Principal Scientist, Environmental Toxicology Group,

Associate Professor, AcSIR,

CSIR-Indian Institute of Toxicology Research, Lucknow 226 001, U.P INDIA

Phone: +91-522-2620107 ext: 665, e-mail aruna@ittr.res.in, aruna.aruna@gmail.com

https://orcid.org/0009-0007-7450-0648

### **EDUCATIONAL QUALIFICATION**

- Ph.D. (2007) in Zoology, from University of Mysore, Karnataka, India.
- M.Sc. (1999) in Zoology with specialization in Genetics, with First Division & First Rank, from University of Mysore, Karnataka, India.
- B.Sc. (1997) with First Division from University of Mysore, Karnataka, India. Subjects: Zoology, Chemistry and Botany.
- Intermediate (1993) with First Division from Karnataka State Board of Education.

## AWARDS AND OFFICIAL POSITION

- 1. Principal Scientist (2020-till date), at CSIR-Indian Institute of Toxicology Research, Lucknow India.
- 2. Senior Scientist (2016-2020), at CSIR-Indian Institute of Toxicology Research, Lucknow India.
- 3. Scientist (2011-2016), at CSIR-Indian Institute of Toxicology Research, Lucknow India
- 4. Scientist B (2008-2011), at CSIR-Indian Institute of Toxicology Research, Lucknow India
- 5. Post Doc fellow (2007-2008) at Cornell University, USA.
- **6.** Recipient of **Foreign Travel Grant** from CSIR, New Delhi (TG/1952/06-HRD dated 27th January, 2006) to attend the 47th Annual Drosophila Research Conference, held at Houston, Texas, USA from 29th March to 2nd April 2006.
- **7.** Miss H. K. Shamantharathna **Gold Medal** at 80<sup>th</sup> Annual Convocation of the University of Mysore, held on March 29<sup>th</sup> 2000.
- **8.** Late Sri. N. C. Narasimha Iyengar and Smt. Ranganayakamma, Sri. N. C. Krishnaswamy, Smt. Chokkamma and Smt. Rukkamma **Memorial Cash prize** at the 80<sup>th</sup> Annual Convocation of the University of Mysore, held on March 29<sup>th</sup> 2000.
- 9. First Rank in M. Sc., Zoology 1997-1999

# **EXTRAMURAL GRANTS/ CSIR PROJECTS**

- **1.** Understanding the association between xenobiotic exposure and obesity using *Caenorhabditis elegans* as a model 2021-2024 (GAP-404 ICMR- funded- Principal investigator)
- **2.** Occurrence, Toxicity and Microbial Remediation of PAHs in Indian WWTPs Sludge 2020-2023 (E3OW, MLP-0018 CSIR funded- Co-Principal investigator)
- **3.** Evaluation of multi-generational effects of silica nanoparticle exposure using *Caenorhabditis elegans* 2018-2021 (GAP-337 DBT funded- Principal investigator)
- **4.** Development of *C. elegans* based platform for screening generational toxicity of nanoparticles residues in the environment 2017-2020 (MLP-001 CSIR- funded- Principal investigator)
- **5.** Evaluation of adverse effects of engineered nano-materials in soil nematode, *Caenorhabditis elegans* [(BSC0112) (CSIR-Network; 12th five year plan) 2012-2017 (Principal investigator)]
- **6.** Organismal sensitivity to environmental agents induced toxicity: A Comparative ecotoxicogenomics approach [(BSC0111) (CSIR-Network; 12th five year plan) 2012-2017 (Co-Principal investigator)]

### **Key publications**

- 1. Srivastava T, Tyagi D, Fatima S, Sathyan MTV, Raj R, Sharma A, Chaturvedi M, Sinha M, Shishodia SK, Kumar D, Sharma SK, Shankar J, Satish A, Priya S. A natural small molecule-mediated inhibition of alpha-synuclein aggregation leads to neuroprotection in *Caenorhabditis elegans*. *J Neurochem.*, (2023) 1-15, <a href="https://doi.org/10.1111/jnc.15907">https://doi.org/10.1111/jnc.15907</a> \*Co-correspondence
- **2.** Moin N, Thakur RS, Singh S, Patel DK, Aruna Satish. β-triketone herbicide exposure cause tyrosine and fat accumulation in *Caenorhabditis elegans*. *Chemosphere*, 236 (2023).
- **3.** Nagar Y, Thakur RS, Parveen T, Patel DK, Ravi Ram K, **Aruna Satish**. Toxicity assessment of parabens in *Caenorhabditis elegans*. *Chemosphere*, 231: 207-215 (2020).
- **4.** Bhatti S, Satyanarayana GNV, Patel DK, **Aruna Satish**. Bioaccumulation, biotransformation and toxic effect of fipronil in *Escherichia coli*. *Chemosphere*, 231: 207-215 (2019).
- **5.** Sonane M, Moin N, **Aruna Satish.** The role of antioxidants in attenuation of Caenorhabditis elegans lethality on exposure to TiO<sub>2</sub> and ZnO nanoparticles. *Chemosphere*, 187:240-247 (2017)
- **6.** Khare P, Sonane M, Nagar Y, Moin N, Ali S, Gupta KC, **Aruna Satish.** Size dependent toxicity of zinc oxide nano-particles in soil nematode *Caenorhabditis elegans*. *Nanotoxicology*, 9: 423-32 (2015).
- 7. Ch Ratnasekhar, Sonane M, **Aruna Satish\***, Mudiam MKR. Metabolomics reveals the perturbations in the metabolome of *Caenorhabditis elegans* exposed to titanium dioxide nanoparticles. *Nanotoxicology*, 9: 994-1004 (2015). \*Co-correspondence
- **8.** Satyaki PRV, Cuykendall TN, Wei KH-C, Brideau NJ, Kwak H, **Aruna S**, Ferree P, Shuqing Ji, Barbash DA. The Hmr and Lhr Hybrid Incompatibility Genes Suppress a Broad Range of Heterochromatic Repeats. *PLoS Genet*. 10(3): e1004240 (2014).
- **9.** Khare P, Sonane M, Pandey R, Ali S, Gupta KC, **Aruna Satish**. Adverse effects of TiO<sub>2</sub> and ZnO nanoparticles in soil nematode, *Caenorhabditis elegans*. *J Biomed Nanotechnol*. 7(1):116-117 (2011).

#### **MEMBER OF REVIEW COMMITTEE (Journals):**

- ➤ Environment Science Nano
- > Environment Toxicology and Pharmacology
- ➤ Environmental Science and Pollution Research
- > Ecotoxicology and Environmental Safety
- > Environmental Health Insights
- Food and Function
- Chemosphere
- Toxicology
- > Plos one
- Journal of Hazardous Materials

#### TEACHINGS AND TRAININGS

➤ Teaching 'Gene Environment Interaction' course to PhD students of AcSIR at CSIR-IITR.

# Ph. D AND MASTER STUDENTS

- ➤ PhD Supervisor: 04 (Ongoing) + 03 (Completed)
- Masters completed: 17