

# Resume

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2. Designation Professor & Head
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6. Date of Joining J.M.I. 03.03. 2009
7. Field of Specialization Plant Virology/Biotechnology/Microbiology

## 8. Academic Qualifications:

Degree	Subjects	Grade	Name of Institutes
BSc (Hons)	Botany (main), Zoology & Chemistry	1 <sup>st</sup>	Aligarh Muslim University
MSc	Botany with specialization in Plant Pathology	1 <sup>st</sup>	Aligarh Muslim University
MPhil	Botany	-	Aligarh Muslim University
PhD	Plant Virology	-	Wageningen University, The Netherlands

## 9. Employment Profile:

S.No.	Position Held	From	To	Name of Institutes
1.	Professor	2009	Contd.	Jamia Millia Islamia, New Delhi
2.	Scientist EI	2004	2009	CSIR -National Botanical Research Institute, Lucknow
3.	Scientist C	2000	2004	CSIR -National Botanical Research Institute
4.	Scientist B	1995	2000	CSIR -National Botanical Research Institute

## 10. Courses taught at Postgraduate and Undergraduate Level:

Molecular Biology, Microbiology and Immunology

## 11. Projects guided at Postgraduate and Undergraduate Level:

Several

## 12. Self-Project Work

S. No.	Name of Project	Awarded by
1.	Molecular characterization of <i>Tomato leaf curl virus</i> with a view to develop	Department of Science & Technology (Govt. of India)

- virus resistant transgenic plants (PI)
2. Development of diagnostic probes against *Cotton leaf curl virus* (PI) CSIR (In house)
  3. Characterization of DNA components associated with cotton leaf curl disease (PI) CSIR (In house)
  4. Molecular characterization of viruses (viz., BYMV and CMV) infecting *Gladiolus* with a view to develop diagnostic kits and virus resistant transgenic plants (Co-PI) Department of Science & Technology (Govt. of India)
  5. Biotechnological approaches for indexing and production of virus free *Catharanthus roseus* and *Withania somnifera* plants (PI) Department of Biotechnology (Govt. of India)
  6. DST-FIST Programme (Coordinator) Department of Science & Technology (Govt. of India)

**13. Ph.D. guided/currently enrolled:**

1. Sanjay K. Singh (2007). Phytoplasma-infecting *Catharanthus roseus* plants: Sensitive detection and generation of phytoplasma-free plants.  
*Currently Manager, Research & Development, with multi-national company Merck based in Bangalore.*
2. Javed Ahmad (2008). Molecular characterization of genomic components associated with leaf curl disease of cotton.  
*Assistant Professor, King Saud University, Saudi Arabia*
3. Neelam Yadav (2011). Molecular characterization of a pot Y virus infecting *Narcissus tazetta* plants and development of diagnostic probes.  
*Assistant Professor, Amity University, Manesar.*
4. Abhinav Kumar (2011). Application of siRNA technology in generating resistance to cotton leaf curl disease.  
*Dr. D.S. Kothari Post Doctoral Fellow at JNU, New Delhi.*
5. Sadia Akhtar (pursuing). Designing and development of RNAi constructs for Cotton leaf curl disease.
6. Zainul A. Khan (pursuing). Molecular characterization of Cotton leaf curl virus (CLCuV) promoter.
7. Sameena Khatoon (pursuing). Generation of *Cotton leaf curl virus*- resistant transgenic Cotton Plants.
8. Shweta (pursuing). *In silico* search of miRNA and siRNA targets against begomoviruses in cotton (*Gossypium hirsutum*) host plant.
9. Gazal Wamiq (pursuing). Developing RNAi- mediated resistance against whitefly (*Bemisia tabaci*) infestation in tobacco.
10. Mirza Sarwar Beg (pursuing). Identification and Designing of amiRNA against CLCuV in *Nicotiana tabacum*.

