



WE'RE SOLVING THE WORLD'S GREATEST CHALLENGES

TOGETHER

Together we can accomplish
what no one can do alone.

**WELCOME TO
THE GLOBAL
COLLABORATORY**

Christine M. Lhulier, Corporate Counsel
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Collaboration - Drawing on Leading Edge Science



Partners



**Universities and National
Labs**

DuPont Science

World Class Scientists

Core Technologies

Enabling Technologies

Customers



Start-ups



Global Innovation Centers: Customer and Technology Gateways



DuPont Innovation Centers

- Paulínia, Brazil
- Mexico City, Mexico
- Johnston, United States
- Troy, United States
- Moscow, Russia
- Geneva, Switzerland
- Istanbul, Turkey
- Hsin Chu, Taiwan
- Bangkok, Thailand
- Pune, India
- Nagoya, Japan
- Seoul, Korea
- Shanghai, China

Doing World-class Science in China

New application development for local needs

- Front Side Silver double printing applications

Market-driven new product development

- Non-halogen flame retardant Zytel® high performance polyamide resins
- TPNEXT™ laminate technology
- DuPont™ Opteon™ YF refrigerant (HFO-1234yf)

Increasing agricultural productivity

- Higher yielding Pioneer® brand seeds
- Rynaxypyr® Chemistry to protect against insects

Renewable materials

- DuPont™ Sorona® renewably sourced™ fibers and polymers
- Biofuels*



Inclusive Innovation in China

Strength in Technology-Business collaboration

Advanced Materials

- World class application development capability
- Strong connection with markets and local customers
- Synergy among DuPont businesses at China R & D Center
- Global automotive, PV and FR centers
- Leveraged analytical, processing & nanotechnology

Industrial Biosciences

- Enzyme and gene discovery in China Technology Center (Puxi)
- Sorona® application in China R & D Center (Pudong)
- Enzyme application in WuXi
- Process engineering at JV site

Agriculture & Nutrition

- Maize breeding
- Biotech trait discovery through joint venture
- N&H food testing/application in China Technology Center



**Leveraged Regional Lab
China R & D Center
Pudong, Shanghai**



**China Tech Center
N&H and IB
Puxi, Shanghai**



**DuPont Pioneer AgBiotech JV
Life Science Park, Beijing**

DuPont China R&D Center Overview

- Started up in March 2005
- Located in Zhangjiang Hi-tech Park, Shanghai
- A comprehensive corporate R&D center supporting all key businesses in the region
- Integrated R & D and application development facilities with lab, semiworks, training rooms, and product displays
- 300 technical professionals including over 65 Ph.D. scientists, moving up to 500 professionals





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- IP is fundamental to science-based innovation
- IP laws must evolve to meet the challenges of the modern, complex global environment
- Stakeholders must collaborate address IP challenges

Business-Driven IP Strategy in China

Where to start - Understand Scope of R&D and Business Opportunity

- ❖ China is world's second largest economy after the United States
- ❖ Largest country in the world by population
- ❖ Fast growing renewables and consumer markets
- ❖ Growing number of middle income consumers
- ❖ Close proximity to Asia Pacific region and economies
- ❖ Strong government investment and talent pool

What is the target market? Does taking technology /R&D to China capitalize on the strong ability of local researchers, materials, knowledge and insight?

Business-Driven IP Strategy in China

Understand IP risks and manage expectations of success

- ❖ Reverse engineering, counterfeiting, and misappropriation are considered the norm
- ❖ How to capture and protect IP that is transferred, licensed, created, developed and/or improved in China
- ❖ How to enforcing IPR's successfully, minimizing expense with appropriate remedy
- ❖ How to protect and enforce rights with respect to trade secrets
- ❖ How to draft agreements that secure value and protect IP and avoid pitfalls

Need to implement an R&D and IP strategy consistent with business goals and have best practices implemented at early stage to mitigate IP risks.

Business-Driven IP Strategy in China

Agree on best practices and be vigilant with implementation

- ❖ Understand that IPR landscape is improving but will take many years
- ❖ Do not rely on conventional IP protections, tailor IP strategy for market
- ❖ Be well versed in local customs, rules and develop relationships
- ❖ Do and maintain due diligence
- ❖ Try to anticipate changes in competitive landscape
- ❖ Have rigorous processes and training and management systems

Need to implement IP management requirements, such as document control systems, compartmentalization and anti-counterfeiting methods.

Best practices for Protecting IPRs in China

IP Strategy at Corporate Level

- *Understand what you have in China and what you need to deliver business objective*
 - What IP already exists, what is needed?
 - What internal controls are in place, what should be in place?
 - What communication systems do you have and are they sufficient?
 - How are internal controls documented and reviewed?

Understand the IP Legal Landscape

- *Understand what laws, rules and regulations apply to achieve the business objective*
 - Patent law, trade secret, anti-trust, import/export, regulatory, tax, employment
 - Follow developments

Implement Preventive Measures and Balance risk

- *How can you prevent misappropriation*
 - Patents, trademarks, copyrights, agreements
 - Management processes and agreement terms
 - What communication systems do you have and are they sufficient?
 - Can manufacturing process be compartmentalized?
 - Can design facilities to limit IP risk exposure?
 - Document management and IT systems

Best practices for Protecting IPRs in China

Careful selection of employees and business partners

- *Understand who you are sharing sensitive information with and conduct due diligence*
 - Educate employees and business partners of IP processes
 - Have terms in agreements that require IP protections
 - Audit rights and controls, engage regularly and develop relationships
 - Build internal and external lines of communications

Licensing Best practices

- *Understand who you are sharing sensitive information with and conduct due diligence*
 - Avoid transfer of crown jewels, *in total*
 - Understand import/export restrictions, regulatory and registration requirements
 - Have terms in agreements that require IP protections, provide for auditing and address improvements, specify which language controls if contract is written in two languages
 - Understand antitrust compliance – avoid unreasonable restrictions on rights to further develop technology, field restrictions, purchase of goods requirements
 - Consider dispute resolution terms and governing of law