


## Curriculum Vitae

<b>Full Name</b>	Dr. ANANT RAM NAUTIYAL			
<b>Designation</b>	Professor			
<b>Department</b>	High Altitude Plant Physiology Research Centre			
<b>Campus</b>	Srinagar			
<b>Address</b>	High Altitude Plant Physiology Research Centre H.N.B. Garhwal University Srinagar Garhwal			
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<b>Educational Qualification</b>	<b>Degree; University; Year</b> 1. M. Sc. (Botany); Garhwal University; 1977. 2. D. Phil.; Garhwal University; 1983.			
<b>Teaching Experience</b>	<u>27</u> Years	<b>Research Experience</b>	<u>35</u> Years	
<b>Research Interest and Fields of Specialization</b>				
<ol style="list-style-type: none"> <li>1. Seed Physiology and Reproductive Biology of Plants</li> <li>2. Plant eco-physiological aspects</li> <li>3. Bio-productivity</li> </ol>				
<b>Honours &amp; Awards</b>				
<ol style="list-style-type: none"> <li>1. Awarded for Overall Distinguished Performance during UNEP Training Course on Bioproductivity at NBRI, Lucknow, 1986.</li> <li>2. Awarded Membership of The National Academy of Sciences, India</li> <li>3. Fellow of Indian Society of Seed Technology</li> </ol>				
<b>Member of Academic Institutions</b>				
<ol style="list-style-type: none"> <li>1. Life Member - Indian Society of Seed Technology, New Delhi.</li> <li>2. Life Member - Indian Society for Plant Physiology, New Delhi</li> <li>3. Life Member - Society for Plant Physiology and Biochemistry, New Delhi.</li> <li>4. Life Member - Indian Society of Tree Scientists, Solan.</li> </ol>				
<b>Membership of Scientific Organizations</b>				
<ol style="list-style-type: none"> <li>1. Member – Research Policy Committee, Indian Council of Forestry Research and Education, Ministry of Environment and Forests, Govt. of India, 2008, 2014.</li> <li>2. Chairman - Research Advisory Committee, Centre for Aromatic Plants (CAP), Govt. of Uttarakhand, Dehra Dun 2014.</li> <li>3. Chairman - Committee constituted for Structural Reorganization and Determination of Qualifications for State Medicinal Plant Board, Uttarakhand, 2014.</li> <li>4. Member – Academic Council – Forest Research Institute Deemed University, Dehra Dun 2012-14.</li> <li>5. Member - Project Evaluation Committee, Integrated Eco-development Research Programme, GBPIHED, Ministry of Environment &amp; Forests, Govt. of India, 1996-1999.</li> <li>6. Member - Forest Tree and Shrub Seed Committee of International Seed Testing Association, Zurich, Switzerland (1989-1992; 1992-1995; 1995-1998; 1998-2001).</li> </ol>				

**Research Supervision (No. of Ph.D. Degree Awarded)**

- 12 awarded as Supervisor
- 04 awarded as Co-supervisor

**Research Projects**

- Energy Plantation Demonstration Units in Hill Villages (as Principal Investigator) sponsored by DNES, Govt. of India; 1986-1991. (Completed).
- AICP on Endangered Plant Species - Seed Biology, (as In-charge Principal Investigator), sponsored by Min. of Environment & Forests; Aug. 1990-Dec. 1990. (Completed).
- Biomass Research Unit for Mountain Tree Species, (as In-charge Principal Investigator), sponsored by DNES, Govt. of India; 1990-1992. (Completed).
- Biomass Research Centre for Western Himalayan Region, sponsored by Min. of Non-conventional Energy Sources, Govt. of India; 1992-1998. (Completed).
- Clonal propagation, seed technology and bioproductivity improvement of selected mountain tree and shrub species, financed by Ministry of Non-conventional Energy Sources, Govt. of India; 1999-2002. (Completed).
- Establishment of energy plantation unit in sub-standard soils in Garhwal region of Uttaranchal using woody species, financed by Department of Biotechnology, Govt. of India; 2002-2005. (Completed).
- Selection and promotion of quality planting material of three important medicinal plants of Himalayan origin Kutki, Revandchini and Tejpatta; financed by National Medicinal Plant Board, Deptt. of AYUSH, Govt. of India;;Project No. UA/64/GO/2003; 2003-2008. (Completed).
- Production and demonstration of high quality planting material of *Jatropha curcas*; Project No. BT/PR/4704/Agr/16/388/2004 financed by Department of Biotechnology, Govt. of India; 2004-2008. (Completed).
- Population assessment and identification of superior genetic stock of *Picrorhiza kurroa* Royle ex Benth and *Valeriana jatamansi* Jones by screening different populations from North-Western Himalayas (H.P. and Uttarakhand), financed by National Medicinal Plant Board, Deptt. of AYUSH, GOI; Project No. HP-03/09; 2009-2013. (Completed).
- Establishment of Model Nursery of Tejpat (*Cinammomum Tamala*); (as Co-PI) financed by State Medicinal Plant Board, HRDI, Gopeshwar Uttarakhand: 2010-2014 (Ongoing).
- Establishment of Model Nursery of Tagar/Samewa (*Valeriana jatamansi*) and Pushkarmool (*Inula racemosa*) under Rastriya Aushdhiya Padap Mission SMPB/HRDI, Govt. of Uttarakhand: 2013-2015 (Ongoing).

