



Preparedness and Response to Emerging Veterinary Disease Outbreaks

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Ten years of EU funded research on vaccine development

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The EU has been funding research on vaccinology and veterinary vaccine development during successive Framework Programmes. Around 45 million euros under H2020 (2014-2020) and over 15 million euros so far under Horizon Europe (2021-2027) were committed in vaccine development. The projects targeted mainly epizootic animal diseases that are regulated at EU level, where vaccination is often not the default control option. Endemic diseases, zoonotic or not, viral, bacterial or parasitic, were also targeted. In spite of those continuous efforts to finance vaccine development, there are challenges that require reflection: the need to measure the true impact of the EU funded research on veterinary vaccines once EU funding ends, the lack of flexible financing systems to address urgent research needs in the veterinary domain.

While overall progress has been made in funding of veterinary vaccine development through public and private sources, overcoming many hurdles impede delivering on its full potential. To name some: (a) the lack of funding capacity, in both the public or private sectors, and their limited interconnections (b) the diversity of animal species and pathogens, (c) the perceived lack of market for certain diseases, (d) the consequence of vaccination on trade in animals and products, (e) the specific constraints for veterinary vaccines, (f) the harsh competition in the private sector, (g) the potential duplication of research efforts in EU countries. Furthermore, there is a need to strengthen the prioritisation and coordination of research at both European and global levels.

Under Horizon Europe, a co-funded European partnership on animal health and welfare (EUPAHW) has been launched in 2024. With a planned total budget of 360 million euro for a period of 7 to 10 years, the EUPAHW includes among its objectives the development of veterinary vaccines, next to prevention, surveillance, detection and other measures to address animal infectious diseases. While this is not a public-private partnership, significant interaction with industry is expected. The activities of the EUPAHW may not aim at reaching the highest Technology Readiness Levels, though basic and applied research will certainly contribute to vaccine development, and it has initiated work on vaccine technology platforms. The partnership may have the capacity to react to urgent needs faster than the procedures in place for initiating projects under Horizon Europe. The potential international development of EUPAHW activities would need commitments from additional partners.

While not all hurdles to deliver on the full potential of public funding can be addressed through the EUPAHW, it should provide new opportunities and capacity building that classical collaborative projects are not able to cover. At a time where One Health is increasingly put forward, lessons for a more efficient enabling environment for veterinary vaccine development could certainly be learned from the medical domain.