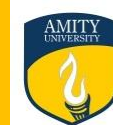




विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

सत्यमेव जयते



AMITY
UNIVERSITY

A RESEARCH & INNOVATION DRIVEN UNIVERSITY

Amity DST TEC Newsletter Volume – 3, Issue 1

Dear Readers!

We are happy to present the Volume 3, Issue 3 of the E-Newsletter of DST sponsored DST-Amity Technology Enabling Centre (TEC) established at Amity University Uttar Pradesh Noida in 2019.

The current issue will give you a glimpse of the activities of TEC: Technologies transferred, Technologies enabled, some of the innovations & research done at different Amity Universities/Campuses and other activities of TEC.

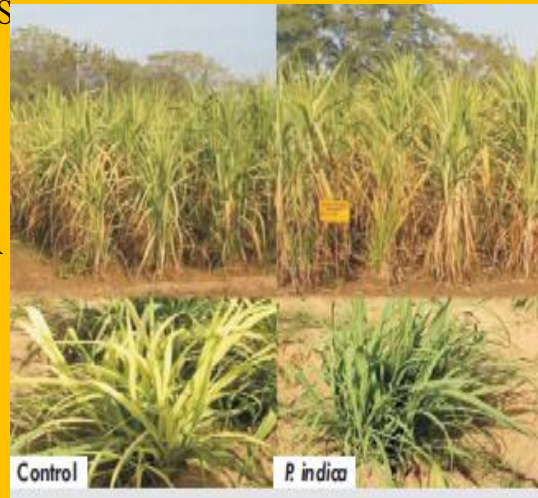
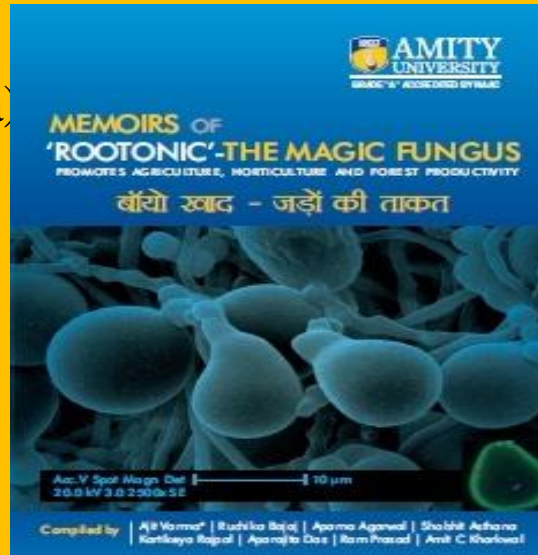
Comments and suggestions from the readers are most welcome to make our next issue more interactive.

-TEC Team



1. Rootonic transferred to M/S Sri Bio Aesthetics Pvt. Ltd.

- It is Magic fungus (*Piriformospora indica*)
- Promotes agriculture, horticulture and productivity
- This fungus was screened from the extreme hot deserts which functioned well in extreme cold deserts
- This is very unique symbiotic fungus which not only promotes plant growth but also has multi-functional activities.



Positive influence of *P. indica* on Sugarcane

2. Herbal Hand Sanitizer transferred to M/S NACL Industries Limited

- 100% alcohol free, Made from herbal extracts and is safe for use in people of all age groups
- No chemical has been used for its formulation
- Shelf life of 1 year under room temperature
- Effectively kills disease causing bacteria and fungi
- Tested against *Streptococcus spp.*, *Staphylococcus aureus*, *E. coli*, *Bacillus subtilis*, *Pseudomonas spp.*, *Candida albicans*, *Aspergillus niger* and *Cryptococcus neoformans*
- Does not lead to skin irritation or dryness even after multiple uses

Plate assays conducted on isolated microorganisms from cars, house holds and AC vents. Clear zone indicated complete eradication



E. coli inhibition on plate against other sanitizers available in the market. A indicates our product



Staphylococcus inhibition seen on the plate. A, B, C indicate various extracts used in the final product



