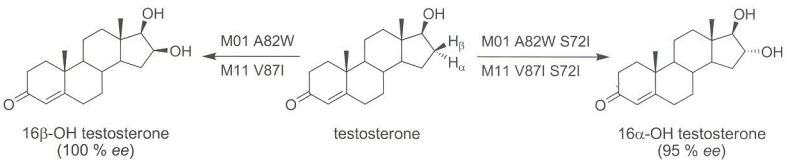
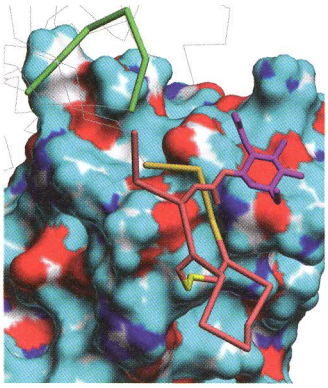
*H. Venkataraman, S. B. A. de Beer, L. A. H. van Bergen, N. van Essen, D. P. Geerke, N. P. E. Vermeulen, J. N. M. Commandeur**



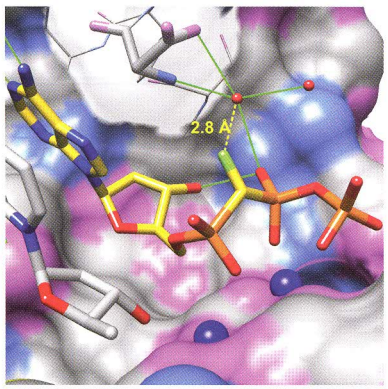
Inversion of stereoselectivity: screening of a minimal mutant library revealed a cytochrome P450 BM3 variant M01 A82W S72I capable of producing 16α-OH-testosterone. Remarkably, a single active site mutation S72I in M01 A82W inverted the stereoselectivity of hydroxylation from 16β to 16α. Introduction of S72I mutation in another 16β-OH-selective variant M11 V87I, also resulted in similar inversion of stereoselectivity.

*D. Wilhelm, H. N. Behnken, B. Meyer**



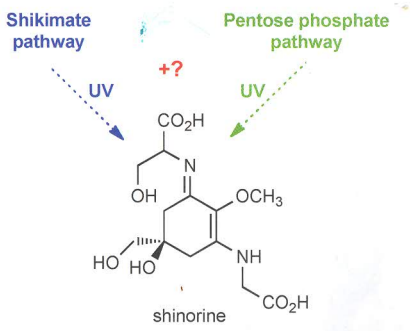
The role of glycosylation of proteins on its binding affinity is not well understood. Even a monosaccharide (magenta) placed at a glycosylation site can significantly enhance binding of peptides to their receptor. If glycosylated, an HIV protein binds stronger and faster to its primary receptors on human cells.

B. T. Chamberlain, V. K. Batra, W. A. Beard, A. P. Kadina, D. D. Shock, B. A. Kashemirov, C. E. McKenna, M. F. Goodman, S. H. Wilson**



The influence of water: Crystallization of (*R/S*)-α,β-CHF-dATP with the preorganized pol β-DNA complex shows that (*S*)-α,β-CHF-dATP is preferentially bound to the active site with the C–F fluorine proximal to a structural water bound to Asp276.

*E. Spence, W. C. Dunlap, J. M. Shick, P. F. Long**



Route of the sun block: According to empirical evidence, sun-screening mycosporine-like amino acids (MAAs) in Eukarya originate from the shikimic acid pathway, whereas in cyanobacteria, biosynthesis of the MAA shinorine reportedly occurs through the pentose phosphate pathway. However, gene deletion shows that the cyanobacterium *Anabaena variabilis* ATCC 29143 does not biosynthesise shinorine exclusively by this route.

