

## Professor Vijay D. Mendhulkar

### ▪ Area of Research work:-

Cytogenetics, Chemical mutagenesis  
Plant cell Culture studies  
Secondary Metabolites elicitation by In-Vitro Techniques  
Nanobiotechnology

### ▪ Academic Qualification:-

- M.Sc., M.Phil. (Nagpur University) Ph.D. (Karnatak University)

### ▪ Specialization:- Cytology and Genetics

### ▪ Contacts-

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- [Google site-https://sites.google.com/site/profvijaydmendhulkar](https://sites.google.com/site/profvijaydmendhulkar)

- Recognized PG teacher and Ph. D. Guide for Botany (University of Mumbai).
- Recognized PG teacher and Ph.D. Guide for Biotechnology (University of Mumbai).
- Recognized PG teacher for the subject of Environmental Science.(University of Mumbai)

▪ Publications:-----73

▪ Presentations in the Conferences :---64

Articles:-----02

Ph.D. awarded:-----10

▪ Post Doctoral Student -----01

▪ Conferences Organized : -----04

▪ Reviewer for the Journals---

- Material Science and Engineering-C
- International Journal of Pharma and Biosciences,
- Journal of Applied Life Sciences International,
- Journal of Material Science and Nanotechnology

▪ Research Projects( Minor) Completed---03

▪ On the Panel of Editorial Board of International Journal of Advances in Plant Sciences published by Academy of Plant Sciences, India.

▪ Coordinator, RUSA, Institute of Science, Mumbai

▪ Member , Ad-hoc Board of Studies in Biotechnology, Shivaji University, Kolhapur.

▪ Member, LAC, Institute of Science, Mumbai Life member, Academy of Advances in Plant Sciences, India.

▪ Co-ordinator- Department of Biotechnology, Institute of Science, Mumbai (2008-2011).

▪ Chairman- DPDC Committee, Institute of Science, Mumbai (2007---09, 2011---).

- **Chairman- Vigilence Commeetee, Institute of Science, Mumbai (2007-08).**
- **Joint Secretary, Alumni Association, Institute of Science, Mumbai. (2001-2004) .**
- **Treasurer, Alumni Association, Institute of Science, Mumbai ( 2005- 08).**
- **Co-ordinator- Gymkhana, Institute of Science, Mumbai (2001-o4).**
- **Member on Local Committee for NAAC Preparation, Institute of Science, Mumbai. (2001-2005) .**
- **Worked as Government nominee, V.C .Nominee & Subject Expert for the Selection of Lecturer and Professor Posts in Botany. University of Mumbai and BAM University Aurangabad.**
- **Worked as a OSD for B.Ed. Entrance Exam. Govt. Of Maharashtra.**
- **Member, Society of Cytologist and Geneticist of India.**
- **On the Panel of Examiners for M.Sc. And Ph.D. Programmes of-----**

Osmania University,Hyderabad.

M.S.University, Baroda.

Karnatak University, Dharwad.

SGB Amravati University.

RTM Nagpur University .

BAM University,Aurangabad.

University of Mumbai, Mumbai.

M.S.University ,Thirunelveli (T.N.).

