

SciLifeLab and Wallenberg National Program for Data-Driven Life Science



*Knut och Alice
Wallenbergs
Stiftelse*



WALLENBERG CENTRES FOR MOLECULAR MEDICINE

WASPI WALLENBERG AI
AUTONOMOUS SYSTEMS
AND SOFTWARE PROGRAM

WASP-HS



DDL S - Driving the paradigm shift towards data-driven life sciences

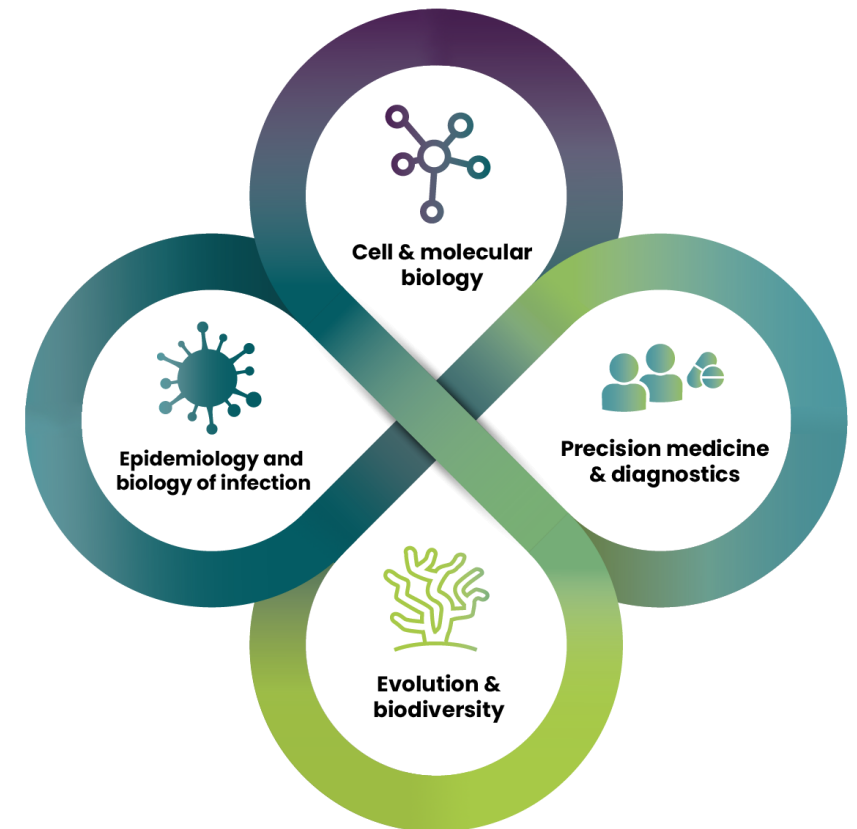


Four research areas

Vision: *The future of life science is data-driven*

Mission: *As a national research and training program across 11 partners, SciLifeLab & Wallenberg National Program for Data-Driven Life Science, DDL S, focuses on how data science and computational approaches enable and energize life science as well as applications in health, environment and industrial research.*

Change how life science is practiced



DDLS

 *~250 PhDs*
~200 Postdocs

Research school & Training

 *39*

DDLS Fellows

WABI
Data Centre
Data science nodes (DSN)

