

Encapsulated porcine islets



ASX: LCT - OTCQX: LVCLY

Diabetes – Neurodegenerative Diseases – Cell Encapsulation

World Leading Cell Implant Company

Australia – August/September 2010

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 - World Leader in Cell Implants

Products

- Lead product DIABECCELL® novel approach to treat Type 1 diabetes
 - Proprietary implants of porcine insulin-producing cells
 - World first clinical program in Phase IIb
- Pre-clinical programs in neurodegenerative diseases – NTCELL for Parkinson's, Huntington's, stroke, hearing loss

Platform

- Porcine cell implants – unique bio-certified pathogen free pig herds
- Breakthrough microencapsulation IMMUPEL™ eliminates need for immune suppression
- Strong IP position

Process

- World's only internationally accredited laboratory to screen for porcine pathogens
- GMP production facility (cell processing and encapsulation)

Revenue

- Commercial launch by 2013
- Global reach through partnering



International Capital Structure and Trading

LCT History

- Formed in 2003, acquired IP, operations and 20 yrs of R&D
- Listed ASX Sept. 2004
- Listed OTCQX June 2008
- Total funds raised to date: A\$56 M

2010 Grant Highlights

JDRF USA	US\$0.5M
N.Z. Government	NZ\$4.0M

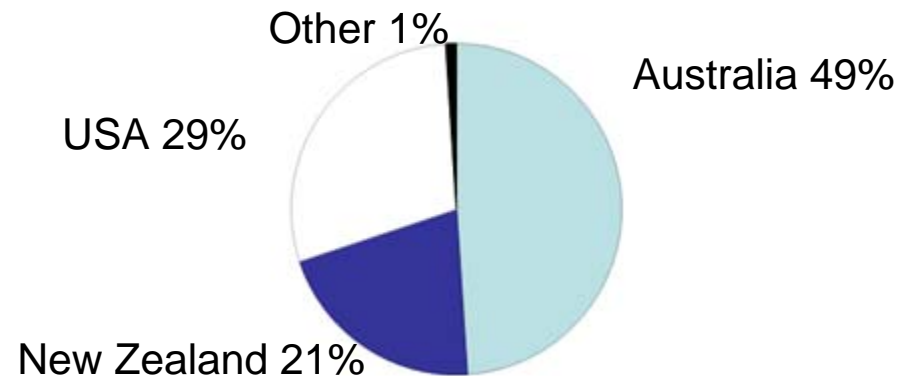
Market Cap at 25 August 2010 A\$53.9 M

Outstanding Shares: 283.8 M
ASX: 84%, OTCQX (ADR):16%

Trading Volume May - Aug 2010:
ASX: 48%, OTCQX (ADR): 52%

Outstanding Options: 6.9%
(50% publicly listed, 50% LCT staff & directors)

Shares Held



LCT Trade Data Summary (25 August 2010)

Market Capitalization: AUD \$53.9 million

Total Ordinary Shares: 283,790,006

Current share price:
52-week range

6-mth price history
20-day SMA
As of 25 August 2010

ASX: LCT

.19
.14 - .41



Red – LCT, blue - ASX200, green - SMA

OTCQX (ADR): LVCLY

1.57
1.00– 3.88



Blue – LCT, yellow - SMA

Type 1 Diabetes

 **Destruction of insulin-producing pancreatic islet beta cells by immune system; life long need for replacement**

Human Burden of Type 1 Diabetes

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

Limited Treatment Options

- No cure
- 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)

The DIABECCELL[®] Advantage

	Beta Cell / Islet Replacement					Beta Cell Regeneration	Immune Therapies
	DIABECCELL [®] (xenotransplantation)	Human Islets (allograft transplantation)	Stem Cells	Gene Therapy	Closed Loop Pumps Recombinant insulins & analogues	Small molecule growth factors HTS	Anti-CD3 abx Oral vaccine
Pros	Ready donor supply LCT no immune suppress Reg. Approval/trials Small pivotal trials Continuous screening LCT commercial 2013	Approved In use (limited)	Ready supply Human to human	No immune suppress. (if human)	Commercially available	Potentially low cost Easy to administer Available to large mkt.	Research goal: Reset immune system & permit beta cell regeneration Easy to administer
Cons	Xeno-therapy Reimburse unknown	Lack of donors Extensive surgery Expensive Immune suppress	Unstable, risk of tumor, cancer etc. Ethical issues-ES Immune suppress Expensive	Difficult to control Insulin gene promoters not new Early research	Device discomfort Not reliable Delivers only insulin	Safety/toxicity - Adverse events No proof of efficacy Immune suppress Subject to original autoimmune disease	Large trials, lengthy trials 7-8 yrs Early onset only - within 90 days of diagnosis Requires residual beta cell mass for efficacy Safety – cancer/infect.
Players	LCT (only approved trials) University of MN, US Betacell, Belgium (no pigs) Cercomed, US (no pigs) Revivacor (gen mod pigs) Semova, Canada (no pigs)	Hospitals - Edmonton protocol	Univ of MN JDRF (IVF)	Academics in Israel Revivacor (pigs)	Animas (J&J) Accu-Chek (Roche) Minimed (Medtronic) Omnipod (Insulet) JDRF	DeveloGen AG Transition Thrx Academics Novartis Res Fnd J&J Biogen Pfizer	Tolerx/GSK JDRF Universities Bayhill MacroGenecs

LCT's Bio-certified Pigs

A Unique High Value Asset

- LCT owns unique pathogen-free pigs derived from sub-Antarctica
- Source herd from Auckland Islands isolated > 200 years
- Safety: no xeno-relevant viruses, parasites or bacteria; pigs do not secrete PERV
- Removed under quarantine by LCT; concession from NZ government for remaining pigs
- LCT owns and breeds its 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 2003 for use in human therapeutics



DIABECCELL[®] Manufacturing

from Pig to Patient

Pancreas removed under anesthesia, and processed



Neonatal Islets isolated and cultured to improve purity



Islet encapsulated and tested for cell viability and Insulin production



Encapsulated islets pass quality control tests



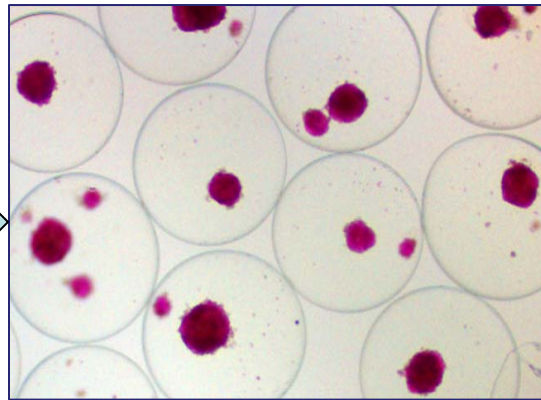
DIABECCELL packed and transported to clinic



DIABECCELL implanted via laparoscopy into abdomen



Manufacture



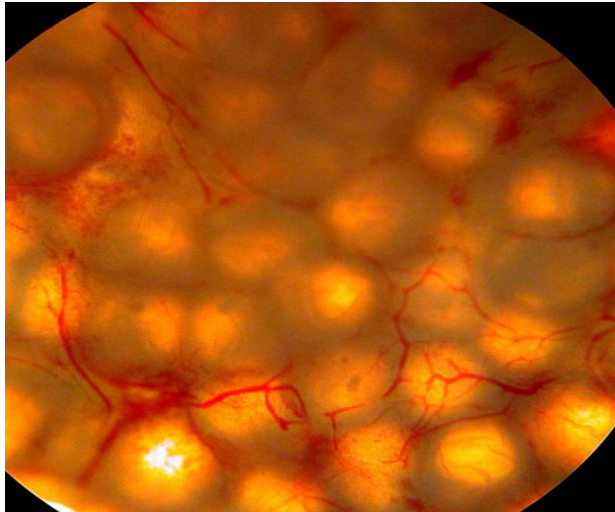
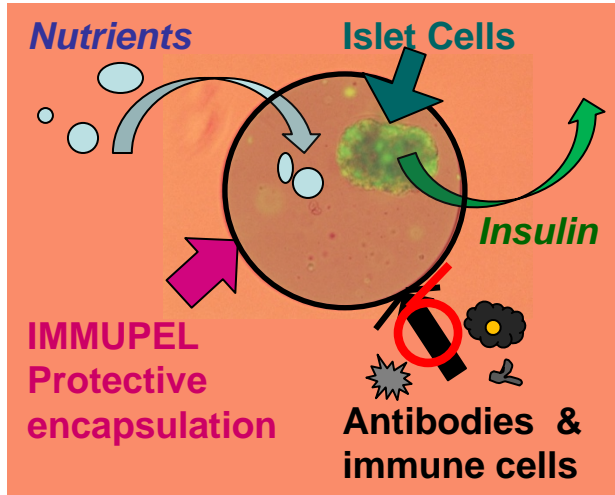
DIABECCELL - Encapsulated islets



Surgical implant

DIABECELL[®]: LCT's Lead Product

Islet Cell Implant Without Immunosuppression



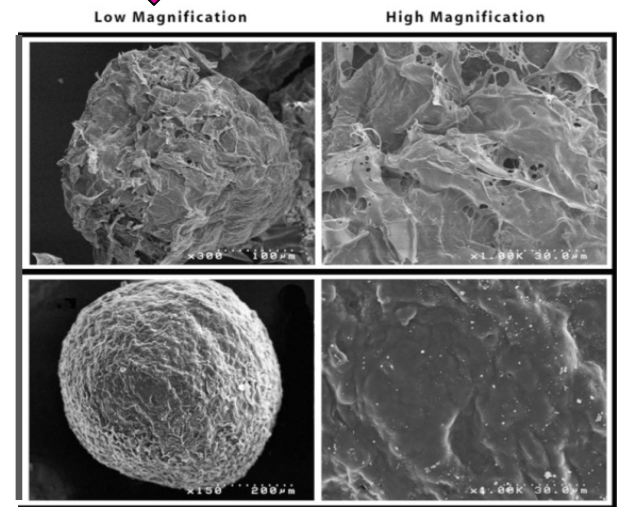
- Structure of IMMUEPEL[™] microcapsules enables nutrients to reach cells but prevents immune rejection
- Immunosuppression **not** required
- Cells function naturally as islet cells in body
- Diabetes is controlled and health improves

IMMUPEL™: Enabling Delivery Technology

Protecting Living Cells in Microsphere Capsules

- Avoids immune rejection without immunosuppression
- Long term durability
- Applicable to other cells (e.g., stem cells)
- Fully integrated cGMP supply capability
- Patent filed, proprietary process
- Licensing opportunities
 - Centocor R&D Inc (J&J) research collaboration with option to license LCT technology in a specified field

Other alginate capsule [90 days]



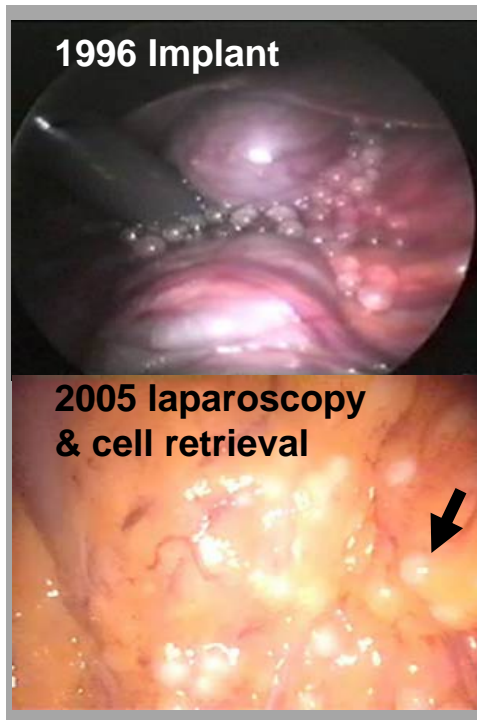
LCT capsule [215 days]

Clinical Data 1

DIABECELL[®] Safety and Proof of Principle for Efficacy in Humans

Pilot study 1996 - 2005

Auckland, New Zealand



10 yr cell survival and function

Published in Xenotransplantation 2007

Phase I/IIa 2007 – 2010

Sklifasovsky Institute, Moscow, Russia

Subjects

8 adult Type 1 diabetes patients
Insulin dependent > 5 years

Dose

5,000 – 10,000 islet equivalents/kg
Up to 3 repeat implants

Safety

- No significant adverse events to date

Preliminary Efficacy

- Improved blood glucose control with reduced HbA1c
- Reduced daily dose of insulin injections
- Two patients off insulin up to 32 weeks
- Intact capsules retrieved after 6 months
- Pig insulin detected in patient blood

Clinical Data 2

DIABECCELL[®] Phase IIb Trial, Auckland, New Zealand

Subjects and Dose

8 adults with unstable Type 1 diabetes

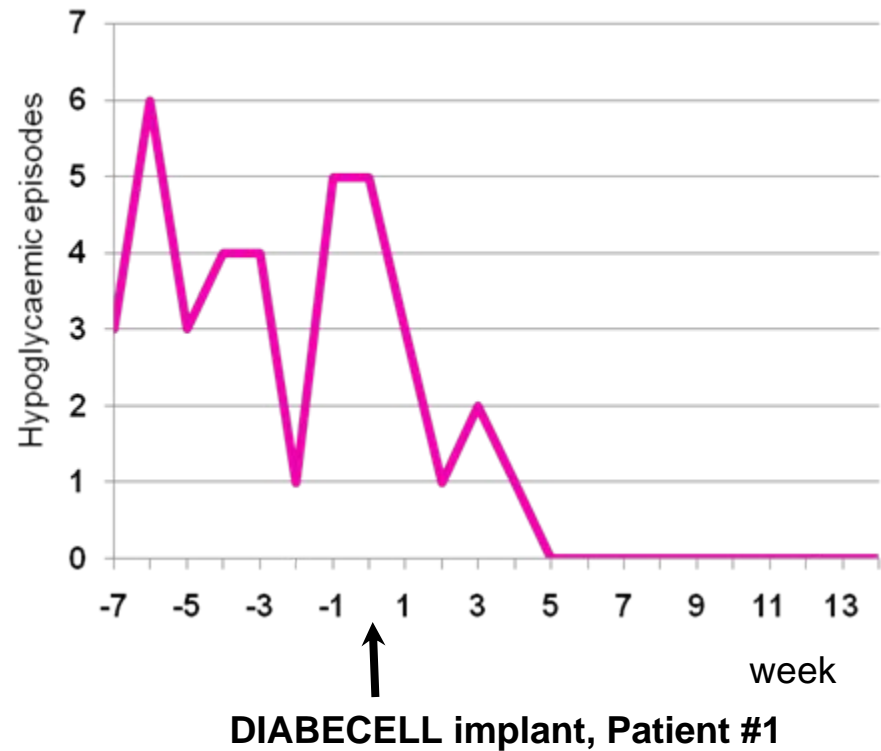
- 4 received implants 10,000 islet equivalents/kg (12 – 24 week follow up)
- 4 received 15,000 islet equivalents/kg (4th patient treated in July)
 - Approval to add further 4 patients

Safety

- Safety profile confirmed with no product-related significant adverse events

Efficacy (first 4 patients given 10,000 IEQ/kg)

- Improved blood glucose control (HbA1c)
- Reduced insulin dose
- All 4 patients showed reduction or elimination of episodes of clinically significant hypoglycaemia
 - 90% reduction from 19 events to 2



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**

Revenue Model for DIABECCELL®

Commercial pathway

- Approval enabling clinical trials in multiple markets
- First approval expected 2013
- Strategic alliances with leading health centers
- DIABECCELL sold direct to patients through DDCE's
- LCT sole 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
Cell Implant Product



DIABECCELL® Development Milestones

2010

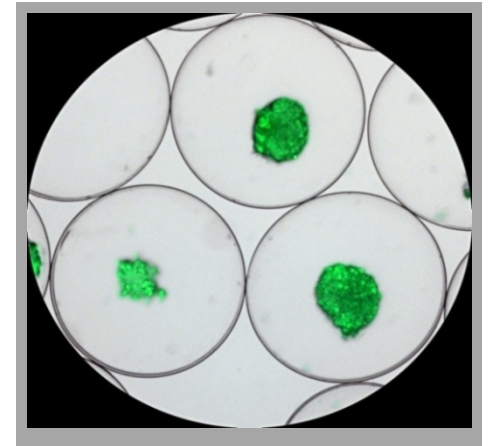
- Q4 Report Phase IIb – 8 patients from NZ trial
- Q4 4 New patients in NZ trial
- Q4 Target product profile defined

2011

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

2012

- S1 manufacturing facility scale up start
- Completion and reporting of pivotal data



AOPI stain

DIABECELL® Commercialisation Milestones

2013

- Revenue from Russia
- S2 manufacturing facility scale up start
- LCT reaches profitability

2014

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

2015

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

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


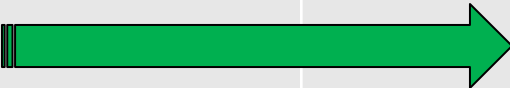

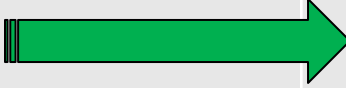
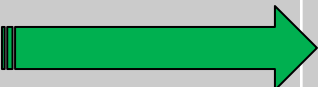


LCT Capabilities and Competitive Advantage

- ☑ 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

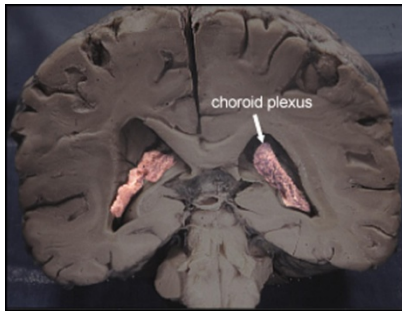
Published long term clinical safety data
- ☑ Approval Ethics and regulatory approval obtained;
18 patients dosed in two jurisdictions
- ☑ Route to Market Designated DIABECCELL Centres of Excellence
(DDCE)
- ☑ Intellectual Property Broad, issued patent portfolio

