

Application of Engineering in Biomedical Science: The Window of Opportunity



Sajib chakraborty and Hossain Uddin Shekhar*

Department of Biochemistry and Molecular Biology, University of Dhaka, Bangladesh

Submission: February 08, 2017; **Published:** February 20, 2017

***Corresponding author:** Hossain Uddin Shekhar, Department of Biochemistry and Molecular Biology, University of Dhaka, Dhaka-1000, Bangladesh, Email: hossainshekhar@du.ac.bd

Editorial

Despite the modern scientific advancement, deeper understanding of disease mechanism and the use of sophisticated instruments, the mortality rates due to complex multi-factorial diseases such as cancer, diabetes and cardiovascular disorder are still eminent. With the ever increasing aging population is it high time to focus on healthcare issues. The demands for more sophisticated medical equipments, therapies and surgical procedures are mounting in order to provide good service to the community. One of the promising approaches involves bridging the traditional engineering skills with medical applications. Challenges that currently exist in health sector including the design of cutting-edge medical equipments and managing vast patient related data can potentially be solved by harnessing the problem solving capacities of applied physics, mathematics and information technology. A prominent example is the emergent field of nano-biotechnology where the principles of engineering and biotechnology are merged together. The applications of such technology potentially included but not limited to drug-delivery system [1], removal of the obstructions in the circulatory system through the utilization of nanorobots [2] and high-throughput nanosensor devices for detecting the biological signatures of cancer [3]. Despite the enormous potential of these emerging fields of biomedical engineering, the health-sector particularly of developing countries suffers from the poor unification of engineering principles and medical science mainly due to the limited resources. However with the advent information technology, the cost of computers and information-technology

associated equipments has reduced dramatically in the past years. The concept of digitization and management of patient data has become an active field of research called medical-informatics - an area where information technology aided healthcare system is being used for patient care and management [4]. Therefore digitization of patient records and developing a searchable database could be a vital step in resource-restricted developing countries to support health-care system.

Although the applications of biomedical engineering in healthcare are well established specially in developed countries, the full-potential of this technology has not been exhausted. This window of opportunity must be utilized to implement the biomedical and engineering principles in managing health-care database, developing more sensitive diagnostic tools and therapies in future. Current Trends in Biomedical Engineering & Biosciences journal is determined to uphold the quality research works of scientists working in this vibrant field. One of the major aims of this journal is to encourage and appreciate unification of engineering principles with medical science.

References

1. Evans J (2009) Five big ideas for nanotechnology. *Nature Medicine* 15: 348.
2. Toumey C (2013) Nanobots today. *Nature Nanotechnology* 8: 475-476.
3. News and Analysis (2007) Cancer nanotechnology: small, but heading for the big time. *Nature Reviews Drug Discovery* 6: 174-175.
4. Miller PL (1995) Medical informatics in clinical medicine and the biosciences. *Nature Medicine* 1: 93 - 94.



This work is licensed under Creative Commons Attribution 4.0 License

**Your next submission with Juniper Publishers
will reach you the below assets**

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
(Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission

<https://juniperpublishers.com/online-submission.php>