**Thermophiles for Biofuel Production**

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**Abstract:** The increasing population and reducing energy reserves had been the driving force behind the quest for finding renewable and sustainable energy sources. Using food based substrates, for example corn, sugarcane etc., to produce energy alternatives though can provide a solution for the energy resource depletion, but also sparks the fuel vs. food debate. Hence, it is essential to develop bioprocesses that can produce biofuel from non-conventional substrates that are economical, abundantly and ubiquitously available, and do not compete with the human or animal feed. Thermophiles can improve the biofuel production using non-conventional substrates due to their ability to produce thermostable hydrolytic enzymes. In this talk, I will present some results from our work on ethanol and biohydrogen production by thermophiles using lignocellulosic biomass. The talk will include the optimization studies for increasing enzyme production and co-culture studies of thermophilic organism to increase the yield of biofuel production.

**Biography**: Mohit Bibra recently completed his Ph.D. at South Dakota School of Mines and Technology. He received his Bachelor’s and Master’s (Hons. Science) degree in Microbiology from Panjab University, India. His research interests centers around 5F’s- fermentation, food, feed, fuel and functional molecules. He has published 4 research articles and 4 book chapters. He was awarded first prize in Engineers Make Great Entrepreneurs and was also awarded ‘Outstanding Student Organization Member’ in 2015 at SDSMT. He has held the position of Department representative and Student Representative in the Central Placement Cell at Panjab University, Chandigarh (2010), and Vice President, India Club at SDSMT (2016). He has also completed 2 industrial internships at GlaxoSmithKline ltd., India and Bayer LLC., USA. He currently also serves as a reviewer for Bioresource Technology and IEEE.

**When: Tuesday, November 27, 2018 at 4:00 pm**

**Where: EP252**