
Editorial

Biosafety and Biosecurity in the Context of Modern Biotechnology

The current issue of Vidurava concentrates on vital regulatory aspects of the safe manipulation, handling, transfer and utilization or application of the products of modern biotechnology. These include genetically modified organisms, food, feeds and processed products.

Historically, the discovery of Deoxyribo Nucleic Acid (DNA) and genes about 70 years ago, and the possibilities of implanting modified genetic material in living organisms using recombinant DNA technology, opened a new vista of scientific enterprise in biology. Nevertheless serious concerns in the risks of introducing genetically modified organisms to the natural environment without proper risk assessment in respect of their impact on conservation of biological diversity led to the introduction of various regulatory measures of which the best known was the Cartagena Protocol on Biosafety, which had since been formally adopted by Sri Lanka.

At this point it may also be relevant to recall that in the United States, the terror attack on the World Trade Centre Towers on 11th September 2001, followed subsequently within three weeks of postal mail deliveries of the vicious Anthrax spores, evidently created global concern of the hitherto unknown

possibilities of what may be considered as the initial thrust towards “Biological Warfare”.

According to an official communication issued in 2007 on the concerns of Biosafety in microbiological and biomedical laboratories in the US, it had been claimed that the Anthrax attack of October 2001 had reopened a new chapter, and changed forever, the way scientific studies in biological and clinical laboratories should be conducted. Since then, Biosafety and Biosecurity, which are inexorably intertwined, had dominated the policy discourse of many countries. In 2006, the “WHO – Biorisk Management Guidelines on Laboratory Biosecurity”, had defined Biosafety as comprising the “containment principles, technologies and practices that are implemented to prevent unintentional exposure to pathogens and toxins or their accidental release”. Biosecurity on the other hand had been defined as “the protection, control and accountability for valuable biological materials (including information) in laboratories, in order to prevent their unauthorized access, loss, theft, misuse, diversion or intentional release.”

These two terms are claimed to be related, but often used interchangeably, and hence said to differ significantly, by what has been stated as “The crucial criterion of Interact”.

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