

Data-Driven Life Science – Cell and Molecular Biology

Request for descriptions of proposed national data services to be included in the SciLifeLab Data Platform

Descriptions of proposed services should be submitted to the Gothenburg Data Science Node, email: ddls-dsn-cmb@lists.chalmers.se by May 15, 2024.

Background: Following Section 3 in the [DDLS Strategy](#), SciLifeLab and partners have built a national Data Platform for data-driven life science research. The SciLifeLab Data Platform includes a range of advanced data analytics support services. The overall aim of the SciLifeLab Data Platform ([which comprises a website and associated hosting environment](#)) is to make resources and services related to data-driven life sciences available for the community. This includes ensuring that the resources and services are as FAIR and open as possible.

The four Data Science Nodes (DSNs) within [The SciLifeLab and Wallenberg National Program for Data-Driven Life Science \(DDLS\)](#) will develop, maintain, and manage national data services in the Data Platform, and also connect them to data analysis and bioinformatics support within their respective DDLS strategic research area. The SciLifeLab Data Centre will operate the central resources of the SciLifeLab Data Platform and coordinate the activities at the national level. The Data Centre also provides an important link to underlying e-infrastructure resources (computing, storage) needed for providing the services. Note that access to such resources for using the SciLifeLab Data Platform services might be connected to submitting applications for allocations or providing user fees.

Scope: This request is for descriptions of proposed national data services in the field of cell- and molecular biology. The submitted descriptions should present data services that would be available to all life science researchers and/or data-producing facilities in Sweden. Also, the data services should bring Swedish data-driven research in cell- and molecular biology forward in the sense that they fill a need that is currently not filled by other broadly available services at the national or international level.

The development, maintenance, and user support of new data services will be carried out by the Gothenburg DDLS DSN in cell- and molecular biology, hosted by Chalmers University of Technology. The actual work will be done by the three research engineers in the DSN employed by Chalmers e-Commons, in close collaboration the SciLifeLab Data Centre and relevant research communities in cell- and molecular biology.

Eligibility: To be further assessed, the described data services must be:

- In alignment with the overall DDLS objectives and the SciLifeLab Data Platform objectives as presented in the [DDLS Strategy](#).
- Well-aligned with the DDLS Cell and Molecular Biology subject area as presented in the [DDLS Strategy](#).
- Feasible to be developed, maintained, and supported by the DDLS DSN and SciLifeLab Data Centre as a national data service within existing resources.

Assessment: The eligible descriptions of national data services will be selected based on an assessment of:

- Novelty and uniqueness.
- Impact; potential to bring Swedish data-driven research in cell and molecular biology forward in an international context.
- National user reach, and potential to integrate with existing national data services.

- Open Science aspects, such as the ability to support FAIR data sharing, FAIR software, and open standards.

Webinar: The request for descriptions of national data services will be presented and questions will be answered by a webinar organised by the Gothenburg DSN (date and time to be published later, see [‘Events & Training’](#) on the SciLifeLab Data Platform for updates).

Instructions for submitting a description of a DDLS national data service in cell and molecular biology

Describe how the national data service enables leadership in novel data-driven methods relying on machine learning, artificial intelligence, or other computational techniques to analyse, integrate, and make sense of cell and molecular data. How will the data service bring Swedish data-driven research in cell and molecular biology forward in an international context? [1 page]

Describe the functionality of the national data service. Is the national data service novel and unique? [1 page]

Describe the national user reach of the data service. If relevant, describe how the data service can be integrated with existing national data services. [0.25 page]

Provide – as far as possible - an estimate of what human resources that would be needed to develop the national data service. Also, provide an estimate what human resources that would be needed to maintain and support the service in a professional way in a sustainable setting. Here, contacts with the Gothenburg DDLS Data Science Node (e-mail address above) prior to submitting the service description might be useful. [0.25 page]

Provide – as far as possible - an estimate of what underlying e-infrastructure resources (computation/data analysis and data storage) that will be required, both initially and in the long-term. Again, contacts with the Gothenburg DDLS Data Science Node prior to submitting the service description might be useful. [0.25 page]

Describe how the national data service contributes to FAIR data sharing, FAIR software and/or open standards. [0.25 page]