

**RAJAGURU PALANICHAMY**  
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Department of Biotechnology  
Central University of Tamil Nadu  
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INSTITUTION AND LOCATION	DEGREE	COMPLETION DATE	FIELD OF STUDY
American College, Madurai	B.Sc.	05/1982	Zoology, Botany, Chemistry
University of Madras, Chennai	M.Sc.	05/1984	Environmental Toxicology
Bharathiar University, Coimbatore	Ph.D.	07/1998	Environmental Sciences
National Institute of Health Sciences, Tokyo, Japan	Post-doc	03/2004	Toxicogenomics/ Proteomics

#### **A. Personal Statement**

My specialization includes human health risk assessment, molecular toxicology and genetic toxicology. My special interest is to apply OMICS techniques to understand the molecular mechanisms and therapeutic target(s) for cancer and diabetes. My other research interest is to carry out biomarkers-based exposure assessment, thus developing new monitoring technologies for air/water pollution exposure assessment to study the impact of air/water pollution on health.

#### **B. Positions and Honors**

1986-1998	Lecturer in Environmental Science, P.S.G. College of Arts and Science, Coimbatore
1998-2005	Reader in Environmental Science, P.S.G. College of Arts and Science, Coimbatore
2005-2009	Assistant Professor in Biotechnology, Anna University of Technology, Tiruchirappalli
2009-2020	Professor in Biotechnology, Anna University – BIT Campus, Tiruchirappalli
2020-To date	Professor in Biotechnology, Central University of Tamil Nadu, Thiruvarur
1998, 2002	Received International Cancer Technology Transfer Award (ICRET) by International Union against Cancer (UICC), Geneva, Switzerland
2003-2004	Received Post-Doctoral Fellowship at National Institute of Health Sciences awarded by Japanese Society of Pharmacopea, Tokyo, Japan
2013	Received Active Researcher Award by Anna University, Chennai
2014	Received Short Term ICMR-DHR Fellowship for training at foreign institution by ICMR (DHR), Govt. of India to conduct research in Toxicoproteomics - Nanotoxicology in National Institute of Health Sciences, Tokyo, Japan
2019	Received Short Term ICMR-DHR International Fellowship for Senior Indian Biomedical Scientists 2019-20 by ICMR (DHR), Govt. of India

#### **C. University Services**

I involved in designing new curricula and courses in Environmental Science, Biotechnology and Biochemistry disciplines in several universities.

- Member, Board of Studies for M.Sc./M.Phil. Environmental Science, PSG College of Arts & Science, Coimbatore; Bharathiar University, Coimbatore; Tamil University, Tanjavur; Bharathidasan University, Tiruchirappalli.
- Member, Board of Studies for M.Sc./M.Tech./B.Tech. Biotechnology in Central University of Tamil Nadu, Thiruvarur; Anna University, Chennai; Bharathidasan University, Tiruchirappalli; Periyar Maniammai University, Tanjavur; Karpagam University, Coimbatore.
- Member of Board of Studies for M. Sc./M. Phil., Biochemistry, Bharathidasan University, Tiruchirappalli

I have served in various capacities and advised the University on administration and planning of activities needed for improvement and development

- Head, Department of Biotechnology, Central University of Tamil Nadu, Thiruvarur Sep. 2020-Till Date
- Director, IQAC, Central University of Tamil Nadu, Thiruvarur June 2023-Till Date
- Nodal Officer-NIRF/ARIIA, Central University of Tamil Nadu, Thiruvarur Sep. 2021-Till Date
- Head, Department of Biotechnology, Anna University-BIT Campus, Tiruchirappalli. May, 2005- Dec.2019

- Member, Board of Governors, Anna University-BIT Campus, Tiruchirappalli
  - Deputy Director, Research & Academic Courses, Regional Office, Tiruchirappalli, Anna University: Chennai
  - Professor Planning and Development, Anna University of Technology, Tiruchirappalli
  - Controller of Examinations, Bharathidasan Institute of Technology, Bharathidasan University, Tiruchirappalli
  - Member, Institutional Animal Ethical Committee, Anna University Tiruchirappalli, Thiruchirappalli
  - Member, Institutional Biosafety Committee, Anna University Tiruchirappalli, Thiruchirappalli
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#### D. Professional Memberships

