

## The CCHFVACIM Project: Addressing an Emerging Public Health Threat

### Advancing Vaccines and Immunotherapies for a High-Risk, Underaddressed Virus

#### Crimean-Congo Haemorrhagic Fever Virus (CCHFV)

is a deadly but overlooked zoonotic virus. Transmitted to humans by Hyalomma ticks that feed on animals, it can cause severe haemorrhagic disease with fatality rates up to 40%. Once limited to Africa, Asia, and the Balkans, CCHFV is now spreading into Western Europe – driven by climate change and migratory birds carrying the Hyalomma marginatum tick as far as England and Sweden. Despite the growing threat, there is no vaccine or specific treatment.

**CCHFVACIM** (CCHF Vaccine and Immunotherapy) addresses this urgent gap. Building on prior EU-funded projects (**CCHFever** and **CCHFVaccine**), it brings together 15 international partners to develop innovative vaccines and immunotherapies – strengthening global health security through cutting-edge science.



## Driving Innovation Against CCHFV

### From Antigen Discovery to Clinical Translation

**CCHFVACIM delivers a focused, science-driven programme to accelerate the development of medical countermeasures against Crimean-Congo Haemorrhagic Fever Virus.**

Researchers are mapping CCHFV glycoproteins to identify key antigenic targets, guiding the design of next-generation mRNA vaccines with strong immune responses and clinical potential. In parallel, monoclonal and mRNA-encoded antibodies are being developed for added protection and treatment.

To support this work, CCHFVACIM refines a suite of in vivo models with all activities conducted under the highest ethical standards and within BSL-4 environments, reflecting a firm commitment to responsible, high-impact research. The project also conducts immunomonitoring in human samples and prepares its lead vaccine for Phase I trials, bridging discovery and early clinical development.

**From molecular insight to clinical readiness, CCHFVACIM shows how precision science can drive innovation against high-consequence emerging viruses.**

## 15 Partners United for a Common Goal

### Collaboration at the heart of CCHFVACIM's mission



#### PROJECT COORDINATOR

Prof. Ali Mirazimi

Nobelväg 18,  
171 82 Solna  
SWEDEN

E-mail: Ali.Mirazimi@folkhalsomyndigheten.se

**Timeline:**  
Jan 2024  
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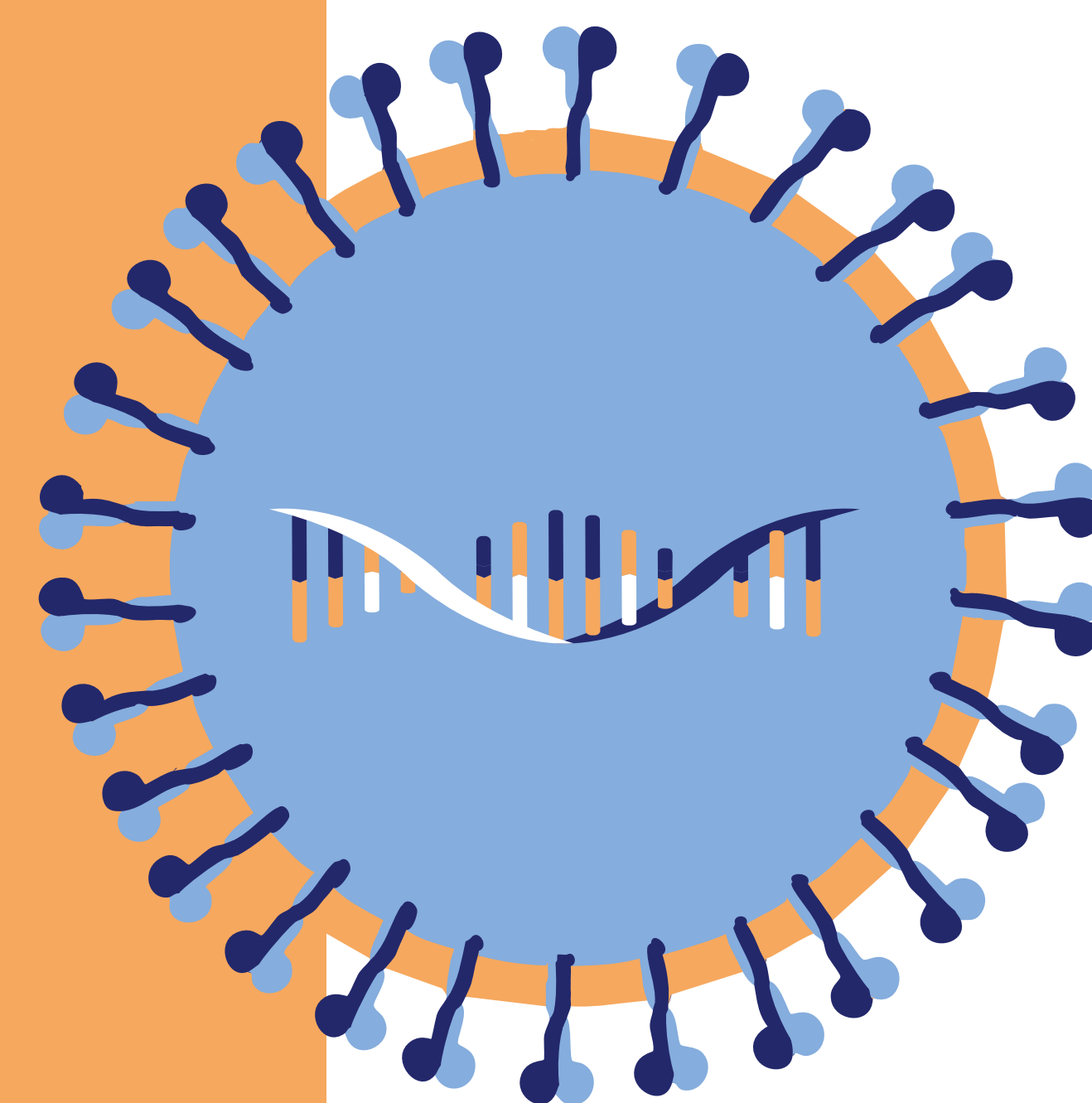
## Strategic Enablers of CCHFVACIM

