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## **The Role of Veterinary Laboratories - Abu Dhabi Agriculture and Food Safety Authority (VLD-ADAFSA) in COVID-19 Pandemic in the United Arab Emirates**

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**Title:** The Role of Veterinary Laboratories - Abu Dhabi Agriculture and Food Safety Authority (VLD-ADAFSA) in COVID-19 Pandemic in the United Arab Emirates

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### **Abstract:**

#### **Introduction:**

The valuable experience gained in combating the middle east respiratory syndrome (MERS) outbreak in UAE in 2013 paved the way to a structured one-health approach enhancing preparedness and response capacities of Veterinary Laboratories - Abu Dhabi Agriculture and Food Safety Authority (VLD-ADAFSA) in responding to the national emergencies. During the early emergencies of the outbreak of coronavirus (COVID-19), the VLD-ADAFSA collaborated with the Department of Health -Abu Dhabi (DoH) to respond to the emergency. The VLD-ADAFSA joined in nation's public health response team as a frontline member on 05-02-2020.

#### **Method**

The VLD-ADAFSA has made several updates on the competency level of the technical personnel and laboratory equipment and ensured the labs' ability to address high-risk pathogens and respond to such emergencies safely. First, the routine animal samples were re-routed and transferred to other regional labs of ADAFSA to maintain business continuity. Work shifts for testing Covid-19 were increased to three shifts a day. A remote working plan was activated in sample registration, monitoring performance, KPI reports, continued procurement process, etc. Precautionary safety measures included daily disinfection of all laboratory premises and offices. The staff was vaccinated and regularly tested along with COVID-19 awareness facilities in line with DOH requirements in UAE.

#### **Results**

As a result, more than 79,942 human samples were analyzed with the capacity of analyzing samples up to 1,000 per day, and turnaround time (TAT) was reduced from 4 hours to 85 minutes. Moreover, VLD-ADAFSA analyzed 1,195 animal samples in addition to 2,419 environmental samples where positive human cases were detected. Furthermore, ADAFSA laboratory personnel participated with experts from the World Organization for Animal Health (WOAH) to develop a guide for veterinary laboratories worldwide, with the aim of addressing emergencies of COVID-19 and backing health entities in combating this pandemic.

#### **Conclusion:**

The veterinary laboratories of ADAFSA have supported the National Emergency Response by testing human, animal, and environmental samples for SARS-Cov2 and participated in the development of global guidelines and standards, which had a positive impact on combating the disease in the region and worldwide.

**Keywords:** veterinary, laboratory, pandemic, frontline, human samples