### Overview

#### **Introduction:**

The Immunology Database and Analysis Portal (ImmPort)( <https://www.immport.org/home>) repository aims to be a trustworthy data resources as an essential component of the research enterprise focusing on immunological research.  ImmPort offers support to the community by providing resources including secure, reliable, and scalable computing systems and infrastructure to operate the data repository; long term archival and data preservation; integration and curation of disparate data sets and data types in specific domains and across clinical, laboratory and computational areas; data sharing, data management, and dissemination following the FAIR Data Principles - Findability, Accessibility, Interoperability and Reusability; development of and adherence to standards and best practices for data collection, presentation and exchange; and training in deposition and use of data and tools. To achieve its mandate of FAIR data sharing, ImmPort transforms the shared data into a more user-friendly resource to enable reuse of the data to gain new insights and findings to advance immunology research. To date, ImmPort has shared 482 studies encompassing various data types and organisms. Further, ImmPort repository has participant level data from 145 clinical trials that are openly available for reuse (<https://immport.org/shared/search?filters=clinical_trial:Y>).

#### **Clinical trial data for use:**

* Latest study listed under clinical trials: <https://www.immport.org/shared/study/SDY472>
* Associated publication: <https://pubmed.ncbi.nlm.nih.gov/31636302/> (open access)
* Dataset has demographic and clinical information along with mechanistic study files.

Machine readable data is available via ImmPort API: <https://docs.immport.org/#API/DataQueryAPI/dataqueryapi/>

#### **Scenario:**

* Retrieve study metadata and associated data via API or from website
* All Immport studies are searchable using study metadata API
* Assess FAIRness of the metadata/data using the RDA FAIR data maturity Indicators
* Convert metadata/data into FHIR standard
* Assess FAIRness of the metadata/data again using the RDA FAIR data maturity Indicators
* Analyze changes to FAIRness (if any)