



PlantForm Corporation

Fiscal 2012 Annual General Meeting
September 2012

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Key events in F2012

Company

- PlantForm Wins Most Promising Technology Award at the Bright / SmartStart UNYTECH Forum.
- PlantForm biosimilar performs as well as brand drug Herceptin® in animal studies
- PlantForm awarded \$300,000 CHTD/IRAP contract for HIV/AIDS project from Canada and Gates Foundation
- PlantForm notified of intent to award a \$2 million contract by DARPA, USA, in field of countermeasure to bioterrorism

Industry

- FDA Approval of Biosimilar Cerezyme, developed by Protalix in a Plant Expression system and then partnered with Pfizer for marketing
- Abbreviated Approval Process for Biosimilars Confirmed in USA Supreme Court under “Obama Healthcare Act”



PlantForm

- Technology

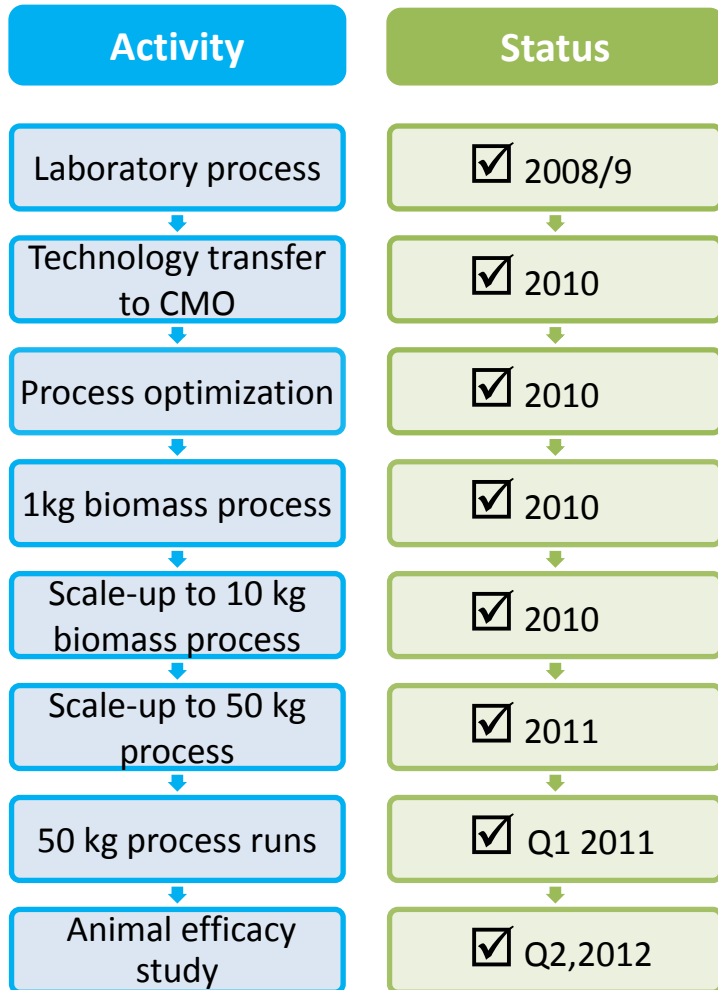
Product Pipeline

Biosimilar Herceptin® (Breast cancer, \$6 billion)	Market Entry
Biosimilar Avastin® (Colorectal cancer, \$8.9 Billion)	2015-2016
Biosimilar Erbitux® (Head and neck cancer, \$2.2 Billion)	2017-2018
Antibody drug candidate (Current) HIV (Funded by Canadian HIV Technology Development)	Ongoing revenue stream
Butyryl Cholinesterase (Pending) Nerve Gas (Funded by DARPA, US Government)	

Technical Advances

- **Biosimilar antibodies**
 - **Biosimilar Herceptin**
 - Proof of Concept animal study successfully completed
 - **Biosimilar Avastin**
 - Second product process development initiated

