

## **The Swedish COVID-19 data portal: From leveraging infrastructure investment to brokering Public Health submission**

Riding the Next Wave of Research Data

*Lisbon, 2021-06-07*


Johan Rung

SciLifeLab Data Centre

[johan.rung@scilifelab.uu.se](mailto:johan.rung@scilifelab.uu.se)

# Swedish COVID-19 Data Portal





AboutEuropean PortalSupport ServicesSubmit dataen | sv

GenomicsProteinsImagingBiochemistryHealthMore | BiobanksResearch projects

## Accelerating research through data sharing

### Available data

Data available from research groups in Sweden. [See available data for all data types](#)


Genomics (16) →  
Biochemistry (32) →  
Serology (7) →  
Recent SARS-CoV-2 testing results →

Proteins (14) →  
Health (60) →  
Public health (24) →

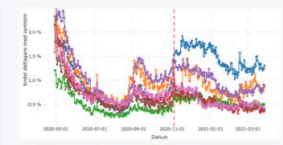
Imaging (4) →  
Drug discovery (5) →  
Other data (13) →

### Data highlights

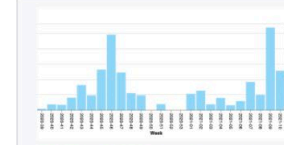
Highlights of recent openly shared data and data re-use. [See all highlights](#)



Proteomic profiling in COVID-19 patients as



Swedish COVID-19 symptom data contribute to



SARS-CoV-2 wastewater data from cities across

### About this portal

The Swedish COVID-19 Data Portal provides information, guidelines, tools and services to support researchers to utilise Swedish and European infrastructures for data sharing. The portal is a national node of the [European COVID-19 Data Portal](#). The portal is operated by the [SciLifeLab Data Centre](#) and partners. Suggestions, corrections, and other comments are [most welcome](#).

