



## Zoonotic Newemergent Viruses in Aquatic Animals

Ataei-Pirkooh A.\*<sup>1</sup>; Mehravi B.<sup>2</sup>

1-Department of Virology, Faculty of Medicine, Iran University of Medical Sciences, Tehran, Iran

2-Department of medical nanotechnology, Faculty of advanced technologies in medicine, Iran University of Medical Sciences, Tehran, Iran

\*Corresponding author's email: ataei.a@iums.ac.ir

### Abstract:

About 75% of emerging diseases have animal resources. On the other hand, the aquaculture is one of the most important food sources in nature, so the possibility of transmitting emerging diseases through aquatic animals is very important. For this reason, even wildlife parks and aquariums can survive emerging viruses. The aim of this study is to conduct a systematic review to summarize emerging human viruses that have also been observed in aquatic animals. In this systematic review, the articles of Pubmed and EMBASE databases from 2000 to 2020 were reviewed. A total of 45 articles were found with the main Keywords of this study, which were finalized and their findings were analyzed after classification. Most studies have been done on marine mammals. The results of this study showed that different species of influenza virus and the coronaviridae family that cause emerging diseases in humans are also pathogenic in these animals. Influenza A and B viruses have been isolated from marine mammals, and even their group suicide has been reported to be related to the influenza virus. Various viruses of the coronavirus family have also been found in marine mammals such as the whale and dolphin. Emerging viral diseases in humans are very important and often have animal reservoirs in nature, and during rotation in nature, they undergo genetic changes that cause problems in their treatment and control. Therefore, observing these viruses in aquatic animals can introduce them as a possible reservoir of the virus in nature.

**Keywords:** marine mammals, Zoonosis, newemerging viruses