

Faculty Profile

Dr. Vijay Laxminarayan Maheshwari

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➤ Educational Qualifications:

Degree	Year	University	Percentage	Division
B.Sc.	1984	Dr. H. S. Gour Univ. Sagar (M.P.)	71.50 %	First
			(VI in the order of University merit)	
M.Sc. (Biochem)	1986	D.A. University Indore (M.P.)	66.00 %	First
			(X in the order of University merit)	
Ph.D. (Biochem)	1990	D.A. University Indore (M.P.)	By Thesis	--
Ph.D. Thesis Title: "Studies on the Mechanism of Activation of Enzymes of Photosynthetic Carbon Reduction Cycle by Light"				

➤ Teaching Experience:

- Teaching Experience (PG) : 23
- Teaching Experience (UG) : 01 year

➤ Area of Research/Expertise:

- Protein Biochemistry
- Plant Tissue Culture
- Secondary metabolites and their biological activities

➤ Awards/Fellowships/prizes received

- "YOUNG SCIENTISTS" award by IUBMB, India in 1994.
- "BOYSCAST Fellowship" of Govt. of India, Dept. of Science & Technology to visit Univ. of Virginia, USA for 8 months.
- **Norman E Borlaug Fellowship** of US Dept of Agriculture, USA for advanced training in Risk Assessment in Genetically Modified Food at Iowa State University, Iowa, USA, April-June, 2008.
- **Best Teacher Award'** of Government of Maharashtra (2009-10)
- Honorary fellowship (FSSE) of Society of Science and Environment at its annual convention at M.L. Sukhadia University, Udaipur (Raj.) (2007)

- Nominated member of Research Advisory Council of Bharti Vidyapeeth University, Pune (2007), Pune University, Pune and Shivaji University, Kolhapur
- Elected as Fellow of Maharashtra Academy of Sciences (2013)
- **Nominated as a Member in the Board of Management, Yashwantrao Chavan Maharashtra Open University, Nasik by The Hon'ble Governor of Maharashtra (2014)**
- Nominated as member of the Local Program Planning and Management Committee (LPPMC) of UGC Human Resource Development Centre, University of Mumbai for a period of 2 years (Feb., 2016).
- Nominated as a member, Moderation Committee, Maharashtra State Eligibility Test (November, 2015 onwards)
- Nominated to Board of Examination, Mumbai University, Mumbai (December 15 to August 16)

➤ Memberships

- Life member of Society of Plant Biochemistry and Biotechnology, India.
- Life member of Society for Biopesticides India.
- Life member of Society for Science and Environment.
- Life member of Global Biotech Forum, Nagpur

➤ Administrative Work experience

- Member, Board of Examinations, NMU, Jalgaon 2001-2005.
- Member, Library Committee, NMU, Jalgaon 2001-2005.
- Member, Ad-hoc Board of Studies in Life Sciences, NMU, Jalgaon (upto 2005).
- Member, Board of University Teaching and Research (BUTR) in Sciences, NMU, Jalgaon (upto 2005).
- Member, Draft Committee, IX Five Year Plan, NMU, Jalgaon.
- Member, University Purchase Committee (1999-2001), (2007-2009).
- Member Academic Council, NMU, Jalgaon (2006-2011).
- Member, IQAC, NMU Jalgaon (2006-2007).
- Member, Steering Committee, NAAC, NMU, Jalgaon (2008).
- Co-ordinator, XI Five year Plan Committee, NMU, Jalgaon (2008).
- Chairman, Ordinance drafting Committee (O.48) (2011-2015)
- Nominated to Senate, NMU, Jalgaon (December 15 to August 16)
- Nominated member, Faculty of Biotechnology and Bioinformatics, Dr. D Y Patil University, Mumbai
- Chairman, BoS in Life Sciences (2010-2015)
- Member, Faculty of Sciences, NMU, Jalgaon (2010-2015)
- Member, Academic Council, NMU, Jalgaon (2005-2010, 2010-2015)
- Member, Senate, NMU, Jalgaon (2010-2015)
- **Member, Management Council, NMU, Jalgaon (2010-2015)**
- Nominated member (By the Governor) of Board of Management, YCMOU, Nasik (2014-17)
- Member, Board of Examinations, NMU, Jalgaon 2001-2005.
- Head, Dept. of Biochemistry, School of Life Sciences, NMU, Jalgaon since 1994.
- Director, Central Assessment Programme for Faculty of Engineering, NMU, Jalgaon, Dec., 1999, May 2000, January, 2001, May-June, 2001, December, 2002 and January, 2003.