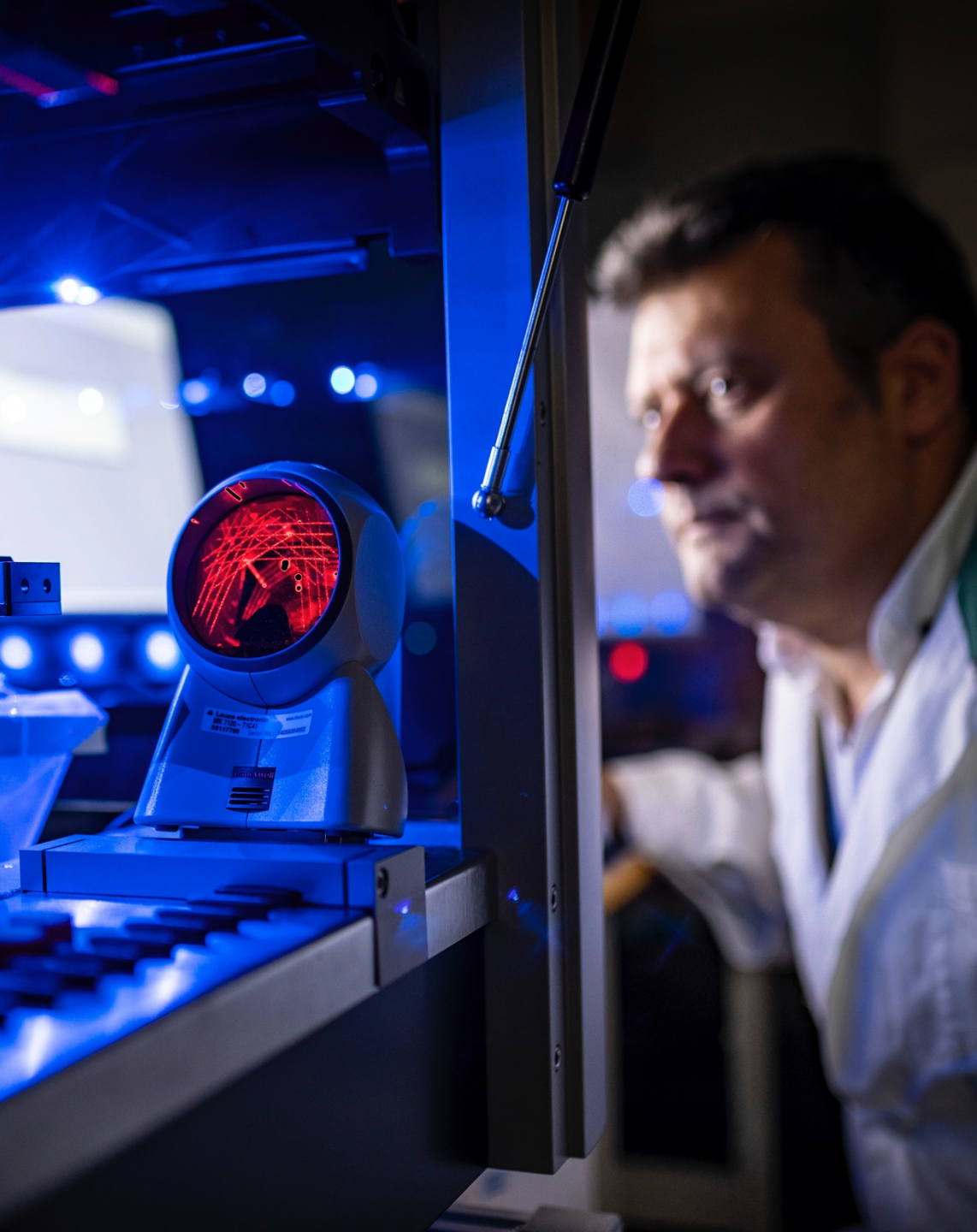
#### Share new COVID-19 data

The portal team is happy to assist you with submitting your data to open repositories or answer any questions about data management.

[Support request](#) →

- The Swedish COVID-19 Data Portal provides information, guidelines, tools and services to support researchers utilizing Swedish and European infrastructures for data sharing, in particular the European COVID-19 Data Portal
- Assignment from Swedish Research Council to SciLifeLab Data Centre
- Data management support for Swedish COVID-19 research programs
- Focus on FAIR data sharing
- Launched June 2020

<https://covid19dataportal.se>



# What is SciLifeLab?



Government appointed mission as a **national research infrastructure in life sciences: 2014-**

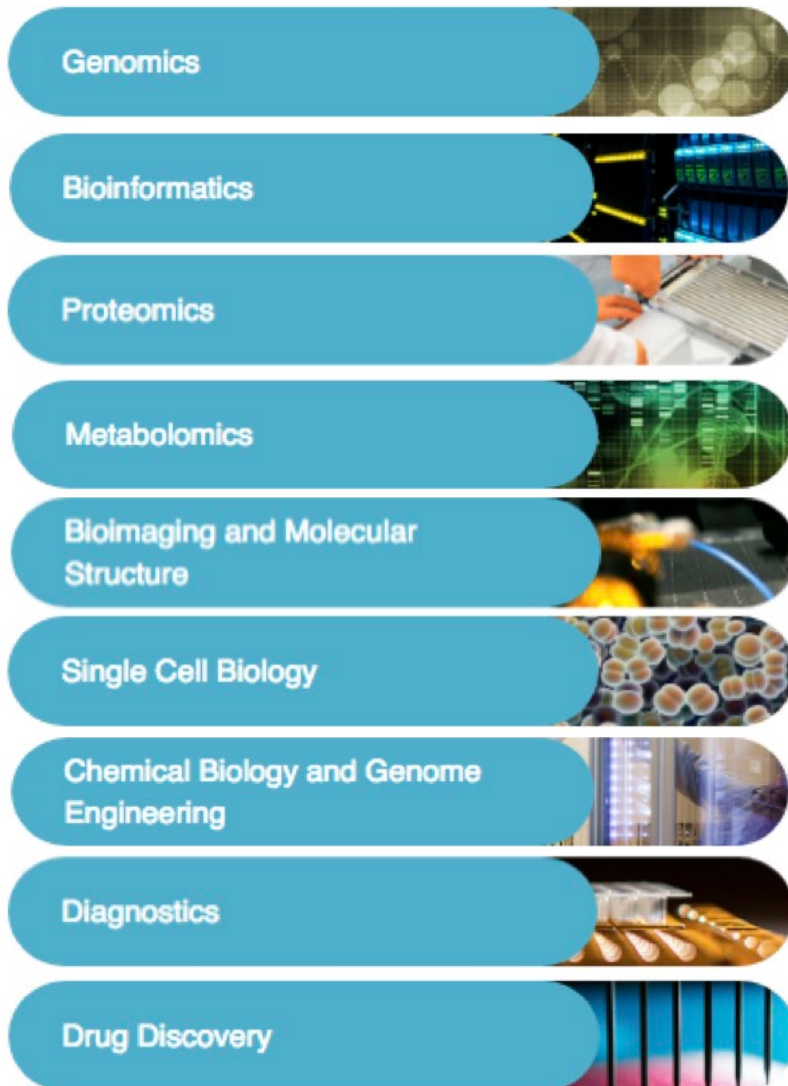
Coordinator of a new national 12-year 3 BSEK KAW program of **data-driven life science (DDLs) 2021-**

