Biodata

Name : Tanushree Sarkar

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Date of Birth : 1st June 1991

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Educational Qualifications :

Examination/ Degree	Board/ University	Year of passing	Subjects	Marks obtained (%/CGPA)	Distinction
Secondary(Madhyamik)	WBBSE	2007	Bengali, English, Mathematics, Physical science, Life Science, History, Geography	73.87%	1st
Higher Secondary	WBCHSE	2009	Bengali, English, Physics, Chemistry, Biological sciences	62.2%	1st
B.Sc.	The University of Burdwan	2012	Botany	61.5%	1st
M.Sc.	University of North Bengal	2014	Botany [Specialization – Molecular Plant Pathology and Fungal Biotechnology]	68.81%	1st
GATE		2017	Life sciences	Score-367	
Ph. D in Botany		Awarded on 19th April 2022	Botany		

Awards/Fellowship/Distinctions : UGC-BSR Research fellowship in the Department of Botany,

University of North Bengal for five years (20/05/2015-20/05/2020), Award letter or UGC circular no. F.25-1/2013-14 (BSR)/7-132/2007 (BSR) Dated-30.05.2014.

Title of the Thesis : Studies on resistance of *Trichosanthes dioica* and their induction with chemical inducers against fungal pathogen.

List of publications :

1. Sarkar T., Saha A. and Saha D. (2020) *Fusarium equiseti*: an Emerging Pathogen of Fruit Rot Disease of *Trichosanthes dioica* in Sub-Himalayan West Bengal. *Alochana Chakra Journal* IX: 4707-4711. **Peer reviewed journal.**

2. Sarkar T., Chakraborty, P., Karmakar, A. Saha A. and Saha D. (2019) First report of *Periconia macrospinosa* causing leaf necrosis of pointed gourd in India.*Journal of Plant pathology* 101: 1281. **Impact factor: 1.74**

3. Sarkar T., Chakraborty P., Das S., Saha A. and Saha D. (2018) First report of *Ascochyta medicaginicola* causing leaf blight disease of pointed gourd in India. *Plant Disease* 102(12): 2657. Peer reviewed journal. **Impact factor: 4.43**

4. Sarkar T., Chakraborty P., Das S., Saha D. and Saha A. (2018) Curvularia leaf spot of pointed gourd in India.*Canadian Journal of Plant Pathology* 40(4): 594-600. **Impact factor: 2.4**

5. Sarkar, T., Karmakar, A., Saha, A., Saha, A. and Saha, D. (2018) *In vitro* bio-control of *Fusarium equiseti* infecting *Trichosanthes dioica* from sub-Himalayan, West Bengal. *Annals of Plant Protection Sciences* 26: 222-225. **Peer reviewed journal.**

6. Karmakar, A., **Sarkar, T.,** Chakraborty, P., Biswas, K. K., Saha, A. and Saha, D. (2021). Genetic variability of tomato leaf curl new delhi virus infecting cucumber in sub-Himalayan plains in Eastern India. International Journal of Agricultural Technology 17(2):535-544. **Peer reviewed journal.**

7. Chakborty, P., Karmakar, A., **Sarkar, T.,** Saha, A. and Saha, D. (2019) First report of Lagenaria mild mosaic virus infecting bottle gourd in India. Plant Disease doi: 10.1094/PDIS-01-19-0195-PDN. **Impact factor: 4.43**

8. Mandal H., Chakraborty P., Das S., Saha A., **Sarkar T.,** Saha D. and Saha A. (2017) Biocontrol of virulent *Ralstonia solanacearum* isolated by an indigenous *Bacillus cereus. International Journal of Agricultural Technology* 13: 19-30. **Peer reviewed journal.**

9. Karmakar A., Chakraborty P., **Sarkar T.,** Das S., Saha A., Saha D. and Saha A. (2016) Prevalence of begomoviruses associated with tomato leaf curl disease in the sub-Himalayan plains of West Bengal. *NBU Journal of Plant Sciences* 10: 66-72.

Summary of Ph.D. thesis:

Trichosanthes dioica Roxb. (Pointed gourd) is a cultivated vegetable crop belonging to the family Cucurbitaceae. It is one of the important vegetable crops in the plains of sub-Himalayan West Bengal. However, due to humid agro-climatic conditions, fungal infections are common in this region which leads to substantial economic losses. Use of synthetic chemicals for disease management not only derive a resistance in the pathogen but also disturb the normal soil-microflora. In our study, isolation of pointed gourd pathogens and their identification has been given first priority. Next, the genetic determinants of disease resistance were investigated. Finally, induction of disease resistance by some known elicitors was studied. Our study reports isolation of 'ten new pathogenic fungi' from pointed gourd plants worldwide. Resistance Gene Analogs (RGA) of 'CC-NBS' type is also a new report in pointed gourd plants. Phylogenetic analysis of five different Defense-relared genes present in pointed gourd plants has also been done for the first time in the present study. In addition, it was found that use of chemical inducers to manage the fungal disease caused by *Fusarium equiseti* could be established as an alternative to replace the harmful fungicides and to provide an efficacious control of the fungal disease.

Other research experience: Identification of *Ralstonia solanacearum* and its management in plants. Isolation and characterization of DNA virus (*Tomato leaf curl new delhi virus*) and RNA virus (*Lagenaria mild mosaic virus*) and their management techniques.

Signature of Candidate

Place : Siliguri

Date : 2nd May, 2022