

Supplementary data 5. *Evolution of new functions with cis-trans conversions.* (A) The structure of Beta Keto Acyl ACP Synthase III (yellow) (Qiu et al. 2001) bound to Coenzyme A (CoA). The location of the *cis* peptide (GF) is highlighted. (B) A similar fold 3-hydroxy-3-methylglutaryl-CoA (HMG-CoA) synthase (green) (Theisen et al. 2004), bound to CoA.

