



**LUND**  
UNIVERSITY

# Research School in Stem Cell Biology

ANNUAL REPORT | 2020



## In brief

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**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 and we have seen the Research School transform since then. We are engaging with researchers at all career stages, policymakers and the general public, and are forging stronger synergy with the leadership at Lund Stem Cell Center.

Our vision for 2021 and beyond is still based on the same goals and core values that we have pursued since 2017: to shape an excellent, inclusive and progressive training and research environment at Lund Stem Cell Center.

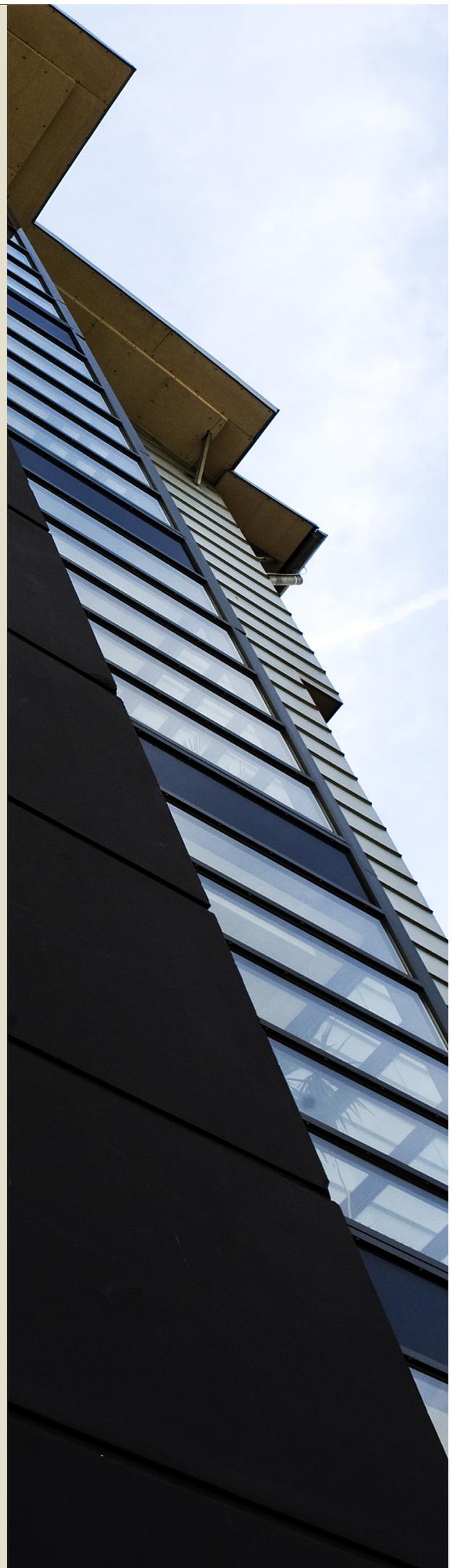
### **EXECUTIVE SUMMARY 2020**

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 report covers the period January to December 2020. It lists the Research School's strategy for 2020 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





## Strategic aims 2020

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The Research School's strategy for 2020 was based around achieving three key areas of equal priority (1-3), underpinned by a fourth essential and enduring area designed to strengthen our operations:

### **AIM 1**

To increase science outreach and visibility.

### **AIM 2**

To focus on PhD student's writing and presentation skills.

### **AIM 3**

To foster research communities.

### **AIM 4**

To build an effective organization by encouraging open and transparent communication as a foundation for a collaborative environment.

## The Research School's response to the Covid-19 pandemic

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As an immediate response to the Covid-19 pandemic in early spring 2020, the Research School offered support measures addressing the shift to remote work by gathering advice on how to stay productive, and by offering online platforms to stay connected.

In the context of the lasting Covid-19 pandemic throughout 2020, some Research School activities were canceled or postponed. As a result of the pandemic, aims (1) and (3) could not be fully attained. Nonetheless, the majority of our activities were offered via the Zoom digital platform. Although the adaption to digital teaching has resulted in increased workload and shifted priorities, it has brought a positive impact on our readiness for digital teaching and learning. We will continue to explore how online learning can be implemented as an element in our mission to foster thriving research communities.

