



The Southern California Drug Metabolism Discussion Group
Presents:

Why Is The Liver Microsomal Cytochrome P450 Such A Versatile And Unique Enzyme?

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Unlike traditional, well-behaved enzymes, liver microsomal cytochrome P450 has very broad substrate specificity, low turnover rate, poor coupling in catalytic cycle and other unusual properties. What structural features of cytochrome P450 contribute to the uniqueness and versatility of this group of enzyme? A spacious and flexible active site of liver microsomal P450 can accommodate large number of drug substrates. The considerable mobility of substrates at the P450 active site makes it possible for the enzyme to generate multiple metabolites from a single substrate. The active oxygen species generated during catalysis at the heme iron are powerful oxidants, capable of catalyzing carbon and heteroatom oxidation and other reactions. Lack of complementary binding of substrates to the P450 active site contributes to the low turnover rate and poor electron transport efficiency. The interaction of camphor and CYP101 (P450cam) will be used to illustrate the importance of complementary substrate-enzyme interaction in catalysis and to contrast the properties of P450cam and the liver microsomal cytochrome P450.

Wednesday, September 12, 2007

5:00 pm: Registration and Buffet Dinner

7:00 pm: Presentation Begins

Salk Institute for Biological Studies, Frederic de Hoffmann Auditorium
10010 North Torrey Pines Road

Price: \$15 Registration (includes buffet dinner and soft drinks / beer / wine)

The SCDMDG was established in 2003 as a forum for Southern California scientists working in drug metabolism in both academic and industrial settings to meet and discuss issues and share information for the public good.



Space is Limited— Please Register Early to Guarantee Your Attendance!

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5310 Eastgate Mall, San Diego, CA 92121

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