Inhibition of *Candida albicans* as indicated by zone of Inhibition

3. Floor Disinfectant transferred to M/S Avirat Ichem Pvt. Ltd.

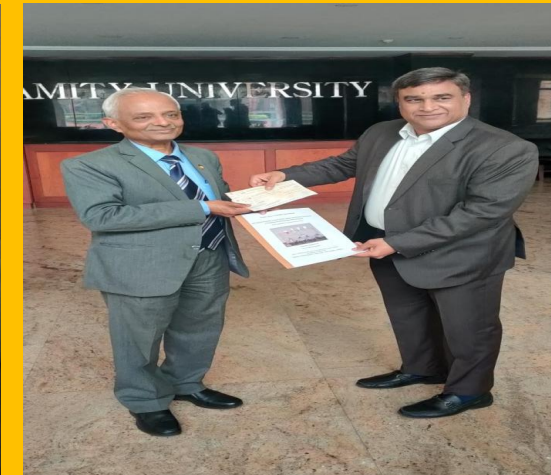
One-step home germicidal disinfectant cleaner and deodorizer.

- Suitable for wet mopping and highly effective for cleaning rest rooms
- Removes the greasy stains and dirt, disinfects, deodorizes and kills mainly the pathogenic microorganisms
- Cost-effective, requires no large set-up or machinery
- Can be manufactured at small scale



4. Electricity Generation with waste-water treatment transferred to M/S Deccan Waters

- Cleans the industrial waste-water plus generate the electric power (from the same water) simultaneously without using any external source or material.



➤ 1. Vegetarian Hard Capsules

- Biodegradable, High tensile strength, Free of cracking,
- Low in moisture content and resist brittleness,
- Cost effective compared to animal protein-based, Inhibit microbial activity
- Higher shelf life, Prepared in various colors



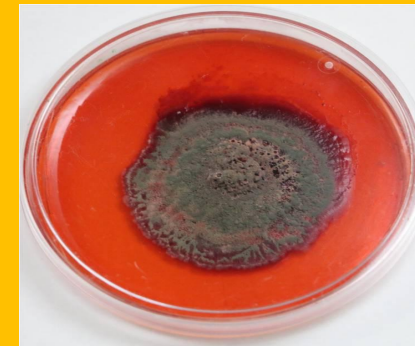
➤ 2. Biocompatible and biopolymer based herbal coating for Enhancement of shelf life of perishable fruits

- Made from natural polymer blend, no side effect,
- Does not release any harmful gas
- Water soluble, Works Up-to 50 degree C



➤ 3. A Novel Endophyte for plant growth promotion

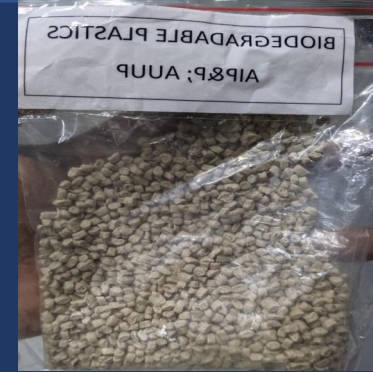
- Promotes plant growth and development,
- Provides resistance against biotic stresses,
- Enhances crop yield in diverse crops



Endophytic activity of *Teleromyces pupurogenus* HNB9, isolated from Kandi region of Shivalik mountainous range

➤ 4. Injection Moldable Bioplastic

- Bio-degradable
- Prepared from the food waste



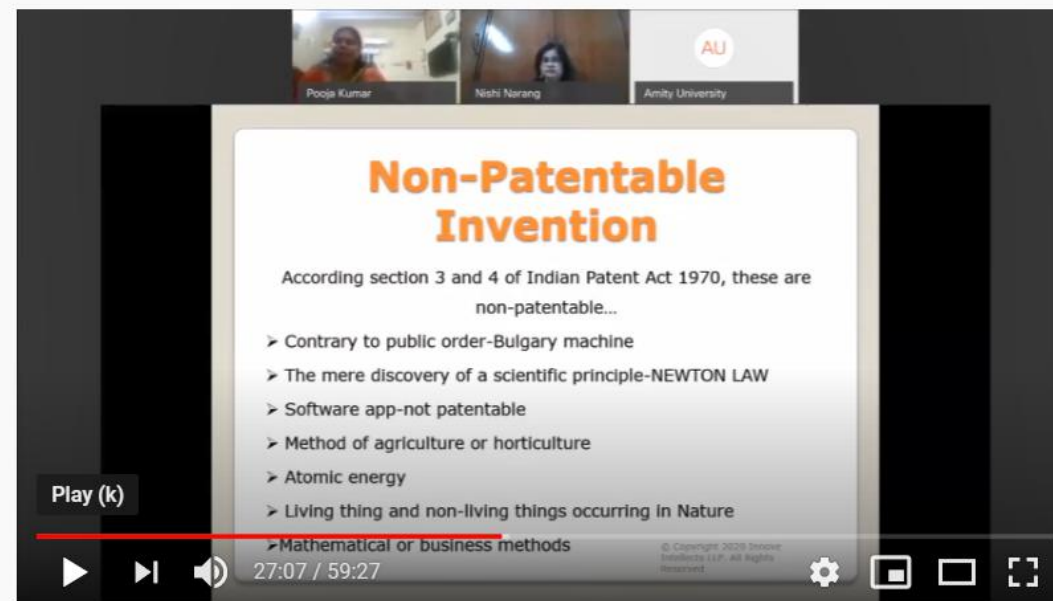
➤ 5. Portable Safety Device for Sewer Worker

