1	**Name of the Scientist**	Dr. Sumitra Arora
2	**Biodata**	
a.	**Designation**	Principal Scientist
b.	**e-mail**	sumitraarora@hotmail.com
c.	**Telephone no. (O)**	011-25842640
d.	**Joining date in ICAR**	12-04-1993
e.	**Discipline & specialization**	Organic chemistry; pesticide residues, screening of plant products and indigenous technologies
f.	**Training/ advance exposure in the area of work**	Post Doctorate from CSIRO on Assessment of toxicity of pesticides in mixtures through Endeavour award fellowship, DEEWR, Australia.

3. Contribution to the scientific advancement

- Developed a bio-pesticide formulation based on cow urine, validated under lab and field conditions for tomato crop at IARI with promising results. Patent published in 2011
- Developed a methodology for assessment of toxicity of pesticides in mixtures.
- Developed a concept for analysing impact of pesticides on environment for rice cropping system, based on lab and field studies, using EIQ concept.
- Observed a plant extract with insecticidal activity for lepidopetran and sucking insects after lab screening under indigenous technologies practiced by farmers.
- Pesticide residue analysis for Basmati rice, fruits and vegetables

4. Current area of research

Pesticide residue analysis; Validation of indigenous technologies in plant protection; detection of pesticides using diagnostic tools, EIQ concept for selection of pesticides with low risk to environment under rice cropping system.

5. Publication (best five)

Sumitra Arora, Irani Mukherji, Aman Kumar and DK Garg. (2014). Comparative estimation of pesticide residues in grain, soil and water from IPM and non-IPM trials of Basmati rice. *Environ. Monit. & Assess.*186 (1): 361-366.

Sumitra Arora, Irani Mukherji, Aman Kumar and RK Tanwar. (2014). Pesticide residue analysis of soil, water and grain of IPM Basmati rice. *Environ. Monit. & Assess.*186 (12):8765–8772.

Amit Kumar, **Sumitra Arora**, Navin Mogha, Salem S. Al-Deyab, Z. A. Ansari, S. G. Ansari. (2013). Glutathione coated Zinc oxide nanoparticles: a promising material for pesticide detection. *Energy and Environment Focus* 2: 101-107.

Sumitra Arora, Ashok K. Kanojia, Ashok Kumar, Vikrant Sahu and Navin Mogha. (2012). Bio-pesticide Formulation to control Tomato lepidopteran pest menace. *Current Science*. **102** (7): 1051-57, 10 April 2012.

Irani Mukherjee and **Sumitra Arora** (2011). Impact Analysis of IPM Programs in Basmati Rice by Estimation of Pesticide Residues. *Bull. Environ. Contam. and Toxicol*. 86:307-313. **Sumitra Arora** (2008). Insecticide Residues Analysis in Okra and Brinjal from IPM and Non-IPM Fields. *Environ. Monit. & Assess.*Volume 151 (1): 311-315.

Sumitra Arora, Irani Mukherjee and T.P. Trivedi. (2008). Determination of Pesticide Residues in Soil, Water and Grains from IPM and non-IPM Field Trials of Rice. *Bull. Environ. Contam. and Toxicol*. 81(4): 373-376.

Authored and edited 5 books on pesticides databases in India, 2006, 2009, 2011, 2013 & 2014.

6. Awards and Fellowships

Arya Bhatt Samman (best innovative research paper) Vigyan Bharati (2006); Young Scientist Associate Award (Pesticide residue chemistry) (Bioved Research Society, Allahabad, 2008); Kalawati medal Award, (Residue analysis in IPM) (Bioved Research Society, Allahabad, 2009); Endeavour Post Doc Award (DEEWR, SA, 2010) (pesticide residue analysis work

using RBPR technique); Nominated Focal Point Scientist (SAARC) (pesticides databases, 2010-13); represented country for SPINet (2011 and 2014)