

**OIE Non Tsetse Transmitted Animal Trypanosomoses Network**

Minutes of the first meeting, 5 May 2015, 12 rue de Prony, 75017 Paris

**1. List of participants and apologies**

The following participants (in alphabetical order) were welcomed at the meeting: Büscher P, Cauchard J, Delespaux V, Diaz F, Gillingwater K, Gonzatti MI, Inoue N, Lun ZR, Mattioli R, Münstermann S, Pascucci I, Peter R, Schnauffer A, Solano P, Touratier L.

The following persons expressed their interest in the OIE NTTAT Network but could not participate in this meeting: Battur B, Desquesnes M, Goddeeris B, Hagos A, Magez S, Mahamat H, Miletti LC, Van Gool F, Goossens J, Yurov K, Sengupta P.

The only persons who did not yet respond to the invitation are P. Minoprio from Institut Pasteur in Paris and M. Teixeira from the Universidad de Saõ Paulo, Brazil.

**2. Welcome**

The participants were welcomed by Dr. Brian Evans, Deputy Director General of OIE who underlined the importance of the newly established OIE NTTAT Network and who formulated the expectations of OIE from this OIE NTTAT Network.

**3. General presentation on OIE Networks (copy of the presentation in annex)**

Dr. Suzanne Münsterman, Project Officer at OIE, gave a general presentation on OIE Networks, their function, expected activities, obligations to OIE and benefit for world-wide animal health as well as for Network participants (presentation in annex). She listed the four NTTAT related OIE Reference Laboratories (Moscow, Montpellier, Obihiro, Antwerp) and underlined their formal obligation to create networks among them. She mentioned how a Network functions, including the role of the (rotating) secretariat in an OIE Reference Laboratory, the core members and affiliated members, organisation of meetings, reporting to OIE, setting up a website etc.

**4. Origin of the OIE NTTAT Network**

This origin was presented by Dr. L. Touratier in a "brief historical overview" (see annex at the end of this report)

**5. Current members of the OIE NTTAT Network**

The current members in the OIE NTTAT Network are listed in the table in annex.

The core members are the four OIE Reference Laboratories (OUAVM, Obihiro; CIRAD, Montpellier; VIEV, Moscow; ITM, Antwerp). Other members belong to other reference laboratories, research institutes, not-for-profit organisations, ministries, international organisations, private companies, OIE and affiliated experts.

In the future, more members can join the Network, provided their application to the Secretariat is accepted by the Network.

**6. Organisation of the Network**

The participants agreed on the following organisational issues

- P. Büscher of ITM, Antwerp, will assume the secretariat of the OIE NTTAT Network. In the future, the secretariat will rotate between the different OIE Reference Laboratories that are members of the Network
- L. Touratier, coordinator of the previous NTTAT group, is consulting member with the task to support continuity and consistency of research work with what the previous group had already achieved, so that duplication will be avoided. He will work in close liaison with the Secretariat.
- Members of the OIE NTTAT Network will have the opportunity to gather at an annual meeting, organised by the secretariat with support from OIE
- The NTTAT Network will submit an annual report to OIE
- The NTTAT Network will establish its own webpage on the OIE website where reports, events, meetings, publications etc. can be posted with links to relevant external websites (coordinator: J. Cauchard)

### 7. Goal and objectives of the OIE NTTAT network

**Goal:** To establish a global strategy for the control of NTTATs

#### Objectives

- To create awareness on NTTATs as *high impact neglected diseases*
- To develop tools that enhance countries' capacity for surveillance of the NTTATs in view of increasing 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

The following **priority research areas** were identified and the following persons were designated to coordinate activities within these research areas:

	<b>Research area</b>	<b>Coordinator</b>
1	Diagnosis	P. Büscher
2	<i>In vivo</i> and <i>in vitro</i> models	K. Gillingwater
3	Treatment	R. Peter
4	Vectors	M. Desquesnes
5	Case definition and case management	I. Pascucci
6	Epidemiology	Z.R. Lun
7	Socio-economic impact	R. Mattioli

The area coordinators should ensure that a sufficient number of topics listed under their research area will be addressed by members of the Network in the course of the year for presentation at the next meeting.

