



Nano-ImmunoEra WP6

Data Management Plan (DMP)

Giovanni Valenti

Data Management Plan

Deliverable information

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Document History

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0.2	01/05/2023	Revised draft by the internal reviewer and circulated to partners	UNIBO
0.3	18/06/2022	Final version including feedback from partners	UNIBO

Scheduled Data Management Plan (DMP) Updates

The DMP is a document that evolves during the lifespan of the project and registers all relevant changes in the life-cycle of all the research datasets of NanoImmuno-ERA project. Updated versions of the DMP have already been planned (see table below). Moreover, this document will be updated whenever important changes in the data or the data management policy occur.

Issue	Expected by project month (M)
Initial DMP	30/06/2023
Intermediate DMP	30/06/2024
Final DMP	31/12/2026

Partner Acronyms

Partner extended name (country)	acronym
ALMA MATER STUDIORUM - UNIVERSITÀ DI BOLOGNA	UNIBO
UNIVERSIDAD COMPLUTENSE DE MADRID	UCM
UNIVERSITY OF ROME TOR VERGATA	UNITOV
FERAL GMBH	FERAL
WAGENINGEN UNIVERSITY & RESEARCH	WUR

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The Data Management Plan (DMP)

The DMP is a document that provides details regarding all the research data collected and generated within the NanoImmuno-ERA project. In particular, it explains how research data are handled, organized, licensed, and made openly available to the public and how they will be preserved after the project is completed. The DMP also provides motivations when versions or parts of the project research data cannot be openly shared on account of third-party copyright issues, confidentiality, or personal data protection requirements or when open dissemination could jeopardize the project's achievements.

This DMP reflects the current state of the art of the NanoImmuno-ERA project. However, the details and the final number of the project datasets may vary during the course of the research. The variations will be recorded in updated versions of this DMP.

Data Summary

NanoImmuno-ERA is a research and innovation staff exchange network aiming at the development of innovative biosensors and diagnostic tools for the detection of clinically relevant antibodies. Nano-ImmunoEra will form the next generation of clinically-oriented analytical scientists capable of delivering innovative solutions that will improve the lives of patients, reduce the cost of healthcare and position Europe as a leader in biomedical devices. Since standard laboratory-based methodologies and disposable tests present several analytical limitations, we have selected antibodies as molecular targets of this project because their rapid, sensitive and specific detection in bodily fluids still represent a significant diagnostic challenge. To deliver these goals, we have assembled a highly inter- and multidisciplinary and multicultural team of European as well as strategic non-EU Countries (USA, Switzerland and South Africa) through the collaboration among 7 academic institutions and 2 non-academic partners to enable ultimate impact to the healthcare. The expertise of different and multidisciplinary research teams, comprised of PhD and Postdoctoral as well as experienced researchers from Universities and companies, will endow Nano-ImmunoEra with a strong intersectoral dimension, which is of high importance for a broad and effective impact of the project. In addition, this program involves key participation of junior researchers with exceptional scientific backgrounds and accomplishments, and will provide strong support for the development of their careers. The transfer of knowledge and related training activities aim to provide scientists achieving specific competences in the field of materials sciences, nanotechnology, molecular biology and biosensors. The project results will be validated and demonstrated at partners' premisses.

The project will primarily generate new datasets instead of reusing old ones because the materials/reagents/devices will be synthesised or assembled *ex-novo*, and they will need a new characterization.

NanoImmuno-ERA will produce different types of data by using different methodologies. The data obtained from the measurements will be qualitative and quantitative, mainly numerical. DNA sequences and microscopy images will be included. Research teams have agreed to use well-known and documented open formats to facilitate accessibility and reusability (Table 1).

Table 1 - Summary of data formats.

Type of data	Formats used during data processing	Formats for sharing, reuse and preservation
Numerical tabular data	.csv; .ascii; .opj; .fid	.csv
Images	.tiff	.tiff; .png
Textual data	.txt	.txt
DNA sequences	.fasta; .gb; .dna; .txt	.fasta; .gb; .dna; .txt

Read me files and the necessary documentation explaining all relevant details regarding data collection, processing methodologies, and quality assurance will be deposited along with the datasets in .odt, .rtf or .pdf format. A Read me file template is provided as Annex III of this document.

The expected size of the data is approximately 150 Gigabytes. Considering the early stage of the project, the effective size may vary with respect to what is declared in the present document. Potential variations will be taken into account in further versions of this document.