- Association of UICC Fellows - Life Member
  - Asian Environmental Mutagen Society - Life Member
  - Environmental Mutagen Society of India- Life Member
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#### E. Research Guidance and Evaluation

- Currently supervising **1** student for Ph.D. in Biotechnology discipline of Anna University, Chennai.
  - PhD degree awarded to **10** students from Environmental Science and Biotechnology by Bharathiar University, Coimbatore; Bharathidasan University, Tiruchirappalli and Anna University, Chennai.
  - Supervising approx **2-3**, M.Sc./M.Tech. students per year for their research projects.
  - Evaluated >25 PhD and >50M.Sc./M.Tech. theses as an external examiner for various disciplines (Biotechnology, Biochemistry, and Environmental Science from different Universities)
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#### F. Research Support and/or Scholastic Performance

##### Completed Research Projects:

1. Evaluation of Occupational genetic risks among Dyeing and Bleaching Industrial workers. *Funded by University Grants Commission (UGC), Govt. of India; Co-Investigator.*
  2. Occupational genotoxicity risk assessment in tannery workers using the single cell gel electrophoresis. *Funded by UGC, Govt. of India; Principle Investigator*
  3. Genotoxicity profiling of ground water in Noyal river basin. *Funded by UGC, Govt. of India; Principle Investigator.*
  4. Designing a 'multitarget RNAi' effector molecule for simultaneous silencing of multiple genes. *Funded by Department of Biotechnology (DBT), Govt. of India; Principle Investigator.*
  5. Screening and characterization of active constituents from an antidiabetic plant *Gymnema montanum* and its pharmacological evaluation using genomic and proteomic approach (**India-Japan**). *Funded by Department of Science & Technology (DST), Govt. of India; Principle Investigator (India).*
  6. Silencing of ER stress response genes using RNA interference to protect hyperglycemia induced pancreatic  $\beta$ -cell death. *Funded by DST, Govt. of India; Principle Investigator.*
  7. Simultaneous silencing of multiple pro-angiogenic factors to suppress tumor-induced angiogenesis. *Funded by DBT, Govt. of India; Principle Investigator.*
  8. Designing minicircle vector for tumor specific co-expression of shRNAs and transgene for improved cancer gene therapy. *Funded by DST, Govt. of India; Principle Investigator.*
  9. Developing a human cell based multigene promoter-fluorescent protein fusion-reporter genotoxicity assay. *Funded by Indian Council of Medical Research (ICMR), Govt. of India; Principle Investigator.*
  10. Fluorescent protein-reporter based assay to measure toxicity of nanomaterials. *Funded by DST, Govt. of India; Principle Investigator.*
  11. Chemoprevention of toxic effects of transition metal nanomaterials by targeting inflammatory miRNAs using dietary polyphenolic compounds. *Funded by Indian Council of Medical Research (ICMR), Govt. of India; Principle Investigator.*
  12. A comprehensive analysis of SNPs in miRNAs and its impact on drug response in South Indian population. *Funded by Indian Council of Medical Research (ICMR), Govt. of India; Principle Investigator.*
  13. Sequential anaerobic solar photo-fenton process for effective treatment of textile effluents. *Funded by DBT, Govt. of India; Principle Investigator.*
  14. Antimicrobial resistance surveillance of Tamil Nadu (India) surface waters (**India-UK**). *Funded by Global Challenges Research Fund, UK Research and Innovation. Principle Investigator (India).*
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#### G. Publications

1. Brindha K, Mohanraj S, **Rajaguru P**, Pugalenti V. Simultaneous production of renewable biohydrogen, biobutanol and biopolymer from phyto-genic CoNPs-assisted Clostridial fermentation for sustainable energy and environment. *Sci Total Environ.* 2022 Nov 7;160002. doi: 10.1016/j.scitotenv.2022.160002.

