An Open Innovation Test Bed to Turbocharge Europe's Nanomed Industry

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The EU-funded SAFE-N-MEDTECH project is creating an open access platform to foster the development of next-generation nanotechnology-based medical devices.

The rapid rise of nanotechnology promises to drive one of the key technological revolutions of the next few years. One sector that is definitely starting to witness a growth in nanotech innovation and application is the healthcare sector. Researchers are seeing its potential across the medical board, from oncology to cardiology, regenerative medicine to dentistry.

However, the same hurdles that initially exist for all newly emerging technologies also apply to nanomedicine. These include navigating regulations (and sometimes the lack thereof), managing costs and resources, attracting and developing talent and expertise, and securing support from public bodies to help see a great idea translated into a viable, successful product.

This is where SAFE-N-MEDTECH (Safety testing in the life cycle of nanotechnology-enabled medical technologies for health) comes in. Its core mission is to provide a broad array of technical, clinical, legal and support services to those companies, especially SMEs, that will form the backbone of a diverse, cutting-edge European nanomedicine sector.

The 34 project partners, coordinated by the Basque Government Department of Health in Gipuzkoa, Spain, are working together to build an Open Innovation Test Bed platform that will act as a single entry point for companies and institutions that wish to bring nano-enabled medical technologies to market. The focus is on the entire life cycle of a device's development, from its conception right through to testing, assessment, upscaling, regulatory approval and finally, market exploitation.

The benefits of an Open Innovation Test Bed for nanomedicine

Ten months after the project began, the COVID-19 pandemic struck. The consortium quickly realised nanotechnology’s potential to contribute towards innovative new treatments for COVID-19 and future pandemics. They also saw they could act as a linchpin for coordinating and supporting such moves to help combat the virus.

As such, in November 2020, the consortium opened a call to provide support to companies that were in the process of developing prevention, diagnostic and/or therapy solutions based on nanotechnology applied to medical devices and in vitro diagnostics. In particular, the project aimed to aid concepts that had a solid science and technology background, a sufficient level of technological maturity (TRLs 4-5) and a clear development pathway.

This is just one example of how an Open Innovation Test Bed can turbocharge a promising new technological sector. Its open access nature and the centralised support it provides can result in key innovations and breakthroughs that can positively benefit the whole of society.

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