International Journal of General Engineering and Technology (IJGET)
ISSN(P): 2278-9928; ISSN(E): 2278-9936
Vol. 3, Issue 4, July 2014, 29-40

International Academy of Science, Engineering and Technology
Connecting Researchers; Nurturing Innovations

APPLICATIONS OF NANOPROTEOMICS IN BIOLOGICAL SYSTEMS: A REVIEW

GARG, GUNJAN

School of Biotechnology, Gautam Buddha University, Greater Noida, Uttar Pradesh, India

ABSTRACT

The high-throughput techniques used in nanoproteomics generally outperform in comparison to normal proteomics techniques. Approaches like disease biomarker detection in humans are one of the major achievements, which have led to the detection of different biomarkers for autoimmune, infectious, neurodegenerative and cardiovascular disease. The use of novel sensors and different nanoproteomic approaches also helps in identifying biomarkers for different types of cancer and other diseases. In plant biology, nanoproteomic assists in gene transfer, creation of deoxyribonucleic acid crystals and identification and quantification of total protein. It also has application in microbial proteomics research. Using nanoproteomics has also helped in studying allied scientific areas like proteobionics and secretomics. This review article covers the current application and future prospects of nanoproteomics approaches.

KEYWORDS: Biological Systems, Disease Biomarker, Nanoparticles, Nanoproteomics