

CONTACT
INFORMATION

Dr. Tareq A. Wani
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Plant Tissue Culture Lab
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Residence: Sopat, Devsar

District: Kulgam, Kashmir

RESEARCH INTERESTS
AND VISION

My broader areas of research are Reproductive Biology, Molecular Biology and Tissue Culture. I seek to use multipronged strategy to elucidate and understand the basic biology of plants, bioprospection of highly prioritized medicinal and aromatic plants of Kashmir Himalayas, threat status and conservation measures using *in vitro* approaches, Active secondary metabolites and elucidation of important pathways responsible for their production, rate limiting pathway genes.

ACADEMIC
APPOINTMENTS

University of Kashmir, Srinagar, India
Department of Botany
DST-SERB- National Postdoc Fellow

April 2017 to date

EDUCATION

CSIR- Indian Institute of Integrative Medicine (IIIM), 2012 to 2017
Jammu, India

PhD— Plant Sciences (Botany)

Degree awarded by **University of Jammu**, Jammu, India

Advisor's: [Dr. Surrinder K. Lattoo](#) and [Prof. Namrata Sharma](#)

Thesis title: Studies on breeding system and molecular cloning of auxin response factor and chalcone synthase genes in *Grewia asiatica* Linn.

Himachal Pradesh University, Shimlah, India
M.Sc. Botany

2006 – 2008

University of Kashmir, Srinagar, India
B.Sc. English, Botany, Zoology and Chemistry

2003 – 2005

HONORS, AWARDS,
AND GRANTS
(NATIONAL/INTERNATI
ONAL)

- Received travel grant to attend **ACSE/ACSTM 2019 in Dubai** **November 2018**
- Received certificate of excellence in Peer-Reviewing from **Asian Journal of Research in Biosciences** **November 2018**
- Qualified Jammu and Kashmir state eligibility test for the recruitment of Assistant Professor (**JK-SET**) **July 2018**
- Awarded **National Postdoc Fellowship** Award, by the Department of Science and Technology, Govt. of India with a grant for 2 years @₹ 9.60 lac per year **2017-2019**
- Received best paper presentation award at “**3rd International Conference on Recent Trends and Advancements in Engineering and Technology (ICRTAET) Organized by Shri Mata Vaishno Devi University (SMVDU), Katra, India.** **November 2016**
- Received best oral presentation award at “**11th JK Science congress held at University of Kashmir, Srinagar.** **October 2015**
- Received best poster presentation award at “**International Conference on Medicinal Plants: Resource for Affordable New Generation Healthcare. CIMAP**”, Lucknow, India. **March 2015**
- Qualified Agricultural Scientists Recruitment Board– National Eligibility Test (**ASRB-NET**) held by Indian council of Agricultural research (**ICAR**), New Delhi, India **November 2014**
- Awarded **certificate of excellence** in the quiz on Atmospheric Ocean Science and Technology conducted by Ministry of Earth Science, Govt. of India at the 101st Indian Science Congress, Jammu, India **February 2014**
- Qualified **Graduate Aptitude Test in Engineering (GATE)** vide all India rank **58/13262.** **March 2011**
- Qualified National Eligibility Test (**NET**) held jointly by Council of Scientific and Industrial Research (**CSIR**) and University Grants Commission (**UGC**), New Delhi, India vide all India rank **0057/1335.** **December 2009**

MEMBERSHIP OF
SCIENTIFIC SOCIETIES

Member Indian Science Congress Association, Kolkata, India	2013
Editorial Member of Journal of Plant Sciences	2017
Editorial Member of Advances in Biomedicine and Pharmacy	2016
Reviewer of Asian Journal of Research in Biosciences	2018

EXPERIENCE

University of Kashmir , Srinagar, India DST-SERB-National Postdoc Fellow	April 2017 to date
CSIR-IIIM , Jammu, India PhD Research Fellow	Sep.2010-Nov 2016
Lecturer in secondary school education Jammu and Kashmir at T.I.A.I. Kulgam, Kashmir, India- 192231	Jan 2008-Jan 2010

PEER REVIEWED
JOURNAL
PUBLICATIONS**2018**

- J-19 Amin S, **Wani TA***, Kaloo ZA, Singh S, John R , Majeed U, Shapoo GA (2018) [Genetic stability using RAPD and ISSR markers in efficiently *in vitro* regenerated plants of *Inula royleana* DC](#) **Meta gene** 18 (2018) 100–106
(* Corresponding author).
- J-18 Farhana Maqbool, SeemaSingh, **Wani TA***, Mudasar Ahmad, Bashir A. Ganai, Mahroofa Jan (2018). [Phytochemical Screening and Antioxidant Activity of Methanolic Extract of *in vitro* Raised Plants of *Atropa acuminata* Royle.](#) **International Journal of Sciences: DOI: 10.18483/ijSci.1747; Online ISSN: 2305-3925; Print ISSN: 2410-4477**
(* Corresponding author).
- J-17 Mudasar Ahmad, **Wani TA** , Zahoor A Kaloo, Bashir A Ganai, Ubaid Yaqoob and Hilal A Ganaie (2018). [Conservation through *In vitro* Seed Germination Studies of *Meconopsis aculeta* Royle: A critically endangered and endemic to Kashmir Himalaya, India.](#) **Medicinal & Aromatic Plants DOI: 10.4172/ 2167-0412.1000315.**