➤ Leadership experience

- **Officiating Vice-Chancellor, NMU, Jalgaon during** 15/9/2015 to 18/9/2015, 27/9/2015 to 2/10/2015 and 22/10/2015 to 2/11/2015
- **HOD-** Department of Biochemistry 1994.
- **Director,** School of Life Sciences, 2007.
- **Director, Internal Quality Assurance Cell (IQAC), NMU,** Jalgaon from Feb., 2010 – March 2012.
- **Acting Director, Board of College and University Development (BCUD) ,** North Maharashtra University, Jalgaon from Jan. 7, 2008 to Feb. 28, 2008.
- Appointed and worked as **Chairman, Observers' Committee** for Avishkar-2012- A state level Inter University Research Convention held at BSKKV, Dapoli during 7-9 January, 2013 and MAFSU during 21-23 January, 2015 by the Hon'ble Chancellor and Governor of the State of Maharashtra
- Convener : UGC-SAP DRS National Seminar on Integrated Pest Management Feb. 16-17, 2005, 2006, 2012
- Chairman: UGC-SAP DRS National Seminar on Integrated Pest Management March 2007, 2013
- Coordinator: UGC sponsored Refresher Course in Life and Environmental Sciences. 11/11/2003 to 1/12/2003.
- Convener: Indo-US binational seminar on Genetically Modified Crops : Issues, Status and Awareness. Jan 20-21, 2009 (Sponsored by Norman E Borlaug International Agricultural Science and Technology Program, USDA, USA, UGC-SAP, ICMR, DAE and NMU, Jalgaon).
- Convener: Two day workshop on "Advanced Biotechniques: Hands on learning instrumentation: School of Life Sciences, NMU, Jalgaon. 7-8 Oct., 2009.
- Convener: One day workshop on "Advanced Biotechniques: Hands on learning instrumentation: School of Life Sciences, NMU, Jalgaon. 5/2/2010.
- Subject co-ordinator for 10 days each NET/SET coaching workshops 03 times (May, 2001, December, 2009 , May, 2010, May, 2013).
- Convener, National Conference on Biotechnology for all (NCBFA-2010) at NMU, Jalgaon (December 29-30, 2010). The conference was attended by about 165 delegates.
- Organized a one day work shop on "NACC Accreditation and reaccreditation: Issues and awareness" for principals and co-ordinators of NAAC steering committee of affiliated colleges. Total 176 delegates participated in it. August 3, 2011, NMU, Jalgaon.
- Convener of the Popular Lecture Series on 'Genetically Modified Food' under the National Science Day Celebrations (supported by DST, New Delhi and RGSTC, Govt of Maharashtra, Mumbai) on 9/3/2013 at NMU, Jalgaon and 15/3/2013 at Pratap Philosophy Centre, Amalner.
- Convener: 8th Maharashtra State Inter University Research Convention, Avishkar 2013, NMU, Jalgaon, January 16-18, 2014.
- Convener, 3rd Global Sustainable Biotech Congress held at North Maharashtra University, Jalgaon, India during December 1-5, 2014. The congress was attended by over 625 delegates from all over the world (17 countries) and India. The congress comprised plenary sessions, 25 concurrent sessions on campus, 3 parallel sessions for students in affiliated colleges, 1 session for farmers in the remote tribal dominated Akkalkuan town in Nandurbar district and 2 industry Technology parallel session at Nirmal Seeds Pvt Ltd., PACHORA and Jain Irrigation Systems Ltd., Jalgaon

➤ **Serving on Editorial Boards**

- Regional Editor for journal Physiology and Molecular Biology of Plants (2001-2003).
- Editorial board member of Journal of Biopesticides (2004-2006).
- Guest Editor (with Dr. B. L. Chaudhari and Shri K. S. Vishwakarma) Journal of Advances in Science and Technology : Special issue on selected papers presented in 'National Conference on Biotechnology for all' (NCBFA-2010) organized by the School of Life Sciences, NMU, Jalgaon (2010)
- Guest editor (with Prof. S.B. Chincholkar) Special issue of Indian Journal of Biotechnology, (2004)

➤ **Technology Transferred**

- "Biopesticide processing and formulation from a plant origin" (2004)

➤ **Other activity done/ on going**

- Visited Cayuga Community College, Auburn, NY, USA as a member of the team of North Maharashtra University, Jalgaon for discussion and finalizing Joint Degree Program between the two institutions (August 22 to September 2, 2012)
- Campus representative, USIEF, New Delhi

➤ **Ph.D. Students (Awarded, 18)**

1. Dr. (Mrs.) S.R. Bhalsing
2. Dr. Tushar H. Borse
3. Dr. Nilesh P. Teli
4. Dr. Prashant S Mendki*
5. Dr. Ravindra P Patil*
6. Dr. Pankaj K Pawar
7. Dr. Hemlata M Kotkar
8. Dr Dinesh P Patil*
9. Dr. Sripad Upasani
10. Dr. Bipin K Salunkhe
11. Dr. Jitendra Solanki
12. Dr. Prakash. K
13. Dr. R. H. Patil
14. Dr. P.H.Agarkar
15. Dr. Pankaj R Gavit
16. Dr. Bharat M Bhalerao
17. Dr. Arun Patil
18. Dr. K. S. Vishwakarma
19. Dr. Suresh S Alizad*

*As co-guide,

➤ **Ph.D. students (On going, 4)**

1. Ms. Kiran R. Marathe (Thesis Submitted, Nov., 2016)
2. Ms. Mohini Patil (Thesis submitted, October, 2016)
3. Mohd. Shahid (Thesis Submitted, February, 2017)
4. Mr. Sainath Kasar*
5. Mr. Prasad Jape*

* As co-guide

➤ **M. Phil. Students (completed, 1):**

1. Ms. A V Mhaskar

➤ **Number of Books Written:** 02

➤ **Number of Patents:** 01

➤ **Number of research papers published:** 99
(Google scholar, March, 2017) No. of citations = 732
h index = 13
i10 index = 22