Shivaji University ,Kolhapur

## Key note Addresses

- Biotechnological method in Advanced Research ----Guest Lecture for B.Ed. participants [Biology DrBabasaheb Ambedkar Marathwada University, March, 2021, Aurangabad.
- Key address on Carona-19 Pandemic-April, 2021, VMV. Amaravati Advanced instrumental use in Botanical Research-Silvasa, April-2021
- Techniques in Plant Science Research- Key Note Address in International Conference at Padalia College of Pharmacy, Ahmadabad. 28th Jan, 2020
- Trends in metabolite engineering-Bioactive constituents and their Elicitation using In-vitro techniques. Guest Lecture in National Conference at Vidhyabharati College, Amaravati. 2nd Feb, 2019.
- DST - Inspire Guest Lecture on- *Algal Biotechnology*. In Gov. P.G. Autonomous College, Durg, Chattisgarh, 26-09-2018.
- DST - Inspire Guest Lecture on- *Biological polymers*. In Gov. P.G. Autonomous College, Durg, Chattisgarh, 24-02-2017.
- Lead Lecture in National Conference on the Topic " Bioactive Constituents and their Elicitation using In-Vitro Technques. 02-03-2017, Department of Botany, Babasaheb Ambedkar Marathwada University, Aurangabad.
- DST - Inspire Guest Lecture on- *Plant Cell-A factory of Natural Metabolites*. In Gov. P.G. Autonomous College, Durg, Chattisgarh, 22-10-2016.
- Key Note Address on topic- Biological Synthesis of Nanoparticles and their applications in Agriculture and Health Care. APSI National Conference, Padalia College of Pharmacy, Ahmadabad, 1-2 Feb, 2015
- Key Note Address on topic---Significance of Bioactive Metabolites and their Enhancement under in- vitro Condition "In National conference on Biodiversity and Ecological Sustainability, Puri, Odisha 15th-16th, 2014
- Guest Speaker under DST sponsored programme, Inspire Science. Delivered a talk on "Youthful Era of Scientific Innovations at P.G. College Bhilai, Chhattisgarh on 19-09-2013
- Guest Lecture on the topics, " Secondary Metabolites and its Elicitation " in National Conference at Vellar College, Erode, Tamil Nadu. Oct. 10th-12 th, 2004
- "Secondary Metabolites and In-Vitro Techniques" at ENBIOT-09 in Indian Institute of Environmental Management SIES, Nerul, Navi Mumbai, on 3<sup>rd</sup> Dec-2009
- Delivered a talk on "Advances in Biotechnological Research" for Biotechnological Society, Department of biotechnology, Shivaji Mahavidyalaya, Amravati, 18 th August, 2010.
- "Biostatistical Applications" in Workshops at Academic Staff College, Nagpur University, Nagpur
- "Mutation Methodology" in Refresher course, Academic Staff College, Nagpur University, Nagpur.

- Chairperson for Scientific sessions National Conferences at Bhartidasan University, Triruchirapally (27th –29th, 2001), , N. D. University, Faizabad (17th to 18th December ,2007) ,M.S. University, Baroda ( 22 Feb, 2009) APSI-Scientists Meet at Ranchi (11-12 October 2009) , Hyderabad (30thSept- 1st Oct 2010) Chiang Mai (2012) Kota, Rajasthan 2013 ,Puri-2014, and Ahmadabad,2015.

## Conferences/ Workshops Organized-----

- 1.17<sup>th</sup> APSI Scientists Meet and National Conference on “Perspectives and Present Scenario in Plant Science Research” (NCPSPSR-08), 20<sup>th</sup> -21<sup>st</sup> November 2008 ,organized in collaboration with the Academy of Advances in Plant Sciences India, Muzaffarnagar and Department of Botany, Institute of Science, Mumbai.
2. “Bionics-09”---A workshop on Bioinformatics, 28<sup>th</sup> Dec.2009.
3. “Bionics-10”---A seminar on Carrier Guidance for the students of Biotechnology, 28<sup>th</sup> - 29<sup>th</sup> Jan 2011.
4. Convener---"National Conference on Conservation of Medicinal Plant". Organised by Department of Botany and Biotechnology,Institute of Science on Dec.14-15th 2012.

## Awards---

Best Oral Presentation Awarded Papers in National conferences—3

2nd prize for best presentation in Nanobiotek-18- Conference Jointly organized by AllMS,IIT-Delhi & DBT (Gol) at AllMS Delhi on 26-10-2018 for the paper ‘Assessment of Anticancer activities on Lung cancer cell lines-A549 using metal nanoparticles synthesized in Elephantopus scaber L. Leaf extract’.

