1. **Name** : **Dr. Jagesh Kumar Tiwari**
2. **Designation** : Scientist (Senior Scale)
3. **Contact details** : Division of Crop Improveme
ICAR-Central Potato Research Institute
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4. **Academic career and professional attainments**

(a) Degree	University/Institution	Year
B.Sc. Horticulture	Dr. PDKV, Akola, Maharashtra, India	2002
M.Sc. (Ag) Vegetable Science	GBPUA&T, Pantnagar, Uttarakhand, India	2004
Ph. D. (Horticulture)	IARI, New Delhi, India	2007
Post-Doctoral Research	University of Adelaide, Adelaide, Australia (Australian Endeavour Research Fellow - 2015)	2015

(b) Position held	Duration	Institution
Scientist (Senior Scale)	07-01-2012 to till date	Central Potato Research Institute, Shimla
Scientist	19-05-2008 to 06-01-2012	Central Potato Research Institute, Shimla
Scientist	07-01-2008 to 18-05-2008	NAARM, Hyderabad

5. Area of Research

- Somatic hybridization (via protoplast fusion) for late blight and potato virus Y resistance in potato improvement
- Allele mining, transcriptome analysis and QTL mapping of late blight resistant genes in potato
- Molecular characterization of potato germplasm
- Genetic approaches in nitrogen use efficiency for potato improvement

6. Current Institute Projects

- Genetic enhancement of potato through molecular and genomic tools
- Management and enhancement of potato germplasm

7. Externally funded Projects

- Symmetric somatic hybridization for late blight resistance in potato (funded by the DBT)
- PhytoFuRa (funded by the ICAR)

8. Awards / honours

- Chandra Prabha Singh Young Scientist Award for the year 2011-12 by the Indian Potato Association, CPRI, Shimla.

- Best research paper award by the Horticulture Society of India in for the year 2013.
- IPA Gold medal for the best paper award for the year 2012 by Indian Potato Association, CPRI, Shimla.
- IPA Best Poster Award in National Seminar on Emerging Problems of Potato, 1-2 Nov. 2014, CPRI, Shimla.
- ICAR-Junior Research Fellowship during M.Sc. (2002 to 2004)
- CSIR/UGC-NET (2003 and 2004)
- IARI-Fellowship during Ph.D. (2004 to 2007)
- ICAR- NET (2006) and ARS (2007)

9. Publications (Research Papers)

SN	List of Research Papers
1.	Singh R, Rawat S, Sharma V, **Tiwari JK** and Singh BP (2016) Homology modelling and Structural analysis of FLOWERING LOCUS T protein from *Solanum tuberosum*. International Journal of Computational Bioinformatics and In Silico Modeling 5 (2): 799-807
2.	Singh R, **Tiwari JK**, Rawat S, Sharma V and Singh BP (2016) Monitoring gene expression pattern in somatic hybrid of *Solanum tuberosum* and *S. pinnatisectum* for late blight resistance using microarray analysis. Plant Omics Journal 9(1):99-105 (NAAS Score: 6.00)
3.	**Tiwari JK**, Devi S, Chandel P, Ali N, V Bhardwaj, Singh BP (2016) Organelle genome analysis in somatic hybrids between *Solanum tuberosum* and *S. pinnatisectum* revealed diverse cytoplasm type in potato. Agricultural Research 5: 22-28 (NAAS Score: 5.88)
4.	Chandel P, **Tiwari JK**, Ali N, Devi S, Sharma Shashi, Sharma Sanjeev, Luthra SK, Singh BP (2015) Interspecific potato somatic hybrids between *Solanum tuberosum* and *S. cardiophyllum*, potential sources of late blight resistance breeding. Plant Cell Tissue and Organ Culture 123:579–589. (NAAS Score: 8.61)
5.	**Tiwari JK**, S Devi, S Sharma, P Chandel, S Rawat and BP Singh (2015) Allele mining in *Solanum* germplasm: cloning and characterization of RB-homologous gene fragments from late blight resistant wild potato species. Plant Molecular Biology Reporter 33:1584–1598. (NAAS Score: 8.37)
6.	**Tiwari JK**, Devi S, Sundaresha S, Chandel P, Ali N, Singh B, Bhardwaj V, Singh BP (2015) Microarray analysis of gene expression patterns in the leaf during potato tuberization in the potato somatic hybrid *Solanum tuberosum* and *Solanum etuberosum*. Genome 58: 305–313 (NAAS Score: 7.56)
7.	**Tiwari JK**, Saurabh S, Chandel P, Devi S, Ali N, Bist CM, Singh BP (2015) Analysis of genetic and epigenetic changes in potato somatic hybrids between *Solanum tuberosum* and *S. etuberosum* by AFLP and MSAP Markers. Agricultural Research 4: 339-346 (NAAS Score: 5.88)

