

Design of novel semisynthetic metalloenzyme from thermolysin

ABSTRACT

Initial applications of biocatalysis involved the use of naturally occurring enzymes. With new challenges in green chemical reactions, biocatalysts that shed light is metalloenzyme, which function as enzymes and contain metal that are tightly attached and always isolated with the protein [1]. In recent years, enzyme engineering has proven to be an invaluable tool for elucidating biocatalytic mechanisms as well as producing enzymes for industrial purposes. Approaches developed for *in vivo* chemical modification and *in silico* computational methods promise to increase the scope and have already been used successfully to alter existing proteins so that they have better stability and functionality [2]. This task might be good to address in designing a new biocatalyst with improved properties.

Keyword: biocatalysis, metalloenzyme, enzyme engineering