**CURRICULUM VITAE**

Name: **Dr. Tarun Kumar Patel**
Post: **Assistant Professor-Biotechnology**
Affiliation: **Sant Guru Ghasidas Government P.G. College, Kurud, Dhamtari (C.G.)**
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**EDUCATIONAL QUALIFICATION:**

| Exam | Board/College/University |
|---|---|
| Ph. D. (Biotechnology) | Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) |
| M.Sc. (Biotechnology) | Rungta College of Science & Technology, Durg; Affiliated to Pt. Ravishankar Shukla University, Raipur (C.G.) |
| B.Sc. (Microbiology) | D. P. Vipra College, Bilaspur; Affiliated to Guru Ghasidas University, Bilaspur (C.G.) |
| HSSCE | M.P. Board of Secondary Education, Bhopal |
| SSCE | M. P. Board of Secondary Education, Bhopal |

**NET and GATE EXAMS:**

- **CSIR-NET:** Dec. 2008, June 2010 and Dec. 2010
  Subject: Life Science
  Result: Qualified for Lectureship

- **GATE**: 2009
  Subject: Life Science
  Result: Qualified

**M.Sc. DISSERTATION: "Micropropagation and Molecular Characterization of *Chlorophytum* species"** from National Research Centre for Medicinal and Aromatic Plants (NRCMAP), Anand, Gujarat, INDIA.

**CONFERENCES, WORKSHOPS AND TRAININGS:**

1. National Workshop on "Alternatives to use of animal sacrifice in life science education for teachers" at Department of Zoology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) India from August 24th -25th, 2013.

2. National workshop cum theme meeting on "Ion beam induced material modifications & neutron generation using 3 MV particle accelerator : Application in Physical, Chemical and Life Sciences" held on 19th -20th August, 2013 at Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) India.

3. Participated in Hands on workshop on "Microarray & real time PCR techniques" at Pt. Deendayal Center for Genetic Diseases & Molecular Biology, Department of Biochemistry, Pt. J.N.M. Medical College, Raipur from 26th -31st July, 2013.

4. Participated in the "Acquaintance program of Inter University Accelerator center, New Delhi" at Department of Pure and Applied Physics, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.) India on 19th July, 2013.

5. Participated in workshop on "Mass Spectrometry and its applications" held at Sophisticated analytical Instrumentation facility (SAIF) North Eastern Hill University (NEHU) from 12th -14th March, 2013.

6. Workshop on “Molecular Biology Approaches for Microbiological Studies and Application” at CFTRI, Mysore from 22nd -26th September, 2009.

7. A hands on training on “Phylogenetic and structural analysis of Protein Modeling(Hemoglobin, Myosin and Insulin) in Bioinformatics with emphasis on Drug Designing” organized by Department of Biotechnology, Rungta College of Science and Technology, Durg (C.G.) from 24th November - 1st December, 2008.

**ORAL AND POSTER PRESENTATIONS:**

1. **Tarun K Patel**, Rajesh Anand, Bhupendra N Tiwary, Jata Shankar*. Detection of aflatoxin production in *Aspergillus flavus* strains through triple quadrapole mass spectroscopy. National Conference on Microbial Diversity: Exploration, Conservation & Application" on Feb., 16th & 17th, 2013, Bilaspur (C.G.), India. (Poster)

2. **Tarun K Patel**, Bhupendra N Tiwary, Jata Shankar*. Isolation and screening of *Aspergillus flavus* strains from Chhattisgarh region. National Conference on Microbial Diversity: Exploration, Conservation & Application" on Feb., 16th & 17th, 2013, Bilaspur (C.G.), India. (Oral)

3. **Tarun K Patel,** Namrata Singh, Niharika Kashyap, Rajesh Anand, Bhupendra Nath Tiway, Jata Shankar. pH regulates biosynthesis of Aflatoxin B1 in *Aspergillus flavus* confirmed through mass spectrometry. Asian Congress on Biotechnology: Bioprospecting for Sustainable Development, Dec. 15-19, 2013, New Delhi, India. (Poster)

4. **Tarun K Patel**, Pratik Sahu, Manita Sahu, Agam Prasad Singh , Bhupendra Nath Tiwary, Jata Shankar Qualitative and quantitative estimation of Aflatoxin B1 in *Aspergillus flavus*. Asian Congress on Biotechnology: Bioprospecting for Sustainable Development, Dec. 15-19, 2013, New Delhi, India. (Poster)