**14. Invited Talk:**

Several

**15. International Visits:**

Australia, Belgium, Canada, Germany, Netherlands

**16. Membership of National Bodies:**

Indian Virological Society-Life Member

Indian Phytopathological Society-Life Member

**17. Reviewer of Research Papers:**

Several prestigious national/international journals

**18. Workshops/Conferences (International) Attended:**

- VII International congress of Virology, August 26-31 1990; Berlin, Germany
- International Workshop on Potyvirus Taxonomy, Braunschweig, Germany, September 2-4, 1990
- VII International Congress of Plant Pathology, Montreal, Canada, July 28-August 6, 1993
- XIII International Workshop on Legume, Montreal, Canada, July 25-27, 1993

**19. Books**

**1. Handbook of Plant Virology**

Khan JA, Dijkstra J

The Haworth Press, New York, London, Oxford

**2. Plant viruses As Molecular Pathogens**

Khan JA, Dijkstra J

The Haworth Press, New York, London, Oxford

**20. Selected Publications:**

1. Khan JA, Lohuis H, Goldbach RW, Dijkstra J (1990). Distinction of strain of bean common mosaic virus and blackeye cowpea mosaic virus using antibodies N- and C-or N-terminal peptide domains of the coat protein. *Annals of Applied Biology* (UK) 117: 583-93.
2. Dijkstra J, Khan JA (1992). A proposal for a bean common mosaic subgroup of Potyvirus. *Archives of Virology* (USA) (Suppl.5): 389-395.
3. Khan JA, Lohuis H, Goldbach RW, Dijkstra J (1993). Sequence data to settle the taxonomic position of bean common mosaic virus and blackeye cowpea mosaic virus isolates. *Journal of General Virology* (UK) 74: 2243-2249.
4. Khan JA, Lohuis H, Goldbach RW, Dijkstra J (1994). Distribution and localization of bean common mosaic virus and bean black root virus in stems of doubly infected plants. *Archives of Virology* (USA) 138: 95-104.
5. Khan JA, Lohuis H, Bakardijieva N, Peters D, Goldbach RW, Dijkstra J (1994). Interference between two strains of bean common mosaic virus is accompanied by suppression of symptoms without affecting replication of challenging virus. *Journal of Phytopathology* (Germany) 140:260-268.
6. Khan JA, Aminuddin, Raj SK, Singh BP (1998). Detection of plant viruses- Biotechnological and molecular advances. *Indian Journal of Experimental Biology* 36: 546-552.
7. Aminuddin, Khan JA, Raj SK (1999). Association of an unknown potyviruses isolate with a severe mosaic disease of *Narcissus tazetta* L. *Indian Journal of Experimental Biology* 37: 1034-1036.
8. Khan JA, Aminuddin, Singh BP (1999). Detection of potyviruses infecting ornamental crops. *Indian Journal of Plant Pathology*. 17 (1/2): 12-15.
9. Khan JA (1999). Detection of tomato leaf curl Gemini virus in its vector *Bemisia tabaci*. *Indian Journal of Experimental Biology* 38: 512-515.