The data produced can be of interest to different potential users inside and outside the project.

The purpose of the datasets inside the project is to collect data regarding the selection of the recognition elements to be use for antibody detection in electrochemiluminescence or electrochemical sensing platforms (WPs 1) and electrode production ana characterization (WP2). In the case of WP 3, the purpose of the data will be the evaluation of the performances of the methods exploited for the assays and the comparison of the new methods with the gold standard techniques in the diagnostic laboratories. Moreover, for WPs 4, the main utility of the datasets will be the integrated lab on a chip and devices produced during the project, applicable to the final lab users who will run the biological tests. Preliminary analytical tests will also be performed.

Concerning the utility of the data outside the project, the data will be of interest to the research community working with luminescent nano- and bio-materials and their use in analytical devices, with a particular focus on synthetic procedures, for the scientific community working on Applied life sciences researchers and specialists. Furthermore, they can be of interest also for companies working in the field of (bio)sensors and diagnostic kits including lateral flow devices.

FAIR Data

This DMP follows the EU guidelines¹ and describes the data management procedures according to the FAIR principles². The acronym FAIR identifies the main features that the project research data must have to be findable, accessible, interoperable, and re-useable, allowing thus for maximum knowledge circulation and return of investment.

Making data findable, including provisions for metadata

To improve the findability of research data produced during the NanoImmuno-ERA project, the datasets will be deposited in trusted³ data repositories if and when appropriate.

During the course of the project, and at least at the moment of publication of project results, each research team will deposit and describe the relative underlying datasets. Trusted data repositories can attribute persistent unique identifiers (PIDs) to the deposited items. In particular, the repositories identified by the consortium attribute the PIDs specified in Table 2.

Moreover, the chosen data repositories support standard descriptive metadata to ensure datasets' indexing and discoverability. In particular, they support Dublin Core⁴ and DataCite Metadata Schema.⁵

Readme files and the necessary documentation explaining all relevant details regarding data collection, processing methodologies, and quality assurance will be deposited alongside the datasets.

¹ Guidelines on FAIR Data Management in Horizon Europe (Version 2.0, 01 April 2022), https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf

² The FAIR data principles (GO FAIR), <https://www.go-fair.org/fair-principles/>

³ Search your field repository in <https://www.re3data.org/>

⁴ Dublin Core Metadata Schema: <https://www.dublincore.org/schemas/>

⁵ DataCite Metadata Schema: <https://schema.datacite.org/>

Specific keywords or variables used in the datasets will be, if possible, consistent with the vocabulary of the scientific field, and they will be uniquely defined in the metadata files provided alongside each dataset to ensure the interoperability of the data.

NanoImmuno-ERA research data are organized in datasets, which are named collections of data units with the same focus and scope.

This DMP suggests the following standard rules for dataset naming to improve data visibility, discoverability, citation, and permanent online tracking.

The recommended dataset title structure consists of the following:

PROJECT ACRONYM. WPnumber. WP title or description specifying WP aims. Tasknumber. Task title or description specifying Task aims. additional information specifying coverage and nature of data (if necessary). version number (optional, in case of revisions to help identifying the updates especially in repositories that do not track versioning automatically)

Example:

NanoImmunoERA. WP1. Selection of CRISP-Cas protein. Task 1.3. Development of electrochemical CRISPR-powered biosensors for antibody monitoring. V1

The version number of the dataset will be added at the end of the title in case of data revisions to help identify the dataset updates, especially in repositories that do not track versioning automatically (see *Annex 1* for dataset names, unique identifiers, and descriptions).

The DMP also recommends the following rules for file naming:

- for dataset file(s)
[PROJECT ACRONYM]_WPnumber_Tnumber_coverage or other content specifications_date (YYYYMMDD)_vn.file extension

Example:

[NanoImmunoERA]_WP1_T3_protein properties_20230817_V1.png

- for readme file(s)⁶
[PROJECT ACRONYM]_WPnumber_Tnumber_coverage or other content specifications_date (YYYYMMDD)_vn_README.file extension

Example:

[NanoImmunoERA]_WP1_T3_protein properties_20230817_V1_README.txt

WPnumber means “work package number”, Tnumber is “task number”, and vn is the “version number” (in case of data revisions or updates).

