SciLifeLab

Co-funded by the European Union

SciLifeLab PULSE

Research community briefing meeting

Time: December 16, 09:00-10:00, zoom

Participants: SciLifeLab research community/PIs, Associated partner PIs/representatives, PULSE-MG

N.B. Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them.

Agenda

- Welcome and introductions
- MSCA-COFUND
- Organization
- Training
- Budget, funding & reporting
- Communication
- Timeline
- Summary of PI commitment & benefits
- Final comments

Introduction to SciLifeLab PULSE management & training teams

PULSE Management Group

PULSE Training committee

Mia Phillipson (UU)
PULSE Director
Co-Director of SciLifeLab

Per Ljungdahl (SU)
PULSE Co-Director (academic track)
Campus Solna Director

Kristian Sandberg (UU)
PULSE Co-Director (entrepreneurial track)
Co-Director of DDD Platform

Maria Bäckström (UU)
PULSE
Program Coordinator
SciLifeLab Administrative Coordinator

Disa Hammarlöf (KTH)
PULSE
Program Manager
SciLifeLab Research coordinator

Jessica Lindvall (SU)
PULSE Training Director
SciLifeLab Head of Training

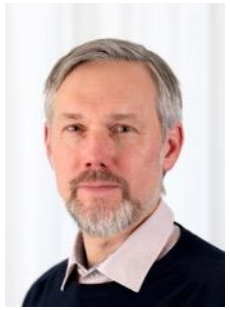
Anna Ridderstad Wollberg (UU)
PULSE Training coordinator
Senior project leader DDD

Kristen Schroeder (SU)
PULSE Training coordinator
Scientific Training Officer

Support functions

Anna Frejd (KTH)
Communications Manager

Karin Nedler (KTH)
Graphic Designer



Per Lek (KTH)
External Relations Officer

Carina Gustafsson (KTH)
Financial controller

KTH-RSO

Per I Arvidsson (UU)
Director of DDD Platform (entrepreneurial track)

About MSCA COFUND

- EU-funded research & innovation program
- Mobility, training, career development
- Academia ↔ Industry collaboration
- MSCA-COFUND program SciLifeLab PULSE funded in 2023 call and launched autumn 2024

MSCA-COFUND

All participants must be aware of principles set out in the *Commission Recommendation on the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers*.

Guidelines for Supervision

The MSCA are the European Union's flagship program for the mobility and training of researchers. One of the essential elements of successful research is supervision.

→ Publications Office of the European Union: MSCA guidelines of supervision

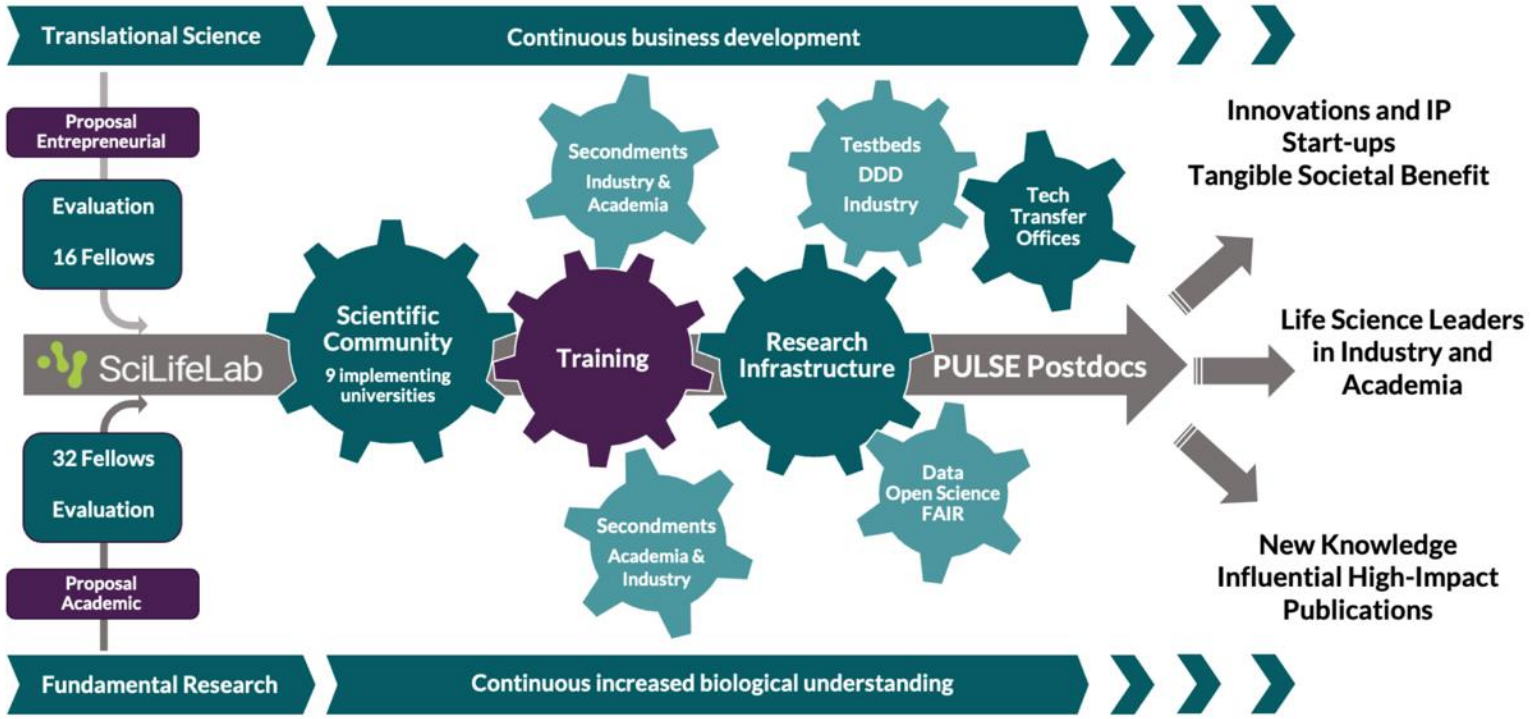
→ About MSCA: MSCA guidelines on supervision

General principles of the Green Charter

- The goal of the MSCA Green Charter is to encourage sustainable thinking in research management.

