

# HORIZON-HLTH-2024-DISEASE-08-20 Pandemic preparedness and response - A SME partner for biomarkers and vaccine delivery systems for viral T cell vaccine development is sought.

## Summary

Profile type	Company's country	POD reference
<b>Research &amp; Development Request</b>	<b>France</b>	<b>RDRFR20240126017</b>
Profile status	Type of partnership	Targeted countries
<b>PUBLISHED</b>	<b>Research and development cooperation agreement</b>	<b>• World</b>
Contact Person	Term of validity	Last update
<a href="#">Sabrina WODRICH</a>	<b>26 Jan 2024</b> <b>25 Jan 2025</b>	<b>26 Jan 2024</b>

## General Information

### Short summary

The project aims to develop vaccines that activate T cell for viral diseases. Together the partners will develop a new generation of dengue vaccine which target development of dengue specific T cell response. In parallel, the project will design and test immunogenicity of T cell epitopes of other flaviviruses including Zika virus, West-Nile virus. The French research institute is currently looking for a SME with expertise in biomarkers and vaccine delivery systems.

### Full description

The French research institute is dedicated to the study of biology, micro-organisms, diseases and vaccines. It has been at the forefront of the fight against infectious diseases since its creation in the 19th century.

The project has 2 specific aims:

1. Develop surrogate markers for immune-protection against dengue and other flavivirus diseases– Zika, West-Nile, etc.
2. Study vaccine deliver systems which activate T cells

Aim 1 - The project will study immunological profiles (dengue specific -CD4, CD8, memory T cell, memory B cell, antibody profiles) of a cohort consist of dengue infected individuals and flaviviruses seronegative individuals living in

dengue endemic regions. The objective will be to follow them for all fever episodes during the next 3 years and identified virology confirmed dengue cases. It will correlate immunological profiles with protection against dengue disease and hospitalized/severe dengue. It aims at identify surrogate markers for protection against dengue disease and develop an assay which is sensitive, robust and easy to use for “beyond phase 1” vaccine trial.

Aim 2 – Together the partners will study vaccine delivery systems which activate T cells. They will use murine and non-human private to study immunogenicity of the vaccine delivery systems using our dengue T cell epitopes. The project will compare immunological profiles after vaccination compare with natural dengue infection and current tetravalent live attenuated dengue vaccine. The best candidate vaccine will be tested using dengue disease mouse model.

To well-answer the HORIZON-HLTH-2024-DISEASE-08-20 call, the French institute is looking for a SME with expertise in biomarkers and vaccine delivery systems, mainly:

- developing assay to quantify viral specific T cell response
- providing vaccine delivery system which activate T cell response, which could be encapsulated mRNA, viral vector, adjuvants, etc.

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#### Advantages and innovations

The advantages of viral T cell vaccine are:

1. Avoiding and minimizing side effect induced by antibodies such as antibody dependent enhancement (ADE) which is an important factor for development of severe dengue.
2. Well-balanced immuno-protection against all 4 dengue serotypes because of the conserved regions of the T cell epitopes.
3. Long-lived immunity from T follicular helper cells.
4. Possibility to add T cell epitopes of other viruses in one component.

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#### Technical specification or expertise sought

1. T cell assay development
2. Vaccine delivery system which activate T cells which could be encapsulated mRNA, viral vector, adjuvants, etc.

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#### Stage of development

**Under development**

IPR Status

**IPR granted**

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#### Sustainable Development goals

- **Goal 3: Good Health and Well-being**

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## Partner Sought

#### Expected role of the partner

They are currently looking for a company primarily with expertise in biomarkers and vaccine delivery systems. The company has to be a small and medium size enterprise, SME.

Expected roles are:

- 1 To develop assay to quantify viral specific T cell response.
2. To provide vaccine delivery system which activate T cell response.

## Type of partnership

**Research and development cooperation agreement**

## Type and size of the partner

- **SME 50 - 249**
- **SME 11-49**
- **SME <=10**

## Call Details

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## Framework program

**Access to finance**

## Call title and identifier

**HORIZON-HLTH-2024-DISEASE-08-20**

**Pandemic preparedness and response: Host-pathogen interactions of infectious diseases with epidemic potential**

## Submission and evaluation scheme

**Single-stage submission scheme**

## Anticipated project budget

**7 to 8 million**

## Coordinator required

**No**

## Deadline for EoI

**5 Apr 2024**

## Deadline of the call

**11 Apr 2024**

## Project duration in weeks

**260**

## Web link to the call

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/to-pic-details/horizon-hlth-2024-disease-08-20>

## Project title and acronym

**Viral T cell vaccine**

## Dissemination

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### Technology keywords

- **06001006 - Human vaccines**
- **06002002 - Cellular and Molecular Biology**
- **006001002 - Care and Health Services**
- **06001018 - Virus, Virology/Antibiotics/Bacteriology**
- **06004 - Micro- and Nanotechnology related to Biological sciences**

### Targeted countries

- **World**

### Market keywords

- **05003005 - Drug delivery and other equipment**
- **05001005 - Molecular diagnosis**
- **05001001 - Diagnostic services**

### Sector groups involved

- **Health**