Roadmap to foster and encourage vaccine innovation in Europe

The EU-funded IPROVE project has unveiled a comprehensive roadmap for vaccine research and innovation in Europe for the next 20 years.

Launched at the European Parliament on 16 March, the roadmap is the first of its kind and will inform strategic decisions on the priorities for future vaccine investment in innovation and technological development at EU and Member State level. The launch event was hosted by three prominent Members of the European Parliament (MEPs) – French MEP Francoise Grossetete, Romanian MEP Cristian Silviu-Busoi and German MEP Markus Ferber.

Maintaining Europe’s vaccine leadership

The IPROVE (Innovation Partnership for a Roadmap on Vaccines in Europe) was formed with the mission of establishing a clear vision of how to maintain Europe’s preeminent position as a global leader in vaccine and vaccinology technologies and its capacity to tackle unmet medical needs. Currently 80 % of vaccines from the major research manufacturers are produced in Europe and exported worldwide. Additional aims of the project included favouring a more structured vaccine innovation agenda, tackling changing medical needs and supporting healthcare systems during a time of strained public budgets.
The project consortium, coordinated by the European Federation of Pharmaceutical Industries and Associations (EFPIA) and Vaccines Europe, a specialised group within EFPIA, began the process through a detailed consultation process. This involved experts from public health and regulatory bodies, SMEs, large industry actors, academia, research organisations, civil society organisations and funding bodies. This was to help the project analyse the entire vaccine innovation chain, from needs identification and conceptualisation, to discovery and development, including interventions necessary to improve education curricula, and vaccine perception and awareness by the public.

Roadmap conclusions

The roadmap highlights that it is a clear necessity for Europe to continue investing in the basic and fundamental science underpinning vaccine research. This research needs to be multidisciplinary and connected across microbiology, immunology, structural biology systems and bioinformatics.

A more rational approach for antigen selection and vaccine design should be prioritised and recommendations are made on the need to support and accelerate research into novel adjuvants, the development of vaccine vectors, and prime-boost strategies, as well as, the investigation of novel routes of immunisation.

From a development perspective, goals include the simplification and a more evidence-based and less empirical approach to the design of clinical studies, better tools and approaches for data collection, extraction, analysis, and interpretation in order to support more efficient translation of innovation into practice.

Furthermore, the project calls for more attention to be given to ensuring innovation in the manufacturing, regulatory and quality control cycle, to enable more affordable, faster, more flexible and less wasteful production. The project critically pointed out the need for more funding and partnership across sectors to support the networks and multidisciplinary infrastructures that are essential to vaccines’ R&D innovation.

The project’s far reaching consultation also reinforced the fact that vaccines are only as good as their vaccine implementation programmes, and that more must be done to understand and address vaccination hesitancy on the part of both the general public and healthcare professionals. The roadmap points out that there is great potential for more pan-European cooperation and collaboration in this area, as well as for facilitating the development of physical European Research Clusters for vaccines that bring the science, entrepreneurs, investors and the most innovative vaccine producers together.

Ruxandra Draghia-Akli, Director of the Health Directorate at the European Commission’s DG Research and Innovation (RTD) commented: ‘The FP7-funded
IPROVE project is an important contributor to build a strategic vision for future European activities in the entire innovation chain for vaccines, and to maintain Europe’s leading position in this important area of research, which is close to the hearts of European citizens.’

The IPROVE project finishes at the end of March 2016 and received around EUR 500 000 in EU funding.

For more information please visit:
IPROVE project website

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