2nd prize for best presentation of work in APSI conference, Dehradun for the paper, EMS Induced Quantitative Variations in Ascorbic acid content in Cell Suspension Culture of *Linum sitatissimum* L. Priyanka Patade and V.D.Mendhulkar (2011) -DMSO induced cell permeability in suspension cultures of *Blumea lacera* (Burm. f.) DC. for the release of total flavonoids. National Conference on Current innovations in Plant Science, Kopergaon..

Priyanka Patade, Sandeep Singh and V.D.Mendhulkar (2009)- Effect of DMSO as a Permeabilizing agent on Suspension Cultures of *Bacopa monnieri* Linn. ) in National conference on “Diversity, Products and Environmental Planning. Ranchi, 11-12 October,2009.

Priyanka Patade and V. D. Mendhulkar (2010)- Triton X-100 induced cell permeability in suspension cultures of *Blumea lacera* (Burm. f.)DC. for the release of total flavonoids. (Presented in 19<sup>th</sup> APSI Scientists Meet 2010

and National Conference on Plant Biotechnology towards Nutritional And Nutraceutical Potential. Sep. 30th - Oct. 1st 2010. Saionji Naidu Mahavidyalaya, Hyderabad.

Best Posters Presentation Awarded Papers in National conferences—3

Aruna Nagare and V.D. Mendhulkar (2013)-Studies on Antibacterial properties of Leaf Extract from *Swertia* species collected from Konkan Region. --In APSI Scientist Meet-2013, Modi Institute of Technology, Kota, Rajasthan, 2-4 Feb,2013.

Moinuddin M. Ali and V.D. Mendhulkar (2011).Synthesis and Characterization of Silver and Gold Nanoparticles in Leaf Extract of Medicinal Plant, *Andrographis paniculata* Nees. Presented in “Nanoscience and Nanobiotechnology: Present and Future Perspectives” (LSFI-MIET-NANO-2011)26th November 2011, Meerut.

Laxmikant Yeragi and V. D. Mendhulkar-(2009)- ICP- AAS analysis for the Accumulation of Heavy Metals in the Mangrove plant *Exoecaria agallocha* L. Collected from Polluted Area. - In National conference on “Diversity, Products and Environmental Planning. Ranchi, 2009.

## **Citations-**

- Best Conference Organizing Secretary for 17th APSI Scientists Meet and National Conference on “Perspectives and Present Scenario in Plant Science Research” (NCPSPSR-08), 20th -21st November 2008 ,organized in collaboration with the Academy of Advances in Plant Sciences India, Muzaffarnagar.
- APSI Certificate of Excellence presented by Honorable Minister for Minor Irrigation, Govt. Of Andhra Pradesh, on 30th September 2010 in 19th APSI Scientists Meet 2010 and National Conference on Plant Biotechnology towards Nutritional and Nutraceutical Potential. Sep. 30th to Oct. 1st 2010. Sarojini Naidu Mahavidyalaya, Hyderabad.

## **Articals---**

- Callus Induction from leaf and stem explants of Medicinally Important Plant *Blumea lacera* Linn. In *Genome Characterization: Basics and Applications*, edited by V. Padmaja, B. Subba Rao and A. Arundhati. Jaipur, Aavishkar, 2007, ISBN 81-7910-195-7 R.W. Raut, Shabeena. Yaseen and V.D. Mendhulkar.
- Article in Express Pharma--Contributed for the article, Genuinely green?,,in Express Pharma ,Magazine of Indian Express Group, 16-28 Feb2009.

