

Archives of Biotechnology and Biomedicine

Volume - 1, Issue - 1

Research Article **Published Date:-2017-11-15 00:00:00**

[Pros and Cons Controversy on Molecular Imaging and Dynamics of Double-Standard DNA/RNA of Human Preserving Stem Cells-Binding Nano Molecules with Androgens/Anabolic Steroids \(AAS\) or Testosterone Derivatives through Tracking of Helium-4 Nucleus \(Alpha Particle\) Using Synchrotron Radiation](#)

In the current study, we have investigated pros and cons controversy on molecular imaging and dynamics of double-standard DNA/RNA of human preserving stem cells-binding Nano molecules with Androgens/Anabolic Steroids (AAS) or Testosterone derivatives through tracking of Helium-4 nucleus (Alpha particle) using synchrotron radiation. In this regard, the enzymatic oxidation of double-standard DNA/RNA of human preserving stem cells-binding Nano molecules by haem peroxidases (or heme peroxidases) such as Horseradish Peroxidase (HPR), Chloroperoxidase (CPO), Lactoperoxidase (LPO) and Lignin Peroxidase (LiP) is an important process from both the synthetic and mechanistic point of view

Research Article **Published Date:-2017-08-31 00:00:00**

[Nutritional Value of Three Different Oyster Mushrooms Grown on Cattail Weed Substrate](#)

Three distinct oyster mushroom strains including *Pleurotus florida* (PF), *Pleurotus eous* (PE) and *Pleurotus sajor-caju* (PS) were successfully cultivated on cattail weed substrate. A comparative analysis of different parameters viz., biological efficiency (BE) and protein, carbohydrate, crude fiber and fat content in fruitbodies were evaluated. According to biological efficiencies obtained PF (90%) was superior strain, while order can be represented as 90% > 89% > 82% respectively in PF > PS > PE. The highest protein (4.8 g), lipid (0.61 g) and dietary fiber (31.6g) values were obtained in the fruitings of *Pleurotus sajor-caju*. However, the utmost level of carbohydrate (41g) was recorded in *Pleurotus eous*. On the basis of the observation of the present study we recommend use of cattail weed substrate for cultivation of oyster mushrooms for better nutrients.

Research Article **Published Date:-2017-07-17 00:00:00**

[Is advanced Coupling Methods best fitted in Biosensing of Microparticles?](#)

Microparticles (MPs) are considered important diagnostic biological markers in many diseases with promising predictive value. There are several methods that currently used for the detection of number and characterization of structure and features of MPs. Therefore, the MP detection methods have been remained pretty costly and time consuming. The review is depicted the perspectives to use coupling methods for MP measurement and structure assay. Indeed, there is large body evidence regarding that the combination of atomic force microscopy or coupling nanoparticle tracking analysis (NTA) with microbeads, plasmon resonance method and fluorescence quantum dots could exhibit much more accurate ability to detect both number and structure of MPs when compared with traditional flow cytometry and fluorescent microscopy. Whether several combined methods would be useful for advanced MP detection is not fully clear, while it is extremely promising.

Review Article **Published Date:-2017-06-28 00:00:00**

[Concise Review: Considerations for the Formulation, Delivery and Administration Routes of Biopharmaceuticals](#)

The drugs of biological origins have attracted the attention of many pharmaceutical companies where it is essential to protect the heterogeneous nature and the optimal three dimensional structures of the different macromolecules. These molecules are used in both the investigation and therapy purposes, so their maximum activities should be maintained. This requires the designing of certain delivery formulations that suits the macromolecule nature, its target organ, the required dose and delivery route, and that's why the biotech companies invest millions of dollars towards achieving that. The first main focal point of this article includes the recent developments in the formulation technologies for several biomacromolecule classes. The second focal point concentrates on the current considerations for optimizing their delivery for a maximum performance in the body.

Letter to Editor

Published Date:-2017-05-01 00:00:00

[The Daring of Biosimilars](#)

The so-called "biotechnological revolution" is changing the structure of the Pharmacopoeia [1]. The space of biological products, previously limited to blood products and vaccines, grew from the introduction of first recombinant therapeutics in the 1980s until attaining a 25% by value of the pharmaceutical market. This share is expected to reach 50% in the coming years. More than 80 biotechnology drugs have entered the market in the last ten years. It is estimated that there are more than 900 biological products on development for more than 100 diseases [2].

Review Article

Published Date:-2017-05-01 00:00:00

[The Bacterial Heterotrimeric Amidotransferase GatCAB: functions, structures and mechanism-based inhibitors](#)

tRNA-dependent amidotransferases (AdT) are essential enzymes for protein biosynthesis in many bacteria and in all archaea. As AdT is essential for a number of pathogenic bacteria, and it is absent from mammalian cytoplasm, it is considered as a putative target for novel inhibitors that could be lead compounds to develop a new class of antibiotics. Besides GatFAB of *Saccharomyces cerevisiae* mitochondria and GatAB of *Plasmodium falciparum* apicoplast, all reported AdT can be divided into two groups: heterodimeric GatDE and heterotrimeric GatCAB. The latter is required to catalyze the conversion of Glu-tRNAGln and/or Asp-tRNAAsn into Gln-tRNAGln and/or Asn-tRNAAsn in many pathogenic bacteria. Recently determined high resolution crystal structures of several GatCAB could be used to design new inhibitors. In this review, we highlight the essential role of AdT for the faithful translation of glutamine and/or asparagine codons, we describe important features of the crystal structures of several GatCAB as well as tRNA/AdT/aaRS complexes for the formation of Gln-tRNAAsn and Asn-tRNAAsn, we finally summarize discoveries of AdT inhibitors based on their analogy to glutamine, adenosine triphosphate and 3'-end of tRNA.

Review Article

Published Date:-2017-04-25 00:00:00

[Overview of Interferon: Characteristics, signaling and anti-cancer effect](#)

Interferons are multifunctional cytokines widely used in clinical settings as an anti-viral drug. In addition, interferons exhibit anti-cancer and anti-bacterial effects. Nearly two thousand papers related to interferon are published each year, which illustrates the importance placed by researchers on the study of interferon. This review focuses on recent advances in the study of interferon, particularly in the areas of its mechanism of anti-cancer effect and signal transduction. We also describe the tumor resistance to interferon and the side-effect of interferon-based therapy, which leads to an expectation of future research of interferon.
