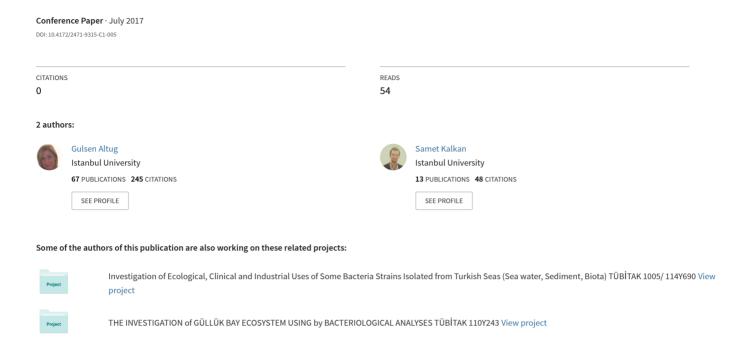
Occurrence and Distribution of Bacillus Species in Turkish Marine Environments



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July 17-18, 2017 Munich, Germany

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Sessions

Day 2 July 18, 2017

Microbial Ecology | Environmental Microbiology | Microbial Diseases and Epidemiology | Microbial Biotechnology | Bioremediation | Plant-Microbe Interactions | Soil Microbiology | Probiotics-Prebiotics Research

Session Chair Andreas Vilcinskas University of Giessen, Germany

Session Introduction

Title: Occurrence and distribution of Bacillus species in Turkish marine environments

Gulsen Altug, Istanbul University, Turkey

Title: Histopathological study for the effect of Intra -peritoneal (I.P) and subcutaneous (S.C)

infection with different doses of Pasteurella multocida in Swiss mice

Waffa A Ahmed, University of Baghdad, Iraq

Title: An ecologist's perspective on sexually transmitted diseases (STDs): Host manipulation

by STD agents as an explanation of silent infection modes and behavioral changes in

HIV-infected MSM

Martin Heil, CINVESTAV Irapuato, Mexico

Video Presentations

Session Introduction

Title: Probiotics reduce DGAT1 and lipid profile that involved in chronic hepatitis C virus progression

Maii M Nabieh, Tanta University, Egypt

Title: Biotic and Abiotic Factors Influence formation and ontogenic dynamics of the lake

sturgeon and channel catfish larval gut microbiome

Shairah Abdul Razak, The National University of Malaysia, Malaysia

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Gülşen Altug et al., Appli Micro Open Access 2017, 3:2(Suppl)

DOI: 10.4172/2471-9315-C1-005

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Occurrence and distribution of Bacillus species in Turkish marine environments

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Although *Bacillus* species are isolated in both terrestrial and marine environments, marine bacilli display more effective metabolically peculiarities depending on the specific environmental conditions of marine habitats. While *Bacillus* species play a significant role in biogeochemical recycling processes of metal salts, some of them described as potential biocontrol agents. In this study, occurrence and distribution of *Bacillus* species were investigated using culture-dependent and independent methods in the sea water samples taken from various marine areas of Turkey in different periods between 2000 and 2016. Variable environmental parameters; temperature, salinity, conductivity, pH and dissolved oxygen were recorded *in-situ*. The members of Bacillaceae were identified using both culture dependent methods; VITEK compact 30 micro identification system and molecular methods; bacterial DNA isolation, real time PCR (Q-PCR), PCR product purification, DNA sequence analysis and phylogenetic analysis. Micro-geographical distribution of *Bacillus* species and environmental variables were determined. The most common species were recorded to be B. flexus. Besides, *Bacillus cereus*, *B. thuringiensis*, *B. pumilus*, *B. firmus*, *B. mycoides*, *B. megaterium*, *B. oceanisedimini*, *Geobacillus stearothermophilus* showed high frequency of occurrence. The metabolic characteristics and color, spore-forming forms and resistivity frequencies against heavy metal salts of the strains have been shown that marine bacilli isolated from the marine areas have significant potential for possible biotechnological applications such as remediation of heavy metal polluted areas, can be used as a source of natural carotenoids and bio-drugs.

Biography

Gulsen Altug (Prof. Dr.) is a Professor and Marine Microbiologist in the Department of Marine Biology of the Fisheries Faculty at Istanbul University. Her research focuses on marine bacteriology, including bacterial diversity and micro-geographical variations, clinical, industrial and ecological uses of marine isolates, bacterial pollution, epibiotic bacterial communities and anti-bacterial characteristics, bacterial remediation (oil degrading capacity of marine isolates), and resistant bacterial isolates against heavy metals and antibiotics. She is also the Inventing Founder of the biotechnology start-up company named Biyotek15 R&D Training and Consulting Industry and Trade Ltd. Company in Entertech of Istanbul University Technocity.

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