



Training-workshop report

2th-6th November 2015

BioZoonoSEA laboratory, KU, Bangkok, Thailand

This training workshop was implemented under the umbrellas of **BioZoonoSEA**, the “Biotechnology Platform for Research and Training on Parasitic Zoonoses in South East Asia”, **NAHIAT**, the “Network on Atypical Human Infections by Animal Trypanosomes”, **GREASE** network “Management of Epidemiological Emerging Risk in South East Asia”, and with the financial support of the **French Ministry of Foreign Affairs**, French Embassy, Bangkok, Thailand, and the **ComAcross** Project “Companion Approach for Cross-sectoral collaboration in health risks management in SEA”.

From 2th to 6th November 2015 the “Training-Workshop” limited to 12 participants was held at the Faculty of Veterinary Medicine, Kasetsart University, Bangkok, Thailand. This Training allowed giving lectures and practices on parasitological, serological and molecular techniques applied to trypanosomes (see the list of participants at the end of the document).

Participants were welcomed to the new Laboratory of the BioZoonoSEA Platform, by Dr Aurélie Binot (ComAcross project), Stéphane Herder and Marc Desquesnes (BioZoonoSEA Platform). Participants presented themselves and the schedule of the training program was presented before the beginning of the course.



From left to right, 1st line: Pr S Jittapalapong (FVM, BioZoonoSEA/KU), S Herder (IRD, BioZoonoSEA/KU), M Desquesnes (CIRAD, BioZoonoSEA/KU), K Ninnasopha (NUOL; Lao); 2nd line: K Keonam (NUOL, Lao), W Nurcahyo (Gadjah-Mada University Indonesia), C Keat (NIPH, Cambodia), S Bunnary (NAVRi, Cambodia), P Chalermwong (FVM/KU), C Doysabas (UPLB, Philippines), S Phomhuksa (NAHLC, Lao), S Ung (NIPH, Cambodia), T Sothearos (NAVRi, Cambodia); 3rd line: B Yimming (FVM/KU), P Manivong (PAFO, LAO), A Keosengthong (NUOL, LAO), T Souksavath (Samneua, Lao).

On 2nd of November, parasitological methods were exposed and practiced with fresh infected blood. Direct microscopic observations of trypanosomes were made with various microscope standards. Setting up of the optical equipment was emphasized for proper examination.



Enrichment method by capillary centrifugation was practiced by the participants and Giemsa stained slides were made and given to them to be used as reference slides when back to their laboratories.



Hematocrit Centrifuge Technique (HCT) was practiced and the direct examination of living parasites made using various optical equipment. Giemsa Stained blood smear were made and observed as shown on the right picture.

In the afternoon, serological methods were reviewed through a lecture and the principles of the card agglutination technique for *Trypanosoma evansi* (CATT *T. evansi*) was exposed and practiced by all participants with a set of horse samples collected during an outbreak of surra in Thailand.



CATT test is the only serological test for trypanosome which is commercially available; it allows to detect immunoglobulin M; it is thus efficient in case of recent infection by the main pathogenic trypanosome of livestock (and sometime humans): *Trypanosoma evansi*.



Participant and supervisor practicing the CATT *T. evansi* test

On 3rd of November ELISA method was described extensively and practiced; ELISA is suited for large scale serological surveys to determine the prevalence of infections in a population. Interest of CATT versus ELISA method were also discussed.



Marc Desquesnes

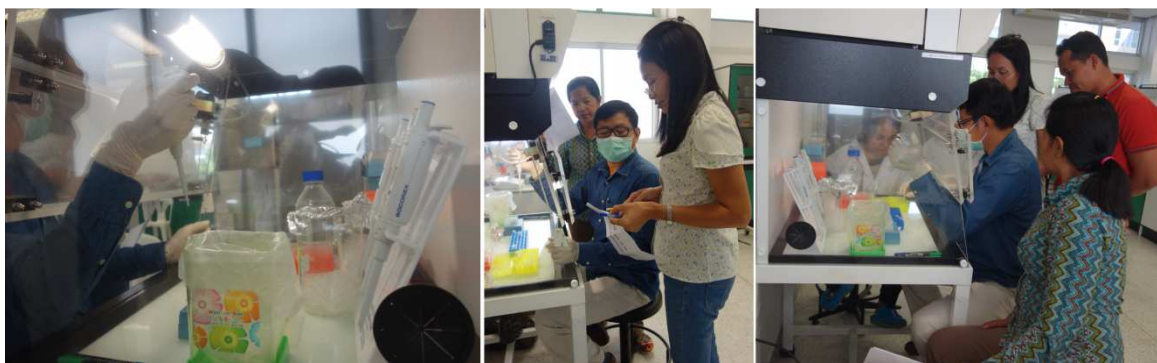
Souk Phomhuksa

Chheangheng Keat

Tansouphanh Souksavath &
Khampasong Ninnasopha

On 4th and 5th of November molecular methods were exposed, with first the DNA preparation methods using a commercial resin or a commercial kit with fresh infected blood. PCR were performed by supervisors and participants in order to familiarize with these methods.





Participants practicing molecular techniques (PCR)

On 6th November, last PCR were revealed and the results discussed; complementary explanations were given for molecular techniques such as PCR product extraction, sequencing, and sequence analysis.



A session was organised for evaluation of the training by the participants and to develop their expectations for the future. It was suggested that the participants would apply for complementary training sessions (2-3 weeks) once they would have collected samples from their country in an epidemiological survey. Other financial supports would be necessary for such trainings.

Future collaboration and/or support that BioZoonoSEA platform might bring to the participants were discussed as well as future workshops to be organised, notably in Cambodia.



Certificates of attendance were given to all participants in the presence the 2 main supervisors of the training, Dr Stéphane Herder and Marc Desquesnes (UMR InterTryp, IRD-CIRAD) and their assistants Benjarat Yimming and Piangjai Chalermwon (FVM/KU).



S Herder & C Doysabas



S Herder, W Nurcahyo, M Desquesnes



K Keonam & M Desquesnes



Final group picture of participants and supervisors of the Training-Workshop:

“Parasitological, serological & molecular techniques
applied to the diagnosis of trypanosome infections”

2-6 November 2015, Bangkok, Thailand.

Acknowledgement to the French Embassy, Bangkok, Thailand and the ComAcross project (UE) for their financial support of this training-workshop

**List of participants to the training-workshop on “Parasitological,
serological & molecular techniques applied to the diagnosis of
trypanosome infections”**

2-6 November 2015, Bangkok, Thailand.

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