2017

- J-16 Mohd Yaseen, Mudasar Ahmad, **Wani TA** , Manzoor Ahmad, B. A Gani and Rashida Qureshi (2017). [Phytochemical screening and antioxidant activity of extracts of the leaf and stem of *Achillea millefolium*.](#) **International Journal of Advanced Science and Research 6:55-59.**

- J-15 **Wani TA**, Pandith SA, Gupta AP, Chandra S, Sharma N, Lattoo SK (2017). [Molecular and functional characterization of two isoforms of chalcone synthase and their expression analysis in relation to flavonoid constituents in *Grewia asiatica* L.](https://doi.org/10.1371/journal.pone.0179155) *Plos One* (<https://doi.org/10.1371/journal.pone.0179155>).
- J-14 **Wani TA*** and **Lattoo SK** (2017). [Auxin response factor \(GaARF\) cloning and expression in relation to reproductive maturation in *Grewia asiatica* L.](#) *Plant gene* **12**, 123-130
(*Corresponding author).
- J-13 Pandith SA, Dhar N, **Wani TA**, Razdan S, Bhat WW, Rana S, Lattoo SK (2017). [Production dynamics in relation to ontogenetic development and induction of genetic instability through *in vitro* approaches in *Pelargonium graveolens*: A potential essential oil crop of commercial significance.](#) *Flavour Fragr J*; 32: 376-387.
- 2016**
- J-12 Shah SN, **Wani TA***, Ram B, Koul M, Awasthi P, Rajput DS and Reddy GS (2016). [An efficient protocol for *in vitro* organogenesis and antioxidant studies in *Melia dubia* Cav.](#) *African Journal of Biotechnology* **15**(19):768-775.
(* Corresponding author).
- J-11 Shah SN and **Wani TA*** (2016). [Family Asclepiadaceae- a reservoir of medicinal plants with special importance on *Gymnema sylvestre* R.Br. -An Overview.](#) *Advances in Biomedicine and Pharmacy*, **3** (1): 59-77.
(* Corresponding author).
- J-10 **Wani TA**, Rana S, Bhat WW, Pandith SA, Dhar N, Razdan S, Chandra S, Sharma N, Lattoo SK (2016). [Efficient *in vitro* regeneration, analysis of molecular fidelity and *Agrobacterium tumefaciens*-mediated genetic transformation of *Grewia asiatica* L.](#) *J Plant Biochem Physiol*; **4**.
- J-9 Nilofer Gulam Nabi, **Tareq A. Wani**, Syed Naseer Shah and Mukta Shrivastava (2016) [Spilanthes acmella an endangered medicinal plant - its Traditional, Phytochemical and Therapeutic properties "An overview.](#) *International Journal of Advanced Research* (2016), Volume **4**, Issue **1**, 627 – 639
- J-8 Razdan S, Bhat WW, Dhar N, Rana S, Pandith SA, **Wani TA**, Dhar RS, Vishwakarma R, Lattoo SK (2017). [Molecular characterization of *DWF1* from *Withania somnifera* \(L.\) Dunal: Its implications in withanolide biosynthesis in response to exogenous elicitation.](#) *J Plant Biochem Biot*; **26**: 52-63.
- 2015**
- J-7 **Wani TA**, Pandith SA, Rana S, Bhat WW, Dhar N, Razdan S, Chandra S, Kitchlu S, Sharma N, Lattoo SK (2015). [Promiscuous breeding behaviour in relation to reproductive success in *Grewia asiatica* L. \(Malvaceae\).](#) *Flora*; **211**: 62-71.