The ecosystem behind CCHFVACIM's scientific ambition



### What makes CCHFVACIM different?

The project doesn't start from scratch – it builds on the momentum of prior EU-funded work and leverages a trusted network of partners across continents, from field hospitals in endemic regions to advanced mRNA production facilities.



## An Interdisciplinary, One Health-driven Approach for Real-Life Impact

### Integrating Human and Animal Health Research to Combat CCHFV

CCHFVACIM is rooted in a **One Health-driven approach**, recognising that the fight against zoonotic diseases like CCHF cannot rely on human health interventions alone. CCHFV circulates silently in wildlife and livestock populations, and spills over into humans, with potential devastating consequences. Tackling the challenges posed by this zoonotic disease demands a **coordinated, interdisciplinary response**.

This is why **CCHFVACIM integrates expertise** across human and veterinary medicine, immunology, virology, structural biology, and vaccine development. By fostering close collaboration across these fields, the project bridges disciplinary boundaries to design and evaluate innovative medical countermeasures **applicable to real-world settings** where humans, animals, and vectors interact closely.



[www.cchfvacim.eu](http://www.cchfvacim.eu)  
[contact@erinha.eu](mailto:contact@erinha.eu)

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## Toward Real-World Countermeasures

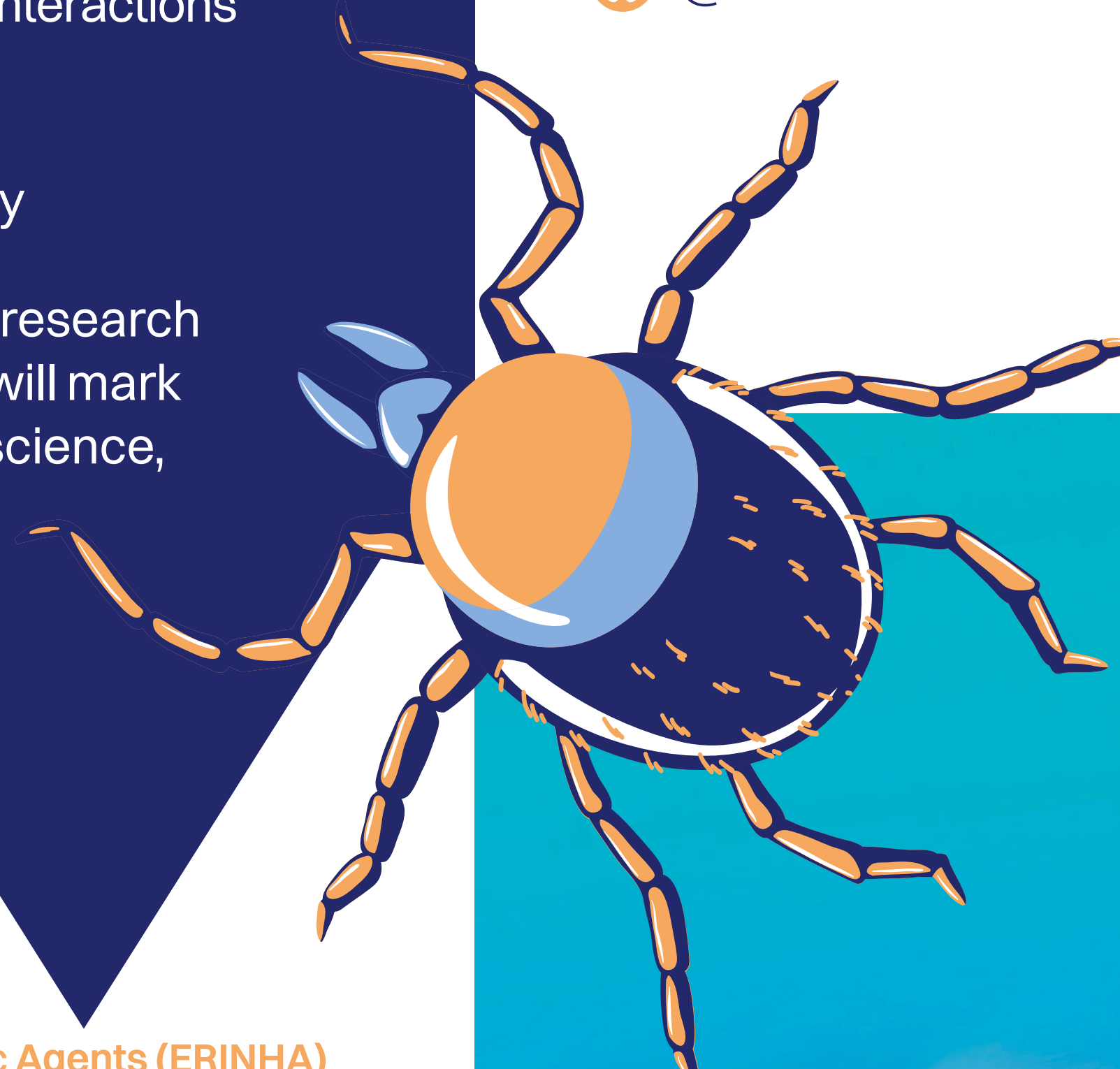
