ARCHANA SHARMA FOUNDATION OF CALCUTTA
IN COLLABORATION WITH
DEPARTMENT OF BOTANY, UNIVERSITY OF CALCUTTA

INVITES YOU ALL TO

A talk
on

BIOTECHNOLOGY OF SELECTED PLANT SPECIES AND NANOTECHNOLOGY IN AIR QUALITY RESEARCH

SPEAKER

Dr. Nabarun Ghosh, Ph.D
FACULTY AND PROJECT SUPERVISOR, GENOMICS AND INSTRUMENTATION, BITGENOME INSTITUTE

Date: 8th June 2026
Time: 3.00 pm

VENUE: ARCHANA SHARMA MEMORIAL HALL, DEPARTMENT OF BOTANY, UNIVERSITY OF CALCUTTA

PROGRAMME SCHEDULE

3.00 pm	**Inauguration**
3.05pm	**Welcome Address by Head of the Department of Botany** **Welcome Address by the President ASFC**
3.10pm	**Introduction and felicitation ceremony of Dr. Nabarun Ghosh**
3.15pm	**Talk by the Speaker**
4.15pm	**Vote of thanks**

The title of the talk:

BIOTECHNOLOGY OF SELECTED PLANT SPECIES AND NANOTECHNOLOGY IN AIR QUALITY RESEARCH

Dr. Nabarun Ghosh

Abstract:

Biotechnological Applications in Leguminous Trees, Cotton, and Sorghum Research conducted at the Center of Advanced Study (CAS), Botany, University of Calcutta, the University of North Texas explored genetic and biotechnological innovations in leguminous trees, cotton, and sorghum. These studies, carried out in collaboration with the USDA and Texas Tech University, with advanced crop improvement strategies, focusing on genetic improvement for productivity, and ecological sustainability.

Nanotechnology offers transformative solutions to mitigate airborne pollutants. Advanced Hydrated Photocatalytic Oxidation (AHPCO) systems, for example, leverage nanoscale catalysts to neutralize PM2.5, pollen fragments, and volatile organic compounds. These interventions not only reduce pollutant load but also address allergenic triggers, offering scalable strategies for improving both indoor and outdoor air quality.