Making data openly accessible

As a guiding principle, NanoImmuno-ERA seeks to ensure open access to research data via the repository as soon as possible and within the limits and deadlines set out in the DMP to allow dissemination, validation, and reuse of research results.

In addition, data deposition in repositories will guarantee long time preservation and accessibility to datasets.

Restrictions to access are applied only in the following cases:

- when collected data belongs to a third party which have denied permission to share them;
- on account of confidentiality and proprietary issues;
- protection of the personal data of subjects involved in the research.

As a consequence, all possible and legitimate actions and strategies will be adopted to allow data sharing, including:

- converting the files to standard open formats;
- providing all relevant documentation and explanation for the data and the datasets;
- obtaining written consent to participate in the study and on the processing of personal data by each participant to the study;
- aggregating/anonymizing personal data.

For data that fall under some of the restrictions described above and for which it is not possible to take any action to make them shareable, the EU allows complete closure or restricted access to them. The main reason for limited access to data produced in the

⁶ A “README” file is a document containing relevant information about dataset authorship, terms of reuse and responsibilities, explaining dataset content and structure, collection procedures and analysis (such as file specifics, methodologies, codebooks of variables, data sources, and further necessary notes). (See Annex III to visualize the suggested README file template).

NanoImmuno-ERA project will be the protection of intellectual property rights; an embargo will be applied for the time needed for the patent submission and/or to keep them as an industrial secret during the exploitation phase. No issue will derive from collecting personal data of patients.

NanoImmuno-ERA DMP indicates the versions or parts of the datasets that cannot be freely shared, providing the specific motivations in *Annex I*.

Each different dataset is deposited by the team responsible for the data collection and management in the repository of their choice.

Table 2 – Summary of repositories chosen for datasets' publication and preservation.

Partner	Repository			PID
	Name	Type	URL	
UNIBO, UCM,UNITOV, FERAL,WUR	Zenodo	general	https://zenodo.org/	DOI
UNIBO	AMSacta	Institutional	https://amsacta.unibo.it/	DOI
UNITOV	European Nucleotide Archive (ENA)	disciplinary	https://www.ebi.ac.uk/ena/browser/home	Accession Number

Making data interoperable

All datasets will be described using standard descriptive metadata (e.g., Datacite for Zenodo) or general repository for the DNA sequences (e.g. ENA) to ensure metadata interoperability for indexing and discoverability. Furthermore, all relevant documentation explaining codebooks, user manuals, data collection procedures and analysis will be made available along with the data to guarantee intelligibility, reproducibility, and the validation of the project findings.

Partners will convert all shareable data from proprietary formats to allow data exchange and reuse among, e.g., researchers, institutions, organisations, and countries. Data will be made available in well-known and documented open formats (see Table 1 for details), as much as possible compliant with available (open) software applications.

Proprietary software, such as Sigmaplot⁷, Origin⁸ or Graph Pad⁹, is used in the data processing. The deposited documentation will include a full explanation and instructions (a summary of the tools and software necessary to reuse data is described in Table 3).

Table 3 – Summary of tools and software for enabling reuse of the data.

Tools/software
SigmaPlot Software ⁷
Origin ⁸ Software for Graphing and Analyzing
Prism Graph Pad ⁹
Open spreadsheet and document editors, such as OpenOffice ¹⁰ or LibreOffice ¹¹
free CSV file viewers, such as CSV viewer
The Origin Viewer ¹²

Increase data reuse

NanoImmuno-ERA distributes the shareable data by adopting licenses that allow the reuse of the data and the datasets in their entirety by other scholars and stakeholders. Whenever the nature of the data allows it and at the appropriate timing, datasets will be made available under CC BY or CCo licenses. In addition, an embargo period will be applied to some datasets to allow full exploitation of research results by the Partners. The quality of the data will be carefully assured by repeating the measurements several times and analysing errors and inconsistencies with standard statistical methods. In the case of the data concerning DNA sequences, re-sequencing and functional validation of constructs will be performed.

Besides their deposition in trusted repositories, which will grant their reusability by third parties after the end of the project, data will be given a full citation from official project publications and the project website.

