Advocating exposure assessment in postgraduate training

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- Focus on various aspects of exposure-related health effects
- Suggesting interdisciplinary, multicentre PhD School,
- Based on cross-border training, teaching and interdisciplinary research collaboration involving several European universities
Studying adverse health outcomes related to exposures is a major societal challenge
- residential and occupational
- life style and as consumer

Calls for greater focus in medicine and natural sciences (training and research)

Major limitation: lack of objective, verifiable, individual exposure data (also confounder control)
Environmental exposures are among priority risk factors for chronic disease mortality for WHO 2013/2015.

In parts of the EU air pollution reduces life expectancy more than one year.

Globalization of trade and production processes have a direct and indirect environmental and occupational health impact.

This increasing knowledge should be part of postgraduate teaching in environmental health.
In the 20th century, the tobacco epidemic killed 100 million people worldwide.

During the 21st century, it could kill one billion.

Tobacco use is a risk factor for six of the eight leading causes of death in the world.

- Ischaemic heart disease
- Cerebrovascular disease
- Lower respiratory infections
- Chronic obstructive pulmonary disease
- HIV/AIDS
- Diarrhoeal diseases
- Tuberculosis
- Trachea, bronchus, lung cancers

*Other tobacco-caused diseases
Possible new hazards should be recognized

Modern workplaces can be associated with new (unstudied) health risks (i.e. nano materials)

Globalized production and global transport of new materials - process engineering

Need:
• toxicology data
• exposure assessment
• epidemiology
• risk assessment
The School will teach and train the junior researchers (PhD students) within individual focussed expert centres organized thought Europe.
The School will facilitate the **interdisciplinary collaborative approaches in research** within the PhD Program.
They need to gain interdisciplinary knowledge on:

- exposure sciences,
- toxicology
- risk assessment
- pathological diagnostic standards
- epidemiology
- risk management and prevention
- policy implications and ethical issues

Since today early stage researches are potential future new policy/decision makers
Environmental exposures are important risk factors.

Most chronic diseases and cancers among the NCDs are exposure related.

However, this is still not self-evident for many scientists, clinicians, health professionals.

Our Goal: to educate new generation of researches/health professionals who pay more attention to such cases of cancer and chronic diseases that can be prevented.
Developing new treatments for cancer or other chronic diseases takes many years, but reducing exposure to external factors is something that we can start doing today.

Problem 1: missing or not accurate exposure assessment

missing data or exposure assessment not done correctly, i.e. wrong sampling time, wrong target substance, wrong method used........

Problem 2: ethical aspects of risk communication

down sizing harm (i.e. advocating chrysotile as “asbestos with “less harm”) doubtth literature, conflicted scientists, COI-problems........

Problem 3: cost-benefit analysis

Economic motives often outweigh health motives when making choices about cleaning up our living environment

- who benefits (new products/new anti cancer drugs)?
- who pays for the NCD costs?

It would be wonderful if, in future, each euro spent on cancer treatment was matched with one euro for cancer prevention.
THANK YOU