Journal of
Bioengineering & Biomedical Science

Heidari, J Bioengineer & Biomedical Sci 2016, 6:2
DOI: 10.4172/2155-9538.1000e124

Editor's Note Open Access

Innovative Biomedical Equipment's for Diagnosis and Treatment

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Received date: November 11, 2016; **Accepted date:** December 10, 2016; **Published date:** January 30, 2017

Editor's Note

Journal of Bioengineering and Biomedical Science is a peer reviewed; open access journal that comprises various articles contributes to the advancement of research in biomedical sciences.

The current issue of the journal Volume No. 6, Issue 2, comprised of 9 articles. They were addressing the cutting edge research of biomedical sciences such as, antiviral drug discovery, diagnosis of breast cancer assessment, tissue engineering, epilepsy diagnosis, ovarian cancer disorder and bimolecular computing. Present issue crucially contributing to the biomedical research fraternity since it published original research articles from various countries like Italy, USA, Iran, Canada, Mexico, Tunisia and Pakistan.

Author Rusnati et al. tried to use Heparan Sulfate Proteoglycans (HSPGs) as a multifaceted target for the novel approaches in antiviral drug discovery. Since most of the diseases are caused by viruses, their mutation rate is also very high in comparison with bacteria and drug of choices for the treatment are also limited. Many viruses (including HIV–1, HSV, HPV and RSV) exploit Heparan Sulfate Proteoglycans (HSPGs) as attachment receptors corresponding to almost all eukaryotic cell types, in view of this author deciphered its application to produce Heparan Sulfate Proteoglycans (HSPGs) as a multifaceted target against virus [1].

Researcher Shokoufi et al. claims that a Periodic Dynamic Thermography (PDT), in conjunction with image processing and analysis, to be an easy to use procedure involving capturing thermal images of the breast. He proposed a proof of concept study for subjects to overcome the limitations of mammography at the adolescence stage. Author proposed very interesting and acceptable diagnostic tool which is the need of the hour to stop the growing breast cancer cases in the world [2].

Author Jarquín–Yáñez et al. chooses tissue engineering as an advanced research area and addressed the limitations of tissue engineering i.e., scaffolds. The author's solicited initiative to produce biopolymers from gelatin and hyaluronic acid may be employed to construct diverse scaffolds that allow cells to differentiate and proliferate on them. Further it may facilitate to obtain the best functional and mechanical conditions in scaffolds [3].

Epileptic is a neurological disorder marked by sudden recurrent episodes of sensory disturbance, loss of conscience, convulsions, associated with abnormal electrical activity in the brain. It is an unsolved ambiguity for the scientists. Author Mechmeche et al. had proposed dynamic approach to the challenging issue. MATLAB simulation illustrates that by comparing two classifiers, the high–dimensionality is reduced to one relevant feature, showed as classification metrics of 100%. The epilepsy diagnosis is successfully tested in the discriminant Fisher–space with the single–best relevant feature [4].

One of the most common cancers observed in the women is ovarian cancer; hence diagnosis is priority to exterminate the prevalence. Researcher Mahmoodian et al. efforts to discover a tool for the early diagnosis of this disease, while minimizing the side effects and should be economically viable. He utilized the ultra sound integrated with photo acoustic technique in which the minimal amount of cost, energy, and laser are acquired [5].

Scientist Mansy had ventured extended the scope of stethoscope to smart stethoscope in order to bedside monitoring of patients often involves measuring pulse, temperature, respiratory rate, and blood pressure, auscultation can also provide useful diagnostic information. Perhaps it demands the presence of a healthcare provider and hence is done intermittently [6].

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