➤ **Publication details:**

A. Reviews:

1. Patil R H, Patil M P and **Maheshwari V L** (2016) Bioactive secondary metabolites from endophytic fungi: A review of biotechnological production of and their potential applications. In : Studies in Natural Products Chemistry, (Bioactive Natural Products) (Ed. : Atta-ur-Rahman) **Elsevier Science Publishers, Amsterdam, pp 189-205** (ISSN 9780444636010)
2. Mohammed S I, Patil, M P, Patil, R H and **Maheshwari, V L** (2016) Endophytes: Potential source of therapeutically important secondary metabolites of plant origin, In : Endophytes: Crop Productivity and Protection - Volume 2 (Editors : Dinesh K. Maheshwari and K. Annapurna) (**Springer International**) (Accepted)
3. Salunke, B.K., Prakash, K, Vishwakarma, K.S. and **Maheshwari, V.L.** (2009) Plant Metabolites : An alternative and sustainable approach towards post harvest pest management in pulses. **Physiol Mol Biol Plants** 15 (3), 185-197 (**IF= 1.35**).
4. Sharma, R.K., Yadav, K.R., **Maheshwari, V.L.** and Kothari, R.M. (2000) Bagasse Preservation : A need for biotechnological approach. **CRC Rev. Biotechnol.** 20(4) 237-263 (**IF = 7.178**).
5. Mendki, P.S., **Maheshwari, V.L.**, Kothari, R.M. and Gowda, B.S. (2001). Biopesticides: Emerging trends, advantages and disadvantages **Physiol. Mol. Biol. Plants** 7, 107-115 (**IF= 1.35**).
6. **Maheshwari V.**, Divedi U., Bhardwaj R. and Mishra R. (1992) Mechanism of reductive photo activation of enzymes of C4 pathway. **Ind. J. Biosci.** 17 (2) 183-192 (**IF = 2.064**).

B. Books :

1. Practical Biochemistry : P.H. Agarkar, J.S. Kulkarni, **V.L. Maheshwari** and R.A. Fursule (2008) Nirali Pralashan, Pune, (ISBN 978-81-906396-9-9).
2. A text book of Biochemistry for Nursing : P.H. Agarkar, **V.L. Maheshwari** and Y.A. Kulkarni (2008) Nirali Prakashan, Pune, (ISBN : 978-81-96396-17-6).

C. Papers in national and International journals

1. Patil Mohini P, Patil R H, Bhadane Bhushan, Mohammed S. I and **Maheshwari V L** (2017) Pancreatic lipase inhibitory activity of phenolic inhibitor from endophytic *Diaporthe arengae*. **Biocatalysis and Agriculture Biotechnology (Elsevier)** **10**, 234-238. doi.org/10.1016/j.bcab.2017.03.013 (25/3/2017).
2. Mohammed S. I., Salunke N S, Vishwakarma K.S. and **Maheshwari V. L** (2016) Experimental Validation of Antidiabetic Potential of *Cayratia trifolia* (L.) Domin: An Indigenous Medicinal Plant. **Ind J Clin Biochem (Springer)** DOI 10.1007/s12291-016-0598-1. (IF = 0.97).
3. Kasar S S, Marathe K R, Bhide A J, Herwade A P, Giri A P, **Maheshwari V L** and Pawar P K (2016) A glycoprotein α -amylase inhibitor from *Withania somnifera* differentially inhibits various α -amylases and affects the growth and development of *Tribolium castaneum*. **Pest Management Science (Wiley, IF = 2.81)** DOI 10.1002/ps.4467.
4. Marathe K R, Kasar S, Chaudhari A B and **Maheshwari V L** (2016) Purification and characterization of a novel heterodimer protease inhibitor from *Streptomyces* spp. VL J2 with potential biopesticidal activity against *H. armigera*, **Process Biochemistry**, **51** : 1650-1663 (Elsevier, IF 3.05) doi.org/10.1016/j.procbio.2016.08.010
5. Mohammed S. I., Chopda M Z, Patil R H, Vishwakarma K.S. and **Maheshwari V. L** (2016) *In vivo* antidiabetic and antioxidant activities of *Coccinia grandis* leaf extract against streptozotocin induced diabetes in experimental rats. **Asia Pacific Journal of Tropical Diseases (Elsevier)**, 6: 298-304. [doi:10.1016/S2222-1808\(15\)61034-9](https://doi.org/10.1016/S2222-1808(15)61034-9). (IF = 0.78)
6. Channale S M, Bhide A J, Yadav Y, Kashyap G, Pawar P K, **Maheshwari, V L**, Ramasamy Suresh K and Giri A P (2016) Characterization of two coleopteran alpha amylases and molecular insights in to their differential inhibition by synthetic amylase inhibitor, acarbose. **Insect Biochemistry and Molecular Biology**, 74: 1-11 (IF 3.45).
7. Mohammed S. I., Chopda M Z, Patil R H, Vishwakarma K.S. and **Maheshwari V. L** (2016) Evaluation of Larvicidal Activity of Essential Oil from Leaves of *Coccinia grandis* against Three Mosquito Species. **J. Arthropod Borne Diseases (Accepted)**. (IF = 1.53).
8. Mohammed S. I., Vishwakarma K.S. and **Maheshwari V. L**. (2015). *In vitro* comparative antioxidant activity of two medicinally important climbers, *Coccinia grandis* and *Caratia trifolia*. **Adv. Pharmacol. Toxicol.** 16(3):57-68.
9. Patil, R H, Patil, M P and **Maheshwari V L** (2015) Rapid chromatographic determination and structural confirmation of β hydroxyl acid form of lovastatin in the fermentation broth of *Aspergillus terreus* PM 03. **Pharmaceutical Chemistry Journal**, 49, 419-424 (DOI 10.1007/s11094-015-1298-5, Springer, Sept, 2015) (IF 0.452).
10. Marathe, K R, Chaudhari A B, Kamalaja, K and **Maheshwari, V L** (2015) Magnesium dependent proteinaceous protease inhibitor with pesticidal potential from alkali-halotolerant *Streptomyces* spp.: Optimization of production using statistical tools. **Biocatalysis and Agriculture Biotechnology (Elsevier)** [doi:10.1016/j.bcab.2015.11.007](https://doi.org/10.1016/j.bcab.2015.11.007) 5, 58-68 (IF= 0.9).

