Title: Bioinformatics for Public Health in Africa: Challenges and opportunities.

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Abstract:
Combinations of various factors including environmental and economic disparity have contributed to make Africa an endemic focus for deadly diseases (malaria, TB, HIV and other emerging non communicable diseases such as cardiovascular and cancers). The burden of these diseases is exacerbated by extreme poverty, malnutrition, resistance to drug or insecticides and lack of effective vaccine. The completion of a number of genome sequences for both the human and pathogens as well as for various insect disease vectors provides unprecedented opportunities for understanding these diseases pathogenesis and may potentially lead to development of vaccine, new drugs, diagnostic tools or biomarkers for monitoring and surveillance. In the past ten years, several training and capacity building initiative supported by WHO, NIH, Wellcome Trust and other international institutions have contributed to generate growing expertise in bioinformatics across Africa. We will examine lessons learned from different training programs in the continent and provide some thought on how to go from training in bioinformatics and genomics technology to more relevant application of bioinformatics to address public health issues in Africa.