

WOAH Collaborative Centre Reports Activities 2022

Activities in 2022

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Centre Information

Title of WOA Collaborating Centre	Quality Management Systems
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Name Director of Institute (Responsible Official):	H.E. Saeed Albahri Salem Alameri , Director General
Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):	Asma Abdi Mohamed Shah, Division Director
Name of the writer:	Asma Abdi Mohamed Shah

TOR1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

Disease control	
Title of activity	Scope
	Development and activation of specialized diagnostic facilities (Genome sequencing techniques) for characterization of

Laboratory Capacity in Genome sequencing and Molecular Diagnosis and writing the Standard Operating Procedure	pathogens including Parapoxvirus, CCHFV, MERS-CoV, Brucella melitensis, Trypanosome evansi to enable the veterinary authority to set plans for the prevention and control of camel diseases
Disease control	
Title of activity	Scope
Isolation/identification of viruses, bacteria, fungi, and parasites and writing the Standard Operating Procedures	Several bacteria and viruses were isolated and characterized at the ADAFSA-CC including Brucella melitensis, Pasteurella multocida, Dermatophyte spp., Camel pox viruses, and MERS-CoV for the purpose of development and validation of diagnostic tests, increasing the scope of analysis, research and publication and vaccine development
Epidemiology, surveillance, risk assessment	
Title of activity	Scope
Development and validation of Pan-Theileria, and Real-Time PCR for Babesia spp. to detect all possible species in each genus in addition to serological techniques for the diagnosis of tick-borne diseases in livestock	To detect all possible species in each genus in addition to molecular serological techniques for the diagnosis of tick-borne diseases in livestock To conduct studies on molecular epidemiology of tick-borne haemoparasitic diseases in livestock in UAE with emphasis on emergence of tick resistance to acaricides application. Research and publication
Epidemiology, surveillance, risk assessment	
Title of activity	Scope
Validation of Pan-Flaviviruses Real-Time PCR	To early detect the Flaviviruses (Dengue virus, Zika, and Yellow Fever virus) diseases transmitted to humans by mosquitoes. This was done in response to the National Mosquito surveillance Program in UAE. Research and publication
Training, capacity building	
Title of activity	Scope
Training Workshop on Validation of Diagnostic Methods in Veterinary Laboratories October 24-25, 2022, Abu Dhabi- United Arab Emirates	ADAFSA-CC-QMS organized an international training on "Validation of Diagnostic Methods in Veterinary Laboratories". Onsite training was on laboratory quality aspects related to method validation of diagnostic tests with the following sessions: 1- Introduction to method validation of diagnostic procedures in Veterinary Laboratories in accordance with WOA. 2- Method validation of Brucella test by RBT 3- Method validation of Brucella test by Real-time-PCR 4- Method validation of Brucella test by ELISA Sixty delegates participated in this event including international delegates from KSA, Jordan & Egypt
Training, capacity building	
Title of activity	Scope
	As part of the contribution to knowledge sharing, continuous

Preparation of Histopathology Slide set	veterinary education, and developing competencies with national partners, a Histopathology Slide Set for teaching purposes of Veterinary Pathology prepared by ADAFSA-CC-QMS and was designated as intellectual property of ADAFSA-CC by the UAE Ministry of Economy
Training, capacity building	
Title of activity	Scope
Workshops & Training on Fish Disease Diagnosis	In this workshop laboratory quality assurance practices on fish inspection, sample selection, and testing were detailed for the accurate and improved diagnosis of fish diseases.
Training, capacity building	
Title of activity	Scope
Provided educational training for undergraduate students of United Arab Emirates University and Higher College of Technology	To share Knowledge, technical experience, and consultancy to promote veterinary education. Hands-on Training on diagnostic techniques for animal diseases
Zoonoses	
Title of activity	Scope
Development and activation of specialized diagnostic facilities (Genome sequencing techniques) for characterization of MERS-CoV, CCHF, Brucellosis, Monkeypox virus and Orthopox virus species.	Respond to the emergency of epidemic and zoonotic diseases pathogens Strengthening one health approach
Wildlife	
Title of activity	Scope
Validation of Pan-PPR Real-Time PCR assay	To detect all lineages of PPR virus in domestic small and wild small ruminants in UAE as well as typical hosts. Research and publication
Wildlife	
Title of activity	Scope
Validation of Pan-Theileria Real-time PCR assay followed by partial genome sequencing	To characterize the novel Theileria genotype in Dama gazelle (Nanger dama) Research and publication
Avian diseases	
Title of activity	Scope