- J-6 Dar BA, Khalid S, **Wani TA**, Mir MA, Farooqui M (2015) [Ceria-Based Mixed Oxide Supported CuO: An Efficient Heterogeneous Catalyst for Conversion of Cellulose to Sorbitol](http://dx.doi.org/10.4236/gsc.2015.51003). **Green and Sustainable Chemistry**, **5**, 15-24. <http://dx.doi.org/10.4236/gsc.2015.51003>.
- 2014**
- J-5 Pandith SA, Hussain A, Bhat WW, Dhar N, Qazi AK, Rana S, Razdan S, **Wani TA**, Shah MA, Bedi YS, Hamid A, Lattoo SK (2014). [Evaluation of anthraquinones from Himalayan rhubarb \(*Rheum emodi* Wall. ex Meissn.\) as antiproliferative agents](#). *S Afr J Bot*; 95: 1–8.
- J-4 Bhat WW, Razdan S, Rana S, Dhar N, **Wani TA**, Qazi P, Vishwakarma R, Lattoo SK (2014) [A phenylalanine ammonia-lyase ortholog \(PkpAL\) from *Picrorhiza kurroa* Royle ex. Benth: Molecular cloning, promoter analysis and response to biotic and abiotic elicitors](#). *Gene* (2014.06.046)
- 2012**
- J-3 **Wani TA**, Koul P, Ram G (2012) [Screening of high yielding genotypes of Pomegranate \(*Punica granatum* Linn.\) from sub temperate region of Jammu and Kashmir](#). **Journal of Medicinal and Aromatic Plant Sciences** **34(1-2)** (2012) **000-000**
- J-2 Khan JA, **Wani TA**, Kumar S and Ram G (2012) [Ethnomedicinal plants used for toothache in poonch district of Jammu and Kashmir \(India\)](#). **ASIAN J. EXP. BIOL. SCI. VOL 3(2) 2012: 415-419**
- 2011**
- J-1 **Wani TA**, Kitchlu S, Ram G (2011) [Genetic variability studies for morphological and qualitative attributes among *Jatropha curcas* L. accessions grown under subtropical conditions of North India](#). *South African Journal of Botany* **79** (2011) **102–105**
- CONFERENCES**
- C-7 **Wani TA et al. (2017)**. Spatial chemical variability of essential oil composition of *Skimmea anquitelia* in relation to its differential in vitro anticancer activity. **National Seminar on Himalayan Biodiversity Characterization and Bioprospection for Sustainable Utilization, University of Kashmir** September 18-19
- C-6 **Wani TA et al. (2016)**. Molecular characterization of two isoforms of Chalcone synthase in relation to reproductive maturation from *Grewia asiatica* L. **3rd International Conference on Recent Trends and Advancements in**

Engineering and Technology (ICRTAET) Organized by Shri Mata Vaishno Devi University (SMVDU), Katra, India. November 17-18 (2016)
Page no. 07. **Best Paper presentation Award**

- C-5 **Wani TA, (2015).** Conventional and Molecular Approaches of Parthenocarpy in *Grewia asiatica* L. **11th JK Science congress** Organized by **University of Kashmir; DST (GOI); and J&K SC&T Srinagar** October 12-14 (2015) Abstract no. BOT-53. **Best Oral presentation Award.**
- C-4 **Wani TA, (2015).** Efficient *in vitro* regeneration, analysis of molecular fidelity and *Agrobacterium tumefaciens*-mediated genetic transformation of *Grewia asiatica* L. **International Conference on Medicinal Plants: Resource for Affordable New Generation Healthcare.** Organized by **CIMAP, Lucknow** March 20-22 (2015). **Best Poster Award.**
- C-3 **Wani TA, (2015).** Promiscuous breeding behaviour in relation to reproductive success in *Grewia asiatica* L. **National seminar on “Innovative Trends in plant and Microbial Sciences”.** Organized by Department of Botany University of Jammu, Jammu March 2-3 (2015) Abstract no. 82.
- C-2 **Wani TA, (2014).** Participated in **Indian Science congress** held at University of Jammu, Jammu from February 3 to 7, 2014.
- C-1 **Wani TA, (2013).** Participated in five days workshop entitled “**National Workshop on Reproductive biology for Biodiversity Conservation** “organized by **Department of Botany, University of Jammu** in collaboration with centre for Biodiversity studies, BGSB University, Rajouri. (Nov.22-26, 2013)
- M-2 **Wani TA et al.,** Molecular characterization of 3-hydroxy-3-methylglutaryl-CoA reductase (HMGR) in relation to aconite biosynthesis from *Aconitum heterophyllum* Wall ex Royle. (**Under review**) *Acta physiologia plantarum*
- M-1 **Nabi N et al.,** Micropropagation of *Psoralea corylifolia* L. – An impetus on conservation and sustainable production of secondary metabolites. (**Under Review**) (**Annals of Agriculture sciences**)
(* Corresponding author).

[MANUSCRIPTS IN
PROCESS](#)

BOOKS

- B-2 Dangroo NA, **Wani TA**, Pandith SA, Ashraf N. *Selected threatened medicinal plants of Himalayas— a rich repository of natural products* (2017). (**Springer** briefs). (**In process**)
- B-1 **Wani TA** A Multipronged strategy for the improvement of *Grewia asiatica* L. (**Lambert academic Publishing**) 978-613-8-33697-6

PROFESSIONAL
COMPETENCES AND
SKILLS ACQUIRED

My complete involvement with research has enabled me to develop better understanding and insight for the execution of R&D programmes. This endurance has made me competent enough in reproductive biology, plant tissue culture and molecular biology. Also, metabolic pathway understanding, elucidation and further modulation/engineering with respect to different environmental factors/stress-conditions and the generation of desired products was part of the programme where I was involved in. I have also developed competence for project/paper writing, fund raising and executing the research projects at my own.

PROJECTS
IMPLEMENTED

Title: Micropropagation under in vitro conditions with an impetus on conservation and molecular characterization of some strategic pathway genes in *Aconitum heterophyllum*.

Funding agency: Department of Science and Technology, Govt. of India, New Delhi

Budget/Duration/Role: 19.20 lac / 2 years / PI

REFEREES

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[Dr. Suresh Chandra](#)

Chief Scientist and Head
Genetic resources and Agrotechnology
Indian Institute of Integrative Medicine
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[Prof. Zahoor A. Kaloo](#)

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