World Organisation for Animal Health

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WOAH Collaborative Centre Reports Activities 2024

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CENTRE INFORMATION

***Title of WOAH Collaborating Centre**	Food-Borne Parasites from the Asia-Pacific Region
***Address of WOAH Collaborating Centre**	Key Laboratory for Zoonoses
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***Name Director of Institute (Responsible Official):**	iu Minyuan and Xuelin Wang,Ministry of Education Institute of Zoonosis Jilin University 5333 Xian Road 130062 Changchun CHINA
***Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):**	Liu Minyua and Xuelin Wang,Ph.D.Director of Institute of Zoonosis Jilin University
***Name of the writer:**	xuelin wang and yang wang

TOR 1 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 WOAH

Category	Title of activity	Scope

Disease control (true)	Toxoplasma infection tracing and risk quantification -TOXOSOURCES.	Farm pigs in China
Epidemiology, surveillance, risk assessment, (true)	Detection, isolation and evaluation of parasites (cryptosporidium and Giardia)	For pigs and human
Training, capacity building (true)	280 permanent staffs of training	Work in animal CDC of Asia
Zoonoses (true)	Genetic engineering vaccine exploration for prevention and control of food-borne major zoonotic trichinosis	Trichinella spiralis
Diagnosis, biotechnology and laboratory (true)	Development of a Tsp-UPT-LF-POCT test strip without blind area based on the phase specific novel diagnostic marker molecular of trichinella spiralis for the diagnosis of Porcine Trichinosis,	For the Trichinella spiralis
Vaccines (true)	Vaccination with recombinant adenoviruses expressing Toxoplasma gondii MIC3, ROP9, and SAG2 provide protective immunity against acute toxoplasmosis in mice; Vaccination with DNase II recombinant protein against Trichinella spiralis infection in pigs;	For mouse,pig and human
Feed safety (true)	Antigenic and functional genes in Trichinella spp.	In China

TOR 3: HARMONISATION OF STANDARDS

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

Proposal title	Scope/Content	Applicable Area
Sharing experience of intrenet		Laboratory Expertise

on One Health approach in all member of OIE	Members of WOAH	Training and Education Veterinary Products Wildlife Health and Biodiversity
Sharing train standard stipulation	Members of WOAH	Laboratory Expertise Training and Education Veterinary Products Wildlife Health and Biodiversity

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

No

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

No

TOR 4 AND 5: NETWORKING AND COLLABORATION

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

No

TOR 6: EXPERT CONSULTANTS

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

No

TOR 7: 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 WOAH, to personnel from WOAH Members?

No

TOR 8: 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 WOAH?

No

TOR 9: DATA AND INFORMATION DISSEMINATION

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

a) Articles published in peer-reviewed journals:

8

1. Wang Y, Zhang X, Wang X, Zhang N, Yu Y, Gong P, Zhang X, Ma Y, Li X, Li J. Clonorchis sinensis aggravates biliary fibrosis through promoting IL-6 production via toll-like receptor 2-mediated AKT and p38 signal pathways. PLoS Negl Trop Dis. 2023 Jan 24;17(1):e0011062. doi: 10.1371/journal.pntd.0011062. PMID: 36693049; PMCID: PMC9873171.

2.Wang J, Jin X, Li C, Chen X, Li Y, Liu M, Liu X, Ding J. In vitro knockdown of TsDNase II-7 suppresses Trichinella spiralis invasion into the host's intestinal epithelial cells. PLoS Negl Trop Dis. 2023 Jun 8;17(6):e0011323. doi:10.1371/journal.pntd.0011323. PMID: 37289740; PMCID: PMC10249883.

3.Yang H, Zhang M, Wang X, Gong P, Zhang N, Zhang X, Li X, Li J. Cryptosporidium parvum maintains intracellular survival by activating the host cellular EGFR-PI3K/Akt signaling pathway. Mol Immunol. 2023 Feb;154:69-79. doi: 10.1016/j.molimm.2023.01.002. Epub 2023 Jan 6. PMID: 36621060.

4. Ma X, Bai X, Li H, Ding J, Zhang H, Qiu Y, Wang J, Liu X, Liu M, Tang B, Xu N. A rapid and visual detection assay for Clonorchis sinensis based on recombinase polymerase amplification and lateral flow dipstick. Parasit Vectors. 2023 May 19;16(1):165. doi: 10.1186/s13071-023-05774-5. PMID: 37208693; PMCID: PMC10197247.

5. Li C, Li C, Xu F, Wang H, Jin X, Zhang Y, Liu X, Wang R, You X, Liu M, Bai X, Yang Y. Identification of antigens in the Trichinella spiralis extracellular vesicles for serological detection of early stage infection in swine. Parasit Vectors. 2023 Oct 26;16(1):387. doi: 10.1186/s13071-023-06013-7. PMID: 37884927;PMCID: PMC10604534.

6. Chen Y, Liu J, Liu X, Chang Q, Ma X, Xu Q. Eimeria granulosa causes spots visible through the serous membrane of small intestine in sheep. Mol Biochem Parasitol. 2023 Dec;256:111595. doi: 10.1016/j.molbiopara.2023.111595. Epub 2023 Sep 18. PMID: 37730127.

7. Qiao W, Zhang P, Jiang N, Zhang S, Bai H, Xie L, Sun L, Wang X. Albumin nanostructure assisted ABZ anti-parasite immune therapy for T. spiralis muscle infection. Biomater Adv. 2023 Jul;150:213434. doi: 10.1016/j.bioadv.2023.213434.Epub 2023 Apr 18. PMID: 37087912.

8. Cao L, Liu J, Cao S, Zhao P, Sun X, Dong H, Bello BK, Guo Y, Wang N, Zhang N, Li Y, Li X, Gong P. Protective efficacy of Toxoplasma gondii bivalent MAG1 and SAG1 DNA vaccine against acute toxoplasmosis in BALB/c mice. Parasitol Res. 2023 Mar;122(3):739-747. doi: 10.1007/s00436-022-07745-8. Epub 2023 Jan 5. PMID: 36600165.

b) International conferences:

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1.21st international congress for tropical medicine and malaria

2.WOAH turns 100: online celebration

c) National conferences:

no

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

no

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

1.PATENT AUTHORIZATION :Jin, Xuemin，Yeast β-Glucan granule Vaccine for Trichinella spiralis muscle larvae and its application 2023, CHINA，CN202410472273.X

12. Additional comments regarding your report:

no