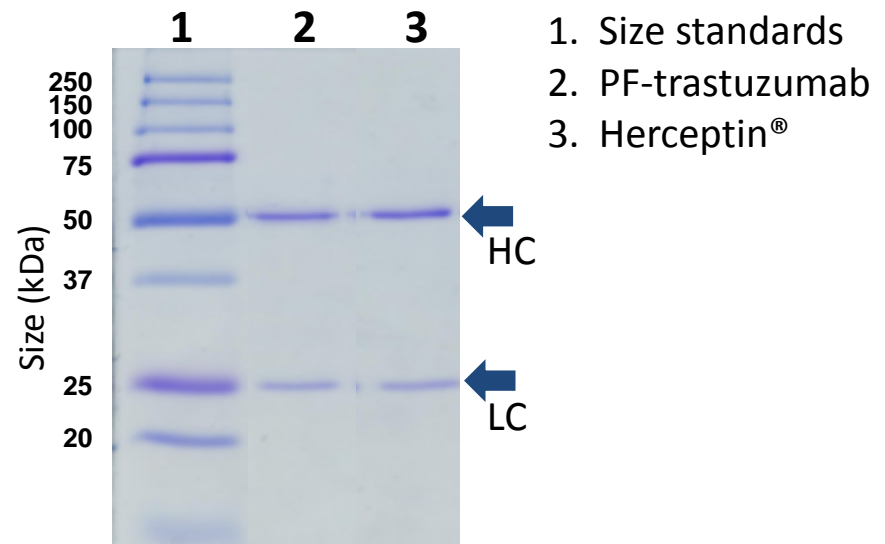
Development Approach and Results



Product characterization:

- *In vitro* demonstration of activity
- Pharmaceutical grade purity
- Modified glycosylation