Validation of a Real-Time PCR to identify the five serotypes of the fowl adenovirus (A-E)	To identify the five serotypes of the fowl adenovirus (A-E) currently circulating in the region for vaccination purposes.
Aquatic animal diseases	
Title of activity	Scope
Fish disease testing services	ADAFSA-CC QMS launched Fish disease testing services which include pathological service, parasitological examination tests to diagnose internal and external parasitic diseases, as well as microbial culture to diagnose bacterial diseases of fish, supported by molecular testing and genome sequencing.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Inter-laboratory comparison programs	ADAFSA-CC-QMS organized inter-laboratory proficiency schemes at the national and international levels on a variety of diagnostic tests; namely Peste des petits ruminants (PPR) Virus by PCR, Brucella RBT, Brucella ELISA tests, Blue Tongue Antibodies using ELISA test, Theileria & Trypanosoma spp. microscopy, bacterial identification and antibiotic susceptibility testing (AST) and microscopic detection of Acid-Fast Bacilli bacteria (AFB). Laboratories from UAE, Saudi Arabia, Bahrain, Sudan, Jordan and Italy participated in the program promoting the quality assurance program internationally. ADAFSA-CC-QMS conducts this program on a regular basis annually to all interested competent laboratories
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Establishment of a Biobank unit	To collect, classify, and store biological samples/reference materials and associated clinical data for the development of and validation of tests and control of the designated pathogens or disease.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Development and validation of a simple method to detect and differentiate Orthopoxvirus species using polymerase chain reaction targeting the A-type inclusion protein (ATIP) gene followed by partial genome sequencing	To detect and differentiate emerging Orthopox viruses.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Development and Validation of diagnostic tests including	Increase the scope of diagnostic tests and validation of new tests for the detection of different pathogens in camel and other

genome sequencing techniques	farm animals
Veterinary medicinal products	
Title of activity	Scope
Evaluating the efficacy of Veterinary Antiparasitic Drugs Under Field Practice	Aimed at effective control of nematodes of ruminants Promote quality assurance of drugs used in the field
Food safety	
Title of activity	Scope
Validation of isolation, identification, and serotyping of Salmonella enterica	To promote one health and identify the serotypes of Salmonella enterica in UAE in addition to research and publication.

TOR3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable area
Interlaboratory comparison program of PPR testing in camel	Technical meeting with PPR Ref. Lab. CIRAD and CVRL in Sudan – for further collaboration in organizing proficiency tests of PPR in camel	Laboratory expertise Training and education
Interlaboratory comparison Program on diagnostic tests for Animal Diseases	Quality Assurance Program with national and international laboratories on the diagnosis of: Brucella by RBT Brucella by ELISA Trypanosoma spp. by microscopy Theileria spp. By Acid Fast Bacilli (AFB) by microscopy	Laboratory expertise

4. Did your Collaborating Centre maintain a network with other WOH Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Istituto Zooprofilattico Sperimentale	Italy	Europe	Collaboration on testing interlaboratory comparison

			samples.
CIRAD	France	Europe	Collaboration on testing interlaboratory comparison samples
CIRAD & CVRL Sudan	France	Africa Europe	Collaborating on testing PPR Interlaboratory Comparison/PT Samples in camels.