**Research collaboration in life sciences (SFO)** across the four host universities (KTH, SU, KI and UU) in Mälardalen **(2010-)**

**A hub for the advancement of molecular biosciences in Sweden**



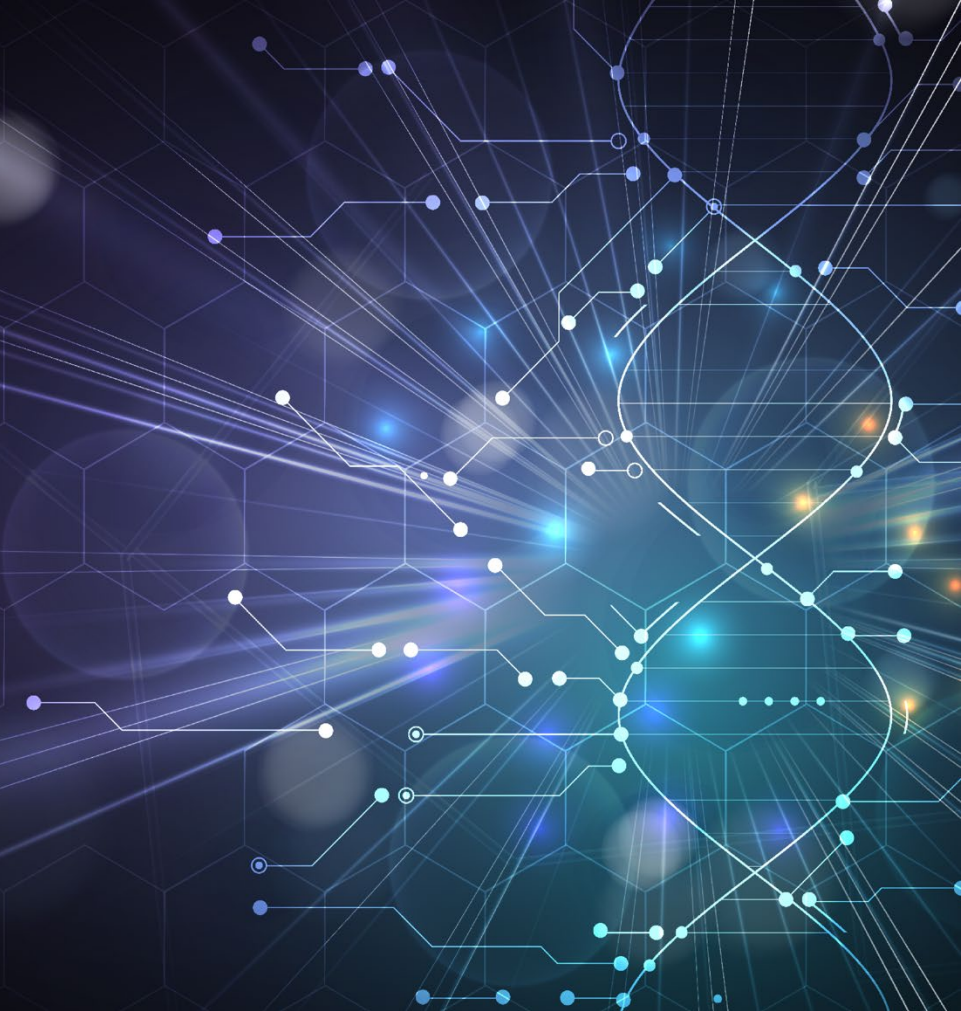
# Science for Life Laboratory: National infrastructure with 10 platforms, 40 facilities



