Environmental and occupational exposures can enhance the non-communicable disease risk (EU-COST project DiMoPEx)

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Background

Studying adverse health outcomes related to exposures in the living and working environment, related to lifestyle and as a consumer, is a major societal challenge today. Until recently, the scientists have spent much time looking for the genetic underpinnings of diseases, now it’s time to start looking closer at the environment and focus on evidence based exposure data.

Challenge:

- Non-Communicable Diseases (NCD) are globally recognized as environmental and occupational health disorders.
- World Health Organization (WHO) has ranked environmental exposures among the top risk factors for chronic disease mortality in the world.
- 15 million people died worldwide in 2012 from non-communicable diseases including cancer, diabetes, chronic cardiovascular, neurological and lung diseases. This is an increase from 10 million deaths attributed to these diseases in 1980

Exposures

- Environmental, occupational, behavioral and metabolic risks can explain half of the global mortality and more than two thirds of global NCD's

Non-Communicable Diseases

In recent years, enormous progress in the exploration of genetic and epigenetic factors and resulting disease risk has been made, the influence of environment exposures and lifestyle factors, has received comparatively limited attention in research and teaching programs.

Life time exposures

In DiMoPEx we aim to study the complex interplay between environment exposure and disease risk, focusing on the life time (0-70) experiences and the relevance of those exposures during the life time.

Relevance and time lines

- Public Health
Studying adverse health outcomes related to exposures in the living and working environment or related to lifestyle as a consumer, is a major societal challenge today. Results in terms of public health benefits may range from effective preventive measures to early detection of possible adverse health outcomes.

- Genetic Biology
Aside from genetic aspects, which account only for 10-20 % of the disease etiologies, the concept of ‘Exposome’ as the total of all exposures, along with the individual susceptibility in gaining increasing interest in scientific and clinical communities.

Environmental and occupational health disorders: lack of interdisciplinary cooperation

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