

C5·6 Technologies



John Biondi
President

C5•6 Technologies

C5•6 develops and markets enzymes to the bio-refining and biofuels industries

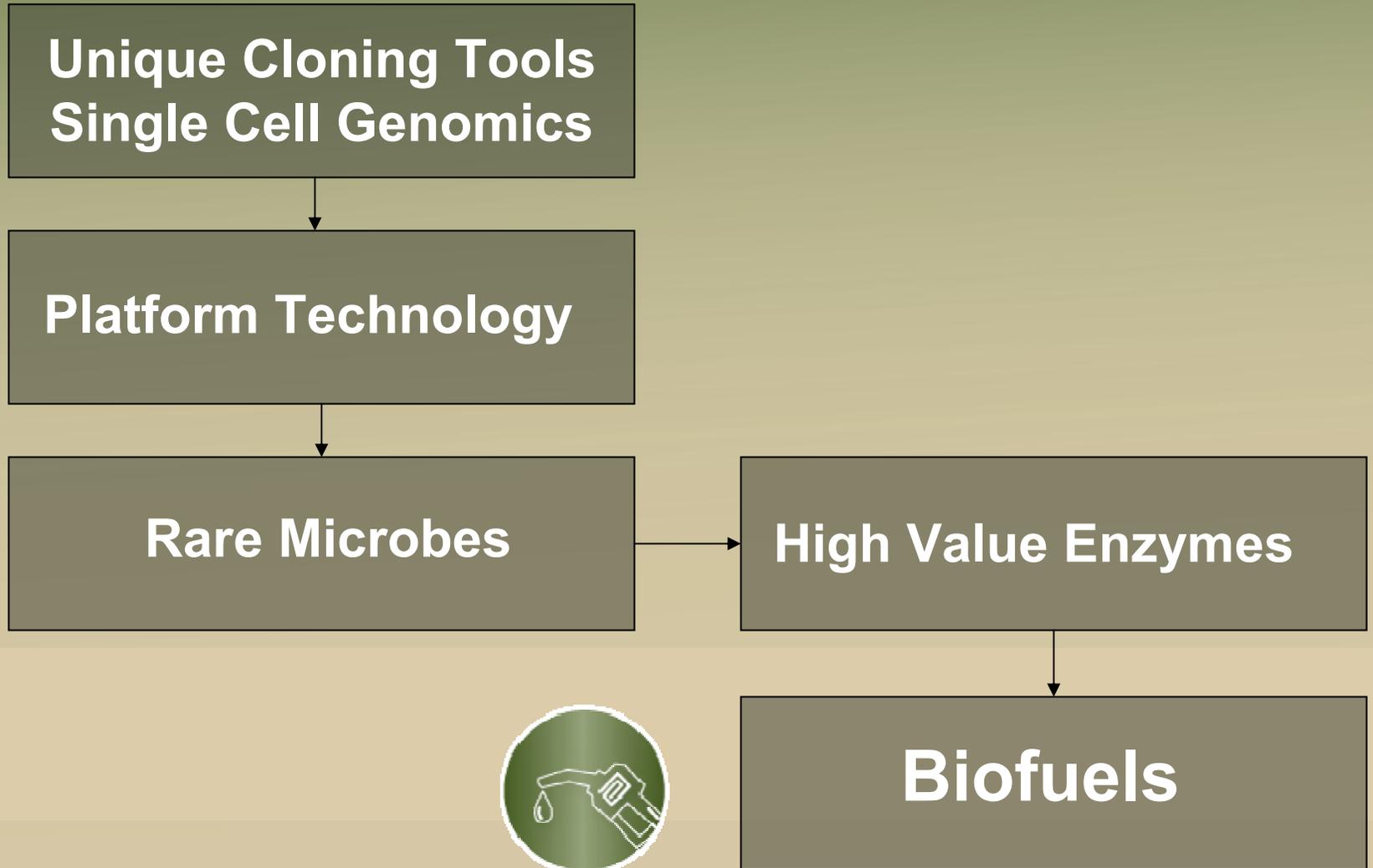
- **Spun out from Lucigen Corporation-**
 - All technology and molecules transferred under a no-charge license arrangement
- **Platform technology = \$6 M Grants**
 - Discovery tools = 8 years, \$4.5 M
 - Biofuels enzymes = 3 years, \$1.5 M
- **\$2 M new grants and loans for C5-6**

C5•6's Competitive Advantage

C5-6 has solved one of the fundamental problems in enzyme discovery.

