

Perspective

On Omics Technologies: Arts but Not Brands Make Sense and Science

Akbar Nikkhah*

Department of Animal Sciences, University of Zanjan, Iran

***Corresponding author:** Akbar Nikkhah, Chief Highly Distinguished Professor, Foremost Principal Highly Distinguished Elite-Generating Scientist, Department of Animal Sciences, Faculty of Agricultural Sciences, University of Zanjan, National Elite Foundation, Iran**Received:** May 09, 2015; **Accepted:** June 04, 2015; **Published:** June 05, 2015**Abstract**

This perspective article describes how the rising Omics technologies in animal and veterinary sciences must not be misused and misinterpreted. The world animal industry and human health initiatives require a sound science that prevents problems and overcomes challenges, but not a superficial brand that carries goals that can in no ways be reached. The upcoming science mentors and leaders must be persistently educated on such a critical issue to avoid investments on research roads that never add merit to the current understanding of life.

Keywords: Omics; Technology; Animal science; Research philosophy

Introduction

Omics technologies of namely genomics, proteomics and metabolomics have introduced different and in some cases new perspectives of science. These technologies may provide pragmatic insights into animal physiology at lower cell and gene levels. Such insights serve both animal and veterinary sciences as well as human medical and nutritional sciences. The latter is of utmost increasing significance, as the occurrence of health problems is on the rise in modern and particularly modernizing communities. The modern lifestyle has taken considerable distance from natural human life as it used to be in the Mother Nature.

Innovative Intuitions and Roadmaps

Omics technologies could be either utilized to offer working tools to tackle the current human health issues (e.g., diabetes, obesity related disorders, cancer, nervous diseases) or misused and misinterpreted to further complicate the problems [1,2]. As the technologies are mostly in their infancy and growing stages, the likelihood of misuse and confusion is dramatically high. For instance, microarray technologies generate substantial sets of information on numerous cellular and gene-protein-metabolism aspects of functional physiology that could just be overly confusing rather than being pragmatically useful and potentially problem-solving. Despite development of some tools and techniques to enable functional and biological processing of such huge dataset towards meaningful interpretation, the capacities are strictly limited. It must be mentioned that further development of the processing techniques in making sense out of the large dataset may simply be futile. This implies that the real challenge is not how to process or analyze the data but is rather related to the nature of data and details acquired. Such comprehensive omic characteristics about cells and genes do not necessarily describe any cause-and-effect relationship or address especial mechanisms underlying the problems investigated.

The informative nature of the Omics technologies on animal and human biology is not fundamentally debatable. However, in what capacity and how such details may be utilized to uncover the mechanisms underlying today's public health issues and to offer

roadmaps of effective prevention and treatment are under serious questions. Education as an ultimate art must continue to flourish and disseminate the actual science and more importantly the pseudoscience that could considerably harm human health of psyche and physique [3-6].

In a nutshell, the modern lifestyle is far from optimal. This is not what thoughtful human ancestors had imagined and aimed for while they were contemplating the healthy nature. In other words, the advanced technologies will have little, if not nil, to accomplish in promising to help the modern man to wisely encounter and slow or stop the escalating developments in health problems incidence. Instead, it is the human lifestyle that must change for renovation and definitely move back towards its natural rhythms and regularities. Nature as the ever-yielding resourceful art must again become the man's source of power and inspiration for a healthy and satisfying life [7,8].

Implications

This article raised serious concerns against thought and non-thought investments on Omics technologies and their superficial applications in animal and veterinary sciences and potentially in human medicine and health. Although likely useful in improving the current level of knowledge and insight into lower-level biology, care must be exercised to not be imprudently confused by the immense outputs that may only complicate the problems. Ultimately, the future can live healthfully only in an artistic must to bring the modern human back to the hands and hugs of nature.

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