Arbo-France

A French network for the study of human & animal arboviral diseases

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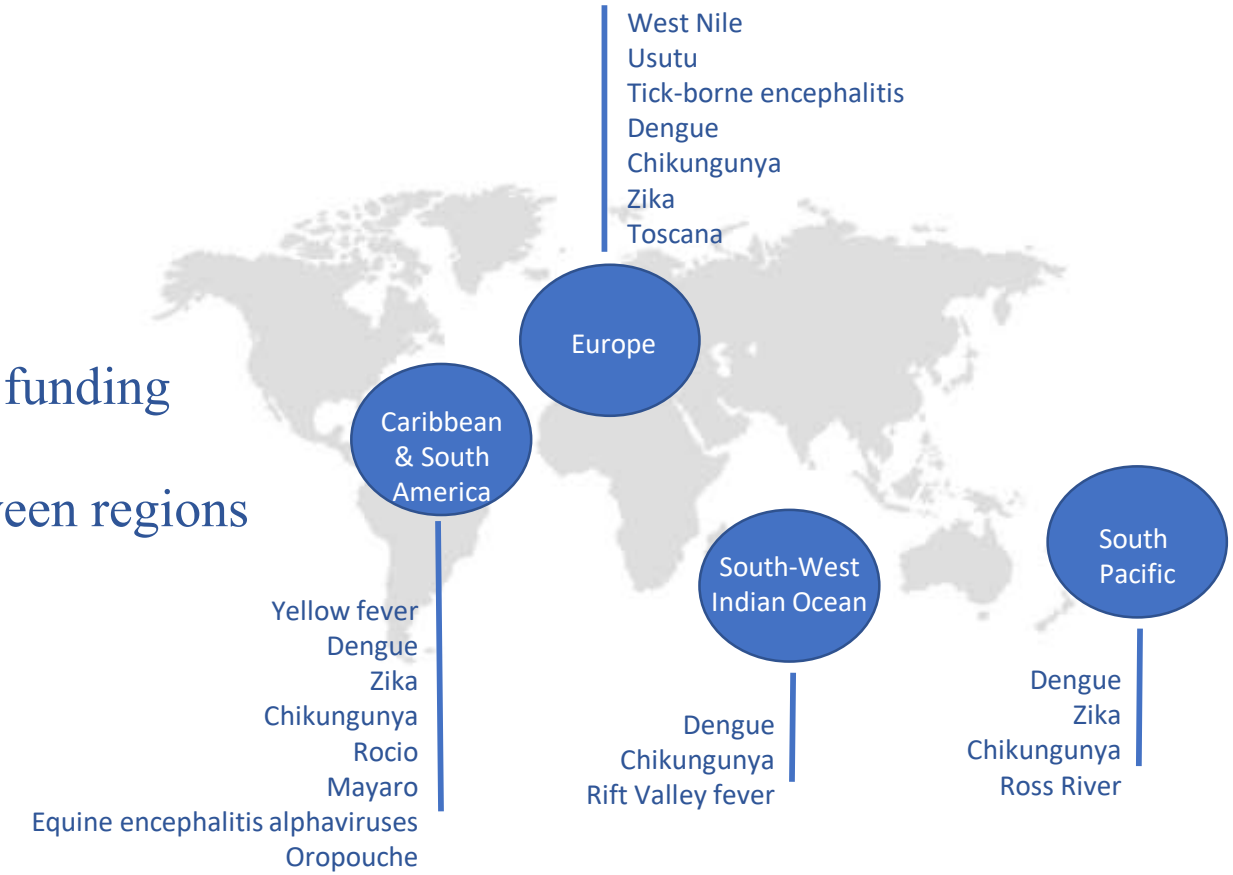
https://arbo-france.fr/

The unique situation of France

- A long tradition of research in arbovirology
- An exceptional eco-epidemiological situation
- A recurrent public health problem
- No dedicated organisation, very low levels of funding
- Lack of coordination between teams and between regions



Arbo-France

Set up in February 2019 to improve preparedness and response to arbovirus epidemics.

Since September 2021, integrated into ANRS-MIE

Arbo-France: a French network for the study of human and animal arboviruses, B. Murgue, AB Failloux, X de Lamballerie, Virologie 2020, 24 (3) : 193-6

