

# Curriculum Vitae



**Dr. PIYUSH SHUKLA**

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GWALIOR (M.P.)**

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## **ACADEMIC PROFILE:**

<b>CLASS</b>	<b>SCHOOL/ COLLEGE/UNIVERSITY</b>	<b>SUBJECT/ DISCIPLINE</b>	<b>YEAR</b>	<b>%</b>
<b>Higher Secondary</b>	Miss Hill School, Gwalior (M.P.)	Biology	2007-08	68%
<b>B. Sc.</b>	SMS Govt. Science College, Gwalior (M.P.)	Biology	2008-11	68%
<b>M. Sc.</b>	Jiwaji University, Gwalior (M.P.)	Molecular Human Genetics	2011-13	70%
<b>Ph. D.</b>	Guru Ghasidas University Bilaspur, Chhattisgarh	Life Sciences	Awarded on 17 <sup>th</sup> December, 2021	--

## **EXPERIENCES:**

- **GUEST FACULTY (PG) IN “DEPARTMENT OF MOLECULAR HUMAN GENETICS” JIWAJI UNIVERSITY GWALIOR (2022-23)**
- **GUEST FACULTY (UG) IN “DEPARTMENT OF BIOCHEMISTRY” JIWAJI UNIVERSITY GWALIOR (2022-23)**
- **Worked as “Project Fellow” in UGC sponsored Major Research Project (2013-2017)**
- **4 MONTH TEACHING (LIFE-SCIENCE) IN MHRD SPONSORED CSIR-NET CLASSES IN GURU GHASIDAS (CENTRAL) UNIVERSITY KONI BILASPUR CHHATTISGARH (2021-22)**
- **1 YEAR AS PGT (BIOLOGY) TEACHER IN MODERN EDUCATIONAL ACADEMY (CBSE) SCHOOL, KONI, BILASPUR, CHHATTISGARH (2021-22)**

## **RESEARCH PROFILE:**

### **TITLE OF Ph.D THESIS**

**“THERAPEUTIC INFLUENCE OF RESVERATROL AND CAFFEIC ACID PHENETHYL ESTER ALONG WITH MICRONUTRIENTS ON RESURGENCE OF ACRYLAMIDE INDUCED HEPATIC AND RENAL PATHOPHYSIOLOGY”**

## RESEARCH PUBLICATIONS:

### Research papers accepted/published:

(Impact Factors as per InCites Journal Citation Reports/ Science Citation Index Expanded (SCIE)/ Clarivate Analytics)

1. Rakshit S, **Shukla P**, Verma A, Nirala SK and Bhadauria M\* (2021) **Protective role of rutin against combined exposure to lipopolysaccharide and D-galactosamine induced dysfunctions in liver, kidney and brain: Hematological, biochemical and histological evidences.** (*Journal of Food Biochemistry*; 45 (2): e13605, DOI: 10.1111/jfbc.13605; **Impact Factor: 2.720/2020**)
2. **Shukla P**, Sahu NK, Kumar R, Bhadauria M, Nirala SK\* (2020) **Hydro-ethanolic extract of *Gloriosa superba* Linn. protecting acute splenic injury by modulating endogenous antioxidants pool in rats.** (*Flora and Fauna*; 26: (2) 295-303, **Indexed in Web of Science**)
3. Shukla D, Shrivastava S, **Shukla P**, Johri JK (2021) **Antimicrobial activity of Piper betle, Ocimum sanctum and Trachyspermum ammi leaves against enteropathogens: A comparative study.** (*International Journal of Plant and Environment*, Volume 7 Issue 2, pp 175-178)
4. **Shukla P**, Sahu NK, Kumar R, Dhalla DK, Bhadauria M, Agrawal ND, Shrivastava S, Shukla S and **Nirala SK\*** (2022) **Quercitin ameliorates acrylamide induced acute injury in spleen by improving endogenous antioxidants pool, histoarchitecture and immune function status.** (*Biotechnic and Histochemistry*; submitted after revision "TBIH-2020-0321"; **Impact factor: 1.718/2021**)
5. **Shukla P**, Sahu NK, Kumar R, Rakshit S, Bhadauria M, , Shrivastava S, Shukla S, **Nirala SK\*** (2022) **Therapeutic potential of caffeic acid phenethyl ester (CAPE) against acrylamide induced multiorgan dysfunctions: Hematological and biochemical mechanisms-based evidences. status.** (Communicated to Archives of Pharmacal research)
6. Singh S, Bhadauria M, Chandra HK, Mishra G, Sahu N, Malik JA, Dhalla D, **Shukla P**, Mehta R, Chaurasia B, **Nirala SK\*** (2022) **Phytochemicals, safety profile and therapeutic potential of *Tephrosia purpurea* against CCl<sub>4</sub> induced toxicity in rats** (Communicated to Journal of Veterinary Pharmacology and Therapeutics).

