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(71) Name of Applicant :

1) DR. HEMAPRIYA J

Address of Applicant : PG & RESEARCH DEPARTMENT OF MICROBIOLOGY, D.K.M COLLEGE OF WOMEN (AUTONOMOUS), D.K.M COLLEGE ROAD, VELLORE, TAMIL NADU, INDIA - 632001. -----

2) MANJULA D

3) DR. VIJAYANAND S

Name of Applicant : NA

Address of Applicant : NA

(72) Name of Inventor :

1) DR. HEMAPRIYA J

Address of Applicant : PG & RESEARCH DEPARTMENT OF MICROBIOLOGY, D.K.M COLLEGE OF WOMEN (AUTONOMOUS), D.K.M COLLEGE ROAD, VELLORE, TAMIL NADU, INDIA - 632001. -----

2) MANJULA D

Address of Applicant : NO.29/A, D.K.M COLLEGE ROAD, VELLORE, TAMIL NADU, INDIA - 632001. -----

3) DR. VIJAYANAND S

Address of Applicant : BIORESOURCE TECHNOLOGY LAB, DEPARTMENT OF BIOTECHNOLOGY THIRUVALLUVAR UNIVERSITY, VELLORE, TAMIL NADU, INDIA - 632115. ---

(57) Abstract :

Abstract This study used solar salterns samples, such as solar salts and sun dried salted fish, to isolate a pigmented halophilic bacterial strain of *Salinococcus salsirae* (MP-4). Solar salterns are one of the extreme environments contain high NaCl concentration which provide the environmental conditions suitable only for specially adapted halophiles. Halophiles belong to all three domains of life and are classified into three groups based on their need for NaCl for survival: slight halophiles, moderate halophiles, and extreme halophiles. Their natural behaviour in high salinity regions has provided them with a number of novel elements and mechanisms that can be used in a wide range of applications. Their pigments play an important role in different areas. Despite the fact that a vast area is dedicated to salt production, little is known about the halophilic biodiversity in Indian salterns, particularly the current study site (Marakkanam, salt pan, and sun-dried salted fish sample). As a result, the current study focuses on the isolation and identification of a novel halophilic chromogenic bacterial isolate and its novel pigment production.

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