

PLP network Data Management and Data Sharing

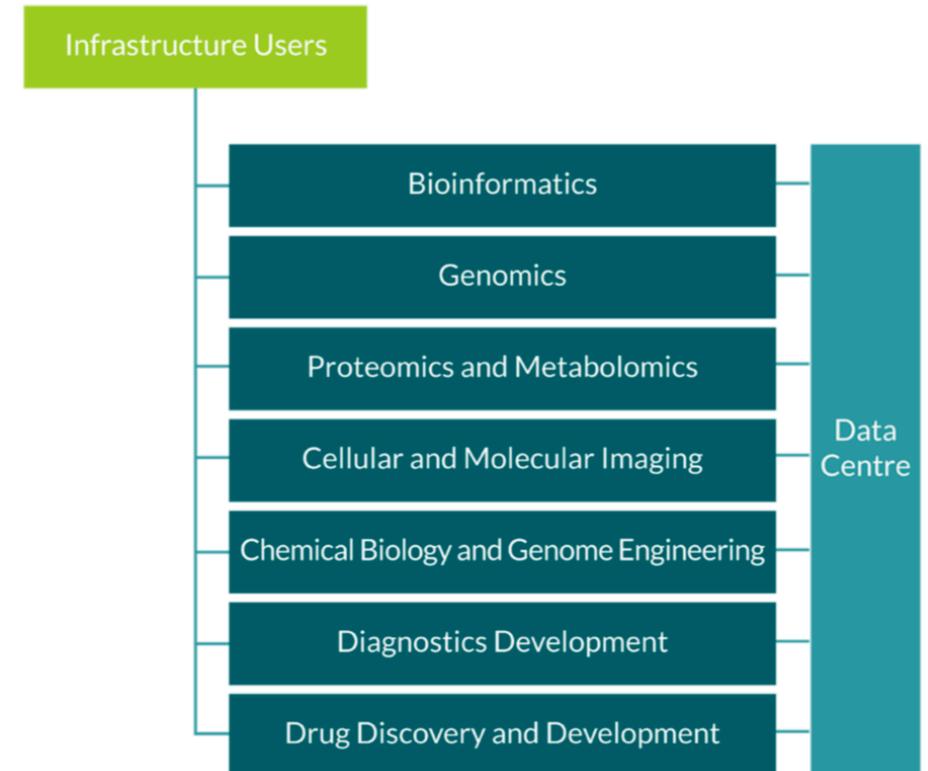
2022-08-17 & 2022-08-18

SciLifeLab Data Centre

SciLifeLab Data Centre



- Central support function for IT and Data for SciLifeLab (including e.g. DDLS program).
- Aim is to increase the scientific impact of Research data by
 - Offering services and resources for data management and IT
 - Promoting FAIR, Open Science, good data practices throughout the data lifecycle.



SciLifeLab Data Centre



- Collaborative tools:



- Data helpdesk: datacentre@scilifelab.se and datamanagement@scilifelab.se

- Portals and Platforms:



- Services: Serve, Data Delivery System, Data Repository... Etc. Etc.

Services: SciLifeLab Data Repository



- A free, web-based system to publish data.
- Available for researchers at Swedish academic institutions working in SciLifeLab's areas of activity.
- For data that does not naturally fit into a subject specific repository
- Possible to set licence conditions and embargo



