

Delancey Street Partners is pleased to present our Outsourced Pharmaceutical Services Sector Review for July 2017. Outsourced pharmaceutical services companies, such as contract research organizations (“CROs”), provide support to the pharmaceutical and biotechnology industries through outsourced research and development and other services that span early stage drug discovery through commercialization and product launch. As they have evolved and matured, biopharmaceutical and other healthcare product manufacturers have increasingly leveraged external vendor relationships to perform non-core operations. CROs and other outsourced pharmaceutical service providers have benefited from this trend, capturing a growing share of the functions that large biopharmaceutical companies now seek to outsource.



This sector review highlights the convergence of CROs and marketing and publication agencies focusing on healthcare products, as the former increasingly target the buildout of late-stage commercialization capabilities through M&A.

Executive Summary

In order to be commercially successful in an outcomes-based healthcare framework, biopharmaceutical products increasingly need to demonstrate efficacy and value to a broader group of stakeholders. As a result, pharmaceutical and biotechnology marketing has shifted away from a physician-centric model heavily reliant on large sales forces to a multi-faceted approach targeting payors and patients as well, to maximize adoption and reimbursement.

In an effort to become strategic partners to their customers, CROs are focused on extending their service offerings into commercialization functions that help products successfully enter the market. In doing so, CROs are acquiring communications, consulting, and other commercialization companies and building capabilities that have traditionally been provided by healthcare marketing and publication agencies.

About Delancey Street Partners

Delancey Street Partners is an independent, industry-focused investment bank. We serve CEOs, Entrepreneurs, Shareholders and Boards of Directors of high growth and middle market private and public companies. Our services include strategic advisory, capital raising and independent board advice. We advise on sell-side and buy-side M&A, growth capital financings and recapitalizations. Our focus sectors include Business Services & Technology, Healthcare, Industrial & Industrial Technology, and Infrastructure.

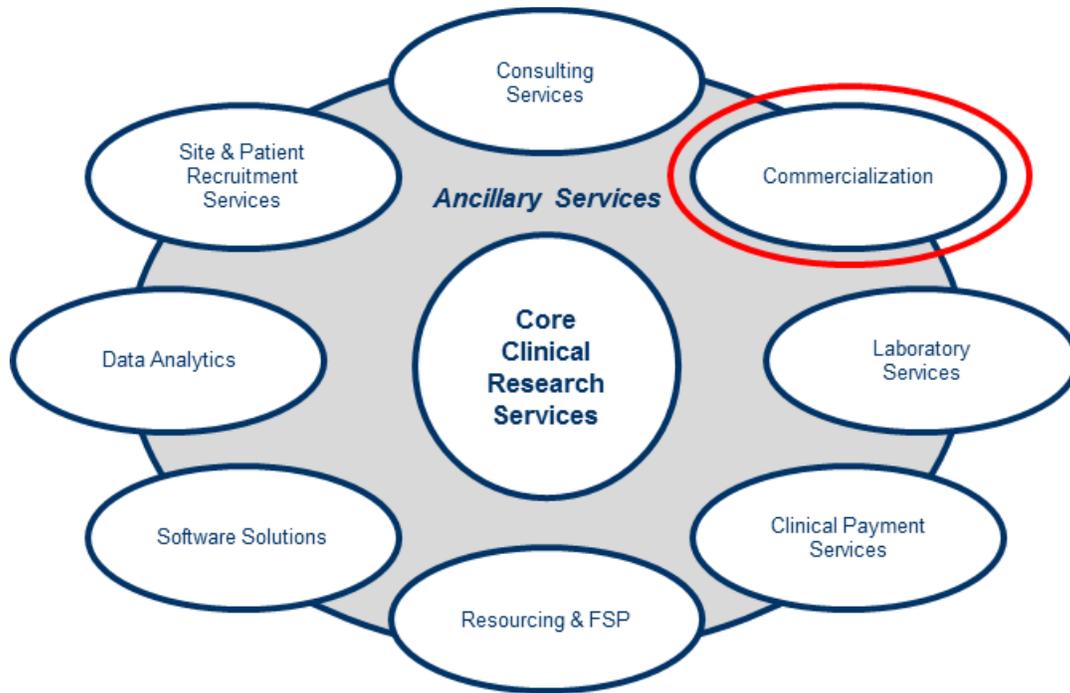
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Expanded Universe of Outsourcing Opportunities for Biopharmaceuticals



Commercialization Services

Commercialization services offer clients with a comprehensive solution for bringing their product to market. Commercialization services span the full product-development life cycle and include:

Communications

- Marketing, branding, and advertising
- Medical education
- Public relations
- Key opinion leader (“KOL”) engagement

Medication Adherence

- Care team coordination
- Patient engagement
- Prescription availability
- Risk management

Advisory Services

- Market access
- Market research and analytics
- Product strategy, launch, and transition
- Licensing strategy

Selling Solutions

- Outsourced sales teams
- Managed markets support
- Sales support
- Sales team building and training

Spotlight Trend: The Blurring Lines Between Healthcare Agencies and CROs

We see a continuing trend of CROs expanding their models to include a variety of services beyond traditional clinical trial outsourcing, particularly in commercialization services. According to KPMG, biopharmaceutical sales and marketing spend is estimated to be as much as double R&D spend and is only ~16% outsourced compared with ~50% for traditional clinical outsourcing. As a result, the contract commercialization service market is growing ~8% compared with ~3% for the traditional CRO market. In addition, by filling in capability gaps, larger CROs are able to offer solutions throughout the product development lifecycle to their clients, capturing additional share of wallet and cementing their positions in strategic partnerships.

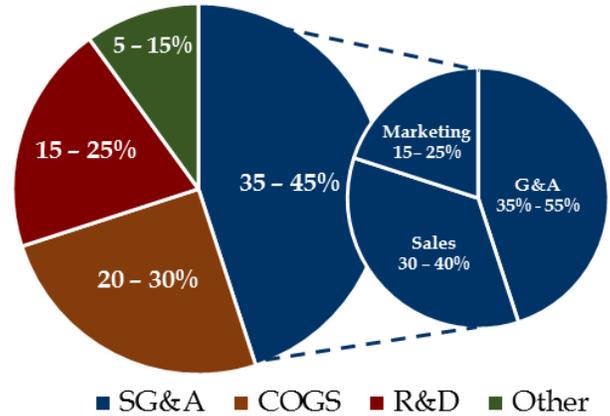
Similar to CROs, large advertising and communications agencies have also used acquisitions to gain share in attractive markets, add differentiated capabilities, and augment growth in a mature and competitive market. Healthcare, especially biopharmaceutical products, is an increasing area of focus as commercialization strategies grow in importance to product success. Agencies have acknowledged that commercialization and marketing strategies are becoming a consideration earlier in the product lifecycle, thus requiring increasing levels of subject matter expertise within their organizations.

M&A Implications

As shown in the chart to the right, we have seen a high level of acquisition activity by both CROs and agencies targeting medical communications, market access, and consulting businesses. As a result, valuation multiples have trended upwards. In addition to strategic activity, private equity firms have recently invested in commercialization-focused outsourced pharmaceutical services platforms with acquisition-focused growth strategies.

Significant Biopharmaceutical Sales and Marketing Spend

Total BioPharmaceutical spend estimated at more than \$650bn in 2014



Source: KPMG

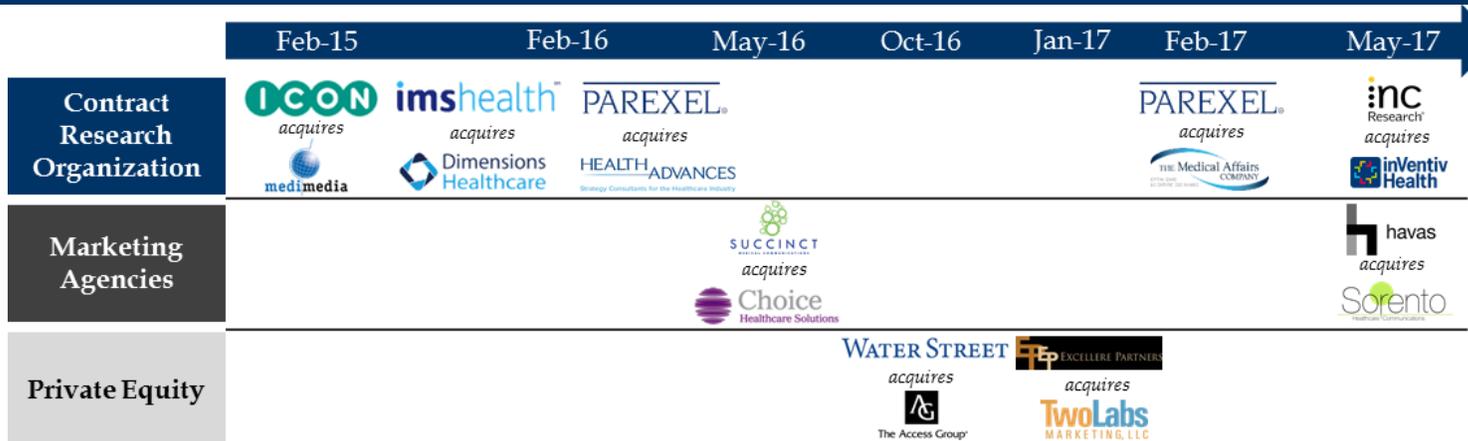
Outsourced Commercialization Market Overview