## **Book chapters contributed: 6**

- Shukla P and **Nirala SK\*** (2017): **Predominant toxicity of acrylamide and therapeutic role of naringenin against acrylamide in rats**. In: Role of Animal Sciences in National Development Vol-2: Biotechnology for Human Welfare, pp 335-341; Eds: Kaliwal BB, Kulkarni GK, Kaliwal RB, Sadashiv SO; Today and Tomorrow's Printers and Publishers, Darya Ganj, New Delhi India [ISBN-81-7019-559-0 (INDIA); 1-55528-414-9 (USA)].
- Shukla P (2018): **Therapeutic execution of caffeic acid phenethyl ester (CAPE) against cytokine alterations and biochemical perturbations induced by acrylamide in rats** In: Health sciences: Basic research approaches pp 13-19; Eds: Rao Nagaraja P., Ramamurthy R., Rao Shashidhar B; Today and Tomorrow's Printers and Publishers, Darya Ganj, New Delhi India [ISBN-81-7019-604-2 (INDIA); (USA)].
- Shukla D, Shukla P., Tandon A, Singh A, Johri JK;: **Role of microorganism as new generation plant bio-stimulants: An assessment** In: Sustainable Agriculture: Microorganisms as biostimulants: New and Future Developments in Microbial Biotechnology and Biengineering pp 1-16; Eds: Elsevier Inc. All rights reserved.
- Shukla D, Shrivastava VK, Shukla P, Johri JK: **An Overview of Plant Extracts/Compounds based synergistic approach to combat drug resistance and other drug-related complications** In Medicinal Plants Phytochemistry and Therapeutics pp 1-10: Agrobios India [ISBN-9788194923749 (INDIA)].
- Shukla P, Shukla D, Pandey A, Bano Y, Bhadauria M, Tiwari PK, Nirala SK: **Role of genetically modified microbial consortium in the management of bio-medical degradable waste** In Biomedical Waste: Recycle and Remediation Strategies [Accepted].
- Shukla P, Shukla D, Pandey A, Bano Y, Bhadauria M, Tiwari PK, Nirala SK: **3r (Reduce, re-use and recycle) Strategies and Policies** In Biomedical Waste: Recycle and Remediation Strategies [Accepted].

## Patents:

- ❖ Filed Indian patent with title of the invention: **“Caffeic acid phenethyl ester thereof as therapeutics for acrylamide induced acute toxicity”**.

**Name of Applicants:** 1) Piyush Shukla &

2) Satendra Kumar Nirala

**Name of inventors:** Piyush Shukla, **Satendra Kumar Nirala**,  
Monika Bhadauria

**Ref./Application No:** 202121046104

**Appl Number:** TEMP/E-1/5965/2021-MUM

**Date of filing:** 10/08/2021

- ❖ Filed Indian patent with title of the invention: **“A novel temperature-based process for increasing yield of L-asparaginase from *Lactobacillus crispatus*”**.

**Name of Applicants:** 1) Piyush Shukla &

2) Deepali Shukla

**Name of inventors:** Piyush Shukla, Deepali Shukla

**Ref./Application No:** 202121059189

**Appl Number:** TEMP/E-1/52007/2021-MUM

**Date of filing:** 18/12/2021

- ❖ Filed Indian patent with title of the invention: **“A novel process of remedy of acrylamide induced acute impairments in liver, kidney, brain and spleen by therapeutic use of resveratrol”**.

**Name of Applicants:** 1) Piyush Shukla &

2) Satendra Kumar Nirala

**Name of inventors:** Piyush Shukla, **Satendra Kumar Nirala**,  
Monika Bhadauria, Sadhana Shrivastava  
and Sangeeta Shukla

**Ref./Application No:** 202121056442

**Appl Number:** TEMP/E-1/64061/2021-MUM

**Date of filing:** 06/12/2021

- ❖ Filed Indian patent with title of the invention: **“Prospective of caffeic acid phenethyl ester as novel therapeutic process against acrylamide induced acute injury in liver, kidney, brain and spleen”**.

**Name of Applicants:** 1) Satendra Kumar Nirala &

2) Piyush Shukla

**Name of inventors:** Monika Bhadauria, Sangeeta Shukla,  
Sadhana Shrivastava, **Satendra Kumar Nirala** and Piyush Shukla.

**Ref./Application No:** 202121054941

**Appl Number:** TEMP/E-1/61566/2021-MUM

**Date of filing:** 27/11/2021

- ❖ Filed Indian patent with title of the invention: **“Administration of trans-resveratrol and caffeic acid phenethyl ester as a method to treat acrylamide induced subchronic toxicity in multiple organs”**.