11. Patil S G, Patil M. P., **Maheshwari V L** Patil R H (2015) In vitro lipase inhibitory effect and kinetic properties of di-terpenoid fraction from *Calotropis procera* (Aiton). **Biocatalysis and Agriculture Biotechnology** (Elsevier) 4, 579-585, [doi:10.1016/j.bcab.2015.08.014](https://doi.org/10.1016/j.bcab.2015.08.014) (IF= 0.9).
12. Marathe Kiran, Pandit S, Chaudhari A B and **Maheshwari V L** (2015) Screening of alkaliphilic salt tolerant actinomycetes from alkaline soda lake for protease inhibitor activity. **Advances in Pharmacology and Toxicology**, 16 (2) : 39-47.
13. M P Patil, R H Patil and **V L Maheshwari** (2015) Biological activity of endophytic *A. flavus* and characterization of bioactive metabolites. **Current Microbiology**, 71 : 39-48 (IF : 1.4).
14. R. H. Patil , M. P. Patil and **V.L. Maheshwari** (2014) Isolation and HPTLC Densitometric Analysis of Rutin in the Broth Extract of Endophytic *Aspergillus flavus* from *Aegle marmelos*. **Journal of Biologically Active Products from Nature** 4:371-376 (DOI: 10.1080/22311866.2014.961099).
15. M.P. Patil, R.H. Patil, S.G. Patil and **V.L. Maheshwari** (2014) Endophytic Mycoflora of Indian Medicinal Plant, *Terminalia arjuna* and their Biological Activities. **International Journal of Biotechnology for Wellness Industries**, 3, 1-6.
16. Patil, A P, Patil, K P, Pawar, P K and **Maheshwari, V. L.** (2013) Isolation and survey of antibiotic sensitivity in nosocomial infections in North Maharashtra Region. **J Association of Physicians of India**, 61: 18-22.
17. Gavit P R, Pawar, P K and **Maheshwari V L** (2013) Isolation, Purification, Partial Characterization and Insect Growth Inhibitory Activity of α -amylase Inhibitor from Seeds of *Amaranthus paniculatus* linn (Rajgira). **Biopesticide International**, 9 (1) : 38-47.
18. Bhalerao B M, Vishwakarma, K S and **Maheshwari, V L** (2013) *Tinospora cordifolia*: Plant Tissue Culture and Comparative Chemo- profiling Study as a Function of Different Supporting Trees. **Ind J Natural Products Resources** 4 (4) : 380-386.
19. Patil, M P, Patil, R H and **Maheshwari, V L.** (2012). A novel and sensitive agar plug assay for screening of asparaginase -producing endophytic fungi from *Aegle marmelos*. **Acta Biologica Szegediensis**, 56 (2) 175-177 (IF = 1.0).
20. Bhalerao, B M, Kasote, D M, Nagarkar, B E, Jagtap, S D, Vishwakarma, K S, Pawar, P K and **Maheshwari, V L** (2012) Comparative analysis of radical scavenging and immunomodulatory activities of *Tinospora cordifolia* growing with different supporting trees. **Acta Biologica Szegediensis**, 56 (1) 65-71 (IF = 1.0).
21. Patil, S. V., Patil, C D, Salunkhe, R B, **Maheshwari, V L** and Salunkhe, B K (2011) Studies on life cycle of mealybug, *Maconellicoccus hirsutus* (Green) (Hemiptera: Pseudococcidae), on different hosts at different constant temperatures. **Crop Protection**, 30 : 1553-1556. (IF : 1.7)
22. Patil, R. H., Prakash K and **Maheshwari, V.L.** (2011) Hypolipidemic effect of *Terminalia arjuna* (L.) in experimentally induced hypercholesteremic rats. **Acta Biologica**

Szegediensis, 55(2) : 1-5. (IF = 1.0).

