OIE Collaborating Centres Reports Activities

Activities in 2018

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Title of collaborating centre:	Surveillance, Control of Animal Protozoan Diseases
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ToR: To provide services to the OIE, in particular within the region, in the designated specialty, in support of the implementation of OIE policies and, where required, seek for collaboration with OIE Reference Laboratories

ToR: To identify and maintain existing expertise, in particular within its region

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

Epidemiology, surveillance, risk assessment, modelling	
Title of activity	**Scope**
Survey of Theileria oritentalis in Japan	A total of 360 blood DNA samples collected from grazing cattle in Japan were analyzed for the PCR diagnosis of bovine theileriosis caused by Theileria orientalis.
Survey of Anaplasma ovis in Mongolia	Totals of 1,179 and 871 blood DNA samples collected from grazing sheep and goats, respectively, in Mongolia were analyzed for the PCR diagnosis of small ruminant anaplasmosis caused by Anaplasma ovis.
Genetic analysis of Babesia isolates with clinical babesiosis in Sri Lanka	A total of 13 blood DNA samples collected from reared cattle with clinical babesiosis were analyzed for the genetic characterization of causing Babesia parasies.
Survey of a cervine Theileria in wild deer, ticks, and cattle in Japan	Totals of 91, 671, 767 DNA samples prepared from wild deer, questing ticks, and cattle, respectively, in Japan were analyzed for the PCR detection of Theileria sp. (sika1).
Survey of Babesia bovis and Babesia bigemina in Mongolia	A total of 1,946 blood serum samples collected from grazing cattle in Mongolia were analyzed for the ELISA serological diagnosis of bovine babesiosis caused by Babesia bovis and Babesia bigemina.
Survey of Babesia bovis and Babesia bigemina in Vietnem	A total of 165 blood serum and DNA samples collected from reared cattle in Vietnem were analyzed for the ELISA and PCR diagnoses, respectively, of bovine babesiosis caused by Babesia bovis and Babesia bigemina.
Survey of bovine tick-borne pathogens	A total of 245 bovine blood samples from Tanzania were analyzed for detection of Babesia spp, Theileria spp, Anaplasma spp and Ehrlichia spp by PCR.
Survey of bovine tick-borne pathogens	A total of 207 bovine blood samples from Benin were analyzed for detection of Babesia spp, Theileria spp, Anaplasma spp and Ehrlichia spp by PCR.
Survey of bovine tick-borne pathogens	A total of 176 bovine blood samples from China were analyzed for detection of Theileria spp and Ehrlichia spp by PCR.
Survey of ovine tick-borne pathogens	A total of 178 ovine blood samples from Sudan were analyzed for detection of Babesia spp, Theileria spp, Anaplasma spp, and Ehrlichia spp by PCR.
Survey of canine tick-borne pathogens	A total of 100 canine blood samples from the Philippines were analyzed for detection of Babesia spp, Anaplasma spp, and Ehrlichia spp by PCR.

Survey of equine tick-borne pathogens	A total of 105 equine blood samples from the Philippines were analyzed for detection of Babesia caballi and Theileria equi by PCR.
Survey of cryptosporidiosis	A total of 344 samples from Iwate and Hokkaido, Japan were analyzed for detection of specific antibodies to Cryptosporidium parvum by ELISA.
Survey of cryptosporidiosis	A total of 47 samples from Iwate, Japan were analyzed for detection of specific antibodies to Cryptosporidium parvum by ELISA and ICT.
Survey of cryptosporidiosis and neosporosis	A total of 570 samples from the southern Kyushu region of Japan were analyzed for detection of specific antibodies to Cryptosporidium parvum and Neospora caninum by ELISA.
Survey of neosporosis	A total of 20 samples from Hokkaido, Japan were analyzed for detection of specific antibodies to Neospora caninum by ELISA.
Survey of toxoplasmosis	Four clinical cases of toxoplasmosis in squirrel monkeys (Saimiri sciureus) in Japan were diagnosed by PCR, IHC and isolation Toxoplasma gondii.
Survey of trypanosomosis	A total of 198, 2,402 and 344 samples from Sudan, Mongolia and The Philippines, respectively, were analyzed for detection of Trypanozoon trypanosomes by PCR or specific antibodies by ELISA.
Training, capacity building	
Title of activity	**Scope**
Training course for molecular diagnostic and pathological techniques against protozoan diseases observed in Mongolia	Nine trainees from Mongolia had research training for advance knowledge and techniques.
Training course for the diagnosis of equine trypanosomosis	Two trainees had training for parasitological and serological diagnosis for trypanosomosis.
Training course for the diagnosis of equine piroplasmosis	Two trainees had training for parasitological and serological diagnosis for equine piroplasmosis.

ToR : To propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the designated specialty

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the surveillance and control of animal diseases, food safety or animal welfare

Proposal title	Scope/Content	Applicable area
Discovery of new bovine Babesia parasite inducible of clinical babesiosis	In Sri Lanka, a new bovine Babesia species (Babesia sp. Mymensing) was detected from two cattle with clinical babesiosis, and the specific PCR assay was established for genetic diagnosis.	☒Surveillance and control of animal diseases ☐Food safety ☐Animal welfare

ToR: To establish and maintain a network with other OIE Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines

ToR: To carry out and/or coordinate scientific and technical studies in collaboration with other centres, laboratories or organisations

3. Did your Collaborating Centre maintain a network with other OIE 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
Institute of Tropical Medicine	Antwerp, Belgium	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East	Standardization of the diagnostic methods for animal trypanosomosis

4. Did your Collaborating Centre maintain a network with other OIE 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
Research Center for Zoonoses	Hokkaido, Japan	☐Africa ☐Americas ☒Asia and Pacific ☐Europe ☐Middle East	Genetic analyses of isolated Babesia and Theileria parasites
Research Center for Zoonoses	Hokkaido, Japan	☐Africa ☐Americas ☒Asia and Pacific ☐Europe ☐Middle East	Epidemiological survey on human African trypanosomiasis

ToR: To place expert consultants at the disposal of the OIE.

5. Did your Collaborating Centre place expert consultants at the disposal of the OIE?

No

ToR: To provide, within the designated specialty, scientific and technical training to personnel from OIE Member Countries

6. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by the OIE, to personnel from OIE Member Countries?

Yes
a) Technical visits: 4
b) Seminars: 10
c) Hands-on training courses: 9
d) Internships (>1 month): 0

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	Supply of the information on the diagnostic methods (PCR assay and ICT) for protozoan diseases	Japan	2
c	Training course for molecular diagnostic and pathological techniques against protozoan diseases observed in Mongolia	Mongolia	9
a	Training for the diagnosis of equine trypanosomosis	Hong Kong	2
b	Seminar on protozoan diseases	China	10

ToR: To organise and participate in scientific meetings and other activities on behalf of the OIE

7. Did your Collaborating Centre organise or participate in the organisation of scientific meetings on behalf of the OIE?

Yes

National/International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
International	OIE non-tsetse transmitted animal trypanosomes network	OIE HQ	6/2018	OIE, Paris, France	15

International	The 3rd International Conference on non- tsetse transmitted animal trypanosomosis	North-West University	12/2018	Potchefstroom, South Africa	15

ToR: To collect, process, analyse, publish and disseminate data and information relevant to the designated specialty

8. Publication and dissemination of any information within the remit of the mandate given by the OIE that may be useful to Member Countries of the OIE

a) Articles published in peer-reviewed journals: 63

1.Paul Franck Adjou Moumouni, Gilbert Luc Aplogan, Hirotaka Katahira, Yang Gao, Huanping Guo, Artemis Efstratiou, Charoonluk Jirapattharasate, Guanbo Wang, Mingming Liu, Aaron Edmond Ringo, Rika Umemiya-Shirafuji, Hiroshi Suzuki, Xuenan Xuan. 2018. Prevalence, risk factors, and genetic diversity of veterinary important tick-borne pathogens in cattle from Rhipicephalus microplus-invaded and non-invaded areas of Benin. Ticks and Tick-borne Diseases. 9(3): 450-464.