Other research outputs

The activities carried out during the NanoImmuno-ERA project foresee the generation of other research outputs, particularly non-digital outputs such as new functionalized

⁷ Sigmaplot: <https://ritme.com/it/software/sigmaplot/>

⁸ Origin: <https://www.originlab.com/>

⁹ Prism GradPad: <https://www.graphpad.com/>

¹⁰ OpenOffice: <http://www.openoffice.org/>

¹¹ LibreOffice: <https://www.libreoffice.org/>

¹² Origin Viewer: <https://www.originlab.com/viewer/>

engineered CRISP-Cas proteins, new reagents - in particular electrode materials and electrode geometry for (electrochemi)luminescence and signal amplification - new nucleic acid sequences. As a general principle, these outputs will be handled by the research team which generates them, under best practices and internal regulations of each institution. These outputs will be referenced in project publications, patents, and deliverables.

Allocation of resources

Making data FAIR requires an investment of money and researchers' time.

All the repositories chosen for the data deposition and storage are free of charge. Cloud storage solutions used for the backup will be paid for by the institutions (e.g., OneDrive at UNIBO, ...), not weighing on the project's budget.

Responsible for data management are the datasets creators (see Table 4). Researchers are encouraged to identify themselves with the unique persistent identifier ORCID¹³.

Table 4 – Summary and contacts of the Dataset Creators.

Team	Dataset Creator	ORCID ID (if available)	mail
UNIBO	Mara Mirasoli		mara.mirasoli@unibo.it
UNIBO	Prodi, Luca	0000-0002-1630-8291	luca.prodi@unibo.it
UNIBO	Valenti, Giovanni	0000-0002-6223-2072	g.valenti@unibo.it
UNIBO	Paolucci, Francesco	0000-0003-4614-8740	francesco.paolucci@unibo.it
UCM	Elena Benito Pena	0000-0001-5685-5559	elenabp@quim.ucm.es
UNITOV	Alessandro Porchetta	0000-0002-4061-5574	alessandro.porchetta@uniroma2.it
FERAL	Gianluca Adornetto		gianluca@inne.io
WUR	Raymond Staals	0000-0002-5741-9457	raymond.staals@wur.nl

Moreover, partners are encouraged to identify and cite all contributors (See Table 5) participating in data management activities, specifying their roles according to a given standard vocabulary (DataCite Metadata Schema).

Table 5 – Summary of team members involved in collection and management of the datasets.

¹³ Registration is free of charge for researchers and allows for automated linkages between the researched identity and his research activities and outputs. <https://orcid.org/>

Team	Member	ORCID ID (if available)	Role
UNIBO	Claudio Ignazio Santo	0000-0003-4802-1671	Data collector
	Donato Calabria		Researcher
	Alemu, Yemataw Addis		Data collector
UCM	Benito-Peña, Elena	0000-0001-5685-5559	Researcher
	del Barrio, Melisa	0000-0002-6947-6686	Researcher
	Navarro, Fernando	0000-0002-6149-7511	Researcher
UNITOV	Alessandro Porchetta	0000-0002-4061-5574	Researcher
FERAL	Dolati, Setareh		Researcher
	La Manna, Fabio		Researcher
	Orgill, Jonathan		Researcher
WUR	Raymond Staals	0000-0002-5741-9457	Project member
	Jurre Steens		Researcher
	Carl Salazar		Researcher
	Afonso Madruga Amieiro		Researcher

Keys for "Role" column: Data Collector (such as survey conductors, interviewers...), Producer (person responsible for the form of a media product), Project Member (a researcher indicated in the GA), Researcher (an assistant to one of the authors who helped with research, data collection, processing and analysis but is not part of team indicated in the GA), Research Group (the name of a research institution or group that contributed to the dataset).

(See Annex I for details about data management responsibilities related to each project dataset).

Data security

Data shared among Partners will not contain sensitive data. In particular no data from patient will be used or produced during the project.

Data generated by each partner will be initially stored in the computers, laptops, intranet directories, hard drives, and cloud storage systems of the research institution, accessible through institutional passwords modified periodically and protected by regularly updated antiviruses. None of the project data will be left inadvertently available by being left on desks or in unlocked rooms. All the research materials stored in computers are subject to back up regularly (according to each institution's regulations) to safeguard them from accidental losses. Cloud storage will be used for regular backup before data deposition in a repository. The SharePoint¹⁴ will be set as the channel for data sharing amongst the partners. A direct link from the NanoImmuno-ERA website "private area" will be accessible only – and to all – the partners involved in the project.

