**WASP and DDLS joint call for research projects 2023**

1. **OFFICIAL CALL TEXT**

**WASP AND DDLS ANNOUNCE A JOINT CALL FOR RESEARCH PROJECTS**

# The SciLifeLab and Wallenberg national program for Data-Driven Life Science (DDLS) was launched in 2020 by (KAW). DDLS is a 12-year funding initiative to support data-driven life science in Sweden, across 11 universities and institutions with SciLifeLab as the host. The program will focus on four strategic research areas of data-driven research:

# Cell and molecular biology

# Evolution and biodiversity

# Precision medicine and diagnostics

# Epidemiology and biology of infection

# SciLifeLab and KAW share the ambition to foster the next generation of life scientists by creating a solid computational and data science base that helps scientists analyze and interpret data patterns, and to seamlessly integrate their data with the global life science data streams. Central components of DDLS include: education, training, recruiting new talent, sparking collaborations, and engagement in innovation activities.

Wallenberg AI, Autonomous Systems and Software Program (WASP) is Sweden’s largest individual research program and provides a platform for academic research and education, fostering interaction with Sweden’s leading companies. The program addresses research in artificial intelligence, autonomous systems, and software as enabling technologies for developing systems acting in collaboration with humans, adapting to their environment through sensors, information, and knowledge, and forming intelligent systems of systems. WASP strengthens, expands, and renews the national competence through new strategic recruitments, a challenging research program, a national graduate school, and collaboration with industry. The program is conducted in close cooperation between leading Swedish universities to promote the competence of Sweden as a nation within the area of AI, autonomous systems and software.

## **AIM AND SCOPE**

DDLS and WASP have a strong ambition to form solid collaborations by bridging the gap between the scientific disciplines of DDLS and WASP respectively. The Knut and Alice Wallenberg foundation has earmarked funding for such collaborations in their donations to both these programs. To amplify their collaboration, DDLS and WASP announce a second call for proposals for bridging research projects.

The funded projects should span across the thematic profiles of DDLS and WASP, address fundamental research problems between the WASP and DDLS research areas and be of a visionary, high risk – high gain nature. The main objectives should go beyond just applying existing computational tools to biological problems or data-sets. Addressing the fundamental research challenges requires significant multidisciplinary activities such as conceptual, methodological and technological elements from both the life sciences and engineering fields with powerful research methodologies based on mathematics of artificial intelligence, machine learning, autonomous systems or software. It is therefore expected to apply new mathematics, modeling, or informatics to life science data in integrated projects. The projects must, as an integral part, contain both: i) Harvesting or making use of empirical data from experimental, clinical, or observational studies, and ii) Theoretical or computational method development from sciences such as mathematics, computer science, physics, and engineering.

The funded projects should also continue the building of a collaborative community and a critical mass by making data, resources, and code available in accordance with the FAIR principles. Supported projects are also expected to create resources and technical capabilities that will be made available to others. Applications should thus specify how FAIR data sharing and open access publishing of data and code will be addressed and any exceptions stated at the time of application. All projects are required to establish a data management plan (DMP) at the start of the project.

Project participants are expected to be active contributors and participants in community events, training activities, seminars, and symposia.

A research project will have both a rapid start-up phase and a high potential impact. Thus, a project can explore new synergies between existing projects and staff, and novel ideas enabled by forming multidisciplinary teams spanning across the DDLS and WASP domains.

The projects must have two applicants, one faculty from WASP and one from DDLS (defined under **Who can apply** below). The aim is a flexible cross-program collaboration where participants from each program extensively contribute to the project. Please see definition of eligible project participants below.

**WHO CAN APPLY?**

A project is led jointly by one faculty (main PI/co-PI) from WASP and one faculty from DDLS (main PI/co-PI). It is expected that each PI devotes at least 10% activity level to the project. A faculty can be involved in a maximum 2 applications and as a main PI in only a single application. The two faculties can come from the same university.

Faculty positions are: assistant professors, associate professors or professors. Both PIs have to hold a faculty position before the deadline for this call.

PI’s that previously have received funding from the joint WASP-DDLS call 2021 are not eligible to apply in this call.

The WASP faculty should be employed at one of the WASP partner universities CTH, LiU, LU, KTH, UmU, or be part of Affiliated Groups of Excellence at ÖrU, UU or LTU and have their research focus within AI, Autonomous Systems or Software. Please note that it is **not** necessary to be a formal WASP faculty (that has signed a WASP affiliation agreement) in order to apply for this call. Project participants from the WASP area should be/become employed at one of the partner universities as described above.

The DDLS faculty should work in life science with a data or computational angle within the four DDLS research areas and affiliated with a Swedish university or The Swedish Museum of Natural History.

**PROJECT PARTICIPANTS**

A project participant is someone who has experience within the research fields that are in the scope of WASP or DDLS such as postdoc, junior/senior researcher or technical staff/expert.

## **BUDGET**

The total funding for this call is 40 MSEK, we will strive for an equal distribution between the WASP and DDLS programs.

The maximum available funding for each project is 1 MSEK/year/partner, i.e., a total budget of 4 MSEK for two years. We prefer projects to last for two years.

**FINANCIAL INFORMATION**

* The grants will be funded by KAW. Faculties are responsible for any necessary co-funding needed at each university/department.
* Overhead and premises costs will be covered according to respective programs terms and conditions.
* There is also a maximum coverage of 50% for LKP (payroll overhead) on personnel costs.
* All costs applied for in the projects are to be specified in the budget template
* Eligible costs are for example: salaries for WASP and DDLS faculty (applicants), including supervision for postdocs/experts/junior researchers, salaries for project participants, and running costs. For equipment, depreciation costs are eligible. Please check the budget template in the application system (Anubis) for more guidelines.
* Prepare one budget for the WASP part and one for the DDLS part of the project (approved budget will be financed by the corresponding program accordingly- transfer of funding between the budgets is not possible after approval).
* Costs will be reimbursed by requisition to KAW. KTH and LiU will coordinate this process, templates will be provided for this purpose at a later stage.
* No funding can be directed to industry, industrial partners or public sector

## **PROPOSAL STRUCTURE/FORMAT**

## **Submission – how to apply**

One person applies as the main PI of the project with a commitment letter from the co-PI (co-applicant)

*Link to application system with detailed information*

**Application form and word template**

1. Name of project
2. Name, affiliations of main and co-PI
3. Project plan (max 4 pages) with clearly specified subject area including data science and FAIR aspects
4. Detailed explanation of the collaborative benefits and the role of each PI and each party (max 1 page)
5. Short CV and top publications only for main PI and co-PI (co-applicant) (max 2 pages each)
6. Reference list
7. Commitment letter from the main PI should be signed by the Head of the department.
8. Commitment letter from the co-PI (co-applicant) should be signed by the co-PI (co-applicant) and by the Head of the department
9. Budget (template for budgets)

## **EVALUATION CRITERIA**

Projects will be evaluated according to the following criteria:

* Novelty and Originality from a data-driven perspective
* Multi-Disciplinarity
* Scientific quality
* Merits of the applicants in relation to their career stage
* Synergies in the planned collaboration, i.e. complementarity and team science

We will also consider:

* Impact on both life science and of the computational challenges addressed
* Open science and data sharing aspects
* Impact on WASP/DDLS community
* Industrial and societal relevance
* Diversity of gender of the applicants