(\$ in billions)



Source: INC Research investor presentation

Recent M&A Activity



Source: CapitalIQ and Delancey Street Partners

INC Research Case Study: Adding Commercialization Capabilities Through inVentiv Health Acquisition

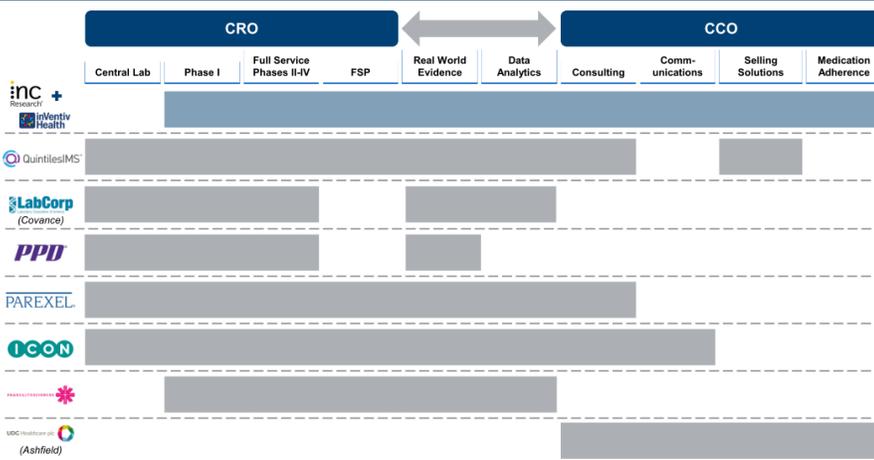
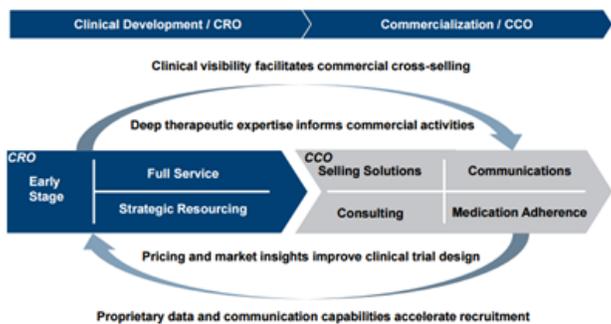
On May 10, INC Research (“INCR”) announced the all-stock acquisition of inVentiv Health (“inVentiv”) for \$4.6 billion, continuing a trend of CROs using M&A to build late stage product development and commercialization capabilities

A primary thesis of the acquisition was to create an end-to-end solution by integrating inVentiv’s contract commercial capabilities, which serve a faster growing market with more outsourcing whitespace



Building an End-to-End Solution

A Leading Provider of Outsourced Biopharma Solutions...

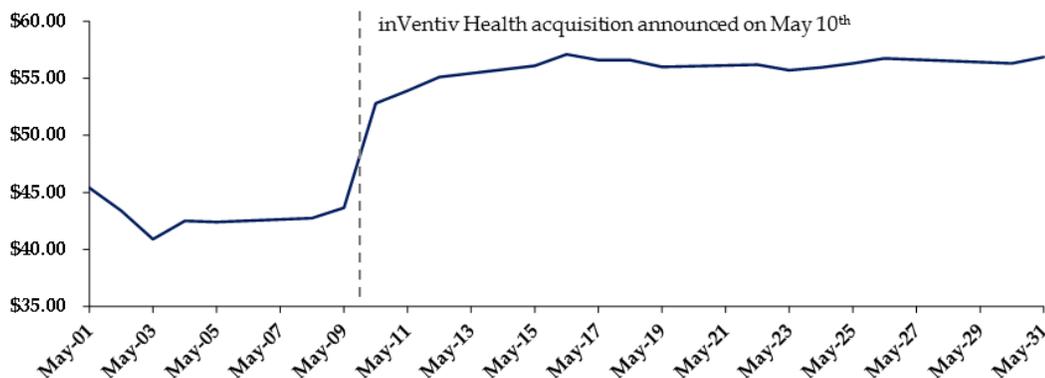


Shortening the distance from lab to life™

Source: May 10, 2017 INC Research investor presentation announcing inVentiv acquisition

