

cardiabioplastics.com Info@cardiabioplastics.com

TO: COMPANY ANNOUNCEMENTS OFFICE

**ASX LIMITED** 

DATE: 30<sup>th</sup> August 2011

#### **INVESTORS PRESENTATION**

Attached is Cardia's Investors Presentation document.

PAT VOLPE Chairman



# GLOBAL BIOPLASTICS RESIN SUPPLIER (ASX CODE: CNN)









# Disclaimer

## Forward looking statement disclaimer

"This presentation contains "forward-looking statements". Such forward-looking statements may include, without limitation:

- (I) estimates of future earnings;
- (ii) estimates of future production and sales;
- (ii) estimates of future cash costs;
- (iv) estimates of future cash flows;
- (v) statements regarding future debt repayments; and
- (vi) estimates of future capital expenditures.

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# "The New Plastics"

Bioplastics, simply use less oil with environmental benefits.



**Current Nanjing Manufacturing Plant** 

ASX-listed company with Chinese manufacturing and global distribution and marketing of Bioplastics resins.

# Cardia Bioplastics: A Value Proposition

#### The Market

- ✓ Plastics Industry 230Mt (\$500B).
- ✓ Bioplastics approx 1Mt in 2011 or <1% of Plastics market: still in its infancy strategic opportunity to position Cardia globally.
  </p>
- ✓ Bioplastics market is running at double digit growth (DDG) since 2010.

#### The World

- ✓ Globally, governments, consumers, brand owners & packaging companies are shifting to "lower carbon economy" and looking for environmental benefits.
- ✓ Recently, USA, EU, Latin America, Australia, Japan, India, China, Middle-Eastern governments have legislated against plastic bags with moves to reduce carbon foot print. Kyoto protocol: Govt's pledging to reduce carbon emissions by 2020
- ✓ Market opportunity in Bioplastics for carrier bags, packaging and organic waste management.

#### Cardia Sales

- ✓ Cardia Sales expected to at least triple in F2012 compared to F2011 as global shift now taking place.
- ✓ Sales Sept 2011 Qtr expected to exceed June 2011 Qtr by at least 100% with sales expected to be greater than \$1M for that quarter.
- ✓ Sales ramp up should contribute to cash flow and reduce burn rate in F2012...
- ✓ Confirmed global brand owners and packaging companies aligned with/or customers of Cardia, its distributors/convertors:
  - Nestlé, P&G, Kimberly-Clark, Colgate-Palmolive, Henkel, KFC, McDonalds, 7-Eleven, Kmart, Jusco, Indofoods, Nature Organics
  - Collaboration with key partners in Australia BASF, Sulo & SITA (waste management)
  - Multinational packaging companies marketing Cardia products include Sealed Air, Wipack, Jockey Plastik, RPC Group, Jatco, Polyden & Stellar Films

# Manufacturing

- ✓ Manufacturing capacity in China is planned to be expanded in 2011 to 11,200t p.a. and further review 2012 based on anticipated sales growth..
- ✓ Malaysian J/V film manufacturing expected to commence production by Nov 2011.

### **Management and Expertise**

✓ World-class technical and management expertise in Bioplastics.

### Distribution, Marketing & Sales

- ✓ 2009/10 first year of commercialisation with sales/marketing.
- ✓ Nine distributors now established in strategic countries globally.
  Including: EU, UK, USA, South America, China, Malaysia and Australia

### Recognition

- ✓ Since 2008 winner of four internationally recognized achievement awards for business excellence, commercialization, green technology & SME company expected to have most influence in new Aust-Asian markets.
- ✓ Major Global Achievement Cardia Bioplastics awarded sole and exclusive supply contract to 2008 Beijing Olympic and Paralympic Games.

#### Patents and International Accreditation

- ✓ Family of 9 patents covering 29 individual formulation, process and application patents lodged.
- ✓ Internationally accredited in all key countries (ticket to operate).