<https://scilifelab.figshare.com>

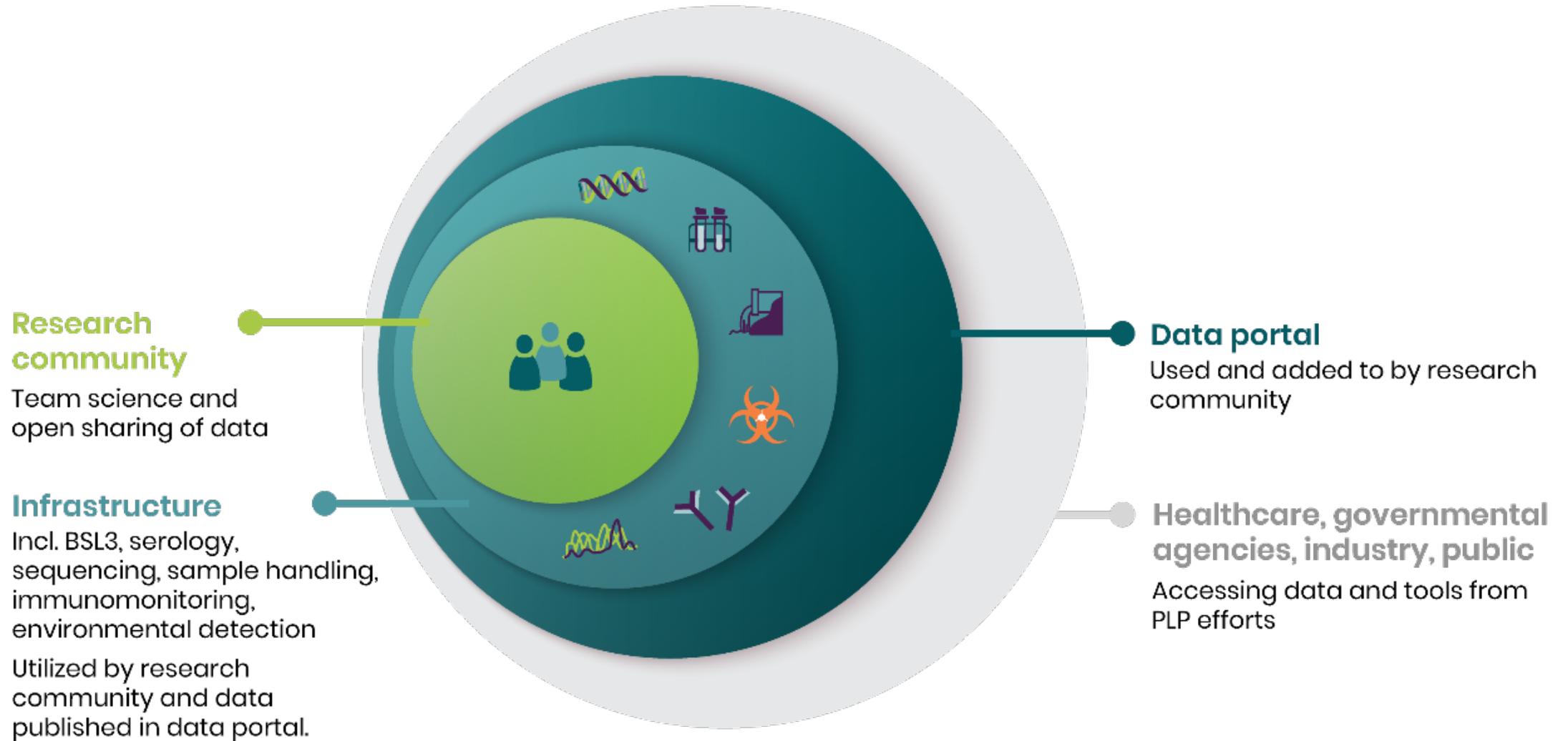
SciLifeLab Data Centre and PLP



SciLifeLab Data Centre supports the PLP network for data handling:

- (1) Provide systems and services for projects.
- (2) Maximise the impact and accessibility of data generated.
- (3) Operate the **COVID-19 & Pandemic Preparedness Data Portal**

SciLifeLab Data Centre and PLP



Swedish COVID-19 and Pandemic Preparedness Portal



- Originally the **Swedish COVID-19 Data Portal** (Swedish 'node' of European COVID-19 Data Platform)
 - Launched June 2020.
 - Over 260,000 pageviews
- Joined PLP in 2022.
- pandemicpreparednessportal.se/

The screenshot shows the homepage of the Swedish COVID-19 and Pandemic Preparedness Portal. At the top, there is a navigation bar with links for 'About', 'Contact', and language options 'en' and 'sv'. Below this are buttons for 'Contribute', 'Share data', and 'Get support'. The main content area is divided into several sections:

- Data:** Includes links for 'Available datasets', 'Data highlights', 'Dashboards', 'Sample collection database', and 'Data management'.
- Resources:** Includes links for 'Emerging Pathogens' and 'Research & Funding'.
- Topics:** A horizontal list of topic tags including 'COVID-19', 'Infectious diseases', and 'Antibiotic resistance'. A highlighted tag reads 'Special page on emerging pathogen: Monkeypox'.
- Accelerating research through data sharing:** A large blue banner with white text.
- Available datasets:** A grid of links to various data categories: Genomics (43), Protein (27), Imaging (6), Biochemistry (25), Health (74), Drug Discovery (12), Serology (12), Public Health (52), and Other (30).
- Data highlights:** A section for recent open data, featuring three featured articles:
 - Direct RT-PCR used to monitor Omicron BA.1/BA.2 variant transition in Sweden (Update):** Accompanied by a heatmap visualization.
 - Study of host-viral interactions of Crimean-Congo haemorrhagic fever identified potential new drugs:** Accompanied by a heatmap visualization.
 - Large scale immunofluorescence to explore the host cell response to SARS-CoV-2 infection:** Accompanied by immunofluorescence microscopy images.
- About this portal:** A text block explaining the portal's purpose and the role of the SciLifeLab Data Centre.
- Share new data:** A pink call-to-action box with the text 'The portal team is happy to assist you with submitting your data to open repositories or answer any questions about data management.' and links for 'Guidelines' and 'Support request'.

Share data-centric study information



Data highlights

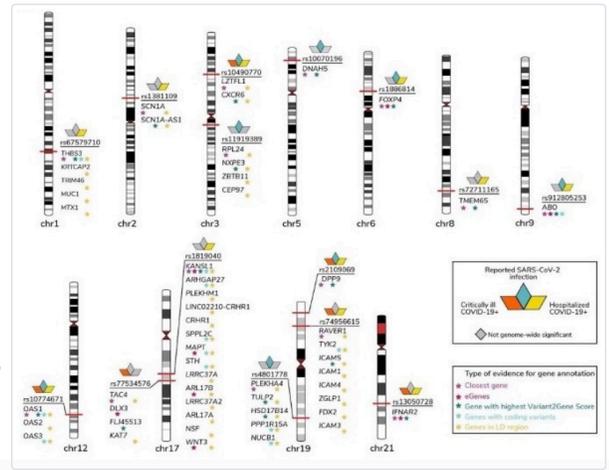
Home / Data highlights / Human genetic mapping can provide insight about COVID-19 pathogenesis and drug development

Human genetic mapping can provide insight about COVID-19 pathogenesis and drug development

Published: 2021-08-10

Over the last two years, the COVID-19 pandemic (caused by the SARS-CoV-2 virus) has burdened healthcare systems and economies worldwide. Treatments and vaccines against COVID-19 have been developed in record time over this period. The effects of SARS-CoV-2 infection on patients have been found to vary from asymptomatic infections to life-threatening conditions, including viral pneumonia and acute respiratory distress syndrome. Multiple studies have identified risk factors (e.g. age, sex, and body mass index) that can influence disease severity, but these risk factors alone do not explain disease variability between individuals. Investigations into how genetic factors may contribute to COVID-19 susceptibility and disease severity may therefore be crucial in providing important insights into COVID-19 pathogenesis and identifying potential mechanistic targets for drug development or drug repurposing.

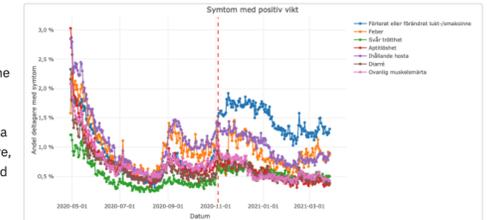
Previous genome-wide association studies (GWAS) have provided evidence for the involvement of several genomic loci (e.g. 3p2) in COVID-19 severity and susceptibility. Additional understanding regarding the genetic basis of individual susceptibility to SARS-CoV-2 and severity of COVID-19 disease is needed.



