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## Isolation of Novel Thermotolerant $\beta$ -agarase Producing *Agarivorans* sp.

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Thermotolerant or thermophilic agarase is useful for the production of functional oligo-saccharide from agar. Novel thermotolerant  $\beta$ -agarase producing bacterium was isolated near Jeju island and named as *Agarivorans* sp.1 JA-1 after 16S rRNA gene sequencing, biochemical and morphological characteristic investigation. Novel *Agarivorans* sp.1 JA-1 expressed agarase with or without agar and it's production pattern was growth-related. Agarase activity was maximum at pH 8.04 in 50 mM Glycine-NaOH buffer and optimum temperature was 40°C. Agar-degrading activity was maintained over 80% at 60°C and 70% at 80°C. Hence isolated novel *Agarivorans* sp. JA-1 strain and its thermotolerant  $\beta$ -agarase could be used for the production of functional agaro-oligosaccharide from agar in solution state with high efficiency.

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