

Regional Initiatives



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▼ 'Hai gui' stimulate Asian biotech industry

Jen Lin Liu¹

Jen Lin Liu is a freelance writer based in Shanghai, China

Asia's biotech opportunities attract brains to the region.

With the opening on October 29 of the biomedical park [Biopolis](#), Singapore has shown it can recruit high-caliber scientists from around the world. More specifically, the park has been able to attract what the Chinese call 'hai gui': Chinese-born researchers who, after spending years studying and working abroad in academia or the biotech and pharmaceutical industries, have decided to return and take advantage of opportunities in their home or neighboring countries.

The trend is true not only for Singapore but also for mainland China and Taiwan, both of which intend to build themselves into 'biotech hubs.' In the past decade in Shanghai, for example, 283 biotech firms have been created, according to Ni Jian, the President of the Chinese Biopharmaceutical Association (Washington, DC, USA), but only 25% (~70) have research and development capabilities.

However, there is no official count on how many of the overseas Chinese returnees have entered the biotech sector. But Jian, who is also CEO of Shanghai Fuchun Zhongnan Biotech, estimates that more than 200 scientists and entrepreneurs have returned to Shanghai alone in the past two years to join startups or create companies of their own.

"This is the best time to be in China since the Tang Dynasty," says Leo Yuxiang Liu, the head of market development at Shanghai New Summit Biopharma, referring to a historic period of progress that lasted from the 7th to 10th centuries and whose closest western equivalent was the Renaissance, which occurred from the 14th through the 16th centuries in Europe.

The 'hai gui' gain confidence from large amounts of government support bestowed on biotech activities across the region. For example, after an economic downturn in the late 1990's, Taiwan and Singapore reinvented themselves by turning away from their ailing electronics and manufacturing sectors and invested heavily in biotechnology. Singapore pledged \$4 billion over a five-year period to the biotechnology industry¹, and the combined five-year government and private industry investment in Taiwan is about \$4.3 billion over the five-year period that ends in 2007.²

Although Taiwan might be focused on attracting scientists that have ethnic ties in greater China, Singapore has actively tried to recruit talent from anywhere abroad, says Liu. He estimates 75% of senior scientists at his institute are from abroad, with about half of those scientists not of Chinese descent.

Scientists from overseas say they are attracted to returning to Asia not only because of particular governmental policies, but because of "a sense of opportunity," says Edison Liu, the executive director of the Genome Institute of Singapore. For example, Jackie Yi Ru Ying, who was born in Singapore and lived there until her family moved to New York when she was 7, says she was attracted by the ability to have a greater influence on a larger number of scientists in Singapore. As a former professor at the Massachusetts Institute of Technology (Boston, MA, USA), she had 15 postdoctoral students to steer; as head of the city-state's Institute of



Institute of Bioengineering and Nanotechnology

Jackie Ying left the Massachusetts Institute of Technology in Boston to head Singapore's Institute of Bioengineering and Nanotechnology.*

Bioengineering and Nanotechnology, she now oversees 90 researchers.*

Others, like Chang Tse-Wen, are driven by the desire to help the region where they were born and raised. Chang left a prominent career in the United States at drug discovery company Tanox (Houston, TX, USA), to return to Taiwan in 1996. Until recently, he was the president of the Development Center for Biotechnology (Taipei, Taiwan), a government think tank that helps steer biotechnology policies, and he now heads the life sciences department at Tsinghua University (Hsinchu, Taiwan), his alma mater. But ultimately his experience abroad landed him his prestigious positions in Taiwan: "I have more weight because it's a small place, and few people have the experience that I do in Taiwan," says Chang.

** Paragraph 7, preceding the asterisk, contains several errors of fact. The article states that Professor Ying was born in Singapore and moved to New York when she was 7, that she is a "former professor" at the Massachusetts Institute of Technology and that she now supervises 90 researchers at the Institute of Bioengineering and Nanotechnology. In fact, she was born in Taiwan and moved to the US at age 15, still holds a professorship at MIT and supervises 90 staff members at IBN, about 80% of whom are researchers.*

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*** Note:** The photo caption and paragraph 7, preceding the asterisk, contains several errors of fact. The article states that Professor Ying was born in Singapore and moved to New York when she was 7, that she is a former professor at the Massachusetts Institute of Technology and that she now supervises 90 researchers at the Institute of Bioengineering and Nanotechnology. In fact, she was born in Taiwan and moved to the US at age 15, still holds a professorship at MIT and supervises 90 staff members at IBN, about 80% of whom are researchers.

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