2. Yukesh Kannah R, Dinesh Kumar M, Kavitha S, Rajesh Banu J, Tyagi VK, **Rajaguru P**, Kumar G. Production and recovery of polyhydroxyalkanoates (PHA) from waste streams – A review. *Bioresour Technol.* 2022 Dec;366:128203. doi: 10.1016/j.biortech.2022.128203. Epub 2022 Oct 28.
3. Brindha R, Rajeswari S, Debora JJ, **Rajaguru P**. Evaluation of global research trends in photocatalytic degradation of dye effluents using scientometrics analysis. *J Environ Manage.* 2022 Sep 15; 318:115600. doi: 10.1016/j.jenvman.2022.115600 Epub 2022 Jun 27. PMID: 35772271
4. Rajesh Parsanathan, **Rajaguru P**. Air pollution impairs endothelial function and blood pressure. *Hypertens Res.* 2022 Feb; 45(2):380-381. doi:10.1038/s41440-021-00807-x Epub 2021 Dec 2. PMID: 34857898
5. Chandrasekar P, Abimanyu S, Venkateshwaran K, **Rajaguru P**, Ravichandiran V, Subramanian N. Development and Evaluation of Polyvinylpyrrolidone K90 and Poloxamer 407 Self-Assembled Nanomicelles: Enhanced Topical Ocular Delivery of Artemisinin. *Polymers (Basel).* 2021 Sep 8; 13(18):3038. doi: 10.3390/polym13183038. PMID: 34577939 PMCID: PMC8470191
6. Karan NA, **Rajaguru P**, Sarkar K, Ganesh MR, Suzuki T, Ali D, Ramkumar KM. Pharmacological Activation of Nrf2 by Rosolic Acid Attenuates Endoplasmic Reticulum Stress in Endothelial Cells. *Oxid Med Cell Longev.* 2021 Apr 8; 2021:2732435. doi: 10.1155/2021/2732435 eCollection 2021. PMID: 33897939 PMCID: PMC8052152
7. Sivanantham A, Pattarayan D, Rajasekar N, Kannan A, Loganathan L, Ramalingam B, Mahapatra SK, **Rajaguru P**, Karthikeyan M, Rajasekaran S. Tannic acid prevents macrophage-induced pro-fibrotic response in lung epithelial cells via suppressing TLR4-mediated macrophage polarization. *Inflamm Res.* 2019 Dec; 68(12):1011-1024. doi: 10.1007/s00011-019-01282-4. Epub 2019 Sep 5. PMID: 31489459
8. Indhumathi V, Senthil Kumar S, **Rajaguru P**. Morin protects human respiratory cells from PM<sub>2.5</sub> induced genotoxicity by mitigating ROS and reverting alters miRNA expression. *Int J Environ Res Public Health.* 2019 Jul 5; 16(13):2389. doi: 10.3390/ijerph16132389. PMID: 31284452.
9. Sivanantham A, Pattarayan D, Ramalingam B, Kar A, Mahapatra SK, Thimmulappa RK, **Rajaguru P**, Rajasekaran S. Tannic acid protects against experimental acute lung injury through downregulation of TLR4 and MAPK. *J Cell Physiol.* 2019 May; 234(5):6463-6476. doi: 10.1002/jcp.27383. Epub 2018 Sep 24. PMID: 30246289
10. Sireesh D, Suresh T, **Rajaguru P**, Dhamodharan U, Suzuki T, Ramkumar KM. Differential proteomic profiling identifies novel molecular targets of pterostilbene against experimental diabetes. *J Cell Physiol.* 2019 Mar; 234(3):1996-2012. doi: 10.1002/jcp.26835.
