

# Medical science leaping ahead

Research has come a long way since its toad-catching days, reports  
**Janelle Miles**

MEDICAL science has come a long way since biochemist Lyn Krebs collected toads from a Brisbane creek to use for human pregnancy testing in the 1960s.

In those days of FJ Holdens and beehive hairdos, Mrs Krebs and her colleagues would take two male toads and a woman's urine to determine a pregnancy.

The toads were kept away from their female friends for at least a week — otherwise amphibian amour would cause a false positive result.

The scenario sounds a bit like something out of a book on black magic in these days of being able to buy a five-minute, do-it-yourself pregnancy test from a chemist.

But however antiquated the toad test seems, it had its basis in science.

Mrs Krebs and other scientists at Sullivan Nicolaides Pathology, which turned 50 this year, used the toads to test for the presence of a hormone known as human chorionic gonadotropin (hCG) produced by pregnant women. The hormone stimulates toads to produce sperm.

Scientists injected a woman's urine into the dorsal lymph sacs of the toads and waited at least six hours before extracting and viewing the amphibians' urine under a microscope for the presence of the tell-tale sperm, indicating a positive test.

Two toads were used as a quality control measure.

Because toads hibernate, in the winter months laboratory staff would have to wake them up by putting them in warm water and exercising their legs to get them ready for testing.

"It's a ridiculous story but that's what happened," said Mrs Krebs, adding the toads lived to be reused in future tests.

Pathology testing is much more sophisticated now but the 61-year-old, who still works at Sullivan Nicolaides part-time, recalls her toad-catching days with a sense of fun.

"I was involved with a boys' brigade company then and the leader and myself used to accompany a number of boys down to Kalinga Creek," she said.

"We did have the police come one night shining torches and wanting to know what we were doing loitering after dark."

"I remember saying: 'We're collecting male toads to do pregnancy tests' and one of the officers said: 'A likely story, ma'am'."

"It was a bit hard to convince him."

Mrs Krebs said the toad tests were able to detect pregnancy from about a week after a woman missed her period.

Modern laboratory methods still test for the presence of hCG but are able to determine pregnancy two weeks earlier than that.

Much has changed in the 50 years since John Sullivan began



TESTING times ... Lyn Krebs used toads for pregnancy testing in the 1960s. Picture: Annette Dew

the practice in Brisbane's Wickham Tce and was joined soon afterwards by his pathologist colleague, Nick Nicolaides.

Humans were years from walking on the moon, the Beatles were unheard of and scientists still had no definitive tests to diagnose many diseases, including viral hepatitis and chicken pox.

"It wasn't that long ago when you could put all the accrued, scientific knowledge of disease

**"The police came one night shining torches and wanting to know what we were doing loitering after dark."**

Lyn Krebs, biochemist

and medicine into a single book," Sullivan Nicolaides' chief executive Michael Harrison said.

"Now, you couldn't fit it all in a room full of books."

These days, medical scientists are not only able to test for many more diseases, they can also differentiate between several types of the one condition.

For example, by being able to distinguish between different forms of breast cancer, they enable treating doctors to better target therapies for patients.

About one in five cases of breast cancer have high levels of a protein called HER-2 on the surface of tumour cells.

Those women, but not other breast cancer patients, benefit from treatment with the drug Herceptin which sticks to the protein so the cells are no longer stimulated to grow.

Dr Harrison predicts that pathologists will be able to genetically profile people more precisely so

one of the patients died before a pathologist spotted a tiny nematode under the microscope.

The find enabled doctors to stop the steroids in the other patients and administer a more appropriate anti-parasitic drug leading them to a rapid and complete recovery.

Investigative work revealed the patients had eaten undercooked pademelons.

The Queensland-based Sullivan Nicolaides laboratory is credited internationally as being at the forefront of diagnosing skin disorders through partner David Weedon, a Bond University professor.

"If a pathologist in say, America, has a difficult-to-diagnose skin condition, and he's looked at it under a microscope and can't decide what it is ... David will be sent the slides," Dr Harrison said.

Mrs Krebs left high school to join Sullivan Nicolaides in February, 1963, and studied medical science part-time at the University of Queensland. At the time, she remembers working with about 20 people in the laboratory.

In 2006, the pathology firm employs more than 2000 people with half of those working in 21 laboratories throughout Queensland, NSW and the Northern Territory.

## Sign of the times is now going digital

**Bernadette Condren**



**KIDS' CORNER**

EN ROUTE\* to work each day, I drive past a sign that states loud and proud "we sell sandwich boards".

Last time I saw someone sporting a sandwich board was in New York towards the end of last century (how old does that make you feel?) and, yes, it proclaimed the end was indeed nigh.

It was one of those surreal moments (along with waiting four hours for a martini at the Algonquin and seeing steam coming out of the manholes) when you know you're in the city where the dream can become the reality.

Or end up in a digger's ditch.

Mind you, there's always the possibility that I'm completely on the wrong track — and it has been said I could write the Refidex of wrong tracks — and that the sandwich boards referred to outside the Brisbane store were those dime-a-dozen signs outside every coffee shop, cafe and restaurant in town.

Although there was the one that sat perkily outside a Brisbane purveyor of fine flesh many, many years ago that proudly stated "Sydney strippers".

What those lasses south of the border had that couldn't be matched in the sunshine state one wonders, but there you have it.

A sandwich board for the times.

But come, that's a little prosaic at this time of year.

I prefer to think of someone bouncing out of bed each morning, sifting through their dodgy array of trench coats, trilbies, boots and archaic doomsday sayings to come up with something pithy to amuse the punters.

There's something old-fashioned about a man sporting a sandwich board.

And it's an old-fashioned way of advertising that's destined for the grave.

Along with real butter, the Iced Vovos of the 1970s and quality tin toys, sandwich boards are being given the boot.

As strange as it may seem, it's the US that's leading the charge.

Where once the likes of Burger King and Mustang were lauded on boards — sandwich or bill — now they've gone digital.

No longer will the wielder of chalk or of those massive roller brushes used to plaster paper ads to billboards be required.

Advertising technology is now stellar. A micro chip for macro edification.

Each digital billboard has 422,000 red, green and blue diodes (thingies to do with the flow of electrical current).

When charged with electricity, these diodes can combine to form more than a billion colours — and it takes just minutes to reprogram ads using a computer keyboard.

The ads themselves mightn't be any better, but the method of delivery sure is swank.

It's a shame really.

The schmicker things get, the more jobs fall by the wayside — people who become the meat in the sandwich of modernity and invention.

It's a sandwich bored by the drill of inhumanity.

\* Once had an editor who turned his face inside out when I used the phrase "en route" in a story I was writing — don't know if he thought it was obsolete, erroneous or just plain stupid. Made him pay for it. Married him.

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### South East Queensland Medical Opportunity

Located within the Caboolture Shire, the development of The Village at Burpengary presents a turn-key opportunity for members of the medical fraternity to establish a business with practice management infrastructure and services provided



The development is due for completion late-2007 and includes a supermarket, childcare centre, food outlets, retail and office accommodation.

To register your interest for lease contact Ken Kramme 0418 144 855 or addedval@bigpond.net.au