

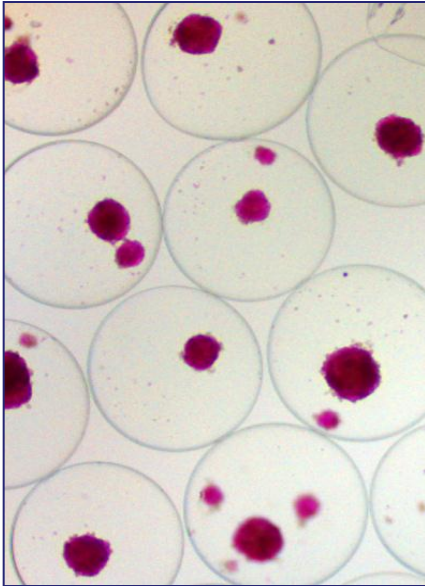


LCT

living cell technologies™

ASX: LCT - OTCQX: LVCLY

Diabetes – Neurodegenerative Diseases – Cell Encapsulation



Encapsulated porcine islets

BIO Investor Forum – October 2010

Dr Ross A Macdonald, CEO

Safe Harbor Statement

This document contains certain forward-looking statements, relating to LCT's business, which can be identified by the use of forward-looking terminology such as "promising", "plans", "anticipated", "will", "project", "believe", "forecast", "expected", "estimated", "targeting", "aiming", "set to", "potential", "seeking to", "goal", "could provide", "intends", "is being developed", "could be", "on track", or similar expressions, or by express or implied discussions regarding potential filings or marketing approvals, or potential future sales of product candidates. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no assurance that any existing or future regulatory filings will satisfy the FDA's and other health authorities' requirements regarding any one or more product candidates nor can there be any assurance that such product candidates will be approved by any health authorities for sale in any market or that they will reach any particular level of sales. In particular, management's expectations regarding the approval and commercialization of the product candidates could be affected by, among other things, unexpected clinical trial results, including additional analysis of existing clinical data, and new clinical data; unexpected regulatory actions or delays, or government regulation generally; our ability to obtain or maintain patent or other proprietary intellectual property protection; competition in general; government, industry, and general public pricing pressures; and additional factors that involve significant risks and uncertainties about our products, product candidates, financial results and business prospects. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described herein as anticipated, believed, estimated or expected. LCT is providing this information as of the date of this presentation and does not assume any obligation to update any forward-looking statements contained in this document as a result of new information, future events or developments or otherwise.

LCT – Key Facts

Premise

- World leader in cell implant therapeutics

Lead Product

- DIABECCELL[®]: treatment for Type 1 diabetes using implanted pig cells (Phase 2)
- Commercial launch by 2013

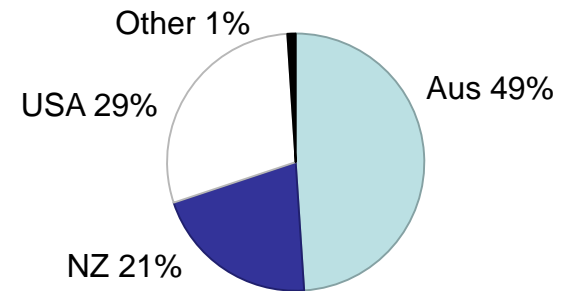
Listing

- Established 2003
- ASX: LCT (2004)
- OTCQX: LVCLY (2008)
- Market cap: ~\$A50m @ A\$0.18
- Capital raised to date: \$A56m; ~1800 shareholders

Operations

- Corp HQ in Sydney, Australia
- Fully integrated development and GMP production in Auckland, NZ
- DPF animal facilities in North and South Islands of NZ
- 55 employees

Shares Held



(\$A1.0 ≈ \$US 0.96)

Type 1 Diabetes

 **Loss of insulin-producing pancreatic islet beta cells; life long need for insulin replacement**

Human Burden of Type 1 Diabetes

- 20m patients (10% of 220m diabetes patients globally)
- Daily insulin injections
- Long term complications
- Major economic burden (>\$300b global diabetes cost)
- About 17% have unstable diabetes: hypoglycemic episodes with seizures and coma

Limited Treatment Options

- No cure
- Insulin therapy little changed in 80+ years
- Multiple approaches researched, but with serious hurdles
- DIABECCELL[®] provides real potential to safely manage Type 1 diabetes

Sources: WHO (Nov 2009) , JDRF , National Diabetes Fact Sheet 2007(NIH, CDC, ADA)

Lead Product: DIABECCELL®

Immunoprotected (alginate-encapsulated) Porcine Islets for Xenotransplantation in Patients with Type 1 Diabetes

Porcine Islets

- Derived from unique, proprietary, closed herd of DPF pigs; neonatal donors
- Rigorous in-house screening: herd, donors, islets & recipients
- Meet current US FDA standards

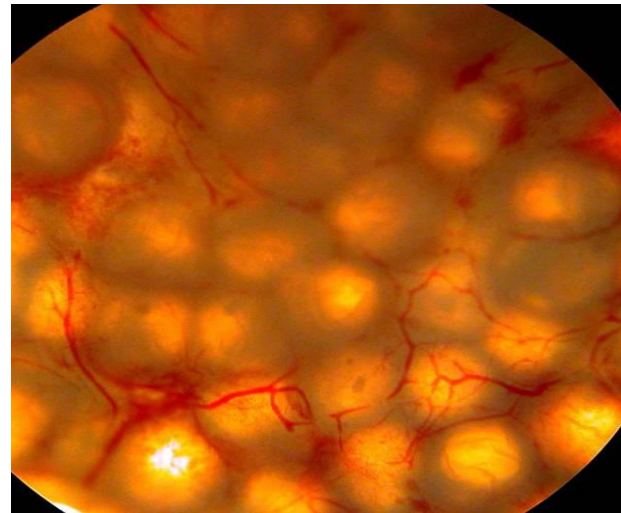
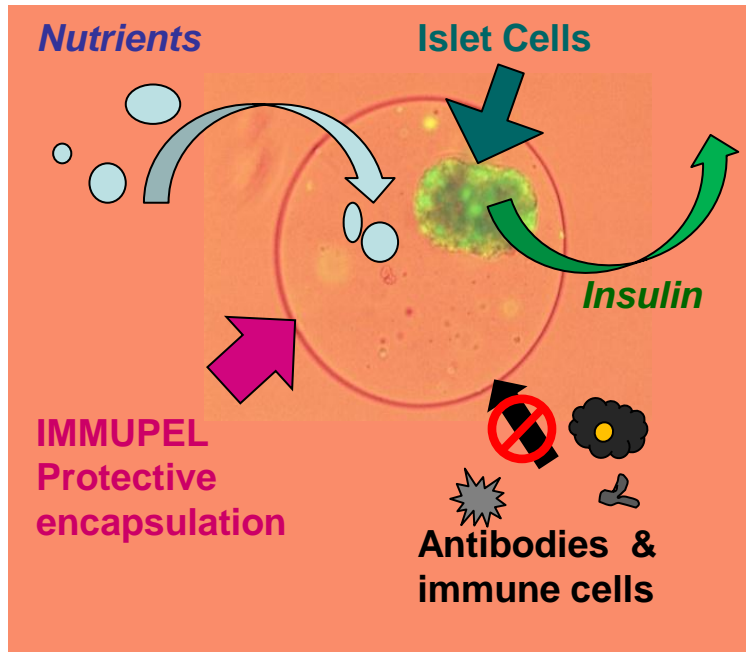
IMMUPEL™: Alginate Encapsulation

- Proprietary technology (multiple applications); collaboration with Centocor (J&J)
- Microencapsulation (0.5mm diameter) in biocompatible alginate gel
- Highly effective immune barrier
- Facilitates exchange of small molecules + *insulin*
- Islets continue to function (make insulin, +) and respond

 For intraperitoneal transplantation into recipient patients

DIABECELL®

Islet Cell Implant Without Immunosuppression



DIABECCELL[®] Manufacturing

from Pig to Patient

Islet isolation and processing



In vitro culture



Islet encapsulation and testing



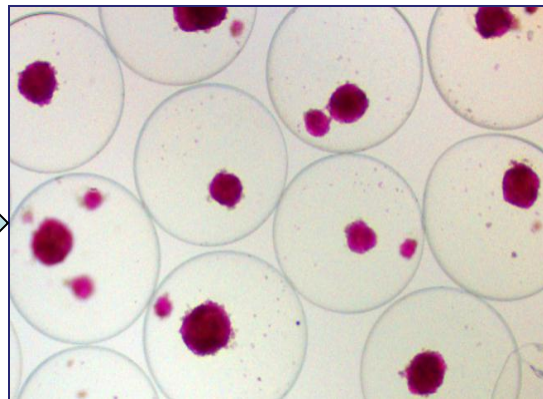
DIABECCELL packed and transported to clinic



DIABECCELL implanted via laparoscopy into abdomen



Manufacture



DIABECCELL - Encapsulated islets



Surgical implant

LCT's Bio-certified Pigs

A Unique High Value Asset

- Proprietary pathogen-free pigs: addresses key barrier to xenotransplantation
- Derived from herd on Auckland Islands isolated > 150 years
- Safety: no xeno-relevant viruses, parasites or bacteria; pigs do not secrete PERV
- Bred & maintained as closed herds in two DPF facilities in NZ; 7 years health and monitoring records, monitored regularly
- LCT pigs are biocertified according to US FDA guidelines for use in human therapeutics



DIABECCELL[®] Summary Data

Pre-clinical Studies

- Variety of rodent models: no Tx-related AE's; therapeutic responses observed
- Diabetic rats: no Tx-related AE's; ↓ insulin dose in Tx group; some insulin independent
- Diabetic non-human primates: no Tx-related AE's; ↓ insulin dose in Tx group

Clinical Studies in Diabetic Patients

- Encapsulated islets (1996): n=2; no AE's; ↓ insulin dose and HbA_{1c} ; porcine C-peptide in urine; ↓ in hypoglycemic episodes
- DIABECCELL[®] Moscow study (2007): n=8;
- DIABECCELL[®] New Zealand study: n=8+4; to report in 4Q10
- Pivotal trial to commence in 2011



DIABECCELL[®] Phase I/IIa: Moscow

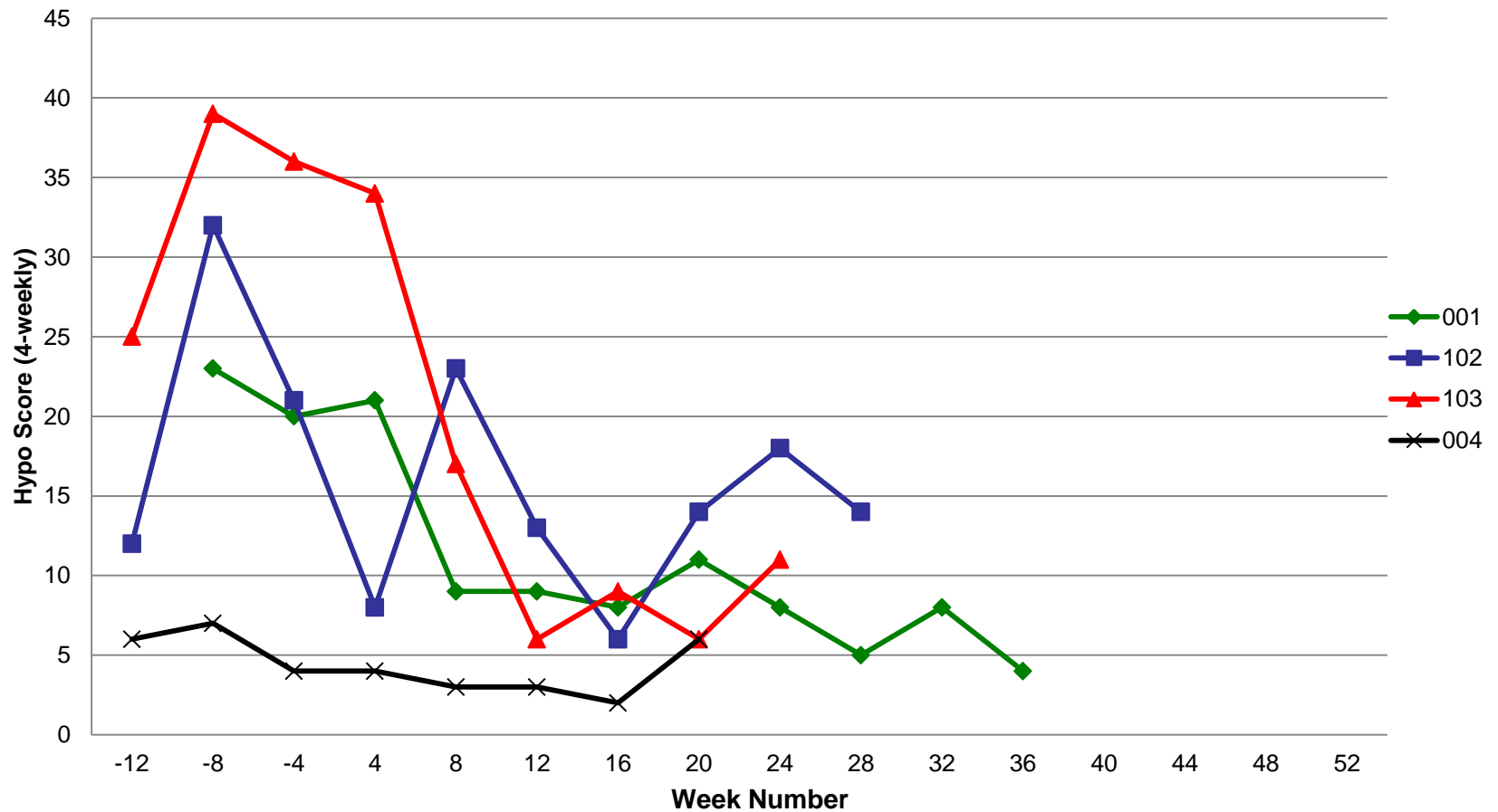
Safety:

- No significant adverse events. Multiple implants are safe. No evidence of zoonotic (animal to human) infections

Efficacy:

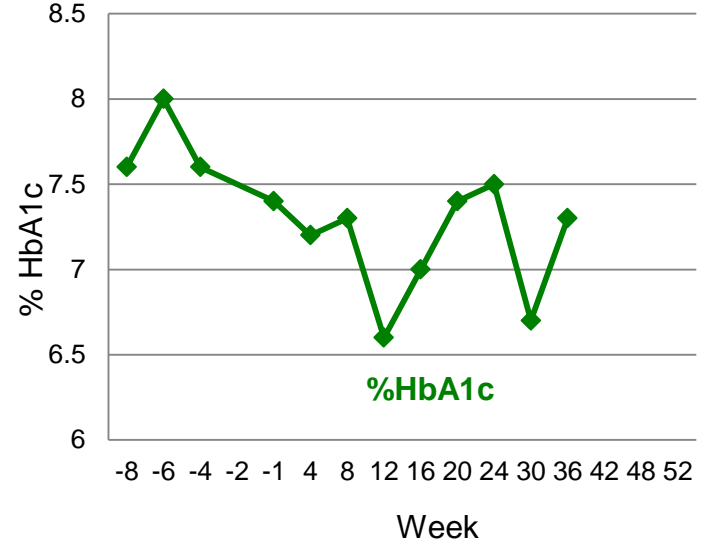
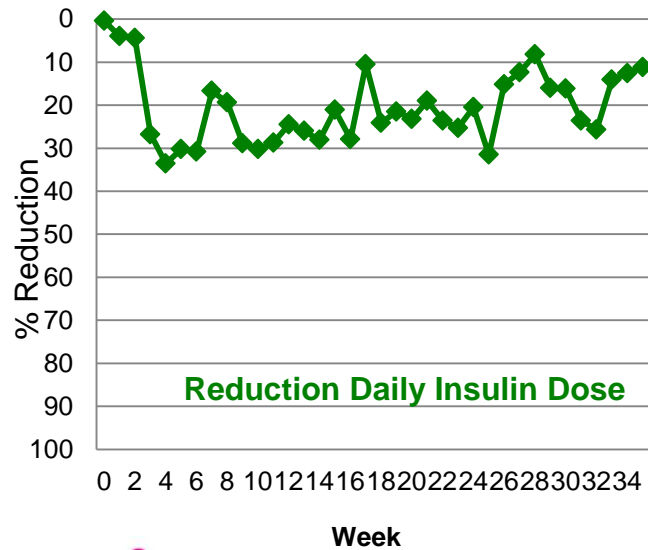
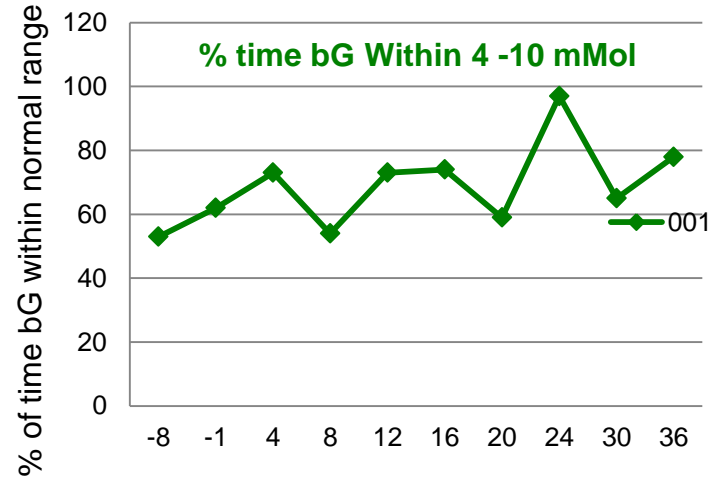
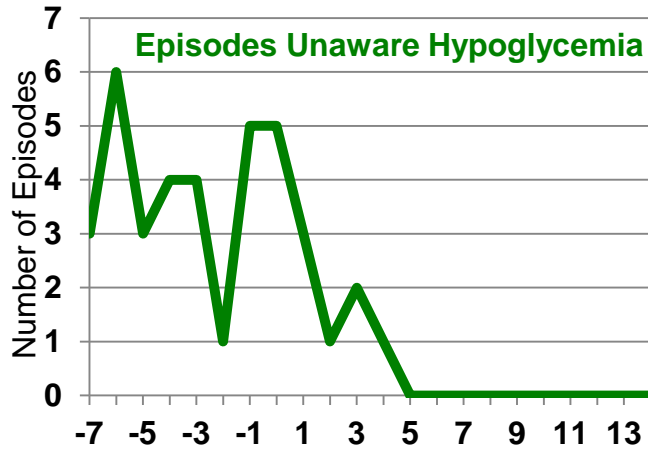
- Normalized HbA1c reflecting good blood glucose control in 7 of 8 patients
- Reduction in daily insulin dose . Two of seven patients off insulin
- No clinical hypoglycaemia
- Micro-capsules retrieved during second implant were intact and contained live cells showing no evidence of immune injury
- Detection of porcine insulin in blood indicating a functional implant

DIABECCELL[®] Phase II: New Zealand Hypoglycaemia scores (Group 1)



DIABECELL[®] Phase II: New Zealand

Data for Patient 1



DIABECCELL[®]: Management of Type I Diabetes

Clinical Trial Endpoints

- Improved glycaemic control – HbA_{1c} < 7%
- Decreased frequency and severity of hypoglycaemia (unaware hypoglycaemia)
- Reduced insulin dose and frequency

➔ **DIABECCELL Target Product Profile defined Q4 2010**

DIABECCELL
Cell Implant Product



Competing Technologies

LCT is the world leader in clinical development of xenotransplantation

Human Islets (“Edmonton”)

- Approved, but limited due to paucity of donors
- Requires long-term immunosuppression; complex surgery
- 80% insulin independent post 1-2 transplants; declines to 10% long term
- 1500 performed since 1999

Stem Cells

- Huge interest
- Unstable; transformation risk
- Ethical issues
- Requires immunosuppression (unless self or matched)

Closed loop pumps

- Deliver only insulin
- Impractical and not particularly effective

Regeneration; immune modulation

- Long term safety questions
- Uncertain efficacy
- Requires very early intervention (immune modulation)

Revenue Model for DIABECCELL®

Commercial pathway

- Approval enabling clinical trials in multiple markets
- First approval expected 2013
- Strategic alliances with leading health centers: Designated DIABECCELL® Centers of Excellence (DDCE's)
- LCT exclusive supplier of biocertified clean pigs
- Scalable, fully integrated manufacturing
 - owned, controlled and managed by LCT

High value product

- Treating 1,000 patients @ \$150K delivers revenue of A\$150m, 50%-60% gross margin (*cf* cost of human islets @ \$250K ea)
- Significant revenue from small (1%) market penetration
- Human islet procedures reimbursed in EU, CGM reimbursed in US

