ChemFuture PharmaTech (Jiangsu) Ltd.

Your One-stop Chemistry Service Provider!
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## 1. Introduction—Overview

**Location:** Wuxi T-Park, Jiangsu Province, China.

**Products and Services:**
- Catalog Products
- FTE- Based Chemistry
- Custom Synthesis: from mg to ton
- Library Design& Synthesis
- Building Block Design & Synthesis
- Process Research & Development
- Analytical Method Development

**Employees:** 65 employees with 40 research scientists.

**Facilities:**
- 53,820 sft total standing alone R&D building is located in Wuxi, T-Park.
- 21,500 sft total pilot plan is located in Yixing, one hour driving distance from our R&D facility.
1. Introduction---Growth Milestones

- **April 2008**: Founded by Dr. Wayne W. Lai and Nanjing Honghe Investment Ltd.
- **September 2008**: Moved into new standing alone R&D building of 53,820 sft with six floors, which is located in Wuxi T-Park.
- **January 2009**: Company became fully operational after all equipment were installed and validated. Sales have been increasing gradually.
- **November 2009**: Our pilot plant became fully operational, which is located at YiXing City, 45 min away from the headquarter and has the production capability from multi kilos up to tons.
1. Introduction --- Location

Advantages:

- Gained strong economic supports from Wuxi Government.
- Convenient transportation and delivery. Easy access to:
  - Shanghai: 1.5h driving
  - Wuxi Airport: 10 minutes driving
  - Wuxi Train Station: 35 minutes driving
- Convenience of raw material procurement.
- Stable guarantee of research scientists.
2. Facilities and Equipments---Wuxi Site

- 53,820 sft total standing alone R&D building in Wuxi T-Park.
- 13 synthetic labs, 1 Kilo lab and 1 analytical lab.
- 95 fume hoods (including 7 walk-in hoods)
2. Facilities and Equipments-Yixing Site

- 21,500 sft total pilot plant is fully operational.
- Capacity of reaction vessels range from 100L to 2000 L.
- ChemFuture compounds can be prepared in scales up to tons in our pilot plant.
3. R&D Team

- Consists of experienced Ph.D. and MS returnees with good qualifications of instructing capacity, affinity and executive ability.
- Currently we have 6 PhD, 3 of them are US trained, 1 is UK trained, and the others are China trained. 30 MS and all of them hold strong backgrounds in organic synthesis and/or possess industrial working experiences.
- Low turnover rate (less than 10%) guaranteed the reliability and the control of research task.
Wayne Lai Ph.D.
*The founder, President and CEO*

- Ph.D. Degree in Organic Chemistry in 1992 from State University of New York and performed his postdoctoral research at Harvard University.
- More than 15 years of work experiences in biotechnology and pharmaceutical industries including a custom synthesis company for 7 years and a major multinational pharmaceutical company for 4 years.
3. R&D Team---Key Personnel

**Jun Xu Ph.D.**  
*Group Leader, Organic Synthesis*  
Ph.D. in Organic Chemistry from Shanghai Institute of Material Medica.  
Over 2 years of work experiences in Shanghai Chempartner Co. Ltd as Team Leader.

**Cedar Chen Ph.D.**  
*Group Leader, Scale-Up Synthesis*  
Ph.D. in Organic Chemistry Lanzhou University  
Over 2 years practical experience in chemistry optimization and process development in Asymchem Laboratories Inc.

**Ming Lu Ph.D.**  
*Group Leader, Analytical Chemistry*  
Ph.D. in Medical Microbiology from university of Texas Houston  
Over 8 years research experience as research assistant in MD Anderson Cancer Center Houston.

**Heting Li Ph.D.**  
*Group Leader, Organic Synthesis*  
Ph.D. in Medicinal Chemistry from Tongji University and postdoctoral research in Clemson University.  
Over 2 years of R&D experience in Wuxi Apptech as group leader.
4. Products and Services

- We provide One-stop Chemistry Service from concept of new drug discovery all the way to IND Filing:

![Diagram showing the process from Target Selection/Validation to Commercialization, with stages like Hit-to-lead, Lead Identification, Lead Optimization, Preclinical Development, IND Filing, Clinical Trial, and Commercialization.]

- FTE Based Chemistry
- Custom Synthesis: mg-tons
- Library Design & Synthesis
- Medicinal Chemistry
- Process R&D
- Analytical Development
- Building Block Design & Synthesis
4. Products and Services
Building Block Design & Synthesis

- A collection of commercially available building blocks has been developed to support advanced combinatorial lead generation, hit-to-lead, lead optimization and medicinal chemistry programs.
- All building blocks undergo extensive quality control by NMR and LC-MS, and purity is guaranteed to be over 95% by both methods.
- All building blocks are in stock and can be purchased in a broad range of grams to hundreds of grams.
- A full list of ChemFuture catalog products (>500 cpds) available upon request.