¹⁴ Microsoft SharePoint: <https://www.microsoft.com/it-it/microsoft-365/sharepoint/collaboration>

The chosen data repositories with specific preservation policies ensure long-term public data preservation. For example, Zenodo policy¹⁵ ensures that the items will be retained for the repository's lifetime and that, in case of closure, best efforts will be made to integrate all content into suitable alternative institutional or subject-based repositories.

Ethics

The research activity in the NanoImmuno-ERA project will be conducted by applying fundamental ethical principles and relevant national, EU, and international legislation, including the Charter of Fundamental Rights of the European Union, the European Convention on Human Rights, and the General Data Protection Regulation (GDPR – Regulation EU 2016/679).

All lead investigators will be responsible for ensuring that ethical standards compatible with and equivalent to those of Horizon Europe will be applied, regardless of the country in which the research is carried out.

Annex I: Dataset Tables

The analytic descriptions of the expected datasets of the NanoImmuno-ERA project are reported in this Annex, organized by work packages.

WP1 – Design of tailored bioresponsive elements for antibody detection

This WP will be devoted to the design and preparation of the bioresponsive element for the signal transduction: recombinant antibody, peptide (immune epitope), recombinant ab and full protein, antigen-nucleic acid chimera, and CRISP-Cas.

Lead: WUR

Participants: UCM, UNITOV, WUR

Months: 1-20

01	Status: not yet available	NanoImmunoERA_WP1_recognitionElem_V1
ID [ID type]		Not yet available [DOI]

¹⁵ Zenodo policy: <https://about.zenodo.org/policies/>

01	Status: not yet available	NanoImmunoERA_WP1_recognitionElem_V1
Chosen repository	Zenodo	
Version	TBD	
Team in charge	UCM	
Creator/s		
Contributor/s		
Contact Person/s	Elena Benito Pena	
Contents	<p>Data on the chemical procedures for synthesizing the compounds and their characterisation (SPR, NMR, LC-MS, FTIR, SANGER, PAGE, Luminescence, SPC, etc). Data on binding constants, binding energies, concentrations and assay format used, cross-reactivities (type of method, temperature, solvents and additives).</p> <p>Raw data includes csv files with spectroscopic data from titration experiments.</p>	
Data format	.csv, .png, .bmp	
Data volume	Not yet available	
Accessibility	Permissive licences (such as CCBY/CC0) will be used when the data can be shared without compromising the IPR; until then, the data will remain embargoed.	
Related publication/s	Not yet available	

02	Status: not yet available	NanoImmunoERA_WP1_AntigenNACHimera_V1
ID [IID type]	Not yet available Accession Number	
Chosen repository	Zenodo or European Nucleotide Archive (ENA)	
Version	TBD	
Team in charge	UNITOV	

02	Status: not yet available	NanoImmunoERA_WP1_AntigenNACHimera_V1
Creator/s		
Contributor/s		
Contact Person/s		Alessandro Porchetta
Contents		The dataset is related to the probe development of oligo-DNA/PNA probes for selective detection of specific Ab or Ab triggered in WP2; The data are: specific peptides sequences, oligonucleotides sequences. These data will be used in WPs 3 and Wp4 and they will be essential for the preparation of biochip for nucleic acids and useful for all the researchers
Data format		.csv, .png, .bmp
Data volume		Not yet available
Accessibility		Permissive licences (such as CCBY/CCo) will be used when the data can be shared without compromising the IPR; until then, the data will remain embargoed.
Related publication/s		Not yet available

03	Status: in progress	NanoImmunoERA_WP1.CRISPCas_V1
ID [ID type]		Not yet available [DOI]
Chosen Repository		Zenodo
Version		TBD
Team in charge		WUR
Creator/s		
Contributor/s		
Contact Person/s		Raymond Staals
Contents		Data describing the proprieties of protein prepared during the project. Protein activity and structure.
Data format		.csv, .txt, .tif, .opj

03	Status: in progress	NanoImmunoERA_WP1.CRISPCas_V1
Data volume		Not yet available
Accessibility		Permissive licences (such as CCBY/CC0) will be used when the data can be shared without compromising the IPR; until then, the data will remain embargoed.
Related publication/s		Not yet available

WP2– Electrode material

This WP will be devoted to the production and characterization of electrode material for the improvement of ECL-based biosensing.

