

# NANEMIAR

## Nanomedicine Approach to Normalize Erythrocyte Maturation in Congenital Anemia by Messenger RNA



Funded by the  
European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme 2021-2027 under the Grant Agreement No 101080156.

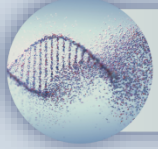
 **Fundación para la Formación  
e Investigación Sanitarias  
de la Región de Murcia**

**IMIB**  
Instituto Murciano de  
Investigación Biosanitaria  
Pascual Parrilla

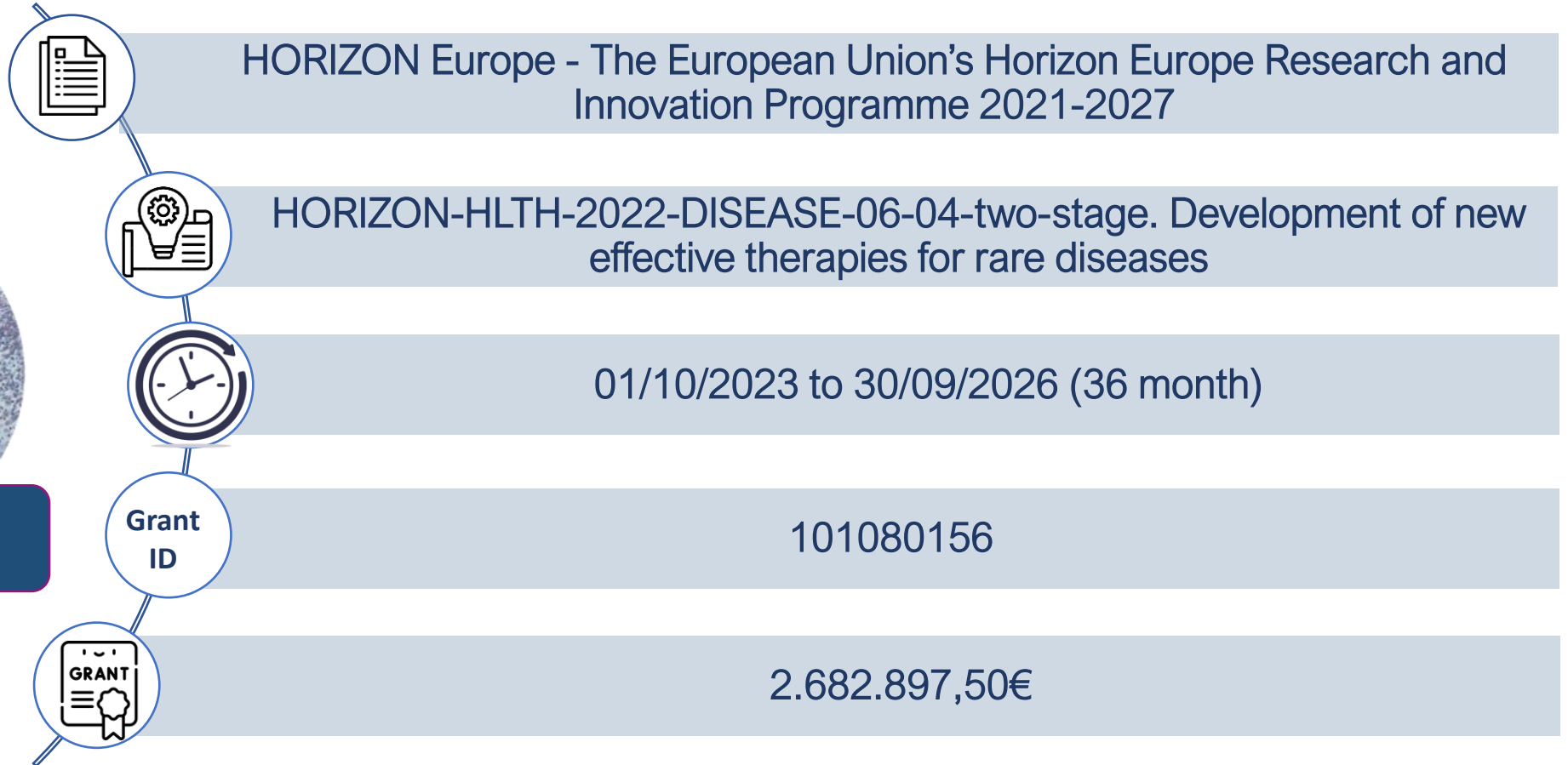
**Servicio  
Murciano  
de Salud**

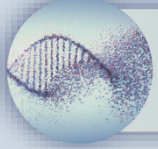
 **mercurna**





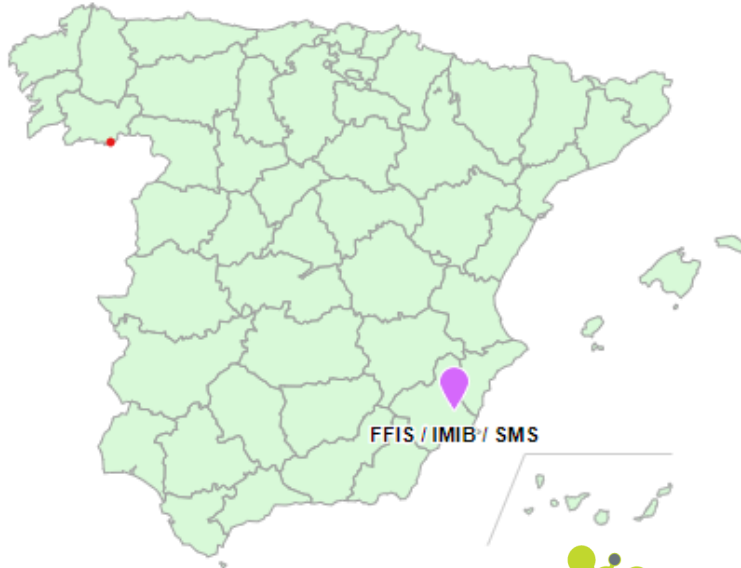
## Project facts





## Coordination

**Spain**  
Murcia



**France**  
Marseille



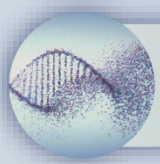
**Netherlands**  
Oss



Affiliated entity

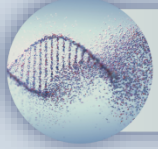






Spain  
Murcia





**β-thalassemia**



Around 280 million people worldwide have a form of thalassemia (1 in 10.000 in the EU)<sup>1</sup>



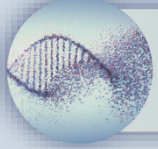
Current treatment (small molecules, blood transfusion) is insufficiently effective in duration and associated with side effects




€15,000 per patient per year => Estimated saving of €5-6B compared to gene therapy approaches

1. Kattamis A, Forni GL, Aydinok Y, Viprakasit V (2020) Changing patterns in the epidemiology of beta-thalassemia. Eur J Haematol 105: 692-703