- The entire \$25B enzyme market is based on material generated from less than 1% of the world's microbes
- The remaining 99% cannot be grown in the lab

C5·6's Technology Application



Benefits for Biofuels

C5-6 has the ability to find and produce new enzymes with targeted attributes

- **Developing enzymes to fit the process rather than a process to fit the enzyme**
- **Bioethanol process = 80°C, pH 5-6; requiring thermostable enzymes with specific characteristics**

C5-6 Target Market

Target customer = Dry Mill Producers

	2005	2012
Production (Gal. B's)	3	7.5 (mandated) 12.0 (projected)
Facilities on-line	100	

C5-6 Opportunity

Number of Plants	Now	2012	Value	Total 2012
Corn	100	235	\$1.5M ea	\$340 M
Soy	0	35	\$5.0M ea	\$200 M
Other	0	35	\$3.0M ea	\$120 M
Total	100	305		\$660 M

Total C5-6 Market Potential = \$660 M

C5·6 Technology Roadmap: Corn

15% wasted in current process due to limitations of current enzymes

- CornBuster I™: 2-3% of starch remains bound to cellulose - successful starch release enzymes currently in ethanol plant lab trials
- CornBuster II™: 11-13% of corn is cellulose and hemicellulose - candidate cellulases in C5·6 lab testing

CornBuster™ enzymes are process enhancements, not replacements, for current enzymes

Corn Ethanol Value Proposition

C5-6 enzymes deliver a strong value proposition for dry-mill producers

- +12% efficiency target = \$12M additional production (*50 million gallon typical plant/\$2 gallon ethanol*)

OR

- \$6M in corn and energy savings if plant is at capacity (*corn @ \$2 bushel*)

Sales value to C5-6 = \$800k--\$1.5M/year per customer

C5•6 Technologies

C5·6 Technology Roadmap: Soy

C5·6's thermostable hydrolases convert soy meal carbohydrate to ethanol

- **2+ billion gallons of ethanol possible from current soy meal production**
- **Soy market dynamics extremely favorable**

Sales value to C5-6 = \$4--\$5M/year per customer

Soy Ethanol Value Proposition

C5-6's ability to convert soy delivers high value to producers and millers in two ways:

- **C5-6 enzymes convert zero value carbohydrates to high value ethanol**
- **Cost-effectively concentrating the protein, increasing its value**

Current margin/bushel = \$0.80

New margin/bushel = \$7.20

Time to Market Overview

C5-6 has a short product-to-market timeline

	Characterize	Lab Trials	Pilot	Scale-up Regulatory	Introduction
CornBuster I	Complete	9/06	3/07		11/2007
CornBuster II	Ongoing	6/07	12/07		9/2008
SoyBuster	Ongoing	9/07	3/08		6/2009

C5•6 Technologies Management Team

David Mead, Ph.D. – Founder & CEO

20 yrs biotech R&D & management; 4 patents

John Biondi, MBA – President

30 yrs business leadership experience; 5 start-ups

Phil Brumm, Ph.D. – Chief Scientific Officer

20 yrs management in industrial enzymes; 7 patents

Rick Remeschatis, MBA, CFA, CPA, – CFO

30 yrs private & public companies

C5•6 Technologies Intellectual Property

Platform Technology

- CloneSmart® vector technology - *granted*
- *Ex cyto* PCR amplification technology- *pending*
- Linear Vector, Host Cells and Enzymes - *pending*
- GC Cloning Technology – *pending*

Molecular Patents

- Viral Polymerase - *pending*
- Novel Thermostable Cellulase - *pending*
- Thermostable Viral Polymerase - *pending*
- Novel Thermostable Hemicellulase - *in process*
- Thermostable Enzymes for Soy Meal Carbohydrate Hydrolysis - *in process*

Process Patents

- Process for Freeing Entrapped Starch from Corn Fiber- *in process*
- Process for Producing Ethanol from Soy meal - *in process*

C5•6 Offering/Uses of Funds

Raising \$5 million

- Completes corn and soy developments
- Deploys direct sales and marketing effort
- Brings company to profitability