Swedish COVID-19 symptom data contribute to accelerating research about pandemic

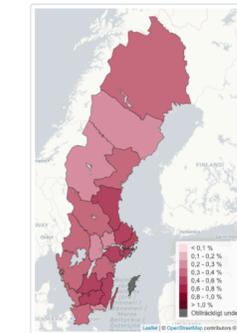
Published: 2021-03-29

The global COVID-19 pandemic has increased challenges to healthcare, society and research. Monitoring societal spread of SARS-CoV-2 virus infection in order to mitigate the pandemic's societal effects is an important part of preventive infection control work. At the beginning of the pandemic, high-quality real-time data on the spread of SARS-CoV-2 in Sweden were lacking. To meet this need, already on April 29 2020 researchers at Lund University launched *COVID Symptom Study Sweden*, a national research initiative for large-scale analysis of symptoms, exposure, and risk factors associated with COVID-19 infection. This initiative started collecting information using a non-commercial smartphone app in which participants self-reported health and symptoms data.



Visualization of the symptoms reported by app users over time. Source: *Dashboard of the COVID Symptom Study Sweden*

COVID Symptom Study Sweden is run by Lund University and Uppsala University in collaboration with King's College London and Zoe Global Ltd (Swedish PIs: prof. Tove Fall, Uppsala University, and prof. Maria Gomez and prof. Paul Franks, Lund University). The project aims to map the spread of COVID-19 in Sweden as well as to increase knowledge about the effect of SARS-CoV-2 on human body. The first aim includes investigation of temporal and geographical trends in SARS-CoV-2 spread and investigations of how changes in national strategies affect the spread.



The second aim focuses on increasing understanding which groups are most likely to be affected by COVID-19, how the disease manifests in terms of symptoms, and the relationship between risk factors and (combinations of) symptoms. The researchers also plan to investigate whether risk factors vary in different stages of infection (early vs. late) as well as the effect of vaccination. A new section of the survey focusing on the effects of COVID-19 vaccination on infection, presentation of symptoms, and risk of long-term COVID-19 has recently been added.

COVID Symptom Study Sweden uses a non-commercial app for data collection from volunteer study participants. Anyone 18 years or older living in Sweden can participate in the study. The app was developed by a health science company ZOE Global Ltd and is available from App Store and Google Play free of charge. Study participants are asked to self-report their health in a health declaration that includes, among other variables, risk factors and previous exposure to COVID-19. They are also asked to provide their postal code. Participants then report regularly (daily) in the app how they are feeling, including any symptoms of illness, results from COVID-19 tests (PCR and antibodies) and whether they have been vaccinated against COVID-19. The study is approved by the Swedish Ethical Review Authority (DNR 2020-01803, 2020-04006, 2020-04145, 2020-04451, 2020-07080).

Today, COVID Symptom Study Sweden has over 206,000 participants and accumulated over 12 million data points. Aggregated results are made available daily using the freely available *COVID Symptom Study Sweden dashboard* (currently only available in Swedish) which includes maps, trends, symptoms, and participants'

Publication- and published data tracking



Showing 1 to 10 of 1,750 entries

Search:

Publication ↑↓ Published ↑↓

First comparison of conventional activated sludge versus root-zone treatment for SARS-CoV-2 RNA removal from wastewaters: Statistical and temporal significance.
Kumar M, Kuroda K, Joshi M, Bhattacharya P, Barcelo D
Chem Eng J **425** 130635. DOI: 10.1016/j.cej.2021.130635

Managers of micro-sized enterprises and Covid-19: impact on business operations, work-life balance and well-being.
Vinberg S, Danielsson P
Int J Circumpolar Health **80** (1) 1959700. DOI: 10.1080/22423982.2021.1959700

Patterns and predictors of sick leave after Covid-19 and long Covid in a national Swedish cohort
Westerlind E, Palstam A, Sunnerhagen KS, Persson HC
BMC Public Health **21** (1) 1023. DOI: 10.1186/s12889-021-11013-2 data available

Multianalyte serology in home-sampled blood enables an unbiased assessment of the immune response against SARS-CoV-2
Roxhed N, Bendes A, Dale M, Mattsson C, Hanke L, Dodig-Crnković T, Christian M, Meineke B, Elsässer S, Andréll J, Havervall S, Thålin C, Eklund C, Dillner J, Beck O, Thomas CE, McInerney G, Hong MG, Murrell B, Fredolini C, Schwenk JM
Nat Commun **12** (1). DOI: 10.1038/s41467-021-23893-4 data available