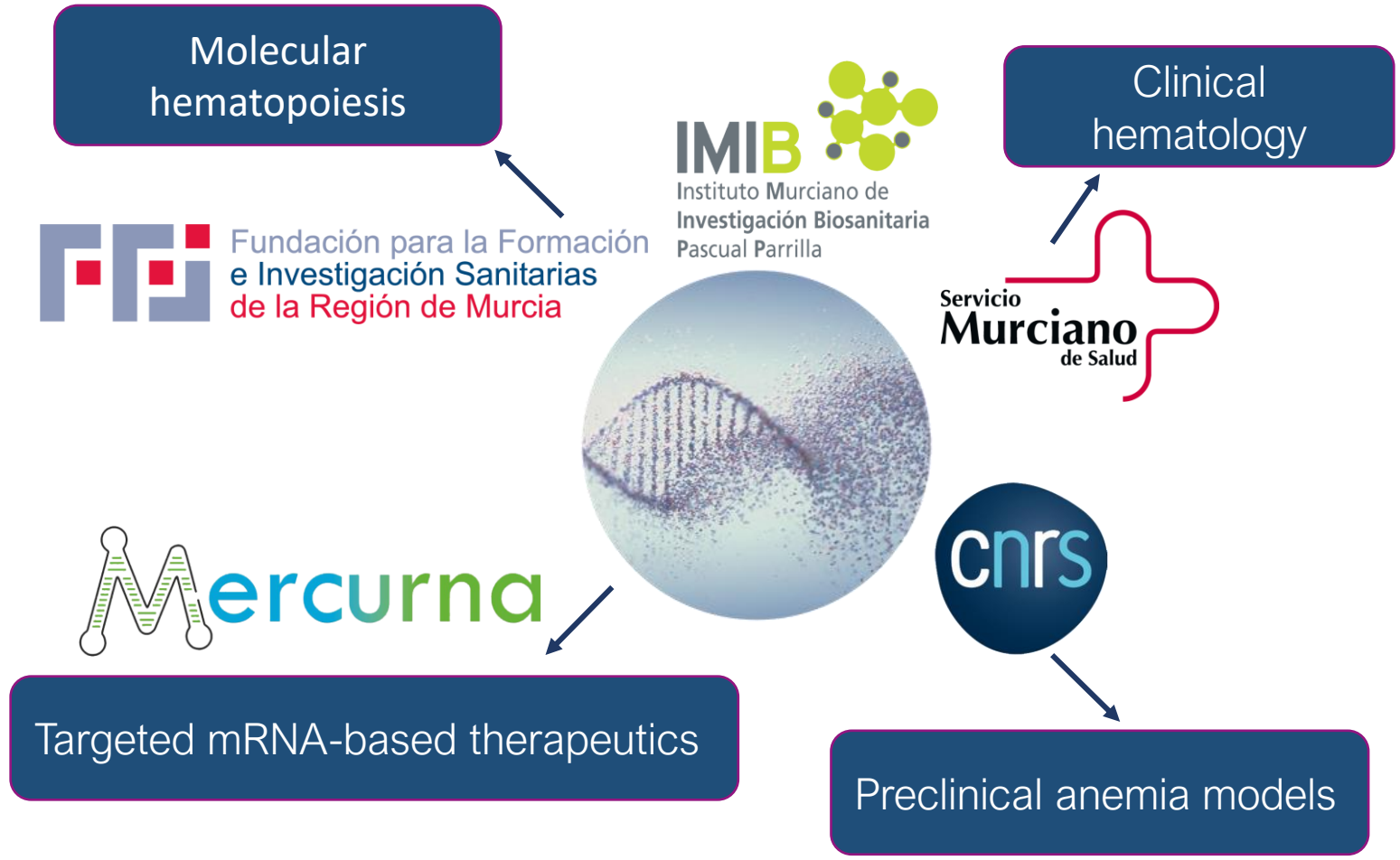


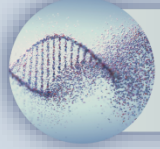
**Ambition**



**Development of an mRNA-based drug candidate for treatment of congenital anemias**

congenital anemias  
drug candidate for treatment of  
based-mRNA an to congenital





## Specific objectives



**Development of targeted mRNA therapeutic**

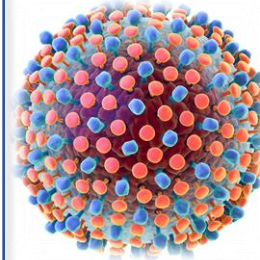
**Pharmaceutical application of mRNA therapeutic**



**Pre-clinical potential of novel therapeutic**

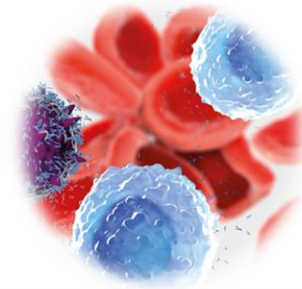


## Outcomes of the call



**A nanomedicine base-system for next-generation gene therapies**

**Proof-of-concept for a safe treatment option for  $\beta$ -thalassemia**



Combining expertise from academic, clinical and industry partners in Spain, France and The Netherlands, we aim to generate an innovative treatment option for congenital anemia, and advance knowledge in targeted therapeutics.





## Expected impact



**“Health burden of diseases in the EU and worldwide is reduced through effective disease management”**

**Aligning with The Horizon Europe Strategic Plan for improved therapies and rare diseases.**



### Scientific Impact

**New breakthrough scientific knowledge on mRNA therapies**

**Strengthening R&I on congenital anemia**

**Promoting knowledge transfer and Open Science**



### Societal Impact

**Addressing needs for new therapeutic options that ultimately increase patients' ability to work/participate in society**

**Strengthening awareness and uptake of mRNA approaches in society**

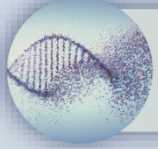