Data & Bioinformatics services

WASP
WCMM *WASP-HS*

Collaborations

 *11*







Partner organizations

Research Areas

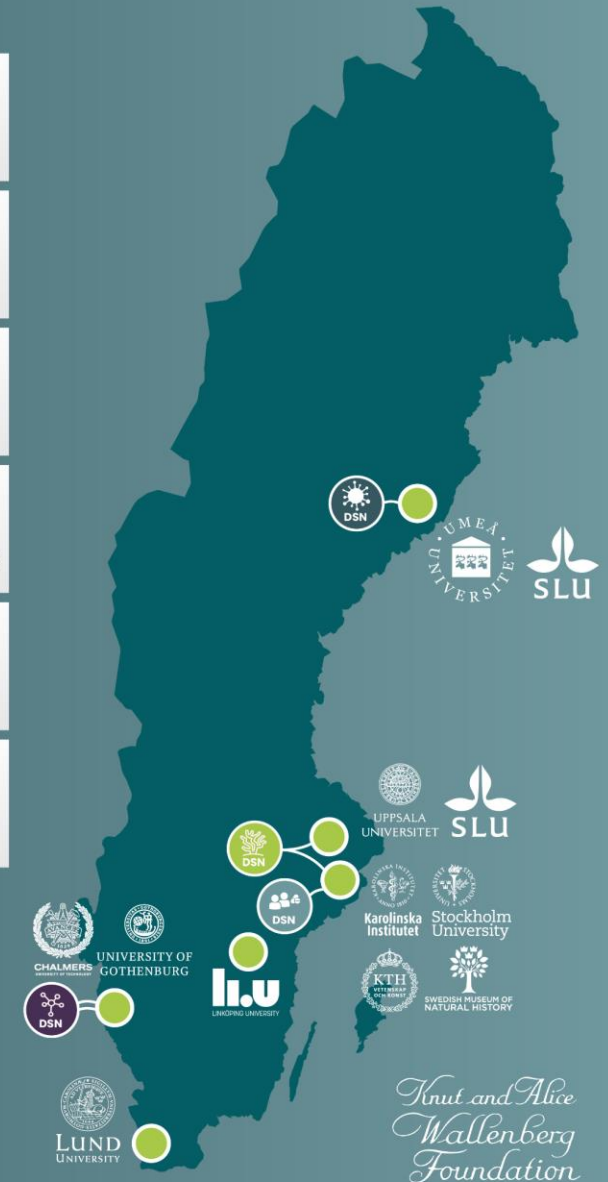
SciLifeLab & Wallenberg National Program for Data-Driven Life Science

Strategic objectives

	Attract Scientific Excellence in Data-Driven Life Science to Sweden
	Train the Next Generation of Data-Driven Life Scientists
	Provide Data Science & Bioinformatics expertise & services
	Bridge the Gap Between the Life Science & Data Science Communities
	Create Partnerships & Impact on Society at large
	Engage in Policy Actions

Impact

 **Healthcare**  **Society**  **Industry**  **Global collaborations**  **Science**



A new national research program 12-year, 3.1 BSEK program funded by Knut and Alice Wallenberg foundation



National initiative with 11 partners

- Phase 1 2021-2023 580 MSEK
- Phase 2 2024-2025 740 MSEK
- Phase 3 2026-2027 670 MSEK
- Phase 4 2028-2029 560 MSEK
- Phase 5 2030-2032 550 MSEK

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SciLifeLab

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CHALMERS



SLU



GÖTEBORGS
UNIVERSITET



Stockholms
universitet



Karolinska
Institutet



UMEÅ
UNIVERSITET



li.u LINKÖPINGS
UNIVERSITET



Naturhistoriska
riksmuseet



UPPSALA
UNIVERSITET



LUNDS
UNIVERSITET

DDLS Fellows Program: 1st round of recruitments 2023



Cell & Molecular Biology



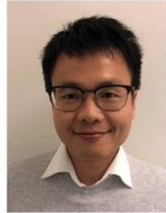
Nicholas Pearce
LiU



Johan Bengtsson-
Palme
Chalmers



Juliette Griffie
SU



Wei Ouyang
KTH



Patrick Bryant
SU

Evolution & Biodiversity



Tom van der
Valk
NRM



Tobias Andermann
UU



Kelly Swarts
SLU, Umeå

Previous affiliations e.g. University of Pennsylvania, Cornell University, ETH Zürich, EMBL Heidelberg, Gregor Mendel Institute/University of Vienna, Free University of Brussels, École polytechnique fédérale de Lausanne (EPFL), University of Oxford