Lead: UNIBO

Participants: UNIBO, UNITOV, WUR, UWC

Months: 3-32

04	Status: in progress	NanoImmunoERA_WP2_ECLperformance_V1
ID [ID type]	Not yet available [DOI]	
Chosen repository	AMSacta	
Version	TBD	
Team in charge	UNIBO	
Creator/s	Valenti, Giovanni	
Contributor/s	Claudio Ignazio Santo Paolucci, Francesco	
Contact Person/s	Valenti, Giovanni	
Contents	Data correlating the concentration of Ab and analytical signal, and electrochemical characterization of the chip. Electrochemical, Impedance spectroscopy, and electrochemiluminescence data: ECL signal intensities. The data will be essential to select condition for WP 4	
Data format	.csv, .txt, .tif, .opj	
Data volume	20 MB	
Accessibility	Permissive licences (such as CCBY/CCo) will be used when the data can be shared without compromising the IPR; until then, the data will remain embargoed.	
Related publication/s	Not yet available	

05	Status: not yet available	NanoImmunoERA_WP2_electrodecharacterization_V1
ID [ID type]		Not yet available [DOI]
Chosen repository		AMSacta
Version		TBD
Team in charge		UNIBO
Creator/s		
Contributor/s		Alemu, Yemataw Addis Paolucci, Francesco
Contact Person/s		Giovanni Valenti
Contents		The dataset is related to the development of electrode preparation and nanostructuring. The data are: raw microscope images, SEM, AFM, raw surface analysis files and data as well as the optimization and validation data. These data will be essential for the efficient ECL generation.
Data format		.csv, .txt, .tif, .opj, .png, .bmp
Data volume		20 MB
Accessibility		Permissive licences (such as CCBY/CC0) will be used when the data can be shared without compromising the IPR; until then, the data will remain embargoed.
Related publication/s		Not yet available

WP3 – ECL-Biosensors and Analytical methods

This WP is devoted to the setup of the platform for the detection of Ab and validate the analytical protocols for the biosensing development.

Lead: UNITOV

Participants: UNIBO, UCM, UNITOV, FERAL, UWC

Months: 18-42

06	Status: not yet available	NanoImmunoERA_WP3_Analyticalmethod_V1
ID [ID type]	Not yet available [DOI]	
Chosen repository	Zenodo	
Version	TBD	
Team in charge	UNITOV	
Creator/s		
Contributor/s	NA	
Contact Person/s	Alessandro Porchetta	
Contents	Data correlating the concentration of Ab and analytical signal, and electrochemical characterization of the chip to achieve the best performance in terms of affinity, specificity, LOD, LOQ, dynamic range, rapidity. Electrochemical, Impedance spectroscopy, and electrochemiluminescence data: ECL signal intensities. The data will be essential to select condition for WP 4	
Data format	.csv, .txt, .tif, .opj,	
Data volume	10 Mb	
Accessibility	Permissive licences (such as CCBY/CC0) will be used when the data can be shared without compromising the IPR; until then, the data will remain embargoed.	
Related publication/s	Not yet available	

WP4 – DEVELOPMENT OF CRISPR-BASED POC FOR AB MONITORING

This WP is devoted to the setup of the platform for the detection of Ab by integrating the results obtained in the previous WP for systems for signal amplification and CRISPR cas design.

Lead: FERAL

Participants: UNIBO, UCM, UNITOV, FERAL

Months: 28-48

07	Status: in progress	NanoImmunoERA _WP4_POC_V1
ID [ID type]	Not yet available [DOI]	
Chosen repository	Zenodo	
Version	TBD	
Team in charge	FERAL	
Creator/s	Gianluca Adornetto	
Contributor/s	Dolati, Setareh La Manna, Fabio Orgill, Jonathan	
Contact Person/s	Gianluca Adornetto	
Contents	Data correlating the concentration of Ab and analytical signal and lateral flow readings data	
Data format	.csv, .txt, .tif, .opj	
Data volume	20 MB	
Accessibility	Permissive licences (such as CCBY/CCo) will be used when the data can be shared without compromising the IPR; until then, the data will remain embargoed.	
Related publication/s	Not yet available	

Annex II: Open Access status of project publications

The following table (Table 6) will be employed in further versions of the document to report the updated list describing the open access status of the project publications and the underlying datasets.

Table 6 – Open access status of NanoImmuno-ERA publications and datasets.

