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EMERGING INFECTIOUS DISEASES Inserm

Activity Report 2025

“Preparing for the crises of tomorrow means building today’s networks, infrastructure and scientific alliances capable of responding to them.”

2025 forcefully reminded us of a fact we can no longer ignore: infectious diseases remain one of the major public health challenges of our century. They emerge, circulate, re-emerge and transcend the notion of borders. International research is now a vital necessity. However, it is being undermined in several regions of the world by geopolitical tensions and pressures on funding.

Anticipating, preventing and responding to future epidemic crises means building research networks and infrastructure and scientific alliances at national and international level now. This is the mission that has guided the actions of ANRS MIE throughout 2025.

The agency has chosen to continue and consolidate its European and international commitment, in particular through its coordination of structured partnerships and its involvement in European research initiatives. It has strengthened its partnership with the World Health Organisation (WHO), which has entrusted ANRS MIE with coordinating the CORC on filoviruses, making the agency a WHO collaborating centre.

Our 2025 Science Days dedicated to the “challenges of international research” highlighted the urgent need to promote international scientific cooperation to tackle the health challenges facing the world.

2025 was marked by major advances within our traditional remit. The prospect of a cure for HIV, long considered out of reach, has never seemed so close. However, these advances must not make us forget what matters: HIV, viral hepatitis and tuberculosis continue to affect millions of people worldwide and require ongoing scientific commitment.

This year, our Outbreak Response programme enabled a proportionate, effective response to outbreaks of filovirus, chikungunya, West Nile Fever and Rift Valley Fever. It is proving to be an indispensable tool for future epidemic threats.

As this activity report is published, the global health event linked to the Andes hantavirus and recent Ebola outbreaks remind us daily that the risk of epidemics is a reality. Health crises are neither exceptional nor isolated: they require us to remain constantly prepared to take action.

Professor Yazdan YAZDANPANAH,
Director of ANRS Emerging infectious diseases

Professor of Medicine and Hospital Consultant since 2006, Yazdan Yazdanpanah has been an internationally recognised specialist in infectious diseases. Professor of Medicine at *Université Paris Cité* and Head of the Department of Infectious and Tropical Diseases at Bichat-Claude-Bernard Hospital (AP-HP) since 2012, he has also been Director of the Thematic Institute for Immunology, Inflammation, Infectious Diseases and Microbiology (IT I3M) at Inserm since 2017. Finally, since 2018 he has been a member of the Global Coordination Mechanism (GCM) for research and development (R&D), established by the WHO to prevent and respond to epidemics.

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Part 1

Preparing for the next crisis: anticipating and structuring research

One of the major objectives of ANRS Emerging infectious diseases (ANRS MIE) is to strengthen preparedness for the occurrence of epidemic crises to provide a rapid and coordinated response. The control of epidemics is based on this capacity to prepare, anticipate and structure the response to emergency situations upstream.

In a context of multiplying infectious threats, the year 2025 represented an important step in consolidating preparedness and response capacities for health crises. ANRS MIE pursued a strategy centred on reducing the time needed to mobilise research, strengthening research infrastructures at national and international levels, and structuring partnerships at international level.

These actions pursue a clear operational objective: to strengthen the capacity for rapid mobilisation of research in an emergency situation.

A clinical research capacity that can be mobilised in an emergency situation

The rapid deployment of coordinated clinical trials from the first weeks following the identification of an emerging threat is a major objective. From this perspective of operational preparedness for health crises, in 2025 ANRS MIE continued to strengthen national clinical research capacities, while structuring an international mechanism devoted to the conduct and coordination of clinical trials.

Strengthening national clinical research capacities

At national level, the year 2025 was characterised by strengthened structuring and a ramping-up of clinical research infrastructures specialised in emerging infectious diseases. This structuring is based on the coordination of national research capacities, bringing together data management, operational capacities for clinical trials and surveillance mechanisms for emerging pathogens.

It is within this framework that the **OPEN-ReMIE** platform (National Operational Research Network for Emerging Infectious Diseases), led by ANRS MIE and co-directed with the Hospices Civils de Lyon, was launched in March 2025. This infrastructure organises and facilitates rapid access to data from cohorts, clinical trials and biobanks, ultimately representing several tens of thousands of participants and samples.

> **OPEN-ReMIE was designed to sustain and strengthen the research infrastructures previously established during the Covid-19 pandemic around hospital-based clinical trials. By consolidating the gains from this period, it acts as a genuine "white plan" for clinical research.**
>
> **Pr. Yazdan YAZDANPANAH,**
> Director of ANRS Emerging infectious diseases

The platform creates the conditions for secure and accelerated access to the data required for clinical research in an emergency situation. Deployed over five years, it forms part of the "**France 2030**" plan, with €10 million in funding from the French National Research Agency (ANR).

In a complementary approach to strengthening capacities, the **I-REIVAC Emergence platform**, launched in 2025, is based on a network of more than 30 hospital investigating centres distributed throughout French territory. It enables the accelerated implementation of vaccine trials and a recruitment capacity, within a few months, of several thousand volunteers in the event of an epidemic.

The platform is jointly led by ANRS MIE and the Paris Public Hospitals Group (AP-HP) and funded to the amount of €12 million for a five-year period by the French National Research Agency (ANR) as part of measure six of the national "MIE and CBRN threats" strategy under the "**France 2030**" plan.

Finally, the **EMERGEN 2.0 consortium**, coordinated by ANRS MIE, Santé publique France and the French Agency for Food, Environmental and Occupational Health & Safety (Anses), and launched in March 2025, extends and broadens the achievements in genomic surveillance and research of the EMERGEN[1] mechanism established during the Covid-19 pandemic.

Strengthened, this genomic surveillance and research mechanism is opening up to other emerging pathogens and affirming its "One Health" approach with the inclusion of Anses in the coordination team. It mobilises a national network of sequencing platforms representing several dozen laboratories. During periods of active circulation, this mechanism enables the analysis of several thousand viral genomes per week and ensures near-real-time surveillance of variants.

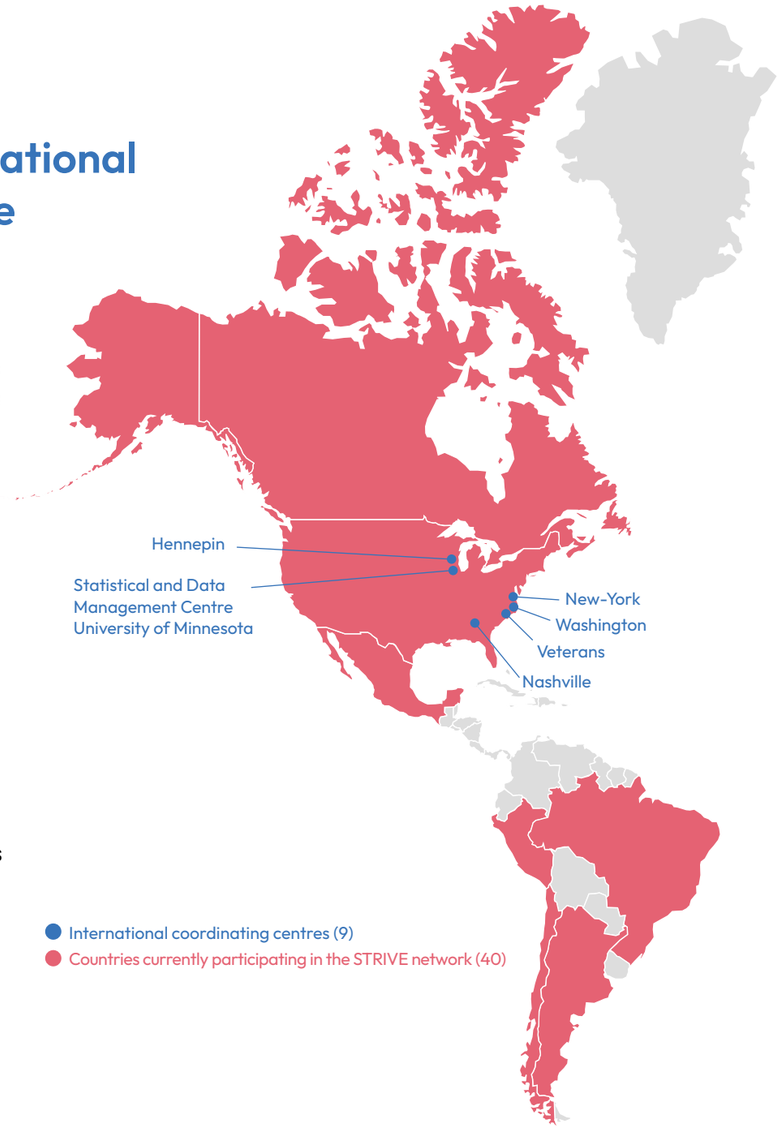
Find out more about the research platforms supported by ANRS MIE
https://anrs.fr/en/infrastructures/research-platforms/

1 Consortium for the surveillance and research on infections with EMERging pathogens through microbial GENomics

Structuring an international research architecture

As emerging infectious threats extend far beyond national frameworks, preparedness for health crises requires the coordination of research capacities at international level. In addition to strengthening national capacities, ANRS MIE consolidated in 2025 its involvement in several international initiatives intended to deploy clinical research networks that can be mobilised in an emergency situation.

Launched on 30 January 2025, the **PROACT EU-Response** consortium mobilises 25 partners, with overall funding of €17 million over five years (2025–2030). It aims to structure a network of clinical trials that can be activated in an emergency, with timelines shortened to a few weeks. ANRS MIE ensures the overall coordination of this consortium and will also be the sponsor of several clinical trials linked to the EU-SyndAct adaptive clinical trial platform. This will notably be the case for the SyndAct-1 clinical trial, which will focus on influenza, Covid-19 and respiratory syncytial virus (RSV).



International STRIVE clinical trial network (2025)

The STRIVE network map lists the 40 countries participating in the STRIVE networks. The nine international coordinating centres (ICCs) are indicated by blue dots.

The **STRIVE network** (Strategies and Treatments for Respiratory Infections and Viral Emergencies) was created in 2023 to respond to the need for a global clinical trial network on respiratory infectious threats and viral emergencies. Funded by the National Institutes of Health (NIH), it brings together nine international coordinating centres, including ANRS MIE, across six continents, in 40 countries, representing more than 300 clinical trial sites. It actively includes low- and middle-income countries to fill a critical gap in the global clinical trial ecosystem.

ANRS MIE is the international coordinating centre for France and for the member countries of its International Network. In 2025, two clinical trials were set up to assess respectively the efficacy of an antiviral agent and of an immunomodulator in hospitalised patients with Covid-19. An observational study (IC-SARI) aimed at describing the pathogens causing acute respiratory infection in hospitalised immunocompromised adult patients was also initiated.