LCT's Therapeutic Pipeline

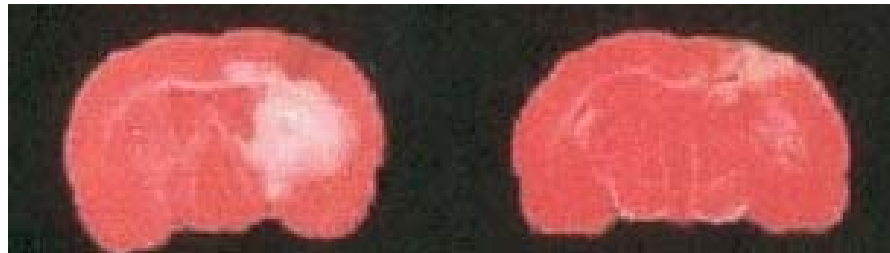
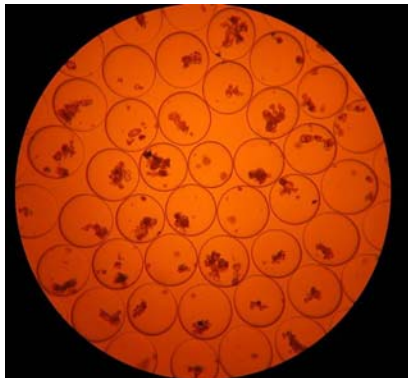
PRODUCT	INDICATION	RESEARCH/ DISCOVERY	PRECLINICAL	PHASE I / II TRIALS	PIVOTAL TRIALS
DIABECCELL®	Diabetes – 1				
		<i>NZ, Russia, other jurisdictions</i>			
NTCELL	Parkinson's				
NTCELL	Stroke				
NTCELL	Hearing Loss				
		<i>Bionic Ear Institute, Melbourne Australia</i>			
NTCELL	Huntington's				

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



Untreated

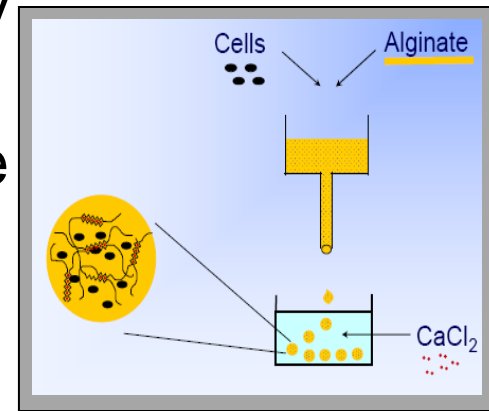
Treated

Rat stroke model; white areas indicate damaged brain tissue

IMMUPEL™ Microsphere Capsules

Multiple Out-licensing Opportunities

- Proprietary encapsulation technology delivers living cell therapies without immunosuppression
- Broad applications
 - Islet, choroid plexus, Schwann cells, stem cells, liver cells, etc.
- Fully integrated cGMP production capability
- J&J collaboration; specific cell type and use



LCT Intellectual Property

Patents - 32 granted, 49 pending; 15 patent families

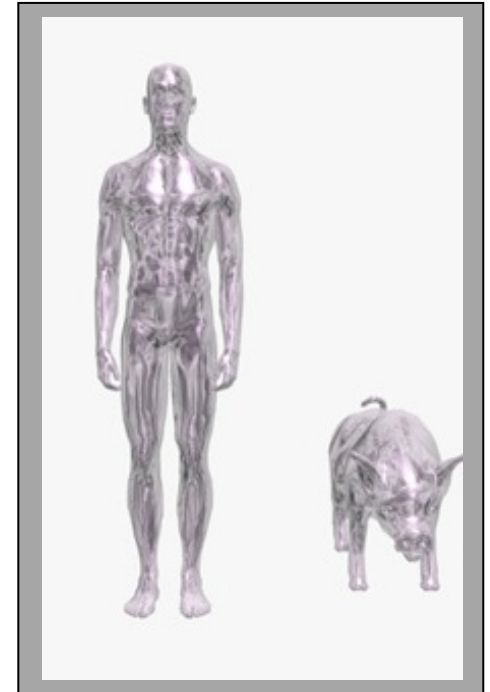
- Use of cells from neonatal piglets for the treatment of diabetes
- Methods of preparing neonatal islets
- Use and method of preparing choroid plexus cells for treatment of neurological diseases
- Method of selection of pigs suitable as source of tissue for human therapeutics
- Alginate encapsulation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



LCT Board of Directors

- **Dr David Brookes, Chairman**, Adelaide, SA, Australia
Director of Atcor Medical Holdings Ltd; Chairman Innovance Ltd (NSX); 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