11. Brindha, R., S. Santhosh, **P. Rajaguru**. Integrated bio-chemo degradation of Mordant Yellow 10 using upflow anaerobic packed bed reactor (UAPBR) and tray type photo-Fenton reactor (TPFR). *J. Clean. Prod.* 2019 Jan 20; 208: 602-611. doi.org/10.1016/j.jclepro.2018.10.158
12. Senthil Kumar S, Muthuselvam P, Pugalanthi V, Subramanian N, Ramkumar KM, Suresh T, Suzuki T, **Rajaguru P**. Toxicoproteomic analysis of human lung epithelial cells exposed to steel industry ambient particulate matter (PM) reveals possible mechanism of PM related carcinogenesis. *Environ Pollut.* 2018 Aug; 239:483-492. doi: 10.1016/j.envpol.2018.04.049. Epub 2018 Apr 21. PMID: 29684875.
13. Pattarayan D, Ayyanar S, Ramalingam B, **Rajaguru P**, Rajasekaran S. Tannic acid modulates fibroblast proliferation and differentiation in response to pro-fibrotic stimuli. *J Cell Biochem.* 2018 Aug; 119(8):6732-6742. doi: 10.1002/jcb.26866. Epub 2018 Apr 17. PMID: 29665059
14. Suganya N, Mani KP, Sireesh D, **Rajaguru P**, Vairamani M, Suresh T, Suzuki T, Chatterjee S, Ramkumar KM. Establishment of pancreatic microenvironment model of ER stress: Quercetin attenuates  $\beta$ -cell apoptosis by invoking nitric oxide-cGMP signaling in endothelial cells. *J Nutr Biochem.* 2018 May; 55:142-156. doi: 10.1016/j.jnutbio.2017.12.012. Epub 2018 Jan 3. PMID: 29455095
15. Abimanyu S, Chandrasekar P, Palanivel K, Venkateshwaran K, **Rajaguru P**, Ruckmani K, Manikandan L, Subramanian N. Development and evaluation of camptothecin loaded polymer stabilized nanoemulsion: Targeting potential in 4T1-breast tumour xenograft model. *Eur J Pharm Sci.* 2018 Apr 30; 116:15-25. doi: 10.1016/j.ejps.2017.10.005. Epub 2017 Oct 5. PMID: 28987538
16. Venkateshwaran K, Ruckmani K, Shanmugarathinam A, **Rajaguru P**, Subramanian N. Biological macromolecules for ophthalmic drug delivery to treat ocular diseases. *Int J Biol Macromol.* 2018 Apr 15; 110:7-16. doi: 10.1016/j.ijbiomac.2018.01.120. Epub 2018 Jan 31. PMID: 29378276
17. Muthuselvam P, Chandrasekar P, Mohananarayanan P, Gayatheri N, Sivasakthi P, Abimanyu S, Ruckmani K, Subramanian N, **Rajaguru P**. Nepafenac loaded silica nanoparticles dispersed in-situ gel systems: Development and characterization. *Int J Biol Macromol.* 2018 Apr 15; 110:336-345. doi: 10.1016/j.ijbiomac.2018.01.123. Epub 2018 Jan 31. PMID: 29408555
18. Brindha R, Muthuselvam P, Senthilkumar S, **Rajaguru P**. Fe<sup>0</sup>catalyzed photo-Fenton process to detoxify the biodegraded products of azo dye Mordant Yellow 10. *Chemosphere.* 2018 Jun; 201:77-95. doi: 10.1016/j.chemosphere.2018.02.151. Epub 2018 Feb 26. PMID: 29518737
19. Krishnaswami V, Ponnusamy C, Sankareswaran S, Paulsamy M, Madiyalakan R, **Palanichamy R**, Kandasamy R, Natesan S. Development of copolymeric nanoparticles of hypocrellin B: Enhanced

