

AMCHAM

Healthcare Innovation Seminar 2015

July 10, 2015



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Chairman, Korea BIO

Korea is a global leader in many advanced industries

- ◆ **DRAM semiconductors**

Korea 63%, US 29%, Taiwan 8%

- ◆ **LCD panel**

Korea 50%, Taiwan 31%, China 11%

- ◆ **Shipbuilding**

Korea 36%, China 28%, Japan 10%

- ◆ **Biopharma ???**

Barriers to Korea's biopharma industry from becoming global leader

- ◆ **Global #1 science and technology matters only**
- ◆ **Scale** is a must-have to overcome inherent R&D risk
- ◆ **'Win Korea first, then go Global'** model doesn't work

- McKinsey & Company

Successful, Productive

Ecosystem

Success Model in Global Market

PayPal Mafia

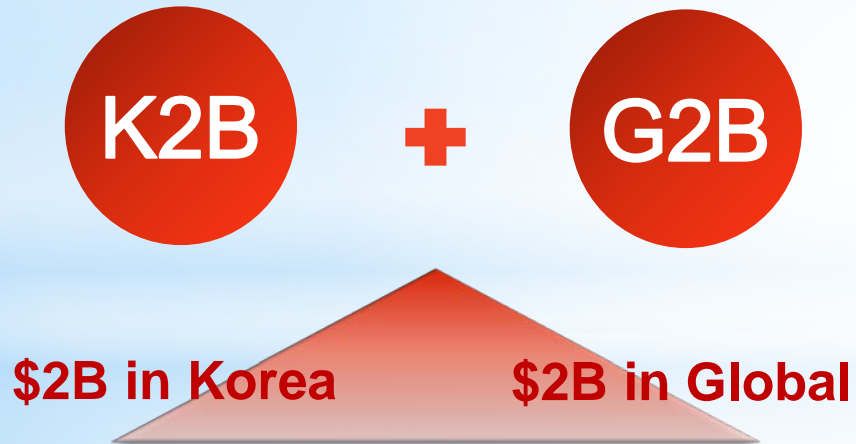
Medical Scientist

Globalization Strategy of Green Cross

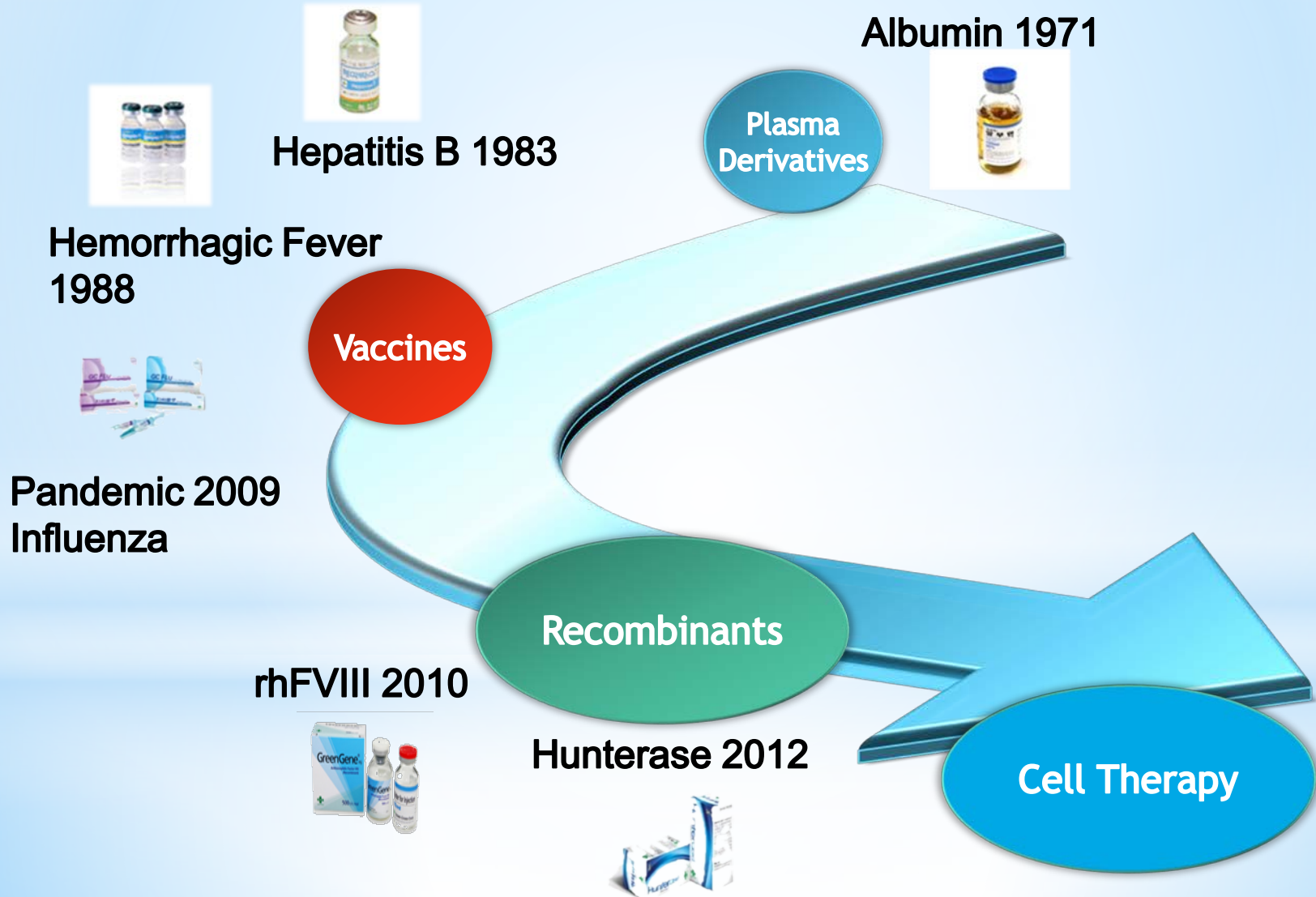
Green Cross 2020

Business Objective

Global Top 50 Pharma Company in 2020



Company History



Pipelines

1

Plasma Derivatives

2

Vaccines

3

Recombinants

4

Cell Therapy

Plasma Derivatives

CANADA Plant (Montreal)

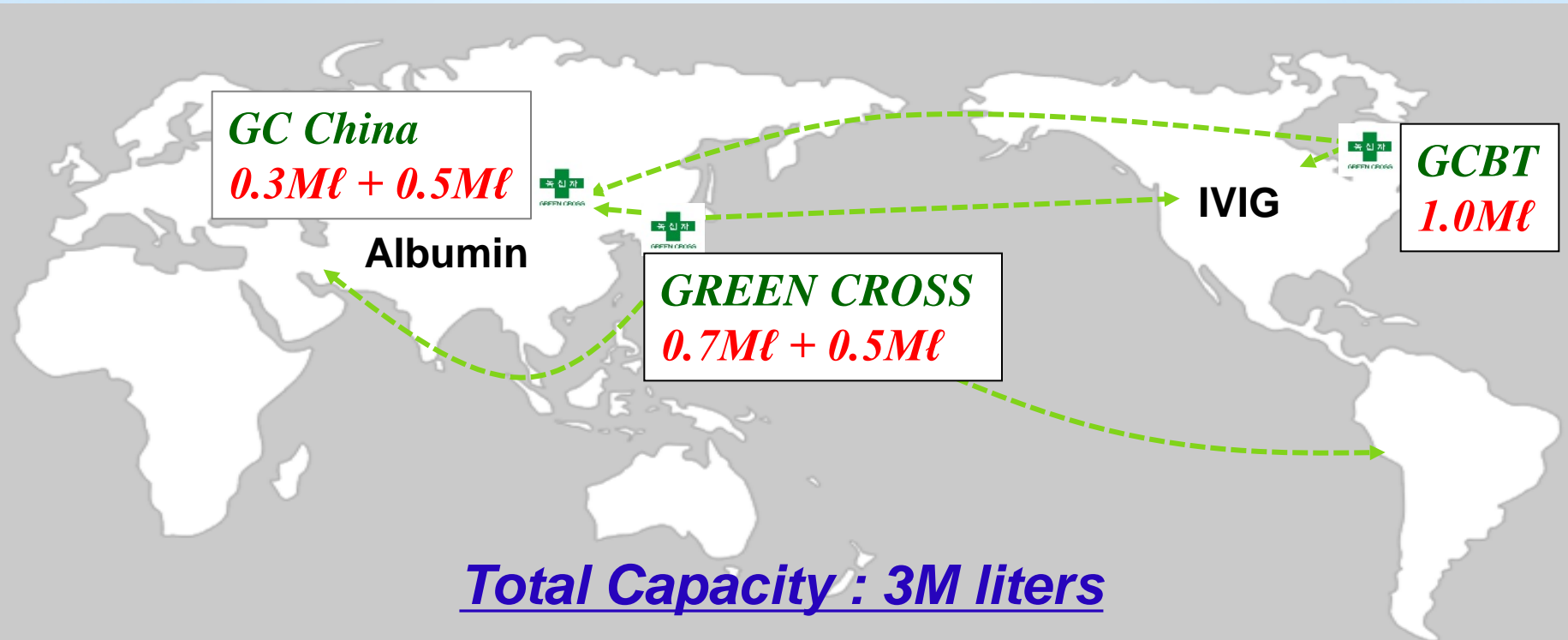
Construction - **2015-2019**

Products - **IVIG, Albumin, Factor VIII**

Capacity - **1M liters /yr**



Plasma Derivatives



Global Competitors Capacity

Baxter	GRIFOLS	CSL™	octapharma plasma	GREEN CROSS
10M liters	9.5M liters	6.2M liters	4.3M liters	3M liters (E)

