Isolation of Catecholate siderophore from novel marine bacterium *Marinobacter* sp. SVU3

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ABSTRACT

Iron is an essential micronutrient required for bacterial growth. Many enzymes and proteins necessary for replication and other metabolic pathways require iron to function. However, iron concentration in marine environment is not adequate. To overcome this limitation, marine bacteria produces low molecular weight protein molecules known as "siderophores", which act as iron chelators. In this work, Catecholate type of siderophore produced from marine bacterium *Marinobacter* Sp. SVU3 was isolated from marine water collected from Gosthani Estuary region, Visakhapatnam, India. Novel *Marinobacter* Sp. SVU3 is halotolerant, rod shaped and Gram-negative bacteria. The 16S rRNA characterization of SVU3 strain showed closest homology with *Marinobacter hydrocarbonoclasticus*. Succinate Medium was used for the siderophore production. Chrome Azurol Sulphate (Universal assay) was used for screening of siderophores. Catecholate siderophore was confirmed by Arnow's and Ferric chloride tests.

Keywords: Siderophore; catecholate; *Marinobacter* sp.

ISBN: 978-81-947843-4-0; DOI: 10.21467/abstracts.109