A Botanical-Based International Healthcare Platform

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My Childhood in China (Late 1960’s)

My Parents in Sichuan Agriculture College (1956)

The Miao Villages, Guizhou

My Sister and I (1966)

The Huangguoshu Fall, Guizhou
The Rise of China

2200 Years Ago (220 B.C.)

Now (Shanghai, 2009)

In the past 30 years:

- Industrialized 3x the pace that the West did: 30 vs. 100 years
- Poverty rate reduced from 60% to 10%: 500 million people lifted out of poverty
  —“An accomplishment unparallel in human history” (Obama, Shanghai, Nov. 16, 2009)
- 1999-2009: annual growth rate at 10%, reaching GDP of $4.8 trillion
- Becoming the 2nd largest economy in the world next year.
Evolution of Technology in China

220 BC

Created in China
- The Compass (4th Century BC)
- Papermaking (2nd Century)
- Gunpowder (9th Century)
- Printing (9th Century)
- Traditional Chinese Medicinal (TCM) (Written) System (since 200 BC)

1979-1999

Made/Copied in China

1999-2009

Re-Created in China
- Energy Tech
- Information Tech
- Manufacturing Tech
- Agriculture Tech

Modernization of TCM
From “Made/Copied in China” to “Invented in China”

China’s 5 Phases of Intellectual Property (IP) Development

- **Phase 1:** Driving growth through export
- **Phase 2:** Climbing the value chain
- **Phase 3:** Paying the price
- **Phase 4:** Getting serious about intellectual property
- **Phase 5:** Profiting from intellectual property

My Little Green Revolution in Silicon Valley
• We should take a personal responsibility for our own health
• Respect our body as a natural holistic micro-ecosystem
• Take care of it so as to allow the body to sustain its intrinsic ability to maintain & restore health
  (much like how we should protect planet Earth for future generations).

Thus, we believe that

• “Sustainable health” is the body’s sustained ability to maintain & restore health so as to allow us to live a healthy, productive life for the rest of our lives.
Botanicals—Global Trends & Market Drivers

- Globally there is a “green revolution” sweeping across developed countries & emerging economies (e.g., China, India, Brazil) demanding for better protection of planet Earth & more natural, healthier foods.

As in Dietary Supplement, Self-Medication & Functional Food:

- Increase in interest in botanical alternative to synthetic drugs

  - Complementary alternative medicine
  - Traditional medicinal systems (Traditional Chinese Medicine (TCM), Japan’s Kampo Medicine (the Practice of TCM), India’s Ayurveda and other Asian Systems)

- Aging population’s increased health concerns in

  - Anti-Aging / Beauty / Sexual Functions
  - Weight Control / Obesity
  - Joint & Bone Health
  - Digestion / Allergy / Immunity
  - Cardiovascular Health / Diabetes
  - Cognition / Memory

- People w/ chronic conditions looking for safer & more cost-effective alternatives to prescription drugs
- Continued sedentary & hectic lifestyles of industrialized regions
- Parents avoiding giving their children drugs & over-processed foods
- Growing population concentrating on health instead of disease
- Educated & informed consumers’ desire to participate in their own health care.
Global Nutraceutical Market

Combined Market of the US, Western Europe, Japan & China:

2007 2012
All Nutraceuticals $134.5 b $183 b
Functional Foods $96.7 b $135 b

“Silver Bullet” Drugs vs. Traditional Herbal Remedies

- Plants have evolved for 300 million years to survive environmental assault.
- 19th – early 20th century:
  - United States Pharmacopoeia (USP) included 50% “impure” multi-constituent plant medicine
  - Medical journals documented many case studies substantiating effectiveness of plant medicine

Medical sciences shifted from complex molecular mixture to single molecules

- Myth No. 1 “Pure compound is safer than Complex plant mixture”
  - Pure compounds have their own risks (may be 1000X –10,000X higher toxicity)
  - Medical errors in Americans (2006) 1.5 million per year
    - Adverse events from herbal remedies are “a tiny fraction of adverse events associated with conventional drugs.”
    - The risk of using herbal remedies is “fewer than synthetic drugs.”

- Myth No. 2 “Single compound is superior because more precise in dosing”
  - There is large variation in drug metabolism & medicinal plant is an inherently dilute mixture.

- Myth No. 3 “Phytochemical in medicinal plant is too dilute to have an effect”
  - Very low concentration of any 1 chemical will contribute to a chemical mixture’s activity
  - even if that chemical does not show activity when isolated.