Representative examples of in-stock Building Blocks
4. Products and Services

--- FTE Based Chemistry Services

FTE Based Chemistry

- Synthetic Chemistry (Scaffold & Building Block)
- Process Chemistry
- Library Design Synthesis
- Medicinal Chemistry (Lead Generation & Optimization)
4. Products and Services
--FTE Based Chemistry Services

- Our FTE team are be able to:
  - implement the synthetic routes designed by the customers
  - design synthetic route for the customers as guided by the customer’s thinking.
- Our regular video conferences and weekly or biweekly reports allow the customers to get understanding of the project progress.
- Our FTE based service gives the customers the control of task, long term stability and reliability, easy management and communication.
4. Products and Services

--Custom Synthesis (Fee for Service)

- Over 95% purity, milligram to ton scales
- Reference compounds
- Building blocks and scaffolds
- Advanced intermediates
- Synthetic pathway design, evaluation, and scouting
- Synthesis route report.

LabTech Microwave Synthesizer

Atlas Automated Synthesis System

Pilot Plant
4. Products and Services
--Library Design and Synthesis

- Customers design their own libraries and synthesis by ChemFuture
- ChemFuture propose and synthesis novel libraries tailored to the client's specific needs
- All the library compounds will be in milligram (mg) quantity with purity > 80% (by LC/MS) or as required.

Initiator™ Sixty EXP Microwave System

H-cube Standard Hydrogenation Reactor
4. Products and Services
--Process Research & Development

- Our experienced chemists can offer you solutions for technology transfer and its process development.
- Here is what we can do:

  - Known route evaluation and development of new synthetic routes for target molecules
  - Optimize reaction conditions to reduce cost and maximize throughput
  - Perform reactions under cryogenic conditions (as low as -80 °C)
  - Develop reliable methods for in-process testing and analysis of intermediates and API's
  - Assessment of critical process parameter
5. Quality Control and Assurance

- The company owns an excellent management team, who possess rich scientific management skills and industrial experiences, as well as good qualifications of instructing capacity, affinity and executive ability.

- We have experienced analysts for methods development, validation and analysis to guarantee that all products delivered by our company constantly meet the customer’s requirements.
Quality Control and Assurance

Quality Control Apparatus

- 400MH Bruker NMR;
- Agilent 1200 HPLC with ELSD detector;
- Agilent LCMS with ELSD detector;
- Agilent GCMS;
- Karl Fischer Titrator;
- Polarimeter
- Melting-Point-Measuring Apparatus;
- And more.
6. Intellectual Property Protection

- IP Protection has fundamental importance not only to our clients but also to the company's success and its very existence.
- All employees will sign Confidential Agreement upon joining.
- All chemists will be specifically trained for safety, notebook and report preparation, etc.

- Outward e-mails are strictly controlled.
- All critical data will be stored in dedicated computers for specific projects or specific customers - only be accessible to current project team members.
- All computers assigned to chemists do not have re-writable CD/DVD drives and functional USB outlets.

- No publication or presentation is allowed unless with written agreement from the customer.
7. Company Culture

- Our Slogan:
  *ChemFuture, the Future of Chemistry!*

- Our Vision
  1. *To become the largest and most comprehensive supplier of Building Block catalog products;*
  2. *To provide a broad and integrated One-stop chemistry services to assist our global partners in shortening time and lowering the cost of new drug research and development.*

- Our Shared Value:
  - Respect clients, exceed customer’s expectation, seek win-win.
  - Develop business with integrity and loyalty, seek foreverness.
  - Provide innovative services with practical-mind, seek excellence.
8. Health Safety and Environment

• All ChemFuture operations and employees have been working together to protect the quality of environment and health and safety of our employees, customers, and neighbors.

Committed to:

- provide safe workplaces for all its associates and third party personnel.
- monitor waste organic, gas emissions and water effluents in accordance with government regulations.
9. Summary----Why us?

- We can provide our customers with a rapidly growing and comprehensive catalog of Building Block products to meet their needs.

- We are able to provide a One-Stop Chemistry Services from concept of new drug discovery all the way to IND Filing to assist our global partners in shortening the cycle and lowering the cost of new drug research and development.

- We are specialized in designing and synthesizing novel and drug-like scaffolds, libraries and building blocks, capable of performing many challenging organic synthesis projects with high quality and low cost.

- We have an excellent management team, who possess rich scientific management skills and industrial experiences, as well as good qualifications of instructing capacity, affinity and executive ability.
Contact Us:

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