Epidemiology & Biology of Infection



Laura Carroll
UmU



Luisa W. Hugerth
UU



Camila Consiglio
LU



Andrea Fossati
KI

Precision Medicine & Diagnostics



Wen Zhong
LiU



Clemens
Wittenbecher
Chalmers



Fredrik Edfors
KTH



Jakob Vogel
LU



Abishek Niroula
GU



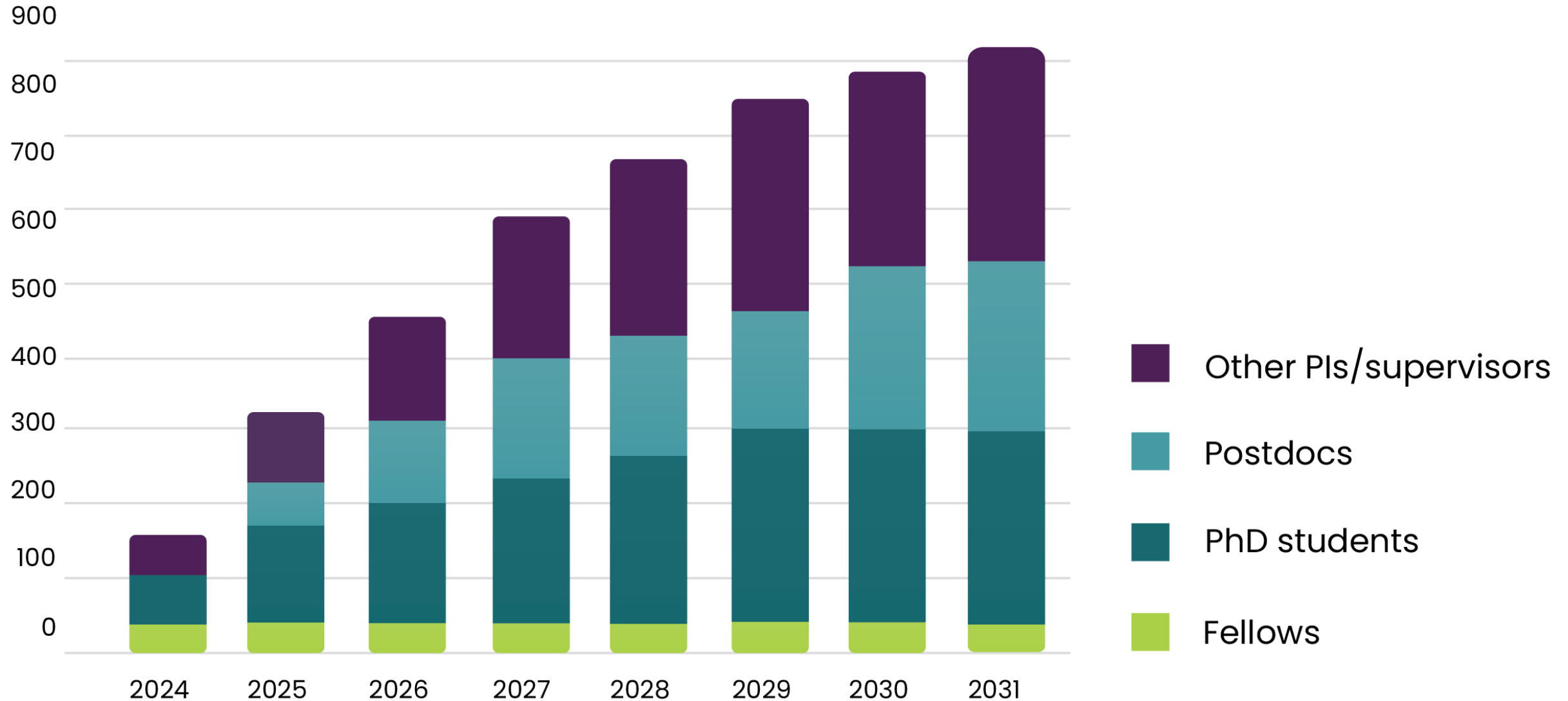
Avlant Nilsson
KI








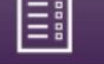
Cemal Erdem
UmU

- Five-year support for excellent young group leaders, launched in 2021
- Tenure opportunity
- Driving the paradigm shift towards data-driven life sciences
- Advancing competence and innovation in four research areas
- 19 Fellows, selected out of about 800 applicants
- 20 fellows being recruited in round 2

