

Internal Seminar

Towards the understanding of thermostability of Cytochrome P450 (CYP175A1) enzyme by NMR

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Cytochrome P450 monooxygenase refers to major group of drug metabolizing enzymes in human. Cytochrome P450(CYP175A1) is highly thermostable. Their flexibility in catalytic sites and membrane association play important roles in substrate binding. Many of these reactions are difficult to achieve synthetically and produce products with great medical and industrial importance. Hence, there is a great interest in understanding the catalysis by these proteins. Therefore we sought to understand the structural features of CYP175A1 and its enhanced thermo-stability. The first step in this is to prepare high yield expression isotopically labeled protein ($^{13}\text{C}/^{15}\text{N}$) and analysis of their substrate binding structure by using the solution and solid-state NMR and to study the key differences of thermostable P450 protein with non-thermostable.

Friday, Jun 10th 2016

2:00 PM (Tea/Coffee at 1:45 PM)

Seminar Hall, TCIS