

Dr. Vineeta Dixit

Assistant Professor

Department of Botany

Nilamber-Pitamber University

Palamu, Jharkhand 822101

Email: allicindixvin@gmail.com

Mobile: +91-7987585170



PROFILE

- Expertise in plant tissue-culture techniques including haploid production(anther and microspore culture), synthetic seed formation and somatic embryogenesis.
- Expertise in ploidy manipulations using in-vitro and in-vivo methods
- Molecular marker based gene introgression in Indian horticultural crops.
- Augmentation of secondary metabolites in plants. Active principle assay using HPLC and GC.
- Generation and screening of micro as well macromutants in plant of choice.
- Experience in microscopy and molecular techniques including PCR, SDS-PAGE, Western blotting, Animal handling.

EDUCATION

- **Doctor of Philosophy (Botany)** **Dec 2011**
Banaras Hindu University, Varanasi, Uttar Pradesh, India.
- **Masters of Science (Botany)** **Jun 2005**
UdaiPratap Autonomous College, Varanasi, Uttar Pradesh, India. (1st Rank)
- **Bachelors of Science** **Jun 2003**
UdaiPratap Autonomous College, Varanasi, Uttar Pradesh, India.

RESEARCH EXPERIENCE

Post-doctoral Fellow **2013- 2014**

Division of vegetable science, IARI, Pusa Campus, New Delhi, India

- Molecular breeding and tissue culture of some important vegetable crops specifically *Brassica oleracea* var. botrytis (Cauliflower) and *Solanum lycopersicum* (Tomato).
- Development of double haploids in *Solanum lycopersicum* and *Brassica oleracea*.

UGC Research Fellow **2009- 2011**

(UGC Fellowship for Meritorious Students (RFSMS))

Department of Botany, Banaras Hindu University, Varanasi, U.P. India

Project: “Ploidy manipulations in *Allium sativum*L.”

- In-vitro colchicine treatment and standardization of protocol to achieve maximum regeneration.
- Development of biochemical assay to measure thiosulphinate levels in regenerated plants.
- Establishment of ploidal level changes using morphological/micro-morphological and cytogenetical studies.
- Quantitative estimation of total soluble sugar, pyruvate and allicin contents by RP-HPLC.
- Synthetic seed formation and somatic embryogenesis.
- RAPD and ISSR based genetic variability studies.

BHU Research Fellow (Topper BHU CRET)

2006-2009

Department of Botany, Banaras Hindu University, Varanasi, U.P. India

Project: “Cytogenetical, morphological and biochemical changes associated with induced mutagenesis in *Nigella sativa* L”

- Generation and screening of micro and macromutants of *Nigella sativa* and development of stable lines
- Quantitative estimation of DNA, RNA, chlorophyll and protein content in mutants versus control.
- Established mutants were categorized for total oil yield and SDS-PAGE profile of protein.
- Extraction of fixed and essential oils and their analysis through HPLC and GC.
- Field lay out designs and statistical analysis including ANOVA and LSD.

TECHNICAL EXPERTISE

- *In silico* drug designing and simulation.
- Plant tissue culture, Karyogram and Idiogram preparations.
- Chromatography such as Thin Layer Chromatography, High Performance Liquid Chromatography, Gas Chromatography.
- PCR based genetic variability studies, Molecular cloning, qRT PCR.
- Spectrophotometric scanning of metabolites and their quantitative estimation.
- Western blotting and microscopic techniques.

TEACHING EXPERIENCE

- **Assistant Professor (Regular)** (Nilamber- Pitamber University, Jharkhand)
- **Assistant Professor (Adhoc)** (Guru Ghasidas Central University, Bilaspur
- **Assistant Professor (Regular)** (DLSPG College)

AWARDS

- *Junior Research Fellowship* Awarded by University Grant Commission for the year 2009 - 2011.
- *Junior Research Fellowship* Awarded by Banaras Hindu University for the year 2006-2008.

- Qualified *National Eligibility Test (CSIR-NET)* for Lecturership conducted by Council of Scientific and Industrial Research in year 2006.

PROFESSIONAL AFFILIATIONS

- Indian Science Congress Annual Member

PROFESSIONAL TRAININGS

- Participated in “13th Orientation Programme” organized by UGC-ASC Guru Ghasidas Vishwavidyalaya, Bilaspur from January 12, 2015 to February 08, 2015 (**Grade A**).
- Successfully completed Refresher course in Botany organized by UGC-ASC Guru Ghasidas Vishwavidyalaya, Bilaspur from 27.05.16 to 16.06.16 (**Grade A**).
- Participated in 3 days symposium and workshop entitled “*Symposium and Workshop on Statistical Methods in Computational Biology*” conducted by MahilaMahavidyalaya, Banaras Hindu University, Varanasi, India.
- Participated in 10 days workshop on “*Chromatography and Molecular biology Techniques(PCMB 08)*” organized by the School of Biotechnology, Chemical and Biochemical Engineering, VIT University, Vellore, Tamil Nadu, India.
- Participated in “*Science and Communication workshop*” organized by The Wellcome Trust/DBT India Alliance in Banaras Hindu University, Varanasi, India.

