

A biomedical boost

World class internationally recognized bioscience programmes

As Singapore positions itself as a biomedical science hub for South-east Asia, there will be a shift from bytes and binaries towards healthcare products, especially drug discoveries.

Supporting this initiative, Singapore is grooming people with talent who will have the skills and knowledge to contribute to the biomedical sciences industry.

Dr John Tholen, Director of the Centre for Biomedical Sciences, has implemented programmes that support training with a progressive emphasis on understanding disease (pathology) and pharmaceutical manufacturing, consistent with the

institute's philosophy of making knowledge work to better prepare students for the challenges ahead in this industry.

Innovative Programmes

"Many of the commercial biomedical science activities in Singapore are pitched at developing healthcare products such as pharmaceutical drugs or medical devices, for example.

"However, The management aspect of the industry is best supported by a multi-disciplinary training in biomedical sciences," Dr Tholen said.

In October 2001, the first vocational biomedical sciences programme began and has since continued developing some of the most innovative programmes in the biomedical sciences, such as degree programmes in Medical Science (Medical Chemistry), Biotechnology (Genomics and Proteomics) and Pharmaceutical Management. Implemented in October 2001, the Foundation Certificate in Biomedical Sciences is recognized internationally by a number of universities and provides an excellent opportunity for students and working professionals to develop their knowledge in the



Centre for Biomedical Sciences and Management, mdxx is equipped with modern laboratories which provide students with essential practical training

biomedical sciences, particularly physiology, organic chemistry and molecular genetics.

Historical milestone

The course work is enhanced with lab-oratory training, which is essential in preparing students for highly responsible laboratory posts in the industry.

Dr Tholen added: "Due to the success of the foundation programme, there have been requests by many non-science professionals for the development of a further programme that is focused on the application of life sciences in commercial processes."

Consequently, the Executive Programme in Life Sciences and Biotechnology has been developed in collaboration with local industry to provide professionals with an understanding of commercial operations within the life science industry.

Last year was a milestone in the history of the MDxx as the institute introduced two new degree courses to offer students a comprehensive education in the life sciences. Students in the Bachelor of Medical

Sciences (Medical Chemistry) and the Bachelor of Science in Biotechnology programmes, awarded by Macquarie University, Sydney, will acquire knowledge and skills in functional genomics and proteomics, which are highly relevant for aspiring scientists wishing to participate in the development of therapeutics.

Progressive training

"These activities are the cornerstones of many pharmaceutical industries, since therapeutic and diagnostic developments constitute as much as 70 per cent of their activities.

"Graduates from these programmes are in strongly competitive positions, as evidenced by their preferred recruitment by pharmaceutical and biotechnology industries in Australia," said Dr Tholen. In addition, the MDxx, in collaboration with the University of Bradford, UK, is the first education provider in Singapore to launch a pharmaceutical management programme.

Dr Tholen explained: "This multi-disciplinary programme has been structured to provide progressive training with emphasis on pathology and understanding of diseases and their treatments, all coupled with operations management and marketing." Last November also saw the launch of the



The Centre for Biomedical Sciences as seen from outside

Centre for Biomedical. Sciences and Management, MDxx, in Dhoby Ghaut, which serves as the institute's key life science training ground. This new facility is equipped with modern laboratories providing practical training, which is a mandatory aspect of education in biomedical sciences. Geared up for the new wave in the biomedical sciences boom, the MDxx has taken on the responsibility of ensuring that its graduates are able to play an integral role in the development of the biomedical sciences hub in Singapore. "It is our belief that those students who gain a strong training in biomedical sciences and are passionate in their chosen professions may find that their creativity can lead to developments that provide invaluable contributions to Singapore's success in the biomedical sciences," added Dr Tholen.