Isolation of Petroleum Degrading Filamentous Fungi in Iriomote (Japan) and Con Dao (Vietnam) Islands by Cong D.P. Doan, Yoshi Terashima (Tropical Biosphere Research Center, University of the Ryukyus)

Oil and gas activities have affected significantly to environment, especially marine and coastal environment. A large amount of them caused enormous environmental consequences when affected to sensitive areas. Bioremendation is one of the most useful technique for hydrocarbon cleanup and the main microorganisms consuming petroleum hydrocarbons are bacterias and fungi. However, the filamentous fungi possess some attributes that enable them as good potential agents of degradation such as spread quickly on the environment, digesting substrates by extracellular enzymes and being able to grow under environmental conditions of stress. Therefore, the objective of the study was to isolate and characterize the petroleum-degrading filamentous fungi from Iriomote (Japan) and Con Dao (Vietnam) Islands. These study areas stand for subtropical and tropical climate areas respectively. Total 24 samples including 16 sediment samples and 8 seawater samples were collected in the two study areas. The results showed that the number of petroleum-degrading filamentous fungi in Iriomote were higher than those in Con Dao. However, the number of isolated strains in Con Dao were higher. There were 13 and 18 strains were collected in Iriomote and Con Dao respectively. Some well-known oil-degrading fungi such as Aspergillus, Penicillium, Tricoderma are also presented in study areas.