## 8. Work programme to implement these priority research areas

### Activities on diagnosis

- Make reference material and strains available (OIE international standard reagents) and share them between members of the Network
- Develop, evaluate and validate new tests according to the OIE validation pathway
- Study of the biological relationship of the different *Trypanosoma* species

### Activities on *in vivo* and *in vitro* models

- Develop *in vivo* and/or *in vitro* propagation models for *T. vivax* and *T. equiperdum*
- Develop protocols for drug screening using these models
- Develop protocols for preparation of biological reagents using these models
- Develop protocols for using these models in diagnosis

### Activities on treatment

- Study the effectiveness of currently existing drugs
- Establish the geographical spread and degree of drug resistance
- Enhance capacity for QC testing for trypanocidal drugs
- Develop new trypanocidal drugs

### Activities on vectors

- Identification and phenology of mechanical vectors
- Evaluation of the impact of mechanical vectors
- Develop vector control tools and strategies
- Study vector resistance against insecticides

### Activities on case definition and case management

- Study the clinical course of the NTTATs
- Develop case definitions on the basis of clinical signs, laboratory diagnosis and the epidemiological situation
- Develop recommendations for management of infected animals

### Activities on epidemiology

- Review of existing literature on NTTATs
- Collect and collate information on new outbreaks, drug efficacy, control efficacy
- Exchange on epidemiological data with the national authorities, regional and international organisations

### **Activities on socio-economic impact**

- Review existing literature on socio-economic impact of NTTATs
- Demonstrate the high impact in terms of socio-economic s of NTTATs
- Use this info as leverage to increase awareness about NTTATs with donors, development agencies and research institutions

### **9. Other issues**

Members of the OIE NTTAT Network may be invited by OIE to participate in the updating of the OIE technical disease cards, in OIE conferences, in drafting a Code Chapter for Surra.

### **10. Presentations on the contribution of each NTTAT Network member**

The NTTAT Network members presented their expertise and activities concerning NTTATs and how they can contribute to the Network.

The presentations are provided as separate annexes.

### **11. Conclusion**

This was a very fruitful inaugural meeting of the OIE NTTAT Network – a new format to continue previous work. It can be expected that the output from this newly set up structure will become more efficient and more visible, given that it is now embedded in the OIE structure.

The meeting achieved to agree on all essential points required to fulfil the formal requirements and therefore the Network is now officially established.

### OIE NTTAT NETWORK: LIST OF PARTICIPANTS AND THEIR AFFILIATIONS

The OIE NTTAT Network is comprised of the one OIE Reference Laboratory on Dourine, two OIE Reference Laboratories on Surra and one OIE Reference Laboratory on African trypanosomoses (respectively **1**, **2**, **3** and **4** in the table below).

<b>Surname</b>	<b>Institute</b>	<b>Region</b>	<b>City</b>	<b>Country</b>	<b>Email</b>
1 Yurov, K	All Russian Res. Inst. for Exp. Vet. Med.	Europe	Moscow	Russia	konstyurov@yandex.ru
2 Inoue, N	Obihiro Univ. Agricult. and Vet. Med.	Asia	Obihiro	Japan	ircpmi@obihiro.ac.jp
3 Büscher, P	Institute of Tropical Medicine	Europe	Antwerp	Belgium	pbuscher@itg.be
4 Desquesnes, M (Solano, P)	CIRAD	Europe	Montpellier	France	marc.desquesnes@cirad.fr (philippe.solano@ird.fr)

Other members of the OIE NTTAT Network are listed in the table below.

They all have considerable expertise in non-tsetse-transmitted animal trypanosomoses and are active in this domain.