Market Reaction to inVentiv Health Acquisition

- Market reaction to the transaction has been very positive, with INCR stock up 30% since announcement of the acquisition
 - All stock transaction with 53% pro forma ownership for existing INCR shareholders
 - Transaction is expected to generate annual synergies of ~100 million
 - The transaction values inVentiv at 12.2x⁽¹⁾ LTM EBITDA
 - INCR’s investor presentation references 2017 and 2018 EV/EBITDA multiples of ~11x and ~10x, respectively⁽²⁾



(1) \$4.6 billion enterprise value and LTM adjusted EBITDA of \$376.2 million per INCR investor presentation
 (2) INCR investor presentation, includes the present value of inVentiv NOLs
 Source: Public filings, equity research, and CapitalIQ

Omnicom Health Group Case Study: Continued Expansion into Biopharmaceuticals

Since the early 1990s, the Omnicom Group has continued to expand its presence in healthcare. Pharmaceutical and healthcare marketing and commercialization services are an area of focus and account for approximately 12% of the Omnicom Group’s total revenue.

Healthcare Communications Platform: Omnicom Group

Omnicom Group reorganized its portfolio of individual healthcare brands by clients’ customer segments in 2016. The reorganization allows for greater alignment and a focus on healthcare expertise among the Omnicom Health Group agencies. The four focus segments include:

- Professional: general agencies targeting healthcare professionals
- Patient: digital patient and relationship communications and marketing
- Payer: institutional customers focusing on access and reimbursement communication
- Medical, Evidence, and Regulatory: scientific communications, research, and medical education

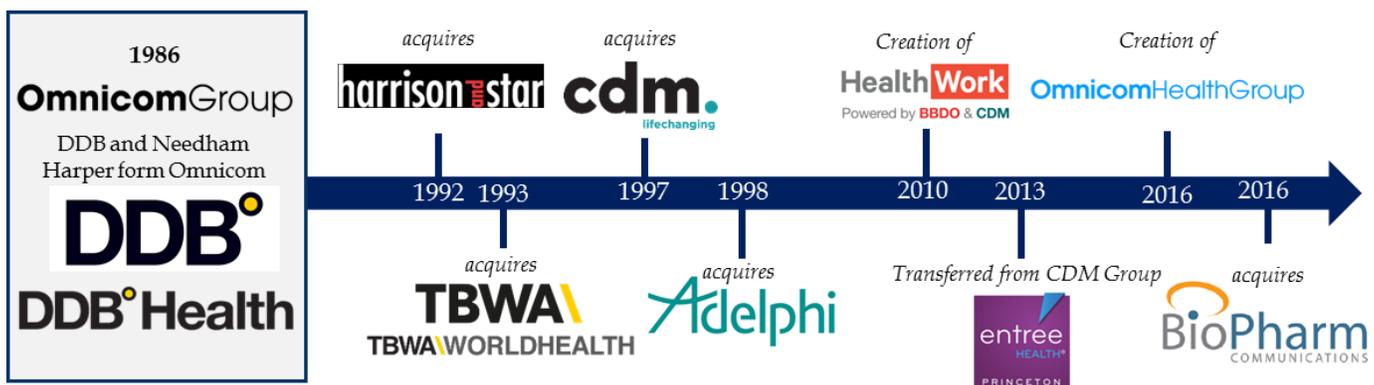


The Omnicom Group is a global marketing and corporate communications company. Omnicom’s branded networks and specialty firms provide advertising, strategic media planning and buying, digital and interactive marketing, direct and promotional marketing, public relations, and other specialty communications to over 5,000 clients in more than 100 countries.



Omnicom Health Group is a global collective of communications companies with more than 3,200 dedicated healthcare communications specialists. It provides marketing services to the health and life-science industries through a combination of specialized agencies, customized client solutions, and collaborations with other Omnicom network agencies. Omnicom Health Group serves more than 100 clients in over 55 offices worldwide. Omnicom Health Group is part of the DAS Group of Companies, a division of Omnicom Group.

