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ABSTRACT

In recent decades technoscientific innovation has pushed the food boundaries to a new frontier of nanofood. Such a term refers to an array of food products, whose processes of growing, production and packaging involve nanoscale (nanotechnology and nanosciences) knowledges and applications.

Current market researches estimate that by 2015 nanotechnologies will influence over 40% of the food processing sector with more than 400 firms involved in research, development and production worldwide. However, the features that make nanomaterials so "attractive" from a chemical, physical and biological point of view – high area-volume ratio, extreme permeability of the nanoparticles, easy absorption of other substances – are also the reasons for a careful use of such substances. The available scientific literature points out that nanomaterials can represent a source of risk not only during their production, but also during the manufacturing of products containing them until they are used and disposed of.

Such a system explains the necessity to adopt regulatory instruments that assure suitable evaluation and risk-management systems able to assure the highest standards of food safety for the protection of the citizen's health.

This contribution will focus on the analysis of the European (EU) regulatory frameworks in the field of agrofood nanotechnology. The analysis will consider the technoscientific changes in agrofood nanotechnology systems and also develop an interpretation of the normative evolution in the EU, assessing how adequate the regulatory instruments are in achieving the goal of responsible research and innovation as proposed within the process of rethinking European governance.