

## **Molecular identification of H9N2 subtype of avian influenza A virus in wild and domestic ducks in Basrah province, South of Iraq**

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### **Abstract**

Influenza A viruses spread naturally among aquatic birds, especially the wild ones. The aim of the current study is to investigate the avian influenza virus subtype H9N2 in the wild and domestic ducks in different geographical areas of Basrah Governorate, namely Shatt Al Arab, Abu Al-Khaseeb, Az Zubayr, and Al Qurnah. The presence of the virus was initially investigated generally using a pair of universal primers by performing the reverse transcriptase polymerase chain reaction. Subsequently, the virus subtype H9N2 was detected in both bird species. The results showed that the overall prevalence of the virus, regardless of subtype, was 66%. The total percentage in wild ducks was 78.6%, which showed significantly higher values than what was in domestic ducks, where it was 52.8%. Regarding the spread of the virus according to geographical location, the percentage of viruses in wild ducks was comparable in all areas involved in the study, while in domestic ducks it was higher in the Al Qurnah region, northern Basrah Governorate, compared to the rest of the regions.

**Keywords:** Ducks, Influenza A virus, Hemagglutinin 9, Neuraminidase 2, Polymerase Chain Reaction, Basrah