

Natureza do trabalho: Resumo

TÍTULO

BIOSECURITY FOR NANOTECHNOLOGY INNOVATIONS

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RESUMO

Introduction: Law No. 11,105, of 2005 is restricted to the regulation of acts in the field of biotechnology and the use of embryos (genetic engineering and control of genetically modified organisms, including genetically modified foods), on the other hand do not enter the legal concept of biosecurity, among others, the technologies related to nanotechnology, that because of technological convergence (nano-bio-info-cogno), provides, among several innovations, applications from technology to prolong life, to those directed to the improvement of mental functions, increase the speed of learning and memory. **Objectives:** The present research demonstrates the guidelines which mark the basic norms of biosecurity, identifying the fundamental importance of safe and responsible development of scientific research involving human beings as in the case of nanomedicine. **Material and Methods:** Through bibliographical and documentary analysis it was identified that, similarly to the agrochemical and biotechnology, nanotechnology may produce advances and ubiquitous effects capable of being at least as large as those in Industrial Revolution. **Results:** Studies have reported potential toxicological effects of nanoparticles on human health, a result of interactions and biological, physical and chemical alterations in various organic functional systems such as respiratory, digestive, nervous, lymphatic, excretory, blood circulation, skin, breast milk, muscle and placenta; as well as the contamination of the environment. In this context, stands out the importance of prevention and precaution, through risk management strategy which aims to eliminate the risks before production of the damage – the function of biosafety. **Discussion and Conclusion:** The legal system should create a set of policies and public and private actions of biosafety for nanotechnology, consistent with the legal discipline of known risks, potential risks and ignorance, related to employment and/or development of technologies with the purpose of avoiding severe and/or irreversible injuries to the natural environment, human health and heredity.

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