COVseq is a cost-effective workflow for mass-scale SARS-CoV-2 genomic surveillance
Simonetti M, Zhang N, Harbers L, Milia MG, Brossa S, Huong Nguyen TT, Cerutti F, Berrino E, Sapino A, Bienko M, Sottile A, Ghisetti V, Crosetto N
Nat Commun **12** (1). DOI: 10.1038/s41467-021-24078-9 data available

Mortality outcomes with hydroxychloroquine and chloroquine in COVID-19 from an international collaborative meta-analysis of randomized trials

Field/Topic

- Biochemistry
- Drug discovery
- Genomics & transcriptomics
- Health
- Imaging
- Proteins
- Public health
- Serology
- Other

Data availability

- Data available

Publication type

- Journal article
- Review
- Preprint
- Other

Year

- 2020
- 2021

Funder

- H2020
- KAW/SciLifeLab
- NordForsk
- Swedish Research Council
- Vinnova

COVID-19 Data Portal SWEDEN

About Contact en sv

Contribute Share data Get support

Data Available datasets Data highlights Dashboards Sample collection database Data management

Resources Emerging Pathogens Research & Funding

Topics: COVID-19 Infectious diseases Antibiotic resistance

Special page on emerging pathogen: Monkeypox

All data types

Home / Available datasets / All data types

Published Data

Data available from research groups in Sweden

The list below is curated manually and as such may not be exhaustive. If you would like to see your dataset here or correct information about your dataset, please get in touch with us. Projects sharing data where at least one author has an affiliation with a Swedish research institute are included. Only projects which openly share data or analysis code that has re-use potential are included.

Last updated: 2022-08-15

Showing 1 to 10 of 170 entries. Search:

Data types

All data types (170)

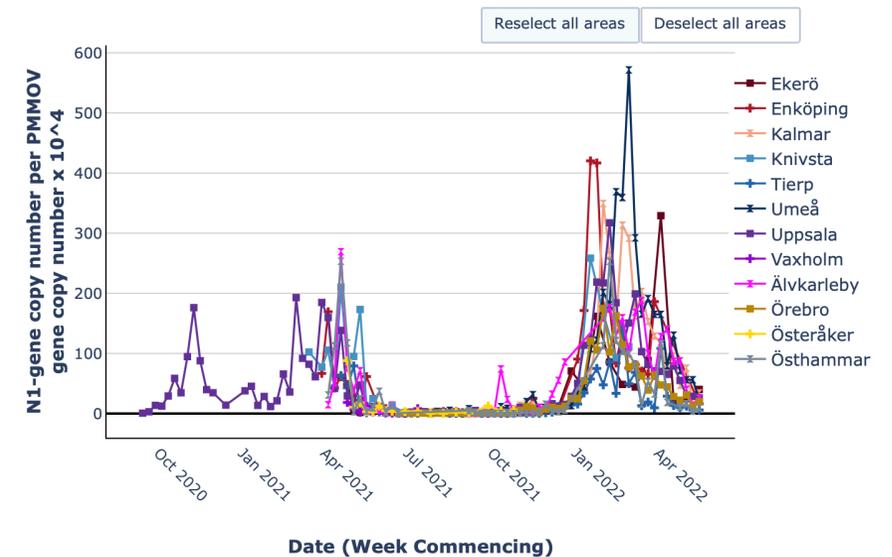
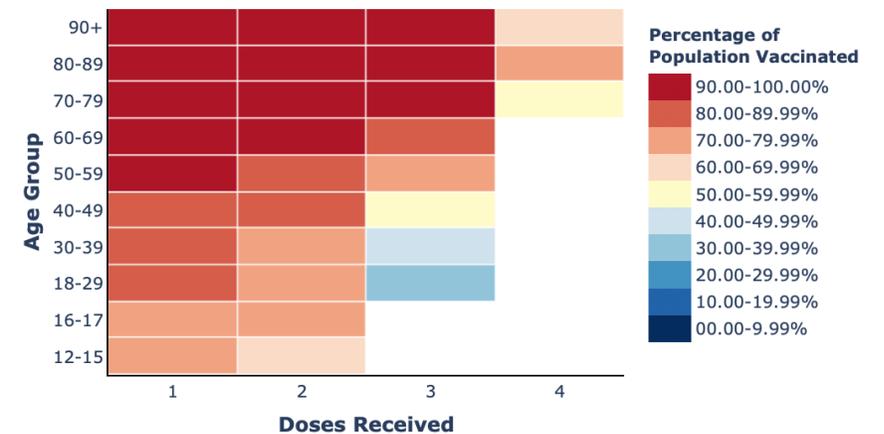
- Genomics & transcriptomics data (43)
- Protein data (27)
- Imaging data (6)
- Biochemistry data (25)
- Health data (74)
- Drug discovery data (12)
- Serology data (12)
- Public health data (52)
- Other data (30)

Publication	Available dataset and code
1H, 13C and 15N resonance assignment of the SARS-CoV-2 full-length nsp1 protein and its mutants reveals its unique secondary structure features in solution Agback T, Dominguez F., Frolov I., Frolova E. I., et al (2021) Public Library of Science (PLoS) DOI: 10.1371/journal.pone.0251834#sec006	Chemical shifts of full-length SARS-CoV-2 data BioMagResBank: 50915
A bispecific monomeric nanobody induces spike trimer dimers and neutralizes SARS-CoV-2 in vivo Hanke L., Das H., Sheward D. J., Perez Vidakovic L., et al	cryo-EM density maps data Electron Microscopy Data Bank: EMD-12561

Dashboards & Visualisations



- Dashboards showing openly available data from Public sources, partner projects, and research groups around Sweden.
- Portal team collaborate with Swedish research groups to build pages, dashboards and visualisations.
- The pages contain details on e.g. methods used, publications produced, as well as links to code and/or data.
- Data can be fed directly into plots, which can be used in promotion/publications (cf. SARS CoV-2 wastewater data).



Collaboration with Biobank Sverige



Sample Collection Database

Registry of Swedish biobanks and sample collections for COVID-19 research. [About the database](#) →

Biobanks: 18

Collections: 35

[Search in the database](#)



 Västerbotten biobank

Sample collection types: Healthcare sample collection

Juridical person: Region Västerbotten

 Västra Götaland
biobank

Sample collection types: Healthcare sample collection

Juridical person: Västra Götalandsregionen

 Dalarna biobank
(forskningen.se)

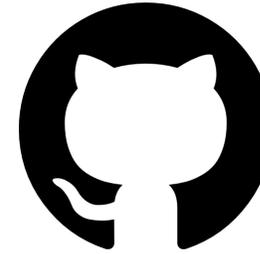
Sample collection types: Healthcare sample collection

Juridical person: Region Dalarna

Portal Content - Focus on FAIR & Open

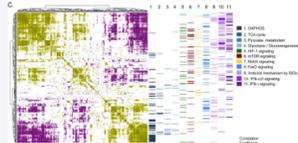


- Encourage and support open sharing:
 - Guidance for submissions
 - Helpdesk
 - Practice what we preach!
- Promote open sharing:
 - Data highlights
 - Social media
 - News
 - Uplift work by others



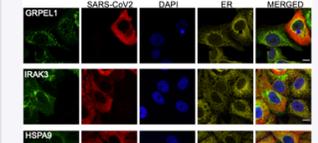
Data highlights

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



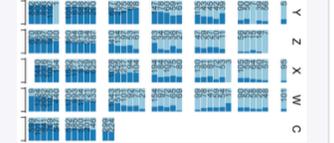
Study of host-viral interactions of Crimean-Congo haemorrhagic fever identified potential new drugs

2022-05-06



Large scale immunofluorescence to explore the host cell response to SARS-CoV-2 infection

2022-04-25



Direct RT-PCR used to monitor Omicron BA.1/BA.2 variant transition in Sweden

2022-04-04



SciLifeLab_DataCentre @SciLifeLab_DC · May 23

Check out the latest [#opendata](#) item published in the [@SciLifeLab](#) Data Repository!

