

## **Gene code benefits long way off**

Jun 28 2000

It is likely to be a while before they permeate health system

SA COULD be in for a long wait before it sees any real benefit from the imminent completion of an accurate blueprint for the human genome.

While Monday's announcement by geneticists that the sequencing of the human genome had been virtually completed met with an enthusiastic response from various European and US leaders, local scientists were divided.

"It is a bigger deal than the space programme" says Cape Town University's head of human genetics, Prof Raj Ramesar. "But on a day-to-day level, it will take a while to permeate the health care system in SA."

Ramesar says although SA has not been involved in the sequencing of the human genome, geneticists in SA have been mapping the placement of diseases on the human genome for a long time. This means that SA researchers will be able to use the discoveries of the Human Genome Project and Celera, a US gene-sequencing company, to "work out which base pair does what".

The increased ability to access genes will help geneticists discover how to prevent and cure various disorders such as asthma, diabetes, depression and cancer.

Glaxo Wellcome's genetics director, Dr Allen Roses, also highlights the possible use of "information from patients' DNA to more accurately prescribe medicines" and "to begin to develop new medicines that act at the root causes of many common diseases".

But it is unlikely that these medicines will be available in less than seven years. "Over the next few years the genetics revolution is unlikely to result in the introduction of a wave of new medicines," says Roses.

In referring to the specific effect of the breakthrough in human genetics, Ramesar points out that SA is ideal as a research area because of its large number of relatively isolated populations. These populations are invaluable for comparative studies of why some people are susceptible to certain diseases. "It would become viable to develop medicines for small populations on whom existing drugs do not work," says Roses.

But although SA is well suited to this type of research, Electric Genetics MD Tanyia Broveak says "local pharmaceuticals will have to start investing in research and development in this area, or be at a huge disadvantage in the short-to-medium term".

SA does not have a significant drug discovery industry, but data from the human genome project could empower local companies with the information they need to develop drugs on their own.

Winston Hide, director of the SA National Institute of Bioinformatics, says SA should start to see growth in smaller biotech companies since they will have the technology to mine information. But he says the

country's human genetics industry will need to develop its skills base and improve its communication capacity.

Broveak says the research on human genes will have a major effect on local projects investigating Afrocentric diseases, since future projects will be able to access information easily and avoid heavy laboratory and equipment costs.

Hide says biotech companies will be able to focus more on the planning and analysis stages of research, instead of wasting time in blind trawling of genetic information.