<b>Bioinformatics</b> Support, Infrastructure and Training (G, Li, Lu, S, U, Um) Compute and Storage (U) Biolmage Informatics (U, S) AIDA Data Hub (Li)	<b>Clinical Proteomics and Immunology</b> Autoimmunity and Serology Profiling (S) Translational Plasma Profiling (S) Proximity Proteomics (U) Mass Cytometry (Li, S) Proteogenomics (S) Glycoproteomics (G)	<b>Integrated Structural Biology</b> Swedish NMR Centre (G) Structural Proteomics (Lu)
<b>Genomics</b> National Genomics Infrastructure (S, U) Ancient DNA (U) Microbial Single Cell Genomics (U)	<b>Single Cell and Spatial Biology</b> Eukaryotic Single Cell Genomics (S) Spatial Proteomics(S) In Situ Sequencing (S) National Resource for Mass Spectrometry Imaging (U) Advanced FISH Technologies (S) Spatial Transcriptomics (S)	<b>Functional Biology and Target Discovery</b> Chemical Biology Consortium Sweden (S, Um) Chemical Proteomics (S) Center for CRISPR-based Functional Genomics (S) Genome Engineering Zebrafish (U)
<b>Clinical Genomics</b> Clinical Genomics Göteborg Clinical Genomics Linköping Clinical Genomics Lund Clinical Genomics Stockholm Clinical Genomics Umeå Clinical Genomics Uppsala Clinical Genomics Örebro	<b>Cellular and Molecular Imaging</b> Advanced Light Microscopy (S, G, Um) Cryo-EM (S, Um, G, Lu, U)	<b>Drug Discovery and Development</b> ADME (Absorption, Distribution, Metabolism, Excretion) of Therapeutics (UDOPP) (U) Biochemical and Cellular Assay (S) Biophysical Screening and Characterization (U) Human Antibody Therapeutics (Lu, S) In Vitro and Systems Pharmacology (U) Medicinal Chemistry – Hit2Lead (S) Medicinal Chemistry – Lead Identification (U) Protein Expression and Characterization (S)
<b>Metabolomics</b> Swedish Metabolomics Centre (Um) Exposomics (S)		

