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Review

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Unconventional Approaches to Isolation and Enrichment of Functional Microbial Consortium - A Review

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ABSTRACT

Studies on how different functional strains interact in a microflora may include isolation of pure strains using conventional plating technique and then mix a few of the isolates before observing their growth in specific medium. As isolating pure strains that take part in the key function of industrial effluent purification via conventional method is impractical, convenient alternative approaches to screen essential microbial group that maintains desired function of a mixed population is desired. Such approaches can be employed to allow the selection and enrichment of so-called functional consortium with user-defined attributes for specific functions. This manuscript provides a review of various approaches to isolation and enrichment of microbial functional consortium in several biological processes. Consideration for the isolation and enrichment approaches and their applications are delineated. Challenges to the applications and further work are also outlined.

Keywords: enrichment; functional consortium; isolation approach; selection pressure; strains

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