DIABECCELL® Development Milestones

2010

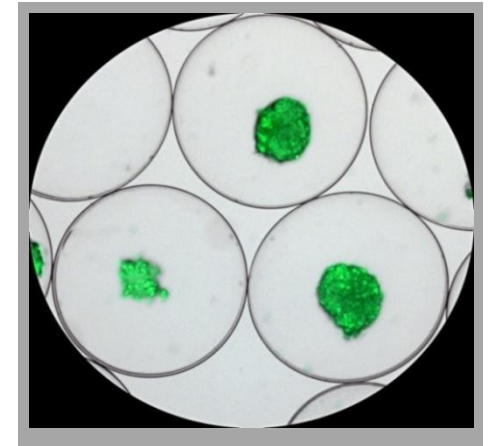
- Q4 Report Phase IIb – 8 patients from NZ trial
- Q4 4 New patients in NZ trial
- Q4 Target product profile defined

2011

- Dose seeking trials continue, add jurisdictions
- Approval for pivotal trial, NZ
- DIABECCELL registration Russia
- Strategic alliance DIABECCELL (12 mth data NZ)

2012

- Manufacturing facility #1 (S1) start
- Completion and reporting of pivotal data



AOPI stain

DIABECCELL[®] Commercialisation Milestones

2013

- File for approval in major jurisdiction
- Revenue from Russia
- Manufacturing facility #2 (S2) start
- LCT reaches profitability

2014

- DIABECCELL approval and revenue – NZ, Australia, US, EU, others
- Revenue from NZ, Australia, others
- S1 complete, S2 interim capacity
- DIABECCELL annual revenue capacity \$50 - \$60 million


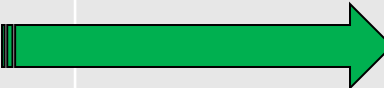
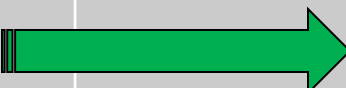


2015

- S1 and S2 at capacity
- DIABECCELL annual revenue capacity about \$80 million



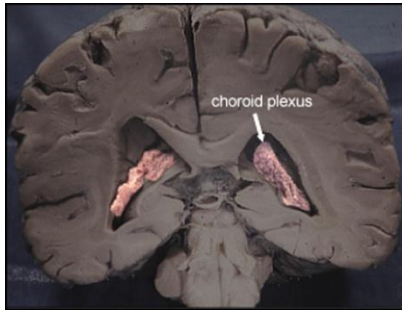
NOTE: These milestones exclude revenue opportunities from NTCELL collaborations, IMMUPEL[™] out-licensing and other porcine biomaterials

LCT's Therapeutic Pipeline

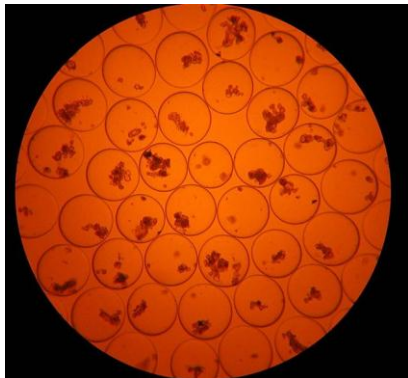
PRODUCT	INDICATION	R&D	PRECLINICAL	PHASE I TRIALS	PHASE II TRIALS	PIVOTAL TRIALS
DIABECELL®	Diabetes – 1	 <i>NZ, Russia, other jurisdictions</i>				
NTCELL	Parkinson's					
NTCELL	Stroke					
NTCELL	Hearing Loss	 <i>Bionic Ear Institute, Melbourne Australia</i>				
NTCELL	Huntington's					

LCT's NTCELL: Neurodegenerative Disease

Alginate encapsulated porcine choroid plexus cells



- Choroid plexus cells naturally produce factors that protect brain and nerve cells from degeneration or injury and enhance repair
- Encapsulated with IMMUPEL™, high yield cells from LCT pigs
- NTCELL has been implanted in animal models of Parkinson's disease, Huntington's disease, stroke and hearing loss; primate studies underway