China’s Unique Competitive Edge
In Botanical Healthcare Product Development

• 3000+ Year History of Using Botanicals for Healthcare
• Established a Sophisticated, Integrated Written System of Using
  - Functional foods
  - Dietary supplements for Disease Treatment & Prevention
  - Botanical drugs
• Renaissance of Botanical-Based Medicine in China Market due to
  - Improved living standard and life style
  - Healthcare reform and education
  - Improved production process using modern technologies

• Modernization of Botanical Pharmaceutical Industry in Order to
  - Produce products in industrial scales
  - Enhance quality control to keep lots consistent
  - Large scale farming of critical botanical ingredients
Healthcare Product Development Cycle

Typical Pharmaceutical

Drug Discovery
Preclinical Development
Clinical Development
Approval
Market

Cost $$$

8-10 Years

$ 800 M

Nutritional Supplement

- EAS (Sports Nutrition)
  6-8 months, 1 Product
  Starting 1993 w/ $14K
  Acquired by Abbott for $320 M in 2005

- Cambridge Theranostics
  (Cardiovascular Supplement)
  7 years, 1 product
  Starting 2009
  Burned $17M

- Airborne Health
  (Flu Drink Mix)
  5 years, 1 type products
  Starting 1997
  Sales reached $100 M by 2006

Product Development

Natural Personal Care Products

- Tom’s Maine
  Started in Maine in 1970
  86% shares acquired by Colgate-Palmolive for $100 M in 2006
  Flagship Toothpaste in 1975

- Burt’s Bees
  Started in Maine in 1984
  Best Seller “Lip Balm” in 1991
  Acquired by Clorox for $925 M in 2007

Market
## From China:
- Identify successful products
- Obtain technical expertise
- Obtain clinical evidence
- Source high-quality ingredients
- Ensure sustainable production

## In the US:
- Identify market needs & customer preferences
- Formulate products accordingly
- File for patent and trademark protection
- Contract manufacturing of products
- Design attractive packages
- Prepare marketing materials following regulatory rules
Sourcing Botanical Products from China

Forming Global Alliance Based on Geographic Locations & Cultures of Botanical Use
- Qinghai-Tibet Plateau
- Guizhou Province
- Guangxi Province
- Yunnan Province
- Sichuan Province

With Pristine Land, Great Biodiversity & Local Cultures of Using Natural Remedies for Promoting Longevity, Disease Prevention & Treatment for Centuries.
Wide Use of Soluble Dietary Fiber in Health Foods & Beverages

• **Soluble Dietary Fiber**
  Dissolves readily in beverages (water, tea, milk, juices).

• **Appetite Suppressant**
  Non-digestible fiber in the gut has the effect of increasing satiety.

• **Natural Low Glycemic Sweetener**
  Oligofructose mildly sweetens but leaves no aftertaste.

• **Fat/Cream Substitute**
  Inulin feels creamy in the mouth and enhances the texture of bread, ice cream, chocolate.
Tasty Health Foods & Convenient Dietary Supplements for People w/ Special Needs

• Soluble Dietary Fiber
• Appetite Suppressant
• Low Glycemic Sweetner
• Fat/Cream Substitute

Novel Formulations

• People w/ High Blood Glucose Levels (Diabetes)
• People w/ Weight Management Problems (Obesity)
• People w/ High Cholesterol & Triglyceride Levels
• Children w/ Weak Immune System (Prone to Infection & Sickness)
• Aging Population w/ Bone & Joint Problems (Osteoporosis)
The Flu Pandemic is Here to Stay

- The Flu Pandemic is HERE! (Winter 2009-Spring 2010)
  “The fall resurgence of 2009-H1N1 influenza could produce infection of 30-50% of the U.S. population this fall and winter” The White House Scientific Advisors’ Report: 2009-H1N1.”
- President Obama declared National Emergency over H1N1 Swine Flu (Oct. 24, 2009)
  - Public’s increasing resistance to vaccine injection for fear of side effects.
  - Ineffectiveness of vaccine against mutated viral strains.
  - Emergence of Tamiflu®-resistance H1N1 strains.
  - Urgent need of effective & safe guard against broad spectrum of viruses
- Ukrainian pandemic flu outbreak (Nov. 2009): extremely contagious & lethal; symptoms dissimilar to H1N1; viral strain not genetically confirmed

Are There any Natural, Safe, & Effective Remedies for Protecting Us against all Kinds of Influenza Virus?
Let us Thrive with Sustainable Health!