24. Mhaskar A V, Prakash K, Vishwakarma K S and **Maheshwari V L** (2011) In vitro regeneration of *Clitoria ternatea* L. through auxillary bud culture. **Int J Pharmacol Biol Sci.** 5 : 17-23.
25. Patil R.H., K. Prakash, **Maheshwari, V L** (2011) Production of lovastatin by wild strains of *Aspergillus terreus*. **Natural Products Communications.** 6 (2) : 183-186. (IF : 0.75)
26. Joshi, P V, Shirkhedkar, A A, Prakash, K and **Maheshwari, V L** (2011) Anti-diarrheal activity, chemical and toxicity profile of *Berberis aristata*. **Pharma. Biol.** Vol. 49 (1) : 94–100. (IF : 0.80)
27. Vishwakarma K S, Patel, K N, Chaudhari, A R, Bhalerao, B M and **Maheshwari, V L** (2010) High frequency in vitro multiplication and plant regeneration in *Clitoria ternatea* L (white single var). **J. Adv. Sci. Tech.** (Spl. Issue), 13 (02): 39-43.
28. Patil, R H, Patil, M P, Patel, S S and **Maheshwari, V L** (2010) Probing the microbial endophytes in a indigenous plant for the production of biologically active metabolites. **J. Adv. Sci. Tech.** (Spl. Issue), 13 (02): 51-56
29. Joshi, P V, Surana, S J, Mandhan, S S and **Maheshwari, V L** (2010) Chemical characterization and verification of role of *A. marmelos* as in vitro and in vivo antidiarrheal agent. **J. Adv. Sci. Tech.** (Spl. Issue), 13 (02): 63-68
30. Patil, S V, Salunkhe, B.K., Patil, C D, Salunkhe R B, Gavit, P R and **Maheshwari, V L** (2010) Potential of extracts of the tropical plant *Balanites aegyptiaca* (L) Del. (Balanitaceae) to control the mealybug, *Maconellicoccus hirsutus* (Homoptera:Pseudococcidae). **Crop Protection.** 29 : 1293-1296. (IF : 1.87)
31. R. H. Patil K. Prakash, and **V.L. Maheshwari** (2010) Hypolipidemic effect of *Celastrus paniculatus* in experimentally induced hypercholesterolemic Wistar rats. **Ind. J. Clinical Biochem.** 25 (4) : 405-410. (H Index : 13)
32. A.V. Mhaskar, K. Prakash, K. S. Vishwakarma and **V. L. Maheshwari** (2010) Callus Induction and Antimicrobial Activity of Seed and Callus Extracts of *Clitoria ternatea* L. **Current Trends in Biotechnology and Pharmacy**, 3(4), 561-567.
33. P.V.Joshi, R.H. Patil and **V.L. Maheshwari** (2009) In vitro anti-diarrhoeal activity and toxicity profile of *Aegle marmelos* (fruit) Correa ex Roxb. **Natural Products Radiance**, 8 (5) 498-502.
34. Salunke B.K., Patil, S. V., Lad, R., Chatterjee, S. and **Maheshwari, V.L** (2008) Antimicrobial activities of three Indian medicinal plants. **J. Cell Tissue Res.** 8 : 1545 -1550.
35. Prakash K. Patil R H, Vishwakarma K and **Maheshwari V L** (2008) Bioprospecting for bioactive circular protein(s) in indigenous plants. **J. Plant Biol** 35, 53-57.

36. **Maheshwari V.L.** (2008) Going back to nature for sustainable pest management ABP News letter Editorial, March 2008 issue.
37. Pawar P.K., Borse T P, Pinjari R Z and **Maheshwari V L** (2008) A simple technique for rapid quantitative determination of solasodine from cultured hairy roots of *Solanum surrattense*. **J. Herbal Med. and Toxicol** 2 (1) : 7-10
38. **Maheshwari V.L.** and Patil R.H. (2007) Isolation, screening and lovastatin production by wild strains of *Aspergillus terreus*. **J. Pure Applied Microbiol** 1: 295-299.
39. Solanki, J.J., Pawar, P.K. and **Maheshwari, V.L.** (2006) Efficient plant regeneration in *Solanum melongena* L. **J. Physiol. Mol. Biol. Plants** 12 : 307-311 (IF = 0.56).
40. Salunke B.K., Patil, K.P., Wani, M.R. and **Maheshwari, V.L.** (2006) Antinutritional constituents of different grain legumes grown in North Maharashtra. **J. Food Sci. Technol.** 43, 519-521 (IF = 0.112).
41. Mendki, P.S., Salunke, B K, Kotkar, H M, **Maheshwari, V L**, Mahulikar, P P and Kothari, R M (2005) Antimicrobial and insecticidal activities of flavonoids from *Calotropis procera* L. for post harvest preservation of pulses. **Biopesticide International** 1 (3,4) : 193-200.
42. Salunke B.K., Kotkar, H.M., Mendki, P.S., Upasani, S.M. and **Maheshwari, V.L.** (2005) Bioefficacy of flavanoids in controlling *Callosobruchus chinensis* (L.) (Coleoptera : Bruchidae) – a post-harvest pest of grain legumes. **Crop Protection** 24, 888-983 (IF 1.87)
43. Pawar P.K. and **Maheshwari, V.L.** (2004) Agrobacterium rhizogenes mediated hairy root induction in two medicinally important members of family Solanaceae. **Ind. J. Biotech** 3 : 414-417 (IF = 0.55).
44. Patil, R.P., Gite, V.V., **Maheshwari, V.L.** and Kothari, R.M. (2003) Improvement in the yield and quality of soybean oil through an integrated biotech approach. **Ind. J. Chem. Tech.** 10 : 470-476 (IF = 0.317)
45. Upasani, S.M., Kotkar, H,M,, Mendki, P.S. and **Maheshwari, V.L.** (2003) Partial Characterization and insecticidal propoerties of Ricinus communis flavonoids. **Pest Management Science** 59 : 1349-1354. (IF = 2.594)
46. Patil, R.P., Chaudhari, A.B., Mendki, P.S., **Maheshwari, V.L.** and Kothari, R.M. (2002) Soybean cultivation : A panacea for soil fertility and sustainable productivity. **Physiol. Mol. Biol. Plants** 8 : 221-239 (IF = 0.56).
47. Patil, D.P., Kulkarni, M.V., **Maheshwari, V.L.** and Kothari, R.M. (2002) A sustainable agro-biotechnology for bioremediation of saline soil. **J. Sci. Ind. Res.** 61, 517-528 (IF = 0.201).
48. Pawar, P.K., Pawar, C.S., Narkhede, B.A., Teli, N.P., Bhalsing, S.R. and **Maheshwari, V.L.** (2002) A technique for rapid micropropagation of *Solanum surattense* Burm. f. **Ind. J. Biotechnol.** 1 : 201-204 (IF = 0.55).