Plasma Derivatives

TRC Plant (Thailand)

Construction - 2013-2015

Products - IVIG, Albumin, Factor VIII

Capacity - 0.2M liters /yr

Malaysia, Indonesia, Middle East



Pipelines

1

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Cell Therapy

PAHO Tender Biz

- **Influenza Vaccine: GSK, Sanofi, Novartis**

8.7M/13M (2015 SH)

4.2M/5.2M (2015 NH E)

- **Varicella Vaccine: MSD, GSK**

5.4M/6.6M (2015~2016)

Pipelines

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Cell Therapy

Recombinants

Hunterase[®]

Indication - Hunter Syndrome (MPS II)

70 patients in Korea

Remarks - Orphan Drug Designation by US FDA

Status - Approved in Korea (2012)
Oman, Algeria, Malaysia

Cost - >\$300,000/year

Shire: Elaprase \$600M



Pipelines

1

Plasma Derivatives

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Cell Therapy

Cell Therapy

GC Cell Center

Construction - 2015-2018

Products

- T Cell
 - NK Cell
 - Dendritic Cell
 - Stem Cell
-

Role

- R&D
 - Manufacturing
 - Cell Banking
-





Cell Therapy

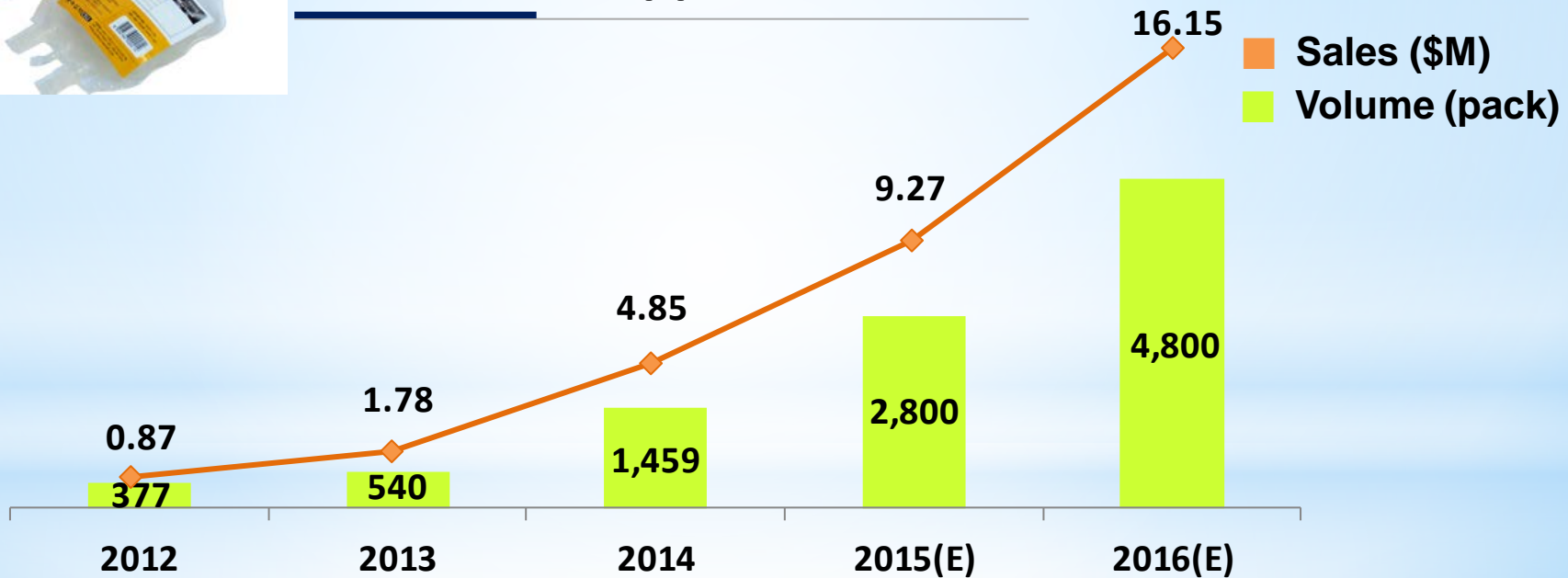
Autologous T Cell



Immuncell-LC™

Indication - **Hepatocellular Carcinoma**

Status - **Approved in Korea**



↑
Glioblastoma

Collaboration with US Companies

Cell Therapy

AGS-003

Partner	- Argos Therapeutics, Inc. US
Ingredient	- Dendritic Cell (autologous)
Status	- Phase III
Indication	- Advanced Renal Cell Carcinoma