<b>Surname</b>	<b>Institute</b>	<b>Region</b>	<b>City</b>	<b>Country</b>	<b>Email</b>
5 Cauchard, J	ANSES	Europe	Goustranville	France	julien.cauchard@anses.fr
6 Gillingwater, K	Swiss TPH	Europe	Basel	Switzerland	kirsten.gillingwater@unibas.ch
7 Goddeeris, B	KULeuven	Europe	Leuven	Belgium	Bruno.goddeeris@kuleuven.be
8 Pascucci, I	IZSAM G Caporale	Europe	Teramo	Italy	i.pascucci@izs.it
9 Schnauffer, A	University of Edinburgh	Europe	Edinburgh	Scotland, UK	achim.schnauffer@ed.ac.uk
10 Lun, ZR	Zhongshan University	Asia	Guangzhou	China	lsslzr@mail.sysu.edu.cn

11	Hagos, A	Addis Ababa University	Africa	Bushoftu	Ethiopia	hagos83@yahoo.com
12	Gonzatti, MI	University Simon Bolivar	South America	Caracas	Venezuela	mgonzat@usb.ve
13	Peter, R	GALVmed	Europe	Edinburgh	Scotland, UK	rose.peter@galvmed.org
14	Van Gool, F	Excelvet-Consultants	Africa	Rabat-Souissi	Morocco	frans.vangool@excelvet-consultants.com
15	Mattioli, R	FAO-AGAH	Europe	Rome	Italy	raffaele.mattioli@fao.org
16	Touratier L	Coordinator c/o OIE	Europe	Bordeaux	France	louistier@aol.com
17	Battur, B	Mongolian State University	Asia	Ulaanbaatar	Mongolia	bat912b@gmail.com
18	Miletti, LC	Universidade do Estado de Santa Catarina	South America	Santa Catarina	Brazil	luiz.miletti@udesc.br
19	Sengupta, P	Indian Council of Agricultural Research	Asia	Bangalore	India	pinakiprasad_s@rediffmail.co
20	Magez, S. (Goossens, J)	Free University Brussels	Europe	Brussels	Belgium	stemagez@vub.ac.be (Julie.Goossens@vub.ac.be)
21	Delespaux, V.	ITM	Europe	Antwerp	Belgium	vdelespaux@itg.be
22	Mahamat, H.	PATTEC	Africa	Addis Ababa	Ethiopia	hassanehm@africa-union.org

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5: European Reference Laboratory for Dourine, based in France.

6: The Swiss TPH is one of few institutes active on screening of compounds against African trypanosomes, with particular interest in *T. vivax*, *T. evansi* and *T. equiperdum*

7: The team of Prof. Goddeeris has been active in isolating new *T. equiperdum* strains in Ethiopia and is currently involved in studies on pathogenicity and drug sensitivity of *T. equiperdum* strains in experimentally infected horses and on the pathogenicity and drug sensitivity of *T. vivax* in experimentally infected calves.

8: IZSAM G. Caporale has built up a profound expertise in *T. equiperdum* and contributed to the control of recent outbreak of dourine in Italy.

9: The team of Dr. Schnauffer is conducting top ranking research on the molecular biology of *T. equiperdum* and *T. evansi* that has led to better understanding the relationship between the two species.