### Economic Impact

**Promoting innovation-based growth in academia and industry**

**Leveraging R&I investment with potential for reduced development and healthcare costs**





NANEMIAR



Follow us



[www.nanemiar.eu](http://www.nanemiar.eu)



[linkedin.com/showcase/nanemiar/](https://www.linkedin.com/showcase/nanemiar/)



[@nanemiar](https://www.instagram.com/nanemiar)

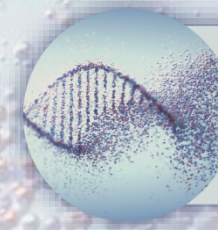


[@nanemiar](https://twitter.com/nanemiar)



Funded by the  
European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme 2021-2027 under the Grant Agreement No 101080156.



# NANEMIAR

## DISCLAIMER:

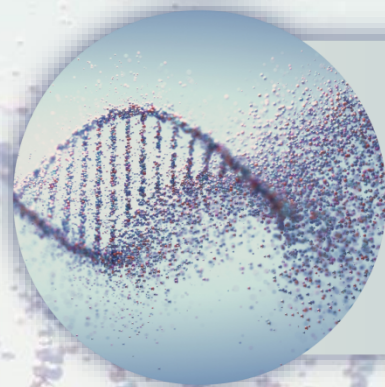
“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Health and Digital Executive Agency (HADEA). Neither the European Union nor the granting authority can be held responsible for them.”



Funded by the  
European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme 2021-2027 under the Grant Agreement No 101080156.





# NANEMIAR



Funded by the  
European Union

This project has received funding from the European Union's Horizon Europe research and innovation programme 2021-2027 under the Grant Agreement No 101080156.



Fundación para la Formación  
e Investigación Sanitarias  
de la Región de Murcia



IMIB  
Instituto Murciano de  
Investigación Biosanitaria  
Pascual Parrilla



Servicio  
Murciano  
de Salud