Cell Therapy

Stemedyne

Partner - **Stemmedica Cell Tech., Inc. US**

Ingredient - **Stem Cell (allogenic)**

Status - **Phase II**

Indication - **Stroke, Chronic Heart Failure**

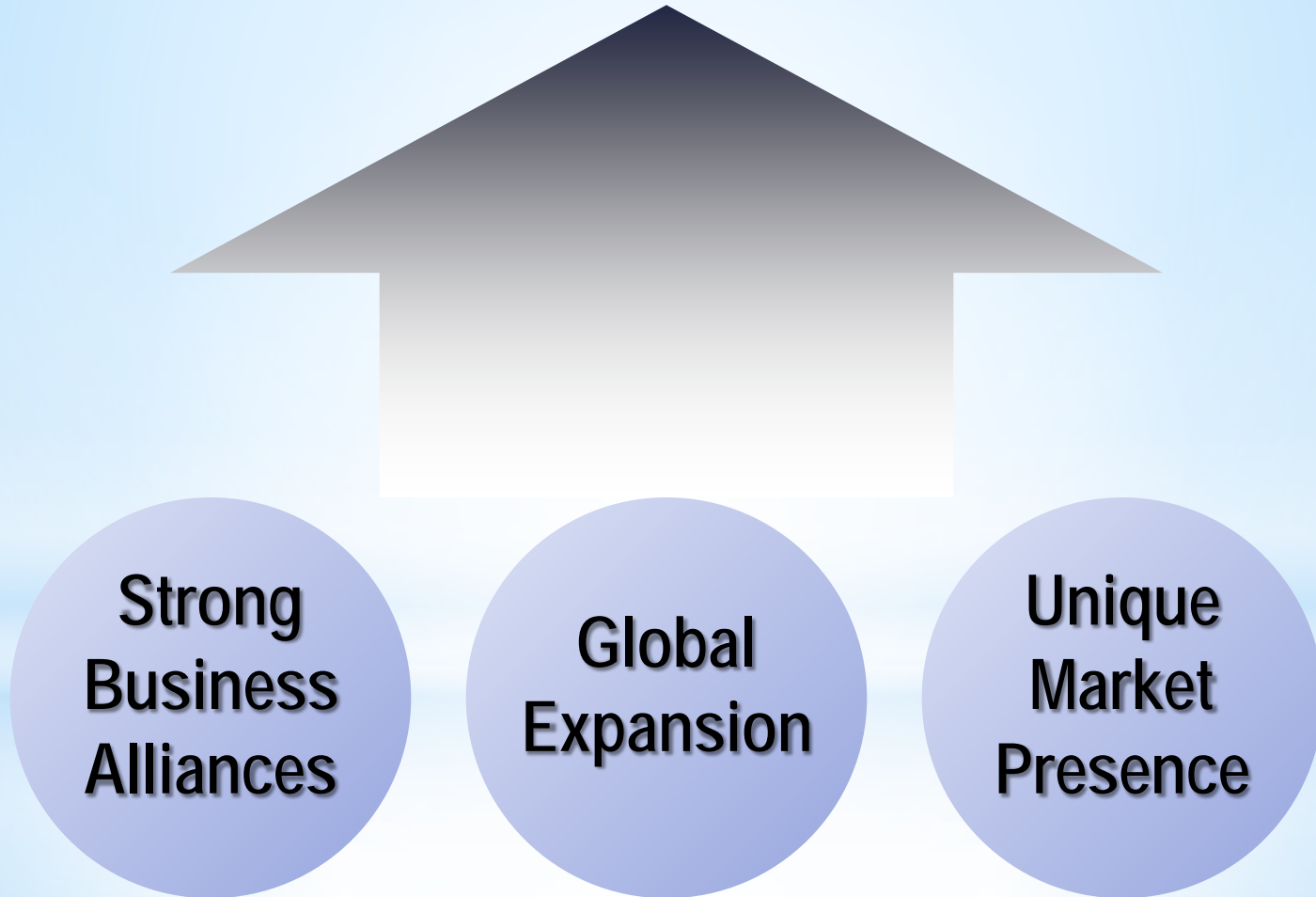
Gene Therapy

JVS-100

Partner	- Juventas Therapeutics, Inc. US
Ingredient	- Stromal Cell Derived Factor 1
Status	- Phase II
Indication	- Advanced Ischemic Heart Failure

Summary

Global Top 50 Pharma in 2020



THANK YOU !!



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