

EuCheMS Answer to the public consultation on Antimicrobial Resistance¹

One of our member Societies, the Royal Society of Chemistry has submitted a detailed response. We support the points made in that response and do not wish to repeat them, just to highlight some areas where we believe urgent effort, funding and even legislation must be invested, preferably at the European level.

1) Awareness

Some of the main causes of AMR are:

- The misuse of antibiotics by oversubscribing and in agriculture
- Lack of awareness of the need to complete doses of antibiotics.

Although there have been attempts to prevent these abuses, they have not had a very significant effect. Direct appeals to doctors, pharmacists and farmers have had some effect on the former, but not enough. Legislation could be considered to prevent the abuse of antibiotics in agriculture. To raise awareness in the public about completing antibiotic courses, advertising campaigns could be successful (as in the advertisements concerning the use of condoms to prevent the spread of AIDS) and we propose that such advertising campaigns should be designed, funded and implemented.

2) Research

Lack of success in conventional drug discovery programmes for finding new antibiotics and other blockbuster drugs has led the pharmaceutical industry to close major drug discovery units. New approaches are required and we propose that a diverse set of instruments should be used to encourage new researchers into the field. We propose that Horizon 2020 should have dedicated programmes that are not too prescriptive and might even support single researchers with good new ideas. However, any new approaches or drugs that are developed must be screened in a standardised way so that any successful strategies or drugs can be optimised and developed. We propose that a centralised screening service could be developed. In addition, a problem of this kind could benefit from the development of a set of dedicated laboratories across Europe. These would be research institutes fully equipped and could be funded through the Joint Infrastructure Fund. The UK Government in its recent autumn statement announced that it would contribute to tackling the problem of AMR by: launching the Global Antimicrobial Resistance Innovation fund, partnered with China, to combat the threat from emerging strains of diseases resistant to existing treatments. The government is investing £50 million in this fund to address underinvestment in antimicrobial resistance research and providing an initial investment of £4 million to establish an Antimicrobial Resistance Centre of Excellence in Research and Development at Alderley Park, subject to a business case. The Alderley Park example could be replicated in other European countries where there is expertise in research into new strategies for tackling antibiotic resistance. Any such centres should attract the world's best researchers and share all knowledge as it develops. The conglomerate should work as a single virtual centre, made of several physical laboratories, for tackling this

¹ Complete name of the consultation is *Public Consultation for the Evaluation of the Commission's Communication to the European Parliament and the Council on the Action Plan against the Rising Threats from Antimicrobial Resistance (AMR) (COM (2011) 748)*. More info at http://ec.europa.eu/dgs/health_food-safety/dgs_consultations/consultation_20151030_amr_en.htm

important problem. Buy-in from the companies that would exploit the research is essential as is a clear route to testing and eventually to the market. This virtual centre would then be the hub of research into tackling AMR but with spokes through which all researchers funded to investigate new drugs and strategies would be linked to the hub and to one another.