EDITORIAL
https://doi.org/10.22239/2317-269X.1160

New and old technologies: regulation challenge

Geraldo Lucchese

Scientific Editor

What a time we are living! Science is making fast progress. Technology creates new materials, products, services, processes. Some are still experimental, others are already in full use. Powerful technologies, such as genetic engineering, allow us to manipulate genetic codes of any kind and intervene in nature in a dramatic manner. Cloning is already possible in large animals and possibly in humans. Genetically modified organisms are widely produced and constitute raw material for large-scale food processing. Nanoparticulate materials have physico-chemical properties that are completely different from those of the materials that originated them and are already widely used, mainly in the pharmaceutical, cosmetic and food industries. Stem cells, with the power of cellular differentiation, bring the prospect of new treatments to diseases that do not have therapeutic alternatives. On the other hand, this type of treatment involves serious technical, ethical, moral and religious questions. Biotechnology and the storage and processing of information by electronic means confirm the new technological wave that is provoking a true revolution; they change productive processes, professions, organizations, institutions, control systems, business and state management. Many and high interests are at stake.

This reality demands well-structured and qualified systems of regulation of risks through public institutions. Contrary to what one might think, a strong State is necessary, with transparent policies aimed at protecting life and the environment and the mission to protect the sectors that are most exposed to risk factors and also more vulnerable. These systems are incompatible with disruptions in the democratic order and require the full functioning of the rule of law, in which legal norms and actions are not manipulated by large investors.

However, in contrast to the dynamism of scientific and technological progress and the need to improve our knowledge and management of the risks we already know, Brazil is experiencing a rupture of the democratic order and the decay of the rule of law. The hegemony of a narrative that says that the economic crisis is the main problem and that fiscal austerity is the only remedy conceals the political crisis and the questions about the remedy Brazil adopted, a remedy that says that the State can not spend on policies of broad social spectrum, such as public health, education and social security. Resources for research and innovation have also been drastically reduced. In this context, the structure of the entire health regulation sector is weakened. There is no way to monitor the demands of health surveillance and to give effectiveness to health protection measures.

History has taught us that every new technology bears new risks. Therefore, we must invest in producing knowledge about the harmful effects of the production, use or consumption of these new materials, products, services and processes. But the dynamics of capitalist society do not wait. Widespread use of these new technologies precedes deeper knowledge about the potential damages to the health of individuals, communities and the environment. The challenge of assessing and managing the risks of these new technologies continues to be addressed very slowly, constrained by political and economic instability. Even well-known technologies like pesticides or medicines do not yet have reasonable sanitary control. Overall, they are abusively used, particularly in Brazil. Although we do not yet have more accurate assessments, we know that the consequences of such abusive and inappropriate use are alarming. The sanitary control of these technologies that we already know is still a challenge.

This Journal perseveres in its mission to identify and spread knowledge about new and old technologies and their impact on the health of the community. This issue contains review articles related to the challenges of regulatory science - microphysiological systems; new technologies - use of stem cells; risk analysis through the Hazop method; and residues of veterinary antibiotics in products of animal origin. It also brings articles on drug control - drug interactions, bacterial resistance and environment, risks of multidrug therapies for HIV/TB, quality of heparin; dilemmas of the organization of the national health surveillance system - human resources; reprocessing of materials in health services; and methodology of food analysis - vitamin A.

We believe there is no sense in innovative technologies with assessed and regulated risk if the population does not have access to them. With that in mind, we want to promote the debate about the difficulty of health systems and the vast majority of the world's population to have access to new medicines that are often the only pharmacological alternatives to the treatment of some diseases.

We hope you enjoy the reading.

Conflict of Interest

Authors have no potential conflict of interest to declare, related to this study's political or financial peers and institutions.