- phototoxic effect and ocular distribution. *Eur J Pharm Sci.* 2018 Apr 30; 116:26-36. doi: 10.1016/j.ejps.2017.10.023. Epub 2017 Oct 18. PMID: 29055734
20. Pattarayan D, Ayyanar S, Venkateshwaran K, Lakshmanan L, **Rajaguru P**, Natesan S, Karthikeyan M, Rajasekaran S. Tannic acid attenuates TGF- $\beta$ 1-induced epithelial-to-mesenchymal transition by effectively intervening TGF- $\beta$  signaling in lung epithelial cells. *J Cell Physiol.* 2018 Mar; 233(3):2513-2525. doi: 10.1002/jcp.26127. PMID: 28771711
  21. Shalini D, Senthilkumar S, **Rajaguru P**. Effect of size and shape on toxicity of Zinc Oxide (ZnO) nanomaterials in human peripheral blood lymphocytes. *Toxicol Mech Methods.* 2018 Feb; 28(2):87-94. doi: 10.1080/15376516.2017.1366609. Epub 2017 Sep 3. PMID: 28805101
  22. Subramanian N, Chandrasekar P, Abimanyu S, Senthilkumar C, Sharavanan SP, **Rajaguru P**. Artemisinin loaded chitosan magnetic nanoparticles for the efficient targeting to the breast cancer. *Int J Biol Macromol.* 2017 Nov; 104(Pt B):1853-1859. doi: 10.1016/j.ijbiomac.2017.03.137. Epub 2017 Mar 27. PMID: 28359890
  23. Subramanian N, Venkateshwaran K, Chandrasekar P, Madi M, Thomas Woo, **Rajaguru P**. Hypocrellin B and nano silver loaded polymeric nanoparticles: Enhanced generation of singlet oxygen for improved photodynamic therapy. *Mater Sci Eng C Mater Biol Appl.* 2017 Aug 1; 77:935-946. doi: 10.1016/j.msec.2017.03.179. Epub 2017 Apr 4. PMID: 28532114
  24. Subramanian N, Abimanyu S, Chandrasekar P, Vignesh T, **Rajaguru P**, Ruckmani K. Chitosan stabilized camptothecin nanoemulsions: development, evaluation and biodistribution in preclinical breast cancer animal mode. *Int J Biol Macromol.* 2017 Nov; 104(Pt B):1846-1852. doi: 10.1016/j.ijbiomac.2017.05.127. Epub 2017 May 22. PMID: 28545970
  25. Subramanian N, Saravanakumar P, Chandrasekar P, **Rajaguru P**, Sivakumar M, Ruckmani K. Co-encapsulated resveratrol and quercetin in chitosan and peg modified chitosan nanoparticles: for efficient intra ocular pressure reduction. *Int J Biol Macromol.* 2017 Nov; 104(Pt B):1837-1845. doi: 10.1016/j.ijbiomac.2017.04.117. Epub 2017 May 1. PMID: 28472691
  26. VS Saraswathi, **P Rajaguru**, K Santhakumar. Solar catalysed activity against methyl orange dye, cytotoxicity activity of MCF-7 cell lines and identification of marker compound by HPTLC of *Lagerstroemia speciosa*. *J Photochem Photobiol B.* 2017 May; 170:263-270. doi: 10.1016/j.jphotobiol.2017.04.015. Epub 2017 Apr 18. PMID: 28460300
  27. Vanitha P, Senthilkumar S, Sireesh D, Ananthakumar S, **Rajaguru P**, Ramkumar KM. Morin activates the Nrf2-ARE pathway and reduces oxidative stress -induced DNA damage in pancreatic beta cells. *Eur J Pharmacol.* 2017 Apr 15; 801:9-18. doi: 10.1016/j.ejphar.2017.02.026. Epub 2017 Feb 16. PMID: 28216051