# SciLifeLab and Wallenberg National Program for Data-Driven Life Science

12 years, 3.1 BSEK, 11 partners



*Knut och Alice  
Wallenbergs  
Stiftelse*

WASP | WALLENBERG AI  
AUTONOMOUS SYSTEMS  
AND SOFTWARE PROGRAM



SciLifeLab

WALLENBERG CENTRES FOR MOLECULAR MEDICINE

WACQT | Wallenberg Centre  
for Quantum Technology



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UNIVERSITET



Stockholms  
universitet



Karolinska  
Institutet



UMEÅ  
UNIVERSITET



KTH  
VETENSKAP  
OCH KONSEK



Naturhistoriska  
riksmuseet



LINKÖPINGS  
UNIVERSITET

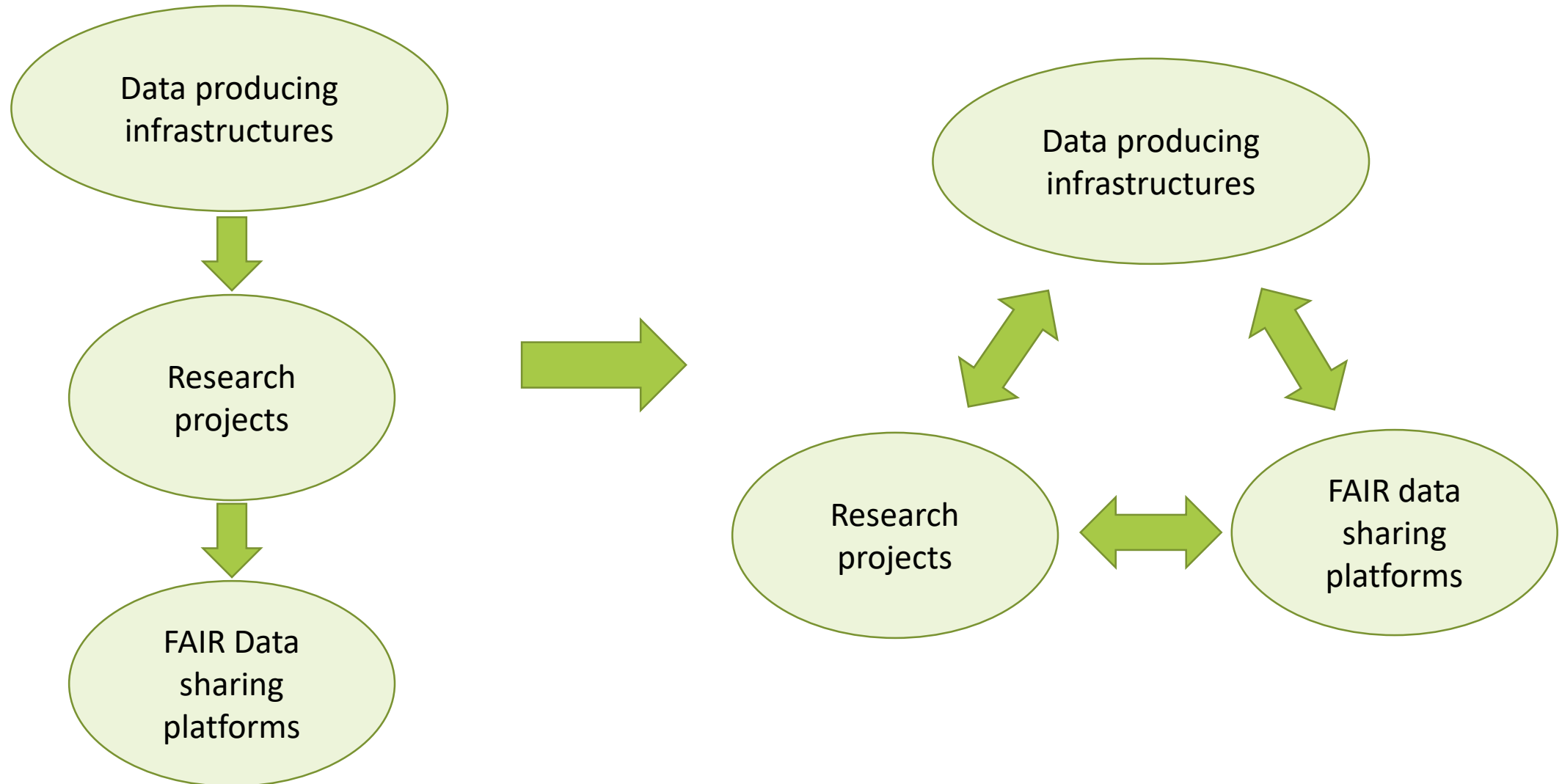


UPPSALA  
UNIVERSITET

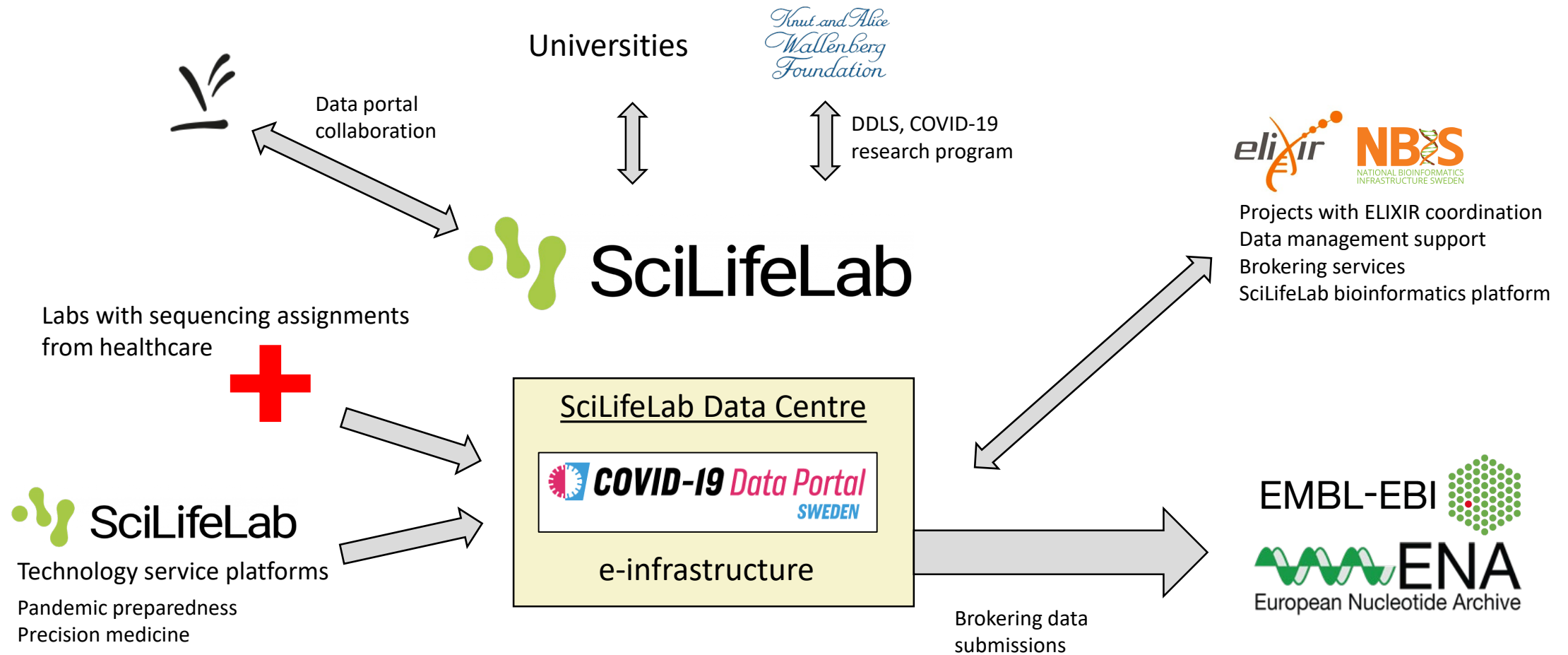


LUNDS  
UNIVERSITET