PUBLICATIONS

- Priti Upadhyay and **Dixit Vineeta**. Biochemical and molecular fine tuning of antioxidative enzyme in *Solanum lycopersicum* under the compatible and incompatible interactions with *Alternaria Solani* *Plant Physiology reports* (Vegetos)
- Shinde S, **Dixit V et al.**, CYP1A1 rs4646903 T>C and rs1048943 A>G polymorphisms and the risk of colorectal cancer: An updated meta-analysis. *Polymorphism*. 8: 2022
- Sinha V, *et al.*, **Dixit V**. A comprehensive review on diagnostic and therapeutic strategies for the management of pancreatic cancer. *Critical Reviews in Oncogenesis*. 25 (4) : 2020
- Shinde S, Saxena S, **Dixit V**, Tiwari AK, Vishvakarma NK, Shukla D. Epigenetic modifiers and their potential application in colorectal cancer diagnosis and therapy. *Critical Reviews in Oncogenesis*. 25(2): 2020
- Kumari P, **Dixit V, et.al.** Computer assisted drug designing of triazole derivatives of noscapine as tubulin binding anticancer drug. *Asian Journal of Pharmaceutical and Clinical Research* 11:2018
- **Dixit V and** Chaudhary BR. Changes in ploidy and its effect on thymoquinone concentrations in *Nigella sativa* L. seeds. *The Journal of Horticultural Science & Biotechnology*, 90: 2015.
- Singh SK, Vishwakarma NK, **Dixit V**. Identification and ligand based virtual screening of 1,4-dihydropyridine analogues as novel calcium channel blockers. *International Journal of Research Studies in Biosciences*. 2015.
- **Dixit V and** Chaudhary BR. Induced genomic and ploidy alterations in *Allium sativum* with emphasis on allicin content. *The Journal of Horticultural Science & Biotechnology* 89(5): 2014 585–591.

- **Dixit V**, Rajani P, Chaudhary BR. Effect of EMS and SA on meiotic cells and thymoquinone content of *Nigella sativa* L. cultivars. *Caryologia: International Journal of Cytology, Cytosystematics and Cytogenetics*, 66 (1): 2013.
- **Dixit V and** Chaudhary BR. *Allium sativum*: Four step approach to efficient micropropagation. *International journal of Innovative Biological Research*. 2 (1): 2013
- **Dixit V**, Rajani P, Chaudhary BR. Sodium azide induced polygenic variability in *Nigella sativa* L. *Botany Research International* 5 (1): 2012
- Rajani P, **Vineeta D**, Chaudhary BR. Comparative spectrum of azide responsiveness in plants. *American-Eurasian Journal of Agriculture and Environmental Science*, 8 (6): 2011.
- Rajani P, **Vineeta D**, Chaudhary BR. Sodium azide induced mutagenesis in fenugreek (*Trigonella foenum-graecum*). *Legume Research*, 33 (4): 2010.

BOOK CHAPTERS

1. **Vineeta Dixit**, Priti Upadhyay. Targeted genome editing techniques in plant defense regulation. In *Transcription factors for biotic stress tolerance in plants*. Springer Nature, Switzerland. [ISBN: 978-3-031-12990-2] 2022.
2. Gupta et al., **Dixit V**. Targeting angiogenesis for colorectal cancer therapy In *colon Cancer Diagnosis and therapy*. Springer Nature, Switzerland. [ISBN: 978-3030-63369-I]. 2021.
3. SapnitaShinde et al., **Dixit V** Dietary Habits and global incidence of colon cancer In *colon Cancer Diagnosis and therapy*. Springer Nature, Switzerland. [ISBN: 978-3030-64668-4]. 2021.
4. SapnitaShinde et al., **Dixit V**. Therapeutic options for the management of cervical cancer. Editor: Nagaraju GP (Series Ed.) *A Theranostic and Precision Medicine Approach For Female Specific Cancers*. Elsevier. USA. 2020 ISBN: 9780128226926
5. **Vineeta Dixit**, Dhananjay Shukla. Plants and Microbes Diversity at High Altitude In *Plants and Microbes in Ever Changing Environment* (2017) 343-363. Editor: SS Singh, Nova Science Publishers, New York, USA. [ISBN: 978-1-53610-3].

PLATFORM/POSTER PRESENTATIONS

- Presented a paper in “National Seminar on Innovation and Research in Science, Management and Technology”. Bilaspur, Chattisgarh, India. 2015.
- Participated in interactive meeting on “Double Haploids: Scope and Future in Horticultural Crops” organized by Society for Promotion of Horticulture and Indian Institute of Horticultural Research, Bengaluru, India. 2013.
- Attended and presented a paper in 8th National Conference on Recent Advances in Biodiversity Conservation, Biotechnology and Environment Management Research organized by Department of Biotechnology, Science College, Rewa, India. 2013.
- Presented a paper in “XXXIII Conference of Indian Botanical Society and International Symposium on the New Horizons of Botany” organized by Department of Botany, Shivaji University, Kolhapur, India 2010.

- Attended and presented a paper in symposium entitled “Current Challenges in Plant Sciences- Gene to Ecosystem” organized by Department of Botany, Banaras Hindu University, Varanasi, India. 2009
- Attended 3 day symposium entitled “Plant Genome: Biodiversity, Conservation and Manipulation” organized by Department of Botany, Banaras Hindu University, Varanasi, India. 2007

RECOMMENDATION

Dr. B.R. Chaudhary

Head & Coordinator

Centre of Advanced Study, Department of Botany
Banaras Hindu University, Varanasi 221 005, India

Email: brchaudhary.bhu@gmail.com

Tel: 91-542-6701125; 6701121 (W)

91-542-2575184 (H)

91-9415812721 (M)

Dr.P. Jayamurthy

Scientist

Department of Agro Processing

National Institute for Interdisciplinary Science and Technology (NIIST)

Council of Scientific and Industrial Research (CSIR) Industrial state Pappanamcode, Trivandrum - 695019. Kerala, India

Email: jayamurthydotcom@gmail.com

Tel +91-9020669056