49. Patil, D.P., Kulkarni, M.V., **Maheshwari, V.L.** and Kothari, R.M. (2002) Recycled agrowaste and modified industrial byproduct with halophiles for improved yield of wheat (*Triticum aestivum* L.) in saline soil. **Physiol Mol. Biol. Plants** 8 : 117-124 (IF = 0.56).
50. Kotkar, H.M., Mendki, P.S., Sadan, S., Jha, S., Upasani, S.M. and **Maheshwari, V.L.** (2002) Antimicrobial and pesticidal activity of partially purified flavonoids of *Annona squamosa*. **Pest Management Science** 58 (1) 33-37 (IF = 2.594)
51. Teli, N.P., Pawar, P.K., Bhalsing, S.R. and **Maheshwari, V.L.** (2001) In vitro propagation of *H.niger* through shoot tip culture. **J. Medicinal Aromatic Plants** 23: 597-599.
52. Patil, D. P., Kulkarni, M. V., **Maheshwari, V. L.** and Kothari, R. M. (2001). Improved yield of bengal gram (*Cicer arietinum*) in saline soil ameliorated with soil conditioner, halophiles and plant growth regulators. **J. Plant Biol.**, 28(2), 207-211.
53. Pawar, P.K., Teli, N.P., Bhalsing, S.R. and **Maheshwari, V.L.** (2001) Micropropagation and organogenic studies in *W. somnifera*. **J. Plant Biol.**, 28(2), 217-221.
54. Teli, N.P., Pawar, P.K., Bhalsing, S.R. and **Maheshwari, V.L.** (2001) Shoot tip, cotyledon and embryonic axis culture of *Vigna mungo* [L] Hepper. **J. Plant Biol.** 27(1), 1-4.
55. Bhalsing, S.R., Teli, N.P., Saindane, P.V., Baviskar, M.P., Pawar, P.K., and **Maheshwari, V.L.** (2001) Tissue culture grown banana: A cost-effective strategy for hardening. **Physiol. Mol. Biol. Plants** 7, 185-189 (IF = 0.56).
56. Ouedraogo, J.T., **Maheshwari, V.L.** Berner, D.K., Pierre, C.A., Belzile, F. and Timko, M.P. (2001) Identification of AFLP markers linked to resistance of cowpea (*Vigna unguiculata*) to parasitism by *Striga gesneroides*. **Theor. Appl. Genet.** 102 (6/7) 1029-1036 (IF = 3.65)
57. Mendki, P.S., **Maheshwari, V.L.** and Kothari, R.M. (2001) Fly ash as a post-harvest preservative for commonly utilized pulses. **Crop Protection** 20 (3) 241-245 (IF 1.87)
58. Rajor, A. Sharma, R.K., **Maheshwari, V.L.** and Kothari, R.M. (2000) Bamboo). metabolism by borers provides a clue to eco-friendly approach for their control. **Ind. Forester** 126, 838-841.
59. Teli N. P., **Maheshwari V. L.**, Bhalsing S. R. And Pawar P. K. (2000) Regeneration of *Vigna radiata* [L.] Wilczek through leaf derived callus and shoot tip culture. **Physiol. Mol. Biol. Plants** 6, 61-66 (IF = 0.56).
60. Verma, R.K., Sharma, R.K., **Maheshwari, V.L.** and Kothari, R.M. (2000) Calcium conjugates of amino acids as ecologically safe plant growth regulators. **J. Plant Biol.** 27, 85-88.
61. Borse, T.H., **Maheshwari, V.L.** and Baviskar, M.P. (2000) Effect of DPC on the metribuzin induced inhibition of PS II photochemistry. **J.Plant Biochem. Biotech.** 9, 41-43 (IF = 0.340).

