



Stockholm University
Centre for Radiation Protection Research

Stockholm University Research Centre for Radiation Protection Research
CRPR

Summary of activities for 2009 to 2011

With the establishment of CRPR in October 2008, Stockholm University wanted 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 Department of Genetics, Microbiology and Toxicology (GMT) provides CRPR with a unique set up of radiation facilities for investigations of effects of low doses and dose rates of low and high LET radiation. CRPR shall promote international cooperation and invite colleagues in Europe to use the low dose and dose rate exposure facilities.

On the national arena CRPR will support collaboration and coordination between universities that have educational programs in subjects of relevance for radiation protection research. CRPR shall arrange seminars and workshops for scientists and research scholars in radiation biology, radiation dosimetry and radioecology in order to stimulate exchange of knowledge and expertise between the disciplines. CRPR shall also be actively engaged in informing the public and decision makers in matters dealing with effects of ionizing radiation on man and the environment.

The Centre is an independent unit within the Department of Genetics, Microbiology and Toxicology 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.

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 GMT. 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 by external funding.

CRPR board 2009-2011.

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

Carl-Magnus Larsson, Head of the Radiation Safety Unit, SSM 2009-January 2010

Leif Moberg Head of research, SSM January 2010-2011

Hooshang Nikjoo, professor, Medical Radiation Physics, Dept of Oncology-Pathology, Karolinska Institutet

Andrzej Wojcik, professor, GMT Stockholm University

Clare Bradshaw, associate professor, Dept of Systems Ecology, Stockholm University

Head CRPR 2009-2011

Mats Harms-Ringdahl, professor, GMT Stockholm University

Support has been provided for the CRPR activities by:

Swedish Radiation Safety Authority (SSM)

Swedish Nuclear Fuel and Waste Management Company, SKB

The Swedish Research Council

DoReMi, NoE, FP7 Euratom.

Activities.

International Conferences, Workshops and Symposia

2009

The present and future of radiation protection research, international workshop (Program appendix

1) The Royal Swedish Academy of Science, October 16th 2009

2010

European Radiation Research Conference, international conference September 5-9, 2010, Stockholm University. Contribution to the organization and sponsorship.

Program (<http://www.err2010.eu/program%20book%20final.pdf>)

Monte Carlo 2010, international workshop, November 9-12 (Program appendix 2)

The Royal Swedish Academy of Science, Stockholm

2011

Radioecological research during 25 years after the Chernobyl accident, joint conference with the Swedish Radioecology Society, March 22-23, Stockholm University.

MELODI 2011, workshop arranged for the partners of MELODI, September 13-14,

Rånäs Slott

System Biology 2011. international workshop, October 16-18 (Program appendix 3)

The Royal Swedish Academy of Science, Stockholm

Seminars:

2009

Boron neutron capture therapy (BNCT) of disseminated liver metastases.

Sander Nievaart (Institute for Energy, Joint Research Centre, European Commission, Petten, Netherlands): Stockholm University, January 30, 2009. Host: Andrzej Wojcik.

Radiation Protection of the Environment: reconciling the need for assessment with ecological complexity

Brenda Howard and Nick Beresford (Centre for Ecology and Hydrology, Lancaster Environment Centre, UK): Stockholm University, April 21 2009. Host Clare Bradshaw

Estimation of genetic risks of ionizing radiation: current status and emerging prospects.

K. Sankaranarayanan, Department of Toxicogenetics, Leiden University Medical Centre, The Netherlands
Stockholm University, May 13 2009. Host: Hooshang Nikjoo

Ionizing radiation, genetic risks and ICRP recommendations from the mid-1950s to the present.

K. Sankaranarayanan, Department of Toxicogenetics, Leiden University Medical Centre, The Netherlands.
Strålsäkerhetsmyndigheten, May 14, 2009. Host: Hooshang Nikjoo

Ionizing radiation and genetic risks - current status and emerging prospects.

K. Sankaranarayanan, Department of Toxicogenetics, Leiden University Medical Centre, The Netherlands.
Karolinska Institutet, May 15, 2009. Host: Hooshang Nikjoo

Childhood Cancer surrounding nuclear power plants in Germany (KIKK study): Critical evaluation of the epidemiological study.

