

PharmSource ADVANTAGE: Sourcing Intelligence for Intelligent Sourcing

January 2010

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Welcome to the *PharmSource ADVANTAGE Briefing!*

Welcome to the January 2010 issue of the *PharmSource ADVANTAGE Briefing*, a complimentary newsletter designed to provide actionable intelligence to bio/pharmaceutical and contract service professionals. Inside each issue, you will find a snapshot of our flagship newsletter, *Bio/Pharmaceutical Outsourcing Report*, along with a company profile developed from our comprehensive **PharmSource ADVANTAGE** contractor database.

This month, we discuss **Patheon's** intentions to close its Caguas, Puerto Rico, manufacturing operations as well as the settlement reached between a group of independent directors and JLL Partners for control of the company's board. In addition, we analyze the **Q3 revenue results** for contract service providers in Asia as well as profile **Angel Biotechnology**. And don't miss the information on our latest report, *The Market for Analytical Testing and Development Services* on page 3.

Enjoy the issue!

Feature Story

Patheon to Close Caguas Facility

Patheon announced plans to close its Caguas, Puerto Rico, manufacturing operations. The facility has capabilities for solid, semi-solid and non-sterile liquids manufacturing. The facility was at one time the principal operation of Mova, which Patheon acquired in 2004, and was a major supplier of Merck's statin products as well as other commercial brands. Patheon will move products from Caguas to its other Puerto Rico production site in Manati.

Separately, Patheon announced that the battle between JLL Partners and a group of independent directors for control of Patheon's board has been settled. Under the court-approved settlement, JLL will have four board seats while there will be three independent directors. In addition, Joaquin Viso, a major shareholder and former owner of Mova, and CEO Wes Wheeler have been reappointed to the board. The settlement also includes some provisions limiting JLL's right to acquire additional shares and take other actions without the consent of the independent directors.

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What it means

The Caguas closure would appear to be largely a matter of utilization: both facilities have been operating at below-optimal utilization, and the closure of one will enable it to get better utilization of the other. The Caguas facility has endured a number of operating problems as well.

Side Effects

Side Effects identifies CMOs and CROs that might be impacted by key events affecting their clients, including company acquisitions, product acquisitions and licenses, product approvals, late clinical product terminations, and FDA rejections.

Pharma Company	Event	Contractor	Product	Relationship
<i>Potentially Positive Side Effects</i>				
Bavarian Nordic	U.S. government contract for smallpox vaccine	IDT Biologika	Imvamune freeze-dried	Injectables manufacturing
Dyax	FDA approval	Avecia Biologics	Kalbitor	Biomanufacturing
Dyax	FDA approval	Hollister-Stier	Kalbitor	Injectables manufacturing
Javelin Pharmaceuticals	NDA filed	Baxter Biopharma Solutions	Dyloject	Injectables manufacturing
Jazz Pharmaceuticals	NDA filed	Lonza	JZP-6	Small molecule API manufacturing
Jazz Pharmaceuticals	NDA filed	Patheon	JZP-6	Nonsterile liquid manufacturing
Moventis	EMA approval	Sanico NV	Resolor	Solid-dose manufacturing
NeurogesX	FDA approval	Formosa Laboratories	Qutenza	Small molecule API manufacturing
NeurogesX	FDA approval	LTS Lohmann Therapie-Systeme	Qutenza	Transdermal dose manufacturing
NeurogesX	FDA approval	CPL-Contract Pharmaceuticals Ltd.	Qutenza cleansing gel	Semi-solid & liquid manufacturing
<i>Potentially Negative Side Effects</i>				
Clavis Pharma	product to be acquired by Clovis Oncology	Teva Pharmachemie	CP-4126	Injectables manufacturing
Gloucester Pharmaceuticals	to be acquired by Celgene	Ben Venue Laboratories	Istodax	Injectables manufacturing

Source: PharmSource Lead Sheet

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PharmSource Special Report

New Study Sizes the Analytical Testing Market

PharmSource is pleased to announce the publication of our new report, *The Market for Analytical Testing and Development Services*. The report presents the findings of our extensive effort to model expenditures on GMP analytical development and testing in both the clinical and commercial phases and to understand the factors that will drive outsourcing of analytical activities over the next five years.

The heart of the study is our model of spending for CMC development, including API process development, formulation, CTM manufacture and associated analytical testing. We have constructed a model driven by the new product pipeline and the outsourcing behavior of the major end-customer segments. A separate model breaks down spending for analytical testing of commercial products.

Based on our model, PharmSource estimates industry spending for CMC development services at about USD 9.3 billion, divided almost equally among process and formulation development, analytical development and testing, and CTM manufacture. We estimate that as much as two-thirds of that spending is already outsourced, either to CDMOs or dedicated contract labs. Growth in the market will be constrained by a likely shrinkage in the development pipeline, and North American and European contractors will be challenged by emerging competition from Asia.