2.Rochelle Haidee D Ybanez, Adrian P Ybanez, Lyra Lee A Arnado, Laila Monika P Belarmino, Knowlie Gay F Malingin, Paul Bien C Cabilete, Ziggy Ryan O Amores, Maxfrancis G Talle, Mingming Liu and Xuenan Xuan. 2018. Detection of Ehrlichia, Anaplasma, and Babesia spp. in dogs in Cebu, Philippines. Veterinary World. 11(1): 14-19.

3.Remil Linggatong Galay, Tomohide Matsuo, Emmanuel Pacia Hernandez, Melbourne Rio Talactac, Kodai Kusakisako, Rika Umemiya-Shirafuji, Masami Mochizuki, Kozo Fujisaki, Tetsuya Tanaka. 2018. Immunofluorescent detection in the ovary of host antibodies against a secretory ferritin injected into female Haemaphysalis longicornis ticks. Parasitology International. 67(2): 119-122.

4.Hitoshi Takemae, Kyousuke Kobayashi, Tatsuki Sugi, Yongmei Han, Haiyan Gong, Akiko Ishiwa, Frances C Recuenco, Fumi Murakoshi, Ryo Takano, Yuho Murata, Kisaburo Nagamune, Taisuke Horimoto, Hiroomi Akashi, Kentaro Kato. 2018. Toxoplasma gondii RON4 binds to heparan sulfate on the host cell surface. Parasitology International. 67(2): 123-130.

5.Adrian Miki C Macalanda, Jose Ma M Angeles, Kharleezelle J Moendeg, Anh Tm Dang, Luna Higuchi, Noboru Inoue, Xuenan Xuan, Masashi Kirinoki, Yuichi Chigusa, Lydia R Leonardo, Elena A Villacorte, Pilarita T Rivera, Yasuyuki Goto, Shin-Ichiro Kawazu. 2018. Evaluation of Schistosoma japonicum thioredoxin peroxidase-1 as a potential circulating antigen target for the diagnosis of Asian schistosomiasis. Journal of Veterinary Medical Science. 80(1): 156-163.

6.Oluyomi Stephen Adeyemi, Tatsuki Sugi, Yongmei Han, Kentaro Kato. 2018. Screening of chemical compound libraries identified new anti-Toxoplasma gondii agents. Parasitology Research. 117(2): 355–363.

7.Seung-Hun Lee, Ehab Mossaad, Abdalla Mohamed Ibrahim, Ahmed Ali Ismail, Paul Franck Adjou Moumouni, Mingming Liu, Aaron Edmond Ringo, Yang Gao, Huanping Guo, Jixu Li, Artemis Efstratiou, Peter Musinguzi, Tamador E.E. Angara, Keisuke Suganuma, Noboru Inoue, Xuenan Xuan. 2018. Detection and molecular characterization of tick-borne pathogens infecting sheep and goats in Blue Nile and West Kordofan states in Sudan. Ticks and Tick-borne Diseases. 9(3): 598-604.

8.Shinen Naranmandakh, Toshihiro Murata, Batsukh Odonbayar, Keisuke Suganuma, Javzan Batkhuu, Kenroh Sasaki. 2018. Lanostane triterpenoids from Fomitopsis officinalis and their trypanocidal activity. Journal of Natural Medicines. 72(2): 523–529.

9.Weiqing Zheng, Yangqing Liu, Huiying Tao, Zifen Li, Xuenan Xuan, Xiaoqing Liu, Paul Franck Adjou Moumouni, Yayun Wu, Wenqing Liu, Haiying Chen. 2018. First molecular evidence of Anaplasma phagocytophilum in rodent population of Nanchang, China. Japanese Journal of Infectious Diseases. 71(2): p129-133.

10.Azirwan Guswanto, Arifin Budiman Nugraha, Bumduuren Tuvshintulga, Dickson Stuart Tayebwa, Mohamed Abdo Rizk, Gaber El-Saber Batiha, Sambuu Gantuya, Thillaiampalam Sivakumar, Naoaki Yokoyama, Ikuo Igarashi. 2018. 17-DMAG inhibits the multiplication of several Babesia species and Theileria equi on in vitro cultures, and Babesia microti in mice. International Journal for Parasitology: Drugs and Drug Resistance. 8(1): 104-111.

11.Ferda Sevinc, Mo Zhou, Shinuo Cao, Onur Ceylan, Mehmet Fatih Aydin, Mutlu Sevinc, Xuenan Xuan. 2018. Haemoparasitic agents associated with ovine babesiosis: A possible negative interaction between Babesia ovis and Theileria ovis. Veterinary Parasitology. 252: 143-147.

12.Kodai Kusakisako, Emmanuel Pacia Hernandez, Melbourne Rio Talactac, Kentaro Yoshii, Rika Umemiya-Shirafuji, Kozo Fujisaki, Tetsuya Tanaka. 2018. Peroxiredoxins are important for the regulation of hydrogen peroxide concentrations in ticks and tick cell line. Ticks and Tick-borne Diseases. 9(4): 872-881.

13.Patrick Vudriko, James Okwee-Acai, Joseph Byaruhanga, Dickson Stuart Tayebwa, Samuel George Okech, Robert Tweyongyere, Eddie M Wampande, Anna Rose Ademun Okurut, Kenneth Mugabi, Jeanne Bukeka Muhindo, Jesca Lukanga Nakavuma, Rika Umemiya-Shirafuji, Xuenan Xuan, Hiroshi Suzuki. 2018. Chemical tick control practices in southwestern and northwestern Uganda. Ticks and Tick-borne Diseases. 9(4): 945-955.

14.Masahito Asada, Hassan Hakimi, Shin-ichiro Kawazu. 2018. The application of the HyPer fluorescent sensor in the real-time detection of H2O2 in Babesia bovis merozoites in vitro. Veterinary Parasitology. 255: 78-82.

15.Hany M Ibrahim, Gamalat Y Osman, Azza H Mohamed, Abduladeem GM Al-Selwi, Yoshifumi Nishikawa, Fathy Abdel-Ghaffar. 2018. Toxoplasma gondii: Prevalence of natural infection in pigeons and ducks from middle and upper Egypt using serological, histopathological, and immunohistochemical diagnostic methods. Veterinary Parasitology: Regional Studies and Reports. 13: 45-49.

16.Aaron Edmond Ringo, Paul Franck Adjou Moumouni, Moeti Taioe, Charoonluk Jirapattharasate, Mingming Liu, Guanbo Wang, Yang Gao, Huanping Guo, Seung-Hun Lee, Weiqing Zheng, Artemis Efstratiou, Jixu Li, Noboru Inoue, Hiroshi Suzuki, Oriel Thekisoe, Xuenan Xuan*. 2018. Molecular analysis of tick-borne protozoan and rickettsial pathogens in small ruminants from two South African provinces. Parasitology International. 67(2): 144-149.

17.Mingming Liu, Paul Franck Adjou Moumouni, Shinuo Cao, Masahito Asada, Guanbo Wang, Yang Gao, Huanping Guo, Jixu Li, Patrick Vudriko, Artemis Efstratiou, Aaron Edmond Ringo, Seung-Hun Lee, Hassan Hakimi, Tatsunori Masatani, Fujiko Sunaga, Shin-ichiro Kawazu, Junya Yamagishi, Lijun Jia, Noboru Inoue, Xuenan Xuan*. 2018. Identification and characterization of interchangeable cross-species functional promoters between Babesia gibsoni and Babesia bovis. Ticks and Tick-borne Diseases. 9(2): 330-333.

