# *Comparative monitoring of dominant symbiont clades of Symbiodinium in reef-building corals of eastern Kish Island, Persian gulf*

*Mona Fard Yazdani*[*1], *Pargol Ghavam Mostafavi*[2], *Muhammad Hassan Shahhosseiny*[3,4]

1. *Marine Biologist, MSc. Marine Biology Department, Marine Science and Technology, Science and Research Branch, Islamic Azad University, Tehran\Iran.*
2. *Marine Biology, PhD. Assistant Professor. Marine Biology Department, Marine Science and Technology, Science and Research Branch, Islamic Azad University , Tehran\Iran.*
3. *Biotechnologist, PhD. Associate Professor. Microbiology Department, Share Qods Branch, Islamic Azad University, Tehran\Iran.*
4. *Iranian Gene Fanavar Institute (IGF), Tehran\Iran.*

## *Abstract*

***Aim and Background:*** *Symbiodinium is a unicellular biflagellate alga that performs symbiosis with certain invertebrates. Different clades of Symbiodinium show variety of physiological features that could have uneven affect on the hermatypic corals stability and survival in various environmental conditions and geographical locations. In this study, Clades of symbiotic zooxanthellae of hermatypic corals of eastern Kish Island were compared to samples taken in 2007.*

***Materials and Methods:***

*Samples were taken at depth of 2 to 5 meters from 5 coral species including Acropora arabiensis, Platygyra daedalea, Porites compressa, Acropora downingi and Psammacora contigua. Coral colonies were air brushed in order to separate Symbiodinium cells. DNA was extracted using CTAB-Chloroform method. LSU (Large Subunit Ribosomal DNA) region was used as target for amplification. Finally PCR products were sequenced.*

***Results:*** *Results did not show any difference between Corals' symbionts and the study in the area during 2007. None of the studied coral species have switched or shuffled their symbionts populations.*

***Conclusion:****Taking into account inhospitable condition and shallowness of eastern parts of the Kish Island, presence of clade D might be an adaptive or acclimatized response due to dominant regional condition.*

***Keywords****: Kish Island, Symbiodinium, Hermatypic Corals, Acclimatization, Sequencing*



[ DOR: 20.1001.1.22285458.1393.4.16.8.7 ]

[*] *Corresponding author:*
*Address: Marine Biology Department, Marine Science and Technology, Science and Research Branch, Islamic Azad University, Tehran, Iran, 09125047937*
*Email: M.fardyazdani@gmail.com*