

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Surra (Trypanosoma evansi)
*Address of laboratory:	Nishi 2-13, Inada-cho, Obihiro, Hokkaido 080-8555
*Tel:	+81-155 49.56.52
*E-mail address:	ircpmi@obihiro.ac.jp
Website:	https://www.obihiro.ac.jp/facility/protozoa/en/woah-rl-tryp-about-us
*Name (including Title) of Head of Laboratory (Responsible Official):	Keisuke Suganuma, D.V.M., Ph.D., Associate Professor
*Name (including Title and Position) of WOA Reference Expert:	Noboru Inoue, D.V.M., Ph.D., Professor
*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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
ELISA	No	0	5050
Direct diagnostic tests			
PCR	Yes	0	64

TOR2: REFERENCE MATERIAL

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

No

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

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA Members?

TOR3: NEW PROCEDURES

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

No

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

No

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

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

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

Name of the WOAHS Member Country receiving a technical consultancy	Purpose	How the advice was provided
JAPAN	Lecture on WOAHS manuals for surra and dourine	Direct communication
SINGAPORE	Advice about diagnosis of surra in dog	Remote assistance
UNITED STATES OF AMERICA	Advice about diagnosis of surra in dog	Remote assistance

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHS Member Countries involved other than your country
The Project for establishment of research and disease control systems for eradication of dourine	5 years	Control of dourine in Mongolia	Institute of Veterinary Medicine	MONGOLIA
Epidemiological studies on animal trypanosomosis and mechanical vectors in water buffalo in the Philippines	1 years	Detection of seasonal variation of Surra and its vectors in the Philippines	University of the Philippines, Philippine Calabao Center	PHILIPPINES
Epidemiological studies on animal trypanosomosis and mechanical vectors in domestic animals in South Africa	2 years	Epidemiological surveillance of animal trypanosomosis and mechanical vectors in domestic animals	North-West University	SOUTH AFRICA

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

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:

In collaboration with institutions shown in the list of ToR5-12, we had conducted epidemiological study of animal trypanosomosis and vector insects.

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:

Noboru Inoue - - JAPAN

The epidemiological data was disseminated as scientific articles listed below (ToR6-16).

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:

9

1. Christina Kannigadu, Helena D. Janse van Rensburg, Janine Aucamp, Keisuke Suganuma, David D. N'Da (2025) Exploration of novel "ferroxazide/ferrazone" derivatives as antitrypanosomatid agents: Design, synthesis, and biological efficacy. *Applied Organometallic Chemistry* 39 (1).

2. Emce Badenhorst, Janine Aucamp, Christina Kannigadu, Helena D Janse van Rensburg, Keisuke Suganuma, David D N'Da (2025) Synthesis and in vitro antitrypanosomatid activity of novel 5-nitroindole-rhodanine conjugates. *Future Medicinal Chemistry* 17 (5) 557-573.

3. Stipan Nurbyek, Toshihiro Murata, Keisuke Suganuma, Yoshimi Ichimaru, Nanami Kurosawa, Yoshinobu Ishikawa, Buyanmandakh Buyankhishig, Bekh-Ochir Davaapurev, Tseasuren Byambajav, Puntsantsogvoo Otgonsugar, Kenroh Sasaki, Javzan Batkhuu (2025) Isolation of Sesquiterpenoids and Trypanocidal Constituents from *Artemisia adamsii*. *ACS Omega* 10 (19) 19665-19674.

4. Janine Aucamp, Helena D. Janse van Rensburg, Simon S. Mnyakeni-Moleele, Keisuke Suganuma, David D N'Da (2025) In vitro leishmanicidal efficacy of synthesized arylidene analogues of glitazone. *Drug Development Research* 86 (5) e70125.

5. Mahmoud Saleh, Momen M. Thabet, Jyothi Kumari, Yaser A. Mostafa, Dharmarajan Sriram, Keisuke Suganuma, Mahmoud Kandeel, Hajjaj H. M. Abdu-Allah (2025) Design, synthesis, biological evaluation, and in silico studies of new nitazoxanide derivatives: Toward broad-spectrum antimicrobial agents *Archiv der Pharmazie* 358 (9) e70091.

6. Frances Paula L. Miaral, Keisuke Suganuma, Claro N. Mingala, Jose Ma M. Angeles, Derick Erl P. Sumalapao, Thaddeus M. Carvajal, Adrian Miki C. Macalanda, Cristian C. Lucanas, Maria Angenica F. Regilme, Gabriel Alexis S. Tubalinal, Maria Luz B. Belleza, Arlene G. Bertuso (2025) Molecular detection of *Trypanosoma evansi* and *Theileria/Babesia* sp. in *Tabanus* spp. populations (Diptera: Tabanidae) from Nueva Ecija, Philippines. *Journal of Asia-Pacific Entomology* 28 (3) 102439.