18.Guanbo Wang, Longzheng Yu, Artemis Efstratiou, Paul Franck Adjou Moumouni, Mingming Liu, Huanping Guo, Yang Gao, Shinuo Cao, Mo Zhou, Jixu Li, Aaron Edmond Ringo, Xuenan Xuan. 2018. Evaluation of the protective effect of a prime-boost strategy with plasmid DNA followed by recombinant adenovirus expressing BmAMA1 as vaccines against Babesia microti infection in hamster. Acta Parasitologica. 63(2): 368-374.

19.Seung-Hun Lee, Hyun-Joo Kim, Min-Jung Lee, Jae-Won Byun, Da-Young Kim, Neung-Hee Kim, Doo-Hwan Kim, Dongmi Kwak, Hae-Eun Kang, Hyang-Mi Nam. 2018. Prevalence of antibodies against severe fever with thrombocytopenia syndrome virus in shelter dogs in the Republic of Korea. Ticks and Tick-borne Diseases. 9(2): 183-187.

20.Ryo Mihara, Rika Umemiya-Shirafuji, Yasuyuki Abe, Tomohide Matsuo, Noriyuki Horiuchi, Suguru Kawano, Kozo Fujisaki, Hiroshi Suzuki. 2018. The development of oocytes in the ovary of a parthenogenetic tick, Haemaphysalis longicornis. Parasitology International. 67(4): 465-471.

21.Minh-Anh Dang-Trinh, Jose Ma M Angeles, Kharleezelle J Moendeg, Adrian Miki C Macalanda, Luna Higuchi, Chiho Oto, Masashi Kirinoki, Yuichi Chigusa, Shin-ichiro Kawazu. 2018. Utilization of real time PCR for the assessment of egg burden in the organs of Schistosoma japonicum experimentally infected mice. Experimental Parasitology. 189: 61-65.

22.Badgar Battsetseg, Thillaiampalam Sivakumar, Naranbaatar Khandsuren, Sandagdorj Narantsatsral, Punsantsogvoo Myagmarsuren, Batsaikhan Enkhtaivan, Batdorj Davaasuren, Daiki Mizushima, Gayani Weerasooriya, Ikuo Igarashi, Banzragch Battur, Naoaki Yokoyama. 2018. Serosurvey of Babesia bovis and Babesia bigemina in cattle in Mongolia. Veterinary Parasitology: Regional Studies and Reports. 13: 85-91.

23.Mingming Liu, Paul Franck Adjou Moumouni, Masahito Asada, Hassan Hakimi, Tatsunori Masatani, Patrick Vudriko, Seung-Hun Lee, Shin-ichiro Kawazu, Junya Yamagishi and Xuenan Xuan. 2018. Establishment of a stable transfection system for genetic manipulation of Babesia gibsoni. Parasites & Vectors. 11(1): 260.

24.Adrian P Ybañez, Rochelle Haidee D Ybañez, Maxfrancis G Talle, Rinna Marie T Arreglo, Mary Janniel C Geens, Jun Gelacio I Villas III, Stephanie R Villar, Charmen L Laruga, Shinuo Cao, Franck Paul Adjou Moumouni, Mingming Liu, Ikuo Igarashi, Xuenan Xuan. 2018. Serological and molecular detection of Theileria equi and Babesia caballi in Philippine horses. Ticks and Tick-borne Diseases. 9(5): 1125-1128.

25.Dickson Stuart Tayebwa, Bumduuren Tuvshintulga, Azirwan Guswanto, Arifin Budiman Nugraha, Gaber El-Saber Batiha, Sambuu Gantuya, Mohamed Abdo Rizk, Patrick Vudriko, Thillaiampalam Sivakumar, Naoaki Yokoyama, Ikuo Igarashi. 2018. The effects of nitidine chloride and camptothecin on the growth of Babesia and Theileria parasites. Ticks and Tick-borne Diseases. 9(5): 1192-1201.

26.Doaa Salman, Wilawan Pumidonming, Eiji Oohashi, Makoto Igarashi. 2018. Prevalence of Toxoplasma gondii and other intestinal parasites in cats in Tokachi sub-prefecture, Japan. Journal of Veterinary Medical Science. 80(6): 960-967.

27.Shunya Shibata, Thillaiampalam Sivakumar, Ikuo Igarashi, Rika Umemiya-Shirafuji, Hisashi Inokuma, Shinya Fukumoto, Naoaki Yokoyama. 2018. Epidemiological survey of a cervine Theileria in wild deer, questing ticks, and cattle in Hokkaido, Japan. Ticks and Tick-borne Diseases. 9(5): 1235-1240.

28.Mahmoud Rezk Aboulaila, Mohamed A Rizk, Shimaa El-Sayed, Naoaki Yokoyama, Ikuo Igarashi. 2018. In vitro antiparasitic effects of six beverages on the growth of Babesia and Theileria parasites. Annals of Complementary and Alternative Medicine. 3(1).

29.Akira Soga, Mami Ko-ketsu, Shinya Fukumoto. 2018. Development of a bsd-blasticidin selection system in Plasmodium berghei. FEBS Letters. 592(11): 1847-1855.

30.Ragab M Fereig, Hanan H Abdelbaky, Fumiaki Ihara, Yoshifumi Nishikawa. 2018. Development and evaluation of the first immunochromatographic test that can detect specific antibodies against Cryptosporidium parvum. Acta Tropica. 185: 349-356.

31.Seung-Hun Lee, Dongmi Kwak, Kyoo-Tae Kim. 2018. The first clinical cases of Haemoproteus infection in a snowy owl (Bubo scandiacus) and a goshawk (Accipiter gentilis) at a zoo in the Republic of Korea. Journal of Veterinary Medical Science. 80(8): 1255-1258.

32.Motohiro Nonaka, Yuho Murata, Ryo Takano, Yongmei Han, Md Hazzaz Bin Kabir and Kentaro Kato. 2018. Screening of a library of traditional Chinese medicines to identify anti-malarial compounds and extracts. Malaria Journal. 17(1): 244.

33.Daiki Mizushima, Tovuu Amgalanbaatar, Batdorj Davaasuren, Nthatisi Innocentia Molefe, Banzragch Battur, Badgar Battsetseg, Noboru Inoue, Naoaki Yokoyama, Keisuke Suganuma. 2018. The utility of an rTeGM6-4r-based immunochromatographic test for the serological diagnosis of non-tsetse-transmitted equine trypanosomosis in rural areas of Mongolia. Parasitology Research. 117(9): 2913-2919.

34.Hanan H Abdelbaky, Ragab M Fereig, Yoshifumi Nishikawa. 2018. Identification of the antigenic region of Neospora caninum dense granule protein 7 using ELISA. Parasitology International. 67(6): 675-678.

35.Huanping Guo, Chunsheng Yin, Eloiza May Galon, Jige Du, Yang Gao, Paul Franck Adjou Moumouni, Mingming Liu, Artemis Efstratiou, Seung-Hun Lee, Jixu Li, Aaron Edmond Ringo, Guanbo Wang, Yongchang Li, Maria Agnes Tumwebaze, Xuenan Xuan. 2018. Molecular survey and characterization of Theileria annulata and Ehrlichia ruminantium in cattle from Northwest China. Parasitology International. 67(6): 679-683.

