

## Confirmation of Noroviruses Existence in Different Tissues of the Persian Gulf Oysters by Reverse Transcription-PCR

Mahsa Khanyaghma\*<sup>1</sup>; Seyed Reza Mohebbi<sup>2</sup>; Pargol Ghavam Mostafavi<sup>1</sup>; Tooraj Valinasab<sup>3</sup>; Sara Romani<sup>2</sup>; Saman Milanizadeh<sup>2</sup>; Pedram Azimzadeh<sup>2</sup>; Shaghayegh Derakhshani<sup>2</sup>

1- Department of Marine Biology, Science and Research Branch, Islamic Azad University, Tehran, Iran

2- Gastroenterology and Liver Disease Research Center, Shaheed Beheshti University, Tehran, Iran

3-Iranian Fisheries Research Organization, Tehran, Iran

romani.sara@hotmail.com

**Background & Objectives:** Noroviruses are common causes of acute gastroenteritis in human that enter the host via fecal-oral route and often hosts infected with sewage contaminated food or water. Oysters known as one of the most important food source of viral infection in humans. The aim of this study was to evaluate different organs of the Persian Gulf oysters for contamination by reverse transcription-PCR (RT-PCR).

**Methods:** The present study was carried out on two species of oysters (*Saccostrea cucullata* & *Solen rosemaculatus*). The oysters were infected in amount of water contaminated with norovirus stool sample in three periods of 14, 19 and 24 hours in vitro. Oyster tissues including: mantle, kidney, hinge, digestive tissue, gill, gonad, rectum, foot, entry siphon and exit siphon separately were homogenized with routine Trizole Methods and RNA extraction were carried out by QIAGEN viral RNA mini kit. Finally analysis was conducted with cDNA preparation and polymerase chain reaction and confirmed by agarose gel electrophoresis.

**Results:** Amongst analyzed tissues on 14 hours, the norovirus was only detected in digestive tissue of *S. rosemaculatus* and on 19 hours norovirus aggregate in gill and digestive tissue of *S. rosemaculatus* and only in digestive tissue of *S. cucullata* and on 24 hours digestive tissue and gill of both species showed norovirus contamination.

**Conclusion:** Although these oysters are used as a dietary in south of Iran, analysis of possible contamination of these oysters through to prevention of norovirus caused gastroenteritis are important. This investigation can be considered as the first study in the Persian Gulf area.

**Keywords:** Noroviruses; Oysters; R T-PCR