

## **DBT-CIAB scientists find a new way to valorise spent aromatic biomass**

A group of researchers from the department of biotechnology's Centre of Innovative and Applied Bioprocessing (DBT-CIAB), Mohali have found a solution to valorize spent aromatic biomass, which otherwise creates environmental pollution. The biomass was directly used as a feedstock to produce platform chemicals including xylose, levulinic acid, and lignin. In order to produce such chemicals a sustainable approach was followed. The green approach was followed via recyclability of the reaction system and use of water as a solvent. Xylose, levulinic acid, and lignin were isolated in good yields upon treatment of spent aromatic biomass with p-cymene-2-sulphonic acid. Chemical processing of palmarosa biomass with p-CSA under heating conditions produced xylose in ~16% yield. Further treatment of biomass with p-CSA in presence of aq. HCl under reflux conditions resulted in selective degradation of cellulose to levulinic acid (~22% yield) following isolation of lignin. This approach is promising for commercialization to produce xylose, levulinic acid and lignin from spent aromatic biomass.

The work was led by Dr. Bhuwan Bhushan Mishra and coworkers and the work was recently published in Bioresource Technology in 2019 [Bioresource Technology, 2019, 293, 122105].

Contact person and address:

Chief Executive Officer (Attn. Dr. Bhuwan Bhushan Mishra), CIAB, Mohali,

Email: [ceo@ciab.res.in](mailto:ceo@ciab.res.in) Phone: 01725221400