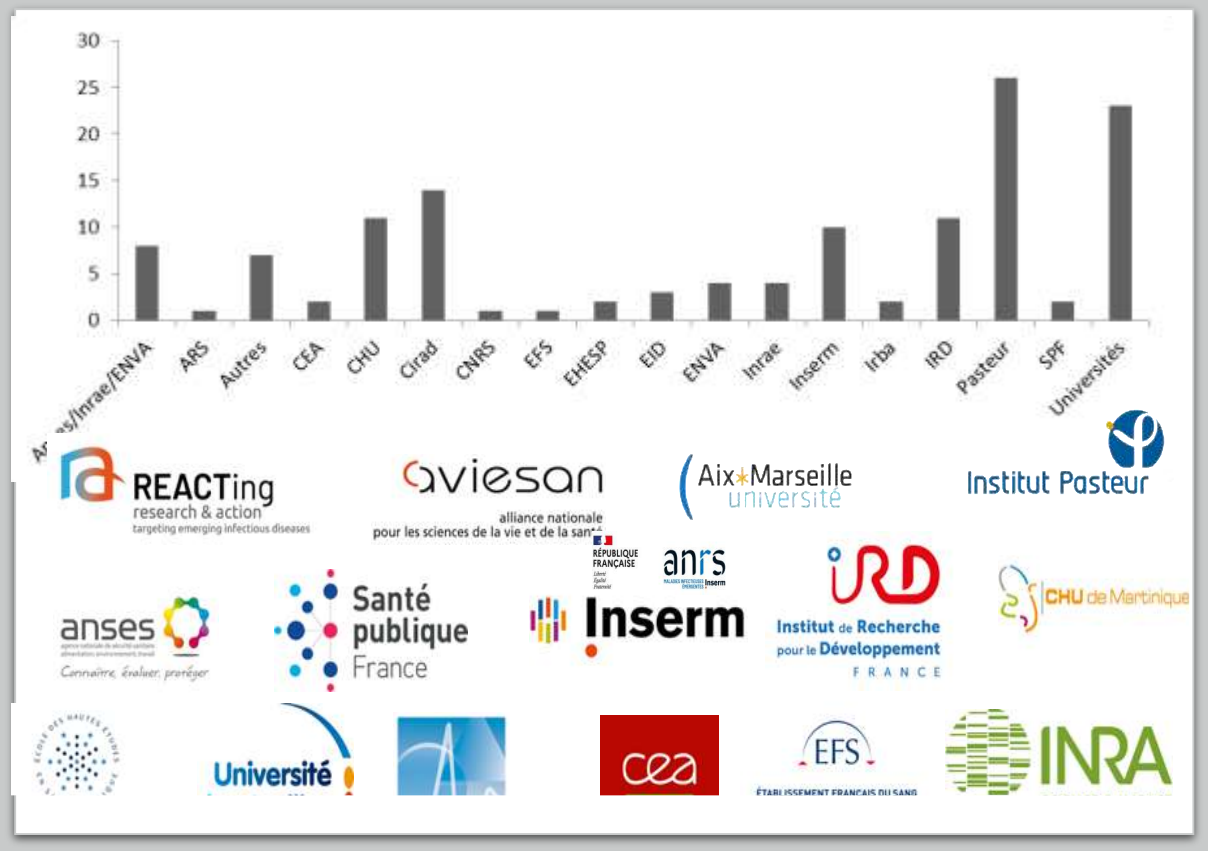
Objectives & Organisation

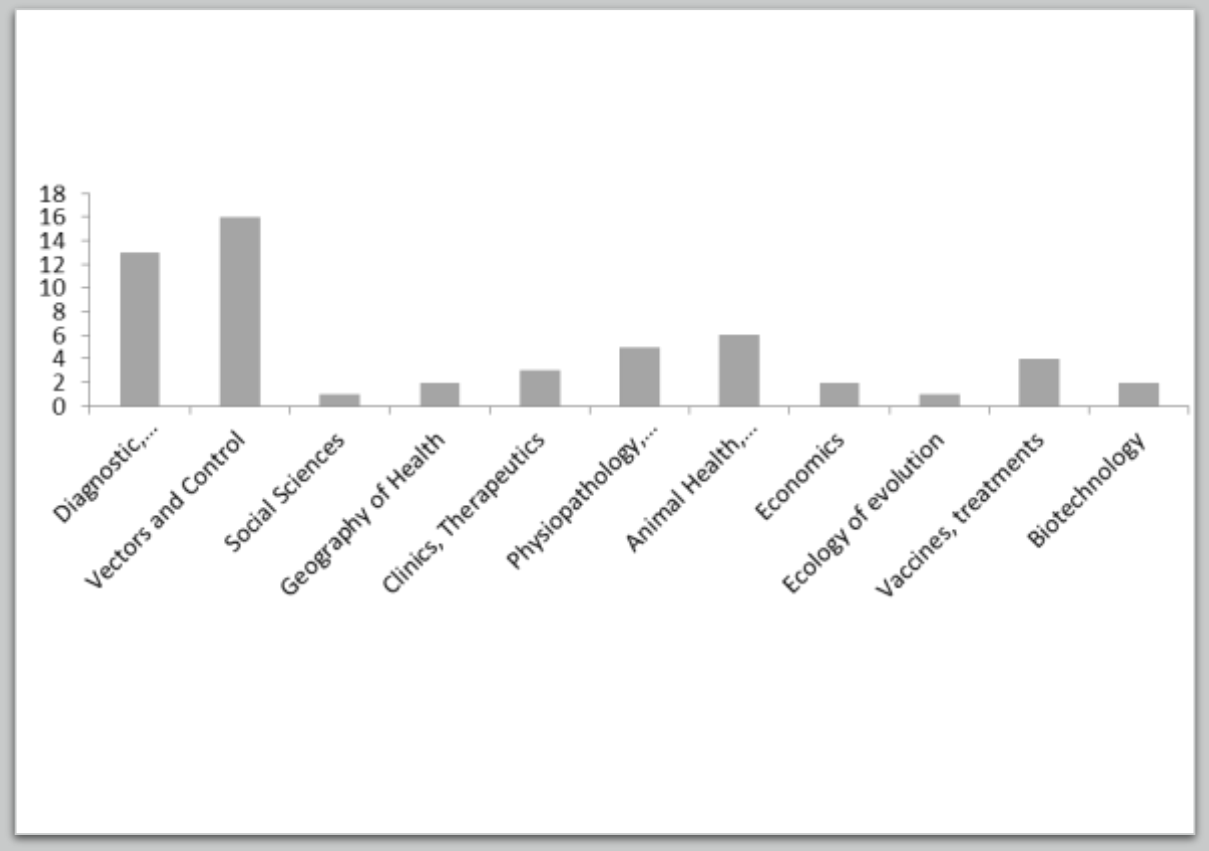
Objectives

- Provide an **alert function** to the ANRS-MIE
- Contribute to **scientific excellence** by promoting an integrated One Health approach
- Strengthen the **structuring and integration** of arbovirology projects in France