62. Baviskar M.P., Borse, T.H. and **Maheshwari, V.L.** (2000). "Biochemical interactions of metolachlor with the photosynthetic apparatus" **Physiol. Mol. Biol. Plants.** 6, 135-140 (IF = 0.56).
63. Mendki, P.S., **Maheshwari, V.L.** and Kothari, R. M. (2000) Papaya leaf dust as post harvest preservative for five commonly utilized pulses. **J. Plant Biol.** 27, 197-201.
64. Bhalsing, S.R., Teli, N.P., Pawar, P.K. and **Maheshwari, V.L.** (2000) Isolation and characterization of solasodine from cultured cells of *S. khasianum*. **J. Plant. Biol.** 27, 6-9.
65. Baviskar M.P., Borse, T.H. and **Maheshwari, V.L.** (1999). A Comparative Study on effects of metribuzin and metolachlor on photosynthetic apparatus. **J. Adv. Sci. Technol.** 2, 48-52.
66. Teli N. P., Pawar P. K., Bhalsing S. R. and **Maheshwari V. L.** (1999) Plant tissue culture studies in some medicinally important members of family Solanaceae. **J. Adv. Sci. Technol.** 2, 15-18.
67. Teli N.P., Patil N.M., Pathak H.M., Bhalsing S.R. and **Maheshwari V.L.** (1999), *Withania somnifera* (Ashwagandha): regeneration through meristem culture, **J. Plant Biochem. Biotech.**, 9, 1-3 (IF = 0.340).
68. Borse T.H., **Maheshwari V.L.** and Baviskar M.P. (1998) Inhibition of PSII activity by Metribuzin - a triazinone herbicide. **Ind. J. Exp. Biol** 36, 800-804 (IF = 1.295).
69. Bhalsing S.R. and **Maheshwari V.L.** (1998) Plant tissue culture - A potential source of medicinal compounds. **J. Sci. Ind. Res.** 57, 703-708 (IF = 0.201).
70. Borse T.H., Mendki P.S., Chaudhari B.S., Kulkarni M.V. and **Maheshwari V.L.** (1998) Biodegradation of cypermethrin by indigenously isolated bacteria from soil. **Pollution Res.** 17, 347-348.
71. Bhalsing S.R. and **Maheshwari V.L.** (1996) In vitro culture of *S. khasianum* and extraction of solasodine. **J. Plant Biochem. Biotech.** 6, 39-40 (IF = 0.340).
72. **Maheshwari V.L.** and Bhardwaj R. (1995) Photoactivation and regulation of fructose 1,6 bisphosphatase in vivo. **J. Plant Biochem. Biotech.** 4, 101-104 (IF = 0.340).
73. Dethé S.M., **Maheshwari V. L.** and Kulkarni M.V. (1993) Comparison of flowering induced changes in *B. monosperma* & *C. arietinum*. **Biol. Edu.** 9 (4) 101-104.
74. **Maheshwari V.** and Bhardwaj R. (1991) Photoactivation and regulation of maize leaf phosphoenolpyruvate carboxylase. **Ind. J. Exp. Biol.** 29 : 1058-1061 (IF = 1.295).
75. Sharma D., Bhardwaj R. and **Maheshwari V.** (1990) Inhibition of energy transfer from light harvesting chlorophyll protein complex to PS II by oxyfluorfen. **Plant Sci.** 70 : 27-33 (IF 2.92).

76. **Maheshwari V.**, Bhardwaj R. and Sharma D. (1990) Photoactivation of maize leaf phosphoenolpyruvate carboxylase by a heterogeneous photochemical system. **Photosynthetica** 24 (4) : 632-636 (IF = 1.0).
77. **Maheshwari V.**, Bhardwaj R. and Sharma D. (1989) Flowering induced ageing in *Butica monosperma*. **Current Sci.** 58 : 578-580 (IF = 0.567).
78. Sharma D., Bhardwaj R., **Maheshwari V.** and Nagar S. (1989) Oxyfluorfen binds to and inhibits photosystem II photochemistry. **Plant Sci.** 63, 1-6 (IF = 2.92)
79. Sharma D., Bhardwaj R. and **Maheshwari V.** (1989) Inhibition of photosynthesis by oxyfluorfen. **Current Sci.** 58 : 1334-1336 (If = 0.567)
80. **Maheshwari V.**, Bhardwaj R., Sharma D. and Nagar S. (1988) Heterogeneous photochemical and chloroplast mediated photoactivation of spinach fructose-1, 6-bisphosphatase. **Biochem. Biophys. Res. Commun.** 152 : 668-673 (If = 2.5).

• **Papers published in proceedings of Symposia/conferences/book chapters:**

1. Teli, N.P. and **Maheshwari, V.L.** (1999) Plant tissue culture studies of *Vigna radiata* (L.) Wilczek and *Vigna mungo* (L.) Hepper. In: Perspectives in Biotechnology (eds. Reddy, S.M., Rao Digambara and Vidyavati), Scientific Publishers, Jodhpur, India.
2. Borse T.H., **Maheshwari V.L.**, Kothari R.M. and Patil S.F. (1999) Natural Dyes : A trend in 21st century. In : **Sovenir of 18th Annual Conference of Indian Council of Chemists**, N.M.U., Jalgaon, Dec. 1999, 33-38.
3. Shah S.J., Teli N.P., Wani G.S., Kulkarni M.V., **Maheshwari V.L.** and Gokhale S.B. (1998) Standardization of herbal liquid preparations containing glycosides. In: **Herbal Medicines** (Ed. Puniya A.K.), 120-123.
4. **Maheshwari V.**, Bhardwaj R. and Sharma D. (1990) The mechanism of activation and inactivation of photosynthetic fructose 1,6-phosphatase. In: **Recent Trends in Photosynthesis** (Briton, G. and Biswal, U.C. eds.) Agro-Botanical Publ., Bikaner, India. pp 193-200.
5. P.S. Mendki, H.M. Kotkar, S.M. Upasani, **V.L. Maheshwari** and R.M. Kothari (2003) Use of various botanicals for combating the attack of pulse beetle, *Callosobruchus chinensis* (Linnaeus). In : *Biopesticides and Pest Management*, Volume 2, (eds. O. Koul, G.S. Dhaliwal, S.S. Marwaha and J.K. Arora), Campus Books International, New Delhi, pp. 70-79.
6. Bhalsingh, SR, Teli, NP, Pawar, P.K. and **Maheshwari, V.L.** (2003) Regeneration and transformation in some medicinally important members of family Solanaceae. In: Plant Genetic Engineering, Vol. 3 Improvements of Commercial Plants I (Singh R.P and Jaiwal P.K. eds) Sci Tech Publishing LLC, USA pp.321-347.
7. Mendki, P.S. , Kotkar, H.M., Upasani, S M and **Maheshwari, V.L.** (2003) Botanicals for post harvest preservation of pulse grains. In: Biological Control of insect pests (eds. Ignacimuthu, S and Jayraj, S) Phoenix Publishing House P.Ltd., New Delhi. Pp. 200-207.
8. Mendki, P.S., **Maheshwari, V.L.** and Kothari R.M. (2004) Pulse Beetle (*Callosobruchus chinensis*) : some biochemical changes in pulses during storage. In : Contemporary Trends in Insect Science (Ed. Gujar G.T.) Campus Books International, New Delhi, pp. 165-183.