Trastuzumab purity

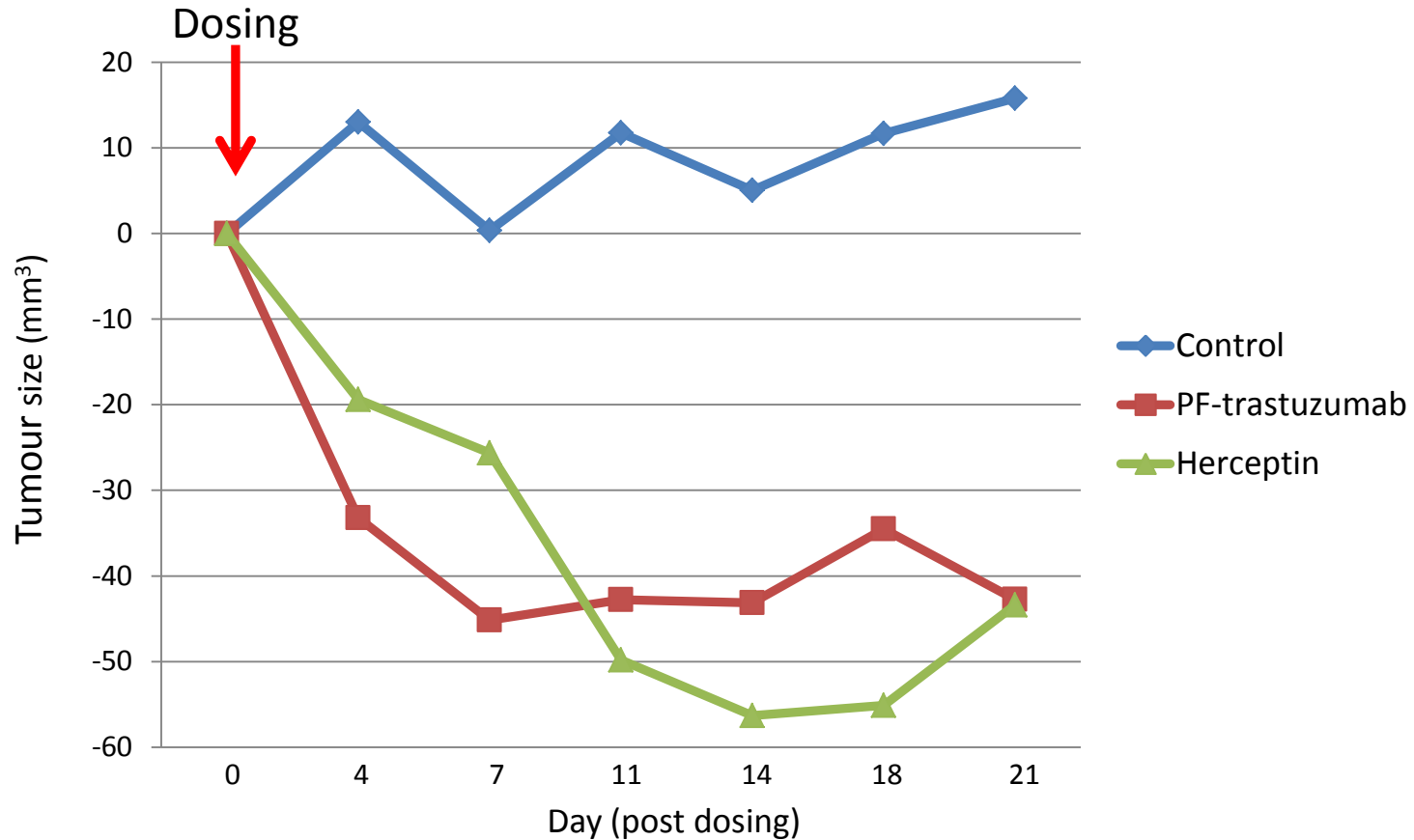


Animal Studies

- MTD (stand alone PF-trastuzumab study)
 - Mice
 - 10, 30, 100mg/kg (therapeutic dose 2, 4 and 8mg/kg)
 - No adverse clinical signs
 - Herceptin was tested up to 80mg/kg
- PK (stand alone PF-trastuzumab study)
 - Mice
 - 1 injection
 - Normal drug distribution for a monoclonal antibody
 - Drug present at beyond 21 days
 - Drug at above minimum therapeutic dose at day 5



Tumour activity assay

Human breast cancer tumours grown in mice and dosed with drugs (PF-trastuzumab or Herceptin®) or no treatment (control)



Tumour size relative to day zero dosing control

Timeline

Milestones	2011	2012	2013	2014	2015/6
Regulatory			EMA Science Advice	Phase I CTA submission	Phase III CTA submission
Process Development & scale-up	Laboratory process	Tech transfer	Characterize & Stability	Scale-up	Validation
Manufacturing	Tech transfer to CMO First scale-up	1 GLP batch	2 GLP batch 1 GMP batch	5 GMP Batch	5 GMP batch
Preclinical	Characterize	Efficacy (SCID mice)	Safety & Tox (2 species)		
Clinical				Phase I (50 subjects)	Phase III (500 subjects)
Licensing	Ongoing				Note: Optimal partnership timing upon PI completion 
Pipeline Development		2 nd Product Initiated			

Series A financing will fund development activities until end-2014



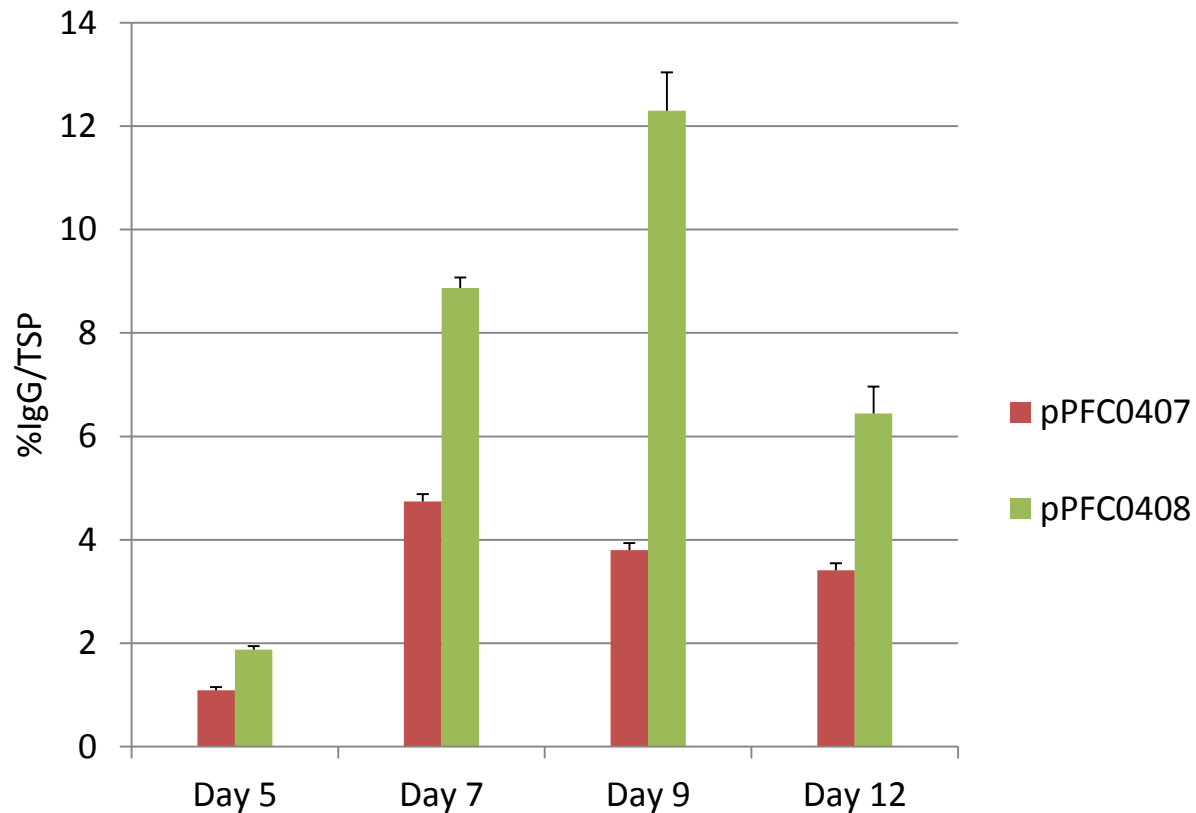
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- **HIV/AIDS IRAP/CHTD project**
 - Expression of drugs
 - Activity demonstrated

HIV/AIDS antibody expression

Expression of the HIV/AIDS antibody (4E10) is above 12% of Total Soluble Protein



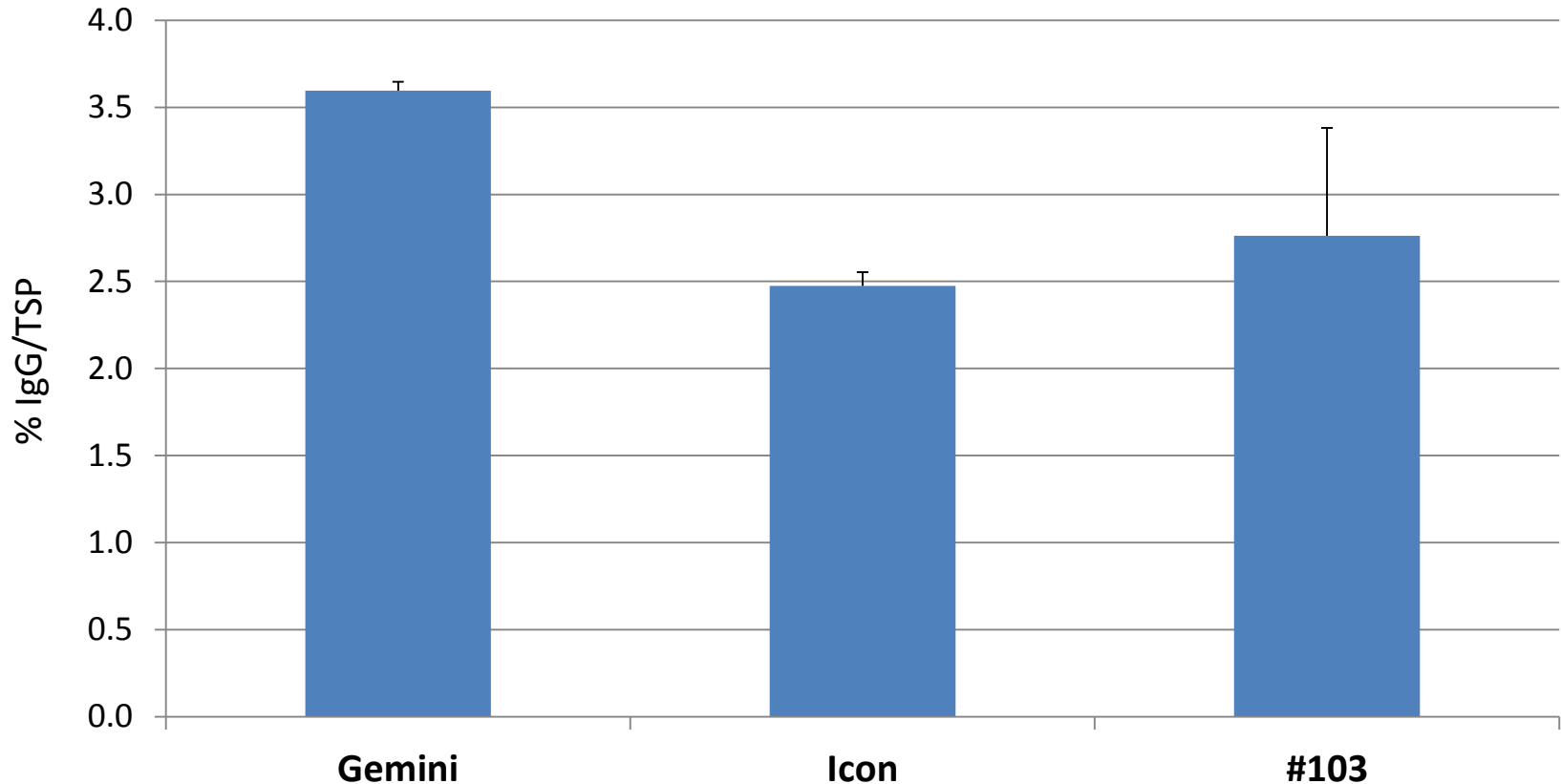
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- **Platform systems**
 - Expression systems
 - Glycosylation modification