8.	**Tiwari JK**, Poonam, Saurabh S, Devi S, Ali N, Bhardwaj V and BP Singh (2015) Molecular characterization of potato somatic hybrids by inter simple sequence repeat (ISSR) markers Potato J 42 (1): 1-7 (NAAS Score: 4.88)
9.	**Tiwari JK**, S Saurabh, P Chandel, BP Singh and V Bhardwaj (2015) Assessment of genetic and epigenetic variations in potato somatic hybrids by methylation-sensitive ISSR and RAPD markers. *Bangladesh Journal of Botany* 44(1): 45-50. (NAAS Score: 6.38)
10.	**Tiwari JK**, S Saurabh, P Chandel, S Devi, N Ali, CM Bist, BP Singh and V Bhardwaj (2014) Analysis of DNA methylation patterns in potato somatic hybrids between *Solanum tuberosum* and *S. etuberosum* by molecular markers. *International Journal of Innovative Horticulture* 3: 53-59.
11.	Singh R, JK Tiwari, V Sharma, BP Singh and S Rawat (2014) Role of pathogen related protein families in defence mechanism with potential role in applied biotechnology. *International Journal of Advanced Research* 2: 210-226.
12.	**Tiwari JK**, Saurabh S, Chandel P, Devi S, Ali N, Bist CM, Singh BP, Bhardwaj V (2014) Analysis of DNA methylation patterns in potato somatic hybrids between *Solanum tuberosum* and *S. etuberosum* by molecular markers. International Journal of Innovative Horticulture 3:53-59
13.	**Tiwari JK**, P Chandel, BP Singh and V Bhardwaj (2014) Analysis of plastome and chondriome genome types in potato somatic hybrids from *Solanum tuberosum* x *Solanum etuberosum*. *Genome* 57: 29-35 (NAAS Score: 7.56)
14.	Chakrabarti SK, Singh BP, Thakur G, **Tiwari JK**, Kaushik SK, Sharma S and Bhardwaj V (2014) QTL mapping underlying resistance to late blight in a diploid potato population of *Solanum spegazzinii* × *S. chacoense*. *Potato Research* 57:1–11. (NAAS Score: 6.84)
15.	Sundaresha S, **Tiwari JK**, R Sindhu, S Sharma, V Bhardwaj, SK Chakrabarti and BP Singh (2014) *Phytophthora infestans* associated global gene expression profile in a late blight resistant Indian potato cv. Kufri Girdhari. *Australian Journal of Crop Science* 8: 215-222. (NAAS Score: 5.00)
16.	**Tiwari JK**, SP Trehan, Sundaresha S, Poonam, BP Singh, VK Dua and V Bhardwaj (2014) Gene expression analysis: indicators of nitrogen use efficiency in potato cultivars. *Potato Journal* 41: 175-179. (NAAS Score: 4.88)
17.	Singh R, S Rawat, **Tiwari JK**, V Sharma and BP Singh (2014) *In-Silico* analysis of structural properties of pathogen-related protein (PR1) in potato somatic hybrid. *Journal of Advanced Bioinformatics Applications and Research* 5: 150-162.
18.	**Tiwari JK**, S Saurabh, P Chandel, BP Singh and V Bhardwaj (2013) Analysis of genetic and epigenetic variation in potato somatic hybrid by AFLP and MASP markers. *Electronic Journal of Biotechnology* (DOI: 10.2225/vol16-issue 6-full text-9). (NAAS Score: 6.65)