TOR4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAHA Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
FAO and FAO-Sub Regional Office	Rome & Abu Dhabi	Europe MiddleEast	Detection of potential recombination of MERS-CoV with SARS-CoV-2 or other Coronaviruses in dromedary camels
FAO and FAO-Sub Regional Office	UAE	MiddleEast	To investigate SARS-CoV-2 Transmission to Farmed and Companion Animals in Contact with COVID-19 Infected Humans.
ADAFSA-CC collaborates with the Higher College of Technology in conducting research in tick-borne parasitic diseases in ruminants in the region	UAE	MiddleEast	Molecular epidemiological studies of tick-borne haemoparasitic diseases in livestock (sheep/goat/camels) in UAE with emphasis on the emergence of tick resistance to acaricides application
ADAFSA-CC collaborated with the Veterinary Pathology Unit, Life Sciences Department Al Ain Zoo in conducting a molecular investigation of Theileria spp. In Ndamas Gazelles	UAE	MiddleEast	Molecular detection and characterization of a novel Theileria genotype in Damas gazelle (Nanger dama)

TOR6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOAAH?

Yes

NAME OF EXPERT	KIND OF CONSULTANCY	SUBJECT
Dr. Abdelmalik Khalafalla	Invited speaker	Attended the International Seminar on Emerging and Re-emerging Diseases of camels, held online on 25 April 2022, and delivered a presentation on Emerging Diseases of Dromedary Camels
Dr. Abdelmalik Khalafalla	Invited speaker	Attended the Abu Dhabi Public Health Centre (ADPHC) and Institut Pasteur Infectious Disease Symposium, 03-04 October 2022, and delivered a presentation on One Health Contributions Towards Effective Responses to Emerging Infectious Diseases
Dr. Abdelmalik Khalafalla	Member: ad hoc group on PPR Status of Countries, the World Organization for Animal Health (WOAH) Paris, France	Participated in the group meeting which took place virtually from 19 to 21 October 2022.
Dr. Abdelmalik Khalafalla	Member: The PPR Global Research and Expertise Network (PPR-GREN) Bureau, FAO/WOAH	Attended the Launch of the Peste des petits ruminants (PPR) Global Eradication Programme Blueprint, which was held in FAO Headquarters, Rome, on the 4th of November 2022.
Dr. Abdelmalik Khalafalla	Invited keynote speaker	Attended the 1st International Salon on Camel Pathology held in Ourgala, Algeria 15-17 November 2022 and delivered a presentation on Infectious Diseases of Dromedary camels and the Role of the Collaborating Centre
Dr. Abdelmalik Khalafalla	Member: The PPR Global Research and Expertise Network (PPR-GREN) Bureau, FAO/WOAH	Attended the 5th meeting of the PPR Global Research and Expertise Network (PPR-GREN) which took place in a hybrid arrangement from 7-9 December 2022 in Montpellier, France
Asma Abdi Mohamed	Expert	Shared experiences of the ADAFSA-collaborating centres in PVS pathway Sub - regional orientation training workshop from 19-22 September, Abu Dhabi UAE
Dr. Hassan Zackaria	Invited speaker	5th meeting of the PPR Global Research and Expertise Network (PPR-GREN) which took place in a hybrid arrangement from 7-9 December 2022 in Montpellier, France

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

No

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOA, to personnel from WOA Members?

Yes

a) Technical visit : 25

b) Seminars : 1

c) Hands-on training courses: 60

d) Internships (>1 month) : 2

TYPE OF TECHNICAL TRAINING PROVIDED (A, B, C OR D)	CONTENT	COUNTRY OF ORIGIN OF THE EXPERT(S) PROVIDED WITH TRAINING	NO. PARTICIPANTS FROM THE CORRESPONDING COUNTRY
A	CAMENET Steering Committee Meeting	GCC, Jordan, Yemen,Iraq	9
A	Technical Visit of Delegation from the Ministry of Animal Resources	Sudan	5
A	Visit of Director WOA DG & Expert from Italy	France, Italy	7
A	Technical Visit of Pharmaceutical experts	China	4
C	Training on Validation of Diagnostic Methods in Veterinary Laboratories	UAE, Egypt, KSA, Jordan	60
D	Training for a PhD student –Dr. Housseem Samari in PCR, Real-Time PCR, Sanger sequencing and analysis of Sanger sequencing data as well as quality management systems in the Veterinary laboratories during the period of 05-16 December 2022	Algeria	1
D	Hands-on Training on bacterial identification and Antibiotic	UAE	1

Susceptibility Testing (AST) to PhD student – Mrs. Manju Stephen

TOR8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOA?H?