  28. Pattarayan D, Dheeran R, Ayyanar S, **Rajaguru P**, Rajasekaran S. C-phycocyanin suppresses transforming growth factor- $\beta$ 1-induced epithelial mesenchymal transition in human epithelial cells. *Pharmacol Rep.* 2017 Jun; 69(3):426-431. doi: 10.1016/j.pharep.2016.12.013. Epub 2017 Jan 5. PMID: 28288400
  29. Mohanraj S, Anbalagan K, **Rajaguru P**, Pugalenti V. Effects of phyto-genic copper nanoparticles on fermentative hydrogen production by *Enterobacter cloacae* and *Clostridium acetobutylicum*. *Int. J. Hydrog. Energy.* 41: 10639-10645. doi.org/10.1016/j.ijhydene.2016.04.197
  30. Bhakkiyalakshmi E, Suganya N, Sireesh D, Krishnamurthi K, Devi SS, **Rajaguru P**, Ramkumar KM. Carvacrol induces mitochondria-mediated apoptosis in HL-60 promyelocytic and Jurkat T lymphoma cells. *Eur J Pharmacol.* 2016 Feb 5; 772:92-8. doi: 10.1016/j.ejphar.2015.12.046. Epub 2015 Dec 25. PMID: 26724845
  31. Rajasekaran S, Pattarayan D, Rajaguru P, Sudhakar Gandhi PS, Thimmulappa RK. MicroRNA Regulation of Acute Lung Injury and Acute Respiratory Distress Syndrome. *J Cell Physiol.* 2016 Oct; 231(10):2097-106. doi: 10.1002/jcp.25316. Epub 2016 Feb 4. PMID: 26790856
  32. Rajasekaran S, **Rajaguru P**, Sudhakar Gandhi PS. MicroRNAs as potential targets for progressive pulmonary fibrosis. *Front Pharmacol.* 2015 Nov 5; 6:254. doi: 10.3389/fphar.2015.00254. eCollection 2015. PMID: 26594173
  33. Sireesh D, Bhakkiyalakshmi E, Ponjyanthi B, **Rajaguru P**, Ramkumar KM. Pathophysiological Insights of Methylglyoxal Induced Type-2 Diabetes. *Chem Res Toxicol.* 2015 Sep 21; 28(9):1666-74. doi: 10.1021/acs.chemrestox.5b00171. Epub 2015 Sep 11. PMID: 26250540
  34. Bhakkiyalakshmi E, Sireesh D, **Rajaguru P**, Paulmurugan R, Ramkumar KM. The emerging role of redox-sensitive Nrf2-Keap1 pathway in diabetes. *Pharmacol Res.* 2015 Jan; 91:104-14. doi: 10.1016/j.phrs.2014.10.004. Epub 2014 Oct 29. PMID: 25447793
  35. Senthilkumar S, Manju A, Muthuselvam P, Shalini D, Indhumathi V, Kalaiselvi K, Palanivel M, Chandrasekar PP, **Rajaguru P**. Characterization and genotoxicity evaluation of particulate matter collected from industrial atmosphere in Tamil Nadu State, India. *J Hazard Mater.* 2014 Jun 15; 274:392-8. doi: 10.1016/j.jhazmat.2014.04.017. Epub 2014 Apr 21. PMID: 24797908
  36. Bhakkiyalakshmi E, Shalini D, Sekar TV, **Rajaguru P**, Paulmurugan R, Ramkumar KM. Therapeutic potential of pterostilbene against pancreatic beta-cell apoptosis mediated through Nrf2. *Br J Pharmacol.* 2014 Apr; 171(7):1747-57. doi: 10.1111/bph.12577. PMID: 24417315

