Annals of Proteomics and Bioinformatics

Volume - 7, Issue - 1

Research Article **Published Date:- 2023-11-20**

Association of HLA-DRB1 Alleles with Rheumatic Fever Among Senegalese Patients

Background: Acute rheumatic fever (ARF) is a systemic inflammatory disease resulting from an abnormal immune response to group A ?-hemolytic streptococci. ARF is a major public health problem in developing countries, particularly in Senegal. The aim of this study was to evaluate the mutation penetrance and genetic diversity of exon 2 of the HLA-DRB1 gene in Senegalese patients with ARF.
Results: DNA was extracted from the blood of patients with ARF. Exon 2 of the HLA-DRB1 gene was amplified by polymerase chain reaction and sequenced using the Sanger method. Bioinformatics software and databases (polyphen-2, SIFT and ProVean) were used to assess the pathogenicity of missense mutations. The results revealed a high level of polymorphism in exon 2 of the HLA-DRB1 gene, with 73 non-synonymous mutations between codons 21 and 89, which lie in the hypervariable region encoded by exon 2. Of the 73 variants tested, 44% were pathogenic, indicating their potential involvement in ARF onset.
Conclusion: Our results indicate that the HLA-DRB1 mutations involvement in the onset of rheumatic fever.

Review Article **Published Date:- 2023-06-16**

Human Monkeypox Virus Severity

Monkeypox is a sylvatic zoonotic sickness that initially affected tropical rainforest areas in the west and vital Africa earlier than spreading to other places. Its miles carried with the aid of the Monkeypox virus member of orthopoxvirus circle of relatives. The clinical features of the infection resembles to smallpox. The primary animal to human transmission is the cause of most people of human Monkeypox ailments. Severe rodent species and non-human primates function hosts for the virus. Transmission can manifest with infected people, animals or objects into contact with bodily fluids, sores on the skin or inner mucosal surfaces just like the mouth or throat, or breathing droplets. The incubation length for Monkeypox usually lasts 6 to 13 days, even though it could last as long as 21 days. The ailment is often self-proscribing, with signs and symptoms generally clearing up on their own inside 14 to 21 days. Signs can range from moderate to extreme, and lesions may be itchy or painful. Due to the discontinuation of recurring smallpox vaccination which supplied some pass- safety in past, populations have become more liable to Monkey pox. The outbreak of Monkeypox virus due to the fact that may additionally, 2022 has created a worldwide risk of the virus. In the present review, Monkeypox epidemiology, severity, therapeutics, vaccination and its transmission to non-endemic countries has been considered. Special care and guidelines may help in the containing in the spread of the infections to the non endemic countries.

Mini Review **Published Date:- 2023-05-01**

Advances in deep learning-based cancer outcome prediction using multi-omics data

Cancer prognosis reflects a complex biological process measured by multiple types of omics data. Deep learning frameworks have been proposed to integrate multi-omics data and predict patient outcomes in different cancer types, potentially revolutionizing cancer prognosis with superior performance. This minireview summarizes the advances in the strategies for multi-omics data integration and the performance of different deep learning models in prognosis prediction of diverse cancer types using multi-omics data published in the past 18 months. The challenges and limitations of deep learning models for predicting cancer outcomes based on multi-omics data are discussed.

Letter to Editor **Published Date:- 2023-04-24**

A brief evaluation of the concepts of omics, genomics, proteomics and metabolomics in terms of sperm cell

---

The ability to live things to transfer their genetic heritage to future generations in a healthy way forms the basis of the science of reproduction. In this sense, understanding the structure and functions of the sperm cell, which is one of the sexual cells, is one of the important issues that should be emphasized. Methods such as omics, genomics, proteomics, and metabolomics, which have been found in research in recent years, are also used to evaluate the functions of the
sperm cell.

Research Article **Published Date:- 2023-03-21**

Three-phase partitioning for isolating peroxidase from lemon peels

Background and objective: Peroxidase is an oxidoreductase that uses different compounds as substrates and thus can be utilized for different applications. The goal of this work is to isolate peroxidase from lemon peels using Three-Phase Portioning (TPP).
Methods: TPP was set by adding varying amounts of salts and alcohol and the enzyme activity recovery was measured for each variable. Different parameters were optimized successively in order to achieve the highest enzyme activity recovery including salt type, salt concentration, pH, alcohol/crude extract ratio and type of alcohol and then, combining all optimized conditions together.
Results: Salt that gave maximal recovery was sodium potassium tartrate, optimal salt concentration was 15%, optimal pH was 8, optimal alcohol/crude extract ratio was 1 and t-butanol was preferred to 1-butanol. Efficiently, upon combining all optimized factors, an activity recovery of 175% was obtained.
Conclusion: This protocol provides an easy, feasible method to efficiently isolate peroxidase from lemon peels using TPP.