Quantification of DSBs by immunofluorescence - Images & masks
doi.org/10.17044/scili...
[#OpenScience](#)

NEW PLP Resources Section



Background & Projects

The PLP network

The PLP program aims to build a national network of laboratory capabilities (the PLP network). Capabilities are funded in different calls. In this section, we list the capabilities funded in each call and provide links to their webpages.

PLP1 capabilities

The following eight PLP capabilities are part of The Pandemic Laboratory Preparedness Program 1 (PLP1)

Project	Principal Investigator (Affiliation)
Rapid establishment of comprehensive laboratory pandemic preparedness – RAPID-SEQ	Jan Albert (Karolinska Institutet)
Genomic Pandemic Preparedness portfolio (G3P)	Valterri Wirta (Karolinska Institutet)
Systems-level immunomonitoring to unravel immune response to a novel pathogen	Petter Brodin (Karolinska Institutet)

Pandemic Preparedness Resources

Home / Pandemic Preparedness Resources

Overview

The COVID-19 pandemic began over 2 years ago. It had a tremendous, negative impact on society and healthcare systems globally. The speed of the response from all quarters was unprecedented, as was the level of cooperation within and around the scientific community. This helped to get the pandemic under control and prevent greater, more widespread damage. In order to minimise the impact of the next pandemic, we need to act to make sure that our response is as quick as possible. The best way to do this is to invest in pandemic preparedness now. Pandemic preparedness involves ensuring that the resources needed to fight a pandemic are ready for immediate use; preventing the need to invest significant time on development during the pandemic.

This section of the Portal is dedicated to resources related to pandemic preparedness (i.e. resources that can be used in current and future pandemics). At present, the resources listed are primarily related to the [Pandemic Laboratory Preparedness \(PLP\) program at SciLifeLab](#) (refer to our [PLP program background page](#) for additional information). However, any pandemic preparedness resources built by individuals associated with a Swedish university or research institute can be included.

The resources pages themselves are not static. They will be updated as soon as possible after more information becomes available on the resource(s).

! We welcome suggestions about relevant resources that could be included in this section. Those involved in the resources listed below are also invited to inform us of any updates. Please email us at datacentre@scilifelab.se or use our [contact form](#) to get in touch.

Section last updated: 2022.08.10

Pandemic Laboratory Preparedness Capabilities Stage 1, 2021 (PLP1):



Capability specific pages

The screenshot shows the 'COVID-19 Data Portal SWEDEN' website. The main navigation includes 'Data', 'Resources', 'Dashboards', and 'Data management'. A sidebar highlights 'Topics: COVID-19', 'Infectious diseases', 'Antibiotic resistance', and a 'Special page on emerging pathogen: Monkeypox'. The main content area is titled 'Pandemic Preparedness Resources' and lists the 'BSL3 Biomedicum-SciLifeLab Collaborative Platform'. It details the PI(s) as Antonio Rothfuchs, the host organization as Karolinska Institutet, and describes the resource as involving two separate components: 1. Swedish biosafety level 3 (BSL3) network and 2. State-of-the-art biosafety level 3 (BSL3) facility. A map of Sweden shows the locations of participating institutions.

Contact & Suggestions form

Data Management support for PLP



- Data Management, DMPs, Data sharing, Brokering, and Data-related questions
- Data Management Q&A- drop in sessions monthly 3-4PM
 - Sept 13th, Oct 11th, Nov 8th and Dec 13th 3-4 PM
- Individual support: Contact DC/ NBIS Data Management team datamanagement@scilifelab.se
- Customised support information for the PLP network will be sent to each project.

What do we need from you?



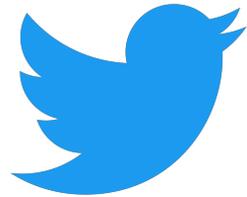
- (1) Provide us a thumbnail for your resource page
- (2) Check your resource page – anything you'd like to add/change?
- (3) Get in touch to tell us how we can help!

Contact Data Centre



Visit us: <http://pandemicpreparednessportal.se/>

Social media:



@scilifelab_DC



Scilifelab-data-centre

Contact form: <https://www.covid19dataportal.se/contact/>

Web: datacentre@scilifelab.se

...or on Slack!