37. Subarmanian N, Abimanyu S, Chandrasekar P, Vinoth J, Gangarani G, **Rajaguru P**. Development and Evaluation of Magnetic Microemulsion: Tool for Targeted Delivery of Camptothecin to BALB/c mice bearing Breast Cancer. *J Drug Target*. 2014 Dec; 22(10):913-26. doi: 10.3109/1061186X.2014.948878. Epub 2014 Aug 14. PMID: 25119147
38. Sireesh D, Bhakkiyalakshmi E, Ramkumar KM, Rathina Kumar S, Anto Jennifer P, **Rajaguru P**, Paulmurugan R. Targeting SUMOylation cascade for diabetes management. *Curr Drug Targets*. 2014; 15(12):1094-106. doi: 10.2174/1389450115666140915124747. PMID: 25230117
39. Ramkumar KM, Vijayakumar RS, Vanitha P, Suganya N, Manjula C, **Rajaguru P**, Sivasubramanian S, Gunasekaran P. Protective effect of gallic acid on alloxan-induced oxidative stress and osmotic fragility in rats. *Hum Exp Toxicol*. 2014 Jun; 33(6):638-49. doi: 10.1177/0960327113504792. Epub 2013 Sep 24. PMID: 24064907
40. Ramkumar KM, Sekar TV, Bhakkiyalakshmi E, Kira F, **Rajaguru P**, Berger F and Paulmurugan R. The impact of oxidative stress on islet transplantation and monitoring the graft survival by non-invasive imaging. *Curr Med Chem*. 2013; 20(9):1127-46. doi: 10.2174/0929867311320090003. PMID: 23317098
41. Ramkumar KM, Manjula C, Elango B, Krishnamurthi K, Devi SS, **Rajaguru P**. In vitro cytotoxicity of *Gymnemamontanum* in human leukemia HL-60 cells: Induction of apoptotic cell death by mitochondrial membrane potential collapse. *Cell Prolif*. 2013 Jun; 46(3):263-71. doi: 10.1111/cpr.12033. PMID: 23692085
42. Ramkumar KM, Manjula C, Ganana Kumar MA, Kanjwal, **Rajaguru P**. Oxidative stress-mediated cytotoxicity and apoptosis induction by TiO<sub>2</sub> nanofibers in HeLa cells. *Eur J Pharm Biopharm*. 2012 Jun; 81(2):324-33. doi: 10.1016/j.ejpb.2012.02.013. Epub 2012 Mar 7. PMID: 22446064
43. Luan Y, Kogi M, **Rajaguru P**, Ren J, Yamaguchi T, Suzuki K, Suzuki T. Microarray analysis of responsible genes in increased growth rate in the subline of HL60 (HL60RG) cells. *Mutat Res*. 2012 Mar 1; 731(1-2):20-6. doi: 10.1016/j.mrfmmm.2011.10.005. Epub 2011 Oct 20. PMID: 22032829
44. Ramkumar KM, Sankar L, Krishnamurthi K, Saravana Devi SS, Chakrabarti T, Kalaiselvi K, Palanivel M, **Rajaguru P**. Antigenotoxic potential of leaves on DNA damage in human peripheral blood lymphocytes and HL-60. *Environ Mol Mutagen*. 2010 May; 51(4):285-93. doi: 10.1002/em.20543. PMID: 19950392
45. Ramkumar KM, Thayumanavan B, Palvannan T, **Rajaguru P**. Inhibitory effect of *Gymnema montanum* leaves on alpha-glucosidase activity and alpha-amylase activity and their relationship with polyphenolic content. *Med Chem Res* 2010 Oct 28;19, 948–961. doi.org/10.1007/s00044-009-9241-5
46. Ramkumar KM, Lee AS, Krishnamurthi K, Devi SS, Chakrabarti T, Kang KP, Lee S, Kim W, Park SK, Lee NH, **Rajaguru P**. *Gymnema montanum* H. protects against alloxan-induced oxidative stress and apoptosis in pancreatic beta-cells. *Cell Physiol Biochem*. 2009 Jul 13; 24(5-6):429-40. doi: 10.1159/000257480. Epub 2009 Nov 4. PMID: 19910683.
47. Ramkumar KM, Ponmanickam P, Velayuthaprabhu S, Archunan G, **Rajaguru P**. Protective effect of *Gymnema montanum* against renal damage in experimental diabetic rats. *Food Chem Toxicol*. 2009 Oct; 47(10):2516-21. doi: 10.1016/j.fct.2009.07.010. Epub 2009 Jul 17. PMID: 19616598.
48. Ramkumar KM, Manjula C, Sankar L, Suriyanarayanan S, **Rajaguru P**. Potential in vitro antioxidant and protective effects of *Gymnema montanum* H. on alloxan-induced oxidative damage in pancreatic beta-cells, HIT-T15. *Food Chem Toxicol*. 2009 Sep; 47(9):2246-56. doi: 10.1016/j.fct.2009.06.011. Epub 2009 Jun 9. PMID: 19520139.
49. Latha, M., Pari, L., Ramkumar K.M., **Rajaguru, P.**, Suresh, T., Dhanabal, T., Sitasawad, S., Bhonde, R. Antidiabetic effects of scoparic acid D isolated from *Scoparia dulcis* in rats with streptozotocin-induced diabetes. *Nat Prod Res*. 2009 Oct 29; 23(16):1528-40. doi: 10.1080/14786410902726126. PMID: 19606382
50. Ramkumar KM, **Rajaguru P**, Latha M, Ananthan R. Effect of *Gymnema montanum* leaves on red blood cell resistance to oxidative stress in experimental diabetes. *Cell Biol Toxicol*. 2008 Jun; 24(3):233-41. doi: 10.1007/s10565-007-9032-z. Epub 2007 Sep 19. PMID: 17879132
51. Ramkumar KM, Vijayakumar RS, Ponmanickam P, Velayuthaprabhu S, Archunan G, **Rajaguru P**. Antihyperlipidemic effect of *Gymnema montanum*: A study on lipid profile and fatty acid composition in experimental diabetes. *Basic Clin Pharmacol Toxicol*. 2008 Nov 11; 103(6):538-45. doi: 10.1111/j.1742-7843.2008.00320.x. PMID: 19067681
52. Vijayanand C, **Rajaguru P**, Kalaiselvi K, Panneer Selvam K, Palanivel M. Assessment of heavy metal contents in the ambient air of the Coimbatore city, Tamilnadu, India. *J Hazard Mater*. 2008 Dec 30; 160(2-3):548-53. doi: 10.1016/j.jhazmat.2008.03.071. Epub 2008 Mar 22. PMID: 18471965
53. Luana Y, Suzuki T, **Rajaguru P**, Takashima Y, Sakamoto H, Sakuraba M, Koizumi T, Saito M, Matsufuji H, Yamagata K, Yamaguchi Y, Hayashi M, Honma M. Potassium dichromate treatment predominantly causes large deletions, but not GC>TA transversion in human cells. *Mutat Res*. 2007 Jun 1; 619(1-2):113-23. doi: 10.1016/j.mrfmmm.2007.02.029. Epub 2007 Mar 4. PMID: 17428505

