Committed to the research, development and commercialisation of human therapeutic products for chronic respiratory and autoimmune diseases

November 2003
Overview

Our Objective

- to build a valuable business, recognised internationally for its approach to therapeutic discovery, development and commercialisation in the fields of respiratory and autoimmune diseases

Our Strategy

- highly attractive product opportunities
- participate in the complete product value chain
- products
- focus on core therapeutic markets
- maintain and build a diversified product pipeline
Management Team

- Alan Robertson BSc, PhD  Managing Director & CEO
- Brett Charlton MBBS, PhD  Medical Director
- William Cowden BSc, PhD  Chief Scientist
- David McGarvey BA, CA  Company Secretary & CFO
- John Crapper BAS, MBA  Chief Operations Officer
- Gary Phillips BPharm, MBA  Commercial Director

Total staff 24: Frenchs Forest and Canberra
Board & management

Strong collective skills & experience

- Charles Kiefel (non-executive Director)
- Carrie Hillyard (non-executive Director)
- Denis Hanley (Chairman)
- Alan Robertson (CEO and Director)
- Brigitte Smith (non-executive Director)
- Brett Charlton (CMO and Director)
- Malcolm McComas (non-executive Director)
- David McGarvey (Company secretary and CFO)
TGA approved facilities

Frenchs Forest NSW
Diversified Product Portfolio

Respiratory diseases
- Bronchitol - cystic fibrosis
- Bronchitol - bronchiectasis
- Bronchitol - chronic bronchitis
- Arido\textsuperscript{TM} – airway function

Autoimmune diseases
- PXS25 - multiple sclerosis
- PXS25 - rheumatoid arthritis
- PXS2000 – multiple sclerosis

---------------Clinical Trials-----------------

<table>
<thead>
<tr>
<th>research</th>
<th>preclinical</th>
<th>phase I</th>
<th>phase II</th>
<th>phase III</th>
<th>registration</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

3-5 years  15 months  15 months  18 months  18 months  12 months

indicative time to complete
<table>
<thead>
<tr>
<th>Product Trial</th>
<th>Aridol</th>
<th>Bronchitol</th>
<th>Bronchitol</th>
<th>Bronchitol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Disease</strong></td>
<td>Asthma monitoring</td>
<td>Cystic Fibrosis</td>
<td>Bronchiectasis</td>
<td>Bronchiectasis</td>
</tr>
<tr>
<td><strong>Nature of Study</strong></td>
<td>Phase 3</td>
<td>Phase 2 - acute mucociliary clearance</td>
<td>Phase 2 - acute mucociliary clearance</td>
<td>Phase 2 - 12 day treatment Efficacy/safety</td>
</tr>
<tr>
<td><strong>Participants</strong></td>
<td>640</td>
<td>24</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td><strong>Participating Sites</strong></td>
<td>more than 10</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Location of Sites</strong></td>
<td>Hospitals in Australia, UK, Norway, Finland, Switzerland, Canada</td>
<td>Australia</td>
<td>Australia</td>
<td>Australia</td>
</tr>
<tr>
<td><strong>Endpoint</strong></td>
<td>PD15, adverse events</td>
<td>Quantitated mucociliary clearance</td>
<td>Quantitated mucociliary clearance</td>
<td>QOL, FEV1</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Safety and efficacy of Aridol demonstrated</td>
<td>Efficacy demonstrated Ready for chronic Phase 2</td>
<td>Efficacy demonstrated Ready for chronic Phase 2</td>
<td>Significant improvement in QOL Ready for Larger Phase 2</td>
</tr>
<tr>
<td><strong>Adverse events</strong></td>
<td>None significant</td>
<td>None significant</td>
<td>None significant</td>
<td>None significant</td>
</tr>
<tr>
<td><strong>Further studies required before:</strong></td>
<td>Regulatory filings</td>
<td>Phase III</td>
<td>Phase III</td>
<td>Phase III</td>
</tr>
</tbody>
</table>
### Clinical Trials in Progress

**Aridol (Phase III)**
- **CTM manufacture**
- **Approvals**: Nov 03
- **Dosing/recruitment (600 patients)**: Apr 04

**Bronchitol cystic fibrosis (Phase II)**
- **CTM manufacture**
- **Approvals**: Nov 03
- **Dosing/recruitment (60 patients)**: Apr 04

**Bronchitol bronchiectasis (Phase II)**
- **CTM manufacture**
- **Approvals**: Sep 03
- **Dosing/recruitment (60 patients)**: Apr 04
Respiratory diseases
(Chronic obstructive lung diseases)

Mucociliary system (normal)

Mucus

Cilia

Airway Surface Liquid

Goblet Cell

Ciliated Cell

Submucosal glands
Respiratory diseases
(Chronic obstructive lung diseases)

Mucociliary system (dysfunctional)
Respiratory diseases
(Chronic obstructive lung diseases)

Mucociliary system (after Bronchitol)
Study in Patients with Bronchiectasis

Right Peripheral Region of Lung

![Graph showing lung clearance over time with and without Bronchitol]

- **120min**:
  - Without Bronchitol [n=8]: [Value]
  - With Bronchitol [n=8]: [Value]

- **24hr**: [Similar data presentation]
Chronic bronchitis
without Bronchitol
Chronic bronchitis
with Bronchitol (400mg)
Bronchitol
for Chronic Obstructive Lung Diseases
Bronchitol
Emerging Product Profile

**Product description**
- Convenient, portable, pocket sized, dry powder inhaler
- Once or twice per day inhaled therapy
- Targeted to cystic fibrosis and chronic obstructive pulmonary disease

**Clinical benefits**
- Reduce number of infections
- Improve lung function (FEV₁)
- Reduce requirement for hospitalisation
- Reduce need for physiotherapy
- Improve exercise capacity
- Improve quality of life
Aridol™

Dose required to cause 15% fall in lung function

Asthma severity

- Normal
- Mild
- Moderate
- Severe

pharmaxis
Aridol™
for asthma management
Aridol™
Emerging Product Profile

**Product description**
- Simple, inexpensive test
- Clinical office test, no specialist equipment
- Standardise and measure lung function
- Valuable tool in diagnosis, monitoring and management of diseases

**Clinical benefits**
- Confirms diagnosis
- Assess the severity
- Appropriate medication
- Optimisation of steroid use
### Product Portfolio

<table>
<thead>
<tr>
<th>Category</th>
<th>Products</th>
<th>Research</th>
<th>Preclinical</th>
<th>Phase I</th>
<th>Phase II</th>
<th>Phase III</th>
<th>Registration</th>
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<tbody>
<tr>
<td><strong>Respiratory diseases</strong></td>
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<tr>
<td>Bronchitol - cystic fibrosis</td>
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<tr>
<td>Bronchitol - bronchiectasis</td>
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<tr>
<td>Bronchitol - chronic bronchitis</td>
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<tr>
<td>Aridol™ – airway function</td>
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<tr>
<td><strong>Autoimmune diseases</strong></td>
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<tr>
<td>PXS25 - multiple sclerosis</td>
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<tr>
<td>PXS25 - rheumatoid arthritis</td>
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<tr>
<td>PXS2000 – multiple sclerosis</td>
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</tbody>
</table>

**Indicative time to complete**

- Bronchitol - cystic fibrosis: 3-5 years
- Bronchitol - bronchiectasis: 15 months
- Bronchitol - chronic bronchitis: 15 months
- Aridol™ – airway function: 18 months
- PXS25 - multiple sclerosis: 18 months
- PXS25 - rheumatoid arthritis: 18 months
- PXS2000 – multiple sclerosis: 12 months

**Clinical Trials**
PXS25

- Treatment of autoimmune disease
  - multiple sclerosis
  - rheumatoid arthritis
  - irritable bowel disease
  - psoriasis

