

Living Cell
Technologies Ltd



Company Announcement

LCT reports nine-year survival of transplanted pig islet cells in a diabetic patient

6 April 2005, Australia:

Living Cell Technologies Ltd (ASX: LCT) today reported the long-term survival of encapsulated pig islets in a man with type 1 diabetes. The cells were retrieved after being in the patient's abdomen for almost nine years.

A 40 year old man with Type 1 diabetes received a transplant of an early prototype of LCT's DiaBCell in 1996, as part of an approved clinical trial. Type 1 diabetics are not able to produce sufficient insulin of their own. The pig islet transplants were intended to release insulin and restore control of blood glucose levels. The pig islets were prepared in an alginate capsule to protect them from immune rejection and no immune suppressive drugs were needed for this transplant.

"For about one year, his insulin dosage was reduced by as much as 34 per cent and control of his diabetes improved," said Professor Bob Elliott, LCT Medical Director.

"However, by two years the daily insulin requirement returned to the pre-transplant dose. Nevertheless, he has insisted that over the next seven years continued benefit from DiaBCell helped him control his diabetes better than before the transplant," continued Professor Elliott.

Professor Elliott said, "The patient insisted that the site of the transplant (the abdominal cavity) be examined. We were pleasantly surprised to see a small number of intact capsules. The capsules contained live pig cells. A few were removed and produced a detectable amount of insulin in culture when stimulated with glucose. Analysis using microscopy further indicated that these few cells contained insulin."

"I have always thought the transplant has helped me manage my blood glucose levels better, especially overnight. I am looking forward to another transplant," the patient told LCT.

"This is one patient's experience," said David Collinson, Chief Executive Officer of LCT, "but it shows that pig cells within capsules, when placed in the abdomen, can be protected for a long period of time and, continue to produce small amounts of insulin. This is potentially great news for diabetics."

"We have taken the best features of this prototype islet preparation, advanced our encapsulation technology and are now moving towards a clinical trial with our DiaBCell product," said Mr Collinson.



The nine-year survival of transplanted islets in the diabetic patient has been accepted for presentation at the International Pancreas and Islet Transplant meeting in Geneva in May this year.

Pig islet transplantation is of particular interest to medical practitioners and patients since implanted islets can replace the insulin-producing function of the pancreas, which is lost in individuals with type 1 diabetes.

The extremely limited availability of suitable human islets for transplantation makes the therapeutic use of pig islets an important alternative, particularly because pig insulin is almost identical to human insulin and has been used clinically since the early part of last century.

About DiaBCell:

DiaBCell uses its micro-gel coating to protect the transplanted living islets from damage by the recipient's immune system. Islets are the specialised cell groups in the pancreas, which produce and secrete insulin into the blood in response to increased glucose levels, such as occurs after a meal. The increased glucose stimulates the islets to produce insulin, the insulin signals the body's tissues to take up glucose as a source of energy, causing the blood glucose levels to decrease. When blood glucose returns to normal levels, the stimulated secretion of insulin by the islet automatically stops.

About LCT: www.lct.com.au

Living Cell Technologies Ltd is an ASX listed biotechnology company (ASX: LCT). LCT began its business to develop and commercialise cell therapies for the treatment of a wide variety of diseases in 1987. The company has operating companies in New Zealand and Rhode Island, US.

LCT's technology has potential application for the treatment of conditions caused by a deficiency of specific cell function. The company has three products under development – NeurotrophinCell for Huntington's and DiaBCell for diabetes being developed in accordance with US Food and Drug Administration guidelines, and Fac8Cell for haemophilia.

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