#### **Point of Difference**

- Diversified product offering: resins for films and rigid packaging plus finished goods.
- ✓ Product portfolio includes: Biohybrid™ (less oil) to compostable (environmental) resins.
- ✓ Development projects with global brand owners and packaging companies.
- ✓ R&D already working on next generation of Bioplastics.

# **Technology Breakthrough**

✓ World's first biodegradable bag made from CO₂ emissions and starch.

### Corporate

- Only ASX-listed stock focused on Bioplastics following 2009 merger with Biograde.
- ✓ Dual listing on OTC-QX in USA.
- ✓ Since incorporation in 2003 in excess of \$20M invested into Bioplastics business.
- ✓ Current Market Capitalisation approx \$11M: Net Assets (incl. intangibles) \$15M.
- ✓ Positioned to grow significantly with world leading brand owners and packaging companies in F2012 and beyond.
- ✓ Barrier to entry and lead time gives Cardia market advantage.
- ✓ Low cost to upscale capacity & quick pay back on capital equipment investment.
- √ 49% interest in Malaysian J/V with no capital outlay.
- ✓ Rare opportunity at lower than cost entry point.
- ✓ Competitors market values at up to 5 times of Cardia.

#### In A Nutshell...

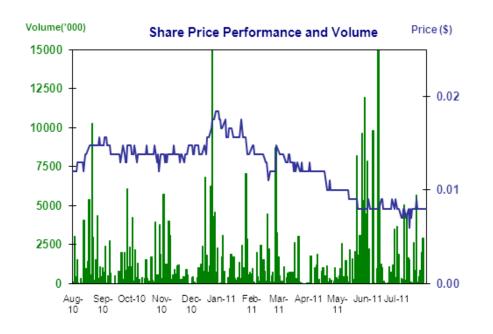
✓ All pieces are in place: Cardia is ready to capitalise on the global shift to Bioplastics - creating a rare business opportunity to establish Cardia Bioplastics brand as a force in the "new plastics"- "Bioplastics" arena

"THE NEW PLASTICS WORLD"

# The Board & Senior Management

Corporate	Pat Volpe CPA Chairman	Expertise in capital markets, corporate structuring, and fund raising. Chairman and founding shareholder of Cardia Bioplastics.
Management, Sales & Marketing	Dr. Frank Glatz  Managing Director	Expertise in international plastics and packaging industries. Track record in global commercialization of bioplastics products.
Technology	Dr. John Scheirs Technical Director	International expert in polymer technology and biodegradable products.
China Operations	Jacky Chen General Manager China, Director	Experienced General Manager responsible for China Operations. Founding shareholder of Cardia Bioplastics.
Management,	Rekha Bhambhani Acs,cpa Company Secretary, Financial Controller	Internationally experienced Company Secretary and Financial Controller
Finance	Graeme Ward ACA General Manager	Experienced General Manager Finance with track record in packaging industry and corporate development.
International Operations	Alex Fernando Chief Operating Officer	Expertise in international business management in China and Asia.
R&D	Chen Chan Ping Technical Director China Operations	Inventor of technology, Vice Chairman, China Degradable Plastics Association. Founding shareholder of Cardia Bioplastics.

# **Key Financial Metrics**



ASX LISTED with subsidaries in Hong Kong, China, Malaysia and the USA					
Established	2003				
Top three shareholders: Polarity B Pty Ltd.13.%, Vermar Pty Ltd 9.% I.E Properties Pty Ltd 3%	25%				
Debt	Nil				
Current monthly burn rate.(approximately)	\$350,000 p.m.				

Capital Structure							
Shares on issue (ASX: CNN)	1,341.8 M						
Share price (as at 7 July 2011)	0.8 cents						
Market capitalisation	\$10.7 M						
Listed options on issue (ASX: CNNOA)*	223.6 M						
Option price for 30/6/2012 exercise Piggy back option on exercise 30/6/2103	1.5 cents 2.0 cents						
Rolling monthly turnover	75.6 M						
Top 20 shareholders (number of shareholders 2694)	42.53%						
Board & management shareholding	12.41%						

Financial Metrics	
Net Cash (as at 31/7/2011)	\$2.85M
Net Tangible Assets	\$8.552M
NTA per share	\$0.006
Book Value per share	\$0.011
EBITDA^	\$(3.325)M
EPS^	(0.38) cents
P/E^	0

# Cardia Bioplastics Product Offering

- Cardia Bioplastics resins are made from renewable resources replacing traditional petroleum-based plastics.
- Cardia has positioned itself to manufacture, distribute and market globally sustainable resins and packaging derived from renewable resources. Its product portfolio is represented as follows:



 Bioplastics resins replacing up to 66% petroleum-based content in standard packaging applications and reducing carbon foot print and green house gas emissions



High performing Bioplastics resins certified to international standards for biodegradability and compostability



 Customer service: design, development and production of ready to use film and bag products



 Next generation Bioplastics development. World's first biodegradable carrier bags made from CO<sub>2</sub> emissions and starch

# Patents & International Accreditation

#### **Currently 9 patent families with 29 individual patents**

- In 2010 lodged provisional patents adding to patent portfolio:
  - CO<sub>2</sub>S<sup>™</sup> technology world's first biodegradable bag using CO<sub>2</sub> emissions blended with starch
  - Multi-layer Film technology
  - Biohybrid™ Foam Technology

### **International Accreditation**

- Accredited globally, in all countries with certification schemes including USA, EU, China, Australia, Sth America, Japan & Asia.
- Food contact approval in Europe and USA













# **Business Model**

#### **Development Business**

Packaging development with leading packaging producers and users

- Strategic relationships
- Development of product and application technology
- Long term sales agreement for large resin business

#### **Intellectual Property**

- Generation of know how and IP through development business and own R&D activities
- Licensing of converters
- Substantial patent portfolio

#### **Resin Business**

Sales and distribution of Cardia resins for standard packaging applications

- Direct sales
- Sales through agents and distribution network

#### **Licensing and Branding**

- Licensing of converters
- Co-Branding of products

#### **Finished Goods Business**

Sales and distribution of Cardia Bioproducts

- Direct sales of ready to use compostable film and bag products
- Sales through agents and distribution network

