



Trio of Companies in Strategic Outsourcing Partnerships with Lilly

Eli Lilly's recent agreement to sell an R&D facility to Covance is the largest and most comprehensive outsourcing deal in the CRO industry. Somewhat lost in the hoopla around the mega-Lilly-Covance deal, was that Lilly also cut similar agreements at the same time with Quintiles and i3 Statprobe.

These agreements are indicative of major changes in the sponsor-CRO relationship as the pharmaceutical industry remains under pressure to cut drug development time and costs.

Eli Lilly and Company's recent agreement to sell a major R&D facility to Covance, along with its decision to hand over clinical monitoring and data management duties to Quintiles and i3 Statprobe, respectively, indicates a growing trend toward major drug companies scrutinizing their R&D operations and developing new models that could help cut time and cost in getting new drugs to market.

While the \$1.6 billion Lilly-Covance deal, which was announced in August, received a great deal of attention as the largest and most comprehensive in the contract research

CRO-Sponsor Strategic Alliances

CRO	Sponsor	Announced	Services
(Accenture)	Wyeth	2000	Clinical data management
Quintiles	Solvay	2001	Clinical development
RPS	Wyeth	2005	Monitoring in North America and Latin America, others
ChemBridge Research Laboratories	AstraZeneca	2006	Discovery chemistry
PPD	PDL BioPharma	2006	Biomarker discovery
i3	Eli Lilly	2008	Data Management
Quintiles	Eli Lilly	2008	Monitoring in U.S. and Puerto Rico

Source: Company websites.

organization (CRO) industry, the agreements with Quintiles and i3 Statprobe also represent significant changes in Lilly's drug development model and indicate a shift in how major pharmaceutical companies will work with CROs in the future.

Industry analysts consider the three Lilly deals significant because, in the past, these types of full-capacity, strategic-partner agreements would have been expected only from smaller biotech companies, which often lack the infrastructure to conduct the activities themselves. But in these three recent deals, a major pharmaceutical company, which could have maintained its internal infrastructure, made a strategic decision to outsource significant portions of its drug development work,

including preclinical safety work, clinical monitoring and data management, to outside partners.

Lilly's strategic alliances with Covance, Quintiles and i3 Statprobe are seen as an indicator of evolving relationships between major pharmaceutical companies and CROs. "In the context of drug development, that relationship is moving beyond the provision of discrete services and toward real strategic partnerships," said Douglas Peddicord, Ph.D., executive director of Association of

Clinical Research Organizations (ACRO). "We've been seeing indications of this kind of move for a number of years now, but this is a landmark announcement of a major pharma really looking to use CROs as strategic partners in a very different way from the usual purchase of services."

Many analysts believe Lilly's agreements with Covance, Quintiles and i3 Statprobe represent a shift in how drugs will be developed in the future and expect more deals of this magnitude to be announced in the coming months.

Monitoring Transferred to Quintiles

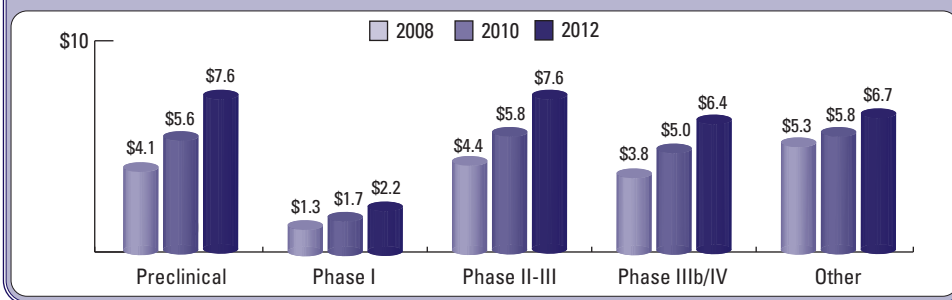
In recent years, the pharmaceutical industry



www.i3statprobe.com

Projected Spending on Development, by Phase

U.S.\$ in billions



Source: Goldman Sachs, 2008.

has experienced tremendous pressure to cut drug development time and costs while improving drug safety. “For several years, experts have suggested that the traditional R&D model cannot survive,” said John R. Vogel, Ph.D., a drug development consultant. “The cost of maintaining a full range of discovery and development capabilities in-house is huge. That investment is impractical when the pipeline cannot guarantee full utilization of these resources. The burden becomes impossible when you add in the cost of building and maintaining all the new technologies that offer the promise of separating the winners from the losers at an early stage.”