More information on *The Market for Analytical Testing and Development Services* is available at www.pharmsource.com/other/market-for-contract-analytical-and-development-services

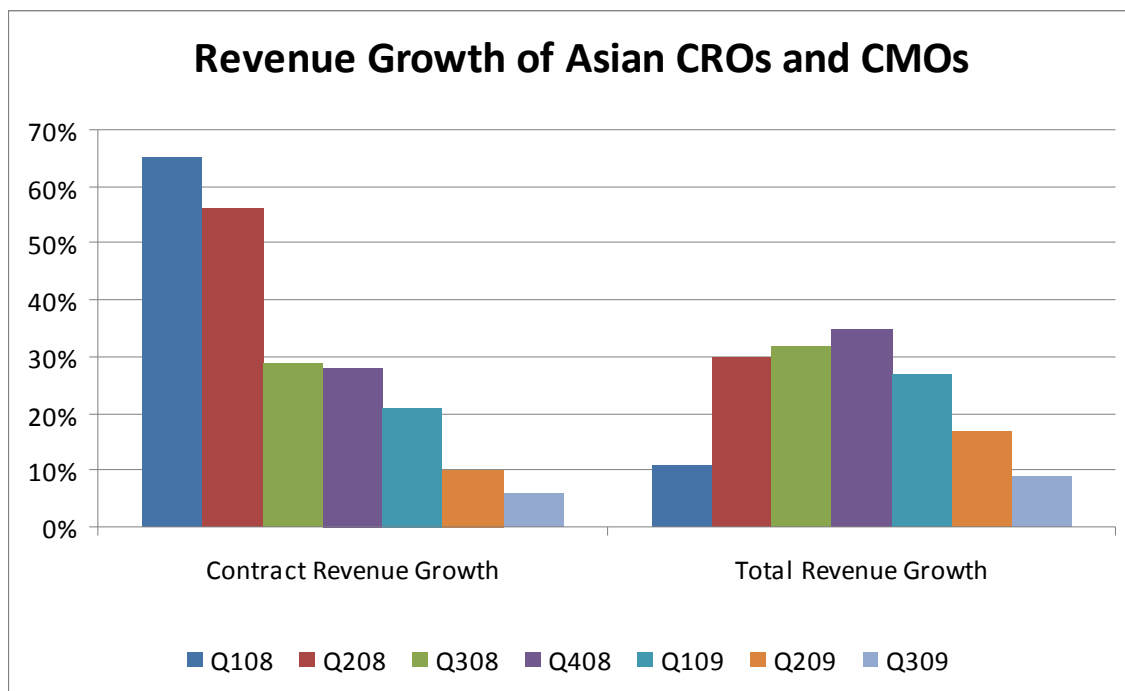
Business Conditions

Q3 2009 Financial Review: Growth Still Positive for Asian Contractors

Revenue growth for contract service providers in Asia continued its downward trend in the third quarter (Q3) of 2009. Since posting a remarkable collective growth of 65 percent in Q1 2008, Asian CROs and CMOs have experienced declining growth rates, with the 11 contracts that break out contract revenue registering 6 percent growth last quarter. Individual company results continue to be varied, with six companies posting positive growth and five reporting negative results.

Multiple Asian contractors have established operations in the West in the past few years, primarily through acquisitions, and those Western operations significantly underperformed their Asian counterparts last quarter. **WuXi PharmaTech**'s US-based laboratory services reported -1 percent growth, while revenue from China-based lab and manufacturing services grew 15 percent. Things were worse at **Piramal Pharma Solutions**, the contract arm of Piramal Healthcare, where Indian manufacturing revenues grew 31 percent while Canadian and European revenues declined 18 percent. **Jubilant Life Sciences**' **HollisterStier** and **Draxis Pharma** operations in the US and Canada grew 4 percent last quarter, but that underperformed Jubilant's Indian research and manufacturing operations, which posted 11 percent growth.

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Helping to increase the attractiveness of India is the significant depreciation of the rupee vs. the U.S. dollar. The greenback has appreciated more than 20 percent vs. the rupee during the last 24 months — meaning that goods and services from India are significantly cheaper than they were just two years ago. The Chinese yuan, meanwhile, has appreciated 10 percent vs. the U.S. dollar during that same time period.

Q3 (ending September)	Contract Services		Total	
	Revenue (\$M)	Growth (%)	Revenue (\$M)	Growth (%)
Jubilant Life Sciences	\$114	10%	\$191	-1%
Dr. Reddy's	\$110	11%	\$377	14%
WuXi PharmaTech	\$70	4%	\$70	4%
Piramal Healthcare	\$55	-2%	\$205	12%
Dishman Chemical	\$33	-9%	\$45	-14%
Celltrion	\$32	-7%	\$32	-7%
Hikal	\$18	29%	\$25	12%
Biocon	\$15	37%	\$121	29%
Torrent Pharma	\$10	32%	\$95	16%
Suven Life Sciences	\$7	-13%	\$7	-15%
Vimta Labs	\$5	-1%	\$5	-1%
Bilcare			\$54	25%
Shasun Chemicals			\$39	-13%
Total	\$469	6%	\$1,266	9%

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PharmSource ADVANTAGE: Contractor Profile

API – Biomanufacturing

Angel Biotechnology Receives License Renewal

Angel Biotechnology (Northumberland, UK) announced that it signed three contracts to provide regenerative medicine development services to unnamed clients and entered a 30-month financing agreement with Trafalgar Capital Advisers to receive up to GBP 4 million (USD 6.5 million). The company plans to use the money to invest in staff and resources to support expected new business.

