

Advances in Genetics in Defiance of the Law of Nature

The tortuous evolutionary journey from Charles Darwin's natural selection to Gregor Mendel's genetics, and to modern molecular biology, in defiance of the laws of nature, has reached a crucial phase enhancing the debate on what is good and bad for the wellbeing of humankind.

This edition of Vidurava, which takes on the theme of 'Genetics Past and Present', places in perspective the panorama of possibilities and probabilities, of advances in molecular biology.

Conservation of nature, and living in harmony with the natural environment have been the prime factors of sustainable livelihoods in ancient times. However, the phenomenal erosion of this philosophy over the last 300 years, or more specifically since the Industrial Revolution of Europe, has seen an unprecedented worldwide turbulence, and spread of upheavals and natural disasters.

Nevertheless, recent advances in molecular biology, despite consequences of defying the laws of nature, has seemingly shown both positive and negative effects. Thanks to scientific intuition combined with multi-axial dispensation of technological interventions, has in many instances tipped the scales in favour of the new outcomes in molecular biology.

Among the many episodes of success stories in this field are, 1) the detection of various agents of disease infections, 2) diagnosis of hereditary diseases, 3) finger printing for paternity testing and in forensics, 4) development of insect-resistant transgenic food crops to enhance food production, and 5) development of the vitamin A rich Golden Rice.

Unfortunately, despite these favourable dispensations, countries like Sri Lanka with pristine rain forests, and a unique biological diversity, faces serious threats of illegal smuggling of the precious genetic material by unscrupulous people of both local and foreign origin. Such cross-border gene piracy has been of such magnitude in recent times that global cooperation to combat this menace has led to interventions by INTERPOL. Although Sri Lanka has instituted a Biodiversity Protection Unit within the Customs Department since 1993, which is considered to be the only one of its kind in the global Customs institutions, but, there is need to strengthen appropriate legal instruments for its effective implementation.

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