36.Dickson Stuart Tayebwa, Patrick Vudriko, Bumduuren Tuvshintulga, Azirwan Guswanto, Arifin Budiman Nugraha, Sambuu Gantuya, Gaber El-Saber Batiha, Simon Peter Musinguzi, Mariam Komugisha, Jonh Son Bbira, James Okwee-Acai, Robert Tweyongyere, Eddie M. Wampande, Joseph Byaruhanga, Paul Franck Adjou Moumouni, Thillaiampalam Sivakumar, Naoaki Yokoyama, Ikuo Igarashi. 2018. Molecular epidemiology of Babesia species, Theileria parva, and Anaplasma marginale infecting cattle and the tick control malpractices in central and eastern Uganda. Ticks and Tick-borne Diseases. 9(6): 1475-1483.

37.Lijun Jia, Huanping Guo, Mingming Liu, Yang Gao, Lei Zhang, Hang Li, Suzhu Xie, Ningning Zhang. 2018.

Construction of an Adenovirus Vaccine Expressing the Cross-reactive Antigen AMA1 for Neospora caninum and Toxoplasma gondii and Its Immune Response in an Animal Model. Iranian Journal of Parasitology. 13(2): 235-243.

38.Mohamad Alaa Terkawi, Ryo Takano and Kentaro Kato. 2018. Differential Gene Expression Profile of Human Neutrophils Cultured with Plasmodium falciparum-Parasitized Erythrocytes. Journal of Immunology Research. 2018: 8.

39.Ruenruetai Udonsom, Yaowalark Sukthana, Yoshifumi Nishikawa, Ragab M Fereig, Charoonluk Jirapattharasate. 2018. Current situation of Neospora caninum and Toxoplasma gondii infection among beef cattle in Kanchanaburi, Ratchaburi and Nakhon Patom provinces, Thailand. Thai Journal of Veterinary Medicine. 48(3): 403-409.

40.Adrian P Ybañez, Claro N Mingala, Rochelle Haidee D Ybañez. 2018. Historical review and insights on the livestock tick-borne disease research of a developing country: The Philippine scenario. Parasitology International. 67(2): 262-266.

41.Yoshifumi Nishikawa, Naomi Shimoda, Ragab M Fereig, Tomoya Moritaka, Kousuke Umeda, Maki Nishimura, Fumiaki Ihara, Kaoru Kobayashi, Yuu Himori, Yutaka Suzuki and Hidefumi Furuoka. 2018. Neospora caninum dense granule protein 7 regulates pathogenesis of neosporosis by modulating host immune response. Applied and Environmental Microbiology. 84(18).

42.Rika Umemiya-Shirafuji, Takeshi Hatta, Kazuhiro Okubo, Moeko Sato, Hiroki Maeda, Aiko Kume, Naoaki Yokoyama, Ikuo Igarashi, Naotoshi Tsuji, Kozo Fujisaki, Noboru Inoue, Hiroshi Suzuki. 2018. Transovarial persistence of Babesia ovata DNA in a hard tick, Haemaphysalis longicornis, in a semi-artificial mouse skin membrane feeding system. Acta Parasitologica. 63(2): 433-433.

43.Fumi Murakoshi, Kenji Koyama, Takumi Akasaka, Noriyuki Horiuchi, Kentaro Kato. 2018. Molecular and histopathological characterization of Cryptosporidium and Eimeria species in bats in Japan. Journal of Veterinary Medical Science. 80(9): 1395-1399.

44.Aiko Kume, Shunji Kasai, Hana Furuya, Hiroshi Suzuki. 2018. α-Tocopheryl succinate-suppressed development of cerebral malaria in mice. Parasitology Research. 117(10): 3177-3182.

45.Oluyomi Stephen Adeyemi, Nthatisi Innocentia Molefe, Oluwakemi Josephine Awakan, Charles Obiora Nwonuma, Omokolade Oluwaseyi Alejolowo, Tomilola Olaolu, Rotdelmwa Filibus Maimako, Keisuke Suganuma, Yongmei Han & Kentaro Kato. 2018. Metal nanoparticles restrict the growth of protozoan parasites. Artificial Cells Nanomedicine and Biotechnology. 1-9.

46.Oluyomi Stephen Adeyemi, Yuho Murata, Tatsuki Sugi, Yongmei Han, Kentaro Kato. 2018. Exploring Amino Acid-Capped Nanoparticles for Selective Anti-Parasitic Action and Improved Host Biocompatibility. Journal of Biomedical Nanotechnology. 14(5): 847-867

47.Arifin Budiman Nugraha, Umi Cahyaningsih, Amrozi Amrozi, Yusuf Ridwan, Srihadi Agungpriyono, Dharmawaty Muhammad Taher, Azirwan Guswanto, Sambuu Gantuya, Dickson Stuart Tayebwa, Bumduuren Tuvshintulga, Thillaiampalam Sivakumar, Naoaki Yokoyama, Ikuo Igarashi. 2018. Serological and molecular prevalence of equine piroplasmosis in Western Java, Indonesia. Veterinary Parasitology: Regional Studies and Reports. 14: 1-6.

48.Kin Israel Notarte, Takashi Yaguchi, Keisuke Suganuma, Thomas Edison dela Cruz. 2018. Antibacterial, cytotoxic and trypanocidal activities of marine-derived fungi isolated from Philippine macroalgae and seagrasses. Acta Botanica Croatica. 77(2): 141-151.

49.Tatsunori Masatani, Ragab M Fereig, Konosuke Otomaru, Shingo Ishikawa, Isshu Kojima, Seiji Hobo, Yoshifumi Nishikawa. 2018. Seroprevalence of Cryptosporidium parvum and Neospora caninum in cattle in the southern Kyushu region of Japan. Parasitology International. 67(6): 763-767.

50.Patrick Vudriko, Rika Umemiya-Shirafuji, James Okwee-Acai, Dickson Stuart Tayebwa, Joseph Byaruhanga, John Son Bbira, Kozo Fujisaki, Xuenan Xuan, Hiroshi Suzuki. 2018. C190A knockdown mutation in sodium channel domain II of pyrethroid-resistant Rhipicephalus appendiculatus. Ticks and Tick-borne Diseases. 9(6): 1590-1593.

51.Baldorj Pagmadulam, Punsantsogvoo Myagmarsuren, Ragab M Fereig, Makoto Igarashi, Naoaki Yokoyama, Badgar Battsetseg, Yoshifumi Nishikawa. 2018. Seroprevalence of Toxoplasma gondii and Neospora caninum infections in cattle in Mongolia. Veterinary Parasitology: Regional Studies and Reports. 14: 11-17.

52.Thillaiampalam Sivakumar, Bumduuren Tuvshintulga, Atambekova Zhyldyz, Hemal Kothalawala, Palitha Rohana Yapa, Ratnam Kanagaratnam, Singarayar Caniciyas Vimalakumar, Thuduwege Sanath Abeysekera, Amitha Sampath Weerasingha, Junya Yamagishi, Ikuo Igarashi, Seekkuge Susil Priyantha Silva, Naoaki Yokoyama. 2018. Genetic analysis of Babesia isolates from cattle with clinical babesiosis in Sri Lanka. Journal of Clinical Microbiology. 56(11).

53.Hironori Bando, Naoya Sakaguchi, Youngae Lee, Ariel Pradipta, Ji Su Ma, Shun Tanaka, De-hua Lai, Jianfa Liu, Zhao-Rong Lun, Yoshifumi Nishikawa, Miwa Sasai and Masahiro Yamamoto. 2018. Toxoplasma Effector TgIST Targets Host IDO1 to Antagonize the IFN-γ-Induced Anti-Parasitic Response in Human Cells. Frontiers in Immunology. 9: 2073.

