

# Expat Kiwi scientist's drug quest

New Zealander Dr Jilly Evans is a key figure in a hotly tipped US drug company

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YOKE HAR LEE

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**W**E TRY never to forget that medicine is for the people. It is not for the profit. The profit follows. And if we remember that, [the profit] never fails to appear."

These were the words of George Merck, the founder of one of the world's most successful drug companies. It is a quote that Kiwi-born but San Diego-based scientist Dr Jilly Evans likes because it syncs with her own philosophy. She is certain that big bucks mean nothing unless you have a higher purpose — that of doing something good for society.

That may sound like airy fairy talk. But Evans is no airy fairy person. She holds the rare distinction of being associated with two patents in biotech discovery. Her work has been published in over 100 scientific papers and she has a stake in hot-shot San Diego company Amira Pharmaceuticals, where she is vice-president of biology. Before this she spent 21 years with Merck & Co (Merck Sharp and Dohme in New Zealand).

Last year, when Merck closed its San Diego outfit, Evans and her ex-colleagues formed Amira Pharmaceuticals with the help of venture capitalists. The company has raised US\$9 million (\$13.4 million) — a stunning validation given that it was set up barely a year after Merck exited.

Evans and Amira's chief scientific officer, Dr Peppi Prasit, were key people involved in developing two main anti-inflammation drugs (Singulair and Vioxx — the latter has since been withdrawn) produced by Merck.

The market for non-steroidal anti-inflammation drugs, which Amira is competing for, is valued at about US\$3 billion.

The basic science behind Amira's business is that of unravelling the pathways of material going in and out of cells that are inflamed.

Amira scientists know from previous research that a "baddie" (5-lipoxygenase-activating protein or FLAP in short) is responsible for producing leukotriene in cells that are inflamed and common in patients with asthma or arthritis.

The quest is to find FLAP inhibitors that will act like shields to prevent the leukotrienes from penetrating the body's cells.

According to Evans, what is exciting about Amira's research is its very focused approach.

Amira will select patients for treatment based on their DNA. She likens this to the drug Herceptin, which is aimed specifically at women found with the HER2-type cancer.

Amira's first clinical trial will happen in early 2007. If everything goes according to plan, it will market its first drug between 2010 and 2012.

If it succeeds, it will be a multimillion-dollar company.

Even though the company is very young in terms of the bio-pharmaceutical lifecycle, Amira has already sealed a major collaborative deal with Swiss drug giant Roche to develop new drugs. Roche has extensive capability to screen targets in cells for development while Amira has the expertise to develop the right compounds for the drug.

Because Amira's scientific brains have deep knowledge about leukotriene pathways, the company has carved out certain

segments for screening to get early results.

Evans is not alone in thinking Amira has a great chance of succeeding. Other scientists also look upon Amira as a great success candidate.

Dr Jim Watson, a classmate of Evans in the University of Auckland's then school of microbiology and founder of New Zealand's Genesis Research, says that if any company is going to succeed, Amira will.

"They have a team with solid industry experience, in both research development and clinical trial.

"They also have a team experienced in dealing with the regulatory framework associated with commercialising a drug."

Watson is also of the view that Amira has mature candidates (in cell and chemical compounds

research) for clinical trials.

The company also has a team of venture capitalists very focused on getting Amira to move at the pace it needs. Its investors are Avalon Ventures, Prospect Ventures and Versant Ventures, all based in California.

Versant has also invested in another famed New Zealand pharmaceutical company, Antipodean Pharmaceuticals.

Retired microbiology professor Ray Ralph, Evans' supervisor for her Masters degree at the University of Auckland, also believes his former student has a very good chance of success. More than that, he is impressed by her ethical and moral qualities.

"She is highly enthusiastic, is very intelligent, and has total devotion to

Jilly Evans and her San Diego-based company are on a quest for an anti-inflammatory drug. Photo by Richard Robinson

whatever she is doing. She puts her heart and her soul in everything.

"She also has a strong sense of concern for others that is pretty rare."

When Evans is not buried deep in work, she is busy championing her other causes, including promoting women in science-based careers, alleviating childhood poverty, and lending her expertise to helping New Zealand find a good working model and a niche for commercialising biotechnology research.

Evans reckons scientists are made, not born. She started out at university studying geography but ended up specialising in cell biology and later organic chemistry. "I wasn't born a natural scientist. I think we tend to end up in a career where we had teachers who are passionate about their subjects."

For this she has her fourth form teacher, Neil Akehurst, to thank. Akehurst's magic in explaining the basic building blocks for life in DNA left an indelible imprint.

Another person who inspired her was her sixth form chemistry correspondence course teacher, Jean Struthers, whose "lovely tapes" left a deep impression.

Amira is an apt name for a drug research company. Evans says it is named after a little place near her San Diego office called Mira, which in Spanish means "to look".

Perfect for a company set up to seek the holy grail of the next big drug. ■

Yoke Har Lee is an Auckland-based freelance business journalist.

**'I WASN'T BORN A  
NATURAL SCIENTIST.'**

**Dr Jilly Evans**