# Activity report 2020

## SEMINAR SERIES

The Research School hosts a number of 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: Ella Quist (Ahlenius lab) and Anna Konturek-Ciesla (Bryder lab) | Research School organizers: Christine Karlsson and Henrik Ahlenius  
Format: Zoom

DATE	TECHNOLOGY	SPEAKER
MAY 13	Exploring chromatin 3D architectures	Giovanni Ciriello, University of Lausanne, Switzerland
JUNE 23	Organoid models of human brain structure and function	Madeline Lancaster, University of Cambridge, United Kingdom
SEP 23	Spatial Transcriptomics	Lina Olsson, Lund University <sup>1</sup>
NOV 4	Super-resolution and advanced microscopy	Sebastian Wasserström, LU and Alexey Amunts, Stockholm University

**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: Zoom

DATE	TOPIC	SPEAKER
JUNE 15	My path in science	Jonas Frisé, Professor of Stem Cell Research Karolinska Institutet, Stockholm, Sweden
DEC 7	Doing it my way: Creating your own career	Jean-luc Doumont, Research communication expert, Brussels, Belgium

**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: Live event

DATE	TOPIC	SPEAKER
FEB 14	Scientific Integrity: How to publish reproducible results	Celine Carret, Senior Editor EMBO Molecular Medicine

**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 June 2020 these meetings are open to both postdocs and PhD students. Postdoctoral organizers: Maciej Ciesla (Bellodi lab), Pavan Prabhala (Magnusson lab), Srisaiyini Kidnapillai (Ottosson lab) | Research School organizer: Christine Karlsson  
Format: Zoom

DATE	TOPIC	SPEAKER
APR 24	Making proactive career choices	Mikael Sigvardsson, Lund Stem Cell Center <sup>2</sup>
MAY 8	Where to? How to define your next move?	Katharina Lahl, LU Paul Bourguine, SCC
MAY 20	Recruitment: What do PIs look for when recruiting postdocs?	Chris Madsen, LU Daniella Ottosson, SCC
JUNE 5	How to explore your entrepreneurial ideas?	Johan Flygare, SCC Experts from LU Innovation
SEP 18	From idea to execution	Cristiana Pires, Asgard Therapeutics, SCC
OCT 16	Promoting your science	David Kent, University of York, United Kingdom Alexander Doyle, SCC
DEC 11	Adding value to your CV	Anna-Karin Wihlborg, LU Research Services Christine Karlsson, SCC

1. Lund University, LU

2. Lund Stem Cell Center, SCC

## COURSES, WORKSHOPS AND TUTORIALS

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.

The development of leadership initiatives has been a major Research School focus since 2017, as we believe that leadership and management skills are critical for academic success. As the human dimension is considered crucial for the success of these initiatives, we canceled the planned leadership courses due to the Covid-19 pandemic.

Format: Live events (IRL) and digital meetings (Zoom)

Research School organizer: Christine Karlsson

DATE	TOPIC	TRAINER
MAR 23-25*	Flow cytometry introductory course	FACS Core Facility, SCC
APR 14	Online presentation training for researchers (Zoom)	Ben Libberton, Aurora Dynamics
APR 27	Toolbox workshop: Meeting techniques (Zoom)	Christine Karlsson, SCC
MAY 11-15*	Flow cytometry continuation course	FACS Core Facility, SCC
MAY 25-26*	Creative Problem Solving for Scientists	KnowInnovation
JUNE 11*	Toolbox workshop: Working relationships	Christine Karlsson, SCC
SEP 14-16	Flow cytometry introductory course (IRL)	FACS Core Facility, SCC
SEP 21-22	Presentation techniques for scientists (IRL)	Elevate Scientific
OCT 15	Scientific illustration tools - part I (Zoom)	Marie Jönsson, SCC
OCT 19-23	Flow cytometry continuation course (IRL)	FACS Core Facility, SCC
NOV 5	Scientific illustration tools - part II (Zoom)	Marie Jönsson, SCC
NOV 9-11	Flow cytometry introductory course (Zoom)	FACS Core Facility, SCC
ALL YEAR	Toolbox tutorial: How to write a paper aimed towards a peer-reviewed scientific journal	David Bryder, SCC