19.	**Tiwari JK**, Poonam, SK Chakrabarti, V Kumar, J Gopal, BP Singh, SK Pandey and D Pattanayak (2013) Identification of host gene conferring resistance to *Potato virus Y* using *Ry* gene-based molecular markers. *Indian Journal of Horticulture* 70: 373-377. (NAAS Score: 6.11)
20.	**Tiwari JK**, S Sundaresha, BP Singh, SK Kaushik, SK Chakrabarti, V Bhardwaj and P Chandel (2013) Molecular markers for late blight resistance breeding of potato: an update. *Plant Breeding* 132: 237–245. (NAAS Score: 7.34)
21.	**Tiwari JK**, SK Pandey, Poonam, SK Chakrabarti, J Gopal and V Kumar (2013) Molecular markers of *Ryadg* gene and serological assay reveal potato virus Y (PVY) resistance in the tetraploid Indian potato (*Solanum tuberosum*) germplasm. *Indian Journal of Agricultural Sciences* 83: 397–401. (NAAS Score: 6.00)
22.	**Tiwari JK**, Munshi AD, Kumar R and Sureja AK (2013) Effects of salt stress on cucumber (*Cucumis sativus* L.): seed germination, vegetative growth and fruit yield. *Indian Journal of Horticulture* 74: 538-543. (NAAS Score: 6.11)
23.	**Tiwari JK**, Poonam, V Kumar, BP Singh, S Sharma, SK Luthra and V Bhardwaj (2013) Evaluation of potato somatic hybrids of dihaploid *S. tuberosum* (+) *S. pinnatisectum* for late blight resistance. *Potato Journal* 40: 176-179. (NAAS Score: 4.88)
24.	**Tiwari JK**, P Chandel, S Gupta, J Gopal, BP Singh and V Bhardwaj (2013) Analysis of genetic stability of in vitro propagated potato microtubers using DNA markers. *Physiology and Molecular Biology of Plants* 19: 587–595. (NAAS Score: 4.63)
25.	Sarkar D, **Tiwari JK**, S Sharma, Poonam, Sanjeev Sharma, J Gopal, BP Singh, SK Luthra, SK Pandey and D Pattanayak (2013) P-7 (IC0590090; INGR11051), a potato (*Solanum tuberosum* (+) *S. pinnatisectum* tetraploid, somatic male fertile hybrid carrying resistance to potato late blight introgressed from *S. pinnatisectum*. *Indian Journal of Plant Genetic Resources* 26: 93-94. (NAAS Score: 4.61)
26.	**Tiwari JK**, Poonam, D Sarkar, SK Pandey, J Gopal and SR Kumar (2013) E 1-3 (IC0590089; INGR11050), a potato (*Solanum tuberosum* (+) *S. etubersoum*) tetraploid somatic male fertile hybrid carrying resistance to potato virus introgressed from *S. etuberosum*. *Indian Journal of Plant Genetic Resources* 26: 93. (NAAS Score: 4.61)
27.	**Tiwari JK**, Poonam, AK Srivastava, BP Singh and TK Bag (2013) Protoplast fusion in potato improvement. *Keanean Journal of Science* 2: 3-5.
28.	**Tiwari JK**, BP Singh, J Gopal, Poonam and VU Patil (2013) Molecular characterization of the Indian Andigena potato core collection using microsatellite markers. *African Journal of Biotechnology* 12: 1025-1033. (NAAS Score: 4.0)

