

Dr. Niraj Singh

Assistant Professor & Co-ordinator

Department of Microbiology, Royal Global University, Guwahati, Assam, 781035

Academics:

- B.Sc. (Chemistry, Botany, Biotechnology), Purvanchal University
- M.Sc. (Molecular Biology & Biotechnology), Tezpur University
- Ph.D. (Molecular Biology & Biotechnology), Tezpur University
- **Thesis Title:** Development of an Efficient Root Inoculation Method of *Ralstonia solanacearum* F1C1 in Tomato and Eggplant Seedlings and its Applications to Study Plant-Microbe Interaction

National Level Examination:

- ❖ Qualified CSIR/UGC JRF-NET (AIR -106) Life Science in (2015)
- ❖ Qualified DBT JRF for Research in Biotechnology/Life Science (2013)
- ❖ Qualified (ICAR) ARS-NET in Agricultural Biotechnology) (2014)
- ❖ Qualified SLET (NE) in Life Science(2017)
- ❖ Qualified GATE in Biotechnology (2016)
- ❖ Qualified GATE in Life Science (2013)

Scholarship /Fellowship:

- ❖ Department of Biotechnology, Govt. of India- SRF- Jan 2016- Jan 2018
- ❖ Department of Biotechnology, Govt. of India- JRF- Jan 2014- Jan 2016
- ❖ Department of Biotechnology, Govt. of India- M.Sc studentship 2010

Research interest: Molecular Microbiology, Gene cloning, Gene mutation, *Ralstonia solanacearum* wilt disease research and its control

List of additional duties and responsibilities:

- ❖ Member of IQAC (From Jan 2023- Till date)
- ❖ Ph.D. Cell Coordinator The Assam Royal Global University, Guwahati, Assam, (November, 2021-Till date)
- ❖ Assistant Examination Superintendents The Assam Royal Global University, Guwahati, Assam,(Period: ~1 year 2020-21) (Awarded with a certificate of appreciation for the role in exam conduction from Registrar)
- ❖ Exam Coordinator Department of Microbiology, (RSBSC) The Assam Royal Global University, Guwahati, Assam, 781035,(Period: August, 2019-Feb 2022)
- ❖ NAAC steering committee member The Assam Royal Global University, Guwahati, Assam, (July 2020-Till date)(working on Criteria-5 NAAC SSR)

Teaching /Research Experience:

- ❖ Worked as a faculty at the Department of Botany, NEHU, Shillong (Theory and Practical class for Bsc, MSc & Ph.D. Students)- Jan 2019-June 2019
- ❖ Project Jrf at Gautam Budha University, Noida, Uttar Pradesh (July 2013- Jan 2014)

RESEARCH PUBLICATIONS

- ❖ **N. Singh**, T.Phukan, P.Sarma, K. Kabyashree, A. Barman, R. Kumar, R. V. Sonti, S. Genin and S. Kumar Ray (2018), An **innovative** root inoculation method to study *R. solanacearum* pathogenicity in tomato seedling, **Phytopathology(APS)(IF-4.05, 49 citation)**
- ❖ **Niraj Singh**, Rahul.Kumar, Suvendra Kumar Ray(2018), An innovative approach to study *R.solanacearum* pathogenicity in 6to7 days old tomato seedlings, **Bio-Protocol(5 citation)**
- ❖ R. Kumar, A. Barman, T.Phukan, K. Kabyashree, **N. Singh**, G. Jha, R. V. Sonti, S. Genin and S. Kumar Ray (2017) *Ralstonia solanacearum* virulence in tomato seedlings inoculated by leaf clipping, **Plant pathology(IF-2.5, 26 citation).**
- ❖ **N. Singh (2021)**, *Ralstonia solanacearum*: An emerging threat as a mysterious plant pathogen, **Current science (IF-1.2)**
- ❖ T.Phukan, K. Kabyashree, R.Singh,, P.L,Sarma, **N.Singh**, A. Barman, B. Jena, S. Kumar Ray(2019) *Ralstonia solanacearum* virulence in eggplant seedlings by the leaf-clip inoculation, **Phytopathology Research (BMC). (Expected IF-2-3 (5 citation)**
- ❖ **Niraj Singh (2020)** A Rapid Pathogenicity Assay of *R. solanacearum* in 10-12 Days Old Eggplant (*Solanum melongena*) Seedlings by Root Inoculation Approach, **bioRxiv(Preprint).**
- ❖ **Niraj Singh (2020)** A Rapid Screening of Resistant Tomato Cultivars in Early Seedling Stage Against *Ralstonia solanacearum* Bacterial Wilt Under Soil and Nutrients Free Conditions, **bioRxiv (Preprint).**

BOOK CHAPTER:

- ❖ **Microbial biofilms: An optimal for genetic material exchange in a microbiome environment**, Publisher- Wiley, **First & Corresponding Author**, April 2022)
- ❖ **Climate Changing Impact on Microbes and Their Interactions with Plants: An Overview**
Publisher: Springer Nature 2022
- ❖ **Secondary Metabolites in Plants** (Publisher- Taran Publishing House) **First & Corresponding Author** (Accepted for Publication- January 2022)

BOOK:

- ❖ An Innovative approach to study *Ralstonia solanacearum* pathogenicity by scholars press, Germany. **ISBN:978-613-8-83233-1 (Author- Dr. Niraj Singh)**(available at Amazon for sell) (**March-2020**)

INVITED TALK:

- ❖ Invited Talk at the National Conference on innovation and emerging novel research in plant sciences, department of botany government v.y.t. pg autonomous college, durg, 491001, chhattisgarh 17th - 18th january 2023
- ❖ Key note speaker at IPS Zonal Symposium on “*Reframing Futuristic Plant Health Safeguards*”, Assam Agricultural University, Jorhat, Assam- Jan 2023
- ❖ Invited talk at Vigyan Gurjari in association with the Department of Science and

Technology, Government of Gujrat, Gujrat Vigyan Samellan - 4 Feb-2022

- ❖ National conference on “**Bio-prospecting and Conservation of Biodiversity for Sustainable Agriculture and Health**” 06-07 February 2020, St. Joseph University, Dimapur, Nagaland, India
- ❖ **7th IBWS(International Bacterial Wilt Symposium)**, Uruguay, for Ralstonia solanacearum Bacterial wilt research.

Resource Person:

- ❖ Resource person for CSIR NET-JRF life science subject for all Tamilnadu state students from **Madurai Kamraj University, Madurai** (CENTRE FOR TECHNOLOGY ENHANCED LEARNING(CTEL) & DEPARTMENT OF LIFESCIENCES of **AYYA NADAR JANAKI AMMAL COLLEGE (NAAC A+ GRADE), SIVAKASI, TAMILNADU**)

REFRESHER COURSE FOR UNIVERSITY FACULTY:

- ❖ University and PG college MSc Teachers training program in **Biology/Life science** at **Indian Institute of Science, Karnatka** from **16th June to 6th July 2019 (21 days)** (Certificate with **A Grade**)
- ❖ Online Interdisciplinary Refresher Course on Pedagogical Innovations in Higher Education organized by Teaching Learning Centre, Tezpur University during **06-20 December, 2021**. (Certificate with **A⁺ Grade**)
- ❖ **ATAL FDP on “Genome Engineering for Environment” 23-27 August 2021 , Centre for environmental sciences, IIT, Guwahati, Assam**

WORKSHOP ATTENDED:

- ❖ Training course on Gene cloning, Protein Biochemistry, Structural Biology & Bioinformatics, **ACTREC, Mumbai, 18th to 29th July 2016**.
- ❖ Bioinformatics workshop on Genomics, Proteomics, Drug design & high performance computing, **IIT Delhi, 21st to 31st August 2017**
- ❖ Workshop on Application of statistical technique in environmental science, **Indian Statistical Institute, North east centre(Tezpur), 15 to 27 March 2017**.
- ❖ Capacity building of teachers, researchers and biomedical practitioners of North Eastern region on advance technique in Molecular Biology and Microbiology, **college of veterinary science, Guwahati, 30th may to 8th June 2017**
- ❖ Workshop on computational tools for Genomics & proteomics Data analysis, **NBAIM, Mau 14th Feb to 17th Feb 2017**

Poster presented in conference:

- ❖ International web conference on sustainable environment and agriculture: technologies progressions and transitions , **August 2020**
- ❖ International symposium on plant Biotechnology for crop improvement, **IIT Guwahati, 20-21 Jan 2017**
- ❖ Annual conference of **AMI (2017)**, Baba Saheb Bhimrao Ambedkar University, Lucknow, **16 to 19 November 2017**
- ❖ An Interactive meet on Molecular intricacies of Plant pathogenic Microorganisms (MIPPM). **Tezpur University, 21-22 Feb 2015**

Talk delivered in conference:

- ❖ Novel aspects in Medicines, Allied sciences and Technologies for New Era , DNA Lab, Uttarakhand, **September 2020**
- ❖ Web conference on New Trends in Agriculture, Environmental and Biological Science for Inclusive development, **20-21 June 2020**
- ❖ International Conference on Plant Science, Guwahati University, **4-6 Feb 2019**
- ❖ International symposium under Advance DNA technology “Technological intervention in microbial resources” **Tezpur University, 4-5 Feb 2018**

Award:

- ❖ Award of appreciation at Gujrat Vigyan sammelan-2022
- ❖ Award of Appreciation at IPS Zonal Symposium on “*Reframing Futuristic Plant Health Safeguards*”, Assam Agricultural University, Jorhat, Assam-Jan-2022
- ❖ Young scientist award- 2022 (National conference supported by DST, DRDO, CSIR, St. Joseph University, Dimapur, Nagaland)
- ❖ Hayward- Prior Travel Awards” 2020, 7th IBWS, Uruguay, for Ralstonia solanacearum Bacterial wilt research (Pathogenicity and virulence work)
- ❖ Young Plant Pathologist award 2020, (NTAEBSID- 2020) 21-22 June, 2020
- ❖ Award of excellence in teaching, training and research, NAMASTE-2020, Organized by Uttarakhand govt & DNA lab, Uttarakhand (10th -12th September 2020)
- ❖ Certificate of appreciation at National level poster presentation competition 2020, organized by IISC, IBAB and Biotechnika (2020)

Signature:



