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Dr Paul Tan, CEO of Living Cell Technologies

ASX-listed Living Cell Technologies Ltd develops live cell therapy products to treat life threatening human diseases. The vertically integrated company focuses on developing treatments where healthy living cells are injected into patients to replace or repair damaged tissue, without requiring the use of toxic drugs to prevent rejection. The company's product portfolio focuses on treatments for people with insulin-dependent diabetes and neurological disorders. The company owns a specialized biocertified pig herd for a safe, reliable source of cells for treatment. In an interview with BioSpectrum, Dr Paul Tan, the newly appointed CEO of Living Cell Technologies (LCT) outlined the company's expertise and future plans.

What kind of presence do you have in the Asia Pacific countries?

LCT's corporate head office and scientific panel are based in Melbourne, Australia. The company has also entered into collaborations with the Howard Florey Institute and the Bionic Ear Institute, both located in Melbourne.

Its research and technology unit is in Auckland, New Zealand and hosts the world's most advanced porcine herd for therapeutic transplantation. Focused on research and the manufacture of product for pre-clinical and clinical studies, LCT has one of the southern hemisphere's only GMP clean room production facilities for encapsulated cell products. The in-house virology department has set the standard for porcine cell characterization around the world. The experienced and dedicated

team, some with over 15 years of experience, supports the specific pathogen-free breeding facilities, clean rooms and research laboratories that interface seamlessly with the worldwide operations of LCT. The company has also conducted some pre-clinical research in Singapore.

What is on LCT's horizon for the next five years?

The focus of the company's operations continues to be advancing its lead products along the clinical trial pathway. The completion of the pre-clinical testing for the DiabeCell means that LCT is ideally placed to achieve its goal of two DiabeCell clinical trials – one in Russia, the other in New Zealand. These phase I trials will be followed by a phase II clinical trial in the US under the guidance of the FDA. The product will be ready for commercialization within five years, with an expected market entry date of 2012 and perhaps earlier in jurisdictions where a market for animal cell therapeutics exist.

LCT is looking at opportunities to market its pig tissue products in other fields and this may become a potentially lucrative revenue stream in the future. We are planning to build additional disease-free pig facilities that will help us grow and extract cells and tissues for clinical trials and eventually the manufacture of other medical products.

Could you elaborate on your products and their applications?

LCT's Biocapsules is a proprietary encapsulation technology that provides a significant delivery platform for its cell therapy products and enables licensing opportunities for a range of cell types. DiabeCell is a porcine pancreatic cell product for the treatment of insulin-dependent diabetes. LCT's Nt-Cell treatment implants choroid plexus cells into the brain and Fac8Cell product uses pathogen-free human liver associated cells (hepatocytes) to produce factor 8 required for blood clotting.

Apart from the present applications, what are the new applications the company is researching on?

LCT has a collaborative agreement with the Bionic Ear Institute to improve the hearing outcomes for cochlear implant patients through rehabilitation of the auditory nerve. LCT has the option to acquire an exclusive licence to commercialize the results.

LCT also has an agreement with the Howard Florey Institute to investigate the effects of the company's proprietary NtCell capsules in nervous system diseases including Huntington's disease.

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