29.	Kaundal P, **Tiwari JK**, N Kaushal, D Kumar, J Gopal, SK Pandey and ID Garg (2012) Comparison of fluorescein- and ^{32}P-labelled probes for safe detection of potato spindle tuber viroid in potato. *Indian Journal of Horticulture* 69: 121-124. (NAAS Score: 6.11)
30.	**Tiwari JK**, J Gopal and BP Singh (2012) Marker-assisted selection for virus resistance in potato: options and challenges. *Potato Journal* 39: 101-117. (NAAS Score: 4.88)
31.	**Tiwari JK**, AD Munshi, R Kumar, RK Sharma, JS Bhat and AK Sureja (2011) Gene effects for fruit yield and its component traits in cucumber (C*ucumis sativus*) using generation means. *Indian Journal of Agricultural Sciences* 81: 894-897. (NAAS Score: 6.00)
32.	Sharma S, D Sarkar, SK Pandey, P Chandel and **Tiwari JK** (2011) Stoloniferous shoot protoplast, an efficient cell system in potato for somatic cell genetic manipulations. *Scientia Horticulturae* 128: 84–91. (NAAS Score: 7.50)
33.	Sarkar D, **Tiwari JK**, Shushruti Sharma, Poonam, Sanjeev Sharma, J Gopal, BP Singh, SK Luthra, SK Pandey and D Pattanayak (2011) Production and characterization of somatic hybrids between *Solanum tuberosum* L. and *S. pinnatisectum* Dun. *Plant Cell Tissue and Organ Culture* 107: 427-440. (NAAS Score: 8.61)
34.	**Tiwari JK**, AD Munshi, R Kumar, RK Sharma and AK Sureja (2011) Inheritance of salt tolerance in cucumber (*Cucumis sativus* L.). *Indian Journal of Agricultural Sciences* 81: 398–401. (NAAS Score: 6.00)
35.	**Kumar J**, AD Munshi, R Kumar, AK Sureja and RK Sharma (2011) Combining ability and its relationship with gene action in slicing cucumber. *Indian Journal of Horticulture* 68: 507-511. (NAAS Score: 6.11)
36.	**Tiwari JK**, Poonam, D Sarkar, SK Pandey, J Gopal and SR Kumar (2010) Molecular and morphological characterization of somatic hybrids between *Solanum tuberosum* L. and *S. etuberosum* Lindl. *Plant Cell Tissue and Organ Culture* 103: 175-187. (NAAS Score: 8.61)
37.	**Tiwari JK**, AD Munshi, R Kumar, RN Pandey, A Arora, JS Bhat and AK Sureja (2010) Effect of salt stress on cucumber: Na^+–K^+ ratio, osmolyte concentration, phenols and chlorophyll content. *Acta Physiologia Plantarum* 32: 103–114. (NAAS Score: 7.52)
38.	**Kumar J**, AD Munshi, R Kumar and AK Sureja (2010) Studies on heterosis in slicing cucumber. *Indian Journal of Horticulture* 67: 197-201. (NAAS Score: 6.11)
39.	Kaushal N, A Bhatnagar, **Tiwari JK**, D Kumar, P Kaundal, SK Pandey and ID Garg (2010) Print-capture RT-PCR to detect groundnut bud necrosis virus-causal organism of potato stem necrosis disease. *Potato Journal* 37: 114-117.

	(NAAS Score: 4.88)
40.	**Tiwari JK**, AD Munshi, R Kumar and AK Sureja (2009) Heterosis for yield and its components in hybrids of salinity-tolerant and sensitive cucumber inbreds. *Vegetable Science* 36: 184-187. (NAAS Score: 3.85)
41.	**Tiwari JK**, AD Munshi, R Kumar, RK Sharma and AK Sureja (2009) Combining ability for yield and related traits in cucumber (*Cucumis sativus* L.). *Vegetable Science* 36: 159-162. (NAAS Score: 3.85)
42.	**Kumar J**, Munshi AD, Kumar R and Sharma RK (2007) Genetic variability, heritability and genetic advance in cucumber. *Pusa AgriScience* 30: 31-34. (NAAS Score: 2.20)
43.	**Kumar J**, DK Singh and HH Ram (2006) Genetic diversity in indigenous germplasm of pumpkin. *Indian Journal of Horticulture* 63: 101-102. (NAAS Score: 6.11)
44.	**Kumar J**, DK Singh and HH Ram (2005) Determining yield components in pumpkin through correlation and path analysis. *Indian Journal of Horticulture* 62: 346-349. (NAAS Score: 6.11)
45.	**Kumar J**, Singh DK and Ram HH (2006) Protein profiling study of indigenous germplasm lines of pumpkin (*Cucurbita moschata* Duh. Ex. Poir). *Vegetable Science* 33: 10-12. (NAAS Score: 3.85)

Book

Mishra BK, Saini S and **Tiwari JK** (2013) Food and Nutritional Security by Sustainable Agriculture: Methods to attain and Sustain. New India Publishing Agency (NIPA), New Delhi. p. 484. (ISBN No. 9789383305049).

10. Professional Affiliations

- Indian Potato Association, ICAR-CPRI, Shimla
- Horticulture Society of India, NASC, New Delhi
- Indian Society of Vegetable Science, ICAR-IIVR, Varanasi

11. Foreign Exposure:

- International Potato Centre (CIP), Lima Peru (Year: 2010; Duration: 3 months) under the NAIP International Training funded by by the ICAR, New Delhi
- The University of Adelaide, Australia (Year: 2015; Duration: 6 months) under the Australian Endeavour Research Fellowship-2015 funded by the Govt. of Australia