Hydrophobic Deep Eutectic Solvent for Remediation of Antifugal and Antiobiotics in Waste water

- \triangleright Molecular Dynamics study of the stability of menthol and N_{4444} cl based DESs in presence of water
- > Study of extraction of nitenpyram (pesticide) from water with menthol-based DES

Hydrophilic DES Results and outcomes HBA Nitenpyram - NIT(O1)-OCT(H51) - NIT(O1)-DLM(H35) - NIT(O1)-WTR(H57) 2.5 Octanoic acid MSD (A²) DL-Pyruvic acid **a**1.5 **Butanoic** acid Acetic acid menthol **Tetrabutylammo** nium chloride Hexanoic acid Levulinic acid **HBD Water-stable DES HBD HBA** Octanoic acid Nitenpyram-DL Menthol Nitenpyram-Octanoic acid 0.8 Average H-Bonds Decanoic acid DL-menthol **Dodecanoic acid** Time (ns)

Current Status

- The study of the other various hydrophobic DESs are to be carried out and their properties in different environments needs to be analyzed.
- The extraction of fluoroquinolones and antifungals such as ciprofloxacin and fluconazole is being carried out both experimentally and with MD simulation