Publications	
Bibliographic citation of the publication	
Archived in repository for Open Access?	Y/N, in case of "Yes" indicate the repository and link to the deposited copy
Status	Open Access/embargo/closed access, indexed in OpenAIRE or not
Related dataset/s	Dataset num: cite dataset
Bibliographic citation of the publication	
Archived in repository for Open Access?	Y/N, in case of "Yes" indicate the repository and link to the deposited copy
Status	Open Access/embargo/closed access, indexed in OpenAIRE or not
Related dataset/s	Dataset num: cite dataset

Annex III: “README” file template

A “README” file is a document that will be deposited with each dataset, containing relevant information about dataset authorship, terms of reuse and responsibilities, explaining dataset content and structure, collection procedures and analysis (such as file specifics, methodologies, codebooks of variables, data sources, and further necessary notes). The template of the README file that will be used by NanoImmunoERA is shown here.

README file

Dataset Title: **“[insert title as defined in the DMP]”**

Dataset Author/s: **Name Surname** (Affiliation), ORCID (if available);

[Add one or more creators, if present]

Dataset Contributor/s: **Name Surname** (Affiliation), ORCID (if available);

[Add one or more contributors, if present. Otherwise, cancel this line]

Dataset Contact Person/s: **Name Surname** (Affiliation), ORCID (if available), email;

[Add one or more contact person]

Dataset License: this dataset is distributed under a **(INSERT LICENSE)**

[Insert the chosen license as indicated in the DMP: e.g. “this dataset is distributed under a Creative Commons Attribution 4.0 International (CC BY 4.0) license, <https://creativecommons.org/licenses/by/4.0/>”]

Publication Year: **(insert YEAR)**

Project Info: **[insert PROJECT ACRONYM] ([project full title]**, funded by European Union, Horizon 2020 Programme. Grant Agreement num. **[insert grant agreement number]**; **[insert project website url]**

Dataset Contents

The dataset consists of:

[Indicate the files that compose the dataset and their name and format.

WE STRONGLY SUGGEST YOU TO FOLLOW THE EXAMPLES PROVIDED FOR THE FILE NAMING, MATCHING THE DATASET FILENAME WITH THE README ONE

In the following examples the datasets were composed by only one file. In case the dataset consists of more files you can name them as described and put them in a compressed folder. In this case readme file name should match the compressed folder name]

EXAMPLE1

- 1 textual qualitative file saved in .rtf format
“ProjectAcronym_WP3_T3-2_ItalyInterviews_20161221_v01.rtf”
 [structure of the filename “ProjectAcronym_insert WP number_insert Task number, e.g. T3.2_ insert Content Describing Keywords_insert date YYYYMMDD_insert version, if needed.format”
 Suggested format:
 -for textual qualitative data .rtf or .txt
 -for tabular quantitative and qualitative data .csv
 avoid proprietary formats such as .doc/.docx and .xls/.xlsx]
- 1 README file

“README_ProjectAcronym_WP3_T3-2_ItalyInterviews_20161221_v01.rtf”

[Same naming as the dataset file. Preferred format .rtf/.txt, allowed format .pdf]

EXAMPLE2

- 1 tabular quantitative file saved in .csv format
“ProjectAcronym_WP7_T7.3_Questionnaire_Sweden_20170905.csv”
- 1 README file
“README_ProjectAcronym_WP7_T7-3_Questionnaire_Sweden_20170905.rtf”

Dataset Documentation

Abstract

[Insert a brief abstract describing the content of the dataset]

Content of the files:

- file **[Insert filename]** contains ...

[Provide a brief description of the content of the file/s. This is an example of how you could start]

- file **[Insert filename]** contains ...

File specifics

[Provide useful info regarding file conversion etc... (Optional)]

Please indicate instruction/technical info in order to allow potential users to correctly visualize and reuse your data (e.g. specific software, ...).

In case of data converted in open formats it could be useful to provide some further information. For example if you deposit for long term preservation a .csv file derived from an excel you can describe the conversion. Here is an example of description of conversion using libre office calc software:

To create the .csv files, “LibreOffice Calc” version: 5.1.4.2 (portable) was used, with the following specifics:

- Character set *Europa occidentale (Windows-1252/WinLatin1)*
- Field delimiter << , >> (*comma*)
- Text delimiter << “ ” >> (*quotes*)

Notes

[Related to the whole dataset or to single files of a multi-file dataset (Optional)]

Data sources

[Optional]

Methodologies

[If necessary to understand how to reuse data]

Codebook of variables

[If necessary to understand the meaning of the variables]

Instructions, examples ad footnotes in suld be deleted from final version.