



Stockholm University
Centre for Radiation Protection Research

Stockholm University Research Centre for Radiation Protection Research - CRPR

Summary of activities during 2021-2023

Introduction

With the establishment of CRPR in October 2008, Stockholm University wants to promote excellence and long term national competence in radiation protection research. Stockholm University has a long standing tradition in education and research on the effects of ionizing radiation on man and the environment. The location of CRPR at the Stockholm University provides CRPR with a unique set up of radiation facilities for investigations of effects of different dose rates and radiation qualities. CRPR shall promote international cooperation and invite colleagues from Sweden and Europe to use the radiation exposure facilities.

The Centre was created as an independent unit within the Department of Genetics, Microbiology and Toxicology (GMT) at Stockholm University at the Science Faculty of Stockholm University and comprises researchers who are active within the fields of radiobiology, radioecology and radiation dosimetry. In January 2013 GMT fused with two other institutes to form the new Department of Molecular Biosciences, The Wenner-Gren Institute – MBW (<http://www.su.se/mbw/>).

The Centre is headed by a Board of five members, one for each of the three research fields and two others whose competence is judged to be of value for the Centre's operation. The Board members and the chairperson of the board are appointed for three years by the Chancellor based on the recommendations of the Board of the Faculty of Science. The Board has the overall responsibility for the Centre's operation and programme.

The Head of the Centre is appointed for a three year period by the chancellor after hearing the Faculty of Sciences and the board of MBW. The head of the Centre shall not be a member of the board. The Head of the Centre is in charge of the daily activities and should be an employee of the University. The activities of the Centre are financed from external sources. From 2013, the webpage of CRPR is <http://www.crpr-su.se>.

Svensk sammanfattning

Med inrättandet av CRPR i oktober 2008 vill Stockholms universitet främja spetskompetens och långsiktig nationell kompetens inom strålskyddsforskning. Stockholms universitet har en lång tradition inom utbildning och forskning om effekterna av joniserande strålning på människan och miljön. Placeringen av CRPR vid Stockholms universitet ger CRPR en unik möjlighet av använda strålningsanläggningar för undersökningar av effekter av olika doshastigheter och strålningskvaliteter. CRPR ska främja internationellt samarbete och bjuda in kollegor från Sverige och Europa att använda anläggningarna för strålningsexponering.

Centret skapades som en oberoende enhet inom institutionen för genetik, mikrobiologi och toxikologi (GMT) vid Stockholms universitet vid Naturvetenskapliga fakulteten vid Stockholms universitet och består av forskare som är aktiva inom områdena radiobiologi, radioekologi och strålningsdosimetri. I januari 2013 gick GMT ihop med två andra institut för att bilda den nya institutionen för molekylär biovetenskap, Wenner-Gren Institute - MBW (<http://www.su.se/mbw/>).

Centret leds av en styrelse med fem ledamöter, en för vart och ett av de tre forskningsområdena och två andra vars kompetens bedöms vara av värde för centrumets verksamhet. Styrelseledamöterna och styrelsens ordförande utses för tre år av kanslern baserat på rekommendationerna från styrelsen för naturvetenskapliga fakulteten. Styrelsen har det övergripande ansvaret för centrumets verksamhet och program.

Activity during 2021-2023

Head CRPR

Andrzej Wojcik, Professor, MBW, Stockholm University

CRPR board

Eva Forssell-Aronsson, Professor, Chairperson, Dept of Radiation Physics, Sahlgrenska Academy at University of Gothenburg

Karolina Stark/Lena Konovalenko, Swedish Radiation Safety Authority SSM

Iuliana Toma-Dasu, Professor, Medical Radiation Physics, Stockholm University and Karolinska Institutet

Mats Harms-Ringdahl, Professor emeritus, MBW Stockholm University

Clare Bradshaw, Professor, Department of Ecology, Environment and Plant Sciences (DEEP), Stockholm University

CRPR did not receive any external financial support during the period 2021-2023.

The activities of during 2021-2023 are described below.

International workshops

Two international workshops were organised:

The international workshop on individual radiation sensitivity - <http://www.crpr-su.se/irir>, KVA, 1-2 September 2022

The role of oxygen in radiation therapy - <https://www.crpr-su.se/hypoxia>, KVA, 4-5 September 2023

Each workshop was attended by ca 100 participants.

International Radiological Protection School (IRPS)

In collaboration with SSM and OECD-NEA, the CRPR organises each year a one week International Radiological Protection School (IRPS). The school is attended by ca 70 international participants. The dates of IRPS were:

23-27 August 2021 (by ZOOM)

22-26 August 2022, Stockholm University

14-18 August 2023, Stockholm University

The NEA website of the IRPS is https://www.oecd-nea.org/jcms/pl_27505/international-radiological-protection-school-irps

The next IRPS is planned for 12-16 August 2024

Other activities

EU partnership PIANOFORTE

CRPR was actively involved in preparation of the EURATOM-funded partnership PIANOFORTE <https://pianoforte-partnership.eu>. The partnership kicked-off in June 2022 and will finish in May 2027. Andrzej Wojcik leads the WP4 on Education and training.

MELODI

Andrzej Wojcik is since 2019 the chair of the European MELODI platform: <https://melodi-online.eu/>. Eva Forssell-Aronsson is member of the Scientific Advisory Committee (SAC). Mats Harms-Ringdahl was a member of the High Level Expert group that founded MELODI. The main aim of MELODI is to promote radiation protection research in the range of low doses. MELODI is a member of the umbrella organisation of European platforms MEENAS: <https://www.meenas.eu/>. All platforms contribute to selecting research priorities for calls for EURATOM-funded research projects.

RENEB

CRPR is member of the European Network of Biological and Retrospective Physical Dosimetry RENEB <http://www.reneb.net>. The main activity of RENEB is to carry out annual inter-laboratory comparisons and promote research on biological dosimetry. CRPR participated in all inter-laboratory comparisons.

UNSCEAR

Andrzej Wojcik and Eva Forssell-Aronsson, are members of the Swedish delegation to UNSCEAR and participated in annual meetings 2020-2023.

SAINT

CRPR joined the SAINT network in 2019. Lovisa Lundholm from Andrzej Wojcik's group joined the Council and represents CRPR in SAINT.

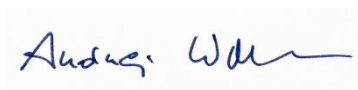
Teaching activities

CRPR organized an annual course in radiation biology and cellular toxicology (15 credits) at the Stockholm University for undergraduate and master students.

CRPR organized each year a two-week European training course CELET - Cellular effects of high and low LET ionising radiation – introduction to radiation biology. The course is financed by the EU project RadoNorm (<https://www.radonorm.eu/>). The course is embedded in the SU course in radiation biology and cellular toxicology and is usually attended by 10-12 European early career researchers, plus the SU students. The website of the 2023 course is: www.crpr-su.se/CELET.

Each year Andrzej Wojcik organised a half-day laboratory exercise in radiation biology to students of the Sjölin's gymnasium Södermalm and organised a half-day field excursion to the Ytterby mine, where natural background radiation was measured. Each year, the number of participating students was ca 10.

Each year the CRPR financially supported the annual meeting of SWE-RAYS with 30 000kr - <https://www.swerays.se>.



Andrzej Wojcik
Head of CRPR

Stockholm, 2023 11 19