

## Dr. Jyoti Amol Deshpande



**Designation:** Assistant Professor

**Email ID:** [jyoti.bidwai@dpu.edu.in](mailto:jyoti.bidwai@dpu.edu.in)

Contact No: +91 20 67919444

**Qualification:** M. Sc. Ph. D. Biotechnology

**Area of Specialization:** Plant Biotechnology

**Research Interest:** Plant Tissue Culture, Medicinal Plants, Plant secondary metabolites

### Educational Qualifications:

1) **Ph. D. in Biotechnology:** Dr. D. Y. Patil Vidyapeeth (DPU), Pimpri, Pune, 2017.

Title of Thesis: Standardization of in-vitro culture of Plumbago sp. for optimization of plumbagin production and therapeutic studies of plumbagin along with in-silico designing and docking of plumbagin analogs

2) **Master's Degree in Biotechnology** (2004) – 68.30%,

Amravati University, Amravati. (**University 3 rd Rank**)

3) **Bachelor of Sciences** (Microbiology, Biochemistry, Chemistry) -78.28 %,

R.L.T. College of Science, Akola,

4) H.S.C.- 75.50%, Arts, Commerce and Science Junior college, Akola.

5) S.S.C.- 86.40%, S.S.H.S. Dongaon. Amravati Board - 27th merit.

6) Computer Skill: Diploma in Computer Applications (April 2002)

Maharashtra State Board of Vocational Examinations Course in Information Technology

### Academic and Research experience:

**Academic Experience: 15 Years**

- **Lecturer:** (2006-2017) at Dr. D. Y. Patil Biotechnology & Bioinformatics Institute, Pune
- **Assistant Professor:** (2017- ) at Dr. D. Y. Patil Biotechnology & Bioinformatics Institute, Pune

**Research Experience: 11 Years** (2009- 2021).

### **Awards and Fellowship:**

#### **Sumer Research Fellowship of IAS, Bangalore**

Funding agency: Indian Academy of Sciences, (IAS), Bangalore

Worked at: Central Food Technological Research Institute, (CFTRI), Mysore, India

### **Scientific Committee Member:**

Life Member- Biotech Research Society of India and Secretary, **BRSI-DYPBBI** unit, India

### **Publications:**

#### **List of Publications (Mrs. Jyoti Bidwai/Deshpande)**

#### **Papers Published in Indexed Journals:**

1. Padhye S, Chavan D, Pandey S, **Deshpande J**, Swamy KV, Srkar FH, Perspectives on chemopreventive and therapeutic potential of cucuminanalogues in Medicinal chemistry, *Mini reviews in medicinal chemistry*, (Impact factor 2.9), 10 (2010) 1-16.
2. Padhye S, Ahmad A, Oswal N, Dandawate P, Rub RA, **Deshpande J**, Swamy K V, Sarkar F H, Fluorinated 2'-Hydroxychalcones as Garcinol Analogs with Enhanced Antioxidant and Anticancer Activities, *Bioorganic & Medicinal Chemistry Letters*, (Impact Factor 2.4), 20 (19) (2010) 5818-21.
3. Swamy K V, **Deshpande J**, Pthegiri J S, Kothekar V, Padhye S, Molecular docking studies on estrogen receptor- $\alpha$ , and chalcone derivatives, *International Journal of Advances in Pharmacy and Biological Sciences*, 1(3) (2011) 87-93.
4. Dandawate P R, Vyas A, Ahmad A, Banerjee S, **Deshpande J**, Swamy K V, Jamadar A, Dumhe-Klaire A C, Padhye S, Sarkar F H, Inclusion Complex of Novel Curcumin Analogue CDF and  $\beta$ -Cyclodextrin (1:2) and Its Enhanced *In Vivo* Anticancer Activity Against Pancreatic Cancer, *Pharmaceutical Research*, (Impact factor 4.5), 22 (2012) 3104 -3108.
5. Prasad Dandawate, Ejazuddin Khan, Subhash Padhye, Himanshi Gaba, Swati Sinha, **Jyoti Deshpande**, K. Venkateswara Swamy, Madhukar Khetmalas, Aamir Ahmad and Fazlul Sarkar, Synthesis, characterization, molecular docking and cytotoxic activity of novel

plumbaginhydrazones against breast cancer cells, *Bioorganic & Medicinal Chemistry Letters*, (Impact Factor 2.4), 22 (2012) 3104 - 3108.

