

SABPA 4TH ANNUAL PACIFIC FORUM ON LIFE SCIENCE ALLIANCES



– UNLEASH THE DRAGON



NOVEMBER 8, SAT. SAN DIEGO, CA

The Most Popular Business Conference Focusing on Cross-Pacific Trends in Financing, Partnering, and Outsourcing

UCSD, San Diego

Ms. Zhu Shen, Ph.D., MBA

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Presidential Debates



Sarah Palin & Her Alter Ego – Tina Fey



The Obama Girls in Obama City, Japan



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China's Earthquake – May 12, 2008



China's Earthquake – May 12, 2008



China's Toxic Milk – Who are the Victims?



Beijing Olympics – 8/8/2008



Beijing Olympics – 8/8/2008



Tale of Chinese CRO Bellweather: WuXi Pharmatech (WX)



Unleash the Dragon

- **Outsourcing Outlook**
- **Licensing & Partnering Trends**
- **Investment & Financing Trends**
- **What does the future hold for big pharma/ biotech?**

China's Pharmaceutical Market

- **Rx growth at 10-15% annually since 1979**
- **Rx revenue expected at \$24 billion by 2010**
- **One of top Rx market by 2020?**

China's Top Disease Areas

Disease Areas	As % of Total Death
Cancer	24.4%
Cerebrovascular disease	21.3%
Heart disease	17.7%
Respiratory disease	13.3%
Trauma & toxicosis	5.9%
Digestive disease	3.1%
Internal system, nutrition, metabolite & immunity disease	3.0%
Urogenital disease	1.5%
Mental illness	1.1%
Neuropathy	0.9%

- More “affluent diseases” & diseases of aging are the leading causes of death
- Disease statistics similar to Western countries

China Advantages

- **Highly-skilled and well-educated workforce**
- **Very competitive cost (at 1/5 to 1/3 of US cost)**
- **Economy of scale**
- **Speed**
- **Solid medicinal chemistry, preclinical, API manufacturing capabilities**
- **Vast patient resources for clinical trials**
- **TCM history and resources**

China Disadvantages (2006)

- **Minimal knowledge and expertise in global standards for drug development and regulatory approval**
- **Lack of transparency of opportunities**
- **IP protection lagging**
- **Few novel therapeutics and relative weak R&D**
- **Difficulty in accessing foreign capital and markets**

China Catching Up (2008)

- **Improved communication/dialog between SFDA and FDA, unified regulatory standard a feasible reality**
- **Intermediaries, media, and Internet increase transparency of opportunities**
- **IP protection greatly improved**
- **More novel therapeutics at top research institutes**
- **More Western investors chase after new Chinese start-ups**

Big Pharma Crisis

- **\$1 billion price tag per approved drug**
- **Declining internal R&D efficiency**
- **Eminent patent expiration of billion dollar blockbusters**
- **Major drug safety problems (Vioxx, Celebrex...)**
- **Higher hurdle for FDA approval**
- **Global economic crisis & massive layoff**
- **Deteriorating public image & confidence**

Small Biotech Challenges

- **Venture capitalists becoming “venture escapists”**
- **Dwindling government grants**
- **Huge funding gap before IND – Valley of Death**
- **Big pharma partners desire “later-stage” deals**
- **Cash is running out FAST!**

China/India CROs Come to the Rescue...

- **Significant cost savings**
- **Comparable quality of service, deliverables**
- **Good IP protection**
- **“Sea turtles” understand customer needs/wants**
- **High flexibility**
- **Economy of scale**
- **Long-term partnership**

Chinese CRO Industry Trends

- **Cost advantage slowly erodes**
- **Leading CROs, new entrants move inland**
- **Expand/add new services via**
 - **M&A: WuXi acquiring Apptech**
CrownBio acquiring Kinasia
Sundia MediTech merged with United PharmaTech
 - **Cross-Pacific Joint-venture: Shanghai Medicilon & MPI Research**
 - **Strategic Alliances: Sundia, HD Bioscience, and NovaSecta (UK)**

Chinese CRO Industry Trends

- **Beyond chemistry. Biology, preclinical, clinical expected to grow rapidly**
- **Beyond fee-for-service, various risk-sharing models**
- **Hire US-based Chinese American scientists as BusDev scouts (Sundia, CrownBio, Medicilon)**
- **More cross-Pacific and domestic M&A, alliances, consolidation in the next 3-5 years**
- **Western pharma from FIPCO to FIPNET model bodes well for outsourcing**

Implications for Western Customers

- **Establish broad alliances with leading CROs in targeted areas**
- **Integrate CROs with internal R&D**
- **Quality of service, communication are key for success**
- **Hire bi-cultural, bilingual talents to manage Asian CROs**
- **Pricing: buyer's market**
- **Explore alternative risk-sharing for smaller customers**

Cross-Pacific Licensing Trends & Outlook

- **Well-financed Chinese pharma willing to pay top dollars for late-stage Western novel drug programs**
- **Chinese pharma hiring Western-training BD executives with China roots**
- **A number of US-based biotech finding “hidden NCE goldmine” in China for licensing**
- **US licensees/ investors demand IP filing for China/India from licensors**
- **Chinese CROs – fertile training ground for novel drug discovery & development in China**

Cross-Pacific Licensing Trends & Outlook

- **Chinese licensors/licensees learning to appreciate sophisticated licensing deal structure**
- **Western licensees/licensors need to understand Chinese legal and regulatory framework**
- **Explosion of Western law firms setting up offices in China**
 - **Foley & Lardner**
 - **Wilson Sonsini Goodrich & Rosati**
 - **DLA Piper**
 - **MoFo**
 - **Baker & McKenzie**

Cross-Pacific Investment/Financing Trends

- Chinese government, life science park investing heavily in biotech/ pharma industry
- US corporate VCs setting up Asian Venture Fund
 - Eli Lilly's Lilly Asian Ventures, Shanghai, 2007
- US / European VC & PE funds investing in cross-Pacific deals
 - HBM BioMed China
 - Qiming Venture Partners
 - DFJ DragonFund China
- Non-healthcare investors investing in Chinese life science start-ups

Take-home Message

- **Cross-Pacific life science scene dynamic, rapidly changing**
- **Chinese CROs industry will consolidate to yield a number of dominant players**
- **Western pharma/biotech companies will dramatically increase their outsourcing in Asia**

Take-home Message

- **Those who anticipate and manage change will win**
- **Many more cross-Pacific licensing/partnering deals to come**
- **Chinese biotech start-ups are becoming HOT investments for Western VCs/investors**
- **“Sea Turtles” will continue to cause “Sea Change” by leading the way of cross-Pacific alliances**



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Establish broad alliances with

- Chinese government, life science parks**
- Local life science organizations (BIOCOM)**
- Local, national, international life science companies interested in partnering**
- Other Chinese American life science professional organizations**
- Conference organizers cross-Pacific
IBC, CBA**
- Local, national, international media**

BioForesight Services

- **Business, corporate development, licensing**
- **Venture capital/ financing advisory**
- **Outsourcing advisory, market intelligence**
- **PR/Media strategy**

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