An approach in product regulation and substances in nanotechnologies

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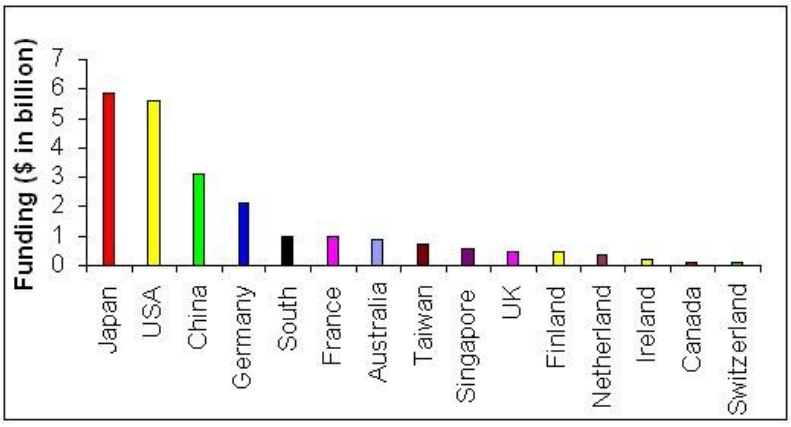
Nanotechnologies hold enormous potential to revolutionise the field of cosmetic, medicine, medical devices, electronics, biomaterials energy production, and consumer products through manifold applications. In the field of biomedicine, for example, cost-effective tissue engineering or the creation of bespoke implant, target delivery and bioavailability of existing or new medical substances are rapidly improving. In field of diagnostic, the sensitivity and specificity of rapid detection processes using lab-on-a-chip divise are also improving.

These improvements are raising questions about safety in short and long term of nanoscale materials. Scientists are debating the current and the future implications of nanotechnologies in our life. This has caused an increase of the scientific literature in the field of nanoscience, and the emergence of new journals on the subject. At the same time many countries are increasing public and private budgets invested in research, development and innovation on manufactured nanomaterials.

The authorities should ensure the safety to humans and the environment due to increasing production of nanomaterials that has occurred in recent years and what may go as far in the future. Some countries are launching strategic programs on safety evaluation and risk assessment of manufactured nanomaterials. This is the case of the *Organisation for Economic Co-operation and Development* (OECD) that develops programs to assist in the implementation of national policies. Other Organizations as Environment Pollutant Agency (EPA) are in the same way, and both are working together in some aspects. Currently many advances have been achieved in the field of regulation and more work is being done towards a safer nanotechnology every day.



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