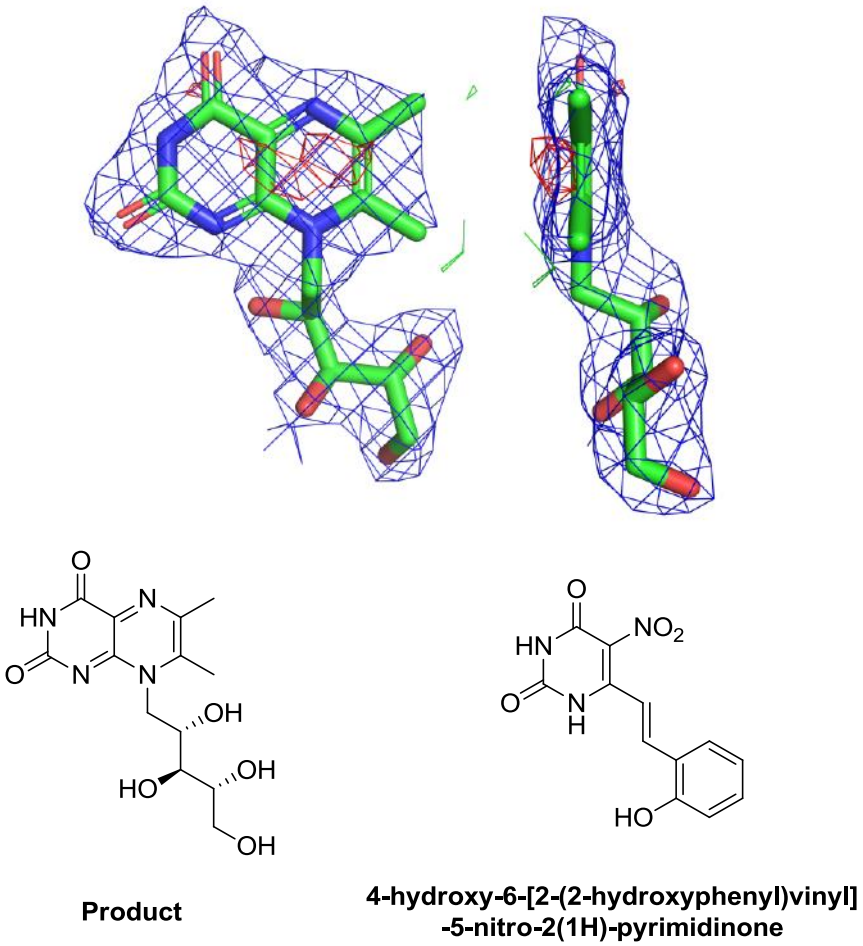

Supplementary Fig. 1: ***Top*** Electron density maps for the product molecule in chain C of data set 2 (inhibitor cocrystallisation; $2F_o$-F_c in blue contoured at 1σ, negative F_o - F_c in red contoured at -3σ, positive F_o - F_c in green contoured at 3σ within 1.6 Å), second representation is rotated 90°. ***Bottom*** Chemical structure of the catalytic product 6,7-dimethyl-8-(D-ribityl)lumazine and the commercially available, weak binding inhibitor (K_i = 210 µM vs *S. pombe* and 95 µM vs *M. tuberculosis* LS (Talukdar *et al.*, 2009)) used for initial co-crystallisation studies.

Talukdar, A., Breen, M., Bacher, A., Illarionov, B., Fischer, M., Georg, G., Ye, Q. Z. & Cushman, M. (2009). *J Org Chem* 74, 5123-5134.