## Publications- 74

1. Shetye, L., Mendhulkar, V.D. (2022). Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) synthesis in *Nostoc muscorum* from biodiesel industry waste: a sustainable model of bioplastic production. *J Appl Phycol* **34**, 1377–1387
2. Laukik Shetye and Vijay D. Mendhulkar (2022). Environment improvement through valorization of organic industrial waste by synthesis of poly- $\beta$ -hydroxybutyrate (PHB) using *Synechococcus elongates*. (accepted for publication in *Jou. Vegetos.*)
3. S. G. Dhuri, L.A. Shetye, V. D. Mendhulkar (2021). Microcystin-based Nanodrug from *Anabaena cylindrica* for Treatment of Hepatocellular Carcinoma. *Int J Pharm Sci & Res.* 13(7): 2794 – 2802.
4. Mendhulkar VD and Shetye L (2021). Investigation of the anti-cancer potency of nanomedicine, green synthesized from *Spirulina platensis*, against breast cancer. *Int J Pharm Sci & Res*; 12(6): 3418-3424.
5. Vijay D. Mendhulkar, Laukik A. Shetye & Omkar Khot (2020). Modulation of the anti-cancer activity of sulfated polysaccharides, synthesized in *Spirulina platensis*, due to varying degree of sulfation induced by nutrient and physical stress. *J. Biol. Act. Prod. Nat.* 10(4): 275-284.
6. Vijay D. Mendhulkar and Laukik A. Shetye (2017). Synthesis of biodegradable polymer polyhydroxyalkanoate [PHA] in cyanobacteria *Synechococcus elongates* under mixotrophic nitrogen and phosphate mediated stress conditions. *Ind. Biotechnol.* 13(2): 85-93.
7. **Sopan N. Kharat, Nidhi Ansari and Vijay D. Mendhulkar (2020)**-HPTLC Screening for flavonoids content in leaf extract of *Syzygium cumini* (Linn.) and its antimicrobial activity. *Research Journal of Pharmacy and Technology*, 13(6): June 2020
8. **Ashwini S Shinde and Vijay D. Mendhulkar (2019)**: Antiproliferative activity of *Elephantopus scaber* mediated silver nanoparticles against MCF-7, A-549, SSC-40 and CoLO-205 Human cancer Cell lines. *Asian Journal of Pharmaceutical and Clinical Research*, Vol. 13 (2), 1-5.
9. **Mendhulkar, V.D., Sopan Kharat and Snehal Mahadik (2018)**. Plant extract Mediated AgNPs synthesis in *Averrhoa bilimbi* and *Syzygium cumini* leaf Extract, their characterization and Antioxidant Potential Assessment. *Der Pharma Chemica*, 10 (11); 24-33.
10. **Mendhulkar V.D. and Laukik Shetye (2017)** Synthesis of Polyhydroxyalkanoate [PHA] in cyanobacteria *Synechococcus elongates* under mixotrophic nitrogen and phosphate mediated stress conditions. *Ind. Biotech. (Scopus indexed)*, Vol. 13 (02), 85-93..
11. **Nisha K and Mendhulkar V.D. (2018)**. An Investigation on Antigenotoxic effect of Vermiwash against Industrial Effluent on *Pisum sativum*. *Jou. of Bioremed. & Biodegrad.* Vol 9(1), 422.
12. **Patil Reshma, V.D. Mendhulkar and Nisha K. (2017)** -Synergistic impact of Vermicompost with chemical fertilizer and Garden Soil on some Physiochemical traits in Okra (*Abelmoschus esculentus*). *Ad. Plant Sci.* 30(II), 109-114.
13. **V.D. Mendhulkar and Sopan Kharat (2017)** HPTLC Assay Phytochemical, FTIR Characterization and Studies on Antioxidant activities of *Elephantopus scaber* (Linn.) using six different Soxhlet leaf extract. *Der Pharma Chemica*. 9(23), 18-28.
14. **Mendhulkar V.D., LA Yeragi and Hemant Kumar (2017)** "Bioassay of vector Larvae with Latex of blind eye Mangrove plant *Excoecaria agallocha* Linn". *Int. J. of Mosquito Res.* (Thomson)

