

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

D5.2 Dissemination and Exploitation Plan

SHORT DESCRIPTION

This document describes the dissemination and exploitation strategies of NANEMIAR on the different activities to be developed, the tools to be employed, the channels to be used, and the communication plan.

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HISTORY CHART

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1.0	2024-03-27	1 st Version of the deliverable	

LIST OF ABBREVIATIONS

DEP	Dissemination and Exploitation plan				
C&D	Communication and dissemination				
FTO	Freedom to Operate				
GDPR	General Data Protection Regulation				
IPR	Intellectual property rights				
KPIs	Key performance indicators				
NDA	Non-disclosure agreement				
R&D	Research and development				
TBD	To be determined				



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1. Introduction

The main purpose of the Dissemination and Exploitation Plan (DEP) is to enhance the vision and outcomes of the project building from an impact-based dissemination, communication, and exploitation strategy to guarantee its acceptance throughout the EU involving both the general public and the main stakeholders.

NANEMIAR project outcomes, such as the data packages, as well as specific technologies and methodologies will be regularly updated through a feedback loop of interaction with project partners and stakeholders. Where possible, these will also be made available on the project's website.

The coordinated activities will ensure that the different target groups are addressed in an appropriate manner. Dissemination will be oriented to build credibility and reliability within the pharmaceutical and clinical community, as well as trust and understanding in new technologies for patients and the general public. Together, this is focused on creating value for the different stakeholders and preparing NANEMIAR for future market opportunities.

Related topics

GDPR compliance – All materials and events will be organised following ongoing regulations at the EU and national levels.

2. Communication, dissemination and exploitation strategy

2.1. Objectives

As we described during the proposal stage, there is significant unmet need for effective, safe, and affordable alternatives that reduce the blood transfusion burden in β -thalassemia and other non-iron anemia patients. Current therapeutics involve *ex vivo* gene therapy or agents that target ineffective erythropoiesis. Yet, these therapies come either at significant cost or have serious side effects due to systemic application.

Added value of NANEMIAR

The project is designed to deliver PoC for an innovative targeted mRNA-based therapy treatment that has the potential to effectively treat β -thalassemia in a safer and more cost-effective manner than current treatments available.

The NANEMIAR communication and dissemination (C&D) strategy aims to efficiently and effectively use mainstream communication tools to increase public and stakeholders' awareness about the added value of the project, to stimulate acceptance and, through project exploitation strategy, to foster uptake of NANEMIAR findings throughout the European Union.



An integrated impact-driven approach will be adopted through a multi-stakeholder and multi-channel strategy, with the following specific objectives:

Overall goals

- To communicate and disseminate the main message of NANEMIAR and its outcomes at European, national and regional level.
- To reach and motivate all target groups and foster their interest in the project.
- To measure the results and impacts generated by the implementation of C&D activities.
- To exploit the results obtained in the project for development of novel medicines.

Specific goals

- To create a brand identity of NANEMIAR to make it easily recognisable.
- To select the most efficient communication tools and make optimal use of resources.
- To build credibility and reliability within pharmaceutical and clinical communities.
- To increase public awareness on the activities and the achievements of the project based on a multichannel approach, also exploiting NANEMIAR partners' own communication channels.
- To generate stories that will secure wider media coverage at local/national or European level.
- To engage with the main stakeholders by implementing dedicated workshops and activities in collaboration with organizers of public open days and/or patient organizations to promote NANEMIAR generated knowledge at European level.
- To manage intellectual property and seek patent protections where possible.
- To keep a close interaction among partners, stakeholders, public authorities, other EU projects.