10. Aminuddin, Raj SK, Khan JA, Haq QMR, Hallan V, Saxena S, Singh BP (2000). Molecular approaches for plant virus characterization and management. *Indian Phytopathology Golden Jubilee Proceedings (2000)*. 1: 75-79, pp 665, Malhotra Publishing House, New Delhi.
11. Khan JA, Singh BP (2000). Characterization of potyviruses infecting ornamental crops. *Indian Phytopathology Jubilee Proceedings (2000)* 1: 99-100, pp 665, Malhotra Publishing House, New Delhi.
12. Aminuddin, Raj SK, Khan JA, Haq QMR, Hallan V, Saxena S, Singh BP (2000). Molecular approach for plant virus characterization and management. *Indian Phytopathology Golden Jubilee Proceedings (2000)*. 1: 75-79, pp 665, Malhotra Publishing House, New Delhi.
13. Khan JA, Sohrab SS, Aminuddin, Gupta RK (2002). Detection of a begomovirus affecting guar [*Cymopsis tetragonola* (L.)] in India. *Journal of Plant Diseases and Protection* (Germany) 109(1): 68-73.
14. Khan JA, Siddiqui MK, Singh BP (2002). The association of begomovirus with bitter melon in India. *Plant Disease* (USA) 86(3): 328.
15. Khan JA, Siddiqui MK, Singh BP (2002). The natural occurrence of begomovirus in sunn hemp (*Crotalaria juncea*). *Plant Pathology* (UK) 51:398.
16. Dijkstra J, Khan JA (2002). The current naming of plant viruses: a critical appraisal. *Archives of Virology* (USA) 147: 2251-2253.
17. Khan JA, Dijkstra J (2002). Seed transmission of viruses: Biological and molecular insights. In: *Plant viruses as molecular pathogens*, Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp 105-126.
18. Dijkstra J, Khan JA (2002). Characteristic features of virus transmission by nematodes. In: *Plant viruses as molecular pathogens*, Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp 63-75
19. Dijkstra J, Khan JA (2002). Virus transmission by fungal vectors. In: *Plant viruses as molecular pathogens*, Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp 77-104.
20. Khan JA (2002). Molecular diversity among isolates of Bean common mosaic virus and Blackeye cowpea mosaic virus. In: *Advances in Legume Research in India*, Rao RR (ed.), Publisher: Bishen Singh Mahendra Pal Singh, Dehradun, pp. 429-435.
21. Khan JA, Sohrab SS, Aminuddin (2003). Guar leaf curl disease from India is caused by tomato leaf curl virus. *Plant Pathology* (UK) 52 (6): 796.
22. Khan JA, Srivastava P, Singh SK (2004). Efficacy of nested PCR for the detection of phytoplasma causing spike disease of sandal. *Current Science* (India) 86 (11): 1530-1533.
23. Khan JA, Ahmad J (2005). Diagnosis, monitoring and transmission characteristics of *Cotton leaf curl virus*. *Current Science* (India) 88 (11): 1-7.
24. Khan JA, Singh SK, Srivastava P, Aminuddin (2006). Sensitive detection of a phytoplasma in *Catharanthus roseus* L. (G.) Don. *Journal of Plant Diseases and Protection* (Germany), 113 (2), S. 49–52.
25. Dijkstra J, Khan JA (2006). Symptomatology. In: *Handbook of Plant Virology*; Khan JA, Dijkstra J (eds); The Haworth Press, New York, London, Oxford, pp. 23-32.
26. Dijkstra J, Khan JA (2006). Plant virus transmission: Fungi, nematodes, and seeds. In: *Handbook of Plant Virology*; Khan JA, Dijkstra J (eds); The Haworth Press, New York, London, Oxford, pp. 127-136.