Recognizing the need for change, many leading pharmaceutical companies have begun revamping their R&D structure and using new outsourcing models that can reduce cost and time from the development process. The first big outsourcing deal came in 2003 when Wyeth handed over its clinical data management activities to Accenture, a deal that was followed two years later by Wyeth reaching a strategic sourcing deal with RPS to provide field monitoring staff. A turning point in the industry was previously reached in 2001 when Quintiles teamed up with Solvay Pharmaceuticals for joint development and risk-sharing in bringing new compounds to market; that agreement has been renewed through 2011. “There have been many smaller deals as well such as pharma outsourcing EDC [electronic data capture] and ePRO [electronic patent reported outcomes] to a handful of specialty providers rather than building and maintaining them in house,” Vogel said.

The Lilly-Covance deal, and Lilly’s decision to outsource monitoring and data handling to Quintiles and i3 Statprobe, are the latest developments in a trend toward large pharmaceutical companies redefining their core competencies, focusing internal resources on those areas, and then outsource-

ing the other activities to providers who can do it faster, more efficiently and cheaper. “Shifting resources internally does two things,” said Jeff Kasher, vice president and chief operating officer of Lilly’s Clinical Development Organization. “The activities that are going to Covance, i3 and Quintiles are absolutely essential for the success of our company. First and foremost, we need to partner with organizations that excel at what they do. The second thing that does is allow us to focus our internal resources on activities that we feel are really core and strategic to the future success of the enterprise.”

For Lilly, outsourcing figures heavily into the company’s strategy to lower development costs and deliver new drugs to market more quickly. During the past few years, the company has been outsourcing jobs and services for research and manufacturing around the world as it gradually lowers its headcount. According to Kasher, Lilly’s latest outsourcing agreements should be viewed in the context of the company’s overall mission. “Eli Lilly & Company is all about discovering and developing innovative medicines and getting those medicines to patients,” he said. “The charge of our clinical development organization is simple: We need to reliably deliver that portfolio of molecules with quality, on-time and on-budget. In order to be successful, we need to increase our flexibility because we have a growing and diverse portfolio of innovative molecules. We’ve also got ever-increasing pressures to reduce the cost of drug development and the cycle-time of drug development. As a company, we need to make changes that are going to be sustainable through what we’ve referred to as the YZ peri-

od, the period beginning in 2011 when several of our key patents will begin to expire.”

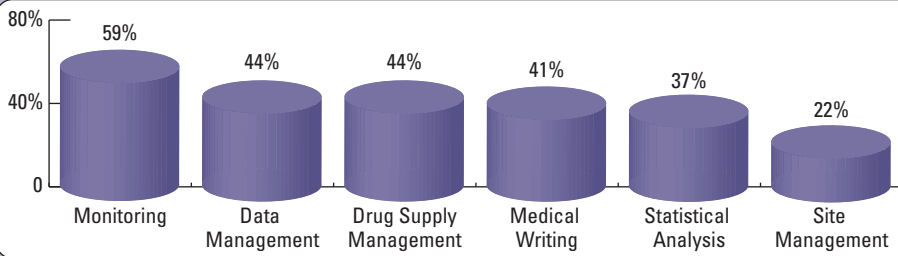
To help realize its vision, Lilly signed a multi-year strategic partnership with Quintiles that transfers all of Lilly’s in-house monitoring for clinical trials in the United States and Puerto Rico to the global CRO. The agreement has been set up as an outcomes-based contract at the portfolio level. “All of the studies are going to be conducted under ICH-GCPs, with Lilly and Quintiles partnering to ensure that patients are treated ethically and within protocol requirements,” Kasher said. “We have an expectation for quality and speed of data collection from sites. And we have an expectation that Quintiles will ensure that sites are inspection-ready. By Quintiles picking up that work through this partnership, it really lets Lilly focus our resources on cultivating and maintaining relationships with these clinical research investigative sites, identifying the absolutely best clinical research sites for new trials, and then working to ensure that these clinical research sites meet their enrollment goals.”

