

Nanotech for Health care and wellbeing: social and scientific challenges and opportunities

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Nanotechnology applied to medicine, is one of the Key Enabling Technologies (KETs) defined by the European Commission. It impacts the current healthcare paradigm shift towards more personalised and predictive medicine. Nanotechnology needs to be integrated with other KETs such as advanced materials, nano electronics, photonics, biotechnologies, and advanced manufacturing to deliver smart nanomedical products to the patients. Accordingly, technology developers and healthcare industries will undergo a profound transition in the coming years towards a more collaborative approach.

The translation of the preclinical proof of concepts to the market via clinical validation, regulatory approval, and approval for reimbursement by the healthcare systems, requires a more integrated and streamlined ecosystem with less barriers between stakeholders and steps.

As reported by the European Technology Platform of Nanomedicine (<https://www.etp-nanomedicine.eu/public/about/>), in the last years, the European Commission strongly invested in nanomedicine project, promoting translational research to transform scientific discoveries from the laboratory into approved and certified products on the market available to patients, thus supporting the entire chain. In 7th EU Framework Programme for Research, more than 80 nanomedicine projects were funded, and the number is supposed to increase in the HORIZON 2020, ranging from the development of new nanostructured drug delivery systems to regenerative medicine, to the creation of nanoparticles for early diagnosis.

During the presentation we will overview the challenges and opportunities in Nanomedicine field in EU and the Don Gnocchi Foundation approach on that.

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