**Administrative Experience**

1. Dean, School of Agriculture and Allied Sciences, HNB Garhwal University, January 2014 till date.
2. OSD (Development and Planning), HNB Garhwal University, 2012 till date.
3. Registrar (as OSD, Administration), HNB Garhwal University, 19 August 2009 to 14 December 2009.
4. Head/Director - High Altitude Plant Physiology Research Centre; till 15 January 2012.
5. Dean, Faculty of Agriculture, HNB Garhwal University, 2004-2007.
6. In-Charge Director - High Altitude Plant Physiology Research Centre, Garhwal Univ.; Aug. 1986 - Dec. 1986; Sept. 1990 – 1995; Oct. 2001-May 2002.

7. Scientist In-charge - G.B. Pant Institute of Himalayan Environment and Development, Garhwal Unit; June, 1993 - December 1993.

#### **Scientific Visits Abroad**

1. U.K. - University of Edinburgh, Scotland, UK to attend International Seed Testing Congress 1989. Also visited Oxford Forestry Institute, Oxford during the visit.
2. Nepal - To attend the International *Dalbergia* Workshop 1994.
3. Germany - LUFA Augustenberg, University of Karlsruhe and University of Hohenheim, Stuttgart under INSA-DFG Academic Exchange Programme, from October to December 1998.
4. Denmark - Danida Forest Seed Centre in 1998.
5. Australia - The University of Western Australia, Perth and Kings Park and Botanic Garden during International Seed Conference "Seed Ecology 2007" September 2007.
6. USA - University of Kentucky, Lexington, in December 2008.

#### **Professional Services**

Member - Building Committee of HNB Garhwal University  
Member, Planning and Development Board, HNB Garhwal University  
Member, Campus Development Committee, HNB Garhwal University  
Convener, MACP Committee (Group B), HNB Garhwal University

#### **Conference/Symposium/Workshop Attended during last five years (2010-2014)**

##### **International**

1. Paper presentation in International Conference on Challenging and Emerging Dimensions in Medicinal/Herbal Plants and their Products: A Global Perspective; Chennai Trade Centre, Chennai, India; November 26-28, 2010.
2. International workshop on Mountain Biodiversity and Impacts of Climate Change with special reference to Himalayan Biodiversity Hotspot, GBPIHEAD-ICIMOD, at G.B. Pant Institute of Himalayan Environment & Development, Kosi-Katarmal, Almora, 6-8 December, 2010. Chaired a Workshop on Medicinal Plants organized by HRDI as an associated event.

##### **National**

1. National Conference on Environmental Constraints, Conservation and Resource Development of Medicinal Plants for Health and Societal Benefits; Doon University, Dehra Dun; 21-23 March 2014.
2. Participated in consultative meet on "To develop the strategy for conservation and sustainable utilization of medicinal plants in Uttarakhand" under UNDP-GEF funded project titled "Mainstreaming Conservation and Sustainable Use of Medicinal Plants Diversity in Three Indian States" on 19<sup>th</sup> October, 2013 at Dehradun.
3. Workshop on "*Mountain Specific Research in the Context of Himalaya*" jointly organized by Indian National Science Academy (INSA), New Delhi, International Centre for Integrated Mountain Development, Kathmandu, and G.B. Pant Institute of Himalayan Environment and Development (GBPIHED), Kosi-Katarmal, Almora at INSA, New Delhi on 19-20 November, 2013.