Overview of PULSE program

- PULSE will recruit and train 48 postdocs for 3 years in two closely connected tracks:
  - Academic - 32 postdocs
  - Entrepreneurial -16 postdocs
- Project time 2025-2030
- Postdocs recruited in two calls
  - 27 postdocs recruited in call 2
  - Calls coordinated by SciLifeLab
- Main PI host is a SciLifeLab Group Leader at one of the eleven participating universities



*"**Training** is at the core of the SciLifeLab PULSE program, that till provide postdocs with the tools needed to succeed as future research leaders, all within a **supportive** and **diverse** environment."*

The PULSE Academic track (32 Postdocs)

Carry out internationally recognized research aimed at deciphering mysteries of life at the molecular level

Research fields reflecting SciLifeLab priorities and strengths:

- Cell and Molecular Biology
- Precision medicine and diagnostics
- Evolution and biodiversity (Planetary biology)
- Epidemiology & biology of infection (Pandemic laboratory preparedness)

Opportunities:

- Access to cutting-edge technologies
- Exploit methodologies and technologies that generate high density data
- Analyze, integrate and interpret large data sets
- Machine learning, artificial intelligence and other computational techniques

Tailored training program for academic researchers

Close collaboration with host universities and SciLifeLab group leaders

PULSE academic track – 2nd call 16 Postdocs

contribute to the transformation of life science data into knowledge

Traditional academic postdoc augmented by a well-conceived individual tailored career development & training programme with secondments

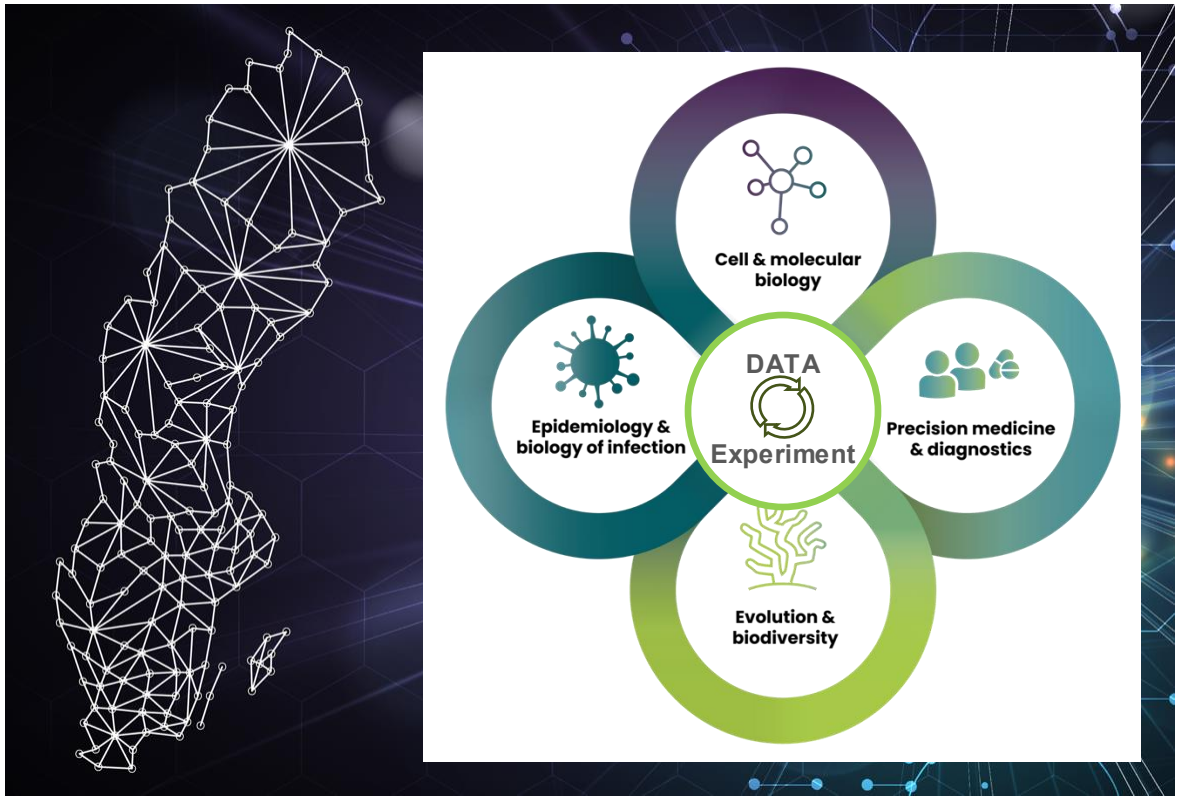
Academic PULSE postdocs carry out research projects in laboratories skilled in the application of high-throughput technologies and data-dense analytical approaches

Projects furthered by access to cutting-edge technologies offered by SciLifeLab Infrastructures

PULSE academic track – 2nd call 16 Postdocs

contribute to the transformation of life science data into knowledge

Projects 2025



Medicine & Diagnostics
- Endocrine disrupting chemicals affecting liver function
- Biomarkers for arbovirus infections
- Neoantigen discovery – cancer proteomics
- Oligonucleotide-based cancer treatments
- Reprograming DC for immunotherapy
- Proximity ligation assays (PLA-Flow) – diagnostic fusion peptides characteristic for leukaemia
- Organoids & lipid nanodrops for enzymatic characterization