2025 GloPID-R general assembly in Paris, France

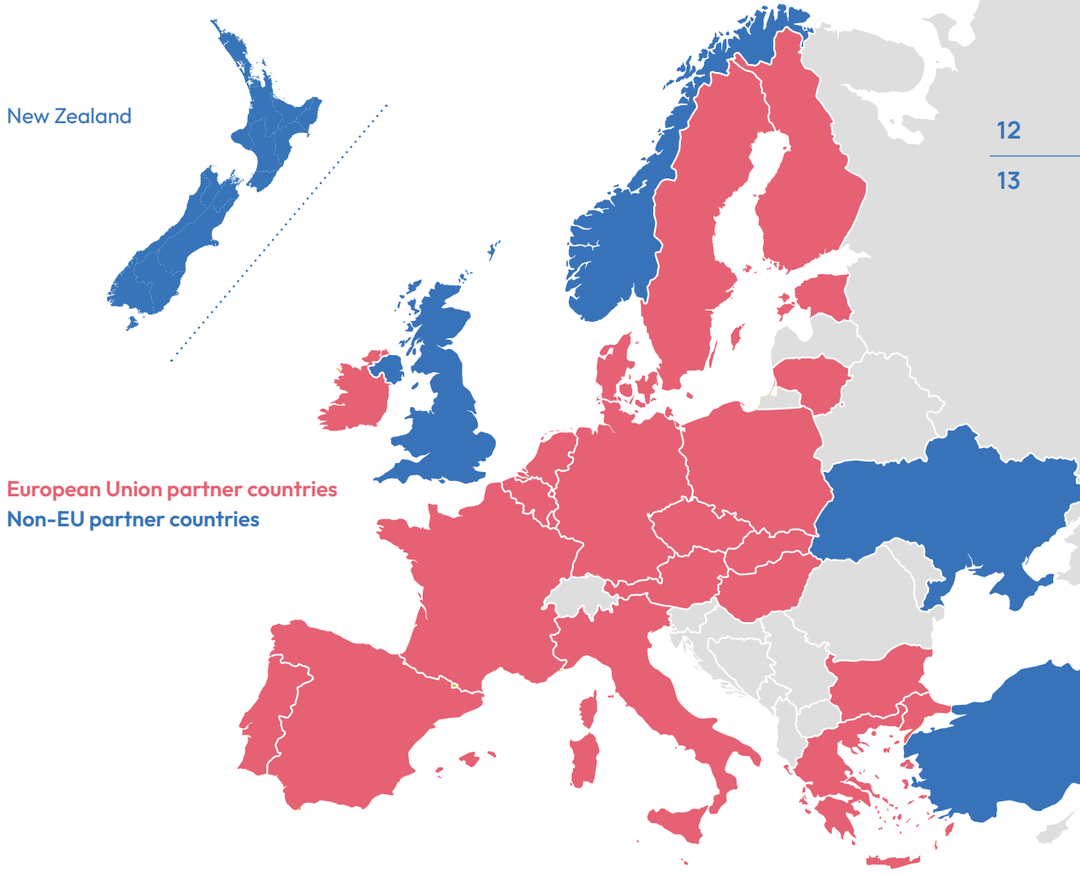
ANRS MIE at the heart of European coordination for crisis preparedness

As part of its coordination missions, ANRS MIE actively contributes to strengthening European preparedness and response mechanisms for health crises. In 2025, its coordination role at European level was consolidated through the structuring and leadership of the BE READY consortium.

ANRS MIE continued its commitment within the GloPID-R consortium, an international network bringing together more than 30 funding organisations in around twenty countries. The 2025 general assembly of the **GloPID-R consortium** was organised by ANRS MIE and held on 27 and 28 October 2025 in Paris. Representatives of GloPID-R members and observers came from around the world to review the year's activities and jointly define the consortium's future directions: namely, to promote equitable research conditions, facilitate an effective and agile clinical response, and support clinical trial networks and platforms ready to respond to an emergence.

"ANRS MIE actively participated in the development of this GloPID-R roadmap to foster better coordination of clinical trials in the event of epidemics and pandemics. The agency worked to simplify the process of obtaining the regulatory approvals required to launch studies, to ensure that equity is taken into account in research and that low- and middle-income countries (LMICs) are involved, and to provide access to innovative treatments."

Alpha Diallo,
Head of the Clinical Research Vigilance Department, ANRS MIE



Partner countries of the BE READY consortium (2025)

The map of the European BE READY partnership presents the 27 partner countries.

“As coordinator of BE READY, ANRS MIE is proud to contribute to structuring a genuinely integrated European landscape for research preparedness. Our role is to foster harmonisation, guarantee scientific excellence and maintain essential research capacities beyond periods of crisis.”

Hervé Raoul,
Coordinator of BE READY, Deputy Director of ANRS MIE

The agency ensures the overall coordination of the BE READY consortium as well as the definition of the strategic research and innovation agenda. ANRS MIE’s involvement in BE READY as overall coordinator is a key element of the agency’s European and global strategy to foster coordination in preparedness and response strategy, to limit the effects of emerging epidemic events.

The **BE READY PLUS** programme, completed in 2025, brought together more than 25 partner institutions from around fifteen countries. It enabled the structuring of common tools (protocols, regulatory frameworks, data-sharing mechanisms) and the testing of coordinated response mechanisms. The final conference organised in 2025 brought together more than 200 international participants, reflecting growing support for this dynamic.

Following on from this, the European BE READY partnership was officially launched in early 2026 and mobilises more than 80 partners from 27 countries. The first operational phase of the partnership, launched in January 2026 for a three-year period, is based on an allocated budget of €118 million. This partnership contributes to structuring a genuine integrated European ecosystem for preparedness and response to health crises.

Strengthening international collaboration through calls for proposals

In line with efforts to structure research capacities that can be mobilised in an emergency situation, ANRS MIE relies on international funding instruments to support concerted scientific responses to epidemic threats. In 2025, the agency continued its participation in joint funding mechanisms aimed at strengthening preparedness and coordination of research at international level.

Within this framework, ANRS MIE is among the funders of the Global Research Improving Pandemic Preparedness (GRIPP) programme, hosted within GloPID-R. The first call for proposals, entitled “**Responding to outbreaks: accelerating clinical trial site readiness in LMICs**”, was open from 4 September 2025 to 14 November 2025. The objective of the **GRIPP 1 call** is to support efforts to improve clinical trial capacities in low- and middle-income countries (LMICs). Funded projects will benefit from a budget of up to €2 million for a maximum duration of 24 months, in coordination with The European and Developing Countries Clinical Trials Partnership (EDCTP).

This call for proposals reflects the intention to strengthen international cooperation to consolidate a clinical research environment that can be mobilised in the event of a pandemic.

ANRS MIE was also involved in preparing the BE READY 2026 call for proposals. Preparation of this call, initiated as early as 2025, mobilised a broad network of European stakeholders.

It is intended to fund around ten to twenty collaborative projects, with individual budgets ranging from one to three million euros, for overall funding estimated at between €30 million and €50 million.

This transnational call for proposals will support innovative, collaborative, interdisciplinary and transnational research projects aimed at better understanding the pandemic potential of emerging pathogens, determining the pathophysiology induced by these pathogens and developing innovative medical countermeasures.

Part 2

Responding to emerging threats: research mobilised in real time

While ANRS MIE plays a central role in supporting the preparation of responses to future infectious threats, it contributes decisively to the response to epidemic crises.

In France, as in Europe and internationally, ANRS MIE plays a very particular role in the scientific landscape for the response to epidemic crises: it acts as a leading player, inter-institutional pilot and research accelerator. It has established a coordination and monitoring procedure to respond rapidly to health crises through its Outbreak Response programme.

In 2025, this mobilisation capacity was put into practice on several occasions in response to infectious threats such as the Ebola and Marburg viruses, Rift Valley fever, arboviruses and viral respiratory infections, confirming the agency's role in structuring and coordinating scientific responses in epidemic periods.

The Outbreak Response programme:a structured, graduated and adaptive response

ANRS MIE has established a mechanism enabling the coordinated mobilisation of the scientific community to be triggered within a few days in the event of a health alert. This Outbreak Response programme is based on a multimodal and evolving approach, structured around three graduated levels of response, activated according to the severity and dynamics of the epidemic situation.

Level 1

Monitoring and anticipation: monitoring of weak signals, mobilisation of experts, analysis of emerging risks.

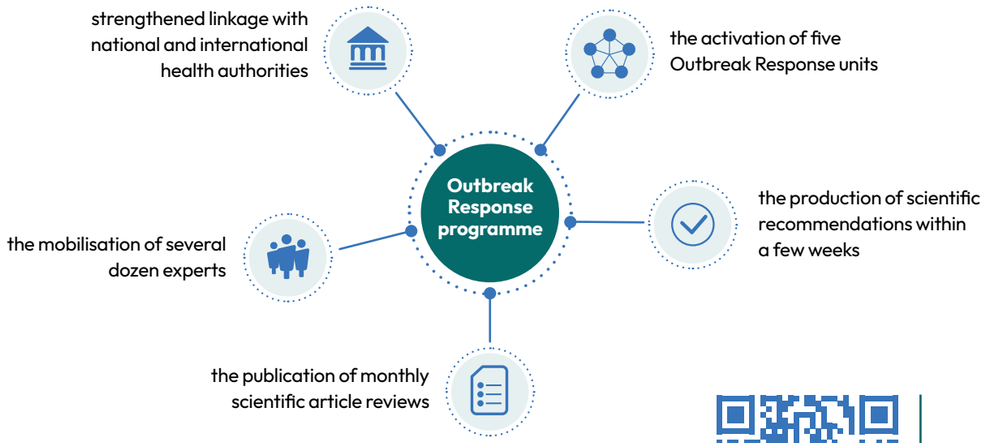
Level 2

Structuring of the scientific response: activation of thematic expert units, identification of research priorities, coordination of stakeholders.

Level 3

Reinforced mobilisation: support for the rapid implementation of research projects, inter-institutional coordination, linkage with national and international health authorities.

In 2025, the Outbreak Response programme enabled:



Find out more about the Outbreak Response programme
https://anrs.fr/en/disease-outbreak/emergence-programme/

Viral haemorrhagic fevers: preparing for epidemic threats

Viral haemorrhagic fevers are threats with a high epidemic impact, characterised by their clinical severity and their potential for rapid spread. ANRS MIE maintained in 2025 a high level of vigilance and international mobilisation capacity, in close connection with the relevant multilateral organisations and research networks.

Ebola and Marburg: defining international research priorities

Ebola and Marburg filoviruses cause recurrent epidemic outbreaks in sub-Saharan Africa. These epidemics, characterised by high case fatality rates that can reach 50 to 90%, have affected several countries in Central and West Africa in recent years, notably the Democratic Republic of the Congo, Uganda and Guinea.

Both viruses are subject to continuous scientific monitoring to anticipate localised outbreak resurgence in Sub-Saharan Africa.

In the face of persistent risks, ANRS MIE played a central international role in 2025, in coordination with the WHO through the Filovirus CORC. Several dozen experts were mobilised to develop a shared scientific roadmap, resulting in 10 research priorities covering, among others:

- the development and evaluation of treatments and vaccines,
- the optimisation of clinical trial protocols in epidemic contexts,
- the understanding of transmission dynamics,
- the strengthening of local research capacities.

These priorities constitute an operational framework that can be directly mobilised in the event of a resurgence.

