

**KONGU ENGINEERING COLLEGE, PERUNDURAI, ERODE 638 060**

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**Technical Session 5 – Agri- food waste: Present insight and future challenges**

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Sustainable utilization of agri food wastes and byproducts for producing value added products (for cosmetic, pharmaceutical or food industrial applications) provides an opportunity for earning additional income for the dependent industrial sector. Besides, effective valorization of wastes/byproducts can efficiently help in reducing environmental stress by decreasing unwarranted pollution. The major focus is to provide comprehensive information on valorization of agri food wastes and byproducts with focus laid on bioactive compounds and bioactivity. This, covers the bioactive identified from wastes and byproducts of plants (fruits, exotic fruits, vegetables and seeds), animals (dairy and meat) and marine (fish, shellfish seaweeds) resources. It is evident that agri food wastes and byproducts presents wide opportunity for isolation of natural bioactive compounds with possible potential applications in the food, pharma and cosmeceutical industries. Fibre extracted from wastes and by products can find potential applications in food application as a low-calorie bulking agent useful as a flour or fat replacer or to improve water and oil absorption and other functional properties and viscosity or as a natural ingredient to provide oxidative stability and enhance the shelf life of foods. Use of wastes as source of prebiotic oligosaccharides will be an interesting arena to be explored. Utilizing agri-food wastes and byproducts (rich in pectin, fibre, lignin, cellulose and hemi cellulose) for producing novel biodegradable bioplastics is another arena that needs to be investigated. Finally, improving and optimization of the isolation, extraction, processing and production processes of agri food wastes and byproducts via a sustainable approach is the need of the hour.

