

Interview with Pierre Meulien, Executive Director, Innovative Medicines Initiative

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The AMR Accelerator celebrates this month its two-year anniversary. Which have been the developments in these first two years that you found the most exciting from the 7 initial projects?



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Before citing a few of the success stories that mostly caught my attention, I would like to commend the hard work undertaken in all seven projects during these first two years. We all know that the COVID-19 crisis posed a few barriers to the research and clinical trials carried out in the AMR Accelerator projects. Among others, the need to prioritise a COVID-19 response amongst infectious disease specialists, the difficulty to recruit volunteers in hospitals for clinical trial studies, the shutdowns and slowdowns of research labs, and just the impossibility to meet in-person have been evident COVID-related challenges that affected the projects. However, these difficult work conditions made the first scientific achievements even more impressive. For example, the progression at the beginning of this year into Phase-I of AB-Direct's tissue distribution of novel antibiotic gepotidacin and TRiC-TB's novel compound with potential to overcome ethionamide or prothionamide resistance in tuberculosis treatments are very promising milestones for future developments. My answer to this question would also be incomplete if I would not mention a project like ERA4TB where partners had the capacity to keep

on track a large portfolio of scientific programmes in spite of the COVID-19 pandemic. Last but not least, the capacity-building project, COMBINE, has done well to address the tricky situation of isolation and confinement while one of the initial priorities of the project was to build a network of specialists within the AMR Accelerator. Connecting the dots between all the AMR Accelerator projects via webinars, online cross-pillar meetings, and more recently an expertise knowledge graph are evidence of the project consortium's resilience and capacity to adapt.

There was a point made at the last AMR Conference, where the AMR Accelerator took part, that cross-linking of large accelerators will be key to sustainably and cost-effectively building capability science in the AMR field across the globe. How do you see this happening?

There are indeed now a number of different initiatives in the field, the last important addition being the AMR Action Fund launched last year. The large range of existing collaborations and public-private partnerships speak for the efforts made by academics, pharmaceutical companies and governments to refuel the antibiotic pipelines and thereby raise hopes of one day shifting the needle on the antimicrobial resistance crisis. This said, no one can underestimate the struggles of developing improved animal models of infection, assessing key safety risks, evaluating risks of antigenic variability, or accessing novel adjuvants. These endeavours, that are so essential in antibacterial research and development, are of an extremely complicated scientific nature. In order to ensure that efforts are not duplicated and funding gaps do not get stuck in the value chain, links need to be made between partnerships looking at maximising analytical and translational capability for scientific data on antimicrobial resistance. Exchanging study results and data, knowledge, and experiences via, for example, a global cross-initiative coalition platform, which

would integrate the excellent work being done by agencies like CARB-X and GARDP, would certainly be of enormous benefit to the capability science and would help facilitate the way towards clinical development. Joining up the dots is one of my favorite themes - we need to ensure IMI projects are globally connected with like minded initiatives.

It seems that although public awareness about AMR raised during the COVID-19 pandemic, a lot of the lab work on innovative antibiotics has been negatively impacted in the last year and a half due to the reasons you just described. Can you think of any ways in which the scientific responses to the COVID-19 crisis benefitted from antibiotic research?

It is true that the general public and the media at large appear to be now more sensitive to the AMR problem. Nevertheless, while the COVID-19 virus took us by surprise, we can't say the same about AMR. We know this crisis is similar to a slowly-growing cancer, which made it less obvious for industry and regulators to develop innovation at a quick pace as was done for the COVID-19 vaccines. Despite the lack of financial and political support from the last decades in the antibiotic field, there is as much real value and advantage for science and society to advance research in infectious diseases as there is to bring to market a COVID-19 vaccine. In Europe alone, it is estimated that 35,000 people die of antimicrobial resistance every year, and thus far, none of the big AMR problems have been fully resolved. If no action is taken, antimicrobial resistance could be responsible for 10 million deaths a year by 2050 (Jim O'Neill, 2014). I hope that the COVID-19 pandemic has been a good learning opportunity, and that health crisis preparedness is now recognised by all as a necessity. To this end, breaking down silos between industrialists, regulators and academics can be a real game changer. The AMR Accelerator, among other cross-industry initiatives, shows good examples

of more effective ways of collaborating with each other. It is obvious that without these kinds of pre-established relations between pharma, academia, regulatory agencies, and governments, the COVID-19 vaccines would have taken much longer before reaching patients. In addition to this, the experience in accelerating developments of antimicrobial drugs helped to quickly develop diagnostic tests and treatments for COVID-19. These are just some of the examples showing how our continuous work on AMR can be useful weapons on other battlefields, such as the one against COVID-19. We may not know it now yet, but the scientific outcomes from the AMR Accelerator projects can potentially be of relevance for future COVID look-alike crises. I am confident that the knowledge, capacity, skills and data created within the AMR Accelerator will also be of high value to curb the rise of resistant microorganisms that have already been massively spread through COVID-19 treatments.

About COMBINE

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About AMR Accelerator

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About the Innovative Medicine Initiative

The Innovative Medicines Initiative (IMI) is Europe's largest public-private initiative aiming to speed up the development of better and safer medicines for patients. IMI supports collaborative research projects and builds networks of industrial and academic experts in order to boost

pharmaceutical innovation in Europe. IMI is a joint undertaking between the European Union and the European Federation of Pharmaceutical Industries and Associations, EFPIA.

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