How EU funding contributes to public health and tackles antimicrobial resistance

Horizon 2020 is the biggest EU Research and Innovation programme ever, with €77 billion of funding available between 2014 and 2020. ‘Health, demographic change and well-being’ is one of the most important areas of EU research funding. The EU devotes a total of €7.4 billion to support health research over this 7-year period.

With our research funding we aim to...

... promote personalised health and care by enabling doctors to better determine the risk of certain diseases and tailor the right treatment for the right person at the right time

... foster stronger European healthcare systems by proposing innovative approaches and technologies

... strengthen health research capacities and innovation strategies across all Member States

... make the EU a stronger global player in health research also by enhancing partnerships between the public and the private sector

Our research projects offer a unique opportunity to improve the quality of life of EU citizens, to stimulate EU industrial competitiveness, and to position the EU as a global leader in health research. We support solution-oriented research projects which lead to the development of new medical treatments and promote evidence-based healthcare.

One of the specific challenges we address is....

Antimicrobial resistance (AMR)

AMR is currently responsible for an estimated 700,000 deaths annually around the world.
Through significant investments in innovation and international coordination efforts, the EU has contributed to creating the momentum for leaders worldwide to recognise the threat antimicrobial resistance poses to citizens and agree to tackle it jointly.

Since 1999, the EU has spent more than €1.3 billion on AMR research to ensure antimicrobials are used appropriately, prevent microbial infections and their spread, improve monitoring and surveillance and, of course, promote research and innovation to develop new effective antimicrobials or alternatives for treatment or prevention. The implementation of an EU action plan against the rising threats of AMR (2011-2016) has enhanced public-private collaboration, open data sharing and coordination of national AMR research efforts. The Commission continues and scales up the fight against AMR, with the launch of a second Action Plan in June 2017. The new Action Plan focusses on supporting Member States, particularly in establishing, implementing and monitoring their National Action Plans, bringing together EU funds and instruments in order to promote innovation and research against AMR and strengthening the EU’s leading role in global fora, notably within the international organisations and with major trade partners.

The key objectives of this Action Plan are built on three main pillars:

1) Making the EU a best practice region
2) Boosting research, development and innovation
3) Shaping the global agenda

The proposed research strategy (Pillar 2) covers the full One-Health spectrum addressing human and animal health as well as the role of the environment.

The EU organises its efforts through...

... collaborative research projects were world-leading scientists join their efforts in transnational research consortia to address AMR

...the inception of the world’s biggest public-private partnership in the field of AMR - the New Drugs for Bad Bugs programme (ND4BB) developed under the Innovative Medicines Initiative (IMI)

... the launch of the Joint Programming Initiative on AMR, which now has 23 members and aims to increase the coordination of AMR research worldwide

... inducement prizes: On 6 February 2017, a €1 million Horizon Prize for the better use of antibiotics was awarded to MINICARE HNL for a finger prick test that can diagnose in less than ten minutes a bacterial infection and identify if a patient can be treated safely without antibiotics.
EU investment on AMR has led to...

... antimicrobial coatings for implants that will help to prevent infections of implants such as hip or knee replacements, which have been created through the IDAC and COATIM projects.

... diagnostic tools to identify pathogens that caused the infection as well as their drug resistances developed by the Chips4Life and RiD-RTI projects.

... policies that promote a more prudent use of antibiotics through the ARNA project.

... close collaboration with the OECD and the European Observatory on Health Systems to analyse Member State policies on AMR, EU governance structures and actions to combat antimicrobial resistance.

... a drug discovery platform for testing and optimising future drug candidates developed by the ENABLE project.

Proven were...

... correlations between antibiotic treatment and the risk of becoming infected with resistant bacteria was demonstrated through the SATURN project.

... that antibiotics should not generally be prescribed to patients with uncomplicated lower respiratory tract infections with the GRACE project.

In the pipeline...

... detection of bacterial infections via the pattern of genes and proteins activated by the child's immune system in response to the infection through the PERFORM study.

... development of entirely new methods to fight bacteria, so treatments that will not use antibiotics, such as in the PHAGOBURN project.

... identification of new ways of getting potential antibiotics into bacteria and preventing bacteria from destroying or expelling the drugs before they can take effect by the TRANSLOCATION project.

... consultation with stakeholders to develop and test new business and stewardship models for antibiotic development by the DRIVE-AB project.

... building of a high-quality clinical and laboratory network of over 700 hospitals and 500 laboratories to evaluate new antibiotics for treatment and prevention of infections by the COMBACTE-NET project.