Find out more about the WHO filovirus CORC coordinated by ANRS MIE
https://anrs.fr/en/partnerships/fighting-epidemics-anrs-mie-leads-who-filovirus-corc/

Rift Valley fever: organising a coordinated response

Rift Valley fever required immediate operational mobilisation in 2025, because of the scale of the epidemic dynamics observed in West Africa.

A significant epidemic was declared in West Africa from 25 September 2025. As of 10 December 2025, Senegal reported 536 confirmed cases and 31 deaths, while Mauritania recorded 53 confirmed cases and 14 deaths. More substantial surveillance data also indicated, at the end of October 2025:

In Senegal: 2,266 cases and 22 deaths, with a strong concentration in the Saint-Louis region (87% of confirmed cases)

In Mauritania: 176 cases and 14 deaths, distributed across 11 of the country's 15 regions.

This epidemic dynamic, associated with favourable environmental, led to the activation of the Outbreak Response unit on 16 October 2025. This unit brought together specialists in human and animal health, illustrating a "One Health" approach, and contributed to:

- identifying knowledge gaps,
- prioritising research areas,
- strengthening links with surveillance networks in Africa and the Middle East.

Arboviruses: monitoring to better respond to risks of expansion

In the context of expanding vectors and changing environmental conditions, arboviruses occupy a growing place among the threats monitored by ANRS MIE. In 2025, the agency strengthened its scientific monitoring and anticipation capacity for several viruses with potential for establishment or spread in temperate zones.

Chikungunya: a risk of lasting establishment

In 2024–2025, a major chikungunya epidemic affected several territories, notably in the Indian Ocean. In Réunion, more than 20,000 cases had been recorded since the beginning of the epidemic in August 2024, with a marked intensification in early 2025.

In parallel, mainland France observed the emergence of early autochthonous cases, an unusual phenomenon, in a context in which the *Aedes albopictus* mosquito is established in more than 70 departments. This situation reflects a growing risk of lasting establishment of the virus in temperate zones.

The Chikungunya Outbreak Response unit was activated on 16 January 2025 in a context of increased circulation of the virus in several regions of the world, with a risk of extension towards temperate zones. The work initiated as part of the activation of this unit focused on:

- the analysis of risks of establishment in Europe,
- the identification of needs in clinical research and prevention,
- the evaluation of vector control strategies.

The evolution of chikungunya in 2025 is an emblematic example of the transition between epidemic circulation in tropical zones and the risk of establishment of the virus on the European continent.

West Nile fever: increased circulation in Europe and France

Similarly, in 2025, circulation of West Nile fever virus was confirmed on European territory, with human cases reported in 10 countries: Albania, Bulgaria, France, Greece, Hungary, Italy, Romania, Serbia, Spain and Turkey.

In mainland France, as of 15 September 2025, 32 autochthonous cases had been recorded, including 21 cases in *Provence-Alpes-Côte d'Azur*, 7 cases in *Île-de-France*, 3 cases in *Occitanie* and 1 case in *Auvergne-Rhône-Alpes*.

These levels are comparable to previous years (38 cases in 2024, 39 in 2023), confirming the lasting establishment of the virus on the territory. This situation led ANRS MIE to activate a level 1 Outbreak Response unit on 21 August 2025 (suspended in November 2025). In this context, the agency undertook several actions:

- the online publication of a monthly review of the literature and scientific news,
- the organisation of a research meeting devoted to West Nile virus, in connection with the Arbo-France network.

Find out more about West Nile fever [FR]
https://anrs.fr/recherche/maladies-pathogenes/fievre-du-nil-occidental/

Viral respiratory infections: maintaining a high level of vigilance

Viral respiratory infections represent a set of threats that are both recurrent and evolving, marked by risks of international transmission and pandemic potential. In 2025, ANRS MIE undertook active monitoring of several respiratory pathogens, combining scientific monitoring, mobilisation of expertise and research coordination.

MERS-CoV: a persistent risk under surveillance

MERS-CoV remains a viral signal under strengthened surveillance. Since its identification in 2012, MERS-CoV has caused around 2,600 confirmed cases worldwide, mainly in the Arabian Peninsula, with a high case fatality rate of 30 to 35%[2]. In 2025, the situation remained characterised by sporadic cases and limited hospital outbreaks, but the risk of international spread persists because of human mobility.

In response, ANRS MIE activated its Level 1 Outbreak Response unit for MERS-CoV on 11 December 2025. ANRS MIE supports numerous research projects on coronaviruses. This pathogen is monitored as part of the Coordinated Actions (AC): AC Viral Respiratory Infections, AC Vaccine Viral Respiratory Infections and AC Transmission.

Avian influenza A (H5N1): a pandemic risk under surveillance

Since 2021, the global circulation of highly pathogenic avian influenza viruses, notably H5N1, has intensified, with unprecedented spread among wild and domestic birds. Cases of transmission to mammals have also been documented.
From 1 January 2003 to 22 January 2026, 993 human cases of avian influenza A(H5N1), including 477 deaths, were reported to WHO in 25 countries[3] A series of cases occurred in Cambodia in 2025, totalling 18 human infections, including 9 deaths[4].

This situation, combined with the geographical extension of the virus, constituted a major warning signal for pandemic risk. Within the framework of ANRS MIE's Outbreak Response programme, the agency made available a **monthly scientific review on avian influenza A(H5N1)**, as well as on **influenza A(H1N1)** and **A(H3N2) viruses** linked to seasonal influenza, in order to monitor research progress.

2 Middle East respiratory syndrome coronavirus (MERS-CoV) – Saudi Arabia (WHO, 2025)
3 WHO. Avian Influenza Weekly Update Number 1033, 13 February 2026
4 CIDRAP. Cambodia confirms its first human case of H5N1 avian flu this year, 16 February 2026.

Part 3

Supporting research: project highlights

In addition to its preparedness and crisis response missions, ANRS MIE supports research activity covering the full scope of its field of intervention. It supports projects across the entire research continuum: basic and translational research, clinical research, public health, and the humanities and social sciences.

The work carried out and supported in 2025 illustrates the continuity of the major scientific priorities promoted by the agency and its capacity to support new research dynamics.

These concern both advances in prevention and prospects for HIV remission, as well as improvements in the management of tuberculosis and viral hepatitis, the development of projects dedicated to emerging infectious diseases, and the deployment of major structuring programmes intended to sustainably strengthen research and innovation capacities.

HIV: advances in prevention and towards a cure

HIV care has been marked by several (r)evolutions over the decades following the emergence of the disease. The year 2025 forms part of this dynamic, with an intensification of advances and major new projects, particularly in terms of prevention. Beyond this progress, HIV research has crossed an additional threshold. It is no longer limited to controlling infection: it is now exploring strategies aimed at lasting remission, or even an HIV cure, opening a new cycle in the scientific history of the disease.

PrEP, an overview of ANRS studies over 15 years

Pre-exposure prophylaxis (PrEP) is one of the major pillars of HIV prevention, making it possible to prevent transmission of the virus in exposed seronegative people. Introduced in France in 2016 in oral form (tenofovir/emtricitabine), PrEP is undergoing a significant evolution in 2025 with the arrival of long-acting injectable forms. Lenacapavir, a capsid inhibitor administered subcutaneously twice a year, obtained marketing authorisation in spring 2025 from the Food and Drug Administration (FDA), followed by the European Medicines Agency (EMA) in summer 2025. Its commercialisation and reimbursement in France are currently under review. Cabotegravir, a new HIV integrase inhibitor administered intramuscularly every two months, received a favourable opinion from the French *Haute Autorité de santé* (HAS) in 2024, with market launch in early 2026.

These new options constitute a major alternative to oral PrEP, particularly for people with a contraindication or at risk of non-adherence.

These alternatives nevertheless raise questions in terms of deployment, accessibility and equity. As a major actor in HIV research, ANRS has supported and funded clinical trials and the provision of PrEP for several years.

ANRS MIE has already set up a working group on lenacapavir to identify and conduct future research projects linked to this innovation and to support and guide the deployment of this new PrEP.

Launch of the VESPA 3-DROM survey

Promoted by ANRS MIE, VESPA is a cross-sectional, prospective, multicentre survey whose objective is to measure the living conditions of people living with HIV who are followed in hospital settings. Conducted on a sample of patients between 2023 and 2024 and completed in 2025, VESPA 3 followed on from VESPA 2 (2011) and VESPA 1 (2003).

The VESPA-3 DROM study was launched in 2025 for a three-year period to analyse the specific characteristics of populations living in the overseas departments and regions.

Launch of the Lactavih Observatory

Opened in March 2025, the LactaVih Observatory enables the exhaustive collection of cases of breastfeeding by mothers living with HIV, a practice now authorised if viral load has been undetectable over the long term. In total, 119 mothers were included, which remains below the initial inclusion hypothesis.

Of the 43 patients followed up to three months after the baby was weaned, no transmission of the virus from mother to child was documented. This study, funded by ANRS MIE, aims to quantify and qualify mothers living with HIV who choose breastfeeding and to assess the safety of this breastfeeding.

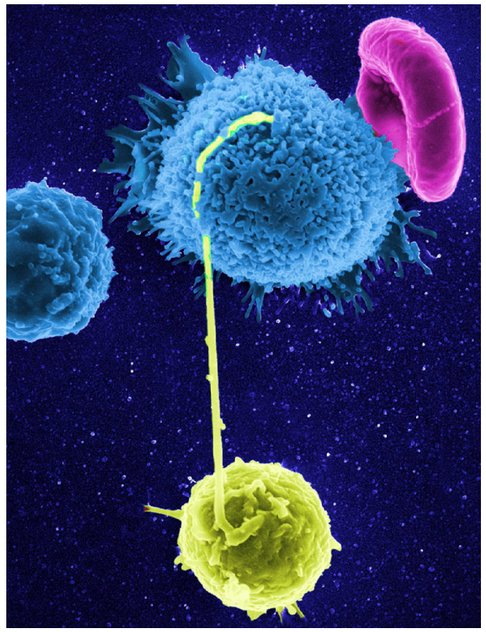
This observatory is fully in line with ANRS MIE's approach to supporting and studying all areas of prevention.

Lasting remission: VISCONTI / PRIMO and Rhiviera 1, encouraging trials

Developing tools and strategies to achieve lasting remission of HIV infection: this is the mission of the **multidisciplinary Rhiviera consortium** launched in 2014 and coordinated by ANRS MIE. It is by drawing on the capacity of some patients to control infection even after treatment interruption, and on two existing cohorts — VISCONTI and PRIMO — that **Rhiviera intends to pave the way towards a possible definitive curative treatment**.

Various clinical trials have been launched and the results, published in August 2025 in *Med*[5], notably made it possible to define the existence, among "controllers", of a genetic signature on the HLA B35 gene linked to NK cells. Another unprecedented study, published in February 2025 in the scientific journal *Nature Communications*[6] highlighted a post-transcriptional regulatory mechanism that plays a role in viral latency and reactivation.

These translational projects will make it possible to better understand the mechanisms underlying viral reservoirs and viral control, as well as the impact of antiretroviral treatments, thereby opening the way to remission strategies. In 2025, the KT Jeang Retrovirology Prize, launched by the journal *Retrovirology*, was awarded to Carine Van Lint, a member of the consortium and formerly a member of ANRS MIE's scientific committees, for her work on HIV-1 latency and viral reactivation.



5 Essat et al. *Med*, August 8, 2025; 100670. DOI : 10.1016/j.medj.2025.100670
6 Passaes et al. *Nat Commun*, February 28, 2025; 16 : 2078. DOI: 10.1038/s41467-025-57290

Interview

Pr. Asier Saez Cirion, coordinator of the Rhiviera consortium — "Curing HIV: several challenges to overcome"

Curing HIV now seems possible: what are the most promising recent advances, but also what are the major challenges ahead?
Several therapeutic approaches and several clinical results are raising hopes of curing HIV. There are now more than a dozen probable cases of cure among people who have received a bone marrow transplant: this procedure remains complex and risky and is hardly generalisable in routine practice. Another hundred or so people are now considered to be in lasting remission thanks to early treatment or different immunotherapies. This state of remission seems to be a more attainable objective in the short to medium term for the population of people living with HIV. In addition to "natural or post-treatment controllers" of HIV, these rare people living with HIV who control the virus without treatment, we are also speaking for the first time of post-intervention controllers, who control the virus after receiving immunotherapy targeting HIV.

But while hopes of a cure are taking shape, several challenges remain to be overcome. Some obstacles are biological and clinical: the virus uses our immune system as a Trojan horse and persists in reservoir cells that escape the immune response. Others are structural: lack or reduction of funding, particularly in Europe and the United States. While some immunotherapies already validated, particularly in oncology, can be repositioned to assess their value in HIV treatment, there is little funding for the costly development of new molecules specifically intended to treat HIV infection.

What is the contribution of the Rhiviera study?
The originality of Rhiviera lies in drawing on the study of "controllers", who can control the virus without treatment, to understand the mechanisms associated with remission, identify predictive markers of control and develop new therapeutic strategies. After more than 10 years of work, we have identified several promising avenues, and three concepts are being evaluated as part of the Rhiviera 01, 02 and 03 clinical trials. The objective is to mimic the immune responses that we identified in natural or post-treatment HIV controllers, to the aim being to propose approaches with demonstrated physiological relevance.

What role has ANRS MIE played, and does it continue to play, in this progress towards an HIV cure?
ANRS MIE is an actor involved at different levels, first through the cohorts that enabled us to identify and study these extraordinary cases of infection control, and then through the coordinated actions that facilitated interdisciplinary exchanges. The establishment of Rhiviera in 2015, with the support of ANRS MIE, made it possible to give identity and credibility to our ambitious projects, and to channel public-private partnerships. ANRS MIE also directly funds several of our projects through calls for proposals and provides us with structuring support in our translational research approach. Finally, ANRS MIE is a valuable spokesperson at European level, to promote collaborative research and the establishment of European funding, with the goal of accelerating the path towards curing HIV infection.

Pr. Asier Saez Cirion,
Associate Professor
at the *Institut Pasteur*, Paris, France;
coordinator of the Rhiviera consortium

2025: a call from the international scientific community for global action on HIV remission

Since the emergence of HIV in the 1980s, the prospect of a cure has never been so tangible. Despite this progress, research on an HIV cure is threatened by a glaring lack of resources.

> **We are at a turning point: the scientific tools are within reach, but without adequate funding, these advances will remain confined to laboratories.**
>
> **Pr. Yazdan Yazdanpanah,**
> Director of ANRS
> Emerging infectious diseases

It is in this context that an opinion piece published in October 2025 in *The Lancet HIV*[7], supported by a broad international coalition of researchers, clinicians, patients and funders, including Françoise Barré-Sinoussi and Asier Sáez-Cirión, warns of the need to maintain and strengthen investment.

It recalls that although HIV is now a chronic infection whose care has been profoundly transformed, the translation of recent advances — therapeutic vaccines, gene editing, broadly neutralising antibodies or "reactivation and elimination" strategies — into accessible solutions remains a major challenge.

With 40.8 million people living with the virus and around 630,000 deaths in 2024, HIV remains a major global public health issue. ANRS MIE is fully involved in international initiatives aimed at accelerating the transition from research innovations to public health applications.

> **An HIV cure would not only save lives but also generate enormous savings.**
>
> **Pr. Françoise Barré-Sinoussi,**
> Nobel Prize laureate
> and co-discoverer of HIV

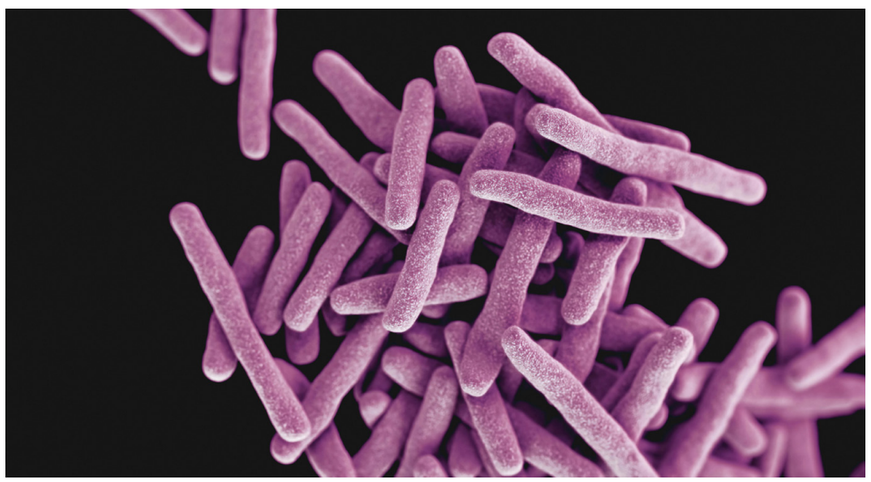
7 https://anrs.fr/en/all-news/scientists-call-for-investment-in-hiv-drug-research/

Tuberculous meningitis: improving treatment and prognosis

Two major clinical trials initiated in 2025 — TIMPANI and Intense TBM

Less well known than pulmonary tuberculosis, but also caused by the bacterium *Mycobacterium tuberculosis*, tuberculous meningitis is the most severe form of tuberculosis and affects the central nervous system. It is a rare but serious disease — with 30 to 40% mortality — which primarily affects vulnerable and immunocompromised populations. Diagnosis and treatment, which currently rely on a combination of antibiotic therapy, anti-inflammatory treatment and supportive care, remain to be optimised. Launched in 2025, the TIMPANI study is a multicentre phase II randomised trial evaluating the addition of adalimumab, an anti-TNF monoclonal antibody, to reduce mortality associated with tuberculous meningitis in patients infected with HIV-1. The disease is in fact characterised by an excessive inflammatory response against Koch's bacillus, which worsens symptoms.

INTENSE TBM is studying the addition of aspirin to reduce mortality and neurological sequelae of tuberculous meningitis in patients with and without HIV in sub-Saharan Africa. It is a multicentre phase III superiority trial comparing intensified tuberculosis treatment with the WHO standard treatment and the addition of aspirin versus placebo. Recruitment began in 2025 in South Africa, Côte d'Ivoire, Madagascar and Uganda.



STIs: new management recommendations

In 2025, the *Haute Autorité de santé* (HAS) published new recommendations aimed at strengthening the prevention and management of sexually transmitted infections (STIs). This update, carried out at the request of ANRS MIE and the French National AIDS and Viral Hepatitis Council (CNS), is intended for health professionals and patients and focuses on the management of phthiriasis, genital herpes, anogenital warts and *Trichomonas vaginalis* infections.

In response to rising incidence and the progression of bacterial resistance issues, **the recommendations concerning bacterial STIs** have been updated, with particular attention to *Chlamydia trachomatis*, *Neisseria gonorrhoeae* (gonococcus), *Treponema pallidum* (syphilis) and *Mycoplasma genitalium* infections. In seeking a compromise between reducing the incidence of STIs under prophylactic treatment and the need to reduce antibiotic consumption to limit the emergence of resistance, the use of doxycycline for the prevention of bacterial STIs is not recommended on a large scale.

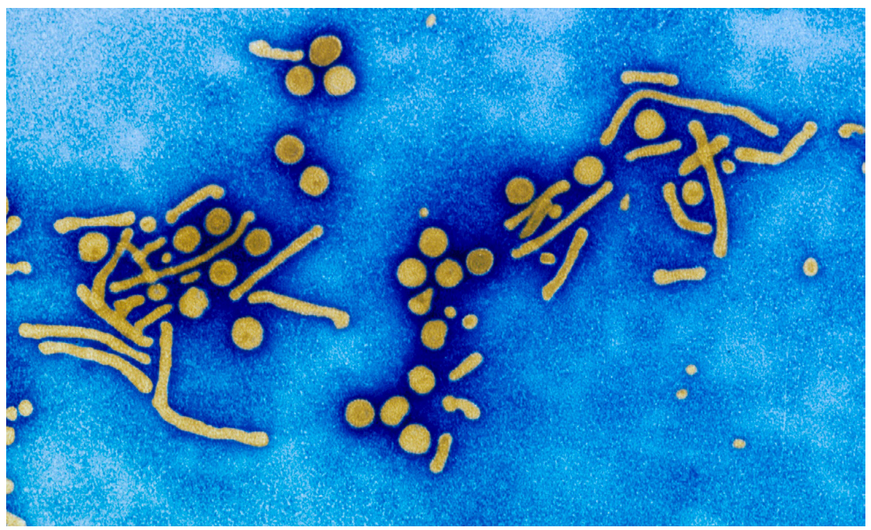
All these new recommendations aim to clarify therapeutic regimens and harmonise practices, considering the latest clinical and epidemiological advances.

Hepatitis: success and outcomes of the largest cohort dedicated to viral hepatitis

Promoted by ANRS MIE, the **HEPATHER** cohort is one of the largest cohorts aimed at improving knowledge of hepatitis B and C and their management. Launched in 2012, this multicentre observational study followed nearly 21,000 patients with hepatitis B and/or C for 4 to 12 years, with the final visits planned for the end of 2025.

Officially entitled "Therapeutic options in hepatitis B and C: a French national cohort", the HEPATHER cohort made it possible to document the natural history of these infections, assess the efficacy and tolerability of different treatments, identify prognostic factors for liver disease, and establish a foundation of knowledge, samples and data for future translational research. HEPATHER has already generated some 70 conference presentations and 59 scientific publications.

One of the original features — and strengths — of this cohort is that it was pioneering in including patients before and during treatment and in linking the cohort data with data from the French National Health Data System, for better representativeness of real-world conditions.



Interview

Pr. Fabrice Carrat: "HEPATHER, a global reference cohort on hepatitis B and C"

The cohort was set up in 2012, with the ambitious objective of including 15,000 patients with hepatitis C and 6,000 with hepatitis B, making it the largest cohort in the Western world on viral hepatitis.

Thanks to this scale, we were able to document very robustly the real impact of direct-acting antivirals (DAAs) against hepatitis C virus, by showing a significant reduction in mortality, the risk of liver cancer and hepatic decompensation among treated patients. The major results on clinical efficacy and safety in the treatment of hepatitis C, published in *The Lancet* in 2019, made it possible to change national patient management recommendations.

Pr. Fabrice Carrat,
Scientific Lead of the HEPATHER cohort,
Professor of Universities / Hospital Practitioner
at *Université Pierre et Marie Curie*, Paris, France

Following the success of hepatitis C treatments, the continuation of HEPATHER is focusing on hepatitis B.
An ancillary HEPAT-B study will ensure the follow-up of the 5,000–6,000 patients included in HEPATHER, together with new inclusions that began in 2025.

The objective is to study the efficacy of existing treatments against hepatitis B and to identify early biomarkers of complications, such as liver cancer.

Infection-related cancers: the European SHIELD project

€25 million, 25 countries, 69 partners: the **European SHIELD project**, launched in December 2025 in Copenhagen, aims to prevent and treat infections that may lead to cancers.

The challenge is major: every year, around two million people develop cancer in Europe. Nearly one in eight cancers is linked to an infection and could therefore be prevented.

The joint action “Strategies for Health Interventions to Eliminate Infection related Cancers” (SHIELD) aims to improve screening for hepatitis B and C, human papillomavirus (HPV), HIV and tuberculosis, as well as to promote vaccination against HPV and hepatitis B. Among the expected deliverables, the development of models based on national data will make it possible to assess the concrete and measurable impact of different prevention actions.

The project also integrates a set of complementary missions: combating stigma and discrimination, training health professionals, strengthening vaccination coverage and screening, particularly among vulnerable populations and in prison settings, and collecting good practices implemented by the different countries. The stated ambition, supported by political and institutional will, is to make prevention and vaccination programmes more effective and more inclusive at community and national levels.

Coordinated by the Centre of Excellence for Health, Immunity and Infections (CHIP) at Rigshospitalet in Copenhagen, the consortium involves ANRS MIE, which is responsible, together with the Public Health Center of Ukraine, for monitoring and evaluating the implementation of the SHIELD project.

> **“Too many people develop cancer due to infections that we could have prevented. The SHIELD project will aim to ensure that no one falls through the cracks. Ultimately, it is about saving lives and creating greater health equity beyond national borders and social divisions.”**

Jens Lundgren,
Professor of Infectious Diseases in the Department of Clinical Medicine at the University of Copenhagen and Rigshospitalet, Denmark

Emerging infectious diseases: large-scale projects to meet the challenges

14 new projects in 2025 as part of the PEPR MIE

Nine research projects and five Junior Chairs were selected as part of the third call for proposals of the **Priority Research Programmes and Equipment on Emerging Infectious Diseases (PEPR MIE)**, launched in April 2025 by ANRS MIE.

Better understanding emerging infectious diseases, or re-emerging infectious diseases, is the objective of the CHICAGO (chikungunya), CCHFabric (Crimean-Congo haemorrhagic fever), MuST-RSV (respiratory syncytial virus), PARAMYXOM6A (paramyxovirus), Flu-PREDICT (influenza A virus) and Disorder-to-adapt (avian influenza) projects. ArboSENSOR and CATMOS focus on the prevention, surveillance and control of the health consequences of these new threats, while INFODEM-EARLY focuses on combating the infodemic.

The five selected Junior Chair projects will fund projects by young scientists on diseases linked to arboviruses, orthonairoviruses and dengue virus. These 14 projects will receive an overall budget of €19.4 million.

Funded under the France 2030 Plan to the amount of €70 million over five years and led by ANRS MIE, PEPR MIE reflects the government’s recognition of the need to prevent and control emerging infectious diseases.

Three disease groups—arboviral diseases, haemorrhagic fevers and respiratory viral infections—were identified as posing a high risk of a health crisis in France, and three priority areas were established. In total, 29 research projects and five Junior Chairs were supported, representing a total budget of more than €57 million. These initiatives form part of the ANRS MIE’s major programme strategy.

Find out more about PEPR MIE 2023–2025 [FR]
https://anrs.fr/wp-content/uploads/2026/02/livret-laureats-2023-2025-pepr-mie-vf.pdf

Interview

Dr. Laura Picas, coordinator of the ArboSENSOR project: innovating to facilitate field-ready detection of arboviruses

“When the 2025 PEPR MIE call for proposals opened, all the planets aligned.”

Putting research at the service of innovation: this is the ambition of the ArboSENSOR project. A 2025 laureate of the Priority Research Programmes and Equipment on Emerging Infectious Diseases (PEPR MIE), led and operated by ANRS MIE as part of the France 2030 plan, this project aims to develop a miniature detection system for chikungunya, Zika and dengue viruses, which is portable but as reliable as an ELISA or PCR test.

“We want to continue democratising point-of-care diagnostic systems [in direct proximity to the patient], like home Covid-19 antigen self-tests,” says Dr. Laura Picas, coordinator of the ArboSENSOR consortium. “In such a way as to identify patients even in areas that are difficult to access or lack the infrastructure and specialised staff required for ELISA or PCR tests.”

The research project is based on an initial exploratory proof of concept: the adaptation and then optimisation of a miniature quartz-based optical detection system capable of analysing specific oscillation frequency signatures in a sample. In collaboration with a research team in microelectronics, Dr. Laura Picas’s team succeeded in developing a surface onto which anti-chikungunya antibodies can be grafted, thereby making the system “five times more sensitive than an ELISA test”, according to Dr. Laura Picas.

Dr. Laura PICAS
Research Director at the *Institut de recherche en infectiologie de Montpellier* (IRIM, CNRS / University of Montpellier, Montpellier), France

“With the ArboSENSOR project, we want to extend the compatibility of our system to other arboviruses, improve it until it reaches a sensitivity close to that of a PCR test, and adapt it to electrical rather than optical detection in order to miniaturise it even further.”

This ambition is one that Dr. Laura Picas’s team would not have been able to pursue without the support of ANRS MIE.

“As a biophysicist, admittedly working within an institute of infectiology, I was unsure whether I could apply for support from ANRS MIE,” confides the research fellow at the *Institut de recherche en infectiologie de Montpellier* (IRIM). “But when the 2025 PEPR MIE call for proposals opened, all the planets aligned: the desire to innovate in point-of-care, the means to build the broadest possible consortium and thereby draw on substantial sampling capacities, and, of course, the priority given to research on emerging infectious diseases. This gave us the means to develop the technology as we had envisaged it and to make a difference.”

With the support of ANRS MIE, the ArboSENSOR project will therefore begin in September 2026. Within the framework of PEPR MIE, this project benefits from PEPR MIE funding of €1 million over 36 months.

Find out more about ArboSENSOR project
https://anrs.fr/en/all-news/pepr-mie-arbosensor-interview/

Covid-19: clinical trial for an innovative nasal vaccine

In March 2025, five years after the beginning of the Covid-19 pandemic, an unprecedented clinical trial was launched on a nasal vaccine against SARS-CoV-2. Sponsored by Tours University Hospital and ANRS MIE, **MUCOBOOST** is a randomised, controlled, multicentre phase I/II trial comparing the safety and immunogenicity of an intranasal vaccine expressing the recombinant N/S proteins of SARS-CoV-2 with an mRNA vaccine. Inclusions for phase I, known as "dose escalation", began in April, with preliminary results in the autumn making it possible to define the recommended dose for phase II, which will take place in early 2026. Developed by the Tours-based start-up Lovaltech, this new-generation vaccine is based on innovative technology and provides broadened protection.
In addition to inducing, like the mRNA vaccine, a systemic immune response, intranasal vaccination also induces a local response at the entry point of SARS-CoV-2. Tested here for the first time in humans ("*first in human*"), this technology could help stop the virus more rapidly and limit its spread and replication.

Beyond SARS-CoV-2, this new approach could revolutionise vaccine strategies for respiratory infections. The MUCOBOOST trial also marks an unprecedented co-sponsorship between a university hospital and ANRS MIE. It represents a first step in rebuilding French leadership in vaccination.

ANRS MIE mobilised against Crimean-Congo haemorrhagic fever (TICKRISK)

"A ticking time bomb": Crimean-Congo haemorrhagic fever, a tick-borne viral disease, is now classified by the World Health Organization (WHO) among the priority threats constituting an imminent risk in Europe. Understanding, preventing, preparing for and communicating about this disease is therefore becoming urgent and lies at the heart of the objectives of the **TICKRISK project**. Taking place over four years and in four countries (France, Spain, Romania, Turkey), **the project aims to compare the perception and management of this disease in different European countries** through a multidisciplinary approach combining anthropology, history, virology, epidemiology, ecology and political science, and associated with a citizen science programme.

One of the objectives is indeed to deploy education and awareness-raising tools on epidemic risks, to analyse public health policies and to document interactions between humans, ticks, animals and the environment. This ambitious project, funded by ANRS MIE, is fully in line with the agency's prerogatives in the fight against emerging infectious diseases.

Part 4

Facilitating, bringing together and sharing: engaging the scientific community

ANRS MIE carries out a mission of scientific coordination and research coordination within its scope: HIV/AIDS, viral hepatitis, tuberculosis, sexually transmitted infections and emerging infectious diseases. It implements an active policy of networking scientific, institutional and community-based actors through its committees, coordinated actions, working groups and international mechanisms.

In 2025, ANRS MIE's strategy resulted in the deployment of new scientific coordination mechanisms, the organisation of structuring scientific events and the strengthening of its International Network. The agency paid particular attention to supporting the new generation of researchers through specific funding mechanisms and networking actions.

Creation of the Innovation Committee: accelerating and supporting therapeutic innovation

ANRS MIE places innovation at the heart of its strategy to foster the development of therapeutics, vaccines and diagnostics for the benefit of infectious risk prevention and patient care. The mission of the ANRS MIE Innovation Department is therefore to structure an effective ecosystem and support the development of medicines, vaccines and diagnostics within ANRS MIE's scope of action.

To accelerate this translation from research to development, ANRS MIE created in 2025 a multidisciplinary and independent **Innovation Committee** to support project leaders selected by the Innovation Department. It is composed of 14 experts from the public and private sectors — research, the pharmaceutical industry, regulatory affairs, technology transfer — who meet four times a year.

The Committee provides, on a voluntary basis, recommendations, technical support and networking to improve project feasibility and connect expertise. The first meeting of the Innovation Committee was held on 26 May 2025. The meeting provided support for two projects funded under the Priority Research Programmes and Equipment (PEPR MIE), focusing on the development of an influenza vaccine platform and the development of a new therapeutic approach against Nipah virus and Paramyxovirinae. On 28 October, the second meeting highlighted a malaria project and an influenza project, SAChA Therapeutics.

The Committee's ramping-up from 2026 onwards gives concrete expression to ANRS MIE's ambitions to support and accelerate innovation for the benefit of patients.

> **The presentation of our project to the ANRS MIE Innovation Committee led to a rich and particularly constructive exchange. The committee members, with varied expertise and an excellent scientific level, made valuable contributions.**
>
> **Isabelle Dimier-Poisson,**
> University of Tours, Tours, France,
> partner in the MUCOBOOST project

Scientific facilitation: focus on the new groups

With the structuring of new thematic working groups in 2025, ANRS MIE is continuing to strengthen its scientific coordination. These new groups respond to scientific issues identified within the research communities and the agency's coordinated actions. Their objective is to structure scientific expertise and to bring out scientific projects or recommendations.

Infodemic working group: broad ambition, concrete projects

Launched at the end of 2024 in the context of the resurgence of the mpox epidemic in the Democratic Republic of the Congo, the **"Infodemic and epidemic crises" working group (WG)** broadened its scope of reflection in 2025 to various health crises. Composed of around thirty specialists from different countries (Europe and Africa) and disciplines (from anthropology to data science, via infectious diseases), **this working group is tackling the broad task of combating health misinformation**. Its members meet regularly in response to epidemics to analyse the mechanisms by which health information is disseminated and adopted, to define monitoring and information analysis strategies, and also to develop and evaluate methods to counter misinformation and strengthen the mobilisation of the communities involved (research, decision-makers, civil society).

These exchanges led to the emergence of several research projects, including the socio-anthropological PADMEN study ("Propagation and Analysis of Discourses on Human Metapneumovirus in the Digital Ecosystem"), funded by ANRS MIE and conducted in early 2025 to develop tools for detecting and categorising online infodemics, as well as the INFODEM-EARLY project, supported at the end of 2025 under the France 2030 PEPR MIE. The latter combines anthropological survey, training in empathic refutation interviewing and the development of tools to anticipate infodemics, particularly in the context of vaccination campaigns against chikungunya in Réunion and Mayotte.

Discover ANRS MIE's scientific facilition groups
https://anrs.fr/en/scientific-research/scientific-facilitation-groups/

Interview

Romy Sauvayre and Léonard Heyerdahl, co-coordinators of the Infodemic working group: "The infodemic is a social invariant"

"In the history of societies, the dissemination of information has always coexisted with the manipulation of information," explains Romy Sauvayre, sociologist of science and beliefs at *Université Clermont Auvergne* and co-coordinator of ANRS MIE's Infodemic working group. "The infodemic is therefore what we might call a social invariant."

For her co-coordinator, Léonard Heyerdahl, expert research fellow in computational social sciences at the *Institut Pasteur*, what characterises today's infodemics, in addition to the overabundance of information, "are the new forms of information distribution: the multiplication of vectors of information (false, accurate, uncertain) through social media, the growing presence of misinformation actors and the wave of content generated by artificial intelligence. All of these contribute to the phenomenon and reinforce the central problem of trust in scientific actors, decision-makers and epidemic control strategies."

Producing reference expertise on health infodemics lies at the heart of the Infodemic WG's activity. The long-term objective is to establish an observatory for health infodemics.

Romy Sauvayre and Léonard Heyerdahl,
co-coordinators of the Infodemic working group

Long-Acting PrEP working group: a working group on lenacapavir

In response to recent progress and marketing authorisations for new pre-exposure preventive treatments, and continuing its longstanding involvement in supporting the development of these new therapies, ANRS MIE has set up a **working group dedicated to lenacapavir**. Coordinated by Pr. Jean-Michel Molina, this international working group brings together representatives of the communities concerned and researchers from different disciplines. Its mission is to define the research questions raised by the arrival of this long-acting preventive treatment and to develop research projects, ranging from clinical research to public health research. The results of this work will help guide public authorities in developing recommendations on the deployment of this new PrEP.

ThéGéVec: a new working group on gene therapy against HIV

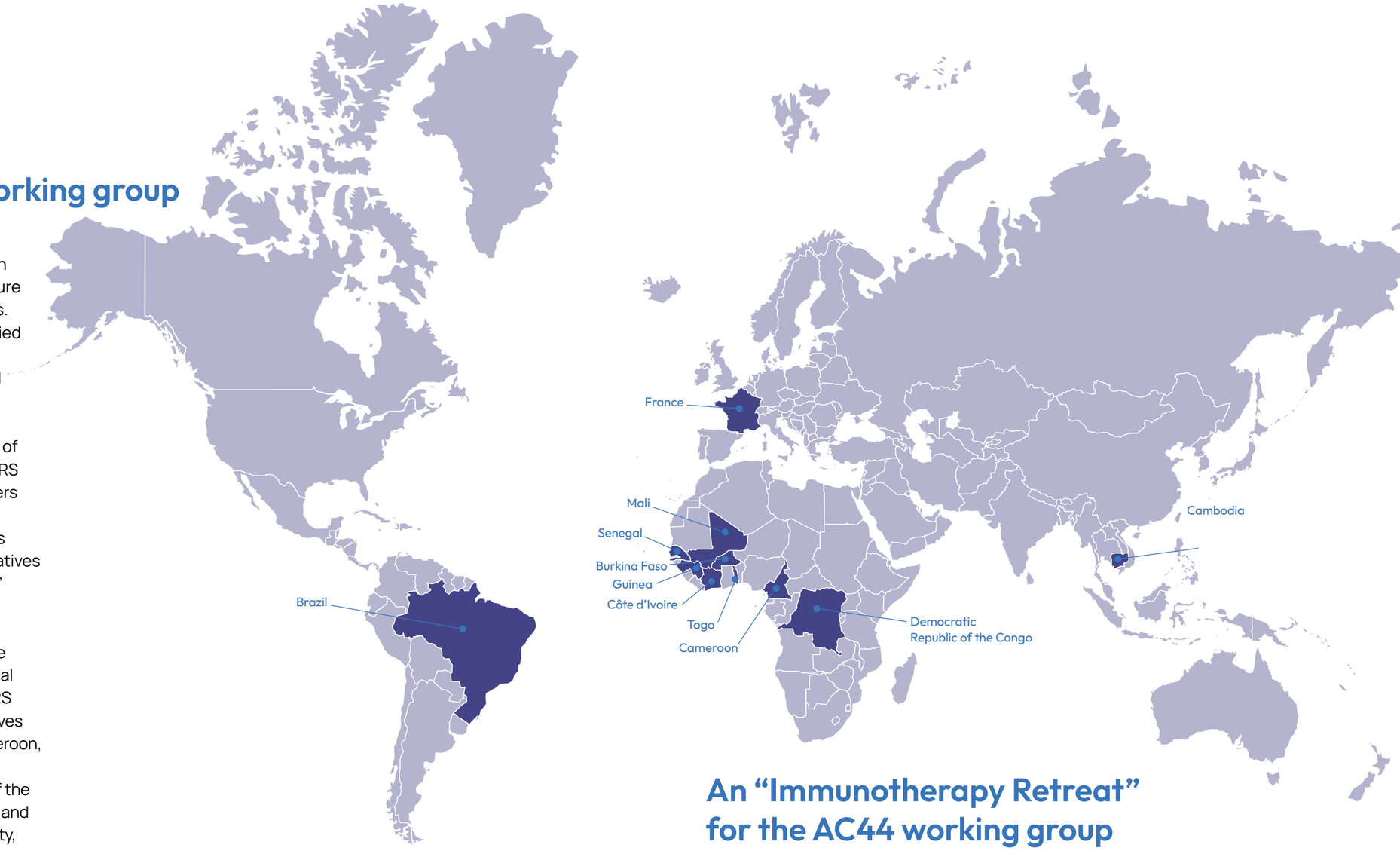
The coordinated action Host-virus interactions: basic and translational research on HIV (AC41) has the mission of coordinating and linking basic research and translational research on HIV. It includes three working groups: Immunotherapy, mother-child and a third group named ThéGéVec, launched in 2025 and dedicated to vectorology and the development of gene therapies. The objective of the ThéGéVec working group is **to bring together and improve the visibility of national expertise in gene therapy, at a time when France was once a pioneer in these fields.**

In line with ANRS MIE's strategic priorities, the ThéGéVec group began by defining objectives to accelerate the development of viral-vector-based technologies for therapeutic purposes and is working to strengthen collaborations between disciplines and indications. A first **ThéGéVec symposium** was organised on 28 November at the *Institut Pasteur* in Paris. Under the theme "Shaping the future of gene therapy with new vectors", this symposium reviewed the state of the art in vectorology and gene therapy research.

HIV and ageing working group

Ageing with HIV is now a reality, even though the disease causes premature ageing and numerous comorbidities. While this phenomenon is well studied in high-income countries, it is less described and assessed in low- and middle-income countries (LMICs), where public health aspects play a fundamental role in the formulation of health policies. In January 2025, ANRS MIE sought to bring together partners from its **International Network**, researchers involved in several of its coordinated actions and representatives of society within an "HIV and ageing" working group.

The working group stands out for the diversity of its members: geographical diversity through the number of ANRS MIE partner sites and PRISME initiatives represented, notably in Africa (Cameroon, Senegal, Burkina Faso, Côte d'Ivoire, Guinea, Mali, Democratic Republic of the Congo, Togo), Latin America (Brazil) and Asia (Cambodia); disciplinary diversity, since the working group involves clinical research, basic research, the humanities and social sciences, geriatrics, infectious diseases, mental health, etc.; and professional diversity through the participation of several representatives from institutions, associations and the scientific community: researchers, Expertise France, Sidaction, the ABOYA association in Dakar, etc.



Partner sites and PRISME initiatives involved in the HIV and ageing working group

An "Immunotherapy Retreat" for the AC44 working group

Organised jointly by the coordinated action "Host-virus interactions: basic and translational research on HIV" (AC41) and the "Immunotherapy" clinical research working group of the "HIV clinical research" AC (AC44) in May 2025, the "**Immunotherapy Retreat**" brought together immunotherapy experts, clinicians and researchers to foster interdisciplinary exchanges on advances in HIV and oncology. This working session strengthened collaborations and created bridges between different scientific communities, thereby opening new perspectives for research and clinical practice, especially on T cells, the tumour microenvironment, and the development of CAR T-cell-based therapies. It was also an opportunity to give young researchers a voice. This conference forms part of a collective dynamic for the launch of a collaborative action combining expertise in oncology, immunotherapy and HIV, focused on immunotherapy to accelerate the cure of HIV.

Events organised by the coordinated actions: thematic days and symposium

Each year, the coordinated actions (ACs) organise events for external audiences to structure scientific exchanges and bring research communities together around their priorities. These exchanges in 2025 fostered the sharing of scientific advances and the building of collaborations.

Viral hepatitis: the AC42 thematic days supporting exchanges, synergies and the emergence of projects

The **coordinated action 42** is responsible for basic and translational research activities relating to viral hepatitis. Its missions were revised in 2025 and now focus on the study of the fundamental molecular and cellular aspects of the life cycles of hepatitis viruses and of host responses and diseases induced by these viruses. The coordinated action's role is to provide ANRS MIE with new concepts and directions concerning prevention and therapy.

The AC42 operates through thematic days open to the whole community, held three times a year.

These meetings continue the work of previous working groups and cover all themes relating to basic and translational research on viral hepatitis.

The themes addressed include in particular: molecular interactions between viruses and their host cells, immune responses to viral infections, the development of new technologies and new experimental models, the development of new antiviral strategies, and the understanding of the mechanisms of pathogenesis associated with viral infections targeting the liver.

TB AC: a first international symposium dedicated to asymptomatic tuberculosis

The **Tuberculosis coordinated action** (TB AC) has the mission of facilitating the development of collaborative projects, strengthening research and development (R&D), and proposing new diagnostic, therapeutic and vaccine approaches in response to the major current challenges relating to tuberculosis.

On 25 June 2025, the TB AC organised its first international symposium dedicated to subclinical tuberculosis. Bringing together researchers and clinicians in person and online, the day was structured around three themes: diagnostic tools for subclinical tuberculosis, transmission and screening strategies, and treatment opportunities for subclinical tuberculosis.

This first edition was a success. It helped improve understanding of subclinical tuberculosis, a major public health issue worldwide.

With a prevalence of 10.6 million cases and 1.3 million deaths worldwide in 2022, tuberculosis remains a major public health issue and lies at the heart of ANRS MIE's priorities.

Scientific events and international conferences

ANRS MIE Scientific Days: meeting the challenges of international research

In a context marked by a multiplication of epidemic risks and the growing impact of environmental and societal crises on public health, research must collaborate, adapt and innovate. This is why ANRS Emerging infectious diseases chose to devote its 2025 Scientific Days to the "the challenges of international research". Through a rich programme, these two days made it possible to share advances and perspectives, whether in prevention, detection, epidemic response or innovation. At a time when scientific research is under threat in the United States, this event was an opportunity to highlight the pressing need for cooperation between international actors. These emblematic ANRS MIE days brought together nearly 500 people on site and 250 remotely.

> **International cooperation is essential to prepare for and prevent epidemics, as well as to detect, control and treat them when they occur. We therefore chose to devote these Scientific Days to "international challenges", and these challenges have never been so great.**
>
> **Pr. Yazdan Yazdanpanah,**
> Director of ANRS Emerging infectious diseases

From 1 to 2 April, the *Institut Pasteur* hosted the ANRS MIE Scientific Days.

EACS 2025: ANRS MIE and TRT-5 CHV open the debate on funding the fight against HIV

Held every two years, the European AIDS Clinical Society Conference took place from 15 to 18 October 2025 in Paris. Within the dense programme of this international conference, **a session co-organised on 17 October by ANRS MIE and the community-based collective TRT-5 CHV**, which brings together associations fighting HIV, hepatitis and STIs, focused on funding HIV research at a time of budgetary restrictions. What is the impact of institutional decisions, particularly as the United States has frozen its funding for the fight against HIV? What new models of support for low- and middle-income countries might be possible? What are the challenges of multilateralism? What is the role of global health agencies? What is Europe's position in relation to these issues in the fight against HIV? These were some of the questions debated during this session of major political and health significance, recalling that issues relating to HIV go far beyond scientific and clinical dimensions alone.

Franco-German collaboration: a joint symposium at ECTMIH

Declared a public health emergency of international concern by WHO, the mpox epidemic is causing concern in a context of increased transmissibility and morbidity and in the hypothesis of a virus that has probably mutated. The mpox epidemic was one of the diseases addressed at the European Congress on Tropical Medicine and International Health (ECTMIH), organised in Hamburg from 29 September to 1 October 2025. Building on a longstanding partnership, **ANRS MIE and its German counterpart, DZIF, co-organised a symposium** there to present the latest advances in vaccines, diagnostics and therapies for the global fight against mpox virus. Discussions focused on recent advances concerning the origin of the disease, the body's defence mechanisms against mpox virus, the virus's capacity to adapt, the clinical manifestations of clade I, its epidemiology, as well as vaccine prevention strategies and therapeutic options. This symposium and this Franco-German partnership illustrate the necessary adaptations and collaborations in research with a view to better health in a changing world.

Launch of PRISME France-Brazil: strengthened scientific cooperation

Launched in Fortaleza in October 2025, on the occasion of the 31st France–Brazil Scientific and Technical Cooperation Seminar and the 9th Scientific Day of the ANRS MIE partner site in Brazil, the France–Brazil **International Research Platform in Global Health (PRISME)** marks a new stage in a scientific collaboration spanning more than 20 years.

PRISME France-Brazil forms part of the continuity of existing partnerships. Within a single alliance, it brings together a network of leading French and Brazilian institutions to strengthen scientific cooperation in global health.

With PRISME France–Brazil, scientific cooperation between France and Brazil is crossing a decisive threshold: it is becoming a strategic lever for responding collectively to major global health threats and affirming a shared ambition, that of placing health at the heart of the future.

Building on work relating to the fight against **HIV, sexually transmitted infections, viral hepatitis and tuberculosis**, PRISME France-Brazil aims to meet current health challenges, marked by the emergence or re-emergence of infectious agents and recurrent epidemics linked to the consequences of climate change.

Signing of PRISME France-Brazil

Discover the ANRS MIE's International Network
https://anrs.fr/en/partnerships/international-network/

Continued support for the new generation of scientists through the Start programme

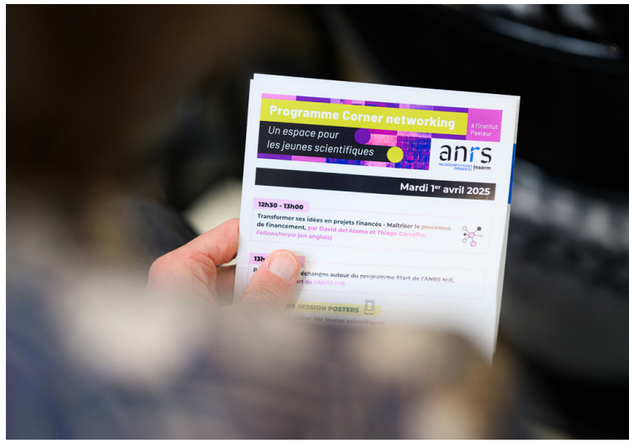
Launched in 2024, ANRS MIE's **Start programme** aims to support young scientists specialising in infectious diseases.

The 2025 call for applications led to the selection of 16 laureates. In the Master's category, which targets candidates from low- and middle-income countries (LMICs), six laureates were selected on themes as diverse as clinical trial data management, body mass index (BMI) as a risk factor for *Mycobacterium tuberculosis* infections, or the screening of flavivirus insect-specific viruses in mosquitoes, in collaboration with Senegal, Cameroon, Vietnam or Brazil. In total, 10 doctoral grants, focusing on pertussis, the Ebola epidemic, Zika virus, alphavirus-derived vectors or the management of viral epidemics through a phylodynamic approach, were awarded. This approach to supporting the future generation of researchers in France and in LMICs lies at the heart of ANRS MIE's commitment to a shared science oriented towards the future.

Find out more about the Start programme
https://anrs.fr/en/funding/start-programme/

16 Master's and doctoral grants funded in 2025 by ANRS MIE to support young scientists

Bringing together nearly 80 people, the second edition of the **Start Day** was held on 31 March 2025, on the eve of the Scientific Days. It provided a privileged moment for meetings and exchanges for young scientists. For young researchers, this event is an opportunity for professional development, networking and exchanges both with peers and with more experienced researchers. This successful second edition illustrates the support and guidance offered by ANRS MIE to the young generation of scientists.



Start Day – 31 March 2025 at the *Institut Pasteur*, Paris

Part 5

Organisation and governance

Key figures for the 2025 calls for proposals

Launch of 9 calls for proposals and applications

2 calls for proposals for the agency's historical scope: HIV, hepatitis, STIs, tuberculosis

3 calls for proposals for infectious diseases (Rech MIE; Emergences LMICs 2025; PEPR MIE 2025)

1 joint GloPID-R call for proposals

3 calls for applications under the Start programme to support young scientists

67 projects funded in 2025 under calls for proposals
for a total of €34.4 million invested

Health crises

8 projects funded urgently outside calls for proposals on

Chikungunya · Mpox · Respiratory viruses

The impact of the withdrawal of PEPFAR funding for HIV.

€14 million Start programme
devoted to young scientists

56 research grants
6 Master's grants
5 Junior Chairs

The ANRS MIE 2025 budget and its use

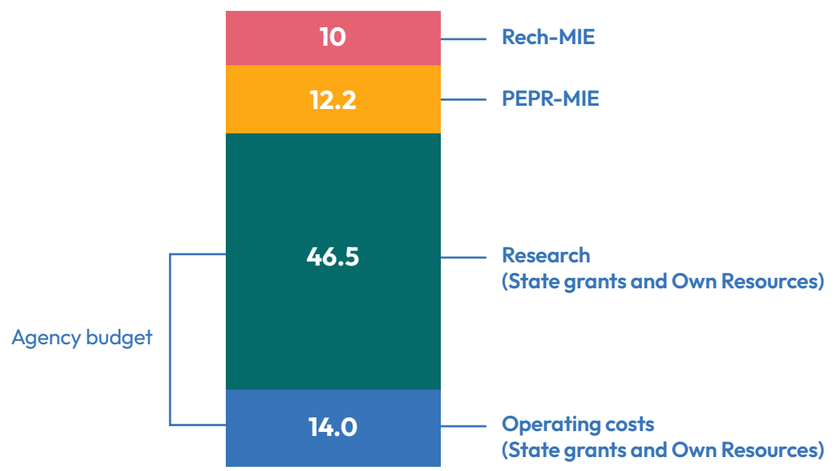
The 2025 financial year marked the fifth year of existence of the ANRS MIE entity, the new entity of ANRS. It was characterised by the consolidation of resources devoted to preparedness and response to emergences, as well as by the continued monitoring of several research funding mechanisms established following the Covid-19 crisis, initially entrusted to Inserm and then transferred to the agency in 2021. In parallel, activities falling within ANRS MIE's historical scope were maintained at a constant nominal budget.

The agency's 2025 budget year corresponds to the third year of implementation of the Emerging Infectious Diseases PEPR (PEPR MIE), which has a budget of **€70 million over five years.**

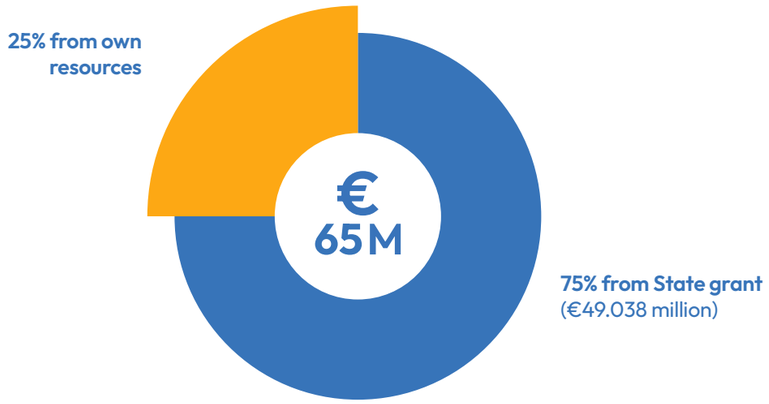
The total budget managed by ANRS MIE in 2025

The 2025 ANRS MIE budget is composed of the State grant, the agency's own resources, the PEPR MIE budget envelope, and funding from the Directorate General for Healthcare Provision (DGOS) for the Rech-MIE call for proposals.

Breakdown of ANRS MIE funding sources in 2025 (in millions of euros)



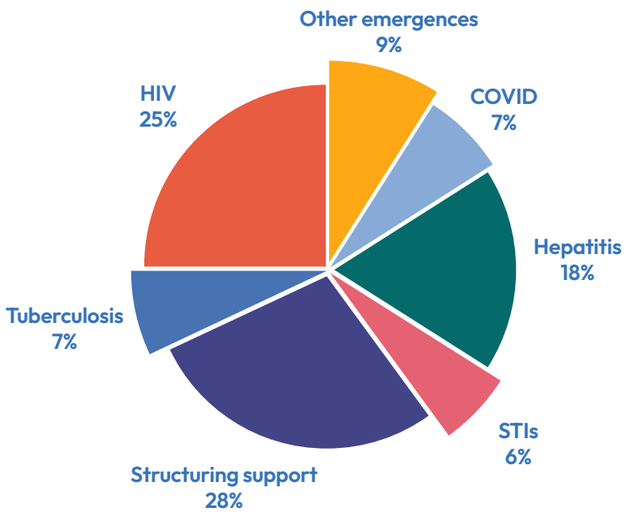
Implementation of 2025 revenue in millions of euros by type of funding



A total of **€49.038 million** in State grant funding (MESRI) was received in 2025.

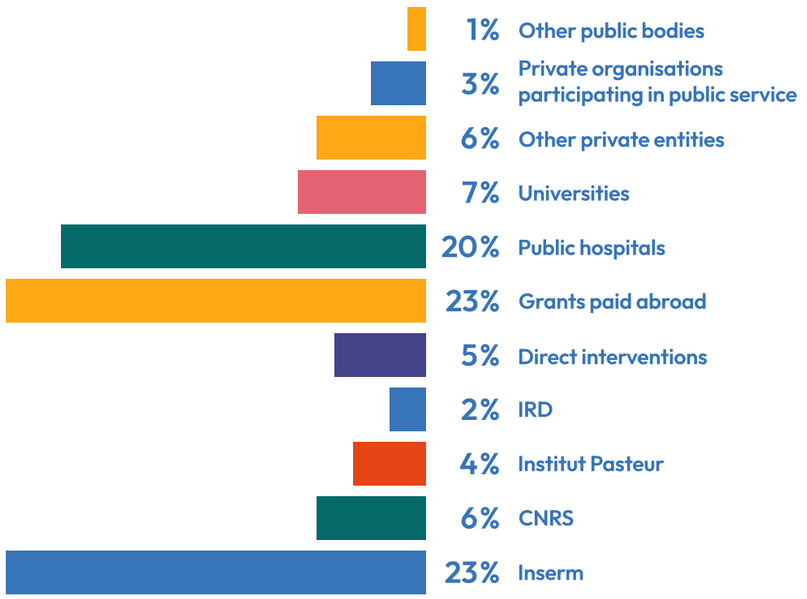
Focus on research expenditure according to funded organisations (State grant)

The overall 2025 breakdown of research funding from the State grant highlights the predominance of the **agency's historical scope**. It is also characterised by an increase in funding allocated to tuberculosis, in connection with the strengthening of the partnership with the South African Medical Research Council (SAMRC). Conversely, in connection with the evolution of the epidemiological situation, the share of funding devoted to Covid-19 continues to decrease.



Breakdown of 2025 research funding from the State grant

Focus on research expenditure from State grant funding



Breakdown of 2025 research expenditure (State grant) by funded organisation

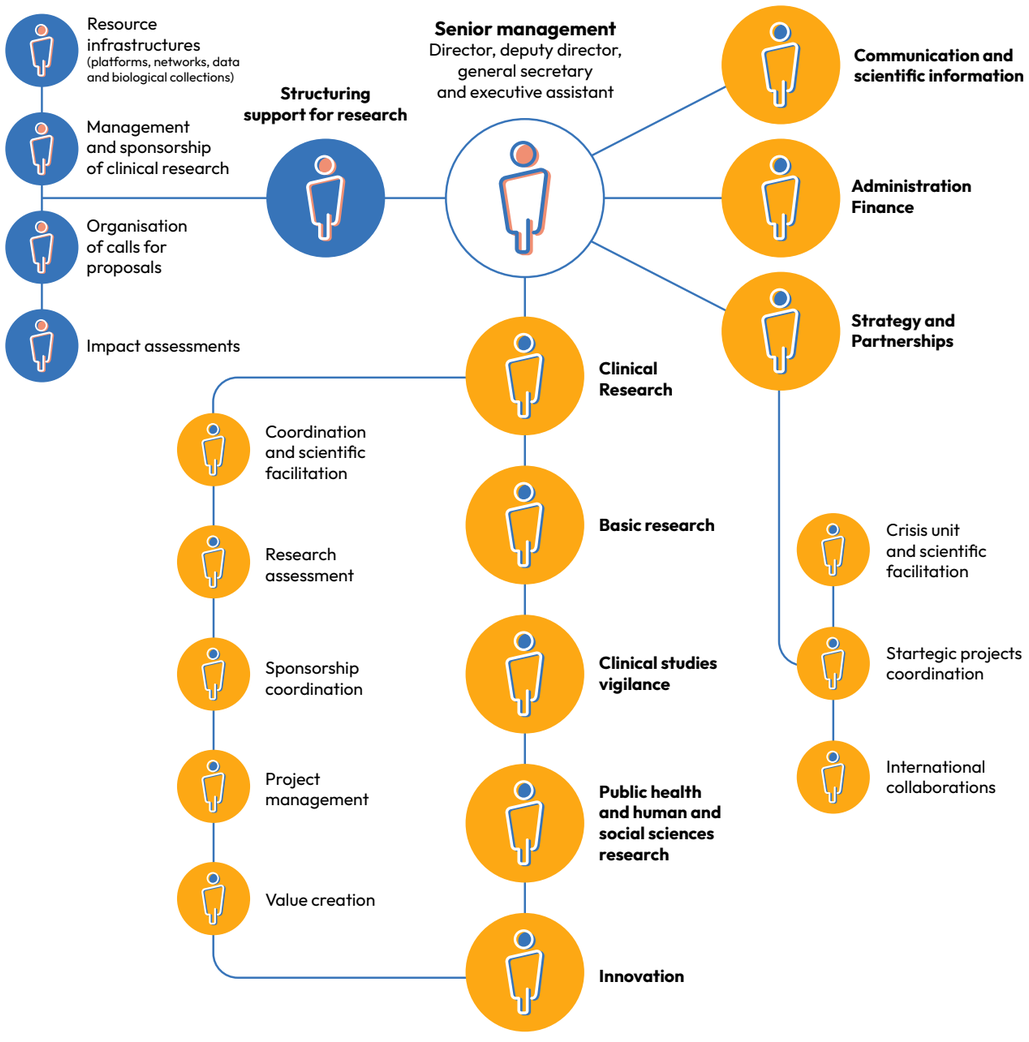
The agency's historical partners account for **35%** of research support, confirming their structuring role within the ANRS MIE ecosystem.

The **23% share of grants paid abroad** reflects the continuity and maintenance of the momentum of the agency's international policy, serving scientific cooperation and the strengthening of research capacities.

Human resources

At the end of 2025: 141 staff members

ANRS MIE's activity is divided between **nine departments, including four thematic departments** (basic research, clinical research, public health research and humanities and social sciences, innovation), two cross-cutting departments and one vigilance department. These departments support research in all its dimensions. **Two other departments support the agency's activity:** an administrative and financial department and a communication and scientific information department.



Governance bodies

The agency is under the authority of the ministries responsible for Research and Health. It has close links with the Ministry for Europe and Foreign Affairs, the General Secretariat for Investment, Anses and *Santé publique France*.

ANRS MIE governance is organised around three councils

Advisory Board

The Advisory Board deliberates on the agency's major strategic orientations, its operation, its administrative and financial organisation, and its scientific monitoring activities.

Chair: Isabelle Richard
Director of the *École des hautes études en santé publique* (EHESP)

Scientific Advisory Board

The Scientific Advisory Board advises the agency on the major orientations of its scientific strategy and on its activities. It also conducts forward-looking reflection on research within its thematic scope.

Co-chairs:
Sharon Lewin, University of Melbourne, The Doherty Institute, Australia
Fabien Zoulim, *Hospices Civils de Lyon*, UMR Inserm – *Université Claude Bernard Lyon* 1 U1350 PaTHLiv, Lyon Hepatology Institute, France

Partners Board

The Partners Board is a forum for institutional, strategic and scientific exchange that brings together the agency's partners. The purpose of this Partners Council is inclusive and participatory. It includes State health agencies.

ANRS MIE also has two scientific evaluation bodies

The Scientific Committees (CSS)

Nine in number, the CSSs carry out the scientific assessment of funding applications. They can be established on a permanent or temporary basis (calls for proposals or missions) and are composed of at least eight members, of whom at least one third are from outside France.

Cohort Evaluation Committee

This committee meets on a three-year cycle to conduct a scientific evaluation of the cohorts run by the agency. It is composed of multidisciplinary, international and independent experts.

Part 6

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Glossary

AAP: call for proposals
AC: coordinated action
ANR: French National Research Agency
ANRS: French National Agency for AIDS and Viral Hepatitis Research
ANRS MIE: ANRS Emerging infectious diseases
ANSES: French Agency for Food, Environmental and Occupational Health & Safety
AP-HP: Greater Paris University Hospitals
BE READY: Building a European Strategic Research and innovation Area in Direct Synergy with other EU and International Initiatives for Pandemic Preparedness
CHIP: Centre of Excellence for Health, Immunity and Infections
CMG: Methodology and Management Centre
CNPq: Brazil's National Council for Scientific and Technological Development
CNRS: French National Centre for Scientific Research
CNS: French National AIDS and Viral Hepatitis Council
CORC: Collaborative Open Research Consortium
CSS: Sectoral Scientific Committees
DGOS: Directorate General for Healthcare Provision
DZIF: German Center for Infection Research
EACS: European AIDS Clinical Society Conference
ECTMIH: European Congress on Tropical Medicine and International Health
EDCTP: European & Developing Countries Clinical Trials Partnership
EMA: European Medicines Agency
EMERGEN: Consortium for the surveillance and research on infections with EMERging pathogens through microbial GENomics
FDA: Food and Drug Administration
GloPID-R: Global Research Collaboration for Infectious Disease Preparedness
GRIPP: Global Research Improving Pandemic Preparedness
HAS: French National Authority for Health
HIV: Human immunodeficiency virus
Inserm: French National Institute of Health and Medical Research
IRD: French National Research Institute for Sustainable Development
I-REIVAC: Innovative-clinical research network in vaccinology
IT I3M: Thematic Institute for Immunology, Inflammation, Infectiology and Microbiology
LMICs: low- and middle-income countries
MIE: emerging infectious diseases
OPEN-ReMIE: National operational research network for emerging infectious diseases
PADMEN: Propagation and Analysis of Discourses on Human Metapneumovirus in the Digital Ecosystem
PEPR MIE: Priority Research Programmes and Equipment forming part of the acceleration strategy
PRISME: International Research Platform in Global Health
PROACT EU-Response: European Proactive Adaptive Clinical Trials Network within EU-Responses
PrEP: pre-exposure prophylaxis
Rhiviera: Remission of HIV Infection Era
SAMRC: South African Medical Research Council
SHIELD: Strategies for Health Interventions to Eliminate Infection related Cancers
STI: sexually transmitted infection
STRIVE: Strategies and Treatments for Respiratory Infections and Viral Emergencies
WG: working group
WHO: World Health Organization

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