Transient Expression System Options



Comparison of trastuzumab expression in Gemini (Arizona State University), magnICON (Nomad) and University of Guelph #103 production systems

PlantForm

- Technology
- Patents

3 Families of Patents Advancing

- **Core platform technology**

- “Methods of Improving the Therapeutic Efficacy and Utility of Antibody Fragments”
- National submissions advancing
 - Review comments from EU

- **Biosimilar Herceptin manufacturing process**

- “Production of HER Receptor Antibodies in Plant”
- National submissions advancing

- **Innovative drug candidate**

- “Anti-Cobra Toxin Antibody Fragments”
- National Submissions advancing

PlantForm

- Technology
- Patents
- Partners

“Partners to Market” Strategy

Global Pharma



- Category leaders in biologics or small molecules
- Global sales and marketing reach

Regional Pharma



- Regional strength in key area(s)
- Strategic intent to enter biosimilar market

Generic



- Financial resources and presence in biosimilar market (or intent to enter)
- Ability to build sales force

PlantForm

- Technology
- Patents
- Partners
- Financing

Financing Strategy and Objectives

- **Angels (Q3/Q4 2012)**

- Target \$500k
 - Focus on opening base to interested investors
 - Funding to advance to Series A financing

- **Series A (Q4 2012/Q1 2013)**

- (Bridge \$2 million)
- Total \$10 million
 - Advance biosimilar Herceptin to completion Phase I Clinical trial
 - Advance early development of pipeline

- **Series B (2014/5)**

- \$24 million
- Partnered/Series C \$44 million
 - Advance biosimilar Herceptin to license submission
 - Advance development of second drug

Previous Funding Received

Source	Type	Dates	Amount
Angel Financing (Private)	Equity investment	2008-date	\$1.5 million
OCIF (Ontario)	Matching Angel investment	2009	\$250,000
MIACS Elevate Industrial Fellowship (Canada)	Post-Doctoral Fellow	2010	\$163,000
OCE Market Readiness Award (Ontario)	Seed funding	2008	\$125,000
FedDev Research Collaboration (Canada)	Conestoga College and PlantForm	2011	\$80,000
Global Commerce Support Program (Canada)	Going Global Innovation	2009 - 2012	\$70,000
IRAP (Canada)	Market evaluation and support	2010	\$40,000

Current Government Funding Opportunities

Project	Source	Amount	Status
Approved			
Biosimilar Herceptin	Investing in Business Innovation (Canada)	\$840,000	Approved, to match Institutional or Angel investment
HIV/AIDS	CHTD-IRAP (Gates and Canada)	\$300,000	Funded-ongoing since Q4, 2011
Proposed			
Butyryl Cholinesterase	DARPA (US Government)	\$2.1 million	Preliminary approval, contract finalization
Biosimilar Herceptin	OICR IPDC Fund (Ontario)	\$1.5 million	Application invited, submission Q3, 2012
PlantForm development	OCE Market Readiness 2a&b (Ontario)	\$275,000	Application submitted, meetings with program managers



PlantForm

- Technology
- Patents
- Partners
- Financing
- Objectives

Corporate Objectives Fiscal 2012: Status

Technical Objectives	Status
Completed trastuzumab animal efficacy study	✓
Scale trastuzumab manufacturing process to clinical/early commercial scale	Awaiting financing
Initiate development of second product	✓
Advance transgenic production platform Match FedDev funding	✓
Financing Objectives	Status
Complete Annual 2011 Rights Offering	✓
Match FedDev funding	✓
Advance Series A financing	✓ (Ongoing)



Corporate Objectives 2013

Technical Objectives

1	Scale trastuzumab (biosimilar Herceptin) manufacturing process to clinical/early commercial scale
2	Characterization of second biosimilar candidate, Avastin
3	Activity study for HIV/AIDS drug
4	Evaluate Animal Health opportunity

Financing objectives

1	Advance Bridge and Series A financings
2	Execute DARPA project agreement
3	Secure at least one Canadian/Ontario Government grant/contract

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Investment Opportunity

Pre-money value \$8.0 million

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