Table 1. Overview of C&D and exploitation strategy

	Communication	Dissemination	Exploitation
Objectives	Promotion of the project and its results	Public disclosure of results. Information and mobilisation of target groups.	(Public) Disclosure of results. Information and mobilisation of target groups.
Audience	General public, including patients and their families; the media	Scientific, pharmaceutical, and clinical communities.	Pharmaceutical, and clinical communities.
Language	Layman's terms	Scientific language	Scientific and business language
Channels	Website (NANEMIAR and partners' websites), partners' newsletter, (social) media, news items, public events	Peer-reviewed journals, congresses and conferences, repositories	Peer-reviewed journals, congresses and conferences, patent databases



2.2. Key target groups

Table 2. Overview of target groups and their input/benefit

	Main group	Specific key target	What can they bring to the	How can the project be of interest?
dience	Project partners	Researchers	project? Developing and executing the project activities. Contributing to the advancement of the knowledge and maximizing the impact of the action.	Gain experience and knowledge in the respective field, interact with peers
Internal audience		Administrative members	Supporting project activities and increasing visibility of outcomes and results	Participate in networking events
_	European Commission	Horizon Europe project representatives	Supporting project activities and networking opportunities, and future funding options	Gain insights into projects results and suggest interactions to foster synergies and wider interest
		Researchers and groups		Novel methodologies can be relevant to their work
	Academia / scientific community	Members of scientific advisory boards, committees, national and international networks, related EU projects, etc.	Establish connections for future collaboration, and interaction on scientific outcomes, methods etc.	New interactions and insights into the topic, and potential new members
External audience		Researchers and R&D teams	Establish connections for future collaboration, and interaction on scientific outcomes, methods etc.	Novel methodologies can be relevant to their work and
Externa	Pharma/Biotech companies	Business developers and management	Potential collaboration agreement for future exploitation of project results and possible financing options	future options for implementation of new technologies
		Investors and venture capital	Financing options for exploitation and further project development	Investment opportunities in emerging fields of drug development
	Clinicians	Hematologists	Information about the patient perspective, the mechanism of disease, and	Novel scientific insight and the advent of new therapies for their patients



			clinical development	
			strategy	
	Patients /end user	Congenital anemia patients and their families Patient organizations and representatives	Information and interaction about the patient perspective and awareness support	The advent of novel therapies that may improve their quality of life Novel scientific insight on new therapy options for patients
	General public	University students, civil society	Support towards public perception, engagement, and awareness	Insights into scientific career, drug development and outreach information about congenital anemia and new treatment options
		EU, national and local media	Public engagement, project promotion and awareness	Press releases, news articles and social media posts on the project

2.3. Tone of voice and key message

The main message of the NANEMIAR project is aimed at developing a novel treatment option for patients with congenital anemia. Also, we will generate new methodologies and technologies, by a wide variety of experimental animal and human models.

Variations of our message will be adapted for each audience, to secure their engagement with the project objectives. A non-technical language will be preferred when addressing general audiences and patients, given the raising-awareness focus of the communication strategy. A more scientific but clear tone will be preferred for dissemination activities.

In the beginning of the project, the key message will focus on the project's purpose, activities, and goals. In the later stages of the project, the key message will focus more on the project's results. The short version of NANEMIAR's key message is:

Key message

NANEMIAR aims to develop novel treatment options for patients with congenital anemia and generate novel data and methodologies that contribute to the emerging field of mRNA-based therapeutics. We are a research project funded by the European Commission from 2023 to 2026.

Below are the supporting recommendations for the use of this NANEMIAR's key message with the purpose to facilitate interactions with the different target groups.



2.3.1 Partners

A positive, call-to-action tone will be used to actively engage them with the communication and dissemination activities and invite them to act as multipliers.

Recommendations

- All partner organisations will be invited to "link back" to the NANEMIAR website (i.e., to establish a project brief supported by the project URL in their own websites) from their sites. These reciprocal links will at the same time improve the ranking of the project website in search engines such as Google and thus make the project more easily findable via search engines and better positioned.
- All researchers will be invited to include NANEMIAR logo in the signature footer of emails, with a link to the NANEMIAR website and thus promote the project.

2.3.2 Academic, pharmaceutical and clinical community

The communication goal is to engage the target audience to be active participants in the project's milestones. The key message must be positive and persuasive. The language used will be more technical.

Recommendations

- Focus on explaining the project innovations and give some examples on how they will be implemented, can be exploited or how collaboration is possible.
- Give extra information on the scientific consortium.
- Explain the availability of the NANEMIAR data.