- Monitors the heart rate of the sewer worker and the level of toxic gases in the sewerage
- Can wear around wrist
- Sends and receives the monitored parameters
- Works in dense fluid medium and provides oxygen up to 5 min



➤ 6. Driver Identification System

- Help avoid theft of the vehicle by monitoring the identity of the driver, Functions with biometric sensors
- and inbuilt camera, Transmits data discretely and Economical



Technology Transfer & Commercialization: An Indian Perspective by Dr. H. Purushottam, Former Chairman, NRDC on 4/5/2020, [\(66\)](#)

[Technology Transfer and Commercialization An Indian Perspective - YouTube](#)

Overview on IPR and integrating IP tool for R&D and University Innovation- R. P. Yadav. Founder & Managing Partner, sr4ipr Partners on 6/5/2020, [\(66\)](#)

[Overview on IPR and integrating IP tool for R&D and University Innovation - YouTube](#)

Sustainable Practices in Agriculture Industry, Dr. Venkatesh Devanur, CEO Agrilife on 8/5/2020, [\(66\)](#)

[Sustainable Practices in Agriculture Industry - YouTube](#)

Building the foundation of a strong business by Mr. Prajakt Raut, Founder of Applyifi.com on 14/5/2020

Patent filing procedure for startups - Ms. Pooja Kumar, Founder of Innove Intellect on 20/5/2020, [\(66\)](#)

[Patent filing procedure for startups - YouTube](#)

2 days online training program on IPR, Dr. Amrish Chandra, AUUP on 2/7/2020 and 3/7/2020, [Two-day online training programme on IPR commences at Amity University \(cityairnews.com\)](#)

What University Inventors need to know about Patent Application? Dr. Amrish Chandra, AUUP on 25/7/2020

Biomimicry 101 and Biomimicry product design by Mr. Saurabh Mehta BioQ Eco Solutions on 21/5/2020,
[\(66\) biomimicry 101 - YouTube](#)

Start-up and IPR Workshop-Dr. BK Sahu, Regional Manager and Head, NRDC - IPFC, Dr. Syed Abdullah, Director and Patent Attorney ELVINNOV IP, Mr. Abhay Sharma, Founders, ANDERSON 23/12/2020
[startupexpoPoster.pdf \(amity.edu\)](#)

- The aim and objective to organise the Workshops/ Seminars is to share learning and best practice from thought leaders and experts. The focus was on the university inventors, start-ups, industries and Technical Institutes in and around Delhi NCR to make them aware about the building the strong foundation of the business, patent filing procedures, Overview on IPR and integrating IP tool for R&D and University Innovation and Indian perspective for technology transfer and commercialization.
- These seminars were attended by a focussed group of 50 participants to a bigger group of 2000 participants across the globe on various platforms. A lot of queries were raised during the sessions by the participants and were immediately answered.
- Future goal of TEC will be conduct next Workshops/Seminars with a focus on revenue generation, with area specific experts inviting a selected group of participants who would like to be a successful entrepreneur.

Methodology to prioritize the technology for enabling under TEC

Identify the current demand and need of the market



Scrutinize the patent and prioritize the technologies for development



Assess Technology Readiness Level (TRL)



Matching of Industry with related technology



Enable the technology as per industry need

- CoronaX - A deep convolutional neural network model for reliable detection of SARS- related coronavirus (COVID-19)
- Anti-viral herbal inhaler having nano-gold based herbal formulation
- A portable ventilator system with varied sensing modes
- An antimicrobial face mask using nanoparticle coating



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