

EuCheMS response to the European Commission’s Public consultation on EU funds in the area of investment, research & innovation, SMEs and single market (in short: on FP9)

EuCheMS, the European Association for Chemical and Molecular Sciences is pleased to respond to the Commission’s consultation on FP9.

We make proposals concerning the **structure** of FP9. These are aimed at protecting excellence and innovation and providing a pipeline that funds projects through all TRLs from basic research to commercialisation.

In addition, we make some proposals for key areas in which **Missions** should be established.

EuCheMS proposed mechanisms for FP9

- Mechanisms to support the brightest minds and deliver transformative disruptive research;
- Mechanisms to de-risk innovation and to enable ideas to “cross the valley of death”;
- Mechanisms to enable academia-industry collaboration;
- Mechanisms to foster collaboration across disciplines and geographical boundaries both within and beyond Europe.

EuCheMS proposed Missions for FP9

Enabling Our Ageing Population – Developing new technologies, services and systems to support an aging population is a pressing current challenge that will take on further urgency as the proportion of older people increases globally. Themes would encompass advances in personalised medicine, medical diagnostics and assisted living technologies, as well as new models for social care and services tailored for an ageing population.

Averting an Antimicrobial Resistance Apocalypse – A mission that addresses the challenge of antimicrobial resistance using a one-health approach. Alongside the development of new drugs and types of therapeutics, strands under this mission could include understanding mechanisms of resistance and understanding the spread of resistance (particularly through environmental pathways), identifying ways to prevent the spread and transmission of infection, development and implementation of rapid and accurate diagnostics, and effective public health interventions, including public understanding of and attitudes towards antimicrobial resistance.

Sustainable Low Carbon Energy for All – A mission to deliver advances across energy efficiency, exploitation, storage and distribution to ensure adequate, equitable and sustainable energy for all. The mission will need to encompass research into materials and processes to deliver new and improved technologies, as well as routes to implementation on the scale needed for public and

industrial use. In addition, research into markets, consumer attitudes and preferences will be essential to understand how to undertake changes across the current system.

Forming a fit-for purpose Food Landscape – This mission will deliver safe, sustainable and sufficient food supplies across the world. It will encompass methods to improve production, develop innovations in new foods, reduce waste and ensure food safety and authenticity. Examining our social and cultural relationships with food, alongside research into public health interventions that encourage improvements in diet would also be part of this mission.

Nuclear Energy and Waste – A mission that will address whether to continue or not with nuclear and which will develop the expertise as many things have to be done to replace nuclear or to retreat waste.

A Clean Sustainable World – This mission strives to engender resource efficiency, the circular economy the protection and replacement of critical elements and the use of sunlight to drive chemical and fuel manufacture. Urgent targets include reducing the use of, reusing and recycling plastics with an aim to have zero plastics being added to the environment by 2030; recycling and reusing phosphorus from human waste, traceability and recycling of all elements in disposable electronic gadgets. There is a large social element in altering attitudes towards recycling, recycled goods and reduced packaging.

Eliminating Lifestyle Diseases – led by sociological and psychological efforts to change behaviours that lead to such illnesses as obesity, diabetes, addictions and anorexia, this Mission will use all the tools of food chemistry and formulation as well as medical interventions to improve the health, quality of life and life expectancy of a sector of society that is growing at an alarming rate.

Smart non-invasive Medical Diagnostics – This mission will lead to smart fast non-invasive diagnostics for a whole range of diseases, as well as imaging hard and soft tissue allowing the phasing out of X-radiography and other potentially harmful techniques.

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About EuCheMS

EuCheMS, the European Association for Chemical and Molecular Sciences, aims to nurture a platform for scientific discussion and to provide a single, unbiased European voice on key policy issues in chemistry and related fields. Representing more than 160,000 chemists from more than 40 Member Societies and other chemistry related organisations, EuCheMS relies on a unique network of active researchers involved in all the fields of chemistry.