Reuters/Copernicus indexed )Vol.4(1),33-36

15. **Piyanka Patade, Vijay D.Mendhulkar\* and Moinuddin vakil (2017)**: Triton x-100 and DMSO induced cell permeability for the release of campesterol and flavonoides in cultured cells of *Blumea lacera* (Burm. f.) DC. Int. J. Pharm. Bi. Sci.Vol 8 (1) :( B) 476 – 483
16. **Mendhulkar Vijay D. and Ashwini Shinde ( 2017)** ;Anticancer activity on MCF-7 and SSC-40 cCancer Cell linesusing SuccessiveSolvent Extracts of *Phyllanthus acidus* [Linn.] leaves. Int. J. Pharm. Bi. Sci., 8 (4):36-42
17. **MendhulkarV.D. And Yadav Anu (2017)**.Anticancer activity of *Camellia sinensis* mediated copper nano particles against HT-29,MCF-7 and Molt-4 human cancer cell lines.Asian J. of Pharmaceut.and Clini. Res..Vol-10(2),71-77
18. **Mendhulkae V.D. and Swati Sakhare (2017)** “Antimicrobial activity of the seed and callus biomass extract *Linum usitatissimum* Linn. against some strains of clinically important pathogens.Int. J. Pharm. Bi. Sci, Vol. 8 (4) :(B) 263-268
19. **Sopan Namdeo Kharat and Vijay D Mendhulkar,(2016)**. Synthesis, Characterization and studies on Antioxidant activity of Silver Nanoparticles using *Elephantopus scaber* leaf extract. Materials Science and Engineering - C ( Elsevier Publication). 6-2,719-724..
20. **Aruna Shahaji Nangare, Vijay Damodhar Mendhulkar (2016)**.Allelopathic effect of *Swertia xanthone* extracts on proteinprofiling and protein quantity in *Vigna radiata* leaves.Int. J. of Pharm Tech Research. ISSN: 0974-4304. Vol.9(9),pp 437-443.
21. **Mendhulkar V.D. and Hena Hayat ( 2016)** Optimization of genomic DNA extraction from the leaf tissues of *Jatropha* species for molecular studies.Asia. J. of Microbi, Biotech.and Environ. Scie. Scopus indexed ,Vol.8 (3 );69-72.
22. **Patade P., V. D. Mendhulkar\* and M. Vakil (2016)** - Campesterol elicitation in *Blumea lacera* (Burm.f.) DC. Cell culture using Salicylic acid and *Aspergillus niger* . Int. J.of Green and Herbal Chemistry. Sec. B; Vol.5( 4), 308-318.
23. **Mendhulkar Vijay D., Priyanka Patade and Moinuddin Vakil( 2016 )**- Chitosan and *Penicillium expansum* mediated elicitation of campesterol in *Blumea lacera* (Burm. f.) DC. cell culture. World J. of Phar. and Pharmac. Sci. .Vol.5 (12),824-833
24. **Mendhulkar Vijay D. \*, Priyanka Patade and Moinuddin Vakil (2016)** - Elicitation of Flavonoids in *Blumea lacera* (Burm.f.) DC. Cell Culture using Chemical Elicitor, Salicylic Acid and Biological Elicitor, *Aspergillus niger*. Int. J. of Cur. Res. in Biosciences and Plant Biology, 3(11): 85-91.
25. **Patade Priyanka, Mendhulkar Vijay D\*, Vakil Moinuddin (2016)** - Studies on Comparative Impact of Chitosan and *Penicillium expansum* for Flavonoids Elicitation in *Blumea lacera* (Burm. f.) DC . cell culture . Int.J.of Pharmacy and Biological Sciences.Vol.6(4),27-34.
26. **Aruna Shahaji Nangare, Vijay Damodhar Mendhulkar (2016)**-Advancement in Enzyme Activities in *Vigna radiata* by Allelopathic applications of Xanthone Extract of some *Swertia* species collected from Southwest Zone of Maharashtra. Der Pharmacia Lettre, [ Scopus indexed ] Vol.8 (8): 334-338
27. **Aruna Shahaji Nangare, Vijay Damodhar Mendhulkar (2016)** “Genotoxic and Cytotoxic Effects of Different Xanthone Extracts of *Swertia* Species in *Pisum sativum*” Int.l J.of Pharmaceutical Sciences Rev. and Res. [ Scopus indexed ] .Vol.39 (1);255-259
28. **Ranjana Singh, Sopan N. Kharat, Vijay D. Mendhulkar (2016)**-Chromatographic analysis for diosgenin content in *Abutilon indicum* (L.) sweet. Int. J.of Pharmacy and Pharmaceutical Sciences ( Scopus, ,Elsevier indexed ) , Vol. 8 (2 ),178-182
29. **Mendhulkar V.D., Yadav Anu, and Supriya Khemkar-(2016)**-Photochemical decolorizationof methyl violet dye using *Azadiracta indica* mediated silver nanoparticles.Der Pharmacia Letter,( Scopus indexed )Vol.8(7):119-128
30. **Anu Yadav and Vijay D.Mendhulkar- (2016)** .*Camellia sinensis* mediated synthesis and