The strategic partnership differs from a traditional staff augmentation model or tactical outsourcing agreement in many ways, beginning with the joint planning carried out between the two organizations. “There has been very extensive analysis of the roles that each company will play along with an assessment of infrastructure needs,” said Nick Dyer, vice president of Strategic Outsourcing for Quintiles.

In addition, Lilly and Quintiles evaluated the use of systems to decide which will be

Top CRO Services

% of total respondents



Source: CenterWatch Vendor & Outsourcing Survey, 2005, n=27.

leveraged from the Quintiles organization and which systems will continue to be leveraged within Lilly. “Clearly the goal there is to minimize the amount of redundancy between the two organizations,” said Quintiles’ Dyer. “We have used the word ‘integrated’ quite extensively when describing this relationship. I think it’s a good word to use because the two organizations are trying to develop this model so that it is seamless—so that both companies are really bringing different elements of clinical development expertise to the table. But those elements are not redundant and there is a certain synergy between the two organizations.”

In the past, Lilly monitored its clinical trial sites either with its own field-based employees or individuals from several third parties. Now, when Lilly does an in-house sourcing of a study, Quintiles exclusively will conduct the monitoring in the United States and Puerto Rico. If Lilly chooses a full-service outsourcing approach for a study, the CRO selected for the full-service contract will conduct the monitoring. “With this integrated partnership with Quintiles, we’re confident that we are going to get greater efficiency and speed by integrating systems and processes with one high quality strategic partner, which is really difficult when we are working with multiple external service providers,” said Lilly’s Kasher.

As part of this new model, Lilly has established a new role within its organization called the Clinical Development Liaison in the United States and Puerto Rico. These individuals will be accountable for site selection, site enrollment and the relationship management.

“We are hoping that this new partnership

will result in simplicity and greater stability in terms of the interface between Lilly and our clinical investigators,” said Lilly’s Kasher.

While study management elements will remain with Lilly, Quintiles will provide both managers and staff for the clinical trial monitoring duties. In addition, Quintiles will provide resource planning and capacity management through a separate function in its organizational design, which was developed specifically to interface with the groups inside of Lilly that plan future studies. “We want to make sure new studies are factored into the portfolio view so that we can effectively resource plan for growth or reductions in staffing to make sure we are aligning the level of resource with the anticipated volume of work,” said Quintiles’ Dyer.

Data Management Transferred to i3 Statprobe

In another multi-year strategic partnership, Lilly has turned over the majority of its U.S. data management work to i3 Statprobe. Lilly declined to disclose specific financial terms of either the i3 or Quintiles agreements.

As a result of the deal, i3 recently opened a new 21,000-square-foot office in Indianapolis to accommodate the expansion required for the new agreement, and expects to hire 150 staff members, including some individuals from Lilly whose jobs were cut as a result of

the recent changes. As part of the agreement with Lilly, i3 will assume duties in the United States for traditional elements of data management, including clinical trial system build and coordination, data set creation and coordination, data flow, data review, and data validation and coordination. In addition, i3 will take on duties for relationship management with other vendors who support the completion of these deliverables. “This is huge for us in terms of reducing our fixed costs. It increases our flexibility and consistency of our work product and it will minimize the oversight in management of third-party resources for us,” said Lilly’s Kasher.

Lilly also is evaluating how it wants to structure data management for the rest of the globe and is considering i3 as a potential partner.

Lilly is transferring the majority of its data management activities in the United States to i3, yet the pharma company will maintain an internal Data Science and Solutions Organization that will focus on strategies, improvements in process, evolving standards and technology. “We won’t have redundancy of activities,” said Lilly’s Kasher. “By transferring the traditional elements of data management to i3, it results in Lilly being able to focus our internal expertise on data strategy to support our pipeline of innovative medicines, as well as improvements in process, improvements in standards, and seeking out new technology.”