Wolfgang-Ullrich Müller (German Commission on Radiological Protection SSK). Stockholm University,
September 11, 2009. Host: Andrzej Wojcik

Radiation-induced communication signal-a tale of two fish

Carmel Mothersill, McMaster University, Canada
Stockholm University, December 7, 2009. Host: Clare Bradshaw.

2010

Dial 112 for p53

Mats Ljungman, Departments of Radiation Oncology and Environmental Health Sciences
University of Michigan, March 18. 2010, Host Mats Harms-Ringdahl.

Polynucleotide kinase/phosphatase - its role in DNA repair and a potential therapeutic target

Michael Weinfeld, Ph.D., Cross Cancer Institute, Edmonton, Canada, Stockholm University, April 8,
2010, Host Hooshang Nikjoo

Polynucleotide kinase/phosphatase - its role in DNA repair and a potential therapeutic target

Michael Weinfeld, Ph.D., Cross Cancer Institute, Edmonton, Canada, Karolinska institutet, April 9 2010,
Host Hoshang Nikjoo.

Modeling time dependent biological response to radiation. Ewa Gudowska, M. Kac Complex Systems
Research Centre, M. Smoluchowski Institute of Physics, Jagellonian University, Kraków, Poland,
December 8, 2010. Host Andrzej Wojcik.

2011

An Arctic marine radioecology study around a nuclear weapons accident site.

Mats Eriksson, International Atomic Energy Agency (IAEA), Marine Environmental Studies Laboratory,
Monaco. February 9, 2011. Host: Clare Bradshaw

Genetics and epigenetics of parental exposure to environmental mutagens. Yuri E Dubrova

Department of Genetics, University of Leicester, United Kingdom, Stockholm University, February 25 2011., Host: Hooshang Nikjoo

Like father like son: Transgenerational genomic instability in mammals, Yuri E Dubrova, Department of Genetics, University of Leicester, United Kingdom, CCK, Karolinska Institutet, February 24 2011, Host: Hooshang Nikjoo

Radiation-induced normal tissue effects: Mechanisms and methods of treatment, Dr Mohi Rezvani, Natural Biosciences, University of Reading, Reading UK, April 20 2011, Host Siamak Haghdoost.

Radiological protection education and training for medical diagnostic and interventional procedures for healthcare staff and students: new ICRP recommendations, Julian Liniecki, Dept. Nuclear Medicine, University Clinics of Łódź, Poland. May 27 2011, Host Andrzej Wojcik.

Alternative repair pathways to handle complex DNA damage generated by oxidative stress and anticancer drugs. Murat Saparbaev, Institut de Cancérologie Gustave Roussy, Villejuif, France, September 29, 2011, Host Siamak Haghdoost.

Other main activities 2009-2011..

CRPR is one of the founding members of the MELODI association that started 2010 (<http://www.melodi-online.eu/>).

MELODI is an European Platform dedicated to low dose radiation risk research.

MELODI will propose R&T priorities for Europe in its field of competence

MELODI will seek the views of stakeholders on the priorities for research, keep them informed on progress made, and contribute to the dissemination of knowledge.

MELODI will interface with international partners like WHO and IAEA.

CRPR organized in 2009, 2010 and 2011 courses in Radiation biology (15 credits) at Stockholm University for undergraduate and master students.

CRPR organized in 2011 a European training course (CELOD) at Stockholm University within the WP3 program of DoReMi.

The Radioecology Research Group at the Department of Systems Ecology, Stockholm University, who are a part of CRPR, are the Swedish partner in the European Network of Excellence in Radioecology that started in February 2011 (www.star-radioecology.org).

STAR will promote integration, networking and scientific excellence to benefit human and environmental radiation protection. The project is structured around seven interlinked workpackages. The integration developed by STAR will support the radioecological needs of industry, national authorities, non-governmental organisations, scientists, and the public. A vital role of STAR is to develop a transition plan to sustainability that invokes a permanent management structure (the European Radioecology Alliance) and long term funding for radioecological research, infrastructure, training and education.