\*Indicates postponed/canceled

## PUBLIC ENGAGEMENT

The Research School is the major organizing body for the yearly UniStem Day, the largest outreach event in stem cell biology in Europe, dedicated to high school students. UniStem Day on March 6, 2020 was pursued as planned after communication with the Lund University corona contingency team.

### UniStem Day 2020 at Lund Stem Cell Center in numbers:

- 574 applications received in total (representation across Skåne)
- 222 high school students from eight different schools were selected to visit Lund Stem Cell Center.
- 16 workshops offered
- More than 60 workshop leaders, including organizing committee members

Schools that could not attend UniStem were instead given the opportunity to participate in the Research School's **"Taking science to schools – Borrow a scientist"** initiative, where scientists from Lund Stem Cell Center visit high schools to talk about stem cell research. Initially planned for spring 2020, the school visits were postponed to autumn 2020 due to the Covid-19 pandemic. Out of ten scheduled visits, seven were held as either IRL or digital visits during October to December 2020, while three were postponed to 2021. The "Taking science to schools 2020" project engaged in total 175 high school students, 10 teachers, and 17 scientists from Lund Stem Cell Center who were supported by the project leaders Christine Karlsson and Jenny Hansson.

The Research School's Executive Director Christine Karlsson collaborated with the Ragnar Söderberg Foundation on the art exhibition **"The invisible body – art in science"**, held in Stockholm 2017-2018. During 2020, Christine Karlsson coordinated the work in transferring all original art works back to Lund University, where they are now on public display at the Faculty of Medicine.

In February 2020, PhD students involved in the Professional Development Program successfully launched the alumni blog **"Science as we know it"**. Blog posts are shared through different social media channels to engage with the general public and the scientific community.

## ANNUAL SYMPOSIUM

The Annual Research School Symposium provides an opportunity to learn and to grow professionally, to meet peers, build a network, and to start new collaborations. Our symposia are designed to actively engage PhD students and postdocs from start to finish. The symposium topic varies each year. In the context of the Covid-19 pandemic, the Research School Symposium 2020 with the suggested topic “Single-cell omics in stem cell biology” was canceled.

## 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 (MHFA), 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 2020, Christine Karlsson met 24 Stem Cell Center staff and students during drop-in hours, both IRL and on Zoom (introduction meetings, coaching, thesis writing support).

**Professional Development Program alumni event.** The Professional Development Program at the Research School in Stem Cell Biology was established in 2018 as a one-year complementary educational program to create a research community for PhD students from diverse laboratories at Lund Stem Cell Center. On September 11, 2020, program participants and program leaders (Jenny Hansson and Christine Karlsson) reunited during a one-day retreat (IRL) to reflect and plan forward along the theme “Vision for change”.

To end this very special year 2020 on a good note and to bring students and staff at Lund Stem Cell Center together in a fun and mindful pre-Christmas corona-friendly mingle session, the Research School organized a **Christmas Yoga Zoom session** on December 14.





## THANK YOU

The Research School in Stem Cell Biology is supported by StemTherapy, a Strategic Research Area for Stem Cells and Regenerative Medicine. StemTherapy is funded by the Swedish Government.

We would like to thank StemTherapy and the Stem Cell Center leadership for their long-term commitment and support. We are grateful to all our members, our external and internal speakers and partners, local administration, and everyone at Lund Stem Cell Center who supported us with encouragement, advice, engagement, and cooperation in 2020. Thank you!

## RESEARCH SCHOOL STEERING GROUP

**Christine Karlsson**, Executive Director | **David Bryder**, Scientific Director | **Jenny Hansson**, Steering group member | **Henrik Ahlenius**, Steering group member



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