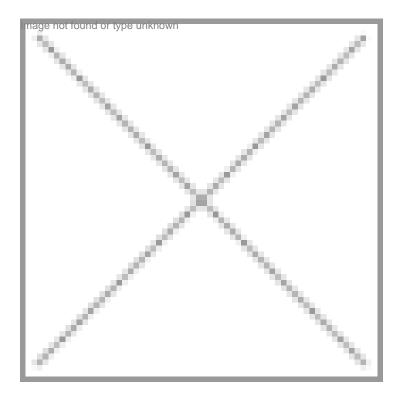


## "Biomedical Sciences is the fourth pillar of Singapore economy"- Dr Heng-Phon Too, associate professor, Department of Biochemistry, National University of Singapore

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## How is the Asian region developing in the area of biotechnology?

This decade has been the era of Asian awakening. Most of the countries in the eastern region have been structuring and consolidating their stakes in biotechnology. China has set up a Bio-Valley in Shenzhen and to develop the field further, the ministry of science and technology is providing funds to the tune of \$1.2 billion. Korea has recently started national initiatives in biotechnology and genomics and has put in \$15 billion this year. Taiwan's domestic electronic industry is diversifying into biotechnology. It has set up a \$30-billion biotech investment seed fund this year. Malaysia has also started and they are setting up a Bio-Valley too. India is developing the first Bio-IT Park in the world, while Singapore is strongly focusing on biomedical sciences. So everybody in Asia is gearing up.

## Why has Singapore chosen to focus on biomedical research?

Singapore had been poised to launch a new direction in economic development post 2000. After the announcement of the first draft of human genome in June 2000, the government decided to launch biomedical sciences as the fourth pillar of industry. The focus on biomedical science was because of some good reasons. As opposed to the existing chemical, electronics and engineering industries, which faced regional competition due to low labor cost, the field of biomedical sciences has a "high barrier entry" as it is very capital intensive. It is a high-end industry and needs a lot of good, well-researched products.

Secondly, Singapore does not have a lot of land. So animal culture or extensive agricultural research cannot be done. Hence we have to go to very high end just like Switzerland did.

Moreover, the potential for the growth of the biomedical field is tremendous as against the agriculture and non-medical devices. The global human therapeutic industry will be worth \$27 billion by 2008 and the human diagnostics will be about \$4.3 billion. In addition, due to the manufacturing of some blockbuster drugs like Zantac in Singapore, it already has the necessary manufacturing plants/facilities.

The vision is to develop Singapore into a world-class hub for biomedical sciences in Asia. With this ambition, the A\*STAR (Agency for Science, Technology And Research) and other government agencies have aggressively set directions, gravitating the nation in building this fourth pillar of economy.

Rolly Dureha