54.Kyoko Hayashida, Rika Umemiya-Shirafuji, Thillaiampalam Sivakumar, Junya Yamagishi, Yutaka Suzuki, Chihiro Sugimoto, Naoaki Yokoyama. 2018. Establishment of a mouse-tick infection model for Theileria orientalis and analysis of its transcriptome. International Journal for Parasitology. 48(12): 915-924.

55.Aaron Edmond Ringo, Paul Franck Adjou Moumouni, Seung-Hun Lee, Mingming Liu, Yussuf Haji Khamis, Yang Gao, Huanping Guo, Weiqing Zheng, Artemis Efstratiou, Eloiza May Galon, Jixu Li, Saruda Tiwananthagorn, Noboru Inoue, Hiroshi Suzuki, Oriel Thekisoe, Xuenan Xuan. 2018. Molecular detection and characterization of tick-borne protozoan and rickettsial pathogens isolated from cattle on Pemba Island, Tanzania. Ticks and Tick-borne Diseases. 9(6): 1437-1445.

56.Seung-Hun Lee, Ha-Young Kim, Haeseung Lee, Jong Wan Kim, Yu-Ran Lee, Myeong Ju Chae, Sang-Ik Oh, Jong Ho Kim, Man Hee Rhee, Oh-Deog Kwon, Youn-Kyoung Goo, Tae-Hwan Kim, Paul John L Geraldino and Dongmi Kwak. 2018. Eimeria species in cattle with diarrhoea in the Republic of Korea regarding age, season and nature of diarrhoea. Veterinary Record. 183(16).

57.Morakot Kaewthamasorn, Mika Takeda, Tawee Saiwichai, Jesse N Gitaka, Sonthaya Tiawsirisup, Yuhei Imasato, Ehab Mossaad, Ali Sarani, Winai Kaewlamun, Manun Channumsin, Suchart Chaiworakul, Wichit Katepongpun, Surapong Teeveerapunya, Jarus Panthong, Dominic K Mureithi, Saw Bawm, Lat Lat Htun, Mar Mar Win, Ahmed Ali Ismail, Abdalla Mohamed Ibrahim, Keisuke Suganuma, Hassan Hakimi, Ryo Nakao, Ken Katakura, Masahito Asada & Osamu Kaneko. 2018. Genetic homogeneity of goat malaria parasites in Asia and Africa suggests their expansion with domestic goat host. Scientific Reports. 8(5827).

58.Kentaro Kato. 2018. How does Toxoplama gondii invade host cells? Journal of Veterinary Medical Science. 80(11): 1702-1706.

59.Mohamed Abdo Rizk, Mahmoud AbouLaila, Shimaa Abd El-Salam El-Sayed, Azirwan Guswanto, Naoaki Yokoyama, Ikuo Igarashi. 2018. Inhibitory effects of fluoroquinolone antibiotics on Babesia divergens and Babesia microti, blood parasites of veterinary and zoonotic importance. Infection and Drug Resistance. 11: 1605-1615.

60.Hironori Bando, Youngae Lee, Naoya Sakaguchi, Ariel Pradipta, Ji Su Ma, Shun Tanaka, Yihong Cai, Jianfa Liu, Jilong Shen, Yoshifumi Nishikawa, Miwa Sasai, Masahiro Yamamoto. 2018. Inducible Nitric Oxide Synthase Is a Key Host Factor for Toxoplasma GRA15-Dependent Disruption of the Gamma Interferon-Induced Antiparasitic Human Response. MBio. 9(5): e01738-18.

61.Paul Franck Adjou Moumouni, Huanping Guo, Yang Gao, Mingming Liu, Aaron Edmond Ringo, Eloiza May Galon, Patrick Vudriko, RikaUmemiya-Shirafuji, Noboru Inoue, Hiroshi Suzuki, Xuenan Xuan. 2018. Identification and genetic characterization of Piroplasmida and Anaplasmataceae agents in feeding Amblyomma variegatum ticks from Benin. Veterinary Parasitology: Regional Studies and Reports. 14: 137-143.

62.Gao Y, Guo H P, Adjou Moumouni P F, Sun M, Liu M M, Efstratiou A, Lee S H,Wang G B, Li J X, Li Y C, Ringo A E, Galon E, Masatani T, Du J G* and Xuan X N*. 2018. Seroprevalence of Toxoplasma gondii infection in sheep from northern China. Tropical Biomedicine. 35(3): 664-668.

63.Rochelle Haidee D Ybañez, Kurt Jimwell G Resuelo, Ara Patrice M Kintanar and Adrian P Ybañez. 2018. Detection of gastrointestinal parasites in small-scale poultry layer farms in Leyte, Philippines. Veterinary World. 11(11): 1587-1591.

b) International conferences: 24

1.Hiroshi Isek, Azirwan Guswanto, Chul-min Kim, Atsuko Saito-Ito, Yuka Minoda, Hisashi Inokuma, Naoaki Yokoyama, Peter J Krause, and Ikuo Igarashi. An immunochromatographic test for serodiagnosis of human babesiosis. The first human babesiosis conference. Yale University, State of Connecticut, USA, April 12, 2018.

2.Yokoyama, N.: Tools and strategies for the control of bovine piroplasmosis. 70th Annual Scientific Sessions of the Sri Lanka Veterinary Association, Kandy, Sri Lanka, June 14, 2018.

3.Xuenan Xuan. An International Symposium entitled “Strategies for the Control of Ticks and Tick-borne Diseases” has been organized in Bangkok, Thailand, July 12~13, 2018; 40 scientists from 5 countries were participated.

4.Yoshifumi Nishikawa, Arpron Leesombun, Masatomi Iijima, Kousuke Umeda, Daisuke Kondoh, Pagmadulam Baldorj, Kunio Isshiki, Coh-ichi Nihei. Effect of metacytofilin, against Toxoplasma gondii: A new drug candidate for toxoplasmosis therapy. ICOPA2018, 14th International Congress of Parasitology, Daegu, Korea, August 20, 2018.

5.Kousuke Umeda, Kaoru Kobayashi, Fumiaki Ihara, Sachi Tanaka, Junya Yamagishi, Yutaka Suzuki, Yoshifumi Nishikawa. Transcriptomics reveals roles of Toll-like receptor 2 and CC chemokine receptor 5 against Toxoplasma gondii infection in primary mouse brain cells. ICOPA2018, 14th International Congress of Parasitology, Daegu, Korea, August 20, 2018.

6.Motomichi Matsuzaki, Junpei Fukumoto, Hisako Kyan, Tatsunori Masatani, Tomohide Matsuo, Mami Murakami, Yasuhiro Takashima, Yoshifumi Nishikawa, Kisaburo Nagamune. The seventh “clade” of Toxoplasma gondii excavated by genome-wide SNP analysis of Japanese isolates. ICOPA2018, 14th International Congress of Parasitology, Daegu, Korea, August 20, 2018.

7.Lee SH, Xuan X. Prevalence and molecular characterization of tick-borne pathogens amongst sheep and goats in Sudan. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 21 2018.

8.Ikuo Igarashi. Developmentof novel diagnostic methods and drugs for babesiosis, 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 21, 2018.

9.Rika Umemiya-Shirafuji. Oogenesis in a parthenogenetic tick, Haemaphysalis longicornis. 14th International Congress of Parasitology (ICOPA2018). EXCO Convention Center, Daegu, Korea, August 21, 2018.

10.Rika Umemiya-Shirafuji. Autophagy-related genes in ticks. 14th International Congress of Parasitology (ICOPA2018). EXCO Convention Center, Daegu, Korea, August 21, 2018.

11.Ikuo Igarashi. An immunochromatographic test for human babesiosis caused by Babesia microti. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 22, 2018.

