

Beware the stem cell hard sell

This June, Australia hosts the first meeting outside North America of the International Society for Stem Cell Research. But have the potential benefits of stem cell research been over-sold? **Melissa Sweet** reports.

It may take years, or even decades, before the promise of stem cell research is translated into useful, safe therapies, according to two University of Sydney academics.

Associate Professor Ian Kerridge, director of the Centre for Values, Ethics and the Law in Medicine, and doctoral

student Tamra Lysaght believe the public may have gained an overly optimistic view of the therapeutic benefits of stem cell research.

They issued the caution on the eve of the fifth annual conference of the International Society for Stem Cell Research (ISSCR), to be held in Cairns in June. It is the first time the meeting has been held outside North America, and organisers have described it as “a unique opportunity to showcase and promote Australia as a global player in stem cell research”.

Professor Kerridge said the ISSCR conference program showed that research was still in its very early stages.

“What this conference clearly shows is that right around the world there is an enormous amount of very basic biological work that remains to be done,” he said. “It is still very much at the discovery stage.”

While the field was moving incredibly quickly, Professor Kerridge said it was likely to yield important new insights into biology, physiology, pathogenesis, fertility and reproduction before it yielded useful clinical therapies.

“It’s still some years before we’re likely to see incorporation of therapies derived from stem cells as having any place in clinical therapy,” he said.

Concerns about the over-hyping of stem cell research are echoed by Tamra Lysaght, who is close to completing her doctoral thesis at the University of Sydney examining public discourse around stem cell policy debates.

Lysaght, who has a scholarship from the Australian Stem Cell Centre based at

Testing times ... encouraging laboratory research provides no guarantee of new clinical treatments.

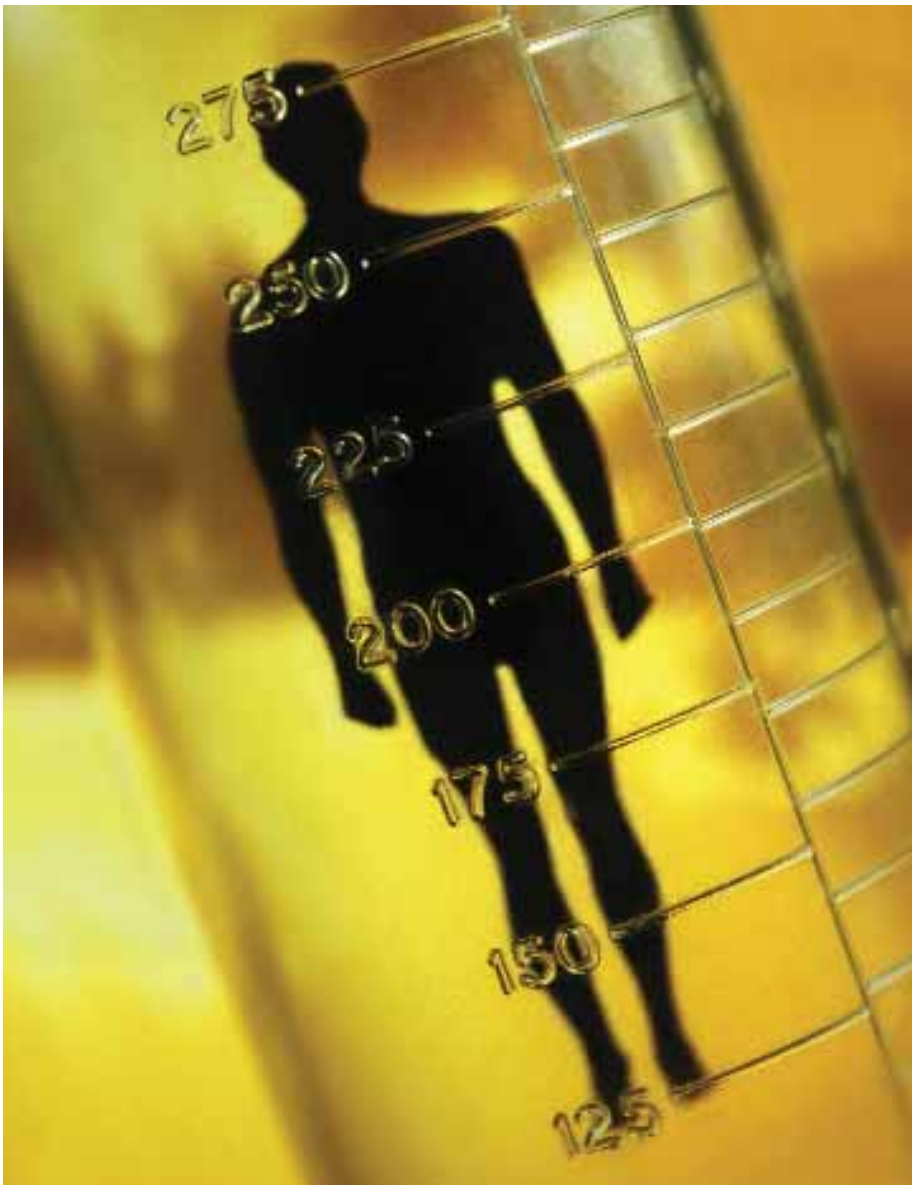




photo: AAP Image/Alan Porritt

Stem cell review ... Associate Professor Ian Kerridge (centre) appears before a Senate committee in Canberra in 2006. The Senate committee examined legislative responses to stem cell research. Professor Kerridge is accompanied by professors Loane Skene (left) and Peter Schofield.

Monash University and undergraduate qualifications in biotechnology and business, says a tendency to over-promote stem cell research and other biotechnologies is problematic for science more broadly.

“The over-selling is a strategy to overcome obstacles in obtaining funding for your particular area of research,” she said. “It may undermine the authority of science if it’s just seen as another stakeholder trying to get its share of the public purse rather than as an objective means of generating knowledge.”

Ms Lysaght stressed she did not want to downplay the significance of stem cell research. “From a scientific perspective, the area is extremely exciting and very promising. It’s just unfortunate the way in which medical technologies and science then interact with other institutions – political institutions and the media.

“How it manifests in the public domain can be quite different to how it’s presented in the scientific domain. The messages presented to the public

are often more optimistic than the much more careful language of science.”

However, Ms Lysaght said she expected that the public generally had a healthy scepticism about media reports of scientific breakthroughs.

“I think most people understand and know what the media is like,” she said. “They know you can’t believe everything that you see. I’d be very surprised if people are going to be shocked if the promises that have been made for stem cell research don’t come to fruition in the time frame they’re expecting.”

Meanwhile, Professor Andrew Elefanti, of the Embryonic Stem Cell Differentiation Laboratory at Monash University and chair of the scientific program of the ISSCR conference, agreed that significant challenges confront stem cell research. It was important the general public realised that encouraging results from laboratory research or early clinical trials would not necessarily translate into new treatments with widespread application, he said.

“Before any of these therapies can

“There is an enormous amount of very basic biological work that remains to be done.”

actually make it to the clinic, be it from embryonic stem cells or adult stem cells, they will have to reach safety criteria,” he said.

“The second thing is if there’s a particular cell you are wanting to transplant, can you make a large enough quantity to scale up production? And the third thing is, how pure can you get that population of cells?

“So people have to be aware that just because you can do something in a research setting doesn’t mean it is going to be feasible or safe enough to bring into routine clinical use.”