# Active role of data sharing in data-driven life science



# Swedish COVID-19 data portal



Interoperability between healthcare regions complicated in Sweden.

Meta-data collection varies between regions and data flow from healthcare to research not straightforward.

Obstacles also include consent handling, legal and regulatory obstacles, e.g. longitudinal studies integrating health data and research data.



# Swedish COVID-19 Data portal

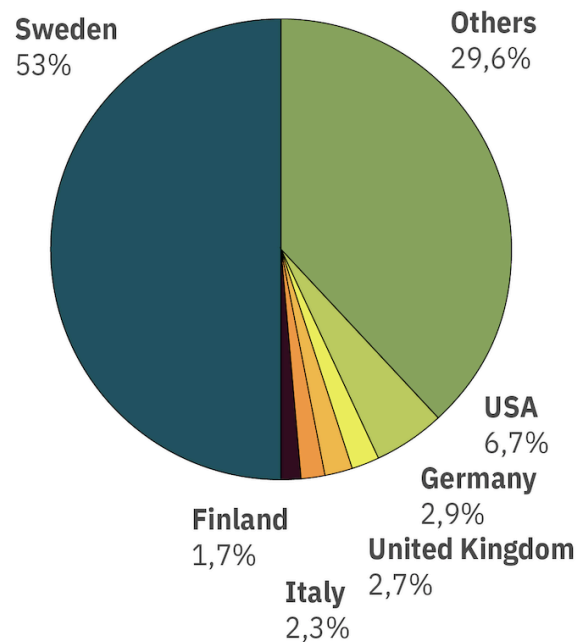


**20.000+**

visitors to the portal

**100.000+**

pageviews of the portal



**100+**

publications openly sharing  
data tracked

**20+**

news items with focus on  
shared data published

**1300+**

articles and preprints  
from Swedish researchers  
tracked.