12.B. Tuvshintulga, T. Sivakumar, N. Yokoyama, I. Igarashi. Clofazimine as a potential agent for treating human babesiosis caused by Babesia microti. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 22, 2018.

13.Mohamed Abdo Rizk, Shimaa Abd El-Salam El-Sayed, Naoaki Yokoyama, and Ikuo Igarashi. Evaluation of the in vitro and in vivo inhibitory effect of thymoquinone on Babesia and Theileria parasites. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 22, 2018

14.Amani Magdi Beshbishy, Gaber El-Saber Batiha, Naoaki Yokoyama, Ikuo Igarashi. Cryptolepine and ellagic acid inhibit Babesia and Theileria in vitro. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 22, 2018.

15.Kawazu S. Studies on development and application of gene manipulation methodologies for investigation of gene function and lifecycle of Babesia parasites. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 23, 2018.

16.Asada M., Hakimi H., Yamagishi J., Sakaguchi M., Yahata K., Kawazu S., and Kaneko O. Babesia bovis ves1α expression is correlated with cytoadhesion of parasite-infected erythrocyte to the endothelial cells. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 23, 2018.

17.Yamagishi J., Asada M., Hakimi H.,and Kawazu S. Whole-genome assembly of Babesia parasite with long-read sequencers. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 23, 2018.

18.Angeles JMA., Goto Y., Leonardo L., Moendeg KJ., Dang TMA., Reyes D., Villacorte E., Rivera PT., Kirinoki M., Chigusa Y., Houghton R., and Kawazu S. SchistoDetectTM: Development of a reliable and sensitive rapid diagnostic test for Schistosoma japonicum infection in humans. 14th International Congress of Parastiology. EXCO

Convention Center, Daegu, Korea, August 23, 2018.

19.Madoka Ichikawa-Seki, Hironobu Sato, Hiroki Hiraya, Shinya Fukumoto, Akiko Yamazaki, Takao Irie, Kayoko Matsuo, Ayako Yoshida, Yoichi Kamata, Yojiro Yanagawa, Kensuke Taira, Ryo Nakao, Hong Keanooi, Haruhiko Maruyama. ELISA using recombinant cathepsin L1 can detect antibodies against Fasciola flukes from sika deer and humans in Japan. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 19-24, 2018.

20.Akira Soga , Mami Ko-ketsu, Shinya Fukumoto. Development of high efficacy in vitro drug selection systems for generating transgenic parasite of Plasmodium berghei. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 19-24, 2018.

21.Takahiro Shirozu, Nobuaki Seki, Akira Soga, Yu-ki Morishita, Mami Ko-ketsu, Shinya Fukumoto. The identification of phenotypes in Dirofilaria immits-infected Aedes aegypti by comparison with the established strain of the vectorial capacity. 14th International Congress of Parastiology. EXCO Convention Center, Daegu, Korea, August 19-24, 2018.

22.Ikuo Igarashi, Dickson S. Tayebwa, Bumduuren Tuvshintulga, Azirwan Guswanto, Thillaiampalam Sivakumar, Naoaki Yokoyama. Evaluation of the Chemotherapeutic Potential of Nitidine chloride and Camptothecin Against Babesia and Theileria. The American Society of Tropical Medicine and Hygiene 67th Annual Meeting.. Sheraton New Orleans and New Orleans Marriott, USA, November 2, 2018.

23. Narantsatsral Sandagdorj, Davkharbayar Batbold, Amgalanbaatar Tovuu, Keisuke Suganuma, Daiki Mizushima, Zoljargal Myagmar, Baatarjargal Purevdorj, Soyolmaa Gurdorj, Nyamdolgor Uranbileg, Mungun-Ochir Bayasgalan, Altanchimeg Adilbish, Noboru Inoue, Battsetseg Badgar, Battur Banzragch. Diagnostics and countermeasures of dourine in Mongolia. The 3rd International Conference on Non-Tsetse Transmitted Animal Trypanosomosis, North-West University, Potchefstroom, South Africa, Poster. December 2-4,2018.

24.Batbold Davkharbayar, Batdorj Davaasuren, Sandagdorj Narantsatsral, Banzragch Battur, Myagmarsuren Pusangtsogvoo, Badgar Batsetseg, Daiki Mizushima, Noboru Inoue, Keisuke Suganuma. Treatment efficiency of combination therapy using diminazene aceturate and quinapyramine sulfate for a dourine horse. The 3rd International Conference on Non-Tsetse Transmitted Animal Trypanosomosis, North-West University, Potchefstroom, South Africa, Oral. December 2-4, 2018.

c) National conferences: 59

1.Daiki Mizushima, Keisuke Suganuma, Tovuu Amgalanbaatar, Batdorj Davaasuren, Davaajav Otgonsuren, Battur Banzragch, Batsetseg Badgar, Noboru Inoue, Naoaki Yokoyama□The serological surveillance of non-tsetse transmitted equine trypanosomosis in Mongolia.□The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, March 17-18, 2018.

2.Badgar Batsetseg, Thillaiampalam Sivakumar, Daiki Mizushima, Ikuo Igarashi, Banzragch Battur, Naoaki Yokoyama□Epidemiological mapping of Babesia bovis and Babesia bigemina in cattle in Mongolia. The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, March 17-18, 2018.

3.Thillaiampalam Sivakumar, Yuzuki Ikehara, Ikuo Igarashi, Hisashi Inokuma, Naoaki Yokoyama□Dynamics of erythrocyte indices in relation to anemia development in Theileriaorientalis-infected cattle. The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, March 17-18, 2018.

4.Ryo Takano, Hiroko Kozuka-Hata, Masaaki Oyama, Kentaro Kato. Long journey of malarial exported proteins. The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, Japan, March 17, 2018.

5.Motohiro Nonaka, Ryo Takano, Kentaro Kato. Characterization of Nova-1 protein of Plasmodium falciparum. The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, Japan, March 17, 2018.

6.Oluyomi Adeyemi, Kentaro Kato. New imidazole derivatives active against Toxoplasma gondii in vitro. The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, Japan, March 18, 2018.

7.Yongmei Han, Oluyomi Adeyemi, Kentaro Kato. Screening of protein kinase inhibitor library for inhibiting Toxoplama growth. The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, Japan, March 18, 2018.

8.Fumi Murakoshi, Tatsuki Sugi, Oluyomi Adeyemi, Motohiro Nonaka, Takaaki Nakaya Kentaro Kato. Activity of the

Apicomplexa specific histone deacetylase inhibitor, Nullscript. The 87th Annual Meeting of the Japanese Society of Parasitology, Tokyo, Japan, March 18, 2018.

9.Arpron Leesombun, Masatomi Iijima, Kousuke Umeda, Daisuke Kondoh, Kunio Isshiki, Coh-ichi Nihei, Yoshifumi Nishikawa. Effect of MCF against Toxoplasma gondii: A new drug candidate for toxoplasmosis therapy. The 87h Annual Meeting of Japanese Society of Parasitology, Tokyo, Japan, March 18, 2018.

10.Bando H, Lee Y, Sakaguchi N, Pradipta A, Ma JS, Nishikawa Y, Sasai M, Yamamoto M. Toxoplasma GRA15-Dependent Disruption of the Gamma Interferon-Induced Antiparasitic Human Response. The 87h Annual Meeting of Japanese Society of Parasitology, Tokyo, Japan, March 17, 2018.

11.Motomichi Matsuzaki, Junpei Fukumoto, Hisako Kyan, Tatsunori Masatani, Tomohide Matsuo, Mami Murakami, Yasuhiro Takashima, Yoshifumi Nishikawa, Kisaburo Nagamune. The seventh “clade” of Toxoplasma gondii excavated by genome-wide SNP analysis of Japanese isolates. The 87h Annual Meeting of Japanese Society of Parasitology, Tokyo, Japan, March 17, 2018.