27. Dijkstra J, Khan JA (2006). Plant virus transmission: Mechanical means and by grafting, vegetative propagation, and dodder. In: Handbook of Plant Virology; Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp. 137-144.
28. Dijkstra J, Khan JA (2006). Description of positive-sense, single-stranded RNA viruses. In: Handbook of Plant Virology; Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp. 253-388.
29. Dijkstra J, Khan JA (2006). Description of double-stranded RNA viruses. In: Handbook of Plant Virology; Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp. 389-402.
30. Dijkstra J, Khan JA (2006). Description of negative-sense, single-stranded RNA viruses. In: Handbook of Plant Virology; Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp. 403-418.
31. Dijkstra J, Khan JA (2006). Description of single-stranded DNA viruses. In: Handbook of Plant Virology; Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, pp. 419-430.
32. Dijkstra J, Khan JA (2006). Description of Reverse Transcribing viruses. In: Handbook of Plant Virology; Khan JA, Dijkstra J (eds), The Haworth Press, New York, London, Oxford, 431-442.
33. Khan JA, Srivastava P, Singh SK (2006). Identification of a 'Candidatus Phytoplasma asteris'-related strain associated with spike disease of sandal (*Santalum album*) in India. *Plant Pathology (UK)* 55 (4): 572.
34. Khan JA, Srivastava P, Singh SK (2006). Sensitive detection of a phytoplasma associated with little leaf symptoms in *Withania somnifera*. *European Journal of Plant Pathology (Netherlands)* 115: 401-408
35. Singh SK, Aminuddin, Srivastava P, Singh BR, Khan JA (2006). Production of phytoplasma-free plants from yellow leaf diseased *Catharanthus roseus* L. (G.) Don. *Journal of Plant Diseases and Protection (Germany)* 114 (1): 2-5.
36. Yadav N, Khan JA (2008). Identification of a potyvirus associated with mosaic disease of *Narcissus* sp. in India. *Plant Pathology (UK)* 57 (2): 394.
37. Ahmad J, M. Y. Khan and Khan JA (2007). Molecular Characterization of Coat Protein Gene of Cotton Curl Virus (CLCuV). *Indian J Plant Pathology* 25, 100-103.
38. Khan JA, Singh SK, Ahmad J (2008). Characterization and phylogeny of a phytoplasma inducing sandal spike disease in sandal (*Santalum album*). *Annals of Applied Biology (UK)* Volume 153, Number 3: 365-372.
39. Kumar A, Kumar J, Khan JA (2009). Sequence characterization of cotton leaf curl virus from Rajasthan: phylogenetic relationship with other members of geminiviruses and detection of recombination. *Virus Genes (Netherlands)* 40(2):282-9.
40. Kumar J, Kumar A, Khan J A, and Aminuddin (2009) First report of papaya leaf curl virus naturally infecting tobacco in India. *Journal of Plant Pathology (Italy)* 91 (S4), 107.
41. Kumar J, Kumar A, Roy JK, Tuli R and Khan JA (2010). Identification and molecular characterization of begomovirus and associated satellite DNA molecules infecting *Cyamopsis tetragonoloba*. *Virus Genes (Netherlands)* 41(1):118-25.
42. Kumar J, Kumar A, Gunapati S and Khan JA (2010). Molecular detection of begomovirus associated alpha and beta satellites from tomato showing leaf curl symptom. *Journal of Plant Pathology (Italy)* 92 (2) 544.

43. Ahmad J, Singh BR, Al-KhedhairyAA, Alarifi S, Khan JA, Musarrat J (2011). Characterization of Sunn hemp begomovirus and its geographical origin based on *in silico* structural and functional analysis of recombinant coat protein. *African Journal of Biotechnology*. 10:2600-2610.
44. Kumar A, Snehi SK, Raj SK, Kumar J, Khan JA (2011). Association of *Cotton leaf curl Burewala virus* and its satellite molecules with leaf distortion symptoms of cotton in India *New Disease Reports* (UK) 24, 18.
45. Sinha V , A. Kumar D. Bhatnagar and Khan JA (2013). Association of Cotton leaf curl Multan virus and its satellite molecules with leaf curl disease of papaya in India. *New Disease Reports* (UK) 27, 9.
46. Kumar J, Singh SP, Kumar A, Khan JA, Tuli R (2013). Detection and characterization of a new betasatellite: variation in disease symptoms of tomato leaf curl Pakistan virus-India due to associated betasatellite. *Archives of Virology* (USA) 158(1):257-61.
47. Khan JA, Kumar J, Thakur PD, Handa A, Jarial K (2013). First report of a 'Candidatus Phytoplasma Ziziphi'-related strain associated with peach decline disease in India. *Journal of Plant Pathology* (Italy) Vol. 95 No. 4, Supplement pp. S4.76
48. Baig MS, Khan JA (2013). Identification of *Gossypium hirsutum* miRNA targets in the genome of Cotton leaf curl Multan virus and betasatellite. *Indian Journal of Biotechnology* 12: 336-342.
49. Kumar J, Singh SP, Kumar A, Khan JA, Tuli R (2013). Recombination study using Radish leaf curl virus isolates. *African Journal of Microbiology Research* 7: 3542-3546.
50. Shweta, Khan JA (2014). *In silico* prediction of cotton (*Gossypium hirsutum*) encoded microRNAs targets in the genome of *Cotton leaf curl Allahabad virus*. *Bioinformatics* 10(5): 251–255.
51. Khatoon S, Akmal M, Sarin NB, Khan JA (2014). Cytokinins improve shoot regeneration efficiency in two Indian cotton (*Gossypium hirsutum* cv. Narashima and *G. arboreum* cv. AKA-7) cultivars. *Acta Advances in Agricultural Sciences* 2 (8): 25-31.