Omnicom Health Group Platform History



Source: CapitalIQ and Delancey Street Partners

Financial Sponsors Have also Been Active in Biopharmaceutical Commercialization

A number of healthcare focused middle market private equity groups have recently made outsourced pharma services investments focused on commercialization, which they are building through add-on acquisitions

TwoLabs Marketing (Excellere Partners)



- Two Labs Marketing provides solutions for pharmaceutical manufacturers’ most prevalent and complex commercialization challenges
- Two Labs designs and implements commercial strategies that are customized to each product’s therapeutic class, distribution channel and patient access needs
- Two Labs was founded in 2003 and is headquartered in Powell, Ohio

- Transaction:** Excellere Partners acquired Two Labs in January 2017
- Acquisition Strategy:** Excellere Partners is actively seeking add-on acquisitions with the following capabilities:
 - Managed markets strategy and implementation
 - Healthcare data aggregation and analytics
 - Trade management
 - Patient support services
 - Regulatory pathway and compliance consulting
 - Government affairs / health economics and outcomes
 - Medical science liaison outsourced agents

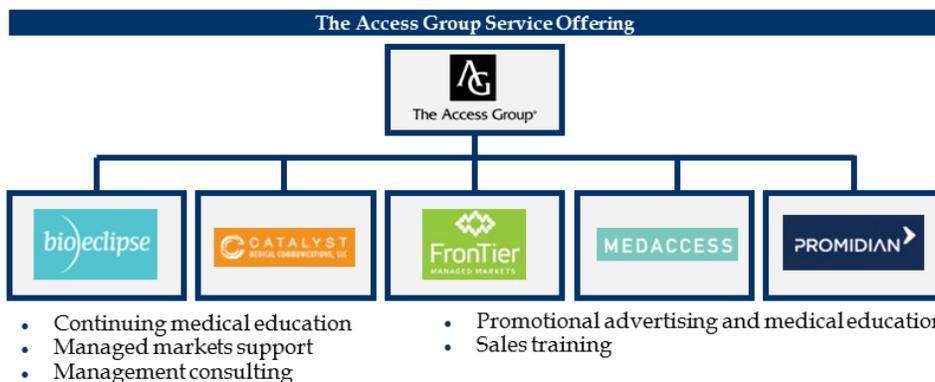


The Access Group (Water Street)



The Access Group®

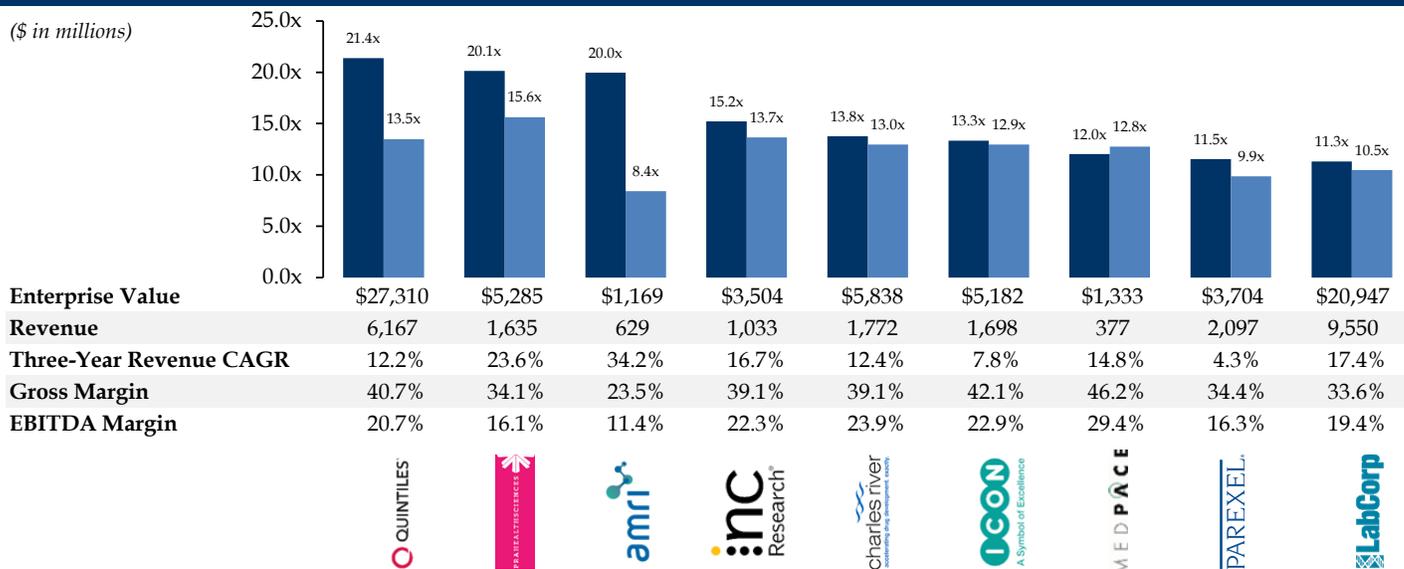
- The Access Group (“TAG”) creates and executes strategies to support the world’s leading biopharmaceutical corporations with maximizing their products’ access to managed markets and patients
- TAG serves more than 90 of the world’s leading pharmaceutical companies on products spanning 75 therapeutic areas from early-stage development through patent expiration
- TAG was founded in 1998 and is headquartered in Berkeley Heights, NJ
- Transaction:** Water Street invested in The Access Group in October 2016
- Acquisition Strategy:** Water Street is seeking to bolster TAG’s suite of services into a broader commercialization services offering