**PUBLICATIONS:**

1. Sanghamitra Samantaray, **Tarun Kumar Patel**, K.A. Geetha & Satyabrata Maiti Identification and assessment of genetic relationships in three Chlorophytum species and two high yielding genotypes of *C. borivilianum* through RAPD markers. Biologia 66/2: 244-250, 2011. https://doi.org/10.2478/s11756-011-0006-5

2. **Tarun Kumar Patel**, Rajesh Anand, Agam Prasad Singh, Jata Shankar, & Bhupendra N. Tiwary. Evaluation of Aflatoxin B1 Biosynthesis in *A. flavus* Isolates from Central India and Identification of Atoxigenic Isolates. Biotechnology and Bioprocess Engineering 19, 1105-1113 (2014). https://doi.org/10.1007/s12257-014-0464-z

3. **Tarun Kumar Patel** (2023). Entomopathogenic Fungi: Nature's Secret Weapon Against Agricultural Pests. Journal of Ravishankar University (Part-B: Science), 36(2), pp. 109-125.DOI: https://doi.org/10.52228/JRUB.2023-36-2-8

**Book Chapter:**

1. **Patel, T.K.,** 2020. Metarhizium. In: Amaresan, N., Senthil Kumar, M., Annapurna, K., Kumar, K., Sankaranarayanan, A. (Eds.), Beneficial Microbes in Agro-Ecology: Bacteria and Fungi. Elsevier, Academic Press, pp. 593–610. ISBN: 9780128234143 https://doi.org/10.1016/B978-0-12-823414-3.00029-0; Publisher: Elsevier (Academic Press)

2. **Patel, T.K.** (2022). Isolation and Identification of Metarhizium. In: Amaresan, N., Patel, P., Amin, D. (eds) Practical Handbook on Agricultural Microbiology. Springer

Protocols Handbooks. Humana, New York, NY. https://doi.org/10.1007/978-1-0716-1724-3_19 ISBN: 978-1-0716-1723-6; ISBN: 978-1-0716-1724-3 (eBook)

3. **Kumar Patel, T.** (2024). Fungal biocontrol agents for the control and management of diseases in crops. In J. Shankar, P. Verma, & M. Shah (Eds.), *Microbial approaches for sustainable green technologies* (pp. 1-20). Taylor & Francis. https://www.taylorfrancis.com/chapters/edit/10.1201/9781003407683-9/fungal-biocontrol-agents-control-management-diseases-crops-tarun-kumar-patel

**MEMBERSHIP IN SCIENTIFIC SOCIETIES:**

- Member of Asian Federation of Biotechnology (AFOB)
- Association of Microbiologist of India (AMI)

**EXPERIENCE:**

**1. Research experience:** Three year and seven month research experience (since 21.01.2011 to 08.09.2014) as Ph.D. scholar in the Department of Biotechnology, Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.).

**2. Teaching Experience:** UG - 10 years (2014 to till date)
PG – 7 years (2017 to till date)

**SUBMISSION OF SEQUENCES IN NCBI GENEBANK:**

| S. No. | Details | Accession no. | Gene Id |
|---|---|---|---|
| 1. | *Aspergillus flavus* var. flavus isolate GGV_BT01 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence | KC907366.1 | 541988168 |
| 2. | *Aspergillus flavus* isolate GGV_BT03 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence | KC907367.1 | 541988171 |
| 3. | *Aspergillus flavus* isolate GGV_BT05 internal transcribed spacer 1, partial sequence; 5.8S ribosomal RNA gene, complete sequence; and internal transcribed spacer 2, partial sequence | KF317635.1 | 532166608 |

**CULTURE DEPOSITION:**

| S. No. | *Species/Strain* | Culture collection | Accession no. |
|---|---|---|---|
| 1. | *Aspergillus flavus, strain GGV_BT01* | MTCC and gene bank Chandigarh, India | 11580 |
| 2. | *Aspergillus flavus, strain GGV_BT03* | MTCC and gene bank Chandigarh, India | 11588 |
| 3. | *Aspergillus flavus, strain GGV_BT05* | MTCC and gene bank Chandigarh, India | 11866 |