

## **Varsity emerges as Africa's bioinformatics hub**

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Africa's largest research supercomputer has been turned on for biomedical research at the University of the Western Cape (UWC), a historically-disadvantaged institution. The official 'switching on' of the Cray SV1 Supercomputer earlier this month is a big step forward for UWC's bioinformatics arm, the South African National Bioinformatics Institute (Sanbi). Sanbi, the leading bioinformatics centre in Africa, becomes the first site on the continent for a dedicated research supercomputer. The institute's key research areas focus on the causes of genetic diseases, vaccine development for HIV and research into the causes of cancer.

Traditionally, supercomputers have served as highly-expensive tools for elite government-funded projects. However, this installation celebrates a collaboration that has been established between the world's leading supercomputer-class company Cray and Sanbi to use the expertise of Sanbi institute director and professor of genomics and bioinformatics, Prof Winston Hide. Hide's expertise stems from over 15 years of direct knowledge gained from managing the process of genome algorithms development in supercomputer environments – something that Cray wishes to develop, with an eye to the burgeoning information-based genomic biotechnology market. Cray approached UWC late last year to establish a strategic relationship in which the company would collaborate with Hide in the development of his world-class biotechnology algorithms, to be used in the discovery of genes upon the Cray platform. The platform, which will serve as a hub for further developments in South Africa's biotechnology capacity, will greatly boost a series of major new initiatives being led by South Africa's Department of Arts, Culture, Science and Technology, along with the collaborative efforts of the World Health Organisation (WHO) and the UK Wellcome Trust. These efforts help to further increase the country's already-established presence in the bioinformatics space, through its premier biotechnology software development company located at UWC, Electric Genetics (EG). Through EG, South Africa contributes key software to the US biotechnology market to help in the design of gene chips.

UWC rector Brian O'Connell says UWC is rapidly developing a leadership position in the delivery of cutting-edge informatics and biotechnology. It holds the honour of being the WHO centre for training in bioinformatics technologies for the continent of Africa.