WATER STREET

Current Trading Performance of Select CROs

Sorted by Enterprise Value / LTM EBITDA



Note: TEV/EBITDA multiples for AMRI and PRXL from prior to transaction rumors utilized
Source: CapitalIQ

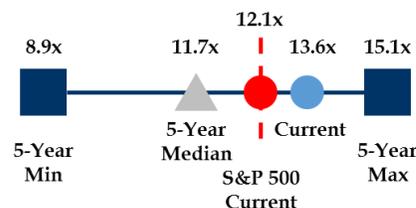
Year-to-Date Sector Trading Performance vs. S&P 500



Note: AMRI and PRXL excluded from calculation due to announced transactions
Source: CapitalIQ

- Strong year-to-date S&P 500 performance has been outpaced by the CRO sector
- June announcements of Albany Molecular Research and PAREXEL transactions have increased prices across the entire sector
- Implied enterprise value / LTM EBITDA multiples of 22.1x and 14.6x for acquisitions of Albany Molecular Research and PAREXEL, respectively

5-Year Enterprise Value / EBITDA Trend



Note: CRO index weighted by market capitalization. Medpace and Quintiles excluded from index due to recent IPOs. TEV/EBITDA multiples for AMRI and PRXL from prior to transaction rumors utilized
Source: CapitalIQ

Recent M&A and Strategic Commentary from Select Companies



"We have been using our capital to service our debt, while we've got our leverage ratio to where we feel more comfortable, under 3. We're under 3 now. There's opportunity to do more meaningful M&A. We've got a nice list of targets that covers the whole gamut of Charles River. It's not as if it's all in manufacturing or all in safety assessment." (David Ross Smith, CFO, May 16, 2017)



"We are very much still engaged on our 'string of pearls' type acquisition policy. I think it is incumbent upon us to look at what's going on in the marketplace as well and making sure that we're not left out of step with the marketplace. So I think it's an interesting time for the industry. I think we will continue to do what we do, which is focus on the knitting and keep on putting on those bolt-ons. It's certainly a time when we have to kind of step back and say, 'Well, hang on, is there some good reason for this? Or is it just a bit of a wave of what's popular at the moment?'" (Brendan Brennan, CFO, May 24, 2017)



"Within our combined clinical customer base, we see an opportunity to bring inVentiv's FSP and hybrid model to many of INC's top 50 customers. We will leverage our combined therapeutic breadth and depth to establish larger and deeper relationships across all customer sizes. In our past, INC has seen opportunities lost to a lesser competitor solely due to the competitor's ability to offer additional services. This transaction will allow us to counter that. We see multiple ways that inVentiv's commercial offering and relationships will enhance our success rate and derive revenue synergies within our clinical operations." (Gregory Rush, CFO, May 10, 2017)



"The biggest need for us in the late-stage clinical business is a stronger presence in the Asia Pacific market. We're undersized in Asia Pacific and that limits our ability to sell and conduct global clinical trials. That would be the biggest thing that we would look at in a potential late-stage acquisition." (David King, President and CEO, May 16, 2017)



"We have unveiled our new strategy, and as part of this new strategy, we are ramping up our M&A activity. When I say ramping up our M&A activity, we are very, very selective in terms of what we are looking for. We're selective about strategic fit, and we're selective about financial performance in the acquisitions that we make." (Josef von Rickenbach, Chairman and CEO, March 14, 2017)

"We have great respect for the global leadership that Josef and the talented employees at PAREXEL have built. We are excited to partner with a company and a team that have a strong track record in helping to successfully navigate the complexities innate to the biopharmaceutical industry and bring new therapies to market." (Jeremy Gelber, Partner, Pamplona Capital Management, June 20, 2017)



"(On Predictivv technology platform) We continue to move forward throughout the year looking to gain efficiencies. We're adding little tuck-in acquisitions that will help accelerate some of the aspects. We're hoping to complete something pretty soon. It's small but it gives us a technology that we didn't have." (Colin Shannon, President and CEO, April 26, 2017)



"We've done acquisitions, and we've repurchased \$1.3 billion of our stock in Q4 2016 and Q1 2017. In Q2 2017, we participated in a successful secondary offering by some of our sponsors, and we repurchased another \$300 million as part of that transaction. So we've been very active with our balance sheet and utilizing that to buy back stock. We think it's a good investment. We'll continue to do that along with our tuck-in acquisition strategy." (Michael McDonnell, CFO, June 14, 2017)

Recent Outsourced Pharmaceutical Services M&A Activity

Date	Target	Acquiror	Target Business Description
06/28/17	* NextPharma Technologies Holding Ltd	CapVest Partners	Contract development and manufacturing organization
06/20/17	* PAREXEL International Corporation	Pamplona Capital Management LLP	Global biopharmaceutical services company
06/20/17	Harrison Research Laboratories, Inc.	SGSSA	Clinical research organization for the cosmetic and personal care industry
06/06/17	* Albany Molecular Research, Inc.	GTCR, The Carlyle Group	Global contract research and manufacturing company
06/06/17	Symbiotic Research, LLC	Tentamus Group GmbH	Contract research organization specializing in crop protection and animal health
05/24/17	* Sorento Healthcare Communications Pvt Ltd	Havas SA	Healthcare advertising and communications services
05/10/17	* inVentiv Health Inc.	INC Research Holdings, Inc.	Outsourced pharmaceutical services
05/09/17	ProPhase, LLC.	WIRB-Copernicus Group, Inc.	Clinical trials services and specialty solutions
05/09/17	MedAvante, Inc.	WIRB-Copernicus Group, Inc.	Technology-enabled signal detection solutions in clinical trials
05/09/17	ImageIQ, Inc	eResearchTechnology, Inc.	Contract research organization and imaging software developer
05/02/17	ThreeWire, Inc.	WIRB-Copernicus Group, Inc.	Customized clinical trial recruitment, enrollment, and retention services
04/26/17	* Pharmaceutical Product Development, LLC	Hellman & Friedman, The Carlyle Group	Global contract research organization
04/05/17	J-STAR Research, Inc.	Porton USA, L.L.C.	Contract research organization for pharmaceutical and biotechnology companies
04/03/17	Recerca Clínica S.L.	IUCT Emprèn, S.L.	Contract research organization based in Spain
03/28/17	Bracket Global LLC	Genstar Capital, LLC	Clinical services and technology solutions for the pharmaceutical industry
03/21/17	Oy Medfiles Ltd.	WDB Holdings Co., Ltd.	Contract research organization based in Finland
03/09/17	Translational Cell Science LLC	BioreclamationIVT	Contract research organization specializing in preclinical services
03/01/17	PharmOptima, LLC	Genesis Biotechnology Group, LLC	Contract research organization providing consulting and laboratory services
02/28/17	* SNBL Clinical Pharmacology Center, Inc.	Pharmaron, Inc.	Drug discovery and clinical trial services
02/15/17	* Takeda Pharmaceutical Data Service, Ltd.	PRA Health Sciences, Inc.	Data services provider to clinical research organizations
02/09/17	Pharm-Olam International, Ltd.	Quad-C Management, Inc.	Global, full-service contract research organization
02/06/17	Seaview Research, Inc.	Quotient Clinical Ltd.	Clinical research organization providing clinical pharmacology testing and laboratory services
02/01/17	* The Medical Affairs Company LLC	PAREXEL International Corporation	Contract medical organization providing medical and scientific affairs solutions
01/19/17	HD Biosciences Co., Ltd.	WuXi PharmaTech	Preclinical contract research organization
01/10/17	Xceleron	Pharmaron, Inc.	Clinical research services for pharmaceutical and biotechnology companies
01/10/17	TwoLabs Marketing, LLC	Excellere Partners	Consulting services for drug development and commercialization process