#### **Branding**

 Branding and Co-Branding of products

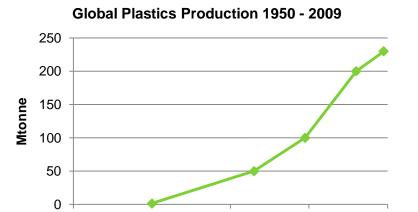






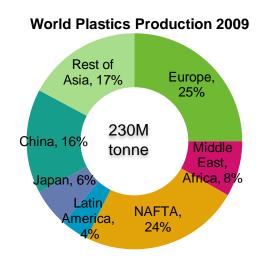
# **Market Potential**

## World Plastics Consumption 230MT (\$500B)



1970

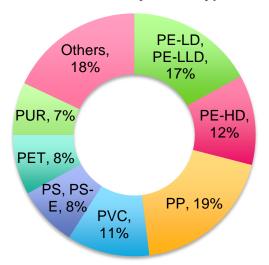
1990



**Plastics Demand by Resin Types 2009** 

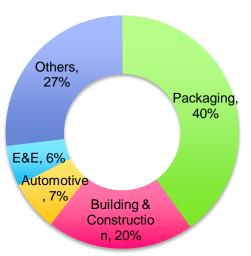
1950

1930

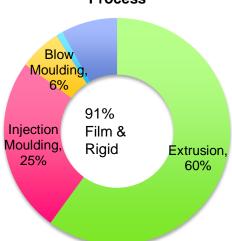


**Plastics Demand by Segments 2009** 

2010

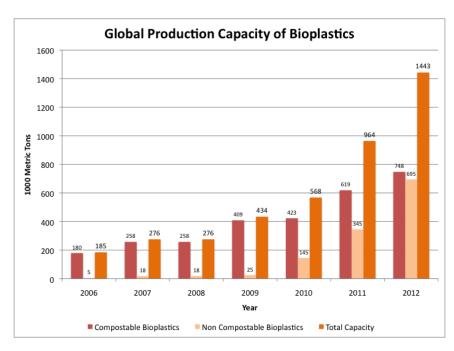


Plastics Demand by Conversion Process



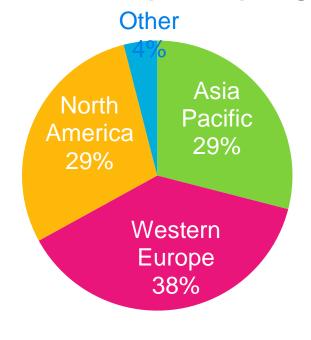
# **Bioplastics Industry**

# **Bioplastics Consumption by Region**



Represents less than 1% of the plastics resins manufactured annually.

Source: European Bioplastics Association



Source: Fredonia Group, 2008

#### **Major Countries Moving to Bioplastics**

Year	2008	2009	2010	2011	2012
Country	EU	China/ Aust.	USA /CAN	Sth America	Asia/In dia

#### Cardia Sales Performance: round \$M's

Year	2009	2010	2011	2012
Amount	\$2M	\$2M	\$2M	sales ramp up

# Cardia's Specific Target Market

Definitive market segment		Volume	Value
Global plastics resin market		230 MT	\$500 B
% that is PP, LDPE, LLDPE, HDPE	50%	115 MT	\$250 B
% used in plastics packaging market	40%	46 MT	\$100 B
% converted to rigid & plastic film packaging	91%	42 MT	\$91 B
% of rigid/film packaging potential to switch to Biohybrid™	50%	21 MT	\$46 B
> Pichybrid™ market netential	1 507	2 447	¢/ 0 D
→ Biohybrid™ market potential	15%	3 MT	\$6.8 B

# Cardia's market potential:

Assumed market penetration	Resultant revenue
1%	\$68 M
2%	\$136 M
3%	\$204 M

# Market Valuations of Bioplastics Companies

Company	Stock Symbol	2011 Sales Revenue	2011 Operating Profit/(Loss)	Market Cap	Listing
Cereplast Thermoplastic Starch	CERP	\$6.3M	(\$7.5M)	\$50M	Nasdaq
Metabolix (PHA)	MBLX	\$0.5M	(\$38.8M)	\$170M	Nasdaq
Cardia Bioplastics Thermoplastic Starch	CNN	\$1.7M	(\$3.3M)	\$11M	ASX

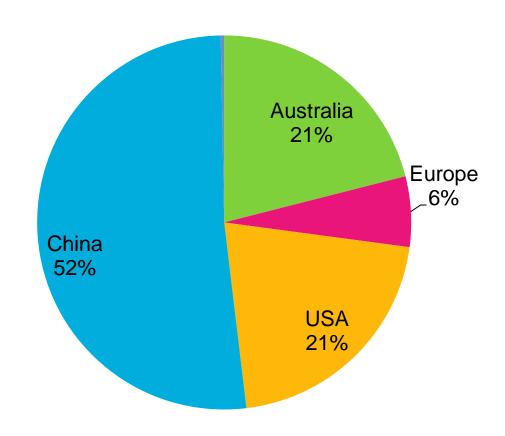






# Cardia's Revenue Contribution by Country\Region

F2011 Revenue



### Cardia's Achievements

#### **Company Achievements**

Year		2003	2	2005	2009	2010	
Achievement	>	Biograde Inc.	Bio	hina/ ograde erger	CNN Takeover of Biograde	Full Commer- cialisation	



#### **Manufacturing Capacity**

Year	2005	2007	2010	2011	Est. 2012
Amount	1000t	3100t	5200t	Expand 11,200t	Capacity review