4. Session Chair - Session - 1 : Medicinal Plants: Resource Development; National Workshop on Medicinal Plants: Scientist, Growers and Industry Interaction; Indian National Science Academy, New Delhi; 23 March 2012.
5. Presented a talk 'From Forests to the Farms: Issues and Challenges in Agronomy Practices for Temperate Species' as Resource Person in the seminar "Sustainable Management of Bio-Resources" during 5th World Ayurveda Congress and Arogya Expo; Bhopal; 9-10 December 2012.

#### **Conference/Symposium/Workshop Organized during last five years (2010-2014)**

1. Co-Patron - National Conference on Environmental Constraints, Conservation and Resource Development of Medicinal Plants for Health and Societal Benefits; at Doon University, Dehra Dun; 21-23 March 2014.
2. Programme Secretary - International Conference on Challenging and Emerging Dimensions in Medicinal/Herbal Plants and their Products: A Global perspective; Chennai Trade Centre, Chennai, India, 26-28 November, 2010.

In addition to above, participated in extension programmes and training programmes for farmers organized at institutional and field level.

#### **Publications during last five years (2010-2014)**

##### **Journals**

Chandra, H., Srivastava, J., Singh, A., Bishnoi, P. and Nautiyal, A.R.: In vitro antimicrobial activity of *Allium sativum* (L.) against some isolated oral pathogens. *The IUP Journal of Life Sciences*, Vol. IV, No. 4, pp. 43-49; 2010.. (ISSN 0973 8487)

Chandra, H., Singh, B., Srivastava, J, Prasad, R. and Nautiyal, A.R.: Seroprevalence of Typhoid in Dehradun Valley (Uttarakhand), India. *Research in Environment and Life Science*.3(2):65-68:2010. (ISSN: 0974-4908).

Bisht, H., Prakash, V. and Nautiyal, A. R.: Conservation strategies for the threatened *Quercus semecarpifolia* Sm. A Himalayan Timberline oak. *International Journal of Conservation Science*, 2(4):275-284:2011 (ISSN 2067-533X).

Gairola, K. C., Nautiyal, A. R. and Dwivedi, A.K.: Effect of temperatures and germination media on seed germination of *Jatropha curcas* Linn. *Advances in Bioresearch*, 2(2):66-71:2011 (ISSN 0976-4585).

Tiwari, N., Purohit, M. and Nautiyal, A.R.: Cultivation: A promising method for conserving *Picrorhiza kurroa*. *International Journal of Medicinal and Aromatic Plants*. 1(1): 14-17: 2011.

Bisht, H., Prakash, V. and Nautiyal, A. R.: In vitro plant propagation for rapid multiplication and conservation of *Fraxinus micrantha*: A Himalayan tree species of high medicinal value. *International Research Journal of Biotechnology*, 2(9):220-227:2011 (ISSN: 2141-5153).

Chandra, H., Bhatia, A., Sidhu, O.P., Nautiyal, A. R. and Behl, H.M.: Determination of aflatoxin level in peanut using immunoaffinity column combined with ELISA. *Environment Conservation Journal* 12(3):13-17:2011. (ISSN 0972-3099)

Chauhan, R. S., Nautiyal, M. C., Vashistha, R. K., Prasad, P., Nautiyal, A. R., Kumar, A. and Teixeira da Silva, J. A.: Morpho-biochemical variability and selection strategies for the germplasm of *Fritillaria roylei* Hook (Liliaceae) - an endangered medicinal herb of western Himalaya, *Indian Journal of Plant Breeding and Crop Science*, 3(16): 430-434. 2011.

Purohit, V. K., Singh, S., Nautiyal, A. R., Prasad, P., Andola, H. C. and Gairola, K. C.: Propagation of *Cinnamomum tamala* through air layering – A simple and clonal propagation method. *Natl. Acad Sci. Lett.* 34 (7& 8): 2011.

Gairola, K.C., Nautiyal, A.R., Sharma, G. and Dwivedi, A.K.: Variability in Seed Characteristics of *Jatropha curcas* Linn. From Hill Region of Uttarakhand, *Bulletin of Environment, Pharmacology & Life Sciences*, 1(1):64-69: 2011.

Purohit, V. K., Chauhan, R. S., Andola, H. C., Prasad, P., Nautiyal, M. C. and Nautiyal, A. R.: *Nardostachys jatamansi* DC. is at risk in the Himalayan region. *Current Science*, 103(3), 251-252:2012.

