How to shape effective communication for safe biotechnology and chemistry?

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Abstract

The rise of biotechnology, synthetic biology and chemistry requires an update in risk assessment. European regulation for biotechnology currently finds itself in a deadlock, thereby stifling innovation in this field (Mampuys, 2021). The rise of new genomic techniques (NGTs) has already sparked discussion on current regulation and risk assessment involved (European Food Safety Authority et al., 2021; Lusser et al., 2012). Questions that are emerging in this discussion are how regulation can follow the pace of new biotechnological developments (i.e. should it become more flexible? (Bouchaut & Asveld, 2021)), whether (and how) to include benefits of innovations in risk assessments (e.g. should we adopt or reject the 'Norwegian Model'? (Svingen, 2022)), and how to assign responsibilities to regulatory bodies (e.g. Government and policymakers) and industry. Concerning the latter, particularly the extent of sharing knowledge and data is expected to be challenging and complex as observed in the conventional chemical industry (Bouchaut et al., 2022).

In this presentation, I will elaborate on the questions stated above, and in particular what this would mean for the shaping of an effective way of communication between associated stakeholders. What are the barriers to establishing such a communication platform, and how could we overcome these for the sake of safe and responsible development of biotechnology. I foresee challenges related to incentivising a high degree of transparency in research and production processes in which a shared responsibility and mutual trust between stakeholders would be crucial, (pro)active exchange of knowledge within and between companies and industries, and good communication with stakeholders related to the policy domain. And, to manage 'new' technologies responsibly, we also need to develop methods to integrate relevant values in risk management strategies, which also gives rise to various questions. For instance, how to assign a weight to relevant values, in particular when they are uncertain, i.e. an uncertain risk or potential (health, environmental, economic) benefit?

Key words: Responsibility Allocation, Safety, Risks, New Genomic Techniques, Communication

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