2.3.3 Patient groups

Patient organizations are a fundamental pillar of dissemination of NANEMIAR. Given the novelty of mRNA as therapeutic modality, the NANEMIAR project will offer scientific evidence-based knowledge and transparent information on the risks and benefits. We would also promote interaction with patients as much as possible.

Recommendations

- Active involvement in congenital anemia patient's symposia.
- It is a two-way interaction: i) to inform patients and their families of current therapies, clinical trials, and potential treatments; and ii) to understand their needs and fears in face of the disease.

2.3.4 General public

NANEMIAR aims to ensure that the project's message is heard despite differences in cultural background and level of education.

Recommendations

- Explain practical examples on how the project's results will be implemented.
- Give extra information about the social impact of the project.



Table 3. Communication, Dissemination and Exploitation matrix

Tools / Channels Ty		Type		Objective / purpose	Content	Target group(s)
Visual identity of NANEMIAR	С	D		Brand positioning of the project	Logo, templates	
NANEMIAR website	С	D		Communication and dissemination of the main message and project updates/achievements	General project information, objectives, impacts, contribution to EU policies, consortium information, news, events, public results	All target groups
Social media posts	С	D		Communication of achievements and engaging target groups	Project results, achievements, and events	
Banner/roll-up	С				General project information with objectives and expected impacts	
Project flyer in different languages	С			Communication of the main project message	Brand image, consortium information, project goal	Partners, clinicians, patients and general public
Press releases and news items	С			Project presentation and communication of achievements	General project information, dedicated project milestones and progress, events	Partners, general public, academic, clinical and industry communities
Partners' websites and newsletter	С			Communication of the main message and project updates/achievements. Acting as pro-active multipliers.	General project information, objectives and impacts, consortium information, project updates, public results	Academic and clinicians, general public
Participation in radio interviews	С			Communication of the main message and project updates/achievements. Acting as pro-active multipliers.	General project information, objectives and impacts, consortium information, project updates, public results	General public
Participation in public events	С			Promotion of the project goal and results and creating awareness for mRNA-based therapies	Project description and general information about the disease and therapy options	General public

This project has received funding from the European Union's Horizon Europe Research and Innovation Programme 2021- 2027 under the grant

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Participation in								
university visits, open	n C			Increasing project awareness and engaging the new generation of	Seminars/lectures, workshops	Academic community,		
days, and teaching				future scientists.	Serimars, rectares, workshops	particularly students		
activities								
Participation in and				 Inform patients and their families of current therapies, clinical trials,	Patients' symposia and seminars			
organisation of				and potential treatments, and understand their needs and fears in	for them and families; Round	Patients, clinical		
patient-centred				face of the disease.	table video	community		
event				Tace of the disease.	table video			
NANEMIAR final	С	_		Presentation of the project results and engaging stakeholders	Seminars/lectures, networking	All target groups		
event		D		Presentation of the project results and engaging stakeholders	Seminars/lectures, networking	All target groups		
Participation in								
academic-oriented		_			Project information with	Partners, academic		
networks and		D		Increasing project awareness and community building	outcomes and expected impacts	community		
platforms								
Participation in					Project information with			
business-related		D	Е	Increasing project awareness and stakeholder engagement	outcomes and expected impacts,	Industry community		
events							and ways of exploitation	
Conference		_	_	Presentation of the project milestones and achievements, and	Project results, achievements and	Clinical, academic and		
presentations	DE		E	engaging stakeholders	ways of collaboration/exploitation	industry communities		
Publications in peer-			_		S	Clinical, academic and		
reviewed journals	DE		DE	Presentation of project results	Project results	industry communities		
Patents			Е	Protection of project results	Project results	Industry community		
Slidedecks		D	Е	Presentation of project results and pathways for exploitation	Project results, achievements and	Industry community		
Silucueurs		U	L	rresentation of project results and pathways for exploitation	ways of collaboration/exploitation	industry community		

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2.4. Communication and dissemination strategy

2.4.1 Communication activities

While dissemination is principally aimed at the clinical, academic and pharmaceutical communities with researchers, technical experts and related parties, communication activities will focus on promotion of NANEMIAR and its results to a non-specialist audience, covering a wide range of groups, at different geographical levels with the objective of increasing awareness and understanding. NANEMIAR's communication activities will focus on a few key headlines outlining the project's results and achievements, targeting a less specialised audience.

Communication will be pursued through the project's public communication channels and tools towards reaching the general public. In order to carry out these activities, in the first months of the project the NANEMIAR consortium will carry out (Table 4):

A: Website design and management

B: Development of promotional material and social media strategy,

Next, the communication activities themselves will be carried out (Table 5)

Table 4. NANEMIAR tools (A) and promotional material development (B) and expected KPIs (key performance indicators)

Cor	mmunication tools /channels	Objectives	Timescale	KPIs	
	NANEMIAR visual identity		M1-3		
	NANEMIAR website	Design, manage and	M3-6		
	Links to consortium partner	update the project's	M3-36	Number of visitors (per project year): 500	
	information	website and visibility	1015-50	Pages visited: 1000	
Α	Links to news items and	Website and visibility	M3-36	Average time spent on the website (min):	
	special events		1015-50	2 min	
	Access to project				
	promotional material and	Engage audience	M3-36		
	public project results				
	Posters, presentations,	Inform target groups	M2-36	Presentation in 15 events	
	banner/roll-up	on project objectives	1012 30	Tresentation in 13 events	
	Project information sheet	and expected impacts	M5-36	500 distributions	
В	NANEMIAR social media	Increase project	M1-36	>100 followers per social media channel	
	(LinkedIn, X, Instagram)	awareness, engage	1011-30	>100 followers per social filedia chaffiler	
	Press releases and news	stakeholders, and			
	items	generate new leads	M1-36	12 items	
	Items	for exploitation			

Table 5. Communication and awareness raising activities and expected KPIs (key performance indicators)

Communication activity name	Objective / description	Communication channel	Target audience	Time scale	KPIs
	Inform about the official	NANEMIAR website	General public		1 item
		Press release / news items	General public		2 items
NANEMIAR Kick-off	launch of the project,	Social media posts	General public	M2	>50 views
meeting	increasing project awareness	Partners' website /	Academic and	1012	
	and stakeholder engagement	newsletter	clinicians, general		1 item
		Hewsiettei	public		
	Communication of the main		Clinicians	M7-M36	10 sheets
NANEMIAR presentation	project message, increasing	Project information sheet	Patients and general	M7-M36	25 sheets
MANLIMIAN presentation	project awareness and		public	1017-10130	25 sheets
	stakeholder engagement	Radio interview	General public	M7-M9	1 item
	Communication of project achievements	NANEMIAR website - news	All target groups	M3-M36	20 items
		items	All target groups		
		Press release / news items	All target groups	M3-M36	12 items
NANEMIAR achievements		in local press	All target groups		12 ItCIII3
IVANCIVIIAN acilievements		Social media posts	All target groups	M3-M36	15 items
		Radio interview	General public	M34-M36	1 item
		Partners' website /	Academic and	M1-M36	12 news items included in
		newsletter	clinicians	1011-10130	partners' website / newsletter
	Short interviews with team	NANEMIAR website			6 interviews
Project research teams interviews / NANEMIAR stories	members to show their perspective / insights related NANEAMIAR project	Social media posts	All target groups	M7-M36	>50 views per interview
Participation in public events	Stakeholder involvement and stimulation to actively participate in the events	Presentations Project information sheet	General public	M7-M36	Presentation of project material in at least 6 events

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Patient's event	Round table video with scientist clinicians and patients to show their vision of NANEMIAR (*)	Project information sheet	Patients and their families	M8-M15 (TBD)	1 item Dissemination of video in more than 10 forums plus youtube
NANEMIAR final event	Stakeholder involvement and stimulation to actively participate in the events.	Presentations	All target groups	M35	>50 participants

An initial list of public events identified to participate in:

- International Day of Women and Girls in Science Annual on February 11
- Get closer to Europe Fair in the Region of Murcia May 2024
- EXPLORE, A la rencontre de la recherche June 2024
- The Mediterranean Researchers' night (https://mednight.eu/) September 2024
- Science Week October 2024
- The Fete de la Science (<u>www.fetedelascience.fr</u>) October 2024

(*) - The engagement of the project with patients and their families began before the official start date of NANEMIAR, since the FFIS/IMIB and the SMS organized the "Day with patients with congenital anemias" on March 29, 2023 in Murcia, Spain. Lesson learned: taking into account that these are patients with a rare disease, it is difficult to gather a high number of attendees. That is why it is proposed to organize the next edition in the format of a round table video that can be disseminated through more forums and channels.

This project has received funding from the European Union's Horizon Europe Research and Innovation Programme 2021- 2027 under the grant

2.4.2 Dissemination and exploitation activities

Dissemination is aimed at researchers, technical experts, and related parties in the clinical, academic and pharmaceutical communities. The main objective is to spread project results throughout EU and wider. The potentially interested target groups identified as part of this C&D Plan and representing the potential end-users will be approached through dedicated dissemination activities, such as:

Table 6. Target audience and planned dissemination activities

Dissemination activity name	Objective / description	Type of dissemination activity	Target audience	Time scale	KPIs
Oral and/or poster presentations	Dissemination at (inter)national conferences (Table)	Conferences	Academic and industry researchers, clinicians	M2-M36	At least 6 items
Publications in peer- reviewed journals	Publications in peer-reviewed journals (e.g., Nature Communications, ACS Nano, Science Advances, Blood, etc.).	Other scientific collaboration	Academic and industry researchers, clinicians	M9-M36	1-2 of published articles in scientific journals
Round table discussions	Meeting with stakeholders in the field of congenital anemia, rare diseases, and/or mRNA therapeutics	Education and training event Meetings Clustering activities Collaboration with EUfunded projects	Academic and industry researchers, clinicians	M7-M36	Participation in at least 6 meetings / discussions
Membership of Networks, Associations and Platforms	Dissemination at specific meetings / events of networks, platforms and associations where several partners are members (including Eritropatologist National group, RAIN, ERN- EuroBloodNet, REDCap, COST Action HELIOS)	Other scientific collaboration	Academic and clinical communities	M7-M36	Participation in at least 3 collaboration meetings
Visibility in industry networks	Increasing project awareness and stakeholder engagement. Presentation of project results and pathways for exploitation	Meetings Other	Industrial community (business developers, venture capital, investors)	M23-M36	> 15 slidedecks shared with project results for exploitation

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An initial list of scientific events identified to participate in:

Table 7. Planned dissemination at (inter)national conferences and at Networks, Associations and Platforms events/meetings.

(Inter)national conference/event/meeting name	Date and place	Partner who will attend
LXV National Congress of the Spanish Society of Hematology and Hemotherapy (SEHH)		
and XXXIX Congress of the Spanish Society of Thrombosis and Hemostasis (SETH), held	26-28/10/2023, Seville, Spain	FFIS-IMIB
jointly with the III Ibero-American Congress of Hematology		
Rencontre Maladies rares "La place des femmes dans la prise en charge des maladies	28/02/2024, Paris, France	CRNS
rares"	20/02/2024, Falls, Flatice	CNIVS
RD cluster – Cluster of Horizon Europe EU-funded research projects on the development	14/03/2024, Brussels, Belgium	All partners
of new therapies for Rare Diseases	14/03/2024, Brussels, Beigluiti	All partifers
Rare disorder Annual symposium MarMaRa	18-19/04/2024, Marseille, France	CNRS
Fanconi Anemia Europe Scientific Meeting	23/05/2024 Paris, France	CNRS
European Hematology Association Hybrid Congress EHA2024	13-16/06/2024 Madrid, Spain	FFIS-IMIB/SMS
Eritro Patología (Grupo Español de Eritropatología)	June 2024 Madrid, Spain	SMS
RAIN (Rare Anemias International Network)	TBD	FFIS-IMIB/SMS
American Society of Hematology (ASH Meeting)	TBD	FFIS-IMIB /SMS, CNRS
Annual mRNA-Based Therapeutics Summit	2025 or 2026	Mercurna
Société Française d'Hématologie (SFH)	TBD	TBD
EMBO (**)	TBD	TBD
Abcam (**)	TBD	TBD
EuroBloodNet (**)	TBD	FFIS-IMIB /SMS
ReDCap (**)	TBD	FFIS-IMIB/SMS

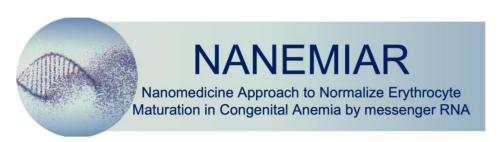
^{(**) -} The opportunity for participation will be evaluated depending on the scientific program proposed for the event/meeting, preferably attending to those that address topics related to NANEMIAR.