Bisht, H., Prakash, V. and Nautiyal, A. R.: Factors affecting regeneration potential of *Quercus semecarpifolia* Smith. A poor regenerated oak of Himalayan timberline. *Research Journal of Seed Science*, 5(2):63-70:2012 (ISSN 1819 – 3552).

Purohit, V.K., Nautiyal, A.R., Nautiyal, P. and Prasad, P. Conservation and propagation of *Zanthoxylum armatum* DC. an endangered medicinal and aromatic plant of Indian Himalayan region. *International Journal of Biotechnology and Biosciences* 2(4): 262-265: 2012.

Purohit, V.K.; Chauhan, R.S.; Andola, H.C.; Prasad, P.; Nautiyal, M.C. and Nautiyal, A.R. *Nardostachys jatamansi* D.C.: Conservation, multiplication and policy issues. *Medicinal Plants – International Journal of Phytomedicines and Related Industries* 4(3): 162-166: 2012.

Gairola, K. C., Nautiyal, A. R. and Prasad, P.. Variation in Biochemical Properties in Seeds of *Jatropha curcas* Linn.: a Study of Hilly Regions of Uttarakhand. *Bulletin of Environment, Pharmacology and Life Sciences* 2 (1): 20-27: 2012.

Saklani, N., Purohit, V.K., Andola, H.C., Rana, M., Chauhan, R.S. and Nautiyal, A.R.: Biological activities of *Valeriana wallichii* DC. *Medicinal Plants - International Journal of Phytomedicines and Related Industries*. 4(3): 115-120: 2012. (Print ISSN : 0975-4261. Online ISSN : 0975-6892).

Tiwari, N., Purohit, M., Sharma, G. and Nautiyal, A.R.: Changes in Morpho-Physiology of *Jatropha curcas* grown under different water regimes. *Nature and Science*. 11(9): 76-83: 2013.

Gairola, K.C. and Nautiyal, A.R.: Storage study of *Jatropha curcas* L. seeds at different temperature conditions. *International Journal of Biology, Pharmacy and Allied Sciences*, 2(2): 456-468:2013,(ISSN: 2277–4998).

Srivastava, J., Chandra, H., Nautiyal, A.R., and Kalra, S.S.: Antimicrobial resistance (AMR) and plant-derived antimicrobials 3 (PDAMs) as an alternative drug line to control infections. *3Biotech (Springer)*. 4 (5): 451-460: 2014. (ISSN: 2190-572X (Print) 2190-5738 (Online). DOI 10.1007/s13205-013-0180-y).

#### **Book Chapter**

Srivastava, J., Chandra, H., Nautiyal, A.R., and Kalra, S.J.S.: Response of C<sub>3</sub> and C<sub>4</sub> plant systems exposed to heavy metals for phytoextraction at elevated atmospheric CO<sub>2</sub> and at elevated temperature. In: Environmental Contamination, *In Tech Janeza Trdine 9, 51000 Rijeka, Croatia, Europe*, Chapter 1. Pp 3-16 (Edited by Jatin Kumar Srivastava) (ISBN 978-953-51-0120-8); 2012.

#### **Proceedings**

Purohit, V. K., Prasad, P., Nautiyal, M. C. and Nautiyal, A. R.: Propagation of highly important life saving herb *Nardostachys grandiflora* DC via conventional and biotechnological approaches. Proceedings 3<sup>rd</sup> International Conference on Advances in Biotechnology (Bio Tech 2013), 18-19 March 2013, Singapore. Pages 1-6. 2013.

#### **Gene Submitted to NCBI, USA**

1. Harish Chandra, Babita Patni, J. Srivastava, A.R. Nautiyal and M.C. Nautiyal. 16s RNA gene sequencing *Bacillus cereus* HAPPRC B4 was done and gene sequencing was submitted to Gene bank, NCBI, USA (Submission ID 1734312) (Accession number KM036215), date of submission 11 June 2014.

2. Harish Chandra, Babita Patni, J.Srivastava, A.R.Nautiyal, M.C. Nautiyal. 16s RNA gene sequencing of *Achromobacter xylosoxidans* HAPPRC K4 was done and sequence is submitted to Gene bank, NCBI, USA (Submission ID 1734319) (Accession number KM036216), date of submission 11 June 2014.

#### **Total Number of Research Publications**

**- 90**