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Nanomedicines in the European translational process

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In 2013, the World Health Organization (WHO) released an update of the report on “Priority Medicines for Europe and the World” with the aim to bridge the gap between public health needs and the current research and development priorities. The European Commission has recognized the opportunities offered by nanotechnology in the health care sector for the development of new diagnostic/therapeutic concepts and funds a wide range of projects in order to fully exploit the potential of nanotechnology. These research activities generate ideas, knowledge and prototypes addressing unmet medical needs that need now to be further progressed into clinical applications. In order to support the translation of such nanomedicines towards clinical use, the European Nanomedicine Characterization Laboratory (EU-NCL) has been established. The EU-NCL provides a comprehensive set of characterization tests (physical, chemical, *in vitro* and *in vivo* biological properties) allowing researchers and SMEs to better define critical quality and safety attributes of their products before entering into clinical investigations. The knowledge base generated by the EU-NCL will additionally support competent authorities to further understand regulatory needs of this emerging product category and will boost the regulatory science in the field.

Biography

Susanne Bremer Hoffmann holds a PhD degree in Biology obtained for her work on the development of immunotherapies against leukemia. After Post-doctoral Research at the Federal Institute for Risk Assessment in Germany, she joined the Joint Research Centre of the European Commission and became a Team Member of the European Centre for the Validation of Alternative Methods (EURL-ECVAM) where she was involved in validation studies of toxicological *in vitro* tests. She collaborated in several framework projects including public-private partnerships and is now a Team Member of the EU-NCL assessing the toxic potential of nanomaterials by using *in vitro* test.

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