- 10:** Prof. Lun has a long standing expertise in molecular biology of *T. evansi* and *T. equiperdum* and their relationship.
- 11:** The Addis Ababa University is partner in several projects on *T. vivax*, *T. equiperdum* and *T. evansi*, in collaboration with the KU Leuven (**6**), ITM (**3**) and GALVmed (**13**) as reflected by its publications on NTTAT.
- 12:** The University Simon Bolivar has been and is still active on NTTAT in Latin America in close connection with the University Simon Rodriguez –IDECYT and has isolated and characterised several strains of *T. evansi*, *T. equiperdum* and *T. vivax*.
- 13:** GALVmed is one of the few organisations that is active in research on diagnosis and treatment of Animal African Trypanosomoses. That research is conducted, among others, in collaboration with Addis Ababa University (**10**), Swiss TPH (**5**) and comprises *T. vivax*. Prof. Büscher (**3**) and Dr. Vet. Van Gool (**13**) are members of the Steering Committee of GALVmed concerning AAT.
- 14:** Dr. Vet. Van Gool, CEO of Excelvet-Consultants has a profound expertise in *T. evansi* and *T. equiperdum* and has been involved in the development of melarsomine that is currently the most efficient trypanocidal drug for the treatment of initial stages of *T. evansi* and *T. equiperdum* infections.
- 15:** Dr. Vet. Mattioli is the FAO expert of African Trypanosomoses
- 16:** Dr. Vet. Touratier is consulting member of the OIE NTTAT Network
- 17:** Dr. B. Battur is conducting research on dourine in Mongolia, in collaboration with the OIE Ref Center for Surra at Obihiro (**2**)
- 18:** Dr. L. C. Miletti conducts research on the biochemistry and molecular characterisation of *T. evansi*. He participates in the initiative to establish a Latin American NTTAT Network.
- 19:** Dr. P. Sengupta is active in the development of new diagnostic tests for surra, by means of recombinant antigens
- 20:** Dr. S. Magez and Dr. Goossens are active in the development of novel antigen detection tests (using nanobodies) for African trypanosomes, in particular *T. evansi*.
- 21:** Dr. V. Delespaux has field experience in African trypanosomosis with particular interest in *T. vivax* (and *T. congolense*). He is responsible for the FAO Reference Lab for AAT at ITM
- 22:** Dr. H. Mahamat is PATTEC coordinator of the African Union

## BRIEF HISTORICAL OVERVIEW

### Origins of the special studies on Non Tsetse Transmitted Animal Trypanosomoses (NTTAT)

Louis TOURATIER

Consulting member of the OIE NTTAT Network

#### 1. May 1983-February 1991

The International **Working Group on *Trypanosoma evansi*** was established during the OIE General Session, on the suggestion of the Director of the Production and Animal Health, FAO in Agreement with the Director General of the OIE.

Bureau: President, Senegal; Assessors: UK and Germany; Secretary: France

Members: Australia, Belgium, Ethiopia, France, Indonesia, Somalia, Sudan

Observers: FAO, CEBV, ILRAD, OUA/STRC

Aim: To develop and apply detailed programmes for a better identification and control of Surra worldwide.

#### 2. February 1991-May 2007

The scope of the Working Group on *Trypanosoma evansi* was extended towards an **OIE *ad hoc* Group on Non Tsetse Transmitted Animal Trypanosomoses (NTTAT)** by decision of the OIE Commission

#### 3. May 2007-May 2014

Cancellation of the OIE *ad hoc* Group on NTTAT and limitation to the OIE designated experts due to their expertise in NTTAT. However, the NTTAT Group maintained its annual meetings and scientific links with its members while keeping OIE aware of this activity but without material support until May 2014.

#### 4. From May 1983 to May 2014

Along their periods of activity, the Working Group on *Trypanosoma evansi* and later the OIE *ad hoc* Group on NTTAT, held annual meetings. Proceedings of the annual meetings were published in the three official languages of the OIE (English, French, Spanish) either in the Scientific and Technical Review OIE (1984-1993) or under mimeographed form in the documents of the OIE General Sessions (1994-2006), or by personal mails (2007-2014).

The Working Group on *Trypanosoma evansi* and the OIE *ad hoc* group on NTTAT co-organised and/or participated in numerous international meetings or conferences *e.g.* in Kuala Lumpur, Malaysia (1986); Annecy, France (1992); Georgetown, Guyana (1996); Key West, USA (1998); Obihiro, Japan (1998); San Juan de los Morros, Venezuela (1999); Caracas, Venezuela (2004); Bogor, Indonesia (2003); Moscow, Russia (2004 and 2008); Hisar, India (2010); Hyderabad, India (2011). Thanks to the kindness of the organisers, round tables on NTTAT were organised at the biannual ISCTRC conferences in Africa. The International Congress of Parasitology (ICOPA) meetings were followed by the Secretary or members of the Working Group and the *ad hoc* Groups Paris, 1990; Izmir, 1994; Chiba, 1998; Vancouver, 2006; Melbourne, 2010; Mexico, 2014.