**200+**

research projects funded  
by major funders tracked

**25+**

sample collections in biobanks  
across Sweden in the database

**200+**

projects in direct contact  
with portal support team  
regarding data sharing

Next phase of portal:


- Vaccine research
- Pandemic preparedness
- Healthcare
- e-infrastructure

(updated 2021-05-24)





# COVID-19 Data Portal source code openly available





[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)


 

[ScilifelabDataCentre / covid-portal](#)

[Watch](#) 7 [Star](#) 7 [Fork](#) 16

[Code](#) [Issues](#) 1 [Pull requests](#) [Actions](#) [Security](#) [Insights](#) [Settings](#)

[develop](#) 4 branches 0 tags [Go to file](#) [Add file](#) [Code](#)

 **akochari** Correct typo about Älvkarleby ✓ 93cf211 20 hours ago 🕒 1,035 commits

📁 .github	Update markdownlint.yml	last month
📁 DOCUMENTATION	Update adding_new_data_highlights.md	last month
📁 archetypes	Move mockup into a new Hugo site	12 months ago
📁 container	Update Hugo to 0.80.0	3 months ago
📁 content	Correct typo about Älvkarleby	20 hours ago
📁 data	Pubs db update	4 days ago
📁 layouts	Forgotten bit of text into Swe	11 days ago
📁 static	Merge pull request #424 from ScilifelabDataCentre/csss-map-page-s...	13 days ago
📄 .gitignore	Ignore backup files	12 months ago
📄 LICENSE	add license	12 months ago

## About

The Swedish COVID-19 Data Portal

[www.covid19dataportal.se/](https://www.covid19dataportal.se/)


[bootstrap](#) [markdown](#) [hugo](#) [covid-19](#)

[Readme](#)

[MIT License](#)

## Contributors

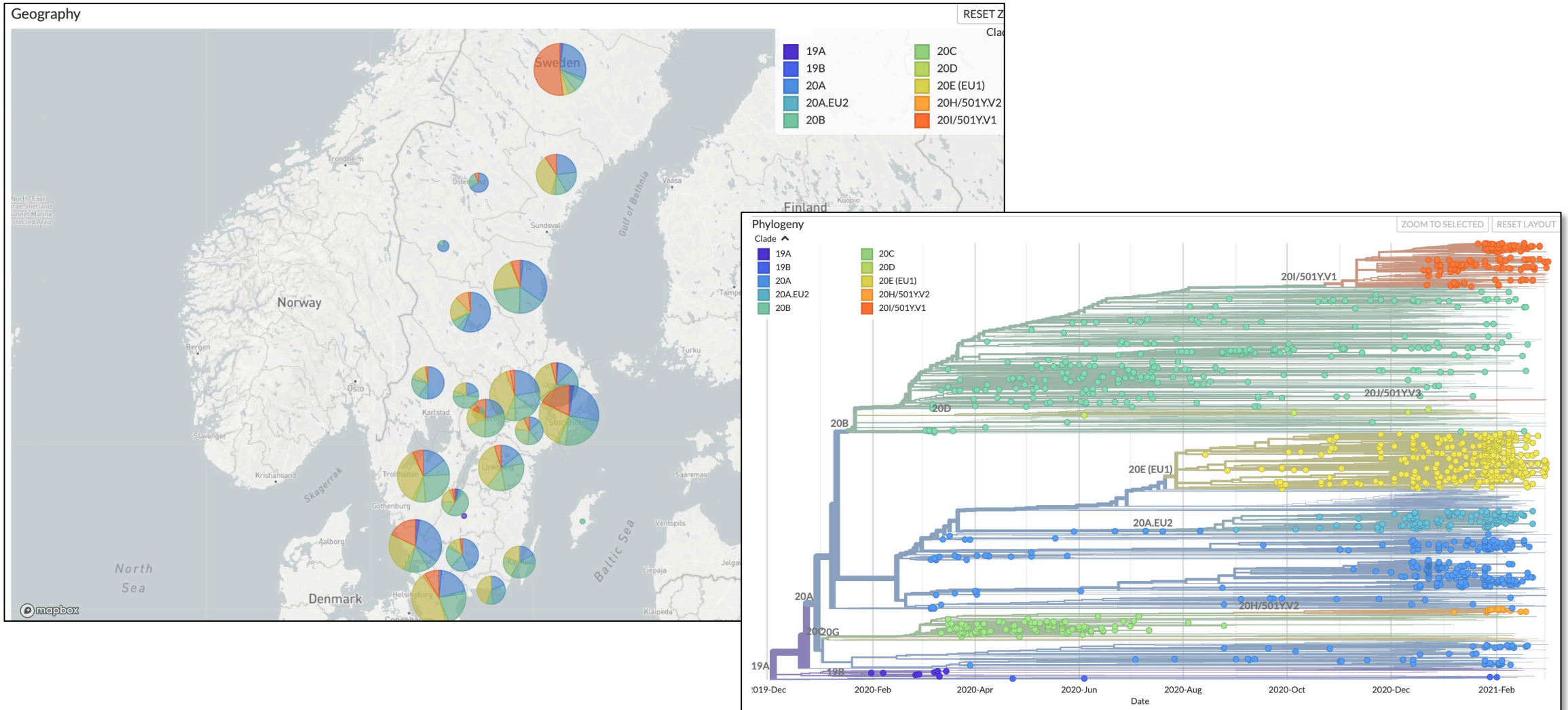
 15



[+ 4 contributors](#)