While i3 Statprobe has performed data management work for Lilly in the past, the strategic partnership marks a shift from tra-

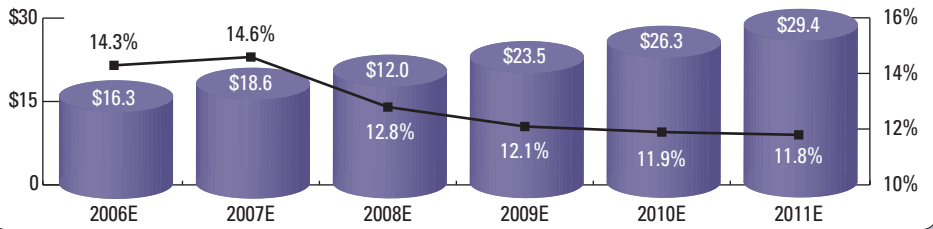
Covance Strategic Alliances

Sponsor	Date Announced	Services	Approximate Deal Value	Duration of Deal
Not disclosed	March 2004	early development services	\$45M	2004-2009
Not disclosed	June 2006	toxicology	\$187M+	2007-2013
Eli Lilly	August 2008	drug development services	\$1.6B	10 years

Source: Company websites.

Worldwide CRO Market Size and Growth Rate

U.S.\$ in billions and % growth YTY



Source: Goldman Sachs, 2007.

ditional CRO outsourcing to a functional alliance model. “The model highlights the strategies and benefits to both organizations for things like continuous improvement and quality in delivery,” said Alex Kordonsky, executive vice president and chief operating officer of i3. “It adds a greater flexibility to more variable cost controlled-type service model. Most importantly, it establishes an extension and integration of standardized processes, developing seamless kind of boundaries for the organizations.”

Three for One

A critical aspect of Lilly’s agreements with Quintiles and i3 Statprobe involves how the three organizations will work together. During the conduct of a clinical trial, data management results must be communicated back to the monitoring group both as a check on the monitor’s behavior and to allow monitors to correct case report form errors and accelerate database lock. As part of the new agreements, Lilly will facilitate communication between the two companies. “The data managers and clinical trial monitors will work directly in the future, but they will be working for i3 and Quintiles, respectively,” said Lilly’s Kasher. “Lilly is going to be in a role of facilitating the interaction on a tactical level. We’ll make sure that study teams are well-informed of the relevant contact information for both internal and external resources. And then on a strategic level, we’ll

ensure that issues are escalated and resolved through in-house resources as well as governance processes we have in place with both companies.”

According to Vogel, who works as a consultant for both pharmaceutical companies and CROs, these relationship design and relationship management issues will be key to the success of these deals and other strategic partnerships in the future. “The new job at Lilly is to make it work, not to shadow these companies or duplicate their activities,” he said. “One of the things Lilly, Quintiles, and i3 need to do is to sit down at a team level, design how the relationship is going to work, and clarify who is going to be responsible for doing something, who is accountable for the end results of it and who is involved and needs to be informed, but isn’t necessarily accountable for it. The accountability is going to shift away from Lilly. That’s a big challenge for the operational people at Lilly, or any sponsor, who are used to feeling accountable.”

Lilly-Covance

Lilly took perhaps the biggest leap in outsourcing in August with the sale of its 450-acre early drug development campus in Greenfield, Ind., which carries out preclinical

toxicology and other early-stage drug discovery work, to Covance for \$50 million. The global CRO also was awarded a 10-year contract worth a minimum of \$1.6 billion for a broad range of drug development services.

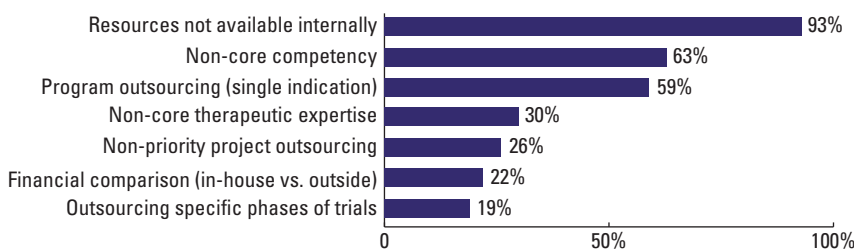
By selling the R&D facility, which was operating at only about half its capacity, Lilly will be able to reduce the fixed cost of running the laboratory and the agreement will give the pharmaceutical company access to Covance’s broader and more efficient drug development platform. “This asset transfer represents an innovative, strategic solution to the R&D productivity challenges of our pharmaceutical client and it carves a new path of growth for Covance and the CRO industry,” said Joe Herring, Covance’s chairman and CEO.