12.Fumiaki Ihara, Sachi Tanaka, Maki Nishimura, Kousuke Umeda, Yoshifumi Nishikawa Involvement of Toll-like receptor 2 in the cerebral immune response and behavioral changes caused by latent Toxoplasma infection in mice. The 87h Annual Meeting of Japanese Society of Parasitology, Tokyo, Japan, March 18, 2018.

13.Kousuke Umeda, Kaoru Kobayashi, Fumiaki Ihara, Sachi Tanaka, Junya Yamagishi, Yutaka Suzuki, Yoshifumi Nishikawa. Transcriptome analysis of the C-C chemokine receptor 5-dependent cell response to Toxoplasma gondii in brain cells. The 87h Annual Meeting of Japanese Society of Parasitology, Tokyo, Japan, March 18, 2018.

14.Adjou Moumouni PF, Hiroshi Suzuki, Xuenan Xuan. Survey of ticks and tick-borne pathogenes of cattle in the Sahelian region of Burkina Faso. 70th Annual Meeting of the Japan Society of Medical Entomology and Zoology, Obihiro, Japan, May12-13, 2018.

15.Lee SH, Mossaad E, Keisuke Suganuma, Xuenan Xuan. Identification and molecular characterization of tick-borne pathogens in sheep and goats in Sudan. 70th Annual Meeting of the Japan Society of Medical Entomology and Zoology, Obihiro, Japan, May12-
13, 2018.

16.Galon EM, Ybanez AP, Xuenan Xuan. Molecular detection and characterization of bubaline tick-borne pathogens in Bohol Island, Philippines. 70th Annual Meeting of the Japan Society of Medical Entomology and Zoology, Obihiro, Japan, May12-13, 2018.

17.Rika Umemiya-Shirafuji, Noboru Inoue, Kiyoshi Okado, Naoaki Yokoyama, Kozo Fujisaki, Hiroshi Suzuk, Xuenan Xuan. Tick research activities at National Research Center for Protozoan Diseases. 70th Annual Meeting of the Japan Society of Medical Entomology and Zoology, Obihiro, Japan, May12-13, 2018.

18.Naoaki Yokoyama, Shunya Shibata, Thillaiampalam Sivakumar, Ikuo Igarashi, Rika Umemiya-Shirafuji, Hisashi Inokuma, Shinya Fukumoto. Epidemiological survey of a cervine Theileria in wild deer, questing ticks, and cattle in Hokkaido. 70th Annual Meeting of the Japan Society of Medical Entomology and Zoology, Obihiro, Japan, May12-13, 2018.

19.Mingming Liu. Establishment of a stable transfection system for genetic manipulation of Babesia gibsoni. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

20.Paul Franck Adjou Moumouni, Xuenan Xuan. Survey of tick-borne pathogens among cattle from Northern and Southern regions of Thailand. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

21.Punsantsogvoo Myagmarsuren, Thillaiampalam Sivakumar, Sandagdorj Narantsatsral, Banzragch Battur, Nobiru Inoue, Naoaki Yokoyama, Badgar Batsetseg□Molecular detection of Babesia bovis in yaks in Mongolia. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

22.Badgar Batsetseg, Thillaiampalam Sivakumar, Sandagdorj Narantsatsral, Punsantsogvoo Myagmarsuren, Daiki Mizushima, Ikuo Igarashi, Banzragch Battur, Naoaki Yokoyama□Mapping the epidemiology of Babesia bovis and Babesia bigemina in cattle in Mongolia. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

23.Sandagdorj Narantsatsral, Keisuke Suganuma, Daiki Suganuma, Noboru Inoue, Naoaki Yokoyama, Banzragch Battur□Badgar Batsetseg□Transferring a rapid test kit to market to facilitate diagnosis of dourine in Mongolia. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

24.Banzragch Battur, Punsantsogvoo Myagmarsuren, Sandagdorj Narantsatsral, Thillaiampalam Sivakumar, Noboru Inoue, Naoaki Yokoyama, Badgar Batsetseg□Survey of ixodid ticks in domestic animals in Mongolia. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

25.Naoaki Yokoyama, Thillaiampalam Sivakumar, Bumduuren Tuvshintulga, Ikuo Igarashi: Genetic analysis of clinical babesiosis in cattle in Sri Lanka. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

26.Thillaiampalam Sivakumar, Atambekova Zhyldyz , Ikuo Igarashi, Naoaki Yokoyama: Epidemiological survey of Anaplasma marginale in cattle and buffalo in Sri Lanka. The 161th Annual Meeting of the Japanese Society of Veterinary Science, Tsukuba, Ibaraki, September 11-13, 2018.

27.Oluyomi Adeyemi, Kentaro Kato. Amino acids-capped nanoparticles show multiple fold anti-Toxoplasma gondii action. The 161th Annual Meeting of Veterinary Science, Ibaraki, Japan, September 11, 2018.

28.Motohiro Nonaka, Ryo Takano, Yuho Murata, Yongmei Han, Md. Hazzaz Bin Kabir, Kentaro Kato. Screening of a library of traditional Chinese medicines to identify anti-malarial compounds and extracts. The 161th Annual Meeting of Veterinary Science, Ibaraki, Japan, September 11, 2018.

29.Yukihiro Goto, Rie Kamihira, Yoichi Nakao, Kentaro Kato. Effects of derivatives from natural products on Plasmodium falciparum. The 161th Annual Meeting of Veterinary Science, Ibaraki, Japan, September 11, 2018.

30.Harunobu Saito, Yuho Murata, Yongmei Han, Kentaro Kato. Characterization of Toxoplasma gondii chitinase like protein 1. The 161th Annual Meeting of Veterinary Science, Ibaraki, Japan, September 11, 2018.

31.Md. Hazzaz Bin Kabir, Albertus Eka Yudistira, Shinya Mitsuhashi, Makoto Ubukata, Kentaro Kato. In vivo evaluation of disulfiram and bronopol compound against Cryptosporidium activity. The 161th Annual Meeting of Veterinary Science, Ibaraki, Japan, September 11, 2018.

32.Yongmei Han, Oluyomi Stephen Adeyemi, Kentaro Kato. Screening of drugs for inhibiting Toxoplama growth and invasion. The 161th Annual Meeting of Veterinary Science, Ibaraki, Japan, September 11, 2018.

33.Fumiaki Ihara, Yoshifumi Nishikawa. Regulation of host NFκB pathway and immune response by Toxoplasma gondii dense granule protein 14. The 161st Annual Meeting of Veterinary Science, Tsukuba, Japan, September 11, 2018.

34.Baldorj Pagmadulam, Punsantsogvoo Myagmarsuren, Ragab M. Fereig, Makoto Igarashi, Naoaki Yokoyama, Badgar Battsetseg, Yoshifumi Nishikawa. Sero-epidemiological study of Toxoplasma gondii and Neospora caninum infections in cattle in Mongolia. The 161st Annual Meeting of Veterinary Science, Tsukuba, Japan, September 11, 2018.

35.Arifin Budiman Nugraha, Umi Cahyaningsih, Amrozi, Azirwan Guswanto, Sambuu Gantuya, Bumduuren Tuvshintulga, Thillaiampalam Sivakumar, Naoaki Yokoyama, Ikuo Igarashi. Serological and molecular prevalence of equine piroplasmosis in Western Java, Indonesia. The 161st Annual Meeting of Veterinary Science, Tsukuba, Japan, September 12, 2018.

