

 Search

- [EDIT CONNECT](#)
- [THIS ISSUE:](#)
- [DAILY NEWS:](#)
- [CONFERENCES AND EXHIBITIONS:](#)
- [SPECIAL REPORTS:](#)
- [INDUSTRY CALENDAR:](#)
- [E-NEWSLETTER SUBSCRIPTION:](#)

"Truly automated cell counting I trust."



**PRODUCT SPOTLIGHT:**

**Seahorse Bioscience**  
**Cellular Bioenergetics Webinars**  
[LEARN MORE](#)

**SPONSORS:**

Results aren't results unless they're reproducible

Over 2000 new products  
Click here to request a free catalog!

We've got you covered.



### Stepping out from behind the curtain

July 2010  
by David Hutton | [Email the author](#)

- EDIT CONNECT:**
- [Midwest BioResearch LLC](#)
  - [CreaGen Biosciences](#)
  - [ICON](#)
  - [Medpace](#)
  - [Emerald BioStructures](#)
  - [Emerald BioSystems](#)

SHARING OPTIONS:

[Facebook](#) | [Twitter](#) | [DIGG](#) | [LinkedIn](#) | [Delicious](#) | [Technorati](#)

An contract research organization (CRO) is generally defined as a service organization providing support to the pharmaceutical and biotechnology industries. That's just scratching the surface of what CROs are and what they do for the companies they serve. Like an onion, if you peel back the layers of these companies, you find they offer myriad services to meet the needs of a customer base that has complex needs.

CROs first began to dot the biotech landscape in the late 1970s. They quickly took on a growing role in research and development, expanding from drug discovery and preclinical work to clinical trials, manufacturing and even marketing. Cost containment due to the economic downturn and regulatory pressures within the pharma industry are now driving R&D outsourcing across the globe. As a result, the scope of the CRO industry is expanding, and the global market is predicted to hit \$35 billion by 2013, according to a report by [Business Insights](#).

In this story, the third and final installment of our multi-part series, we take a look at five different companies. While they aren't the five largest CROs, they offer a cross-section view of the CRO industry and examples of the diversity ongoing today among CROs, the services they offer and the companies that they serve.

#### Midwest BioResearch LLC

[Midwest BioResearch](#) is part of [WIL Research Co.](#), a privately held global CRO and provider of drug development and chemical and food safety services. According to Mike Schlosser, president and founder of the Skokie, Ill.-based CRO, the companies' expertise includes non-clinical toxicology, pharmacology, metabolism and both clinical and non-clinical, small- and large-molecule bioanalytical services. Non-clinical services include nonhuman primates, inhalation, developmental and reproductive toxicology and safety pharmacology.

Schlosser notes there are myriad services that can be outsourced to a CRO.

"Within the pharmaceutical industry, there is clinical trial work and preclinical or non-clinical activities; the latter can refer to drug screening activities, regulatory-driven studies for investigational new drug applications and drug and formulation manufacturing," he says. "In addition, many of the preclinical CROs with the right expertise and knowledge base also support the chemical and food industries."

One of the company's fastest growing areas is in the analysis of protein/enzyme therapeutic drugs quantified in biological matrices such as plasma, and in characterizing antibodies formed against these large molecules, Schlosser adds.

"It was an area we had decades of experience in working at Searle/Pharmacia, and when [Pfizer](#) bought Pharmacia and shut down the Chicago site in 2003, we started Midwest BioResearch, which was acquired by WIL Research last year," he says.

Schlosser notes that the industry is tending to see more consolidation of activities, with larger CROs strategically adding technologies to round out their service offerings to clients.

"Other continuing trends include U.S. CROs seeking partnerships in emerging markets such as China and India," he adds. "Certainly, pharmaceutical companies are becoming more sophisticated about establishing strategic partnerships with CROs as pharma companies continue to reduce the scope of their in-house activities."

#### CreaGen Biosciences Inc.

[CreaGen Biosciences](#), located in Woburn Mass., is a chemistry-based drug discovery service company that provides discovery research services to biotech and pharmaceutical companies.

"Our niche is high-speed medicinal chemistry that uses our proprietary Integrated Chemistry Operating System (ICOS)," notes Dr. Raj Rajur, CreaGen's chairman and CEO. "We serve the underserved space within the drug discovery outsourcing sector." Rajur notes that Boston has been a hub for many new venture-funded, start-up biotechnology companies. Many start-up biotechs have time-sensitive programs that need compounds for biological evaluation, he adds.

"These companies need a local partner who has the right type of expertise who can deliver compounds quickly for screening on a daily basis," he notes. "They also look for CROs who can provide integrated chemistry services along with design and lead optimization expertise so that they can focus on their core screening programs."

This type of collaborative service is typically not provided by many CROs. As a result, Rajur calls CreaGen a "collaborative" research organization, rather than a "contract" research organization.

"Unlike typical CROs, CreaGen functions as an internal drug discovery/medicinal chemistry arm to many virtual, start-up and established biotechnology companies that do not plan on building their internal chemistry department, are in the early stages of building their medicinal chemistry infrastructure or simply want to expand on what they can do internally," Rajur says.

Rajur notes that outsourcing has become an integral part of every biotech and pharmaceutical company.

"Many pharmaceutical companies, who once were very cautious about revealing their internal drug discovery programs, are now willing to outsource their crown jewel programs to CROs," he notes. "To be competitive in the current environment, outsourcing is a must for both pharmaceutical and biotech companies."

Rajur also sees a rapidly changing landscape in the CRO segment, thanks in large part to recent mergers and acquisitions, facility closings and selling or spinning off of non-core assets by pharmaceutical and biotechnology companies.

## **ICON**

**ICON** bills itself as a global provider of outsourced development services to the pharmaceutical, biotechnology and medical device industries.

