



# BioRemid2019

*2<sup>nd</sup> International Meeting  
on New Strategies in  
Bioremediation Processes*

**BOOK OF ABSTRACTS**



PORTO | 24-25<sup>th</sup> October 2019

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**Bioremediation of petroleum hydrocarbons by fungi of the genus *Aspergillus* PC 85  
in different compartments**

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**Key words:** *Aspergillus*, biodegradation, petroleum hydrocarbon, pollution, salinity.

### Abstract

The fungi of the genus *Aspergillus* are found in the most diverse terrestrial compartments. These microorganisms are often found in sites contaminated with petroleum hydrocarbons [1] and can achieve removals of these pollutants up to 86% [2] or even higher, which depends on factors such as compound and concentration involved, species and conditions such as pH, temperature, and salinity, among others [3]. In a search conducted in the sciencedirect.com database using the keywords "fungi, degradation, hydrocarbon and petroleum", "fungi, degradation and PHA" and "fungi, degradation and BTEX", 33, 4 and 1 publications were found. Of these, in 55% (21) was referred species of the genus *Aspergillus* involved in the degradation of compounds present in petroleum and its derivatives. There has been a substantial increase in these studies in the last 4 years, with Mexico, Brazil and Nigeria as the countries with the highest number of publications. Most of the *Aspergillus* species were directly isolated from the soil (50%), possibly due to the greater ease of access to this compartment, followed by wastewater (13.6%) and less from mangrove isolation (9.1%) and in seas and marine sediment (9.1%). However, species from micro-collections are often used (9.1%). Although the main origin of the strains employed came from the soil, most of the degradation studies occurred in aqueous medium (76.2%). Less emphasis has been placed on the study of bioremediation of these compounds in the marine environment, so that only 19% of the articles sought to evaluate the potential degradation of petroleum hydrocarbons under the effect of salinity, a factor of great relevance considering the high incidence of oil spillage in the sea, which indicates a promising bioremediation research area.

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