36.Gaber Batiha, Amany Beshbishy, Naoaki Yokoyama, Ikuo Igarashi. Inhibitory effects of chalcone and trans-chalcone on the growth of Babesia and Theileria. The 161st Annual Meeting of Veterinary Science, Tsukuba, Japan, September 11, 2018.

37.Keisuke Suganuma, Narantsatsral Sandagdorj, Batsetseg Badgar, Battur Banzragch, Ken-ichi Watanabe, Yoshiyasu Kobayashi, Naoaki Yokoyama, Noboru Inoue. Trypanosome and trypanosomosis researches in Mongolia. The 161st meeting of the Japanese Society of Veterinary Science, Tukuba, Ibaraki, Japan, September 11, 2018.

38.Daiki Mizushima, Amgalanbaatar Tovuu, Davaasuren Batdorj, Otgonsuren Davaajav, Banzragch Battur, Badgar Battsetseg, Noboru Inoue, Naoaki Yokoyama, Keisuke Suganuma. The utility of an rTeGM6-4r-based immunochromatographic test for the serological diagnosis of non-tsetse-transmitted equine trypanosomosis in

rural areas of Mongolia. The 161st meeting of the Japanese Society of Veterinary Science, Tukuba, Ibaraki, Japan, September 12, 2018.

39.Fumiaki Ihara, Yoshifumi Nishikawa. Regulation of host NFκB pathway and immune response by Toxoplasma gondii dense granule protein 14. MPW-26/MPMRF-16, Ehime, Japan, September 21, 2018.

40.Kousuke Umeda, Yoshifumi Nishikawa. Role of Toxoplasma cyclophilin18 on host defense mechanism. MPW-26/MPMRF-16, Ehime, Japan, September 21, 2018.

41.Yoshifumi Nishikawa. Identification of virulence factor from Neospora caninum. MPW-26/MPMRF-16, Ehime, Japan, September 21, 2018.

42.Adjou Moumouni PF, Xuan X. Survey of tick-borne pathogens among cattle from Northern and Southern regions of Thailand. 64th Joint Annual Meeting of Northern Branch of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

43.Li Y, Liu M, Chahan B, Xuan X. Molecular investigation of tick-born infections in cattle and yaks in Xinjiang province, China. 64th Joint Annual Meeting of Northern Branch of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

44.Li J, Guo H, Gao Y, Jia H, Xuan X. Characterization of Aspartate aminotransferase in Toxoplasma gondii. 64th Joint Annual Meeting of Northern Branch of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

45.Lee SH, Fukumoto S, Xuan X. Prevalence and molecular characterization of Theileria sp. Sola and Theileria sp. Thrivae in sika deer (Cervus nippon) in Hokkaido, Japan. 64th Joint Annual Meeting of Northern Branch of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

46.Esftratiou A, Galon E, Kume A, Suzuki H, Xuan X. Babesia microti confers macrophage-based cross-protective immunity against Plasmodium chabaudi infection in mice. 64th Joint Annual Meeting of Northern Branch of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

47.Hanan H. Abdelbaky, Maki Nishimura, Naomi Shimoda, Jun Hiasa, Hiromi Tokimitsu, Hisashi Inokuma, Yoshifumi Nishikawa. Evaluation of serodiagnostic antigens of Neospora caninum for bovine neosporosis. The 64th Joint Annual Meeting of Northern Branches of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

48.Akari Nishida, Hidefumi Furuoka, Yoshifumi Nishikawa. Study on CXCR3-dependent immune pathology by infection with Toxoplasma gondii during pregnancy. The 64th Joint Annual Meeting of Northern Branches of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

49.Tomoya Moritaka, Naomi Shimoda, Yoshifumi Nishikawa. Study of NcGRA6 on pathogenesis of neosporosis. The 64th Joint Annual Meeting of Northern Branches of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

50.Ragab M. Fereig, Hanan H. Abdelbaky, Fumiaki Ihara, Yoshifumi Nishikawa. Development and evaluation of the first immunochromatographic test that can detect specific antibodies against Cryptosporidium parvum. The 64th Joint Annual Meeting of Northern Branches of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

51.Amany Magdy Beshbishy, Gaber El-Saber Batiha, Azirwan Guswanto, Naoaki Yokoyama and Ikuo Igarashi. Development of monoclonal antibodies against Babesia microti seroreactive antigen BMN1-17 and its application in rapid diagnostic tests of Babesia microti infection. The 64th Joint Annual Meeting of Northern Branches of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

52.Gaber El-Saber Batiha, Amany Magdy Beshbishy, Naoaki Yokoyama and Ikuo Igarashi. Inhibitory effects of methanolic Olea europaea and acetonic Acacia laeta herbal crude extracts on the growth of Babesia and Theileria. The 64th Joint Annual Meeting of Northern Branches of the Japanese Society of Parasitology and the

Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.

53.Rika Umemiya-Shirafuji, Kiyoshi Okado, Naoaki Yokoyama, Kozo Fujisaki, Xuenan Xuan. An attempt to establish laboratory colonies of ticks at National Research Center for Protozoan Disease. 27th Annual Meeting of the Acarological Society of Japan, Tsukuba, Japan, October 27-28, 2018.

54.Maki Kuniyori, Kioyoshi Okado, Miho Okada, Keisuke Suganuma, Hiroshi Suzuki, Rika Umemiya-Shirafuji. Expression analysis of molecules associated with oogenesis in Babesia ovata-infected Haemaphysalis longicornis ticks. 27th Annual Meeting of the Acarological Society of Japan, Tsukuba, Japan, October 27-28, 2018.

55.Sivakumar Thillaiampalam，Myagmarsuren Punsantsogvoo，Battur Banzragch，Noboru Inoue，Battsetseg Badgar，Naoaki Yokoyama，A sero-epidemiological survey of Theileria equi and Babesia caballi in horses in Mongolia. The 59th Annual Scientific Meeting for the Japanese Society of Tropical Medicine, Nagasaki, Novenber 9-11, 2018.

56.Naoaki Yokoyama, Thillaiampalam Sivakumar, Ikuo Igarashi: Genetic analysis of Babesia isolates from cattle with clinical babesiosis in Sri Lanka. The 59th Annual Scientific Meeting for the Japanese Society of Tropical Medicine, Nagasaki, Novenber 9-11, 2018.

57.Arifin Budiman Nugraha, Bumdureen Tuvshintulga, Mohamed Abdo Rizk, Sambuu Gantuya, Gaber El-Saber Batiha, Thillaiampalam Sivakumar, Naoaki Yokoyama, Ikuo Igarashi. Screening the Medicines for Malaria Venture Pathogen Box against piroplasm parasites. The 59th Annual Scientific Meeting for the Japanese Society of Tropical Medicine, Nagasaki, Novenber 11, 2018.

58.Gaber El-Saber Batiha, Amany Magdy Beshbishy, Naoaki Yokoyama and Ikuo Igarashi. Inhibitory effects of ivermectin on the growth Babesia and Theileria. The 59th Annual Scientific Meeting for the Japanese Society of Tropical Medicine, Nagasaki, Novenber 11, 2018.

59.Angeles Jose Ma, Goto Yasuyuki, Leonardo Lydia, Moendeg Kharleezelle, Danh Trinh Minh Anh, Reyes Dindo, Villacorte Elena, Rivera Pilarita, Kirinoki Masahi, Chigusa Yuichi, Houghton Raymond L., Kawazu Shin-ichiro. Development of a sensitive and specific Point-of-Care Diagnostics (POCT) for Schistosoma japonicum infection in humans. The 59th Annual Scientific Meeting for the Japanese Society of Tropical Medicine, Nagasaki, Novenber 11, 2018.

d) Other
(Provide website address or link to appropriate information): 1
http://www.obihiro.ac.jp/~protozoa/eng/index-eng.html