6. Wani M, Saha, **Bidwai J** and Khetmalas M, Changes in Carbohydrate Levels and Associated Enzyme Activities During Post Harvest Vase Life Of *Gerbera Jamesonii* Cv. Danalin Flowers As Influenced By Mineral Salts, *Journal of Horticulture Letters*, (Index Copernicus Value (ICV) 2012- 6.8), 2(1), (2012) 08-11.
7. WaniM, SarvarF A, AgrawalJ, **DeshpandeJ**, MathewS, KhetmalasM, Qualitative phytochemical analysis and antimicrobial activity studies of *Gymnemasylvestre*, R. Br., *ActaBiologicaIndica*, 1(1) (2012) 121-124.
8. WaniM, SharmaA, **DeshpandeJ**, MathewS, and KhetmalasM B, Qualitative Phytochemical screening of Three Indigenous Medicinal plants, *Research Journal of Pharmaceutical, Biological and Chemical Sciences*, 4(1) (2013) 287-291.
9. **DeshpandeJ**, LabadeD, Kalaiselvi S, KataN, ChaudhariM, WaniM, KhetmalasM, "In- vitro callus induction studies and estimation of plumbagin content from *Plumbagoauriculata L*" *Indian Journal of Experimental Biology*, (Impact factor 1.1), 52 (2014) 1122-1127.
10. **DeshpandeJ**, GoelA, LabadeD, KhetmalasM, WaniM, *In vitro* induction and proliferation of adventitious roots and estimation of plumbagin content from *PlumbagoauriculataL*, *Advances in BioResearch*, (Impact Factor 0.9), 6 (6) (2015) 141-147.
11. **DeshpandeJ**, BodasM, WaniM., KhetmalasM, Plumbagin: a potential drug candidate for treatment of oral cancer, *Trends in Life Sciences*, (Global impact factor 0.65), 4(4) (2015) 773-777.
12. Dandawate P, Ahamad A, **Deshpande J**, SwamyK V, Khan E M, Khetmalas M, PadhyeS, and Sarkar F, Anticancer phytochemical analogs 37: Synthesis, characterization, molecular docking and cytotoxicity of novel plumbagin hydrozones against breast cancer cells, *Bioorganic & Medicinal Chemistry letters*, (Impact Factor 2.4), 24(13) (2014) 2009-2904.

### **Abstracts/Posters Published in Conferences:**

1. **JyotiDeshpande**, Dinesh Labade, Kalaiselvi Shankar, Navin Kata, ManojChaudhari, MinalWani, MadhukarKhetmalas, "In- vitro callus induction studies and estimation of plumbagin content from *Plumbagoauriculata*.", International Conference on Advances in

Biotechnology and Bioinformatics (ICABB Nov. 2013) Nov 25-27 2013, organized by Dr. D.Y. PatilVidyapeeth, Pune and The Biotech Research Society, India (BRSI).

2. **JyotiDeshpande**, Dinesh Labade, Kalaiselvi Shankar, AshishGoel, MinalWani, MadhukarKhetmalas, “*In vitro* Induction and proliferation of adventitious roots and estimation of plumbagin content from *Plumbagoauriculata*.” International Conference on Advances in Biotechnology and Bioinformatics (ICABB 2013) Nov 25-27 2013, organized by Dr. D.Y. PatilVidyapeeth, Pune, India and The Biotech Research Society, India (BRSI).
3. **JyotiDeshpande**, Geeta Bora, AnjulLunkad, Anjali Gawande, ManojChoudhari, MinalWani and MadhukarKhetmalas, “Physicochemical, phytochemical and antimicrobial studies of *Plumbagoauriculata* L. leaves”, 35<sup>th</sup> Annual meeting of PTCA & National Symposium on Advances in Plant Molecular Biology and Biotechnology, March 10-12, 2014, at Indian Institute of Science Education and research (IISER) Pune.
4. **JyotiDeshpande**, PayalAmale, MinalWani, MadhukarKhetmalas, “Qualitative phytochemical investigation studies and isolation of active compounds by thin layer chromatography of *Plumbago*” for oral presentation in the International Seminar on Emerging threats and challenges to Biodiversity-Policy framework and Sustainable management ETCOB2012 at S. V. University, Tirupati, A.P., India, 2-4 March 2012.
5. Faizan Ali Sarvar, Arif Kamal Khan, **JyotiDeshpande**, MinalWani, K. V. Swamy. “*In vitro* Callus Induction Studies of *Gymnemasylvestre* R.Br. & Molecular Docking Of Gymnemic Acid” ICABS – International Conference on Advances in Biological Sciences organized by the Department of Biotechnology and Microbiology and Inter University Centre for Biosciences, Kannur University, Kannur, Kerala, India, March 15-17, 2012.
6. KVSwamy, **JyotiDeshpande**, SoumyaPathgeri, VidyaKothekar, SubhashPadye, “Molecular docking studies on estrogen receptor alpha and chalcone derivatives”, 1st IFIP International conference on Bioinformatics, Surat, 25-28 Mar, 2010.
7. **JyotiDeshpande**, MinalWani, SnehalPande, Rashmi Gupta and PallaviThakral, “Studies on callus induction and inhibitory effect of *Azadirachtaindica* on *S.aureus*, *B. subtilis* and *E. coli*.” International Conference on conservation, Marketing and patenting of medicinal Plants, (ICCMP), Raipur, 13-14 Mar, 2010.
8. Aparna Sharma, TarushikhaKhetan, **JyotiDeshpande**, Siji Mathew, MinalWani “Qualitative Phytochemical Investigation Studies and Isolation of Active Compounds by Thin Layer

Chromatography of Three Anti diabetic plants” Second National Conference on Biotechnology, Bioinformatics and Bioengineering at Kolhapur, Maharashtra, 24-25 February 2012.

