



Dr. Arun Kumar

Senior Scientist

(Genetics & Plant Breeding)

- 1 Date of birth : 11-07-1968
- 2 Educational Qualification : Ph.D. (Botany, Specialization: Plant Cytogenetics), J.N. Vyas University, Jodhpur (2002); M.Sc. (Botany, Specialization: Genetics & Plant Breeding), Kanpur University (1993)
- 3 Joining Date in ICAR : 18-01-2010
- 4 Joining Date in DMR : 18-01-2010
- 5 Discipline /Specialization : Genetics & Plant Breeding, Specialization: Plant Cytogenetics
- 6 Research Experience : 08 years
- 7 Training/advance exposure in the area of work : Obtained Training on Molecular Cytogenetics at PAU, Ludhiana; Management of Plant Genetic Resources at National Bureau of Plant Genetic Resources, New Delhi
- 8 Contribution to the Scientific advancement
 - Wide hybridization of *Brassica species* and developed some interspecific crosses using wild relatives of *Brassica*
 - Confirmation of inter-specific / inter-generic crosses at Cyto-morphological and molecular level in *Brassica species*.
 - Evaluation of genomic homoeology through chromosome associations at diakinesis/metaphase I of meiosis
- 9 Future planning of research
 - Use of *Brassica*, and wild related species for developing introgressed and resynthesized lines of *Brassica juncea* with desirable attributes with respect to biotic (Aphid, *Alternaria*, Sclerotinia rot) and abiotic stresses (drought, heat tolerance).
 - Development of genomic resources for the genetic improvement of Rapeseed-mustard.
 - Marker assisted backcrossing to introgress desired chromosomal segments from the *Brassica* and allied genera.
- 10 Awards/Recognitions
 - Best Research Paper Presentation Award (2014) by Society for Rapeseed-Mustard Research, Bharatpur.

11 Publications (best five)

- **Kumar, A.** Binay K. Singh, Vijay V. Singh and J.S. Chauhan (2013). Cytomorphological and molecular evidences of synthesis of interspecific hybrids between *Brassica rapa* and *B. fruticulosa* through hybridization. *Australian Journal of Crop Science*, 7(6): 849-854.
- Hardev Ram., **Kumar, A.**, Sharma, S.K., Ojaha, A. and Rao, S.R. (2012). Male meiotic studies in Indian ginseng (*Withania somnifera* (L.) Dunal.): A threatened medicinal herb. *American Journal of Plant Sciences*, 3:185-189.
- Sharma, S.K., **Kumar, A.**, Kumaria, S. and Rao, S.R. 2011. Genetic diversity and gene flow estimation in *Prosopis cineraria* (L.) Druce: A key stone tree species of Indian Thar Desert. *Biochemical Systematics and Ecology*, 39: 9-13.
- Purohit, J., **Kumar, A.**, Hynniewta, M. and Rao, S.R. (2011). Karyomorphological studies in Guar (*Cyamopsis tetragonoloba* (Linn.) Taub. An important gum yielding plant of Rajasthan, *India Cytologia*, 76: 163-169.
- Sharma, S.K., **Kumar, A.**, Kumaria, S. and Rao, S.R. (2010). Single primer amplification reaction (SPAR) reveals intra-specific natural variation in *Prosopis cineraria* (L.) *Druce Trees-Structure and Function*, 24 : 855-864.

12. Professional membership

- Society of Genetics and Plant breeding, New Delhi.
- Society for Rapeseed mustard Research, DRMR, Sewar, Bharatpur, Rajasthan