Cell Biology & Biology of Infection/Microbiology
- Proteomics to investigate Oxygen Dependent Enzymes
- Bacterial single cell metagenomics - tracking AMR
- Cell wall integrity Gram negative bacteria
- Disruption of quorum sensing

Evolution & Biodiversity Genetics
- Complex phenotypic traits, color morphs
- Seasonal timing of Baltic herring spawning
- Assessing adaptation to global warming by environmental transcriptomics

The PULSE Entrepreneurial track (16 Postdocs)

Development of disruptive **technologies** to facilitate target-based drug discovery of novel therapeutic agents,
i.e. **not programs developing a specific drug**

Challenges in early Drug Discovery, examples:

- Accuracy and validation of therapeutic target
- Data heterogeneity in AI/ML
- Predicting efficacy and toxicity
- Bridging information from In Vitro studies to In Vivo outcome
- Lack of validated biomarkers

Focus for technology development at SciLifeLab DDD:

- Machine learning
- Display and selection technologies
- Proximity inducing agents
- Therapeutic oligonucleotides

Tailored training program to become an entrepreneur

Close collaboration with DDD, innovation office and industrial partner

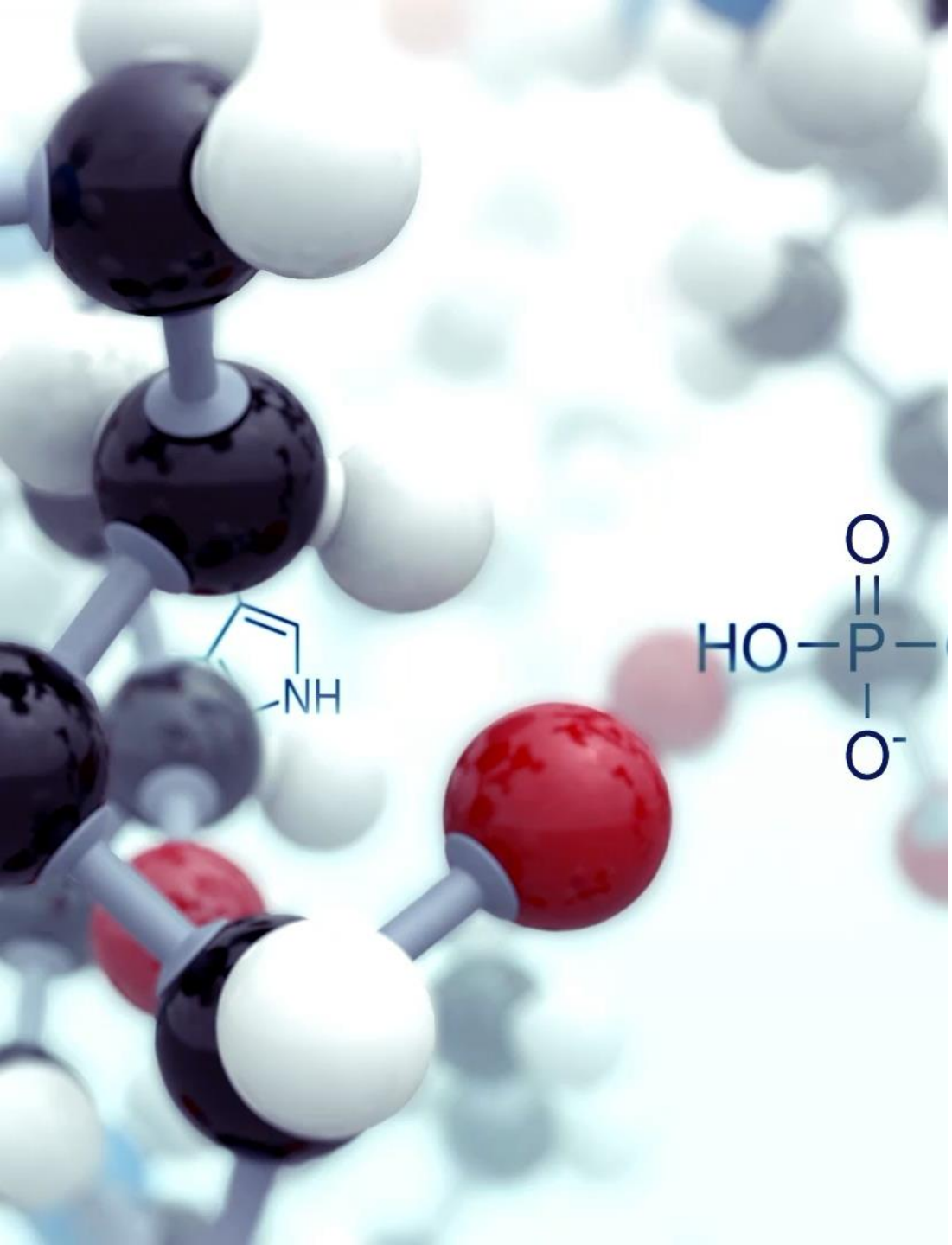
DDD Platform support for entrepreneurial track

The DDD platform supports the entrepreneurial track with:

- Dedicated project leader eq. to 20% FTE
- 125 KSEK/year to cover consumable costs for activities performed by DDD
- Coordination of training in entrepreneurship and drug discovery research

+ Possibility to request additional support from DDD units

The fine-print: The principal investigator&postdoc owns all generated IPR and drive commercialization; DDD is granted a non-exclusive license to use the technology in forthcoming DDD programs



Example of Projects 2025

- Peptide libraries for proximity induction
- AI-design of therapeutic peptides
- Targeted delivery of oligonucleotide drugs
- AI methodologies for hit finding from DNA-encoded libraries and ultra-large virtual libraries
- Bi-specific antibodies for degradation of membrane receptors

2nd call 11 Postdocs

PULSE partners

- KTH beneficiary - SciLifeLab responsible for program coordination
- 11 implementing partners acting as main postdoc hosts, SciLifeLab Drug Discovery & Development platform (DDD) responsible for entrepreneurial track
- 29 associated partners (providing additional training and secondments)

Implementing partners

CHALMERS UNIVERSITY OF TECHNOLOGY
Karolinska Institutet
KTH VETENSKAP OCH KONST
LINKÖPING UNIVERSITY
LUNDS UNIVERSITET
SLU
Stockholm University
UMEÅ UNIVERSITY
UNIVERSITY OF GOTHENBURG
UPPSALA UNIVERSITET
ÖREBRO UNIVERSITY

Associated partners

AFFIBODY
Akiram Therapeutics
AstraZeneca
BEACTICA Therapeutics
bonsai BIOTHERAPEUTICS
CoVaRR-Net
Cyclic Tx
cytiva
eatris
EMBL
HUMAN TECHNOPOLE
The research-based pharmaceutical industry
LIPUM
MALMÖ UNIVERSITY BIOFILMS RESEARCH CENTER FOR BIOINTERFACES
MAX DELBRÜCK CENTER
MAX IV
ORION PHARMA
PEPTISYSTEMS
PROSILICO
QureTech Bio
Ribocure Pharmaceuticals AB
RG DISCOVERY
RI. SE
STRIKE Pharma
SweDeliver
sweden BIO
TestaCenter
UNIVERSITY OF TURKU
VIB

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UNIVERSITY OF GOTHENBURG
UPPSALA UNIVERSITET
ÖREBRO UNIVERSITY

Associated partners

Industry partners

AFFIBODY
Akiram Therapeutics
AstraZeneca
BEACTICA Therapeutics
bonsai BIOTHERAPEUTICS
CoVaRR-Net
Cyclic Tx
cytiva
eatris
EMBL
HUMAN TECHNOPOLE
The research-based pharmaceutical industry
LIPUM
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MAX DELBRÜCK CENTER
MAX IV
ORION PHARMA
PEPTISYSTEMS
PROSILICO
QureTech Bio
Ribocure Pharmaceuticals AB
RG DISCOVERY
RI. SE
STRIKE Pharma
SweDeliver
sweden BIO
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International partners

PULSE partners

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Research infrastructures, institutes and networks

PULSE postdoc selection & recruitment

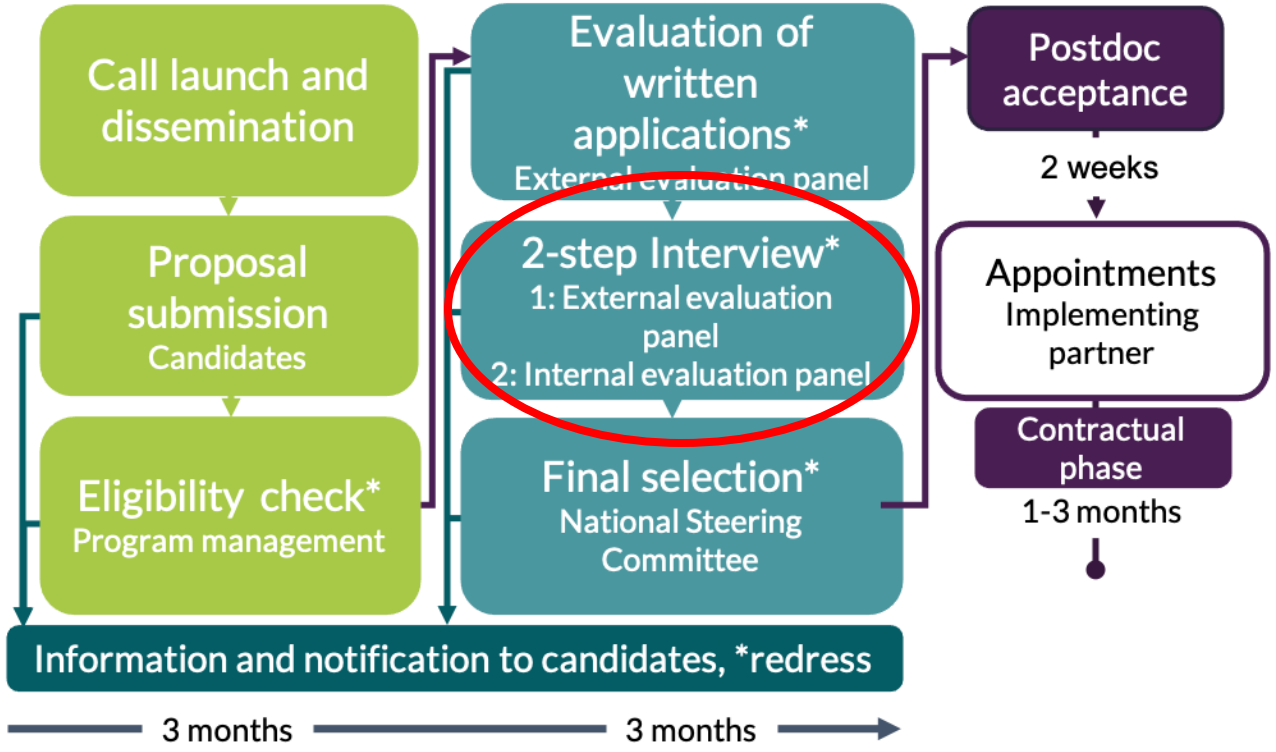
- **Matchmaking** between candidates and SciLifeLab PI hosts (candidate cannot have been employed in proposed hosting lab)
- A PI can support max 2 applications
- **Candidates apply with individually-designed projects** (supervisors should not be involved in writing the proposal, but project discussion with PI host strongly recommended)

MSCA mobility rule: Applicants cannot have lived or worked in Sweden for more than 12 months in the past three years

27 postdocs to be recruited in open call (up to 11 to entrepreneurial)

PULSE postdoc selection & recruitment

- Applications are evaluated in three steps
- International evaluators review written applications & candidates in Interview 1
- Hosting PI & scientific departmental representative partake in Interview 2
- Final list of postdocs approved by the PULSE National Steering Committee



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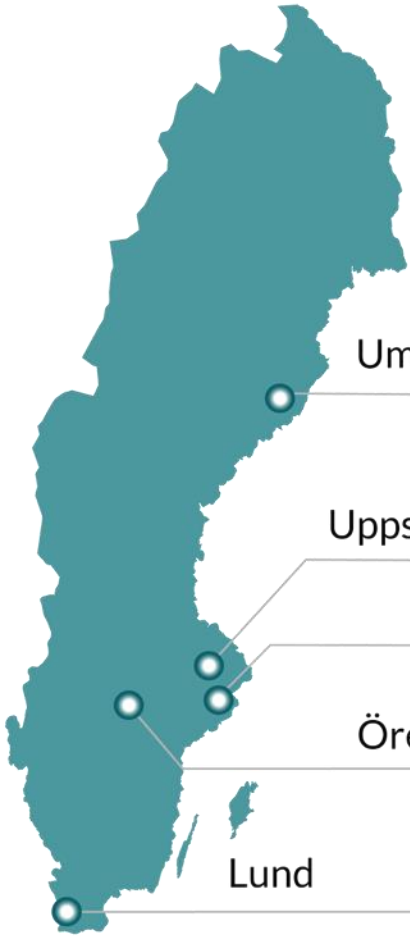
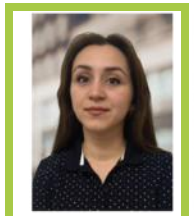
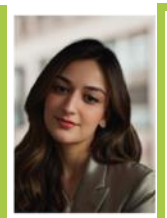
27 postdocs to be recruited in open call (up to 11 to entrepreneurial)

Recruited cohort 1 SciLifeLab PULSE Postdocs

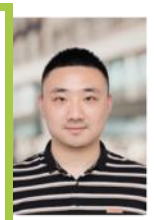



Gulshan Amrahova UU


Sahar Balkhi UU

Solène Beauvois UU

Álvaro Serrano Morrás UU


Lijing Tang UU

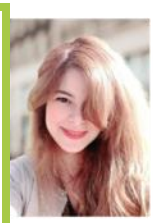
Jean Claude Balingit UmU

Chaitra Shankar UmU

Barbara Walenkiewicz UmU

Alberto Arenas Molina KI

Anna Carbery KI


Heba Khateb KI

Lionel Leck KI

Patricia Sosa Acosta KTH

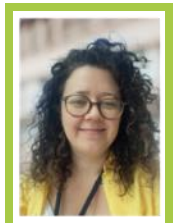
Ana Spencer KTH

Nina Trubanová SU

Hamish Pegg SU

Peng Wei LU

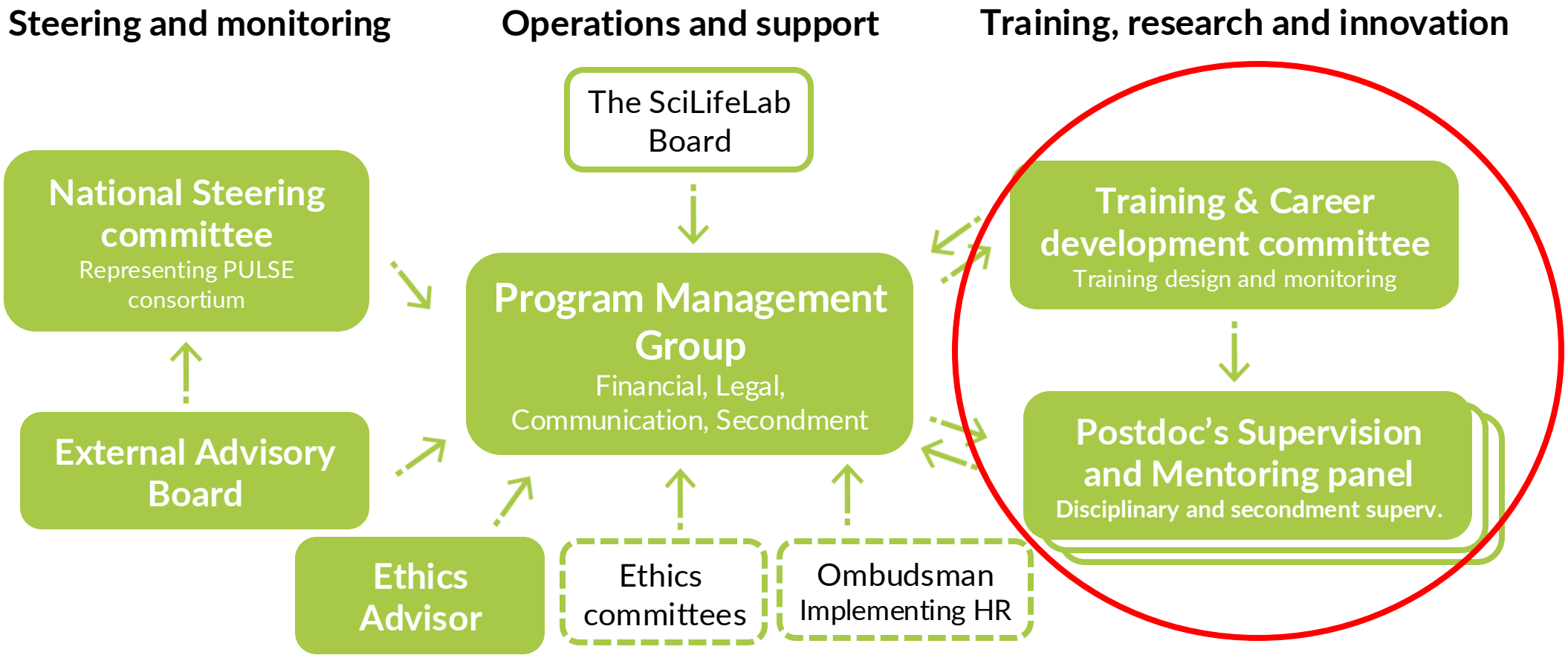
Guillaume Lavanchy LU


Melike Berksöz LU

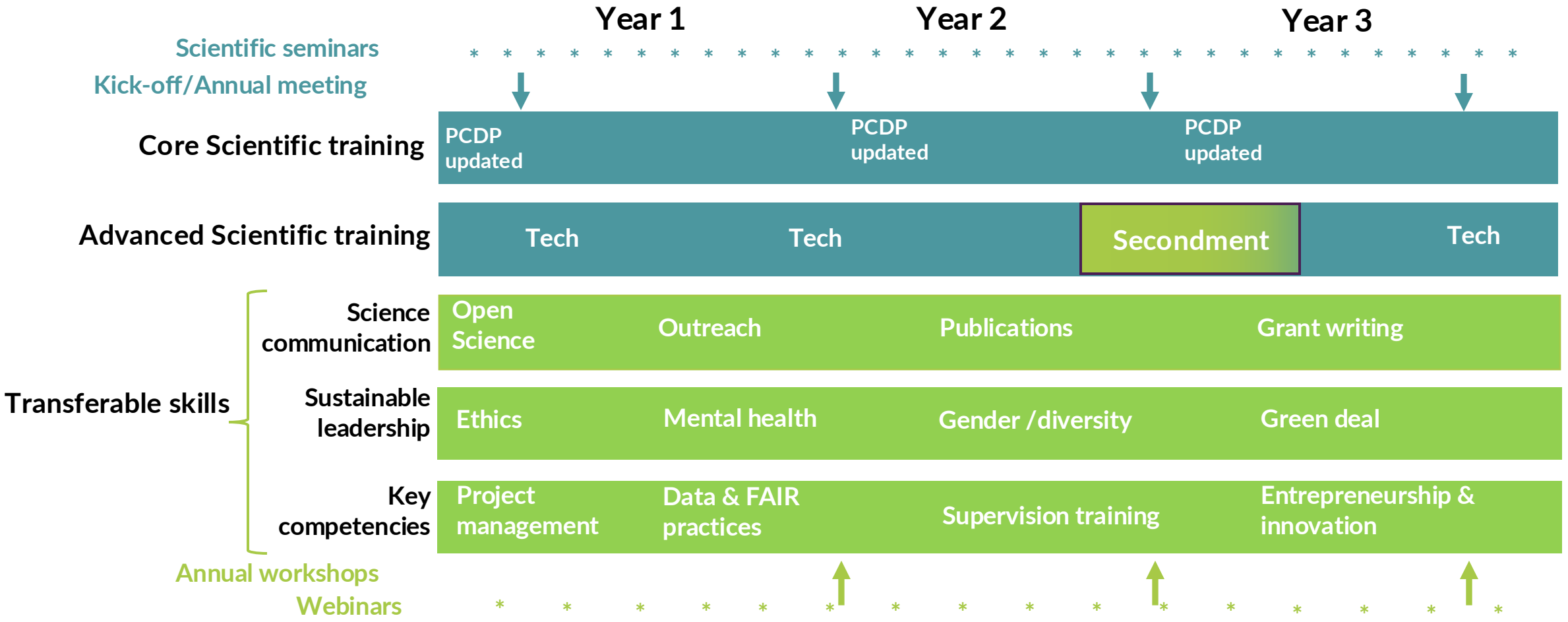
Jade Chaker ÖrU

15 Academic
5 Entrepreneurial

PULSE bodies and assignments



PULSE training – the core of the program



According to Personal Career Development Plan (PCDP)
Annual scientific meetings, workshops and secondments are mandatory

SciLifeLab PULSE overview budget

5 year budget	
EU contribution **(MSCA-COFUND)** To subsidise costs for postdoc salaries & program management	6.88 MEUR 6.5 MEUR to postdoc salaries 0.33 MEUR to program management (coordination, call, evaluation, program meetings, PULSE assignments External Advisory Board & Ethics Advisor)
Implementing partner PI contribution Co-funding of postdoc salary (>38000SEK), travel (incl. secondment), research costs. Based on LKP 59,10% and OH 35%. *OBS! Not by other EU grants or DDLS-KAW fellow funding.*	7.8 MEUR
SciLifeLab contribution national funding Program management not covered by EU contribution of 0.33 MEUR	11.5 MSEK (1 MEUR) Included & decided in SciLifeLab annual budget, 2025-2030
SciLifeLab contribution DDD funding DDD commitment to entrepreneurial track	28.5 MSEK (2.5 MEUR)

Funding for selected projects

- For a SciLifeLab PULSE 3-year project, the hosting PI receives 136,404 Euro
  - Additional support through DDD for entrepreneurial projects
- The EU grant is paid out annually (first payment September 2026 for cohort 2)
- Co-funding required by PI:
  - Salary cost not covered by EU grant
    (min. salary 38,000SEK, university dependent)
  - Research running costs
    (project dependent)
  - Postdoc travel and extra costs for participation in scientific conferences and secondments
    (secondment host responsible for supervision and running costs during secondment)

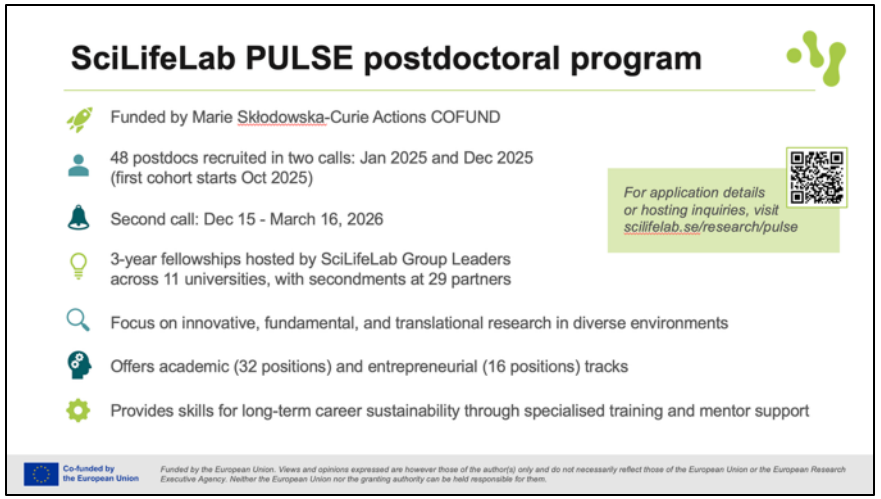
Reporting

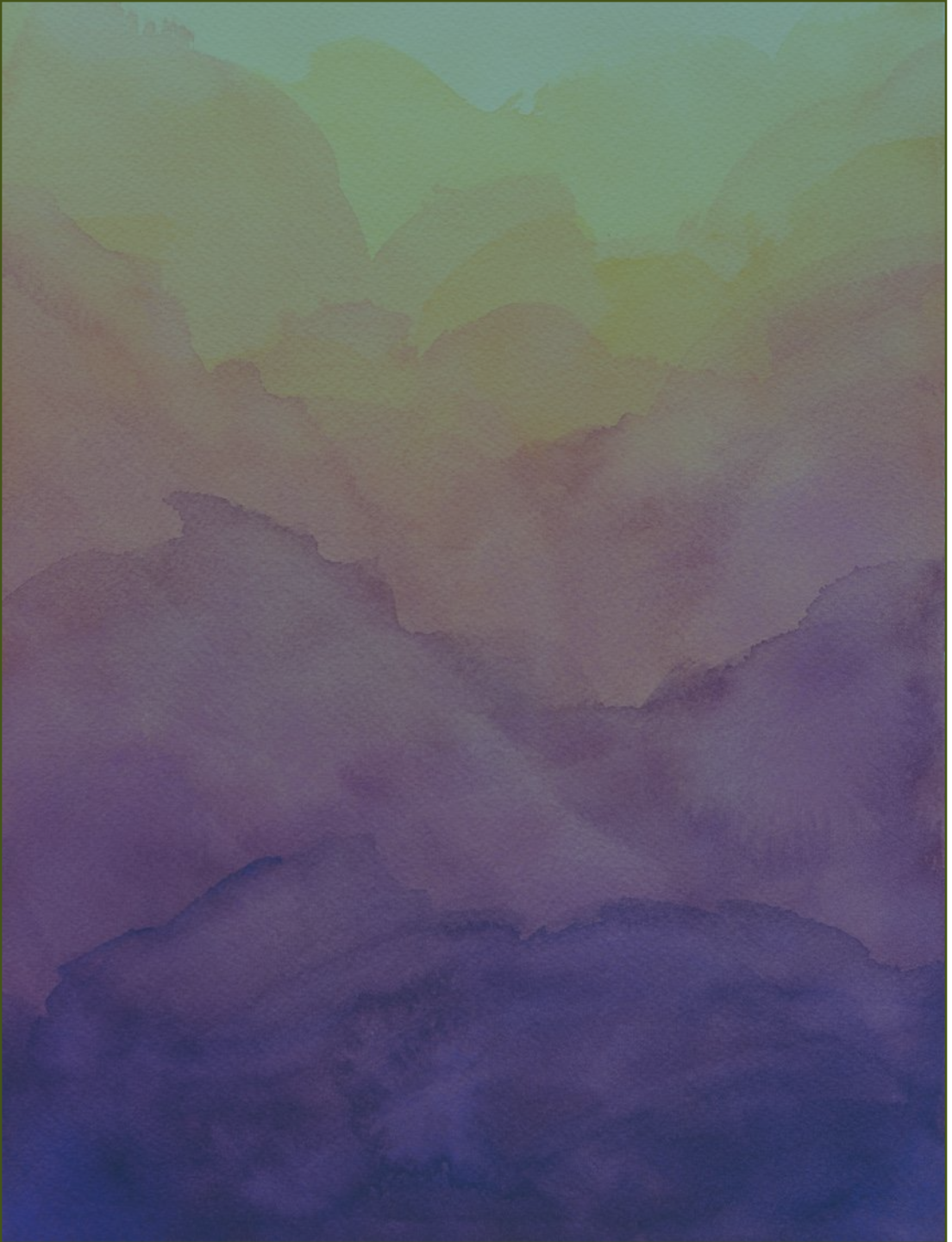
- Deadlines for reporting to EU (for the overall PULSE project) are at 24 months/August 2027 and 60 months/August 2030
  - EU grant payment depends on reporting of
    1) postdoc units & activity
    2) project implementations
  - Reporting will be compiled by SciLifeLab PULSE management group and information will be sent out further on

- For each recruited postdoc
  - A mobility declaration must be submitted 20 days upon postdoc start (information from recruiting departments submitted by SciLifeLab PULSE program office, October 2026)
  - Also, each secondment must be reported in the EU portal

Communication

- Always refer to PULSE website for information, scilifelab.se/research/pulse/
- Remember to share information about SciLifeLab PULSE in your networks & upcoming conference (flyer & ppt)





Communication

- All comms. material / publications of project data must include acknowledgement of EU funding and disclaimer (template will be provided)
- All PIs that recruit a PULSE postdoc will receive a welcoming package with all necessary information

In the pipeline and outlook

2025

October: *Start 1st cohort (21 postdocs recruited)*

December 15: Launch of second call for 27 postdocs

2026

March 16:

- Deadline for second call

March 10-13:

- *First PULSE annual scientific meeting (1st cohort)*

April-May:

- Call evaluation
- Interviews - **save-the-date!**
  - Phase 1: May 4-8
  - Phase 2: May 27-29

October:

- Start 2nd postdoc cohort

2027

March:

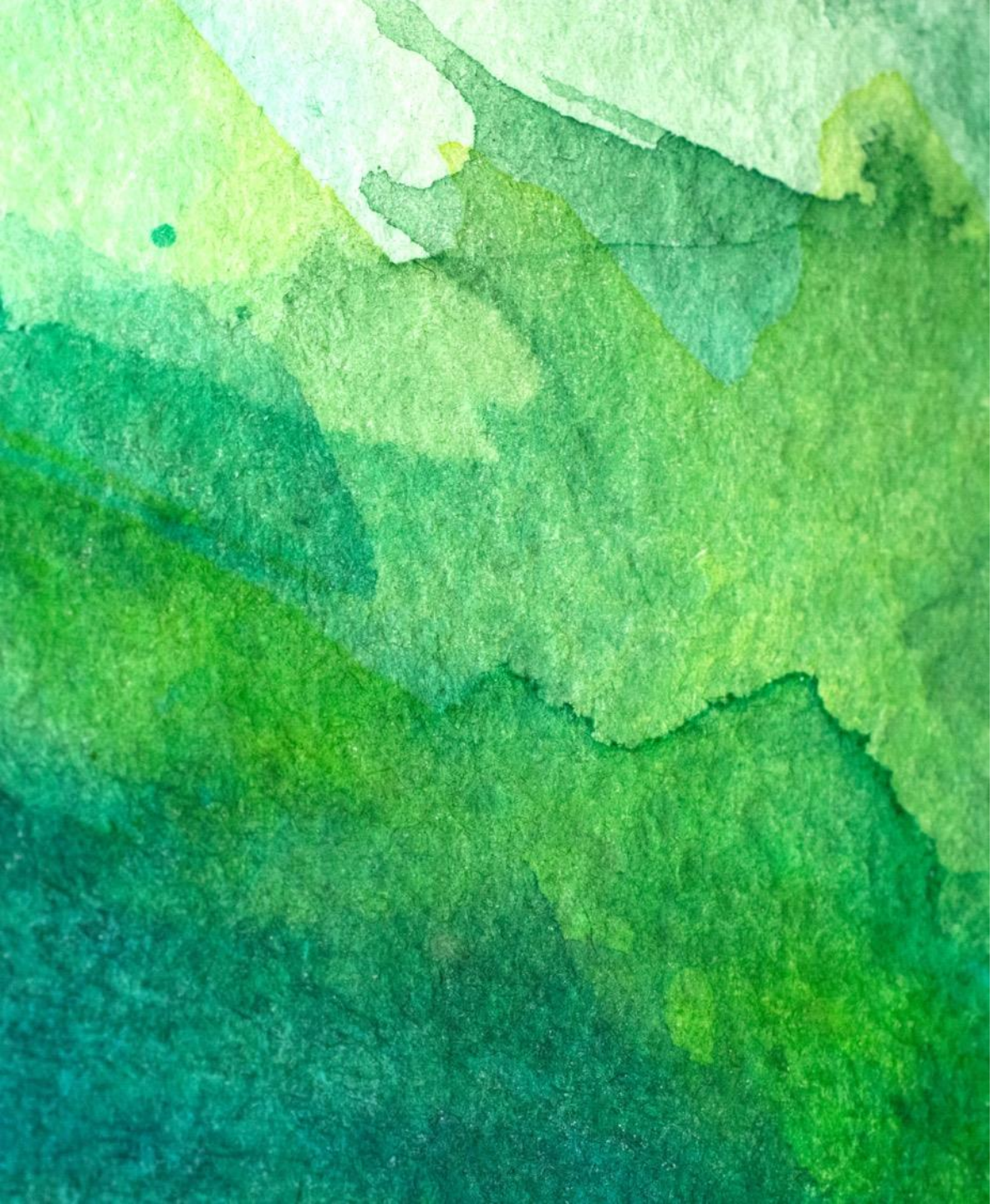
- Second PULSE annual scientific meeting (1st and 2nd cohort)

Summary of PI commitment

- Co-funding of postdoc (salary, research running costs incl. extra costs for secondments)
- Commit to PULSE training program
  - Personal Career Development plan, driven by postdoc with support from PULSE Training Committee
  - Postdoc PULSE program training approx. 2 weeks/year (bimonthly postdoc seminars and annual workshop/scientific meeting)
- Supervision
  - Follow MSCA supervision guidelines
  - Supervision with postdoc 2 h/week
  - Supervision panel, meet 2 times/year (main supervisor + 2 co-supervisors, of which one act as mentor)
- Project agreements and ethical approvals for the project (as needed)
- Open Science, data management & MSCA green charter
  - PULSE emphasizes Open Science practices, and all projects are expected to adhere to the SciLifeLab Data Policy
  - PIs and postdocs should ensure that research outputs such as publications, data, and code are made openly accessible whenever possible
  - MSCA Green charter

Benefits of being a PULSE PI

- Recruitment of **excellent postdocs** through attractive MSCA-branded call, where SciLifeLab is responsible for call and selection of postdocs
- **EU Co-funding** (134 404 Euro for 3-year project)
- Access to **PULSE international network** with industry partners, research institutions and infrastructures
- Great opportunity to take part in major and **unique EU postdoctoral training program**
- Opportunity to tie **new Associated partners** to the network



- **We welcome questions to pulse@scilifelab.se**