

Day 1



ICAR-CAFT in Agricultural Microbiology

# "Recent Advances in Biocatalysts for Biomass Derived Renewable Chemicals"

15, December 2023 – 4, January 2024



15.12.2023

## Inauguration of CAFT 2023



Group photo with the CAFT trainees

Release of CAFT practical manual by the delegates





Registration by the CAFT trainees

Theory lecture by Dr.T.Kalaiselvi





Theory lecture on “Production of ethanol from lignocellulosic biomass-Process flow and challenges”  
by Dr. Rajeev K Sukumaran



Practical session by CAFT trainees

**Day 3**

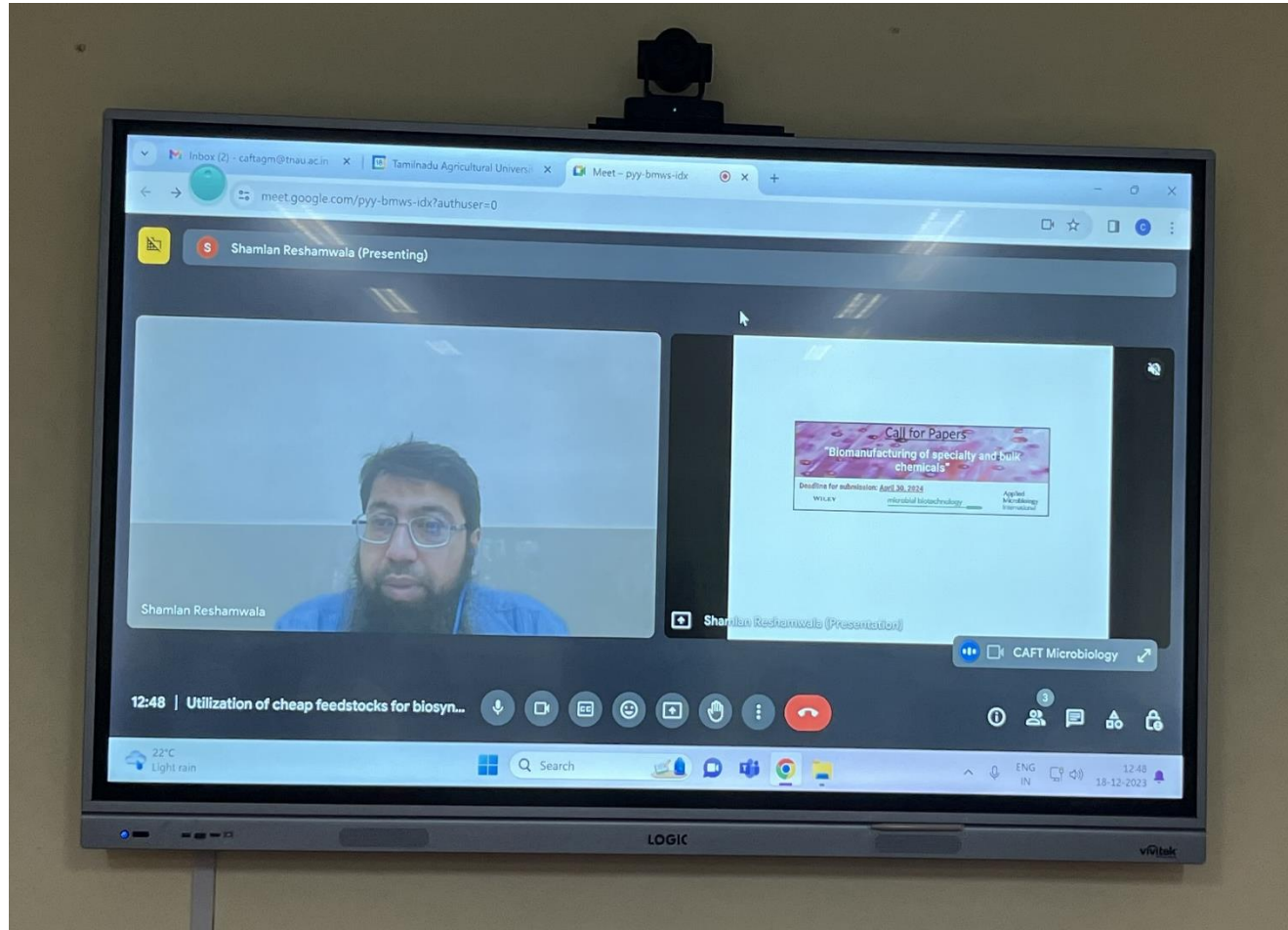
**17.12.2023**



Theory lecture on “Membrane-assisted separation process for biochemical from biomass”  
by Dr. Rajeev K Sukumaran



