Data Management Plan (DMP): TopSpec - 829157

Deliverable: D9.2 **-** ORDP: Open Research Data Pilot

The Data Management Plan (DMP) is key in order to make data findable, accessible, interoperable and re-usable (FAIR).

Content:

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1. Introduction

Research data that were acquired by TopSpec has been treated by the follow principle **"as open as possible, as closed as necessary"**, to allow for scientific publication and protect commercial interests and confidentiality. The DMP was developed to improve handling of information within TopSpec as well as for long-term sharing and reusing of the research data and property when the project had expired.

The overall goal of the DMP was to provide a transparent documentation of research data and applications to the broader scientific community.

2. Data summary (and management)

Data and/or Intellectual Property (IP) description:

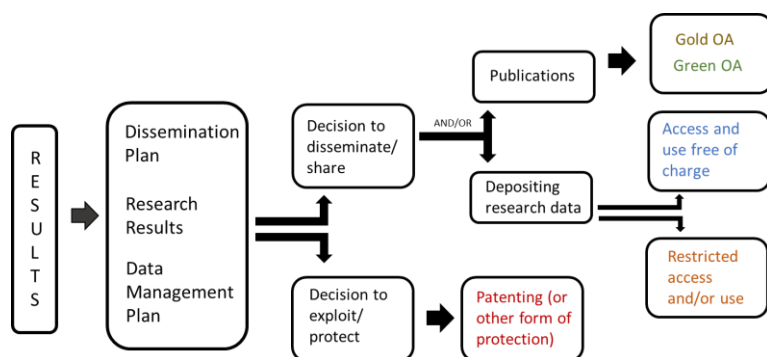| No.	Exploitable Result	Owner(s)	IPR plan/status	Type	Next steps	Potential users	
1	Novel MS/MS platform	FT	Patents filed, pending and planned	Product	Commercialize	Top-down proteomics labs	Omnitrap
2	Top-down Ab sequencing assay	FT/IP	-	Process	Validate	Quality control in mAb production, biosimilars and biobetters, clinical diagnostics	Omnitrap
3	Library of Ab repertoire as immune system response to challenge	FT/IP	-	Product	Create and validate	Large EU projects to collect Ab sequence libraries for specific diseases	Omnitrap
4	Top-down data analysis software	FT/SPS/ NTU/IP	Patents planned, open source optional	Product	Validate	Industrial and academic analytical scientists	Top-down software
5	Novel data acquisition and real-time data processing system	SPS	Patents filed and planned	Product	Commercialize	Biopharma labs	FTMS Booster
6	Protein separation device	BM	Patent filed	Product	Further R&D	Bio-analytical labs	pI Trap
7	Application programming interface	TFS	-	Feature	License access	Orbitrap and TopSpec system users	Orbitrap enhancement

Managing the data:

Figure 1. Open Access (OA) policy.

Editorial committee: An editorial committee (KI, FASMATECH THERMO FISHER, SPECTROSWISS, BIOMOTIF, TNTU, IP, MS VISION), was established for internal review of results generated in TopSpec prior presentation to the public. This included review of videos, manuscripts, presentations, posters, software, and hardware.

Presented data/results arising from TopSpec has acknowledged the funding source. However, the exact wording as stated below was not always followed precisely:

> *"This project has received funding from the European Horizon 2020 research and innovation program under grant agreement no 829157"*

Non-confidential information: Non-confidential reports, and presentations both with or without peer-review process have been archived at the TopSpec webpage and can also be found in a data repository.

Scientific publications: All scientific publications of TopSpec were proof-read by the editorial committee prior publication to ensure the quality and coherence of the manuscript as well as to protect potential IP rights of co-authors and innovation for exploitation. Scientific publications were published as open access.

Access and confidentiality: Preliminary data was only accessible to the involved partners of respective WP. As agreed by the Consortium Agreement (CA) by each partner, all information declared as confidential background information was kept as confidential. But access rights to results and background needed to undertake the tasks of a party was granted on a royalty-free basis, unless otherwise agreed for in the CA. Finalized data was available to all TopSpec partners and linked collaborators that need the data as input for their tasks.

Summarized data and results with no request for confidentiality was made available to all TopSpec partners and beyond. Thus, software, data and research results that was not protected by IP rights and that were no longer confidential (i.e. after publication) has been published on the TopSpec homepage and the raw data added to existing repositories or databases (1, 2 and 3).

3. FAIR data

Findable, Accessible, Interoperable, and Reusable (FAIR) and Open Access (OA)

The TopSpec webpage has been the primary source to store all public results and documentation, as well as to get access to, videos and free software's generated. Additionally, the TopSpec technology has been further spread via open demonstrations and public workshops and lectures throughout the course of the project.

In addition to the information and links available on the TopSpec webpage, mass spectrometry-raw data (and potentially other processed file formats) of importance was intended to be stored long-term in repositories to easily be accessed and downloaded beyond the TopSpec project using standard communication tools. Due to the COVID pandemic which significantly delayed the installation of the TopSpec platforms to KI and to IP, little data has yet been generated and nothing published. However, this aim will remain post project.

4. Allocation of resources and data security:

TopSpec project data and publications has been shared, managed and stored at the TopSpec homepage. The webpage has also served as a password protected SharePoint of confidential data. Costs of maintaining the webpage and SharePoint will be covered by KI via TopSpec and maintained at least 1 year after TopSpec is finished. When the TopSpec webpage is removed, important data, documents and software will be moved/stored at other webpage and/or database locations. In order to prevent data loss and secure data recovery, all important data generated during TopSpec has also been backed up on external servers.

6. Ethical Aspects

The TopSpec partners have carried out the project in compliance with applicable international, EU and national law as well as ethical principles including the highest standards of research integrity. No partner has used other partners results, data or background information without obtaining the owning partners written approval.