





# Rohit Bharati



-  **Nationality:** Indian | **Date of birth:** 12/01/1997
-  Phone number: (+420) 774963883 | **Languages:** English, Hindi, Bengali
-  Email address: rb79750@gmail.com
-  Current Address: Kamýcká 1280, 16521 Prague, Czech Republic

## CAREER OBJECTIVES

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A seasoned professional in the realm of agricultural sciences with 5 years of working experience in laboratory conditions actively seeking a career opportunity in the field of Plant Physiology, Plant Tissue Culture, Plant Breeding, and Molecular Biology within an institution. I aim to establish a long-term commitment, continually enhance my skills, and contribute to the growth of Agriculture and Plant Sciences.

## RESEARCH INTERESTS

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Plant Tissue Culture | Crop Improvement | Ploidy Manipulation | Double haploid induction | Embryo rescue | Plant Molecular Biology | Plant Physiology | Plant Developmental Biology | Plant Epigenetics | Cryopreservation | Plant Bioinformatics | Plant biotechnology |

## EDUCATION

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**Ph.D. in Agricultural Specialization** [ 02/12/2019 – Current ] [ Expected Thesis Defense by March 2024], *Czech University of Life Sciences, Prague, Czechia*

Thesis: Exploring the Potential of *In-vitro* Polyploidization for Genetic Improvement of Medicinal Plants

**Master of Science in Agricultural Biotechnology** [ 21/07/2017 – 04/07/2019]

*Ramakrishna Mission Vivekananda Educational and Research Institute, Kolkata, India*

Thesis: Comparative study of the growth behavior of in-vivo and in-vitro plants of *Withania somnifera* with their antifungal activity. [\[Certificate\]](#)

**Bachelor of Science in Biotechnology** [ 20/07/2014 – 06/2017 ]

*Maulana Abul Kalam Azad University of Technology, West Bengal, India* [\[Certificate\]](#)

## TECHNICAL SKILLS

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*In vitro* Polyploidization | Mutagenesis | Flow-cytometry | Chromosome counting | Nucleic Acid Extraction | Molecular Characterization using molecular markers | Gene Expression | RT-qPCR | NGS library preparation | RNA-Seq data analysis (using R) | Functional Annotation and Pathway Analysis | WGCNA analysis | Plant Tissue and Organ Culture | Virus Elimination | Synthetic Seed Production | Callus Culture | Microscopy | Encapsulation Vitrification | Cryopreservation | Microtome and tissue embedding | SPAD | PhotosynQ | Handy PEA+ | CIRUS-3 | GC/MS sample preparation and data analysis | Bioassays to assess plant stress and physiology including Antioxidant enzyme assay, Proline content, Chlorophyll estimation, etc. | Principal component analysis |

## PROFESSIONAL EXPERIENCE

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### »» Scientific laboratory technician

Laboratory of Plant Tissue Cultures, Czech University of Life Sciences Prague, Czechia [ 01/01/2021 – Current ]

#### Roles:

Media Preparation | Glassware and Equipment Sterilization | Surface Sterilization, Micropropagation, and Subculturing | Inventory Management | Helping and Guiding Bachelor and Master Students | Maintaining Safety Measures

### »» Research Assistant

*Crop Research Institute, Prague* [ 31/07/2020 – 31/10/2021 ]

**Research Area:** Plant-Virus Interaction (Worked with **Triticum**, **Brassica**, and **Nicotiana** spp.)

#### Roles:

Experiment Designing | Homogenize Plant samples | Extracting RNA & DNA from samples | cDNA synthesis | real-time PCR |

## PEDAGOGICAL ACTIVITY

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### »» Undergraduate Lecturer | *Faculty of Tropical AgriSciences, Czech University of Life Sciences, Prague, CZ*

**Subject: Tropical Agricultural Systems (IRI007E)**

- Batch 2022/2023 (40 students)
- Batch 2021/2022 (29 students)
- Batch 2020/2021 (25 students)

### »» Graduate student mentor | *Laboratory of Plant Tissue Cultures, FTA, CZU*

- Mentored four students: 3 Bachelor's and 1 Master's student, providing guidance in their experiments and research projects in Plant tissue culture and biotechnology.