"We specialize in the strategic development, management and analysis of programs that support clinical development—from compound selection to Phase I-IV clinical studies," notes company spokesperson Emily Brand. "Typically, our clients outsource a variety of services to us, including central laboratory capabilities, bioanalytical testing, medical imaging and clinical research operations."

ICON was formed in Dublin, Ireland, in 1990 by Drs. John Climaz and Ronan Lambe with a small team of 5 people. Today, it employs more than 7,300 people across 71 offices in 39 countries. In 1992, ICON opened its first U.S. office in Philadelphia, and branched into Asia in 1996, when it opened an office in Tokyo. In 1998, the company began trading on the NASDAQ exchange. In recent years, the company has fueled its growth strategy through key acquisitions, including the 2003 acquisition of Globomax, a consulting firm. It acquired European staffing group DOCS International in 2007 and medical imaging specialist Beacon Bioscience Inc. in 2009. Earlier this year, ICON acquired Timaq Medical Imaging Inc., a Swiss imaging specialist.

"We have grown mainly organically, but have bolstered our growth through a number of strategic acquisitions which have broadened our service portfolio and added scale to existing services," Brand says.

According to Brand, ICON is one of a small group of organizations with the capability, expertise and flexibility to provide development services on a stand-alone basis or as part of an integrated "full-service" solution.

"We can conduct clinical trials and development projects on either a local, regional or global basis," she says.

In recent years, clients across the pharmaceutical industry have increasingly sought to include the Asia-Pacific region in their drug development programs, drawn to the region by its lower cost base, highly skilled and motivated employee base and substantial pool of treatment-naive patients. With more than 800 employees in 14 Asia-Pacific countries and 13 years of successful operations in the region, ICON says it has the experience and expertise to meet client demand across the region.

## **Medpace**

**Medpace** is a global, full-service clinical research organization providing Phase I-IV core development services for drug, biologic and medical device programs. The company can trace its beginnings back to 1992, when Dr. August Troendle—now Medpace's president and CEO—worked on lipid development at the University of Cincinnati. Medpace, then Medical Research Services, a lab and CRO, was launched.

Five hundred of Medpace's 900 employees are in its Cincinnati headquarters. The remaining staff are scattered throughout Medpace's 14 international offices. Additionally, about 60 percent of Medpace's trial volume takes place overseas. Its largest overseas offices are in Belgium and the Netherlands, its European headquarters. The company opened new offices in Russia and Poland this year in addition to the new central labs in Beijing and Mumbai.

Medpace has enjoyed solid organic growth. In 2009, the company acquired Pharma Brains AG, Medical Consulting Dr. Schlichtiger GmbH, and Symbios (Medpace Medical Device). These acquisitions complement existing Medpace services in oncology and Europe's drug development markets.

According to Mary Kuramoto, associate marketing director at Medpace, Symbios, a medical device CRO, allowed Medpace to expand into the medical device space. Kuramoto says Medpace owes its success to becoming "preferred partner of choice by both sponsors and investigators."

"The value a sponsor places on a preferred provider is rooted in trust, relying on the provider to deliver therapeutic consultation for a project at the highest level of quality," she notes.

As a result, Kuramoto notes that Medpace's reputation is built upon stable and long-term relationships with major sponsors, having consistently delivered successful new drug applications.

Looking forward, Kuramoto points out that current trends in the CRO environment include the creation of strategic partnerships between sponsors and service providers on a therapeutic basis and the integration of strategic consulting and operations.

"This can be a most efficient way to go by providing sponsors with therapeutically focused medical directors providing regulatory consultation as well as regulatory operations support," she says. "In addition, we see sponsors considering a full-service model to preserve this clear accountability and avoid inefficient hand-off between groups."

#### **Emerald BioStructures**

Based in Bainbridge Island, Wash., [Emerald BioStructures](#) has a 12-year history of innovative, structure-based drug design and has helped its clients with multiple successful development projects for new drug molecules.

According to Lance Stewart, Emerald BioStructure's CEO, the company was founded in 1998 as a provider of both structural biology services and developer of novel products and reagents. In 2001, the company was acquired by Medichem Life Sciences, and in 2002, the entire company was acquired by deCODE genetics. At this time, the products division assumed the name Emerald BioSystems, and the services business became deCODE biostructures. In 2009, a group of investors purchased both sister companies, and the services business became Emerald BioStructures, while the products business remained [Emerald BioSystems](#).

"During our 12-year history, we have grown from two to over 50 employees, focusing on all aspects of structural biology," Stewart says. "Our organization provides customized structure-based drug discovery solutions to pharmaceutical companies, biotechnology companies, academic institutions and government facilities."

Stewart says the company's niche in structural biology was chosen because structural elucidation has a tremendous impact on the path to successful drug discovery.

"We provide high-value insight into interactions of targets with therapeutics, both small molecule and protein therapeutics," he says.

This insight reduces the risk of drug discovery by providing an exact understanding of the molecular interaction, which accelerates the lead-to-candidate process."

Stewart says there has been an increase in the demand for structural insights into both mechanism of action for small-molecule therapeutics as well as for understanding how biologics engage their targets.

"With this increase in demand, there has been an increase in the number of providers; however, we have remained focused on collaborating with our partners and providing high quality structures," he notes, adding an increasing number of drug developers are incorporating structure guided methods into their drug discovery process.

Code: E071030

[Back](#)



#### **PAGE UTILITIES**



[PRINT CURRENT PAGE](#)



[SEND THIS PAGE TO A COLLEAGUE](#)

#### **CONTACT US**

Drug Discovery News  
Published by Old River Publications LLC  
19035 Old Detroit Road  
Rocky River, OH USA 44116  
Ph: 440-331-6600 | Fax: 440-331-7563