Theory lecture on “Biocatalysts – Overview and microbial processes for fuels and chemicals” by Dr. U. Sivakumar



Theory lecture on “Utilization of cheap feedstocks for biosynthesis of transportation fuels and fine chemicals”  
by Dr. Shamlan M.S. Reshamwala





Practical session by CAFT trainees



Theory lecture on “Enzymatic pretreatment of Lignocellulosic biomass for effective delignification” by Dr. M. Iniyakumar



Theory lecture on “Cassava biorefinery: Production of biochemical from Sago processing wastewater (SWW)”  
by Dr. U. Sivakumar



Practical session by CAFT trainees



Theory lecture on “Biocatalysis for biorefineries & biovalorization: a green approach for sustainable development”  
by Dr. M. Jerold



Theory lecture on “Microbial production of Lovastatin”  
by Dr. S. Naganandhini



Practical session by CAFT trainees



Theory lecture on “Large scale biorefinery plant for the sequential production of bio-diesel, bio-ethanol, bio-hydrogen and bio-methane using tannery solid waste, molasses and pressmud-design and operational experience at Ranipet”  
by Dr. P. Shanmugam





Practical session by CAFT trainees



Theory lecture on “Energy budgeting for lignocellulosic biomass-derived bio-fuels and green chemicals”  
by Dr. P. Subramanian



Theory lecture on “Microbial simultaneous saccharification and fermentation and consolidated bioprocessing for bio-ethanol production”  
by Dr. R. Anandham



Practical session by CAFT trainees



Industrial visit to Sakthi sugars











Theory lecture on “Microbial production of bacterial cellulose for food and agricultural application”  
by Dr. U. Sivakumar



Practical session by CAFT trainees



Practical session by CAFT trainees



Theory lecture on “Genome Engineering for renewable chemicals from lignocellulosic biomass”  
by Dr. Syed Shams Yazdani



Theory lecture on “Biomass to Carbo-health products”  
by Dr. RS Prakasham



Practical session by CAFT trainees



Visit to Speed breeding facility, TNAU, Coimbatore



Visit to Centre for Agricultural Nanotechnology, TNAU, Coimbatore





Visit to water soluble fertilizer production facility, TNAU, Coimbatore



**Visit to Insect museum, TNAU, Coimbatore**



Theory lecture on “Biomass to carbo-health products – A case study”  
by Dr. RS Prakasham



Theory lecture on “High-yield lipid production using lignocellulosic biomass”  
by Dr. Annamma A Odaneth

**Day 15**

**29.12.2023**



Practical session by CAFT trainees



Theory lecture on “Fuel cell electric vehicles – Research challenges and Opportunities”  
by Dr. Karthikeyan Palaniswamy









Theory lecture on “Production of methane biofuels from anaerobic digester”  
by Dr. S. Karthikeyan



Theory lecture on “Algal biorefinery: A sustainable solution for biodiesel and bioproducts production”  
by Dr. D.Ramesh



Practical session by CAFT trainees



Practical session by CAFT trainees



Theory lecture on “Speciality and aromatic green chemicals from lignocellulosic biomass”  
by Dr. N.O.Gopal



Theory lecture on “Enzymatic process of oligosaccharide production”  
by Dr. U. Sivakumar



Theory lecture on “Bioplastics production”  
by Dr. V.Gomathi



Theory lecture on “Nanoformulation of enzymes for renewable chemicals production”  
by Dr. S. Haripriya





Practical session by CAFT trainees

Feedback by CAFT trainees



Certificate distribution to CAFT trainees



Certificate distribution to CAFT trainees