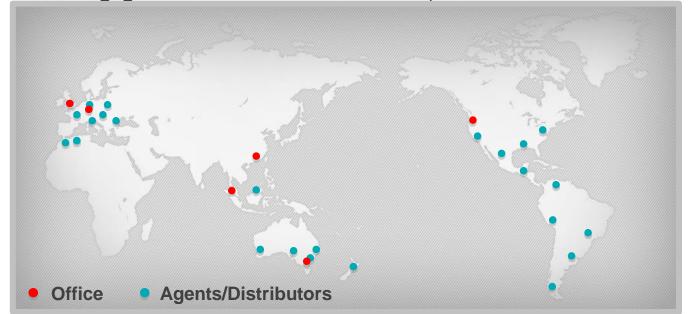
#### **Major Contracts**





# Cardia Bioplastics Global Profile

- Corporate and operational centre in Melbourne (Australia)
- Manufacturing & product development in Nanjing (China)
- Malaysia J/V for manufacturing film & finished goods.
- Sales & operational offices in Aust, China, USA, Germany, UK and Malaysia.
- Establishing global distributor network (nine established so far)



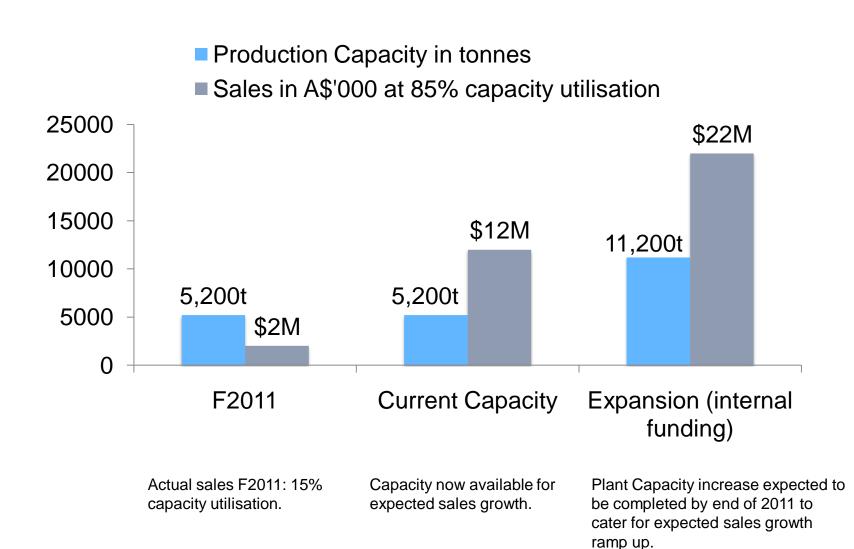
# **Manufacturing Capabilities**

- Established manufacturing facility for Bioplastics resins and films in Nanjing, China with cost effective manufacturing.
- Manufacturing capacity expansion to 11,200 t p.a expected to be completion by end of 2011.
- Plans to consider further resin capacity expansion in 2012.
- New J/V in Malaysia on track to commence film manufacturing in November 2011.





# Current Planned Production & Potential Sales Matrix with existing Nanjing China Plant



# Reasons to Invest

- ✓ Massive international opportunity within multi billion \$ industry with clear evidence of global shift to Bioplastics now experiencing Double Digit growth.
- ✓ Strong Cardia sales growth expected to follow from F2012 and beyond.
- ✓ Sales to high profile brand owners and retailers.
- ✓ Cost-effective manufacturing in China expanding to Malaysia.
- Set up of global operations and distributor network to cater for expected growth
- ✓ Fully accredited internationally and strong patent portfolio with industry recognition.
- Sales growth to contribute to cash flow.
- ✓ So far investment in excess of \$20m made in the business with market cap of \$11m.
- ✓ Current competitors market value up to 5 times that of Cardia.
- ✓ Well positioned to build Cardia's brand with sales and marketing expanding globally.

#### In A Nutshell...

✓ All pieces in place: Cardia is ready to capitalise on the global shift to Bioplastics creating a rare business opportunity to establish Cardia Bioplastics brand as a force in the "new plastic" - "Bioplastics" arena.