C5•6 Technologies Management Team

David Mead, Ph.D. – Founder & CEO

20 yrs biotech R&D & management; 4 patents

John Biondi, MBA – President

30 yrs business leadership experience; 5 start-ups

Phil Brumm, Ph.D. – Chief Scientific Officer

20 yrs management in industrial enzymes; 7 patents

Rick Remeschatis, MBA, CFA, CPA, – CFO

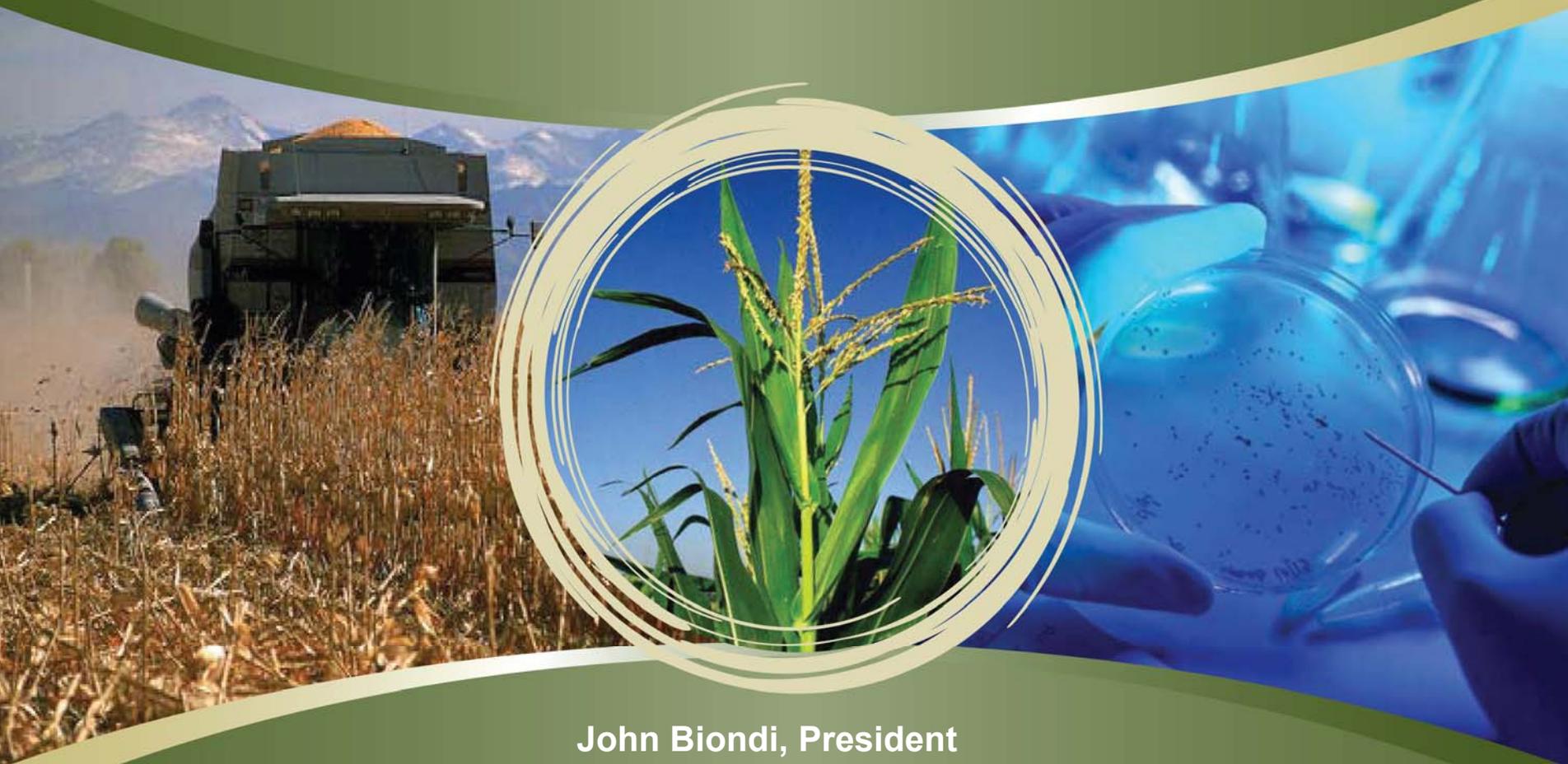
30 yrs private & public companies

C5•6 Financial Goals

Projected Financials and Market Penetration

	2007	2008	2009	2010	2011	2012
Plants On-line	180	213	238	266	285	305
C5-6 Plants	0	23	48	71	85	100
Total Sales(000)	\$0	\$2,960	\$16,850	\$43,790	\$83,400	\$145,980
Cost of Sales	0	1,480	8,425	21,895	41,700	72,990
Op Expenses	1,254	1,827	2,503	2,866	3,451	3,552
Op Income	(\$1,204)	(\$297)	\$5,972	\$19,079	\$38,299	\$69,488

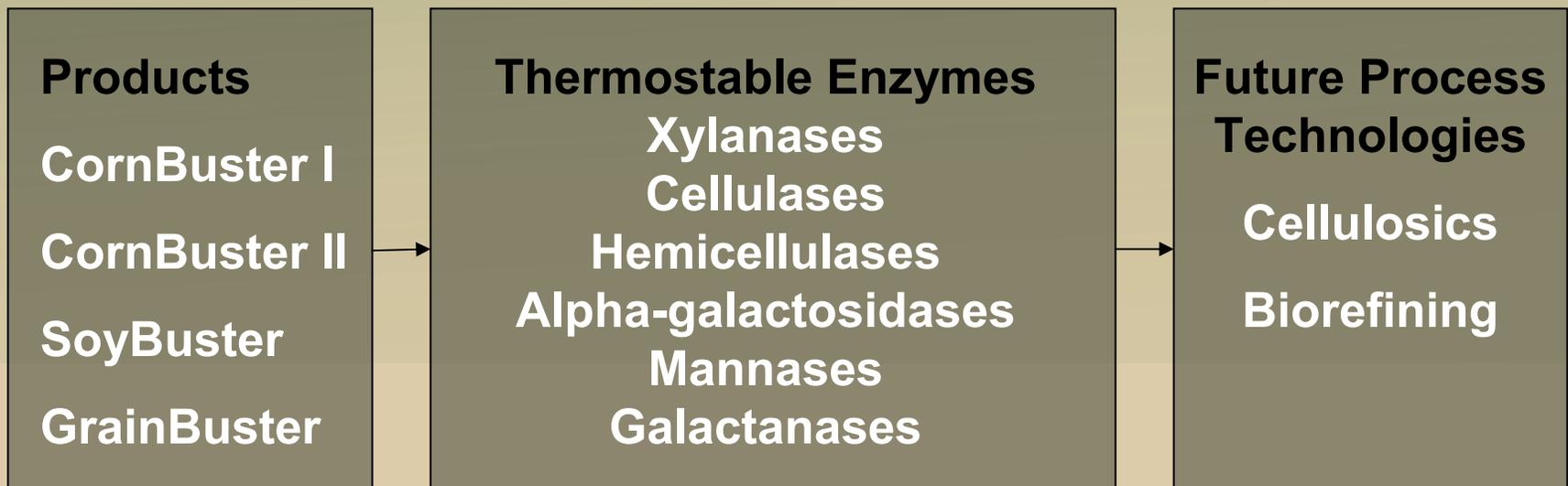
C5•6 Technologies



John Biondi, President
jbiondi@c56technologies.com
608 836-3587 ext: 321
2120 W. Greenview Dr., Suite 9
Middleton, WI 53562

Progression of Developments

Enzymes for today's products bridge to tomorrow's biofuels production technologies



Competitive Overview

Existing Plant:
Front-end Enzymes

Genencor -
amylases

Novozymes -
amylases

Existing Plant:
Down-stream Enzymes

C5-6 Technologies -
high temperature,
multi-feedstock

New Process Plant
Development

logen -
cellulosics, fungal

Dyadic -
cellulosics, fungal

Novozymes -
cold process, fungal

Genecor -
cold process, fungal

C5-6 Technologies

Acquisition Overview

Existing Plant:
Front-end Enzymes

Existing Plant:
Down-stream Enzymes

New Process Plant
Development

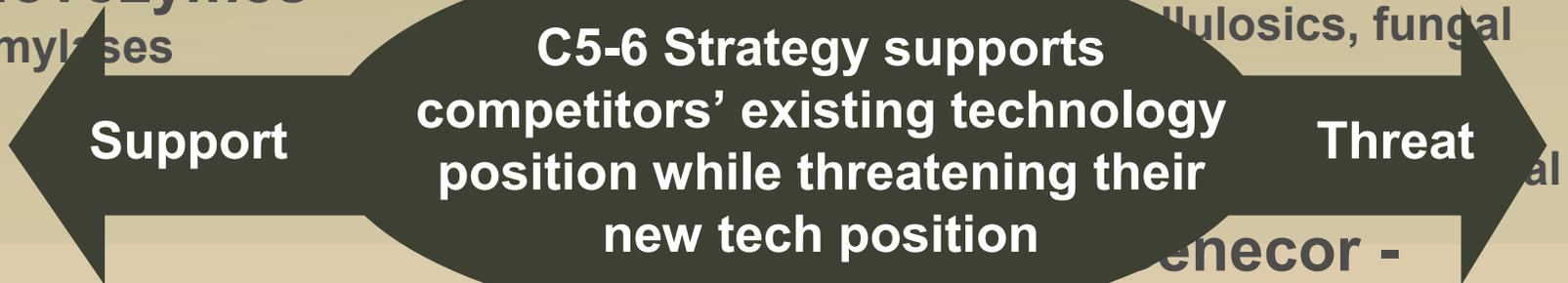
Genencor -
amylases

C5-6 Technologies -
high temperature,
multi-feedstock

logen -
cellulosics, fungal

Novozymes -
amylases

Dyadic -
cellulosics, fungal



Genencor -
cold process, fungal