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2.5. Tools and channels

2.5.1 Visual identity

Logo



Font

Calibri Light

abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789 (!#\$%&/.|*`@´,?:;)

2.5.2 Templates

Word documents and deliverable templates







Presentation templates



2.5.3 Communication toolkit

The project will produce a communication kit including a flyer, poster, roll-up, and template slide presentation with general information about the project objectives, approach, partners, and expected impact. The aim of these materials is to raise awareness of the project, to establish the project's identity and to guide interested readers to the project website, where more in-depth information can be found, as well as to social media profiles, where the project's progress and activities can be followed.

The communication kit will be created in English and each partner will be responsible for its translation into their main language, in order to easily reach local audiences. It will be available in an electronic version on the website to download and it will only be printed if necessary.

Posters and flyer will be distributed at workshops and conferences organised by or with the participation of project members. The use of printouts will be evaluated in advance considering the effectiveness of printed promotional material. In any case, eco-friendly printing measures will be taken (ecolabel paper, low-VOC inks, double-sided printing, reducing the text size and number of pages, etc.).

2.5.4 Website

The website serves as the main information gate of the project. Here, general and specialized information will be stored, updated and permanently accessible to any interested party. It will contain information about the project, its progress, results, and impacts as they are obtained.

Also, it will provide information on all project activities, upcoming events and contact details for all project partners in order to facilitate cooperation and knowledge sharing within and beyond the consortium.

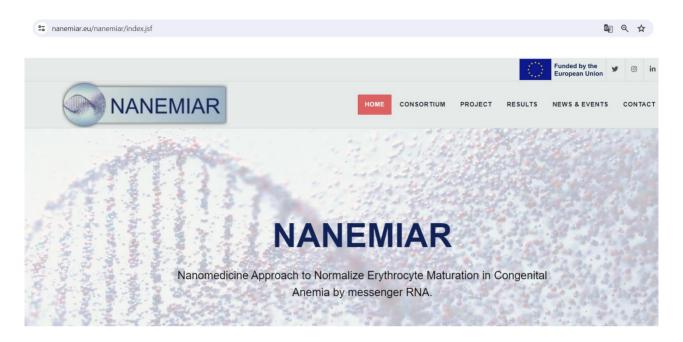
Domain: www.nanemiar.eu

Languages: English (some materials and content available in French or Spanish (as example the flyer for patients and their families).





Homepage screenshot



Expected impact of our project



Funded by the European Union



2.5.5 Social media

The activity on social networks will reinforce the project scope and will help members to connect with the societal reaction on congenital anemia and mRNA-based drug development.

Specifically, NANEMIAR has open accounts at X, Instagram, and LinkedIn.

Social media content will be generated and managed by the consortium members, who will also publish the relevant information in their social networks. This communication channel is expected to be efficient in communicating project activities and ensuring a strong public presence.

X

Addressed mainly to the scientific community in academia and industry.

Main content:

- Promotion of NANEMIAR events
- Participation in third part events
- Dissemination of results
- General facts and news about congenital anemia and mRNA

Profile: @NANEMIAR https://x.com/nanemiar

Instagram

Addressed mainly to general public.

Main content:

- Promotion of NANEMIAR less scientific and technical events
- Dissemination of results
- General facts and news about congenital anemia and mRNA

Profile: @NANEMIAR https://www.instagram.com/nanemiar

LinkedIn

Addressed mainly to mainly to the scientific community in academia and industry.

Main content:

- Promotion of NANEMIAR events
- Participation in third part events
- Dissemination of results
- General facts and news about congenital anemia and mRNA

Profile: https://www.linkedin.com/showcase/nanemiar

#innovation #research #EUproject #HorizonEurope #EUfunded #congenitalanemia #mRNA





3. Exploitation strategy

To efficiently allow translation of research results into innovation, all data generated by the NANEMIAR consortium will be considered for protection prior to publication and, if applicable, appropriate steps will be taken towards industrial exploitation of the knowledge for market development. The specific goals for exploitation are:

- To allow safe disclosure of previous knowledge and new ideas
- To secure the ownership of project innovations
- To create financial value and economic growth through new inventions
- To prevent or discourage unauthorised use of the results by others.

3.1 Management of intellectual property rights

Management of intellectual property rights (IPR) generated in the project is divided into three phases:

The first one ("Agreement phase") is addressed in the NANEMIAR Consortium Agreement. The main topics are the definition of Background and Foreground and the mutual access of partners to these.

The second part ("Innovation phase") of IPR management involves the actual project. Alongside project execution, the resulting Foreground is defined, protected when feasible, and the ownership and sharing of IPRs are addressed.

The third part ("Exploitation phase") is initiated as soon as possible upon IP protection and continues as long as the results of the project are exploited by the partners and third parties.

This section below will mainly focus on the Innovation and Exploitation phase.

3.2 Innovation

The assessment of IPRs eases the commercialization activities of the IPRs as it can be important in negotiations with other partners about IPR exploitation or in other strategic decisions, for example when selling or licensing the IPRs or raising funds related to the exploitation of the IPRs.

3.2.1 Protection of Foreground

Any Foreground that has potential for commercial, industrial or other type of exploitation, will be protected. This can be either Copyright or Industrial property rights. NANEMIAR will focus on industrial property rights, particularly patents, which protect the financial interests of the holder of the rights.



The knowledge produced during the project shall be the property of the partner carrying out the work. In case of jointly generating new knowledge, partners will establish joint ownership. Early on in the project, we aim to perform a Freedom to Operate (FTO) analysis, likely performed a specialized patent lawyer.

The IPR owner is not obliged to use a patent lawyer, though it is highly recommended as the field of patent application is complex and legal assistance will ease the process.

Since patent applications take a long time (tens of months), data can be shared with third parties under NDA (non-disclosure agreement) to stimulate exploitation prior to public record of a patent. In case a partner does not want to protect results that have the potential for industrial or commercial application, the partner is obliged to notify the EC up to four years after the end of the project and be careful not to perform any dissemination activity before this notification.

3.3.2 IP registry

To support exploitation, the partners will monitor project results following Table 8.

This will also involve careful identification, assessment and plans for mitigation of any potential risks related to the exploitation of the IPRs (including potential internal or external disputes).

Regarding data ownership and access, the complete dataset developed during the project lifetime will be confidential and only NANEMIAR consortium members will have access. As described in the consortium agreement, partners must give each other access on a royalty-free basis to results needed for implementing their own tasks under the action. Additionally, beneficiaries must give each other – under fair and reasonable conditions – access to results needed for exploiting their own results. Requests for access may be made up to one year after the set-out period unless agreed otherwise.

3.3.3 Open access

NANEMIAR will guarantee open access to project results, balancing openness and protection of scientific information, commercialization, and IPR, privacy concerns, security as well as data management. Open Access typically focuses on access to "scientific information", which refers to two main categories:

- Scientific publications (published in peer-reviewed academic journals);
- Scientific research data (data underlying publications and/or raw data).

Open Access does not aim to affect IPRs. Each partner has to decide if, when and which results to disseminate, in a way that does not affect the IP generated by research results and more specifically in a way that will not disrupt the decision to exploit research results commercially, e.g. through patenting. The decision on whether to publish through open access must come after the more general decision on whether to publish directly or to first seek protection for IPRs. This means that the consortium will decide the dissemination of the scientific information, having taken into consideration if and how to protect IPRs generated in the lifetime of the Project.





As such, all publications related to NANEMIAR results will be considered only after concluding on the IPR exploitation scheme, respecting the dissemination level of each deliverable and with the assent of all partners.

3.3 Exploitation

The consortium is eager to exploring potential pathways to commercialization by involving end-users and stakeholders early on in the project.