Yes

NATIONAL/INTERNATIONAL	TITLE OF EVENT	CO-ORGANISER	DATE (MM/YY)	LOCATION	NO. PARTICIPANTS
International	4th Camel Middle East Network (CAMENET) Steering Committee	WOAH sub-regional office for GCC	2022-10-24	AbuDhabi	9
International	1st International Salon on Camel Pathology	University of Kasdi Mirbah, Ourgala	2022-11-15	Algeria	1
International	5th Meeting -Peste des Petits Ruminants Global Research and Expertise Network (PPR-GREN)	WOAH, FAO	2022-12-07	France	3

TOR9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOA?H that may be useful to Members of WOA?H

a) Articles published in peer-reviewed journals:

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1. Habeeba S, Khan RA, Zackaria H, Yammahi S, Mohamed Z, Sobhi W, AbdelKader A, Alhosani MA, Muhairi SA. Comparison of Microscopy, Card Agglutination Test for Trypanosoma Evansi, and Real-time PCR in The Diagnosis of Trypanosomosis in Dromedary Camels of The Abu Dhabi Emirate, UAE. *J Vet Res.* 2022 Mar 25;66(1):125-129. doi: 10.2478/jvetres-2022-0002. PMID: 35582483; PMCID: PMC8959682.

2. Ishag HZA, Terab AMA, El Tigani-Asil ETA, Bensalah OK, Khalil NAH, Khalafalla AI, Al Hammadi ZMAH, Shah AAM, Al Muhairi SSM. Pathology and Molecular Epidemiology of Fowl Adenovirus Serotype 4 Outbreaks in Broiler Chicken in Abu Dhabi Emirate, UAE. *Veterinary Sciences.* 2022; 9(4):154. <https://doi.org/10.3390/vetsci9040154>

b) International conferences:

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1-Abdelmalik Khalafalla (2022). Emerging and re-emerging diseases of dromedary camels. *Proceedings of the ICAR International Seminar on Emerging and re-emerging diseases of camels.* 25 April 2022, online.

2-Hassan Zackaria Ishag (2022). Characterization of PPR virus in domestic and wild small ruminants in United Arab Emirates in 2021. 5th meeting of the PPR Global Research and Expertise Network (PPR-GREN) which took place in a hybrid arrangement from 7-9 December 2022 in Montpellier, France

3-Asma Abdi Mohamed Shah (2022). WOA?H Collaborating Centre and its Role in Enhancing Biosecurity". First International Saudi Veterinary Society conference, Prospects of Veterinary Medicine in the Kingdom of Saudi Arabia (Challenges and Chances) 11-13 /10/2022

, Saudi Arabia

c) National conferences:

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- 1- Ghada Abdel Wahab (2022). "One Health Approach - Experiences of Abu Dhabi Agriculture and Food Safety Authority" 16th Dubai International food safety conference 1-3rd Nov.2022
- 2- Asma Abdi Mohamed Shah (2022) "One Health Approach: ADAFSA Collaborating Centre for Camel Diseases and its Role in Promoting the One Health": 16th Dubai International food safety conference 1-3rd Nov.2022
- 3- Abdelmalik Khalafalla (2022). One Health Contributions Towards Effective Responses to Emerging Infectious Diseases. Proceedings of the Abu Dhabi Infectious Disease Symposium organized jointly by the Abu Dhabi Public Health Centre (ADPHC) and Institute Pasteur, 03-04 October 2022.
- 4- Ghada Abdel Wahab (2022). "Food Borne Diseases"- Abu Dhabi International Food Exhibition 6-8 December 2022, Dubai, United Arab Emirates

d) Other (Provide website address or link to appropriate information):

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

- Updated the sequencing facilities that enables diagnosis of various disease pathogens.
- ADAFSA CCQMS has kept its reputation in both national and international level in Quality Management system as the labs are ISO 17025 accredited from UKAS and Certified from BUREAU VERITAS
 - o ISO 9001: 2015 Quality Management Systems.
 - o ISO 14001:2015 Environmental Management Systems.
 - o ISO 45001 Occupational health and safety management systems.
 - o ISO 22301 Security and resilience- Business continuity management systems

12. Additional comments regarding your report: