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Annual report 2021

RESEARCH SCHOOL IN STEM CELL BIOLOGY
LUND STEM CELL CENTER | LUND UNIVERSITY



In brief

The Research School in Stem Cell Biology is an academic consortium that focuses on excellence in research training and career development. We offer a diverse selection of educational activities to provide the next generation of stem cell scientists with an excellent starting platform for a successful career.

Our long-term commitment is to foster learning, discovery, and debate in the field of stem cell research through innovative educational approaches that aim at the entire academic community together. We strive to strengthen our research and learning culture and build an inclusive and progressive environment that enables everyone at Lund Stem Cell Center to thrive. For that, we follow the guiding principles of scientific excellence, transparency, and authenticity. We believe that the human dimension in research – relationships, resilience, and leadership – is crucial to generate excellent science.

We established this long-term strategy in 2017, which has transformed the Research School at many levels. The establishment of an independent Research School board and steering group has been instrumental in driving this change process, which would not have been possible without the enduring support from the Stem Cell Center. After five successful years the time has come for reflection of our activities and for refining our strategy, necessitated further as our Executive Director Christine Karlsson will be on leave of absence from the Research School from January 2022. To centralize our efforts, the Research School board and steering group will be merged into one executive committee as of January 2022. The committee will strategize and implement a redefined Research School scope and mission in line with the overall vision of the Stem Cell Center. This work will be overseen by the Research School's Scientific Director Professor David Bryder.

EXECUTIVE SUMMARY 2021

The annual activity report is a management report of the Executive Director of the Research School in Stem Cell Biology. It enables the Executive Director to be accountable and transparent to the board with the intention to provide all the information concerning our activities. It allows the board to acquire information useful for assessing strategies, commitments and results generated by the Research School over time.

This activity report¹ covers the period January to December 2021. It lists the Research School's strategy for 2021 and a categorized summary of activities and events designed to meet our strategic aims.

Christine Karlsson

Executive Director, Research School in Stem Cell Biology
Lund Stem Cell Center
Lund University

1. Created by Christine Karlsson, edited by David Bryder. December 2021

Strategic aims 2021

The Research School's strategy for 2021 was based around achieving two key areas of equal priority, underpinned by a third essential and enduring area designed to strengthen our operations:

AIM 1

To lay the foundation for inclusive and sustainable education in stem cell biology.

AIM 2

To foster research communities.

AIM 3

To encourage open and transparent communication as a foundation for a collaborative environment.

IMPACT OF THE COVID-19 PANDEMIC

In the context of the lasting Covid-19 pandemic, most Research School activities were offered as digital or hybrid events. Given the emotional burden of living with COVID, the Research School offered a webinar series addressing "Mental health in academia" in spring 2021, followed by a course on "Mental health first aid" in autumn 2021.



Photo: Kenneth Ruoms

Activity report 2021

SEMINAR SERIES

The Research School hosts several seminar series to bring scientists from different research areas at Lund Stem Cell Center together, aiming to stimulate multidisciplinary discussions and collaborative research.

Meet the experts. The Meet the Experts seminar series aims to highlight emerging technologies that are relevant to the research community at Lund Stem Cell Center.

PhD student organizers: Magdalena Madej (Bellodi lab) and Rita Alves (Pereira lab)

Research School organizers: Christine Karlsson and Henrik Ahlenius

Format: Digital

DATE	TECHNOLOGY	SPEAKER
MARCH 9	Mitotic Bookmarking in Embryonic Stem Cells	Pablo Navarro, Institute Pasteur, Paris, France
APRIL 19	Transgenerational Small RNA Inheritance	Oded Rechavi, Tel Aviv University, Tel Aviv, Israel
MAY 18	The SunTag system	Marvin Tanenbaum, Hubrecht Institute, The Netherlands
JUNE 8	The Trim-Away system	Agata Zielinska, Imperial College London, University of Cambridge
SEP 21	Immunopeptidomics	Michal Bassani-Sternberg, Ludwig Institute for Cancer Research, Lausanne, Switzerland
NOV 23	The blastoid system	Nicolas Rivron, IMBA Vienna BioCenter, Austria

Career talks. This seminar series focuses on career development, aiming to inspire PhD students and postdocs about their career possibilities. Senior scientists or life science professionals give insights into their research career in chronological order and focus on key strategic decisions related to science but also other aspects such as e.g., work-life balance.

Research School organizers: Christine Karlsson and Henrik Ahlenius

Format: Digital

DATE	TITLE	SPEAKER
Jan 21	Finding your way in science	Elly Tanaka, Research Institute of Molecular Pathology, Vienna, Austria
Nov 2	Stem cell science and the genesis of new therapeutic strategies for patients	Derrick Rossi, Stem Cell and Regenerative Biology Department at Harvard Medical School, and Co-founder of Moderna

What's next meeting forum. The "What's next" sessions started as a support network for postdocs at Lund Stem Cell Center in 2019 to enable open discussions around a variety of different topics. The core idea was to create a platform for sharing experiences and build collaborations. Since 2020 these meetings are open to both postdocs and PhD students. Considering the COVID pandemic, the What's next meeting forum focused on the topic "Resilience & well-being in academia" during spring 2021. In this webinar series, we explored common challenges that impact on an academic's mental health and well-being. During five consecutive sessions, we offered a practical toolbox to help academics maintain well-being whilst striving for excellence.

During autumn 2021, we launched a new "Triumph and disaster interview series" exploring professional identity across academic career stages. By sharing successes, failures, and lessons learned, we aim to foster transparent and collaborative environments.

Postdoctoral organizers: Dang Nghiem Vo (Sitnicka lab), Pavan Prabhala (Magnusson lab), Srisaiyini Kidnapillai (Ottosson lab)

Research School organizer: Christine Karlsson

Format: Digital and in-person

Resilience & well-being in academia webinars

DATE	TOPIC	SPEAKER
FEB 12	Strategies for managing well-being	Desiree Dickerson, PhD, Clinical psychologist
MARCH 12	Motivation & Procrastination	Desiree Dickerson, PhD, Clinical psychologist
MARCH 17	Supporting student mental health and well-being. A useful toolbox	Desiree Dickerson, PhD, Clinical psychologist
APRIL 16	Perfectionism & Imposter Syndrome	Desiree Dickerson, PhD, Clinical psychologist
MAY 14	Shifting the Spotlight	Desiree Dickerson, PhD, Clinical psychologist
JUNE 11	Rethinking productivity	Desiree Dickerson, PhD, Clinical psychologist

Triumph and disaster interview series

DATE	IN THE SPOTLIGHT	MODERATORS
OCT 22	Nick Leigh, Lund Stem Cell Center	Pavan Prabhala & Srisaiyini Kidnapillai
NOV 19	Emma Hammarlund, Lund Stem Cell Center	Srisaiyini Kidnapillai & Dang Nghiem Vo

Educational sessions. Annual interdisciplinary and interactive sessions that aim to encourage a broad and critical thinking about science and good scientific practice.

Research School organizers: Christine Karlsson and Henrik Ahlenius

Format: Digital

DATE	TOPIC	SPEAKER
MAY 3-4	Critical Reasoning and Logic	Kai Hüwelmeier, The Institute of Argumentation Competence, Berlin, Germany

COURSES AND WORKSHOPS

The Research School offers a variety of flexible courses and workshops with a focus on techniques relevant to stem cell biology as well as transferable soft skills. Several of these courses are run in collaboration with either Core Facilities or teaching staff at Lund Stem Cell Center, providing students with direct contact points with established and emerging new technological developments on-site. A **special thank you** to the dedicated staff at the StemTherapy Flow Cytometry Core Facility and the MultiPark Cellomics Platform who have together with the Research School trained a total of 236 students and junior scientists in flow cytometry since 2014.

To offer inclusive and sustainable education, the Research School has developed a new 3rd cycle advanced course in stem cell biology and regenerative medicine (MESR01F) for PhD students and postdocs at Lund University and other national/international higher education institutions. This work was led by steering group member Mattias Magnusson during 2021. The planned launch date for this course is spring 2022.

Research School organizer: Christine Karlsson

Format: Digital (D) or hybrid (H)

DATE	TOPIC	SPEAKER
FEB 8-10	Flow cytometry introductory course (D)	FACS Core Facility, Lund Stem Cell Center
FEB 16-18	EMBO project management course (D)	Samuel Krahl & Melanie Glickman, EMBO Solutions GmbH
MAY 31 – JUNE 2	Flow cytometry introductory course (D)	FACS Core Facility, Lund Stem Cell Center
SEP 6-10	Flow cytometry continuation course (H)	FACS Core Facility, Lund Stem Cell Center
SEP 9-14	12h Mental First Aid training - MHFA (D)	Christine Karlsson & Jenny Hansson, Certified MHFA instructors
OCT 11-13	Flow cytometry introductory course (H)	FACS Core Facility, Lund Stem Cell Center

PUBLIC ENGAGEMENT

UniStem Day is the largest educational outreach initiative on stem cells and regenerative medicine in Europe, solely dedicated to high school students. Lund University's participation in UniStem Day was initiated in 2015 by Professor Malin Parmar and the Research School in Stem Cell Biology. The Research School has acted as the central organizing body, bringing together scientists from Lund Stem Cell Center with high school students from all over Skåne. Connected to UniStem, the Research School initiated the project "Taking science to schools – Borrow a scientist" in 2019, where researchers from Lund Stem Cell Center visit local high schools to talk about stem cell research and provide insight into a researcher's everyday life.

As the success of such outreach events largely depends on interpersonal interactions between scientists and high school students, both events were cancelled in 2021. Instead, Lund Stem Cell Center and the Research School in Stem Cell Biology prepared an online science quiz¹ to increase the general public's interest for stem cell science.

RESEARCH SCHOOL DROP-IN AND COMMUNITY EVENTS

Professional success requires paying attention to all aspects of life: health and well-being, community, career development, personal and professional relationships. In her role as certified coach and instructor in Mental Health First Aid, Christine Karlsson offers drop-in hours to give PhD students, postdocs, and group leaders the opportunity to discuss these questions in individual coaching sessions. In 2021, Christine Karlsson met 18 Stem Cell Center staff and students during drop-in hours, both digitally and in person.



1. <https://www.sydsvenskan.se/2021-03-05/quiz-svara-lund-vad-kan-du-om-stamceller>

Professional Development Program 2021-2022

The Research School's Professional Development Program¹ is a one-year complementary educational program that brings together PhD students from diverse laboratories at Lund Stem Cell Center. The program objectives tie into the Research School's overall mission to shape an excellent, inclusive, and collaborative training and research environment at Lund Stem Cell Center. The program promotes PhD student success by providing academic and career support, mentoring, and extra-curricular activities. Its professional development activities are built on a collaborative peer-to-peer learning model that helps students develop a foundation for long-term career success.

In November 2021, program leaders Jenny Hansson and Christine Karlsson welcomed 14 new PhD students to the program during a 1.5-days kick-off retreat. The purpose of this retreat was to take the first step in a continuing process to establish a research community together. The overarching retreat topic was the concept of "**Mentoring Up**" – Taking responsibility for your own professional and academic achievements through a collaborative learning, mentoring and feedback approach. The Mentoring Up concept linked back to an online self-leadership training that enrolled students completed prior to starting the Professional Development Program. The program will run through November 2022 with monthly toolbox sessions, writing meet-ups, a connected mentoring program, a combined event with the Professional Development Program alumni from 2018/2019, and an ending retreat.

THANK YOU

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1. <https://www.stemcellcenter.lu.se/research-school/program-overview/PDP>



Photo: pixabay.com



Research School steering group 2021

Christine Karlsson, Executive Director
David Bryder, Scientific Director
Henrik Ahlenius, Steering group member
Jenny Hansson, Steering group member
Mattias Magnusson, Steering group member

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