11/21/16	* TKL Research, Inc., (Clinical Trials Division)	Novella Clinical, Inc.	Provides clinical trial services
11/17/16	CLINapps Inc.	Bracket	Software development & consulting services to pharmaceutical and biotechnology industries
11/10/16	inVentiv Health Clinical, Inc.	Advent International Corporation	Contract drug development services for biopharmaceutical and medical device companies
10/24/16	The Access Group	Water Street Healthcare Partners	Healthcare communications and consulting services
10/20/16	BioClinica, Inc.	Cinven	Integrated clinical research technology solutions for the biopharmaceutical industry
10/03/16	ExecuPharm Inc.	PAREXEL International Corporation	Functional service provider services for the biopharmaceutical industry
09/28/16	Agilux Laboratories, Inc.	Charles River Laboratories International, Inc.	Metabolism and pharmacokinetic services for the pharmaceutical industry
09/19/16	ClinicalRM, Inc.	ICON Public Limited Company	Research, regulatory and sponsor services for the biopharmaceutical industry
09/01/16	EVIDERA	Pharmaceutical Product Development, LLC	Health information and research services for life sciences organizations
08/04/16	IMS Health Holdings, Inc. (NYSE:IMS)	Quintiles Transnational Holdings Inc.	Information and technology services to healthcare industry worldwide
08/03/16	InClinica, Inc.	Velocity Fund Management	Clinical research outsourcing services for the pharmaceutical industry
07/25/16	Compass Research, LLC	BioClinica, Inc.	Clinical research and trial services for the biopharmaceutical industry
06/27/16	Blue Stream Laboratories, Inc.	Charles River Laboratories International, Inc.	Contract analytical, formulations and development-support laboratory services
06/09/16	BioPharm Communications, LLC	Omnicom Health Group Inc.	Medical communications company that develops and distributes medical related information
05/31/16	Medelis, Inc.	WCCT Global, LLC	Oncology contract research services for the biopharmaceutical industry
05/25/16	Privacy Analytics Inc.	IMS Health Holdings, Inc.	Data anonymization software solutions for healthcare and related industries
05/17/16	Choice Healthcare Solutions Limited	Succinct Communications Limited	Medical communications for the pharmaceutical industry
05/03/16	eResearchTechnology, Inc.	Nordic Capital	Technology-driven services for the biopharmaceutical industry and medical devices
04/04/16	WIL Research Company, Inc.	Charles River Laboratories International, Inc.	Global contract research organization for the biopharmaceutical industry
03/18/16	Nextrials, Inc.	PRA Health Sciences, Inc.	Trial management electronic data capture software for the biopharmaceutical industry
03/01/16	Research Across America Inc.	Synexus Limited	Clinical research trial services for the pharmaceutical industry
02/10/16	Health Advances, LLC	PAREXEL International Corporation	Strategy consulting services for the healthcare industry
02/08/16	CRO Analytics, LLC	Ben Franklin Technology Partners	Clinical research performance data collection, reporting and consulting services
02/04/16	Dimensions Healthcare, LLC	IMS Health Holdings, Inc.	Healthcare informatics and consulting services
01/31/16	AlphaImpactRx, Inc.	IMS Health Holdings, Inc.	Research-based insights, analytics and solutions to biopharmaceutical and other industries
01/19/16	Clinverse, Inc.	BioClinica, Inc.	Cloud-based clinical payments system for the pharmaceutical industry

(*) Date transaction announced
Source: CapitalIQ

Information on Delancey Street Partners

Recent DSP M&A Transaction Experience

 <p>a portfolio company of h2CAPITAL has been acquired by  BRANFORD CASTLE PARTNERS Advisor to Seller</p>	 <p>has been acquired by PAREXEL Advisor to Seller</p>	 <p>has been acquired by  METTLER TOLEDO Advisor to Seller</p>	 <p>has completed a majority recapitalization and growth equity financing with PEAKEQUITY PARTNERS Advisor to Seller</p>	<p>Project Spider</p>  <p>Advisor to Seller</p>	 <p>has been acquired by INTUITIS Long-Term Investors Advisor to Seller</p>
 <p>has been acquired by KIELY Advisor to Seller</p>	 <p>has been acquired by MEDNAX NATIONAL MEDICAL GROUP Advisor to Seller</p>	 <p>has divested certain assets of   to ENERGY DISTRIBUTION PARTNERS Advisor to Seller</p>	 <p>has divested RELIABILITY TEST PRODUCTS to CascadeMicrotech Advisor to Seller Fairness Opinion</p>	 <p>has divested GEO Care in a Management Buyout Advisor to Independent Committee Fairness Opinion</p>	

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