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New Antivirals for Infections with Pandemic Potential

NAVIPP – Addressing the Antiviral Gap in Global Preparedness

Delivering Broad-Spectrum Antivirals for High Threat Viruses

In future outbreaks, speed will save lives but vaccines often come too late. To protect populations in the early stages of an epidemic, we need safe, effective **broad-spectrum antiviral drugs** that can be deployed rapidly.

NAVIPP (New Antivirals for Infections with Pandemic Potential) addresses this urgent need. Co-funded by the EU and UKRI, it unites researchers, infrastructures, industry, and clinicians to accelerate discovery and clinical evaluation. Targeting multiple high-risk viral families, NAVIPP builds an adaptable pipeline – from compound libraries to patient care – to boost epidemic response in Europe and beyond.

NAVIPP delivers what has long been missing: broad-spectrum antivirals that work early, work broadly, and are ready when they're needed most.

Co-funded by the European Union

UK Research and Innovation

A Dual-Track Approach to Antiviral Development

Unlocking What's New. Mobilising What's Known.

NAVIPP is built on a bold, clear strategy: to accelerate the development of broad-spectrum antivirals through **two complementary tracks** that feed into a single, translational pipeline.

TRACK 1 Discovery of new antivirals

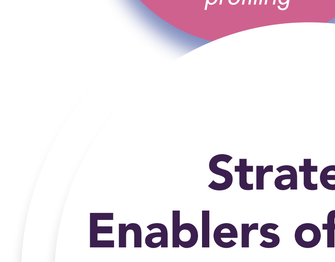
High-throughput screening of 300,000-compound diversity library in four distinct campaigns to uncover novel chemical scaffolds with broad-spectrum antiviral activity.

TRACK 2 REPURPOSING OF EXISTING MOLECULES

Fast-tracking known antiviral compounds with promising safety and activity profiles toward early clinical evaluation.

BROAD-SPECTRUM ANTIVIRALS

Both tracks enable NAVIPP to deliver new solutions and repurpose existing ones, strengthening Europe's outbreak response.



NAVIPP's strategy is simple and powerful: discover what's missing, unlock what already exists, and drive both toward patient-ready tools.

Driving Antiviral Innovation from Lab to Clinic

Integrating Discovery, Mechanistic Insight, and Translational Readiness

NAVIPP's strength lies in its end-to-end antiviral development pipeline, mobilising cutting-edge platforms to ensure that promising compounds don't just get discovered – they move.

HOW NAVIPP WORKS

Screening with purpose

Four large-scale campaigns targeting Filoviruses, Flaviviruses, Paramyxoviruses, and Coronaviruses using high-throughput screening and biologically contained assays.

Understanding how molecules work

Hits are decoded through cell painting, chemical proteomics, and thermal proteome profiling to reveal antiviral targets and mechanisms.

Preclinical validation, done right

Lead compounds are confirmed in complex ex vivo and and in vivo models, with a focus on translatability as well as ethical and responsible research, in BSL-3 and BSL-4 environments.

Designed for clinical reality

Promising candidates are optimised for patient use through nano-conjugation, and evaluated in a flexible clinical trial platform designed for dengue but ready to pivot to other diseases.

Towards Real-World Impact

From Strategic Innovation to Practical Readiness

By combining deep scientific expertise with translational focus, NAVIPP delivers concrete tools to improve Europe's ability to prevent and respond to future viral outbreaks.

- A validated **pipeline of broad-spectrum antiviral candidates**
- A **clinical trial platform** ready for rapid mobilisation
- New insights into **antiviral mechanisms** of action
- Enhanced **EU scientific leadership** in pandemic response
- Stronger **interdisciplinary and cross-sector collaboration**

NAVIPP's legacy extends beyond the development of individual drug candidates. It strengthens the ecosystem that connects discovery, development, and deployment – building a more resilient foundation for pandemic response and advancing Europe's leadership in antiviral preparedness.

Strategic Enablers of NAVIPP

The ecosystem behind NAVIPP's scientific ambition

Ex vivo and in vivo model expertise
Translational virology, human tissue platforms, ethical design

High-throughput screening platforms
Phenotypic assays, compound libraries, roboti automation

Mechanistic profiling & omics platforms
Cell painting, chemical proteomics, thermal proteome profiling

Specialised BSL-3 and BSL-4 infrastructures
Virology, containment, and infection models

Nano-conjugation & formulation technologies
Stability, delivery, pharmacokinetics

Adaptive clinical trial platform
Real-world readiness, evaluation in endemic settings (dengue patients)

Strong public-private partnership
Academic labs, biotech SMEs, infrastructure operators, industry

12 Partners United for a Common Goal

Collaboration at the heart of NAVIPP's mission

PARTNERS

- European Research Infrastructure on Highly Pathogenic Agents (ERINHA, BE)
- French National Institute of Health and Medical Research (INSERM, FR)
- Public Health Agency of Sweden (FOHM, SE)
- National Centre for Public Health and Pharmacy (NNGyK, HU)
- Erasmus Medical Center (Erasmus MC, NL)
- KU Leuven (BE)
- Medical University of Graz (MUG, AT)
- University of Oxford (UOXF, UK)
- GlaxoSmithkline (GSK, ES)
- Max Planck Institute of Molecular Physiology (MPI, DE)
- Spanish National Research Council (CSIC, ES)
- AFFILOGIC (FR)

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Join Us in Advancing Health Security