

Wednesday 8 June 2011

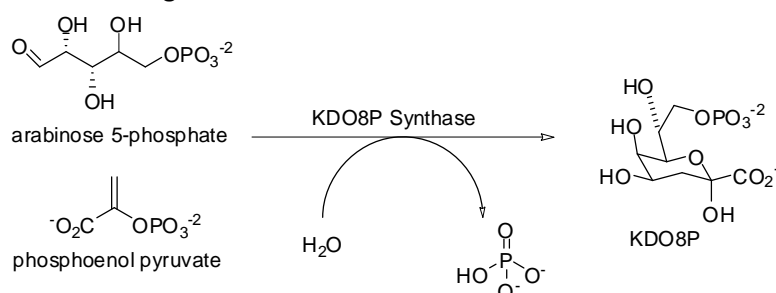
11.00 am Room 531

Aidan Harrison

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"Investigations into the Inhibition of 3-Deoxy-D-manno-Octulosonate 8-Phosphate Synthase"

The enzyme 3-deoxy-D-manno-octulosonate 8-phosphate (KDO8P) synthase catalyses the aldol condensation of the five-carbon sugar phosphate, arabinose 5-phosphate (A5P), and phosphoenol pyruvate (PEP) to give the eight-carbon sugar, KDO8P. It is the second committed step in the synthesis of KDO, a necessary component of the cell wall of Gram-negative bacteria. The KDO biosynthetic pathway is not found in mammalian systems making it an attractive target for inhibition.



This talk will describe the purification and partial characterisation of two KDO8P synthase enzymes from two different bacterial sources, and the inhibition studies undertaken on these enzymes by a variety of single- and dual-site inhibitors, in order to gain information about the mechanism and inhibition of KDO8P synthase.