Following proof-of-concept studies, they need additional funding to prioritize and perform the activities that are required to bring the formulation to the next phase: pharmacology, pharmacokinetics, and toxicology assessments, GMP setup, safety and efficacy studies in humans (Clinical Phase I/II). The first steps can be established by non-dilutive financing such as the EIC Accelerator. At a later stage, venture capital and biotech/pharma interest are highly recommended to initiate co-development deals or other ways for exploitation. Mercurna, as SME, will be the main responsible for these exploitation pathways. Ultimately, we aim for direct sales of the protected product based on the IPRs or licensing the IPRs.

3.3.1 Target groups and stakeholders

Biotech/Pharma companies

The project partners will use the project results for patent protection and share findings with businesses to seek funding and partnering options for further development of their proposed drug upon proof-of-concept stage (Table 6).

Researchers

The project partners will publish and disseminate the project results through academic conferences and scientific journals. The project results will then be used in further research activities (Table 6).

Clinicians

They will disseminate project results and seek connections with the clinical community focused on congenital anemia through academic conferences and scientific journals. This will be used to provide novel treatment opportunities and stimulate clinical development trajectory (Table 6).

3.3.2 Key activities to support the exploitation of results

Since the proposal stage, NANEMIAR has identified key actions to exploit the project results during and after its implementation period. Overall, the main objective is to produce a proof of concept for efficacy of its newly developed drug product for the treatment of congenital anemia. The knowhow generated will be widely used by all partners as well as other stakeholders.





Similar to the C&D activities, the NANEMIAR brand will be used to support and facilitate exploitation. Other steps involve:

- Identification of the main stakeholders for the innovation
- Establishing a strategy to influence the key stakeholders
- Creation of a final exploitation plan to describe and clarify the strategy for further deployment of the outputs of the project.

Table 8. IP registry tool

			Resu	lts information			TRL				
N	lo.	Title	Description	Relation to project	Relevant background knowledge &IP	Partner name	Shares of IP rights	Nature of involvement	Preferred protection/exploitation route	Product	Current/expected TRL
1	-			WP/Task/Deliverable		xx xx					
2	2										

This project has received funding from the European Union's Horizon Europe Research and Innovation Programme 2021- 2027 under the grant

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4. Calendar

I		202	23								2024											2	025										202	6			
Project month	1	2	3	4	1 5	Т	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Deliverables			D5.1	Т		D	05.2						D5.3												D5.4												D5.5
Milestones				T								M1												M2													
Communication	Communication																																				
Kick-off																																					
Website (own and				П																																	
partner																																					
Project info sheet																																					
News items /press				П																																	
releases																																					
Social media																																					
Press releases																																					
Radio interview																																					
Presentations																																					
Dissemination																																					
Publications																																					
Conferences																																					
Round table																																					
Memberships																																					
Exploitation																																					
Patents																																					
Slidedecks																																					

Figure 1. Project timeline with communication, dissemination, and exploitation activities (dark blue) and scheduled deliverables

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5. Monitoring of all activities

Work Package leader (IMIB-FFIS) will work for an effective communication and dissemination strategy under the following responsibilities:

- Define the communication and dissemination strategy and execute it.
- Coordinate all the communication, dissemination and exploitation activities among the consortium members.
- Monitor the impact of communication actions.

To speed up and optimize the decision-making process of the communication and dissemination actions, each partner will designate a communication contact person (Table9) to discuss and coordinate the shared tasks.

All the partners are required to involve and dedicate time to project communication. This involves publishing project's news in their own communication channels (website, social media, etc.), participating in fairs, conferences and clustering activities with other projects, and distributing press releases to local media.

A yearly monitoring report will be prepared with the participation of all partners to know, evaluate and adjust, if needed, the C&D efforts. The WP leader will be in charge of collecting the main data for the annual report, while C&D&E delegates from each partner organisation will provide information according to the monitoring sheet indicated in our shared folder.

Table 9. Communication contacts

Partner	C&D&E delegate
IMIB-FFIS	Ana Belén Pérez Oliva
CNRS	Christophe Lachaud
Mercurna	Jenny van Asbeck





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

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