

binding of TATA-binding protein (TBP) and its association with p65. More importantly, TPA-induced activation of ERK1/2 resulted in increased interaction of p65 with TBP. These findings suggest that genistein inhibits COX-2 expression and PGE₂ production in MCF10A cells by indicating the transcriptional initiation complex that involves TBP.

[OC-3] [10/18/2002 (Fri) 16:20 - 16:30 / Hall B]

A new mechanism for unsaturated fatty acid biosynthesis in *Streptococcus pneumoniae*

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The anaerobic pathway for unsaturated fatty acid biosynthesis was established in the 1960s in *Escherichia coli*. The double bond is introduced into the growing acyl chain by FabA, an enzyme capable of both the dehydration of β -hydroxydecanoyl-[acyl carrier protein] (ACP) to trans-2-decenoyl-ACP, and the isomerization of trans-2 to cis-3-decenoyl-ACP. However, there are a number of anaerobic bacteria whose genomes do not contain a fabA homolog, but these organisms nonetheless produce unsaturated fatty acids. We cloned and biochemically characterized a new enzyme in type II fatty acid synthesis from *Streptococcus pneumoniae* R6 that carries out the isomerization of trans-2-decenoyl-ACP to cis-3-decenoyl-ACP, but is not capable of catalyzing the dehydration of β -hydroxy intermediates. This tetrameric enzyme, designated FabM, has no similarity to FabA, but rather is a member of the hydratase/isomerase superfamily. Thus, the branch point in the biosynthesis of unsaturated fatty acids in *S. pneumoniae* occurs following the formation of trans-2-decenoyl-ACP, in contrast to *Escherichia coli* where the branch point takes place after the formation of β -hydroxydecanoyl-ACP.

[OD-1] [10/18/2002 (Fri) 11:30 - 11:40 / Hall B]

Novel Asymmetric Synthesis of Unsaturated 1,2-Amino Alcohols

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The synthesis of chiral 1,2-amino alcohols has been an area of intense study in the synthetic and industrial fields, because of their important roles in organic synthesis as fundamental building blocks and their occurrence in a number of natural products, drugs, and chiral auxiliaries or ligands. General methods for the synthesis of these compounds can be divided into two large categories: functional group transformations and the C-C or the C-N bond formations. Of these two methods, the former has been used widely so far, including the reduction of α -amino acids, α -amino ketones or α -hydroxy imines, the nucleophilic substitution of 1,2-diols, epoxides, aziridines, cyclic carbonates or cyclic sulfates, the aminohydroxylation or oxymecuration of olefins and the hydroboration of enamines. The latter involves the addition of an organometallic reagent to the N-protected α -amino aldehydes or to the O-protected α -hydroxy imines and coupling of carbanions with imines. Many of these procedures sometimes have one or more problems, for example, low stereoselectivity, limited applications and the use of heavy metals.

Recently, we have developed the novel synthetic methods for N-protected allylic amines from allyl ethers using chlorosulfonyl isocyanate (CSI), we found that the reaction of 1,4-diphenylbut-2-enyl methyl ether with CSI gave only one product, methyl N-(1-benzylcinnamyl)carbamate, due to the steric hindrance of the phenyl ring and the formation of a stable conjugated product.