**encapsulation of Iron nano particles for decolorization of dyes. Biochemistry-An Indian Journal.** Vol. 10 (1) ,20-29.

31. **Kharat Sopan and Mendhulkar V.D. (2017)** --HPLC assay, Phytochemical, FTIR Characterization and studies on Antioxidant activity of *Elephantopus scaber* (Linn.) using six different soxhlet leaf extracts. *Der Pharma Chemica*,9(23),18-28.
32. **Swati Sakhare and Mendhulkar V.D. (2016)** -Embryo exiced callus induction and rhizogenesis in *Linum usitassimum* ( Linn. ). *Int. J. of Pharma and Bio-Sciences.*( Scopus indexed )Vol.7 (3) B 507-511L.A.
33. **Yeragi and V. D. Mendhulkar ( 2016)** Seasonal variations in antibacterial and antifungal activity of *Excoecaria agallocha*. *Asian J. of Microbiology, Biotechnology & Environmental Sciences* ( Scopus indexed, Communicated )
34. **Hena Hayat and Mendhulkar V.D. ( 2016)** -A Simplified approach to transesterification for GC-MS analysis in *Jatropha curcas*. *Der Pharmacia Lettre* [ Scopus indexed ] . Vol. 8 ( 10 ) : 233-237.
35. **Bonny Sinhna Ray, L Pitale and V. D. Mendhulkar (2015)** Effects of temperature stress on Soybean seeds .*Der Pharmacia Lettre*,( Scopus indexed )7 (11):141-46
36. **Mendhulkar V.D., Anu Yadav and Raul Ankita (2015)**-In vivo mitodepressive and genotoxic effect induced by herbal toothpastes in *Pisum sativum*. *Int. J. of Pharm Tech Research*.Vol 8 (6),[Scopus indexed] pp.186-191.
37. **V.D.Mendhulkar and K Nisha (2015)** - Physiological and biochemical effects of polyethylene glycol (PEG) induced drought stress condition in four varieties of Indian tomatoes (*lycopersicum esculentum* ). *Int. J. Pharm. Bi. Sci.* (Scopus, Embase indexed ,Elsevier ) ,6(4): (B) 971 – 980
38. **Singh Ranjana and Mendhulkar V.D. (2015)** - FTIR Studies and Spectrometric analysis of natural antioxidants, polyphenols and flavonoids in *Abutilon indicum* (Linn.) Sweet Leaf extract. *J.of Chem.and Pharmace. Res.h.* Vol. (6): 205-211.
39. **Kharat Sopan, Singh Ranjana and Mendhulkar V.D. (2015)** Quantitative analysis for Diosgenin content in *Elephantopus scaber* (Linn.) by HPTLC using successive solvent extraction method. *Der Pharmacia Lettre*. Vol.7 (5):236-244.[indexed in Elsevier Bibliographic Database SCOPUS, EMBASE]