In addition, the company’s MHRA manufacturers’ licenses were renewed following the successful inspection of its facilities in Edinburgh.

Angel Biotechnology Holdings

Headquarters: Cramlington, Northumberland, U.K.

Services:

- **API—Biomanufacturing**
 - ◆ **Process Development**
 - ◆ **Cell Culture**
 - ◆ **Fermentation**

Below is a part of an actual profile from the **PharmSource ADVANTAGE** database of contract service providers. The database provides detailed information about contractor capabilities in dose and API manufacturing, packaging services, formulation and more. Qualified companies are listed in PharmSource’s contractor database **free of charge**, based on their relevance to our data sets. Along with each profile, you’ll find information about known clients, mergers/acquisitions/alliances, company financials and our comprehensive archive of proprietary articles.

The **PharmSource ADVANTAGE** database of contract service providers can be used to create a shortlist of contractor candidates, or for benchmarking. It can help you save weeks of searching, researching and due diligence.

Angel Biotechnology Holdings plc.

Financials Mergers/Acquisitions News & Analysis Known Clients

Corporate Profile:

Address: 44 Colbourne Crescent
 Cramlington, Northumberland N23 1 WB UK

Voice: 44-1670-591-922

Fax: 44-1670-591-921

Website: www.angelbio.com

E-mail: stuart.duncan@angelbio.com

Ownership: Public company

Stock Exchange: London Stock Exchange
 Symbol: ABH

Primary Business: Contract Services

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Briefing**Contract Business:**

Corporate Head: Stuart Duncan
Title: CEO
Contract revenues: \$0-24 million
Number of employees: 26-50
Business Head contact: Stuart Duncan
Voice: +44 (0)1670 591922
E-mail: stuart.duncan@angelbio.com

Gordon Sherriff
Voice: 44 (0) 1670 591 920
Fax: 44 (0) 1670 591 921
E-mail: gordon.sherriff@angelbio.com

European contact: Finn Willingham
Voice: 44 (0) 1670 591 926
E-mail: finn.willingham@angelbio.com

Trade shows: BIO

Contract Services:

API—Biomanufacturing
 Process Development
 Cell Culture
 Fermentation

Angel Biotechnology Holdings plc.

Edinburgh Site
Pentlands Science Park
Peniciuk, Scotland EH26 0PZ UK
Phone: +44 (0)131 4456077 Fax: +44 (0)131 4456071

Size: 780 sq. ft.

Specifications for "Cell Culture"**Comments**

Capabilities: Capabilities for stem cell manufacture

Biologics products

Diagnostic antigens: No
Monoclonal antibodies: Yes
Polyclonal antibodies: No
Recombinant proteins: Yes
Vaccines - recombinant: No
Viral vaccines and vectors: No

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Project acceptance criteria

Special Materials

BL 1 organisms: Yes
 BL 2 organisms: Yes
 BL 3 organisms: No
 Spore-forming agents: Yes
 Viruses: Yes

Cell lines

CHO: Yes
 NS0: Yes
 PER.C6 (Crucell): Yes

Bioreactor technologies

Production scale

500 L and smaller GMP: Yes
 Pre-clinical materials (Non-GMP): Yes

Batch/Fed-batch

Batch/fed batch: Yes
 Bioreactor size (number): 25 L (1)

Perfusion

Bioreactor size (number): 25 L (1)
 Perfusion: Yes

Other bioreactor technologies

Hollow fiber: No

Single use bioreactors

Single use bioreactors: Yes
 Single use bioreactors types/sizes/number: 10L or 100L

Other cell culture technologies

Roller bottle: No
 Spinner flask: No
 Transgenic animal: No
 Transgenic plant: No

Downstream recovery and purification

Cell homogenization: Yes
 Centrifugation-batch: Yes
 Centrifugation-continuous: Yes
 Chromatography: Yes
 Cold rooms: Yes
 Membrane separations - microfiltration: Yes
 Membrane separations - ultrafiltration: Yes
 Precipitation/crystallization: Yes
 Solvent extraction: Yes

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Briefing

Related services

Analytical methods development:	Yes
Biosafety testing:	No
Cell banking:	Yes
Formulation development:	Yes
Molecular biology:	Yes
Process development:	Yes
Stability testing and storage:	No

Regulatory approvals and certifications

UK - MHRA:	Yes
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PharmSource ADVANTAGE TEST-DRIVE

We invite you to take a **complimentary test-drive** of PharmSource ADVANTAGE online service, the bio/pharma industry's most insightful sourcing intelligence resource. Unique, user-friendly tools provide side-by-side company comparisons, key contact information and due diligence directly from your desktop.

To schedule your **free test-drive**, please call Michael Kaufman at **703-383-4903** ext. **104** (ET) or write to him at michael.kaufman@pharmsource.com.

For a limited time only, we are offering new subscribers a 15% discount when you subscribe within 10 days of your test-drive.

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