

Poster I-3

The BioAfrica Website: An Integrated Bioinformatics Website for Studying the Explosive HIV-1 Subtype C Epidemic in Africa

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Public databases contain a vast amount of human and microbial sequence data, in addition to data on gene expression, protein structure and protein interactions. This information can be used to design safer and more effective treatment strategies, identify novel drug and vaccine targets and increase our understanding of host-pathogen interactions. The BioAfrica website is a project of the HIV-1 Molecular Virology and Bioinformatics Unit at the University of Natal in Durban, South Africa. The primary goal of the website is to collate, analyze and distribute up-to-date information on the explosive outbreak of HIV-1 subtype C infections in southern Africa. Since its establishment in 2001, the website has grown in size and functionality. The current website contains maps and information on the changing dynamics of HIV-1/AIDS in Africa, integrated Genetic Data Environment (GDE)-based software for the efficient analysis of HIV-1 sequence data and an automated HIV-1 subtyping tool. The website also contains representative reference sequences, software and other resources that have been specifically designed to track HIV-1 genetic evolution, select vaccine epitopes and monitor drug resistance in Africa. The website also collates and distributes information on upcoming workshops, both internationally and within Africa. Members of the website's scientific team are actively involved in teaching and organizing courses in bioinformatics. The BioAfrica website is a novel resource that can be applied to wide range clinically-important pathogens, in addition to HIV-1. The website can be accessed at <http://www.bioafrica.net>.