

## **Nanomedicine Translation: the next Challenge**

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Over the last decade a significant amount of public funding has been invested in Europe on collaborative R&D projects in nanomedicine. Despite a significant number of labs and of SMEs operating in nanomedicine in Europe, the number of approved nanomedicine products remains limited in Europe<sup>1</sup>. Funders have become increasingly concerned and some attempts have been made in Europe to improve impact.

After analysis of the value chain of nanomedicine in several sectors like diagnostics or therapy, the European Technology Platform on Nanomedicine has identified several bottlenecks currently limiting the translation of innovative discoveries from academic labs or spin-offs into industrial and commercial products, clinically validated and regulatory approved. Priorities have been identified in the White Paper on Nanomedicine<sup>2</sup> to make Europe a favourable ecosystem for developing innovative nanomedicines. Among others, an European Infrastructure for Nanomedicine Characterization has been initiated, three pilot lines for the scale up of clinical batches, dedicated funding instruments are open to SMEs and so on. All these complementary initiatives are grouped under the Nanomedicine Translation Hub.

Besides these structural and financial priorities, ETPN is also encouraging and supporting education and training of nanomedicine developers on the industrial requirements<sup>3</sup>.

More recently, in order to accompany and provide advices to entrepreneurs, the Translation Advisory Board is being established, open to any volunteer SME looking for advices on their translation pathway.

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<sup>1</sup> M.A.W. Eaton, Improving the translation in Europe of nanomedicines (a.k.a. drug delivery) from academia to industry, J. Control. Release (2012), doi:10.1016/j.jconrel.2012.06.016

<sup>2</sup> ETP Nanomedicine; Nanomedicine 2020: contribution of nanomedicine top Horizon 2020. White Paper to the Horizon 2020 Framework Programme for Research and Innovation – Recommendations from the Nanomedicine Community. May 2013

<sup>3</sup> Easton MAW, et al, Delivering nanomedicines to patients: a practical guide. *Nanomedicine: NBM* 2015;11:983-992

The objective is to make nanomedicine a profitable industrial sector in Europe and make Europe the leader in nanomedicine in the coming years.