

WOAH Reference Laboratory Reports Activities 2024

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Cysticercosis
*Address of laboratory:	No.1 Xujiaping,Yancgangpu,Lanzhou,Gansu,China
*Tel:	+86-931 832.39.78
*E-mail address:	luoxuenong@caas.cn
Website:	
*Name (including Title) of Head of Laboratory (Responsible Official):	Hongbin Yan
*Name (including Title and Position) of WOAH Reference Expert:	Xuenong Luo
*Which of the following defines your laboratory? Check all that apply:	Academic institution

TOR1: DIAGNOSTIC METHODS

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.? (Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
ELISA	No	66	0

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Direct diagnostic tests		Nationally	Internationally
Microscope	Yes	3	0
PCR	No	12	0

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?H?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H Members?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA?H Members?

No

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
Parasite-derived microRNA let-7-5p detection for metacestodiasis based on rolling circular amplification-assisted CRISPR/Cas9	FASEB J. 2024 May 31;38(10):e23708. doi: 10.1096/fj.202302449R.

7. Did your laboratory validate diagnostic methods according to WOA?H Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

Yes

Name of the new vaccine developed	Description and References (Publication, website, etc)
TSOL18 nanovaccines	multiantigen/peptides nanovccines based on ferritin from cysticercus

9. Did your laboratory validate vaccines according to WOA?H Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOA?H Members?

No

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOA?H Member?

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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12. Did your laboratory participate in international scientific studies in collaboration with WOA Members other than the own?

No

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOA?

No

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:

Taeniasis/cysticercosis is a serious public health problem and causes major economic losses to swine producers in developing countries, especially in Africa. For example, the overall seroprevalence of swine cysticercosis was of 17.4% , and parasite loads ranged from 1 to over 23,000 metacestodes per carcass in two rural communities of Zacapa, Guatemala. Whole carcass dissection of a subset of 67 pigs showed the positive is 30%, the true prevalence was calculated as 25-43% in two abattoirs in south-west Rwanda.

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:

Seroprevalence of cysticercosis in pig and human, and taeniasis cases in endemic regions.

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

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Wang L, Pu G, Liu T, Chen G, Li H, Amuda TO, Cao S, Yan H, Yin H, Fu B, Luo X. Parasite-derived microRNA let-7-5p detection for metacestodiasis based on rolling circular amplification-assisted CRISPR/Cas9. *FASEB J.* 2024 May 31;38(10):e23708.

Pu G, Li Y, Liu T, Li H, Wang L, Chen G, Cao S, Yin H, Amuda TO, Guo X, Luo X. mmu-miR-374b-5p modulated inflammatory factors via downregulation of C/EBP β /NF- κ B signaling in Kupffer cells during *Echinococcus multilocularis* infection. *Parasit Vectors.* 2024 Mar 29;17(1):163.

b) International conferences:

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Regional Workshop for WOA National Focal Points for Veterinary Laboratories & 4th Regional Meeting for WOA Reference Centres in Asia and the Pacific
Tokyo, Japan (Zoom) 16-19 July 2024

c) National conferences:

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The 10th National Member Congress & 19th Biennial Conference of the Chinese Society of Parasitology;

*The 18th Symposium of Veterinary Parasitology, Chinese Association of Animal Science and Veterinary Medicine(CAAV);
1st International Forum on Challenges of and Responses to Zoonoses.*

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

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA H Members?

Yes

a) Technical visit : 4

b) Seminars : 4

c) Hands-on training courses: 5

d) Internships (> 1 month) 0

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
C	KAZAKHSTAN	3
B	KYRGYZSTAN	4
A	PAKISTAN	4
C	EGYPT	2

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025 QMS	Laboratory Accreditation Certification	CANAS认可证书-英文.jpg

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
	China National Accreditation Service for Conformity

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ELISA Microscope	Assessment(CNAS)
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20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes
All the treatments about pathogens and samples must be performed according to ISO 17025 QMS

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA?

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
Regional Seminar for WOA National Focal Points for Veterinary Laboratories; 4th Regional Meeting for WOA Reference Centres in Asia and the Pacific	2024-07-15	Tokyo, Japan	SHORT COMMUNICATIONS	WOA reference lab for cysticercosis

TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOA Reference Laboratories designated for the same pathogen or disease?

Not applicable (only WOA Reference Laboratory designated for the disease)

24. Do you network (collaborate or share information) with other WOA Reference Laboratories designated for the same pathogen?

Not applicable (only WOA Reference Laboratory designated for the disease)

25. Did you organise or participate in inter-laboratory proficiency tests with WOA Reference Laboratories designated for the same pathogen during the past 2 years?

Not applicable (Only WOA Reference Laboratory designated for the disease)

Only WOA Reference Laboratory designated for the same pathogen

26. Did your laboratory collaborate with other WOA Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

Not applicable (only WOA Reference Laboratory designated for the disease)

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA Reference Laboratories for the same pathogen during the past 2 years?

No

Biological samples including blood, meat and cysticercus transport were forbidden between different countries.

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOA?

Yes

Kind of consultancy	Location	Subject (facultative)
review of WOA Standards about cysticercosis	China	provide suggestions for improving the Standards

29. Additional comments regarding your report:

Yes

With the continuous improvement of living standards and intensive degree of farming, the natural infection cases of Taenia solium and Cysticercus are less and less, which makes many work impossible in China.