

## **Engineering the functional fitness of transglycosidases and glycosynthases by directed evolution**

### **Abstract:**

The artificial implementation of the Darwinian theory of evolution to create new variants of functional proteins, a process referred to as directed evolution, has acquired many applications in biochemical engineering. Directed evolution is a handy tool in the nascent science of glycobiology, where it is used in the conversion of glycosyl hydrolases into transglycosidases or for improving the transglycosylation behaviour of glycosynthases. This review focuses on recent applications of the directed evolution approach to harness the transglycosidase potential of glycosidases and to enhance the functional fitness of glycosynthases