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The Francophone Network
on Neglected Tropical Diseases



Réseau MTN Francophone

Why this network?

Neglected tropical diseases (NTDs) are communicable diseases that affect the world's poorest populations, which have no access to prevention means or treatments (see text box below).

France and its francophone partners have a long history in the fight against NTDs. Laveran, Pasteur, Yersin, Muraz, Richet, Jamot were pioneers in the research and control of NTDs, and more recently, the Erevan resolution (October 2018) of the Organisation Internationale de la Francophonie specifically addresses NTDs. **The Francophone Network on Neglected Tropical Diseases (RFMTN) was established within the framework of the G7**, and NTDs are part of the French strategy for global health.

Mission & vision

The RFMTN was officially launched on April 8th 2016, in Montpellier. It has been established under the auspices of **AVIESAN, the alliance for health and life sciences**, which promotes collaboration between French research institutions. Currently, the RFMTN gathers research institutions (IRD, Institut Pasteur, INSERM, CIRAD, CNRS, Labex Parafrap and French Universities, Institut Pierre Richet in Côte d'Ivoire as examples), researchers, medical doctors, NGOs having operational projects in the field of NTDs, pharmaceutical industry, foundations and public-private partnerships (e.g. foundation Mérieux, DNDi), and DEC stakeholders (e.g. members from Cote d'Ivoire, Guinea, Cameroon, Burkina Faso, and many others). It is run by an executive secretariat, and is supported by a scientific and strategic committee comprising the member institutions, DEC stakeholders, industry, and NGOs.

The network, based on free individual membership, is also open to associations and scientific societies (*e.g.* Société de Pathologie Exotique). In 2019, it gathers **more than 300 individuals and more than 20 institutions from more than 20 countries including DEC**. Its goals are to fill gaps on NTDs and **to focus on elimination of NTDs**. The network seeks to federate French and francophone institutions and individuals working on NTDs and to strengthen relations between NTDs stakeholders. It promotes inter-

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institutional collaborations on translational research, training, and implementation of elimination projects, and aims at increasing awareness on NTDs. To reach these goals and increase its impact, RFMTN links with other European and African NTD networks.

For the RFMTN, eliminating/eradicating NTDs not only offers the best sustainable solution for the most vulnerable, but is also the best preparedness to avoid re-emergence, besides contributing to the overall objectives of the international community (SDGs, WHO roadmap, London declaration, G7).

The RFMTN focusses on the “elimination of NTDs”, addressing key questions on research and advocacy:

- How to define and implement ad hoc control activities in order to sustain the targets of the WHO roadmap and SDG 3.3?
- In the context of very low prevalence prevailing when approaching or reaching elimination targets: **Which tools are needed and should be developed in this new context (diagnostics, treatments, vaccines, vector control tools)? How to convince industries and national governments to stay on board and maintain their efforts? How to avoid the “punishment of success” by convincing donors to continue funding despite low prevalence?**

We are also convinced that more emphasis should be put on diagnostics, in particular on an integrated approach of diagnostics including not only R&D, but also the notion of access (comprising local manufacturing at high quality standards), of training, and of raising awareness and funding. In particular, the possibility of using new technologies for diagnosis of NTDs should be encouraged. For advocacy, the idea that access to treatment includes access to diagnosis is put forward.

For the NTDs having an animal component, a One Health approach is promoted. In a context of elimination, research should focus on cryptic reservoirs of pathogens in humans, vectors and animals, and prevention

tools should be looked for.

Social sciences, are invited to join international efforts aiming at sustainably eliminating NTDs.

In a broader context of « transitions » (e.g. epidemiological, numerical, agricultural...), transversal research starting from « neglected » pathogens and addressing their potential impact to other (e.g. infectious or non-communicable) diseases is encouraged. The study of immunological and genetic mechanisms that may be common between NTDs and other diseases is of interest.

Achievements: a few examples

The first achievement of the network, as a request from the G7 working group on NTDs, was to get a better knowledge of “who is doing what” in France on NTDs. A questionnaire was sent to the members of the network, and the results of this analysis were presented at the G7 working group in Brussels, Feb 2017.

The fragmentation of the French and francophone scientific and medical community working on NTDs was confirmed. There are two reasons for this fragmentation: 1. An intrinsic one, as addressing more than 18 different diseases, which are in addition “neglected”, leads to more than 18 different realities and contexts. Researchers in France work mainly on Trypanosomatids, *Aedes*-borne NTDs, and helminths, while bacterial NTDs are under-represented. 2. A structural reason: there is no dedicated school of tropical medicine in France. Research and training on NTDs (as well as for other topics) are conducted both in research institutes and universities, and in some private institutions and foundations. As a result, the landscape of NTD activities in France is fragmented, except in some dedicated institutions that have structured their research teams around this topic, e.g. in IRD, Pasteur Institute, Cirad, and a few Universities, and/or specific structures such as DNDi.