**Name of Applicants:** 1) **Satendra Kumar Nirala &**  
2) **Piyush Shukla**

**Name of inventors:** Monika Bhadauria, **Satendra Kumar Nirala** and Piyush Shukla.

**Ref./Application No:** **20221047531**

**Appl Number:** **TEMP/E-1/54239/2022-MUM**

**Date of filing:** **21/08/2022**

#### **AWARDS:**

- **Best poster presentation** awarded by Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur, Chhattisgarh

#### **CO-CURRICULAR ACHIEVEMENTS:**

- Student member of Apex committee, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur, Chhattisgarh
- Member of Innovation council, MHRD, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur, Chhattisgarh

#### **FELLOWSHIP:**

- Availed **“Project Fellowship”** under UGC sponsored Major Research Project entitled “Influence of Phytochemicals on resurgence of acrylamide induced hepato, nephro and encephalopathy” sanctioned to Dr. S. K. Nirala, Department of Rural Technology and Social Development, Guru Ghasidas Vishwavidyalaya, Koni-Bilaspur, Chhattisgarh

#### **HANDLING OF SCIENTIFIC INSTRUMENTS:**

- UV-Vis Spectrophotometer, Semiautomatic Serum Biochemistry analyzer, Blood analyzer, Centrifuges, Vortex shaker, various kinds of pipettes, distilled water plant, Accelerator Solvent Extractor (ASE 150), HPLC, HPTLC, PCR, and Microscopes (Confocal microscope, Compound light microscope, Fluorescence Microscope)

#### **TECHNIQUES AND SOFT SKILLS KNOWN:**

- Agarose gel electrophoresis, PAGE, Western Blotting, ELISA, Microtomy and Microscopy
- Scientific and Academic Writing
- Handling of rats, mice and drosophila

#### **AFFILIATION TO SCIENTIFIC / ACADEMIC BODIES OR AGENCIES:**

- Life member of INDIAN SCIENCE CONGRESS
- Life member of INDIAN SOCIETY OF CELL BIOLOGY
- Life member of SOCIETY OF TOXICOLOGY, INDIA

**PARTICIPATION IN CONFERENCES:**

<b>Organization</b>	<b>Period From - To</b>	<b>Details of Training/ workshop</b>
<b>INTERNATIONAL:</b>		
<b>Department of Molecular and Human Genetics,</b> Jiwaji University, Gwalior (M.P.)India	<b>17-11-2016 To 19-11-2016</b>	International symposia on “ <b>Functional Genomics and Epigenomics</b> ”
<b>Guru Ghasidas Vishwavidyalaya,</b> Bilaspur (C.G)	<b>15-10-2017 To 17-10-2017</b>	<b>International Conference on “Bharat Rejuvenation”</b>
<b>Department of Zoology Guru Ghasidas Vishwavidyalaya,</b> Bilaspur (C.G)	<b>28-10-2018 To 30-10-2018</b>	International Conference on “ <b>Emerging Researches in Bioscience</b> ”
<b>Babulal Tarabai Institute of Research and Technology,</b> Sagar, MP, India.	<b>25-05-2019 To 26-05-2019</b>	International Conference on “ <b>Sustainable Research in Engineering, Technology, Pharmacy and Management</b> ”
<b>Jiwaji University,</b> Gwalior (M.P)	<b>27-12-2019 To 29-12-2019</b>	International conference with the theme “ <b>Breakthrough in Toxicology and Human Health</b> ”
<b>The International Science Congress and Bhilai Institute of Technology,</b> Bhilai, CG, India.	<b>08-12-2019 To 09-12-2019</b>	International Conference
<b>NATIONAL:</b>		
<b>Department of Zoology Govt. V.Y.T.PG. Autonomous College,</b> Durg (C.G.) 491001.	<b>07-02-2015 To 08-02-2015</b>	National conference on “ <b>Prospect of Life Science for Human Welfare with Special Reference to Chhattisgarh</b> ” & <b>First Chhattisgarh Congress of ZSC</b>
<b>Jiwaji University,</b> Gwalior (M.P)	<b>12-03-2015 To 13-03-2015</b>	National conference on “ <b>Scientific Development in 21<sup>st</sup> Century</b> ”
<b>STOX, India and Palamur bioscience limited</b> Hyderabad, Telangana, India.	<b>19-11-2015 To 21-11-2015</b>	National conference on “ <b>Challenges and opportunities in toxicological research</b> ”