In addition, the deal allows Covance, already a leader in the clinical laboratory business, to enter new preclinical specialty market segments, including *in vivo* pharmacology, non-GLP (Good Laboratory Practice) toxicology and non-clinical imaging, which are not currently in the CRO’s portfolio. Under terms of the agreement, Covance plans to staff the facility, in part, by offering jobs to 260 Lilly employees. “This asset transfer opportunity accelerates our plans to enter these new specialty market segments but in a more capital-efficient manner with an anchor client, talented scientific and operational staff, and committed volume,” Herring said. “We plan to equip the Greenfield site to service the entire pharmaceutical and biotechnology industry including restoring GLP toxicology on the site.”

The Lilly-Covance deal is one of the first large-scale examples of this type of facility sale in early-stage drug development. “What was particularly interesting about the Lilly-

Sponsors’ Reasons for Outsourcing Trial Efforts

% or respondents



Source: CenterWatch Vendor & Outsourcing Survey, 2005, n=27.

Select CRO Preferred Provider Agreements

Special Article Reprint

CRO	Sponsor	Announced	Services
Kendle	Pfizer	2003	Data management
KForce	Pfizer	2003	Clinical research monitoring
Quintiles	Roche	2005	Clinical study management services
PPD	Merck	2005	Protein biomarker analysis

Source: Company websites.

Covance transaction was that Covance acquired a piece of the former Lilly infrastructure. That is the best example of an intertwined strategic relationship. It's clear that this is not just a one-off kind of transaction, but really a change in the relationship," said ACRO's Peddicord.

Looking Ahead

Lilly's decision to move beyond traditional CRO outsourcing, along with the growing amount of drug development work contracted to CROs each year, lays the groundwork for other companies to revamp their own outsourcing strategies. At the same time, some of the earlier joint ventures and alliances, including Wyeth's pioneering partnerships with Accenture and RPS and the agreement between Quintiles and Solvay, have shown impressive results. All three of these ventures have led to faster, more efficient drug development, and industry figures

estimate these types of agreements historically have generated savings of 10% to 30%.

While analysts expect more asset transfer deals and strategic partnerships to be announced, industry watchers will scrutinize the results of Lilly's decision to transform its R&D model.

"The success or failure of divesting and outsourcing non-core activities depends on whether pharma can make the cultural shift from managing subordinates to leveraging partners," said Vogel, a drug development consultant. "The point that Michael Useem [professor at the Wharton School, University of Pennsylvania] makes in his work on leadership skills, and which I've been trying to apply to the pharmaceutical industry, is that managers have to move away from evaluating their people in terms of how well they do the work to evaluating them in terms of how well they work with outside providers. That's a whole new skill set. That's really what is central to the

success of the Wyeth deals and what is going to be central to Lilly really getting what they hope to get out of Covance, Quintiles and i3. Can Lilly make that cultural shift from having people who pride themselves in performing at a high level of excellence to motivating people to work with an outside provider and get the provider to achieve a high level of excellence? It's not that easy."

At Wyeth Pharmaceuticals, where the company has adopted a long-standing practice of assessing what processes fit within their core competencies and which do not, and then using insourcing, outsourcing, alliances and various deals to make clinical development more efficient and productive, spokesman Michael Lampe said the lesson learned from these various agreements is simple: "In a real partnership, both partners must share in the risk and rewards and work as a collaborative team. We place a high value on these behaviors and the result is a partnership that is flexible and in which the organizations work together as one team."

—Karyn Korieth

Select CROs

Company	Headquarters	Founded	Employees	2007 Revenue (US\$M)	Countries operating in:
Icon	Dublin, Ireland	1990	5,600	\$631	36
Parexel	Waltham, MA	1983	7,300+	\$742	52
Charles River Labs	Wilmington, MA	1947	8,800	\$1,231	15
PPD	Wilmington, NC	1985	10,400	\$1,414	31
Covance	Princeton, NJ	1987	8,900	\$1,632	20+
Quintiles	Research Triangle Park, NC	1982	21,000	*	50+
PRA	Raleigh, NC	1981	3,300	*	17

*Privately held, no revenue info. available

Source: Company websites.