40. Mendhulkar V.D., Yeragi Laxmikant and Sneha Kadam (2015) -Atomic Absorption Spectroscopic analysis of Heavy Metals in the Leafy Vegetables grown along the Central Railway Track in Mumbai .*The J. of Adv in Plant Sci.*. ISSN-0970-3586. Vol.28 (01):21-23.
41. Yadav Anu and Mendhulkar V.D. (2015). In-Vitro antiplatelet aggregation activity of the extract of *Camellia sinensis*. *Res. in Biotec.*, Vol.(6 (3),10-16.
42. Mendhulkar Vijay D. and Sopan N. Kharat . (2015)-HPTLC assay for Quercetin and Rutin flavonoids in *Elephantopus scaber* [linn.] grown under induced heat stress condition. *Int. J. Pharm. Bi. Sci* Vol.6 (2) [B]-36-52 indexed in CAS (USA) Elsevier Bibliographic Database (SCOPUS, EMBASE).
43. **Mendhulkar V.D. , Bhatti Tejprakash and Kharat Sopan (2015)**-Cytogenetical and Morphological Variations in EMS treated *Glycine max* Linn. (Merr.).*Res. in Biotechnology*.Vol.6(4),19-26.
44. **Yadav Anu and Mendhulkar V.D. (2015)**- Repellency and toxicity of *Couroupita guianensis* leaf extract against Silver leaf Whitefly (*Bemisia tabaci*).*Int. J. of Sci.and Res. Publi.*.Vol.5 (3),249-252.
45. **Singh Ranjana and Vijay D. Mendhulkar (2015)**-*Abutilon indicum* (Linn.), Sweet leaves, a natural source of Saponin-A Spectrometric assays. *Int.J. of Pharm Tech Research*. Vol.8 (4),725-729.[indexed in Elsevier Bibliographic Database SCOPUS, EMBASE]
46. **Raut Vidya, Kharat Sopan and. Mendhulkar V. D. (2015 )** -Electrophoretic Protein profile of few Pulses consumed locally in Mumbai region. *Int. J.of Pure & Applied Bioscience* .Vol. 3 (2), 156-161.
47. **Yeragi L.A. and Mendhulkar V. D. (2015)**- Biodiversity around Garbage area in Kannamwar nagar, Vikhroli Suburb, Mumbai. *Int. J.l of Res. in Envi. Scie. and Tech.*.Vol.5 (2):43-48
48. **Mendhulkar V.D, Mayekar Abhijit, Nagare Aruna. (2015)** - Callus Cytology and Electrophoretic



Protein Profiling in Cultured cells of *Andrographis paniculata* (Linn.) .Int.J. of Pharmace. Sci., Review and Research.34(1),158-161.