9. Salunke B.K. and **Maheshwari, V.L.** (2008) Control of *Callosobruchus chinensis*, a stored grain pest of grain legumes using plant secondary metabolites. In: Kharkwal M.C. (Ed) Proceedings of Fourth International Food Legume Research Conference (IFLRC-IV), October 18-22, 2005, ISGPB, New Delhi, India, pp 753-761
10. K.Prakash, R.H. Patil, K.S. Vishwakarma and **V.L. Maheshwari** (2009) Circular proteins and pest management in grain legumes storage ecosystem. **Proc. of First National Young Scientists Congress, NIT Kurukshetra** (Nov. 2008).
11. R.H. Patil, K. Prakash an **V.L. Maheshwari** (2009) Production lovastatin by *Aspergillus terreus* using agricultural waste in solid state fermentation. **Proc. of First National Young Scientists Congress, NIT Kurukshetra** (Nov. 2008).
12. Patil RH, Prakash K, Vishvakarma KS and Maheshwari VL. (2009) Biotechnological production of statins by filamentous fungi and application of these cholesterol lowering drugs. **In : Biotechnology : Emerging trends.** (Eds. R Z Sayyed and A S Patil). Pp 280-292.
13. Prakash K, Patil, R H, Vishwakarma, K.S. and **Maheshwari, V L** (2010) Global Food (grain legumes) security and role of biopesticides . In : Global Food Security : Concern, Reality and Remedies (eds : Seema Joshi, Anil Dongre and Sammer Narkhede) Himalaya Publications, Mumbai pp 221-229.

• **Popular Articles:**

1. **V.L. Maheshwari** and B.K. Salunke (2005) Natural chemistry of plants for sustainable pest management. Cover story, Advanced Biotech, March, 2005 pp 20-24.
2. **V.L. Maheshwari** and B.K. Salunke (2005) Therapeutic use of essential oils in aromatherapy. A fact File. Cover story, Advanced Biotech, July 2005 pp18-23.

➤ **Research project completed :**

Sr.	Title of Project	Duration	Amount Sanctioned	Funding Agency
1.	Photoregulation of Maize leaf phosphoenolpyruvate carboxylase.	2 Year	Rs. 0.15 lacs (Minor)	UGC, New Delhi
2.	Modernization of Plant Tissue Culture Laboratory in the School of Life Sciences.	3 Year	Rs. 08 lacs (Eight lacs)	AICTE, New Delhi
3.	Plant Tissue culture studies in <i>V. mungo</i> , <i>V. radiata</i> and <i>V. unguiculata</i> .	3 Year	Rs. 4.00 lacs	CSIR, New Delhi
4.	Minimization of losses in five major pulses during storage. (Co-investigator)	3 Year	Rs 7.40 lacs	CSIR (TMO&P), New Delhi
5.	Isolation, Characterization and applicability exploration of a natural dye from the waste pseudo stem of banana after harvesting. (Co-investigator)	3 Year	Rs. 8.00 lacs	DST, New Delhi
6.	Plant tissue culture technology for a few medicinally important plants.	3 Year	Rs. 4.10 lacs	AICTE, New Delhi

7.	A simple technology for post-harvest preservation of pulses using botanical pesticides.	3 Year	Rs. 15.00 lacs	CSIR (TMO&P) New Delhi
8.	Botanical pesticides for post-harvest preservation of pulses	3 Year	11.5 lacs	DST, New Delhi
9.	Plant cyclotides : An alternative and sustainable approach to storage pest management In grain legumes (pulses)	3 Year	Rs. 26 lacs approx..	DBT, New Delhi
10.	Digitised inventory of medicinally important plants of three districts of North Maharashtra. (co-investigator)	3 Year	Rs. 25 lacs	RGCST, GoM, Mumbai
11.	Bioprospecting and pesticidal property of circular proteins against <i>H. armigera</i>	3 Year	17.2 lakhs	DST, New Delhi
12.	Plant Tissue culture studies in some medicinally important plants. (co-investigator)	3 Year	7.8 lakhs	UGC, New Delhi
13.	Lipase producing microbes as biopesticides : Novel approach to mealybug control (co-investigator) (30/6/2010)	3 years	12.31 lakhs	DBT, New Delhi
14.	Studies on interaction of Plant α -amylase inhibitors with insect amylase (PI and Coordinator) (31/8/2012) (In collaboration with NCL, Pune)	3 Year	17.82 lakhs	DBT, New Delhi

➤ **Consultancy Projects:**

- Transferred a technology on “Biopesticide processing and formulation from a plant origin” (2004)
- Consultant to M/s Krishna Anti-oxidants Pvt. Ltd., Mumbai and M/s Naturally Yours Biotech Ltd., Jalgaon for evaluating their botanical pesticides formulations.
- Consultancy and analytical services provided to industries in and around Jalgaon

➤ **Scientific collaborators :**

- Dr. A. P. Giri, National Chemical Laboratory, (NCL) Biochemical Division, Pune (India).
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