<b>Department of Zoology Govt. V.Y.T.PG. Autonomous College, Durg (C.G.) 491001.</b>	<b>07-02-2015 To 08-02-2015</b>	National conference on “ <b>Prospect of Life Science for Human Welfare with Special Reference to Chhattisgarh</b> ” & <b>First Chhattisgarh Congress of ZSC</b>
<b>University of Mysore, Kanataka, India.</b>	<b>03-01-2016 To 07-01-2016</b>	National conference (103 <sup>rd</sup> Indian Science Congress) on “ <b>Science and technology</b> ”
<b>CMD College, Bilaspur (C.G.). India.</b>	<b>02-12-2017 To 02-12-2017</b>	3 <sup>rd</sup> National conference of Zoological society of Chhattisgarh “ <b>Prospects of Innovations in Life Sciences and Socio Economic Challenges</b> ”
<b>Columbia Institute of Pharmacy, Raipur, (C.G).</b>	<b>23-12-2017 To 24-12-2017</b>	National conference on “ <b>Frontiers in pharmaceutical sciences and research</b> ”
<b>Chhattisgarh council of science and technology &amp; Swami vivekanand technical university, Durg, (C.G).</b>	<b>28-02-2017 To 01-03-2017</b>	<b>Chhattisgarh Young Scientist Congress-2017</b>
<b>S.L.T. Institute of Pharmaceutical Sciences, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.).</b>	<b>12-02-2018</b>	National conference on “ <b>Recent trends in Drug Discovery, Development and Delivery Systems</b> ”
<b>Govt.V.Y.T.PG. Autonomous College, Durg &amp; Bhilai Institute of Technology, Durg, (C.G).</b>	<b>27-02-2018 To 28-02-2018</b>	<b>16<sup>th</sup> Chhattisgarh Young Scientist Congress-2018</b>

## **Augmentation of Scientific Skill through Advanced Trainings & Workshops:**

1. Workshop on **“Molecular updates in biological sciences”** on 25<sup>th</sup> January, 2014 organized by Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).
2. One day colloquim on **“Recent advances in plant sciences (RNAi)”** on 8<sup>th</sup> February, 2014 organized by Department of Botany, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).
3. Workshop on **“Isolation and Staining Techniques of Mycorrhizal Fungi”** from 30 to 31<sup>st</sup> October, 2015 organized by Department of Rural Technology & Social Development, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).
4. Workshop on **“Science Communication & Carrer Workshop”** organized by All India Cell Biology Conference, Jiwaji University, Gwalior held on 16.11.2016.
5. Workshop on **“Intellectual Property Rights, IP Commercialization and Prevention of Plagiarism”** from 26-27 February, 2016 jointly organized by Chhattisgarh Council of science & Technology, Raipur and Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).
6. Life Science Skill Development Training Workshop on **“Entrepreneur Development in Herbal Drug Industry” (Characterization, Formulation & Analysis)** from 20-22 October, 2016 organized by Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).
7. Training on **“Instrumentation & Techniques for Biomedical Research”** held on 2<sup>nd</sup> and 3<sup>rd</sup> September, 2016 organized by the Department of Rural Technology & Social Development, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).
8. Three days Hands-on-training program on **“High Performance Thin Layer Chromatography (HPTLC) based Quantification of Secondary Metabolites in Medicinal Plants”** held from 16<sup>th</sup> to 18<sup>th</sup> February, 2017 organized by M.P Council of Science and Technology, Bhopal (M.P.).
9. Two days workshop on **“Curriculum Development in Rural Community Engagement in Higher Education at Post Graduate Level” held on 29<sup>th</sup> -30<sup>th</sup> November, 2017**, organized by Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).
10. Three days workshop on **“Laser-Confocal Microscopy”** from 15.11.2018 to 17.11.2018. Organized by Jiwaji University, Gwalior (M.P.).



## **PARTICIPATION IN ONLINE RESEARCH WORKSHOPS: 04**

1. Workshop on **“Gender Bias in Academic Publishing”** on 29<sup>th</sup> June, 2017, Thursday organized by Elsevier Publishing Campus.
2. Workshop on **“The nuts & bolts of Peer Review”** on 29<sup>th</sup> June, 2017, Thursday organized by Elsevier Publishing Campus.
3. Workshop on **“Molecular Docking”** during 18-12-2018 to 24-12-2018 organized by Qstatix private limited.
4. Seven days workshop on **“PCR-Primer designing PCR and Real Time PCR for Gene Expression Analysis”** from 23.11.2022 to 29.11.2022. Organized by Cytogene, Research and Developmental Lab, Lucknow

### **Referees:**

**Dr. Satendra Kumar Nirala**  
**Assistant Professor (Zoology)**  
**Department of Rural Technology**  
**Central University, Bilaspur Chhattisgarh**

**Dr. Monika Bhadauria**  
**Assistant Professor (Zoology)**  
**Department of Rural Technology**  
**Central University, Bilaspur Chhattisgarh**

**Dr. Manoj Singh Rohilla**  
**Scientist “E”**  
**Department of Biotechnology**  
**Government of India, New Delhi**