49. **Nangare Aruna and Mendhulkar V.D. (2014)** - Studies on In-vitro Antimicrobial Activity in *Swertia* species Collected from South West part of Maharashtra. The J. of Adv in Plant Sci.. .ISSN-0970-3586. Vol.27 (02).pp 287-290.
50. **Yeragi Laxmikant and Mendhulkar V.D. (2014)**. IPA-AES Analysis for Bioaccumulation of Heavy Metals in Mangrove Plants *Excoecaria agallocha* Linn. Collected from Polluted area in Mumbai. The J. of Adv in Plant Sci.. . ISSN-0970-3586. Vol.27 (02).pp 497-500
51. **Nangare Aruna and Mendhulkar V.D. (2014)** - Mangiferin quantification in some *Swertia* species collected from south-west zone of Maharashtra. Int. J. of Bioassays ISSN: 2278-778X. 3 (11) pp 3488-3491
52. Mendhulkar VD, Yadav Neetu, Yadav Anu and K. Nisha. (2014)-Cytological and physiological effects of *Couroupita guianensis* leaf extracts on *Pisum sativum* seeds. Indian J. of Fund. and App. Life Sciences.kant and Pandey Preeti (2014). - ICP-AAS Analysis for heavy metals in *Avicennia officinalis* .Int.J. of Res. in Envi. Sci. and Tech.. ISSN No 2249-9695 .Vol .5 (1); 35-37.
53. **Raut. R. W, Mendhulkar V.D., Kashid S.B. (2014)**-Photosensitized synthesis of Silver Nanoparticles Using *Withania somnifera* leaf powder and Silver nitrate .J.of Photochem. and Photobio. .B-Biol. Elsevier Publications .Vol 132,P 45-55.
54. Vakil M. A. and Mendhulkar V. D. (2013) -Salicylic acid and Chitoson mediated abiotic stress in cell suspension culture of *Andrographis paniculata* ( Burm.F.) Nees. For Andrographolide synthesis. Int. J.Pharm Sci. Res. 4 (9), p. 3453-3459.[indexed in Elsevier Bibliographic Database SCOPUS, EMBASE.
55. Mendhulkar V. D. and Vakil M. A. (2013)-Chitoson and *Aspergillus niger* mediated elicitation of Total flavonoids in suspension culture of *Andrographis paniculata* (Burm.F.) NEES.Int. Jou.of Pharma and Bio. Sciences 4 (4), 731-740. [Indexed in Elsevier Bibliographic Database SCOPUS, EMBASE
56. **Vakil M. A. and Mendhulkar V. D. (2013)** -Salicylic acid and Chitoson mediated abiotic stress in cell suspension culture of *Andrographis paniculata* ( Burm.F.) Nees.for Andrographolide synthesis. Int. J.Pharm Sci. Res. 4 (9), p. 3453-3459.[indexed in Elsevier Bibliographic Database SCOPUS, EMBASE
57. **Mendhulkar V. D. and Vakil M. A. (2013)**-Chitoson and *Aspergillus niger* mediated elicitation of Total flavonoids in suspension culture of *Andrographis paniculata* (Burm.F.) NEES.Int. Jour.of Pharma and Bio. Sciences 4 (4), 731-740. [Indexed in Elsevier Bibliographic Database SCOPUS, EMBASE
58. **Mendhulkar V. D. and Moinuddin M. (2013)**-Elicitation of flavonoids by Salicylic acid and *Penicillium expansum* in *Andrographis paniculata* (Burm.. f.) Nees. Cell culture. Research in Biotechnology 4 (2), p.01-09.
59. **Moinuddin M. and Mendhulkar V. D. (2013)** -Enhanced synthesis of andrographolide by *Aspergillus niger* and *Penicillium expansum* elicitors in cell suspension culture of *Andrographis paniculata* (Burm. f.) Nees. Bota. Bulle.of Acad. Sinica. ( Springer publication)54 (2), 1-8
60. **Mendhulkar V.D. and Moinuddin M. Ali (2011)**.Colorimetric Determination of Cell Growth Phase and detection of andrographolide in suspension culture of *Andrographis paniculata*. Nees. J. of Adv.in Plant Sci., India vol. 24 No. 02. 425–427.
61. **Mendhulkar V.D. and Moinuddin M. Ali. (2011)**- Treatment of Salicylic acid to the Cell Suspension of *Andrographis paniculata* for the evaluation of Andrographolide, The J. of Adv in Plant Sci.. , India vol. 24 No. 02, 413-416.
62. **Mendhulkar, V.D .Tushar Mane and Priyanka Patade (2011)** - EMS induced biochemical variations in cultured cells of *Vigna radiata* L. The J. of Adv in Plant Sci.. , India vol. 24 No. 02, 405-407.
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