- Contribute to the **preparedness plan** for French research in arbovirology
- Actively promote **behavioral and social dimensions** in research projects

Arbo-France is a French network:

1. Multi-institutionnal & multidisciplinaty





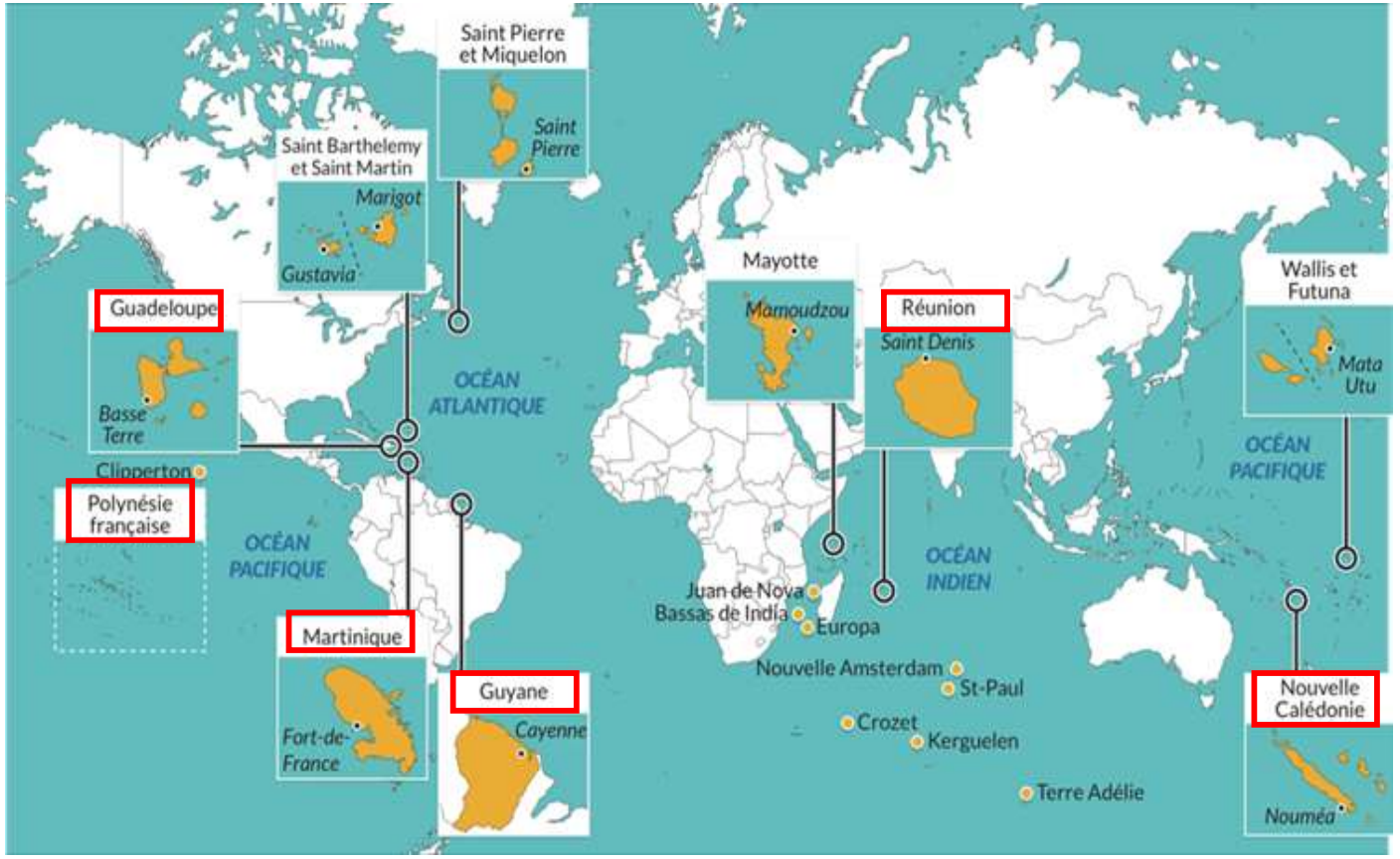
2. On human and animal arboviral diseases

