



DiMoPEx Training School

NIVA: Novel methods for assessment of risk of cancer from occupational and environmental exposures

14th – 16th of May 2018

Centrum för arbets- och miljömedicin CAMM, Stockholm, Sweden

DiMoPEx - course trainer:

Professor, Per Gustavsson, MD

Professor Maria Albin, MD

Professor Karin Broberg

Institute for Environmental Medicine, Karolinska Institutet, Stockholm, SE

In order to improve cancer prevention, which is becoming increasingly important as the incidence of cancer increases, it is important that clinicians, researchers and other professionals working with cancer issues keep up with developments in the field. There is relatively good access to basic epidemiological methods, but there is a need for a wider dissemination of knowledge of new methodological achievements, both in terms of exposure classification and epidemiological analysis including biological markers of exposure and effect. This course aims to cover this important area of knowledge.

Course objectives

The course aims to give an overview of current knowledge on occupational and environmental cancer, recent developments in methods for exposure classification and epidemiological analysis, use of biomarkers for exposure and effect, use of experimental test systems, risk assessment, and aspects of prevention.

Main topics

- Occupational and environmental cancer – systematic review and lack of knowledge
- Measuring and assessing exposure in occupational settings and in the environment – focus on new methods
- Biomarkers of exposure and effect of occupational and environmental carcinogens
- Occupational exposure limits (OEL) for carcinogenic agents – SCOEL, NEG, etc
- Environmental quality standards (EQS) for carcinogenic agents
- Occupational and environmental cancer epidemiology – study design, bias, confounding, dose-response
- Cancer mechanisms – experimental systems, DNA damage and epigenetics
- Experimental test systems – cell systems, comet assay, etc
- Risk assessment and risk management – hazard identification (IARC, Grade) and hazard quantification (PAF, societal costs)
- Cancer prevention in occupations and in the general population
- Emerging risks – new chemicals, engineered nanoparticles, multiple exposure
- Group work on OEL and EQS for carcinogens
- Participants' personal presentations on hot topics in occupational and environmental cancer