### Transforming Knowledge into Actionable Tools

CCHFVACIM is designed to generate real impact by advancing scientific innovation into tools that can support clinical and public health response.

#### The project is set to deliver:

-  **Next-generation** vaccine candidates ready for clinical testing
-  **Innovative immunotherapies** to reduce disease severity and mortality
-  **New insights** into protective immunity and host-pathogen interactions
-  **A strengthened foundation** for the broader CCHFV research community

Given the historic lack of investment in CCHFV research and development, achieving these objectives will mark a critical turning point – not only in advancing science, but in boosting preparedness for one of the world's most neglected viral threats.



#### COORDINATOR

- Folkhalsomyndigheten (coordinator), (FOHM)
- European Research Infrastructure on Highly pathogenic Agents (ERINHA)
- Institut National de la Sante et de la Recherche Medicale (INSERM)
- Statens Veterinaermedicinska Anstalt (SVA)
- Karolinska Institute (KI)
- Institut Pasteur (IP)
- The trustees of the University of Pennsylvania corp (UPENN)
- Friedrich Loeffler Institut – bundesforschungsinstitut fuer Tiergesundheit (FLI)
- Justus-liebig-universitaet giessen (JLU)
- Sivas Cumhuriyet Universitesi (SCU)
- National Center of Infectious and Parasitic Diseases (NCIPD)
- Institut Pasteur du Cambodge foundation (IPC) (KH)
- International Vaccine Institute (IVI) (SE)
- United States Department of Health and Human Services (NIAID) (US)
- UK Health Security Agency (UKHSA) (UK)