<https://github.com/ScilifelabDataCentre/covid-portal>

# Regional sequencing data



# Data and code re-use competition



## COVID-19 DATA AND CODE REUSE COMPETITION

Would you like to contribute to the COVID-19 research efforts?  
The Swedish COVID-19 Data Portal is launching a competition for small research projects that reuse publicly available data and code. Help us to accelerate COVID-19 research efforts while also demonstrating the value of making data and code openly available.

**Who?** Open to everyone, individuals or groups.

**When?** Between May 15th and September 15th 2021.

**How?** Enter a project that makes use of publicly available data and/or code to combat the COVID-19 pandemic or future pandemics. Entries should be submitted to the SciLifeLab Data Repository.

Three winning projects will be awarded support from the SciLifeLab Data Centre to promote the project and/or to enable follow-up work. The exact type of support provided will be tailored to the needs of each project.

FIND MORE INFO ON:  
[COVID19DATAPORTAL.SE/DATA\\_CODE\\_REUSE](https://covid19dataportal.se/data_code_reuse/)

- Demonstrate value in reusable data and the reach of the COVID-19 Data Portal with students as particular target group
- Open to everyone, even internationally
- Open until Sept 15
- Winning projects will receive support to promote project or enable follow-up work
- Entries to be submitted as SciLifeLab Data Repository items

# What we learned: critical components

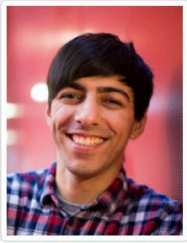
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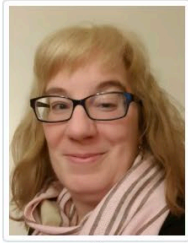
- Rapid international response - EC COVID-19 data platform
- Clear national mandate to develop Data Portal
- Active project support for rapid data sharing and community building
- Existing national and European infrastructure with established collaboration network, existing data infrastructure, and capacity to re-prioritize resources
- Well-organised research programs *requiring* rapid FAIR data sharing
- Direct involvement of researchers in development of interoperable services
- Funding



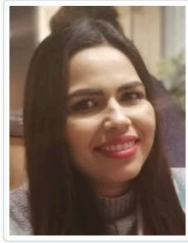
# Credits



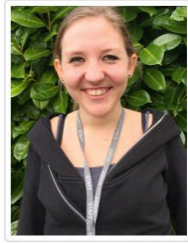
**Arnold Kochari**  
Webmaster for the  
COVID-19 Data  
Portal, SciLifeLab



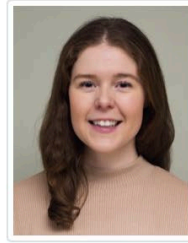
**Katarina Öjefors  
Stark**  
Coordinator for  
COVID-19 projects,  
SciLifeLab



**Parul Tewatia**  
Data steward,  
SciLifeLab



**Liane Hughes**  
Data Engineer,  
SciLifeLab



**Anna Asklöf**  
Data Steward,  
SciLifeLab



**Hanna Kultima**  
Data manager,  
coordinator,  
SciLifeLab



**Johan Rung**  
Head of the Data  
Centre, SciLifeLab



**Per Kraulis**  
System development  
team leader, data  
engineer, SciLifeLab



**Linus Östberg**  
Systems developer,  
system  
administrator,  
SciLifeLab



**Phil Ewels**  
Bioinformatics  
development lead,  
NGI

*Thank you to:*

Partner projects  
Data contributors

Funding:



Swedish Research Council



**SciLifeLab**

[datacentre@scilifelab.se](mailto:datacentre@scilifelab.se) <https://covid19dataportal.se>

@scilifelab\_DC