X. De Lamballerie
AMU-IRD-Inserm

A.-B. Failloux
Institut Pasteur

S. Zientara
Anses-INRA-ENVA

3. In metropolitan France and overseas territories



Organisation

More than 170 experts in metropolitan France and overseas territories

A Broad expertise in human and animal health: diagnosis, epidemiology, ecology, biology, socio-anthropology, vector, modelling, pathophysiology, antiviral therapies, etc

Activities

Monitoring and alert function

- Epidemiological surveillance group
  - Monthly meetings
  - Epidemiological overview in human and animal public health in metropolitan France, overseas territories and in the world
  - Updates: Dengue in La réunion, Oropouche/Mayaro in French Guyana, insecticide resistance, TBEV, RVF, entomological surveillance systems, WN surveillance, etc
- Response to specific situations/events and notes to health authorities:
  - Risk of extension of Zika in mainland France (DGS Nov. 2019)

Reinforce the structuring of projects

Working groups

- Use of dengue vaccines in the West Indies
- WN/Usutu in mainland France
- Atypical forms of dengue fever
- Social acceptability of preventive and curative actions

Provide support in the response to calls for tender

- National Strategy for the Acceleration of Emerging Infectious Diseases: 2023

https://www.anrs.fr/fr/emergences/enjeux-de-la-recherche/pepr-maladies-infectieuses-emergentes

https://anr.fr/fr/france-2030/france2030/call/pepr-prezode-appel-a-projets-changements-globaux-pratiques-humaines-et-emergence-de-maladies-zoo/

Research preparedness and response plan to arbovirus epidemics

Based on epidemic scenarios in metropolitan France and/or overseas territories

- Identify the needs: Diagnosis, Epidemiology, Entomology & Vector control, Medical care, treatment, vaccination, Societal impact, communication, …
- Propose appropriate responses for each of these elements
- List the shortcomings: means, structure, regulations
- Propose priorities for action and research priorities

First example: **Yellow Fever in Martinique**

Deuxième Colloque scientifique Arbo-France

13-14 octobre 2022, Paris Santé Campus

New interventions of vector control and vaccines for human and animal arboviruses

PhD grants
ARBO-France – ANRS | MIE

Innovative vector control strategies & Innovative vaccination strategies

Development of the Sterile and the Incompatible Insect Techniques (SIT-IIT) as part of integrated *Aedes albopictus* control in Mexico

Frédéric SIMARD & David ROIZ

How insecticide resistance can affect *Wolbachia*-induced resistance to arbovirus transmission.

Anna Bella FAILLOUX & Nicolas POCQUET

Scientific strategy for the next 10 years

Priorities

- **Network of clinical cohorts**:
  - Facilitate the collection, analysis and sharing of data and biological samples
- **Diagnostic**
  - Facilitate the preparation and distribution of large-scale tests.
  - Establish a virtual platform dedicated to improving the diagnosis of human and animal arboviral infections.
  - Establish a platform for seroprevalence studies starting with blood donors.

Priorities

- **Entomology**
  - Facilitate connectivity between the different actors of vector control;
  - Promote the development of infrastructure, insectarium in particular;
  - Facilitate discussion on new vector control methods.
- **Research**
  - Promote interactions between human, animal health and environmental scientists;
  - Support national funding for research on non-zoonotic animal arboviroses
  - Strengthen long-term support for "orphan" topics*;*
  - Promote research in regions at risk of emergence.

Expected results

Become a driving force in the development of research projects

Strengthen the integration of disciplines and scientific teams in the conduct of research projects;

Evolve into a reliable reference network for actors in arbovirology research and support expertise with public authorities

Set up an evaluation process that covers scientific activities and activities of the network