

**Name** : **Dr. Nutan Padmanabha Malpathak**  
**Designation** : Professor  
**Date of Birth** : 26<sup>th</sup> August 1960  
**Qualifications** : M. Sc. Ph. D.  
**Research Interests** : Plant biotechnology, Secondary metabolism  
**Contact Information** :  
**Office** : Department of Botany,  
University of Pune, Pune 411 007  
020-25601439  
**Residential** :  
**E-mail address** : mpathak@unipune.ac.in, mpathakster@gmail.com



**Publications ( 2008-2013):**

PradnyaKedari, NutanMalpathak (2013) Subcellular Localization and Quantification of Camptothecin in Different Plant Parts of *ChonemorphaFragrans*  
Advances in Zoology and Botany 1(2): 34-38, 2013

Saurabha B. Zimare, Mahesh Y. Borde, Paramjeet Kaur Jite & Nutan P. Malpathak. (2013)  
Effect of AM Fungi (Gf, Gm) on Biomass and Gymnemic Acid Content of *Gymnema sylvestre* (Retz.) R. Br. ex Sm.  
Proc. Natl. Acad. Sci., India, Sect. B Biol. Sci. DOI 10.1007/s40011-013-0159-9 **IF: 0.02**

Ganesh C. Nikalje, Saurabha B. Zimare and Nutan P. Malpathak (2012) A Comparative Pharmacognostic Study on the Leaf, Stem and Root Components of *Gymnema sylvestre* (Retz) R. Br. ex. Sm  
Proceedings of the National Academy of Sciences, India Section B DOI:10.1007/s40011-012-0088-z  
**IF: 0.02**

Sujatha Raman, Dina ErmiasDagne, Nutan P Malpathak, W.N. Gade (2012) Evaluation of Indian Peanut on the Induction of Caulogenic Buds *in vitro* .  
International Journal of Agriculture and Forestry 2(4): 171-174 DOI: 10.5923/j.ijaf.20120204.0 **IF : 1.2**

Renuka Diwan , Amit Shinde and Nutan Malpathak (2012) Phytochemical composition and Antioxidant potential of *Ruta graveolens* L. *in vitro* culture lines.  
Journal of Botany (in press) **IF:0.964**

S. B. Zimare and N. P. Malpathak (2012) Production of hyoscyamine and scopolamine using stress in *Datura metel* L.  
Bio Technology : An Indian Journal (in press)

S. Baikar and N. Malpathak (2012) Genetic characterization and biochemical analysis in the populations of *P. corylifolia* L. from Western Maharashtra.  
Journal of Biodiversity and Ecological Sciences 1(4): 1-9

A. V. Kulkarni , A. A. Patwardhan , A. S. Upadhye and N. P. Malpathak (2011) Pharmacognostic evaluation of *Chonemorpha grandiflora*, an endangered medicinal plant  
International Journal of Pharmaceutical Sciences and Research (IJPSR), 2(10): 2690-2693

S. B. Zimare and N. P. Malpathak (2011) High frequency of multiple shoot induction in *Datura metel* L. using different concentrations of BAP  
International Journal of Current Research 33( 6):352-354, ISSN: 0975-833X

UtkarshaThakare, NeelamPatil, NutanMalpathak (2011) Performance of chick pea under the influence of gibberellic acid and oxygenated peptone during germination.  
Advances in Bioscience and Biotechnology 2(1): 2156-8502 **IF: 1.778**

Renuka Diwan, Nutan Malpathak (2011) *Ruta graveolens* Cultures as Screening Resources for Phyto-Pharmaceuticals: Bio-prospecting, Metabolic Phenotyping and Multivariate Analysis.  
Bioremediation, Biodiversity and Bioavailability 5(1): 1-9, Print ISSN: 1749-0596

Renuka Diwan & Nutan Malpathak (2011) Bioprocess Optimization of Furanocoumarin Elicitation by Medium Renewal and Re-elicitation: A Perfusion-Based Approach.  
ApplBiochemBiotechnol 163:756–764 **IF: 1.42**

A. V. Kulkarni, A. A. Patwardhan<sup>1</sup>, U. Lele<sup>1</sup>, N. P. Malpathak (2010) Production of camptothecin in cultures of *Chonemorpha grandiflora*  
Pharmacognosy Research 2(5): 298-301 ISSN: 0974-8490

S. Baikar & N. Malpathak (2010) Secondary metabolites as DNA topoisomerase inhibitors: A new era towards designing of anticancer drugs.  
Pharmacognosy Reviews 4(7):12-26 DOI: 10.4103/0973-7847.65320, ISSN online 09778-2787