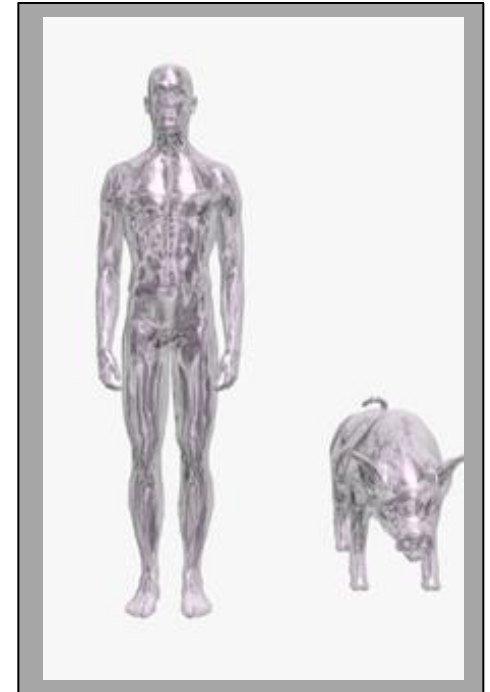
Untreated

Treated

Rat stroke model; white areas indicate damaged brain tissue

LCT Value Proposition

- **Consistent positive Phase II trial data**
Technical risk mitigated
- **Significant revenue potential on horizon**
Estimated registration of DIABECCELL® within 3 years
\$80m projected revenue in 2015: 150% avg y/y growth
- **Global product reach**
Strategic alliances with global pharma and biotech leaders
Scalable product manufacture and supply
- **Exclusive protected high value assets**
Unique bio-certified pigs
Fully integrated proprietary manufacturing process
Delivery technology eliminates need for immunosuppression
- **Broad technology platform delivers multiple opportunities**
NTCELL - multiple neurodegenerative diseases
DIABECCELL - potential beyond Type 1 diabetes
IMMUPEL™ - can deliver other cell-based therapies
Biocertified porcine biomaterials - medical products



Thank you for your attention....



Back-up Slides

LCT Intellectual Property

Patents - 32 granted, 49 pending; 15 patent families

- Use of cells from neonatal piglets for the treatment of diabetes
- Methods of preparing neonatal islets
- Use and method of preparing choroid plexus cells for treatment of neurological diseases
- Method of selection of pigs suitable as source of tissue for human therapeutics
- Alginate encapsulation delivery technology

Operational experience and know-how

- Breeding and screening of designated pathogen-free pigs
- Expertise in alginate selection, composition and processing
- Fully integrated accredited manufacturing

LCT Capabilities and Competitive Advantage

- ☑ Pig Facilities Supply of piglets to FDA standards
unique and exclusive bio-certified pig herds
- ☑ Manufacturing cGMP cell processing and encapsulation
- ☑ Safety Full suite of diagnostic tests accredited in 45
countries for monitoring safety in recipients

Published long term clinical safety data
- ☑ Approval Ethics and regulatory approval obtained;
18 patients dosed in two jurisdictions
- ☑ Route to Market Designated DIABECCELL Centres of Excellence
(DDCE)
- ☑ Intellectual Property Broad, issued patent portfolio

LCT Board of Directors

- **Dr David Brookes, Chairman**, Adelaide, SA, Australia
Director of Atcor Medical Holdings Ltd; medical practitioner
- **Dr Ross Macdonald**, Melbourne, VIC, Australia
Managing Director of Living Cell Technologies Ltd; Director of CNSBio Pty Ltd, Telesso Technologies Ltd, Hatchtech Pty Ltd
- **Mr Simon O'Loughlin**, Adelaide, SA, Australia
Chairman of Bondi Mining Ltd; Director of Aura Energy Ltd, Petratherm Ltd, Chesser Resources Ltd, WCP Ltd and Probiomics Ltd
- **Mr Laurie Hunter**, San Francisco, CA, USA
Director of Trident Resources, Madagascar Oil and Direct Petroleum Exploration Inc.
- **Mr Robert Finder**, Adelaide, SA, Australia
Chairman of LBT Innovations; Director of National Pharmacies Australia; formerly MD & CEO Gropep
- **Mr David McAuliffe**, Perth, WA, Australia
Established biotechnology companies in Europe and Australia; founder and until very recently Executive Director of NeuroDiscovery Ltd, Director of Western Australian ChemCentre
- **Dr Paul Tan**, Auckland, NZ
Chief Executive Officer and COO of Living Cell Technologies Ltd, member NZBio National Advisory Council
- **Emeritus Professor Robert Elliott**, Auckland, NZ
Co-founder and Medical Director of Living Cell Technologies Ltd; Director NZ Childhealth Foundation