## TRAINING AND INTERNSHIP EXPERIENCE

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### »» Internship at *Slovak University of Agriculture, Nitra, Slovakia* [ 01/11/2021 – 31/12/2021 ]

Throughout my internship, I conducted an investigation into the impact of ploidy levels on medicinal herbs belonging to the Lamiaceae family. This study involved the utilization of advanced instrumentation dedicated to the assessment of plant photosynthesis, including PhotosynQ, SPAD, Multiplex, CIRAS, and Dual PAM. Additionally, I refined my proficiency in data analysis, ensuring precise interpretation and the derivation of insightful conclusions from the acquired datasets. [\[Certificate\]](#)

### »» Summer Training at *Universitat Politècnica de València, Valencia, Spain* [ 13/07/2021 – 22/07/2021 ]

**Topic:** *In vitro* Techniques and Research of Mediterranean Plant Biodiversity [\[Certificate\]](#)

## PROJECTS PARTICIPATED

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- Genetic improvement of medicinal plants through biotechnological interventions - (IGA FTZ-20233105) [ 04/2022 – 12/2023 ]  
**Role:** Co-investigator
- Development of polyploid genotypes in *Mentha spicata* using in vitro somatic polyploidization - (IGA FTZ-20223101) [ 01/2021 – 12/2022 ]  
**Role:** Co-investigator
- In vitro induced polyploidy in *Thymus camphoratus* Hoffmanns (IGA FTZ 20213113) - (IGA FTZ-20213105) [ 04/2020 – 10/2021 ]  
**Role:** Co-investigator
- In vitro indukovaná polyploidie u *Celosia argenta* L. (IGA FTZ-20205004) [ 04/2019 – 12/2020 ]  
**Role:** Co-investigator

## CONFERENCES AND SEMINARS

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### »» The 3rd International Electronic Conference on Agronomy

Enhancing Essential Oil Yield and Agronomical Traits in *Melissa officinalis* L. through Synthetic Polyploidization [ Virtual Conference, 15/10/2022 – 30/10/2022 ] Link: <https://sciforum.net/paper/view/14966>

### »» Tropentag 2022

Development of polyploid genotypes in *Mentha spicata* using in vitro somatic polyploidization [ Czech University of Life Sciences Prague, Czech Republic, 14/09/2022 – 16/09/2022 ] Link: <http://dx.doi.org/10.13140/RG.2.2.22828.95361>

### »» Tropentag 2021

Genetic and morphological stability of autopolyploid *Thymus vulgaris* L. and changes in its anatomy and physiology [ University of Hohenheim, Germany, 15/09/2021 – 17/09/2021 ]

### »» ELLS Scientific Student Conference 2020

Effect of zinc oxide and titanium dioxide nanoparticles on in vitro micropropagation of *Monarda didyma* L. from nodal segments [University of Natural Resources and Life Sciences, Vienna, Austria] [19/11/2020 – 21/11/2020 ]

## REVIEW ACTIVITY

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Participated as an academic reviewer for the following Prestigious journals :

- Journal of Plant Growth Regulation
- Scientia Horticulture
- Pest Management Science

## AWARDS AND RECOGNITION

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### »» Josef Hlávka Award for Outstanding Ph.D. Achievement [October 2023]

The prize is intended for talented students up to the age of 33 who have shown special ability and intellectual creativity in their branch. [\[Link\]](#)

### »» Rector's Award for Excellence publication output 2023 [November 2023]

Recognized with the Rector's Award for delivering an exemplary publication as a Ph.D. student at the Czech University of Life Sciences, highlighting a significant contribution to research. [\[Link\]](#)

## DRIVING LICENCE

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European type B1 (20/06/2022 – 20/06/2032)

European type B (20/06/2022 – 20/06/2032)

## REFERENCES

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**Dr. Eloy Fernández-Cusimamani** | PhD. Supervisor | Email: [eloy@ftz.czu.cz](mailto:eloy@ftz.czu.cz)

Professor, Department of Crop Sciences and Agroforestry

Faculty of Tropical AgriSciences

Czech University of Life Sciences Prague

**Dr. Jiban Kumar Kundu** | Employer from Crop Research Institute | Email: [Jiban@vurv.cz](mailto:Jiban@vurv.cz)

Group leader and Senior Scientist,

Plant Virus and Vector Interactions,

Crop Research Institute, Prague, CZ

**Dr. Marián Brestič** | Internship Supervisor | Email: [marian.brestic@uniag.sk](mailto:marian.brestic@uniag.sk)

Professor, Department of Plant Physiology,

Slovak University of Agriculture,

Nitra, Slovakia