9. Faizan Ali Sarvar, Juhi Agrawal, **JyotiDeshpande**, Minal Wani. ‘Second National Conference on Biotechnology, Bioinformatics and Bioengineering’ at Kolhapur, Maharashtra, 24-25 February 2012

10. Minal Wani, Snehal Pande, Nitin More, Shikha Sharma and Dhvani Kothari and **JyotiDeshpande**, “Phytochemical Analysis and Antimicrobial Activity of Crude Extract of *Tridaxprocumbens* Leaves” International Conference on conservation, Marketing and patenting of medicinal Plants, (ICCMP), Raipur, 13-14 Mar, 2010.

## **Research Projects and Fellowship**

- 1. Ph. D. Project:** Standardization of *in-vitro* regeneration of *Plumbago species* for optimization of Plumbagin production and studies of therapeutic activities of plumbagin along with *in-silico* designing and docking of plumbagin and its analogs.
- 2. DPU Funded Project:** Steroidal Motiffs as an Anticancer Agent.  
Name of Funding Agency: **Dr. D. Y. Patil University, Pune.** Duration: 2 Years  
Principle Investigator: Dr. Dr K. V. Swamy, Assistant Professor, Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune  
Co-Investigator: **JyotiDeshpande**, Lecturer, Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune
- 3. DPU Funded project:** Evaluation of anti-cancer activity of plumbagin on Oral Cancer  
Name of Funding Agency: Dr. D. Y. Patil University, Pune, Duration – 3 Years  
Principle Investigator: Dr. SoumyaBasu, Assistant Professor, Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune  
**Co-Investigator:** JyotiDeshpande, Lecturer, Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune
- 4. DPU Funded project** -Isolation of duckweed from water bodies in Pune District and application of DPS (Duckweed Pond System) for water recovery and production of feed.  
Duration – 2years (could not complete the project as I went on maternity leave.)  
Principle Investigator: Dr. JyotiDeshapnade  
Collaborator: JBN Enterprises, Bhosari, Pune
- 5. DPU Funded project-** Enhanced active phytoconstituent production from *Tinosporacordifolia* via *in vitro* cell regeneration and its computational interaction studies against SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus-2).  
Duration – 2years  
Principle Investigator: Dr. JyotiDeshapnade  
**Co-Investigator: Dr. MinalWani and Dr. PrakashNemade**
- 6. Sumer Research Fellowship of IAS, Bangalore**  
Funding agency: Indian Academy of Sciences, (IAS), Bangalore  
Worked at: Central Food Technological Research Institute, (CFTRI), Mysore, India  
Guide: Dr. V. Prakash, Director, CFTRI

## **Research students guided for Final Year Project: 23**

(Including B. Tech Biotechnology, M. Tech Biotechnology and M. Sc. Biotechnology Final Year Students)

## **Workshops/ Conferences Attended**

**1) State Level Seminar on - “Research Orientation and Methodology” (SLSROM 2012)**

Organized by- Padmashree Dr. D. Y. Patil Arts, Commerce & Science College Pimpri, Pune on 9<sup>th</sup> & 10<sup>th</sup> February, 2012

**2) 12<sup>th</sup> Indo - US Cytometry Workshop** (19<sup>th</sup> and 20<sup>th</sup> Oct. 2011) Organized by: University of Miami, Florida, USA International Society for Advancement of Cytometry (ISAC) International Society for Clinical Cytometry (ICCS) and Dr. D. Y. Patil Vidyapeeth, Pune.

**3) National Workshop on "System Biology"** (23.04.2011), Organized by: Dr. D. Y. Patil Institute of Biotechnology and Bioinformatics Institute, Pune

**4) Workshop on “Drug Designing, discovery and development”** Organised at: Dr. D. Y. Patil Institute of Pharmacy, Pimpri, Pune

**5) Workshop on “Essentials of Drug Designing”** Organised at: Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Akurdi, Pune

**6) “National Symposium on Current trends on Biotechnology”** Organised at: Department of Biotechnology, Amravati University

**7) “International Conference on Advances in Biotechnology and Bioinformatics (ICABB 2013)”** Sponsored by: Dr. D.Y. Patil Vidyapeeth, Pune and The Biotech Research Society, India

**8) Advanced Workshop On “Gene Cloning Expression and Characterization (GCEC 2021)”** Organised at: Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Pune.