عنوان مقاله:

In Silico Determination and Validation of FptA Structure and Ligand Binding Site as a vaccine candidate in Pseudomonas aeruginosa

محل انتشار:

کنفرانس بین المللی مهندسی و علوم کاربردی (سال: 1394)

تعداد صفحات اصل مقاله: 17

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خلاصه مقاله:

Iron is an essential element for most living organisms. In mammalian hosts, iron is bound to proteins (hemoglobin, myoglobin, etc.) or stored within high-affinity iron molecules (transferrin, lactoferrin). Some of the bacterial pathogens release siderophore molecules in the external environment that scavenge iron from the proteins of the host and make it available for the bacteria. Iron–siderophore complexes are recognized by specific receptors embedded in the outer membrane. It has been shown that Pseudomonas aeruginosa (an opportunistic bacterium infecting a broad range of organisms) releases two major siderophores, which act also as virulence factors, i.e. pyochelin (Pch) and pyoverdine (Pvd). In comparsion with the Pvd and its outer membrane receptor FpvA, Pch transport and its receptor FptA (Mr: 75,993 Da) has been studied much little. Due to the important role of Pseudomonae in human infections, we have carried on the structural studies of FptA.

کلمات کلیدی:

pyochelin receptor, FptA, Pseudomonas aeruginosa