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55. **Rajaguru P**, Suba S, Palanivel M, Kalaiselvi K. Genotoxicity of polluted river system measured using the alkaline comet assay on fish and earthworm tissues. *Environ Mol Mutagen.* 2003 Feb 25; 41(2):85-91. doi: 10.1002/em.10134. PMID: 12605376
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#### H. Additional Information

##### Conference/Seminar/Workshop

Attended – 44 (International-10; National-32); Organised – 2 (International 1; National 1)

##### Organized:

1. **International workshop on “Micronucleus Assays with Buccal Cells for Human and Environmental Monitoring”**, 5 days, (09-13, Feb., 2011) in association with Prof. Siegfried Knasmueller, Medical University, Vienna, Austria, Prof. Michael Fenech, CSIRO, Australia and Dr. Takayoshi Suzuki, NIHS, Japan. Sponsored by DAE, ICMR, DRDO and CSIR
2. Organized 14-day (28th Jan. to 10th Feb., 2015) Short Term Training Course in “**Biomedical Applications of RNAi Technology**” for Mid-career Researchers. Sponsored by DBT, Govt. of India

#### I. Books

##### Chapters:

1. Amelioration of Metabolic Complications Associated with Diabetes by *Gymnema montanum* in Alloxan Induced Rats. In: **Recent Progress in Medicinal Plants. Vol. 18. Natural Products II.** Eds.: J.N. Govil, V.K. Singh, Naila T. Siddiqui. Pub.: Studium Press, LLC, USA. 2007: 319-338 (ISBN 10: 1-933699-08-6)
2. Chitosan based ocular drug delivery systems. In: **Functional Chitosan: Drug Delivery and Biomedical Applications.** Eds.: Sougata Jana & Subrata Jana. Pub.: Springer Nature Singapore Pvt. Ltd., Singapore. 2019 (ISBN 978-981-15-0262-0)