A particularity of the French research system is the fact that **most researchers are government employees**, including “expats” in DEC working

on NTDs, which make the in-kind contribution of the French government significant, though hardly visible from the outside. This unique approach avoids brain drain and sustains specific knowledge/experience, even when project based funding happens to end. In addition, French research institutions, universities and partnerships (including foundations, NGOs and public private partnerships) have their dedicated international partnership instruments and platforms that they manage and fund with their partners from DECAs, including for example the Pasteur international network, the IRD “laboratoire mixtes internationaux”, or Cirad “dispositifs en partenariat”, “laboratoires internationaux associés”, etc.

However, the strength of the network mainly relies on the results and impact its members have on NTDs. A few recent examples:

- Strong and specific long-term French and francophone involvement in Human African Trypanosomiasis research and elimination programmes contributing to new diagnostic algorithms, re-inforcing tsetse control (“tiny targets”), developing new treatment (fexinidazole and acoziborole), and implementing elimination with the national control programs, thanks to WHO, EDCTP2 and BMGF funding in particular, making it now feasible to reach the elimination objective with less than 1000 reported HAT cases in 2018, or a more than 96% reduction in 20 years time;
- Design and implementation of the Onchocerciasis Control Program (OCP) funded by the World Bank in West Africa, with a decisive impact on Onchocerciasis control. Recent results on filarial NTDs include: the development of a rapid point-of-care test to measure *Loa loa* microfilaraemia allowing the safe administration of ivermectin against onchocerciasis; the demonstration that administration of albendazole alone has a marked impact on *Wuchereria bancrofti* (lymphatic filariasis) endemicity levels, allowing the launch of mass administration of treatment in areas where loiasis is co-endemic (trials conducted in Congo and DR

Congo); the demonstration of an association between onchocerciasis and epilepsy;

- Elimination of geohelminths through a strategy of community-based intensive mass drug administration;
- Development of partnership tools with NTD affected countries, including several common research labs (e.g. LAMIVECT), and training mechanisms, and the set-up of networks (e.g. WIN on insecticide resistance).

What's next

The RFMTN unites the French and francophone NTD stakeholders and has contributed to the WHO consultation on the 2030 roadmap. There is an imperative need to secure manufacturing and distribution of diagnostics, vector control tools, and treatment for NTDs. Research also has a responsibility in proposing tools that may lead to sustainable elimination, but also in building knowledge, translating it, and giving answers to new questions arising during elimination. Many of those questions might have been irrelevant at times when the number of cases was high, but become crucial for reaching sustainable elimination. Involvement of all stakeholders including dedicated human resources in DECAs becomes a challenge in this context of elimination and should be considered a key issue.

One of the future challenges will also be to integrate NTDs into global health as a step towards Universal Health Coverage (UHC) and in this debate, a francophone vision may prove useful. UHC is at the heart of the SDGs and is a crosscutting issue for many SDGs. The RFMTN considers that elimination of NTDs participates in ensuring fundamental human rights, and elimination of these NTDs is a mandatory step towards addressing SDGs, thus progressing towards UHC.

Selected references

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According to “Uniting to combat NTDs” approximately a billion people affected by NTDs in 149 countries have been listed by the World Health Organization (WHO). In spite of their massive impact, which constitute “the chronic pandemic of the 21th century”, only 0.6% of the global healthcare funding are allocated to these diseases. The concept of neglected tropical diseases (NTDs) has emerged from this fact, distinguishing them from other infectious diseases, such as the three diseases funded by the Global Fund (HIV-AIDS, malaria, tuberculosis).

In order to reduce as quickly as possible the global impact of NTDs, WHO has defined a roadmap in 2012, with objectives until 2020 and 2030 that are currently being updated.

Besides WHO, institutions such as the Bill & Melinda Gates Foundation (BMGF) play a major role in the field of advocacy and research funding, in shaping priorities and defining control strategies and activities relating to NTDs. The United States, the United Kingdom, and a number of other (European and non-European) countries invest significant amounts in research and control on NTDs, as an example through the EDCTP2 for Europe. NTDs are specifically mentioned in the 2030 Sustainable Development Goals (SDG n°3, target n° 3.3).



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