Amit N. Shinde, NutanMalpathak, Devanand P. Fulzele (2010) Impact of nutrient components on production of the phytoestrogens daidzein and genistein by hairy roots of *Psoralea corylifolia*  
J Nat Med (2010) 64:346–353 **IF: 1.027**

Amit N. Shinde, NutanMalpathak, Devanand P. Fulzele (2010) Determination of isoflavone content and antioxidant activity in *Psoralea corylifolia* L. callus cultures .  
Food Chemistry 118 (2010) 128–132 **IF: 3.606**

Renuka Diwan and Nutan Malpathak (2010) Histochemical localization in *Ruta graveolens* cell cultures: elucidating the relationship between cellular differentiation and furanocoumarin production.  
In Vitro Cellular and Dev Biol. –Plant 46:108-116 **IF: 1.06**

Amit N. Shinde, NutanMalpathak, Devanand P. Fulzele (2009) Optimized production of isoflavones in cell cultures of *Psoralea corylifolia* L. using elicitation and precursor feeding. Biotechnology and Bioprocess Engineering 14: 612-618 **ISSN: 1226-8372 IF: 1.653**

VinodkumarChavan and Nutan Malpathak (2010) Metabolic Engineering in Plants  
In: Applications of Plant Biotechnology: In Vitro Propagation, Plant Transformation and Secondary Metabolite Production Edts. (Ashwani Kumar and SudhirSopory) Publ. I. K. International. New Delhi pp 256-271

Renuka Diwan and NutanMalpathak (2009) Furanocoumarins: Novel Topoisomerase I inhibitors from *Ruta graveolens* L  
Bioorganic & Medicinal Chemistry 17:7052-7055 **ISSN: 0968-0896 IF: 3.075**

Amit Shinde, Nutan Malpathak and D. P .Fulzele (2009) Enhanced production of phytoestrogenic isoflavones from hairy root cultures of *Psoralea corylifolia* L using elicitation and precursor feeding.  
Biotech. Bioprocess Eng. 14:288-294 ISSN: 1226-8372 IF: **1.653**

Amit Shinde, Nutan Malpathak and D. P .Fulzele (2009) Induced high frequency shoot regeneration and enhanced isoflavones in *Psoralea corylifolia*.  
Rec. of Natural Products 3(1):38-45 IF: **0.792**

Amit Shinde, Nutan Malpathak and D. P .Fulzele (2009) Studied enhancement strategies for phytoestrogens production in shake flasks by suspension culture of *Psoralea corylifolia*.  
Bioresource technol. 100:1833-1839 ISSN: 0960-8524 IF: **4.742**

Wangmo S., N.P. Malpathak & S.S. Deokule (June 2009) Pharmacognostic Study of *Vangueria spinosa* (Roxb.) Hook.: An Important Medicinal Drug. Journal of Renewable Natural Resources, Vol.5 (1), 127-137, CoRRB, Ministry of Agriculture, Thimphu, Bhutan.

Renuka Diwan and Nutan Malpathak (2008)  
Novel technique for scaling up of micropropagated *Rutagaveolens* shoots using liquid culture systems: A step towards commercialization  
New Biotechnology 25(1):85-91 ISSN: 1871-6784 IF: **2.748**

Amit Shinde, Nutan Malpathak and D. P .Fulzele (2008)  
Production of phytoestrogens by plant cell and tissue cultures: recent scenario and exciting prospects  
Pharmacognosy Reviews 2(3):43- 53

Wangmo S., N.P. Malpathak & S.S. Deokule (December 2008). Multiple Shoot Induction *In Vitro* in *Mitragyna parvifolia* Korth.: An Important Medicinal Plant. Sherub Doenme, Academic Journal of Sherubtse College, Vol.8(1&2), 113-118.

#### **R & D projects:**

1. "Genetic transformation and metabolic engineering of *Chonemorpha fragrans*" UGC, New Delhi, (2008-2011) 9,00,000
2. "Exploring *Dianthus caryophyllous* cultures for ribosome inactivating proteins" BCUD, UOP, (2009-2011) 3,00,000/
3. "Bioprospecting of an important mangrove from west coast of Maharashtra: *Aegiceras corniculatum*" BCUD, UOP, (2011-2013) 2,30,000/
4. "To study the effects of gamma radiation on production of phytoecdysteroids in *Sesuvium portulacastrum* L cell cultures and scale up in bioreactor". DAE-BRNS (2013-2016) 25,00,000/

**Patent filed** entitled "process for enhancing production of furanocoumarines using tailored cell cultures (2500/MUM/2008, dt 28/11/08)