Commentary

iMedPub Journals
www.imedpub.com

Journal of Applied Microbiology and Biochemistry
ISSN 2576-1412

2022
Vol.6 No.2:66

The discovery of Acquired Immune Deficiency Syndrome

Kibret Martin*

Department of Biochemistry, University of Pais Vasco, Bilbao, Spain

***Corresponding author:** Ruolin Wu**,** Department of Biochemistry University of Pais Vasco Bilbao, Spain, E-mail: martin_k@gmail.com

Received date: 07-Jan-2021, Manuscript No. Ipjamb-22-13211; **Editor assigned date:** 09- Jan-2021, PreQC No. Ipjamb-22-13211 (PQ); **Reviewed date:** 23- Jan-2021, QC No. Ipjamb-22-13211; **Revised date:** 28- Jan-2021, Manuscript No. Ipjamb-22-13211 (R); **Published date:** 07-Feb-2022, DOI: 10.36648/ J Appl Microbiol Biochem.6.2.66

Citation: Martin K (2022) The discovery of Acquired Immune Deficiency Syndrome. J Appl Microbiol Biochem Vol.6 No.2:66.

Description

Despite tremendous advances in our understanding of soil microbiology, we still lack knowledge about the conditions under which most organisms exist within soil. This is partially because the scale at which we study soil properties is often mismatched with the scale of conditions impacting soil microorganisms. For example, we might determine soil pH by homogenizing 5 g of a soil sample in 10 mL of water and then measuring pH of the slurry, but these 5 g contain numerous pores (microsites) that can vary in pH. Water in a pore containing ammonia-oxidizers may have a lower pH because these organisms exude protons. In contrast, water in pores containing sulfate reducers could have a higher pH because their metabolism consumes protons.

Bacterial, viral and fungal infections are of interest. Relevant pathophysiology, genetics and epidemiology are also included. Recognizing the importance of the broader research context, the journal integrates research from various areas of biology and its applications in human health. Infectious Diseases: Research and Treatment is an international, open access, peer-reviewed journal which considers manuscripts on all aspects of infectious and sexually transmitted diseases in humans. It covers research, prevention, immunization, diagnosis, management and treatment. Biomarkers enable early diagnosis, guide molecularly targeted therapy and monitor the activity and therapeutic responses across a variety of diseases. Despite intensified interest and research, however, the overall rate of development of novel biomarkers has been falling. Moreover, no solution is yet available that efficiently retrieves and processes biomarker information pertaining to infectious diseases.

Infectious Disease Biomarker Database

Infectious Disease Biomarker Database (IDBD) is one of the first efforts to build an easily accessible and comprehensive literature-derived database covering known infectious disease biomarkers. IDBD is a community annotation database, utilizing collaborative Web 2.0 features, providing a convenient user interface to input and revise data online. It allows users to link infectious diseases or pathogens to protein, gene or carbohydrate biomarkers through the use of search tools. It supports various types of data searches and application tools to analyze sequence and structure features of potential and validated biomarkers.

Acquired Immune Deficiency Syndrome

Infectious diseases remain among the leading causes of death and disability worldwide. About 15 million (>25%) of 57 million annual deaths are estimated to be related directly to infectious diseases. Newly emerging and re-emerging infectious diseases constitute an urgent and ongoing threat to public health throughout the world. The discovery of Acquired Immune Deficiency Syndrome (AIDS) has led to renewed appreciation of the consequences of the emergence of infectious diseases. Severe acute respiratory syndrome (SARS) emerged in southern China in 2002 and has had a profound impact on public health. Influenza viruses possess evolutionary agility and the capacity to jump between fowl, farm animal and human species. Just as troubling are chronic infections, which create persistent social and economic havoc. Recent studies have shown that the burden of morbidity and mortality associated with certain infectious diseases falls primarily on infants and young children, with long-term social and economic consequences.

The early phases of soil microbiology were often dominated by attempts to characterize soil populations using culture techniques through laboratory growth on selective (favors a particular group of microbes over others) or non-selective media. While these attempts produced valuable information, little more could be said other than that there was some number of colony-forming-units per gram (CFU g–1) of soil. We are becoming increasingly aware that our knowledge of the soil microbial community is far from complete. We have learned that many microbes in the soil exist in a “viable (alive) but non culturable” state. It has long been observed that as many as 99% of microorganisms in a given soil sample, as quantified using microscopy or another direct technique, are not detected using traditional culture-based methods. This has led many to surmise that the vast majority (90%–99%) of soil microorganisms are not cultural. While it is true that lab culture remains elusive for many soil organisms, creative modifications in isolation methods, media, and incubation conditions have demonstrated that isolation and culture of many of these previously uncultured organisms may be possible if the appropriate conditions are provided. In fact, research using new culture-based methods has experienced somewhat of a renaissance in recent years due to the realization above and the need for cultured type-strains to characterize phenotypes that can be connected with the wealth of sequence data currently being produced through DNA based approaches.

The efficacy of biomarkers to infectious diseases lies in their capability to provide early detection, establish highly specific diagnosis, determine accurate prognosis, direct molecular based therapy and monitor disease progression. They are increasingly important in both therapeutic and diagnostic processes, with high potential to guide preventive interventions. Vast resources have been devoted to identifying and developing biomarkers that can help determine the treatments for patients. Furthermore, there is growing consensus that multiple markers will be required for most diagnoses, while single markers may serve in only selected cases. Despite intensified interest and research, however, the rate of development of novel biomarkers has been falling, suggesting that a resource that leverages existing data is overdue.