Growth of DDLS (estimated cumulative nos. of engaged scientists)



SciLifeLab and Wallenberg - DDLs National Research School

	Attract Scientific Excellence in Data-Driven Life Science to Sweden
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What is data-driven life science?



Data-driven life science is a field of research that focuses on using data, computational methods and artificial intelligence to study biological systems and processes. This approach includes assembling, sharing, integration and advanced analysis of large amounts of data from diverse sources, including experiments, observations, and simulations, in order to gain a better understanding of how living organisms function.

DDLS Research School: Starting in 2024



DDLS Research School is not a standalone independent education/training effort, but a national network of DDLS training activities that take place at each of the universities.

Also postdoc program from 2026 onwards

Two main components of the DDLS Research School:

- 1) Recruitment of talented young PhD students to the school
- 2) Education and training activities

DDLS Research School intake



Intake period	Academic PhD	Industry PhD	Academic postdocs	Industry postdoc	Total PhD/postdocs
2024–2026	40 (20+20)	15 (7+8)			55/
2026–2028	50	15	45	20	65/65
2028–2030	50	15			65/
2030–2032			45	25	/70
Total	140	45	90	45	185/135

>300 PhD and postdocs will join

Strengthening the connection between Universities and life science industry by integrating industrial PhD students and postdoc into DDLS environment

Recruitment Process of the DDLS PhD Students



- **Phase I: Call for Projects**
 - Open call for project proposals within the four research areas
 - Project proposals are evaluated and ranked by international reviewers
 - Approval of selected projects are made by SciLifeLab Board
- **Phase II: Call for PhD students**
 - Joint international announcement
- **Phase III: Selection and interviews**
 - According to local processes with support from DDLS representative
- **Phase IV: Hiring and admission**
 - Employment at university/ company
 - Admission to DDLS research school and local research school when applicable

DDLS PhD Program



Call for Academic PhD Projects ✓

Call for Industrial PhD Projects ✓

What happens next:

- SciLifeLab/DDLS will announce an open call for project proposals within the four research areas
- Project proposals are evaluated and ranked by international reviewers
- Approval of selected projects are made by SciLifeLab Board



Timelines for the call and beyond

Timelines for selection of projects and supervisors (November 22, 2023 – January 10, 2024)

- Call for projects (November 22)
- Deadline for Call (January 10th)
- Reviewing
- Decision in Board Meeting (February 13th)

Recruitment of PhD students (February- April 2024)

Calls for Academic and Industrial PhD Project in DDLS



- Project proposals in **four DDLS research areas** are welcome
- Funded projects should be in line with DDLS strategy and have
 - a novel and original data-driven perspective,
 - be of high scientific quality
 - combine the life science and data science topics.
- **Main supervisor** – (both academic and industrial PhD projects) must have a **secured employment at a Swedish university**
- Co supervisor in industrial PhD projects- **secured employment through the suggested PhD period at the company.**
- One applicant can be the main supervisor in only one academic and one industrial project, but can act as co-supervisors in applications by other PIs.
- DDLS fellows can be main supervisor in industrial projects but only co-supervisor in academic

Calls for Academic and Industrial PhD Project in DDLS



- Project participants (supervisors and students) are expected to be active contributors and participants in the national DDLS community events, training activities, seminars, and symposia organized by the DDLS Research School.

- **Required Documents for both calls**

- Research project proposal
 - Description of the research and training environment
 - CV of the suggested main supervisor

- Additional for academic call:**

- Letter of commitment from the Head of Department/faculty and co-supervisor
 - CV of the co-supervisor(s) (when applicable)

- Additional for industrial call:**

- Letter of commitments from both the research director (or equivalent) of the company and Head of Department of the University
 - CV of the co-supervisor(s)

Calls for Academic and Industrial PhD Project in DDLS



- **Evaluation of Project Proposals**

- Project proposals and PIs are evaluated and ranked by international reviewers. Projects are evaluated according to defined **DDLS evaluation criteria**:
 - Scientific quality of the project
 - Merits of the applicant and co-applicants supervisor/co-supervisor (scientific and training)
 - Fit and contribution of the project to the DDLS program
 - Quality of the supervision plan and the training environment
- We will also consider inclusiveness and diversity.
- Co-funding needed for KAW-funded project
- Decision of the selections of projects are made by the SciLifeLab National Board. There will be 20 academic and 7 industrial PhD projects.
- SciLifeLab will coordinate an international joint announcement for all DDLS PhD positions.

Calls for Academic and Industrial PhD Project in DDLS



Academy

1. Project applicant = academic supervisor, has to be employed at a Swedish university
2. Letter of commitment from **the Head of Department/Faculty**
3. **Faculties** is responsible for any necessary co-funding
4. The granted **academic supervisor** is responsible for identifying and selecting the PhD student.
5. The academic PhD student is employed by the **university**.
6. The recruitment process starts **at the local department** with the granted PIs.
7. DDLS Fellows can apply as co-supervisors.

Industry

1. Project applicant = academic supervisor + **industrial supervisor**
2. Letter of commitment from **the company** and **the Head of Department**
3. **Industry** is responsible for any necessary co-funding
4. The granted **academic main supervisor** and the **industrial supervisor** are responsible for identifying and selecting the PhD student. **Nb: the student must be employed and admitted to the industrial doctoral program before the start of the project.**
5. The industrial PhD student is employed by the **company**.
6. The recruitment process starts **at the local department and the company** with the granted PIs.
7. DDLS Fellows can apply as main supervisors.

Funding for approved projects– Academy vs Industry



Academic PhD project
total KAW funding 3,25 MSEK

Action period:
4 years full time or 5 years 80%

- 3,25 MSEK total KAW funding per project
- Out of the total KAW funding (3,25MSEK), max. 165 KSEK can be allocated for running costs for the project action period defined



Industrial PhD project
total KAW funding 3,25 MSEK

Action period:
4 years full time or 5 years 80%

- 2,5 MSEK total KAW funding for salaries and indirect costs for industrial partner
- 750 KSEK total KAW funding for the university/NRM for supervision of Industrial PhD student for the action period.

Call for Academic PhD Students



Phase II: Call for PhD Students

- Joint international announcement
- Universities/companies with granted projects will also announce the positions in their respective web portals
- Applications submitted to each university with granted project

Phase III: Selection and Interviews

- At the department level and local recruitment group
- Recommendation to have a DDLS representative at the interviews
- Recommendation to hold joint interviews for candidates applying for multiple positions

Phase IV: Hiring and Admission

- Employment by the university/companies
- Admission to the host graduate school, when applicable
- Admission to the DDLS Research School

Timelines for selection of PhD students

- Announcement of the positions (February 2024)
- Evaluation of the applications (March)
- Interviews (end of April)
- List of selected PhD students- offer and acceptance (beginning of May)

Calls for DDLS PhD Projects Are Open!



- Call for Academic PhD Projects in Data-driven Life Science (<https://www.scilifelab.se/data-driven/ddls-project-call-for-academic-phds/>)
- Call for Industrial PhD Projects in Data-driven Life Science (<https://www.scilifelab.se/data-driven/ddls-project-call-for-industrial-phds/#>)

DDLs training environment in 2030



DDLs training environment in 2030

