

Understanding health, ageing and disease: determinants, risk factors and pathways

Specific challenge: The development and preservation of good health, and the occurrence and evolution of common diseases and disabilities result from varying degrees of interaction between the genetic make-up of individual human beings and behavioural, environmental (including endocrine disruptors), occupational, nutritional and other modifiable lifestyle factors. This applies from the earliest stages of development throughout life.

Understanding these factors, their interactions and the extent to which they contribute to health preservation and/or to disease development is important for the development of preventive and therapeutic measures supporting good health, prolonged active independence and a productive working life, not least in the context of changing demographic patterns and the ageing of the European population. In particular, proposals should contribute to improving risk identification and validation, and will allow better diagnosis, risk-based prevention strategies and policies.

Scope:

EITHER:

i. The identification of health trends and determinants, their validation, and the validation of risk factors for disease and disability, through the generation, integration and validation of data derived from relevant disciplines (e.g. molecular, behavioural, nutritional, clinical, social and environmental epidemiology; exposure sciences; genetics, epigenetics, etc.). This should involve the exploitation of existing cohorts and longitudinal studies and the assessment of the necessity to establish new ones, as well as where relevant, the valorisation of knowledge gained from population-based bio-banks.

OR:

ii. The identification of determinants and pathways characteristic of healthy and active ageing (from early stages of development onwards) and of health deterioration caused by time, disease accumulation and the abovementioned risk factors and their interactions.

In both cases, sex and gender differences should be taken into account.

The Commission considers that proposals requesting a contribution from the EU of between EUR 4 and 6 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.

Expected impact:

In both cases, proposals should provide a better understanding of the combined effects of factors causing health and disease, with the knowledge generated underpinning the future development of evidence based prevention, diagnostic, therapeutic and other strategies.

For option:

i. This should provide evidence for risk identification, underpinning future preventive, diagnostic and therapeutic strategies and policies

For option:

ii. This should provide a better understanding of pathways of healthy ageing, underpinning future strategies for the promotion of healthy ageing, targeted disease prevention and clinical interventions

Type of action: Research and innovation actions

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