7. Keisuke Suganuma, Yuta Okuno, Mitsunori Kayano, Tomas J. Acosta, Takeo Yamauchi, Adrian Miki C. Macalanda, Maria Angenica F. Regilme, Frances Paula L. Miaral, Yrjo T. Grohn, Yuma Ohari, Shin-ichiro Kawazu, Noboru Inoue (2025) A temporal analysis of horse fly prevalence in Tokachi, Hokkaido, Japan, based on a 3-year entomological survey. *Journal of Medical Entomology* 62 (6) 1520-1529.

8. Simon S. Mnyakeni-Moleele, Janine Aucamp, Helena D. Janse van Rensburg, Keisuke Suganuma, David D. N'Da (2025) Synthesis and in vitro antitrypanosomatid efficacy of 5-benzylidene-2-thiohydantoin esters. *Medicinal Chemistry Research* 34 (10) 2147-2161.

9. Percy Moyaba, Serero Abiot Modise, Johan Esterhuizen, Keisuke Suganuma, Noboru Inoue, Oriël Thekisoë, Moeti Oriël Taioe (2025) *Stomoxys* species richness and apparent densities at different land-use setups in North-Eastern KwaZulu-Natal province, South Africa. *Insects* 16 (10) 1049.

b) International conferences:

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c) National conferences:

3

1. Keisuke Suganuma, A temporal analysis of horse fly prevalence in Tokachi, Hokkaido, Japan, based on a 3-year entomological survey and development for their control, Ofu, The 4th Rising star retreat meeting, Aichi, Japan

2. Keisuke Suganuma, Kennedy Mochabo, Megumi Ito, Yasuko Araki, Kotaro Ito, Shin-ichiro Kawazu, Noboru Inoue, Kiyoshi Kita, Ascofuranone antibiotic is a promising trypanocidal drug for nagana, The 94th Annual Meeting of Japan Society of Parasitology, Osaka, Osaka, Japan

3. Keisuke Suganuma, Yuta Okuno, Mitsunori Kayano, Takeo Yamauchi, Noboru Inoue, Acosta J. Tomas, A temporal analysis of horse fly prevalence in Tokachi, Hokkaido, Japan, based on a 3-year entomological survey, The 77th meeting of the Japan Society of Medical Entomology and Zoology, Sapporo, Hokkaido, Japan.

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

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TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 6

b) Seminars : 1

c) Hands-on training courses: 1

d) Internships (>1 month) 1

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
A	JAPAN	1
A	PHILIPPINES	2
A	CHINA (PEOPLE'S REP. OF)	2
A	SOUTH AFRICA	1
B	UZBEKISTAN	10
C	PALESTINIAN AUTON. TERRITORIES	1
D	FRANCE	2

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO17025:2017	PDF	L25-132.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
PCR test	Perry Johnson Laboratory Accreditation, Inc (PJLA)

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

In order to safely conduct experiments on animals, pathogens, and gene manipulation, our university has established regulations and special committees based on relevant laws. Laboratory and animal facilities are managed at BSL2 level. Periodical inspections are carried out to ensure that animal experiments, pathogen and gene manipulation experiments are being conducted appropriately. Plans for animal experiments, pathogens, and gene manipulation experiments are reviewed in advance by relevant expert committees and approved before implementation.

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?

No

TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOA Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA REF. LABS
WOAH Non-Tsetse Transmitted Animal Trypanosomoses Network	To create awareness on NTTAT as high impact neglected veterinary diseases To develop tools that enhance countries' capacity for surveillance of the NTTAT in view of improved disease reporting To foster collaborative research on identified topics To respond to needs for scientific evidence as expressed by endemic countries and/or organisations engaged in NTTAT control To fill gaps in knowledge on disease epidemiology, pathogenesis, drug efficacy, vaccines, modes of transmission, reservoir hosts and vector control.	10	RL for Dourine Dr. Laurent Hebert ANSES, France RL for Surra Dr. Nick Van Reet Institute of Tropical Medicine Antwerp RL for Surra Prof. Noboru Inoue National Research Center for Protozoan Diseases, Obihiro University of Agriculture and Veterinary Medicine, Japan RL for trypanosomoses (tsetse transmitted) Dr. Marc DESQUESNES CIRAD-IRD, France

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?

No

We are currently working with RL for Surra (Dr. Nick Van Reet), Institute of Tropical Medicine Antwerp to prepare for the project to be implemented in April 2026 onwards.

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?

No

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

We are currently working with RL for Surra (Dr. Nick Van Reet), Institute of Tropical Medicine Antwerp to prepare for the project to be implemented in April 2026 onwards.

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No