUS Consortium. Diabetes 06/2019; 68 (Supplement1) https://doi.org/2337/Db19-1717-P
24. Teena Koshy, Rector Arya, Juan C. Lopez-Alvarenga, Vettriselvi Venkatesan, Umarani Ravichandran, Surendra Sharma, Sailesh Lodha, Amaresh Reddy Ponnala, Krishna Kumar Sharma Sr., Mahaboob Vali Shaik, Roy G. Resendez, Deepika Ramu, Priyanka Venugopal, R. Parthasarathy, S. Noelta, Juliet A. Ezeilo, Cynthia A. Bejar, Srinivas Mummidi, Chidambaram Natesan, John Blangero,

Krishna M. Medicherla, Sadagopan Thanikachalam Sr., Thyagarajan Sadras Panchatcharam, K. Dileep Kumar, Rajeev Gupta, Ravindranath Duggirala, Dharambir K. Sanghera and Paul SFD (2019) 1639-P: Effect of Educational Status on Fasting Glucose and HbA1c Concentrations Independent of Income and Population Differences in Indian Populations. Diabetes 2019 Jun; 68(Supplement 1) https://doi.org/10.2337/db19-1639-P

25. Juan C. Lopez-Alvarenga, Rector Arya, Geetha Chittoor, Paul SFD, Sobha R. Puppala, Vidya S. Farook, Sharon P. Fowler, Roy G. Resendez, Alvaro Diaz-Badillo, Donna Lehman, Srinivas Mummidi, Chris Jenkinson, Jane l. Lynch, Ralph A. Defronzo, John Blangero, Daniel E. Hale, Ravindranath Duggirala: 2093-P: Acanthosis Nigricans As A Composite Marker Of Cardiometabolic Risk And Its Complex Association With Obesity And Insulin Resistance In Mexican-American Children. Diabetes 06/2019; 68(Supplement 1):2093-P. https://doi.org/10.2337/Db19-2093-P
26. Ravi Kumar Arunachalam, Teena Koshy, Vettriselvi Venkatesan, Gladys Prathiba Dawson, Paul SFD, Pratibha George: Mutation Analysis Using Multiplex Ligation-Dependent Probe Amplification In Consanguineous Families In South India With A Child With Profound Hearing Impairment. Laboratory Medicine 05/2019; https://doi.org/10.1093/Labmed/Lmz027
27. Harpreet Kaur, Teena Koshy, Venkateswaran N., Venkatachalam Perumal, PaulSFD. Chromosome Painting and its Versatility In Modern Diagnostics. (2019) Sri Ramachandra Journal of Medicine 1: 20-26.

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