- Selective inhibitor of T cell migration

- Effective in models of multiple sclerosis and rheumatoid arthritis

- Early preclinical safety testing
PXS2000

- Treatment of autoimmune disease
  - multiple sclerosis
  - rheumatoid arthritis

- Selective activator of peripheral cannabinoid receptors

- Effective in models of multiple sclerosis and rheumatoid arthritis

- Late stage research
Respiratory disease markets

<table>
<thead>
<tr>
<th>Product</th>
<th>Target Application</th>
<th>Patient Population¹</th>
<th>Existing Market Size² (A$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronchitol</td>
<td>Cystic Fibrosis</td>
<td>75,000</td>
<td>575m</td>
</tr>
<tr>
<td>Bronchitol</td>
<td>COPD - Bronchiectasis</td>
<td>580,000</td>
<td>Included in CB</td>
</tr>
<tr>
<td>Bronchitol</td>
<td>COPD - Chronic Bronchitis</td>
<td>30,000,000</td>
<td>3,840m</td>
</tr>
<tr>
<td>Aridol™</td>
<td>Lung function test</td>
<td>30,000,000 ²</td>
<td>Data not available ²</td>
</tr>
</tbody>
</table>

¹ Worldwide

² Estimate - there are currently no reliable figures available as to the potential patient size and existing market size for a lung function test [estimate of 106,000 tests in Australia for fiscal 2003 (cost to govt - $10.5 million). Cost to PBS of ICS = $210 million]
Autoimmune disease markets

<table>
<thead>
<tr>
<th>Product</th>
<th>Target Application</th>
<th>Patient Population(^1)</th>
<th>Existing Market Size(^1) (A$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PXS25</td>
<td>Multiple Sclerosis</td>
<td>1,100,000</td>
<td>3,533m</td>
</tr>
<tr>
<td>PXS2000</td>
<td>Multiple Sclerosis</td>
<td>1,100,000</td>
<td>3,533m</td>
</tr>
<tr>
<td>PXS25</td>
<td>Rheumatoid Arthritis</td>
<td>5,500,000</td>
<td>4,174m</td>
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</tbody>
</table>

\(^1\) Worldwide
## Pro Forma Financials

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and commercial bills</td>
<td>$7 million</td>
</tr>
<tr>
<td>Net proceeds of IPO</td>
<td>$23 million</td>
</tr>
<tr>
<td><strong>Total Cash</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>$30 million</td>
</tr>
<tr>
<td>Cash backing per share</td>
<td>$0.28</td>
</tr>
</tbody>
</table>

### Two Year Cash Usage

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preclinical and clinical trials</td>
<td>$23 million</td>
</tr>
<tr>
<td>Operating costs – staff, rent, R&amp;D</td>
<td>$8 million</td>
</tr>
<tr>
<td>Manufacture (Aridol, Bronchitol)</td>
<td>$3 million</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$34 million</td>
</tr>
<tr>
<td>Less R&amp;D Grants, interest and other income</td>
<td>$4 million</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Cash Usage</td>
<td>$30 million</td>
</tr>
</tbody>
</table>

<sup>1</sup>Cash is invested in bank deposits and bank accepted commercial bills
Key Value Drivers

- Complete Bronchitol Phase II – cystic fibrosis  Mid 2004
- Complete Bronchitol Phase II – bronchiectasis  Mid 2004
- Complete Aridol™ Phase III  Mid 2004
- Approval for Aridol™  Mid 2005

- Initiate clinical development of PXS25  Q3 2004
- Initiate clinical development of PXS2000  Q1 2005
- Initiate Bronchitol comparator study  Q3 2004
- Initiate Bronchitol Phase II/III – cystic fibrosis  Q3 2004
  - bronchiectasis  Q3 2004
Summary

- Near term value enhancing corporate milestones
- Fully integrated business model
- Effective board & experienced management
- TGA approved facilities
- Products from leading Australian science
- Clinical validation for inhalation products
- Attractive markets
- Product focused