



Team

Gregg Blake
Managing Partner
gblake@brocair.com
917.374.4533

Daniel Fagan, Ph.D.
Managing Director
dfagan@brocair.com
314.954.6554

Brocair Partners, founded in 2004, is a financial advisor to businesses serving the healthcare, wellness, and pharmaceutical industries. We provide mergers & acquisitions, corporate finance, and strategic advisory services to companies worldwide.

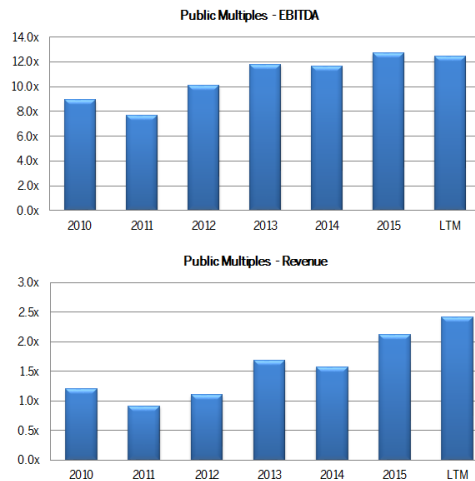
Brocair Partners LLC
Healthcare Investment Banking
1001 Ave. of the Americas
New York, NY 10018
Main: 212.500.5015
Fax: 917.591.3200

CRO Market Analysis

Middle-market CROs continue to consolidate in order to expand their menu of service offerings

Industry Multiples and Index

Over the past two years, valuations have remained consistently strong in the CRO industry. Since mid-2011 our CRO Index has risen 200% compared to a 79% increase in the S&P 500. Public company multiples have been tracking at 2.4x revenue and 12.5x EBITDA while recent transactions have been tracking at 2.2x and 11.0x, respectively.



Source: Capital IQ

Recent Trends

The CRO industry is expected to grow to \$45.2 billion by 2020 at a compound annual growth rate of 6%.¹ This growth is being driven both by an increase in venture capital investment in small biotech drug discovery firms and greater focus on research and development by larger pharmaceutical companies.

The largest volume of M&A activity in the CRO space has occurred in the middle market as smaller firms look for opportunities to expand their service offerings both locally and internationally. Consolidation has also

been a way for firms to address high customer concentration. Through acquisition, companies are able to obtain new customers and offer a new breadth of services. The CRO market has recently become a major target for private equity, such as the acquisition of eResearchTechnology by Nordic Capital in March 2016 for nearly \$1.8 billion. Recently there have been announcements by Advent, which is buying inVentiv Health for \$3.8 billion, and Cinven, which is acquiring BioClinica for \$1.4 billion.

Although smaller firms have dominated M&A activity, larger strategic players have also made significant acquisitions to gain market share and expand their clinical technology applications. The \$13.6 billion acquisition of IMS Health Holdings by Quintiles, a provider of biopharmaceutical development and outsourcing, creates the largest global CRO and will enhance Quintiles' offerings through IMS Health's global information solutions for clients.

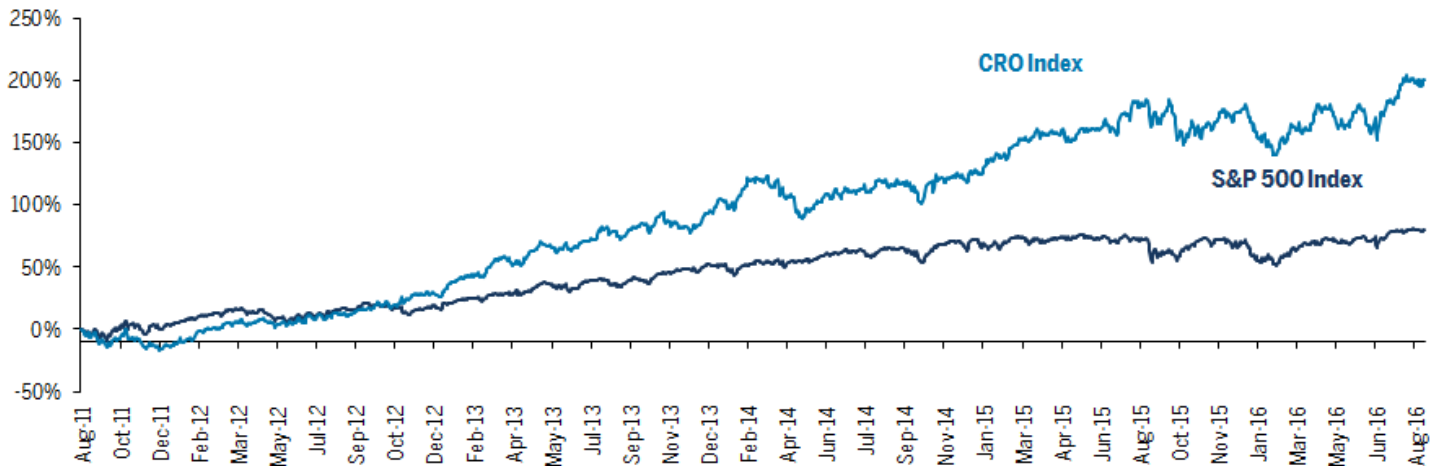
Over the past two years, Charles River Laboratories has completed five acquisitions to strengthen its service offerings and expand its geographical presence both in the United States and internationally. Through its acquisition of Oncotest in November 2015, it was able to reach new markets in Germany expand its reach in preclinical pharmacological services. In June 2016, the acquisition of Blue Stream Laboratories expanded its offerings in the contract analytical, formulations, and development-support laboratory services segments.

Pharmaceutical Product Development has also been active over the last two years with four acquisitions. Most notably, the \$257 million of Synexus Clinical Research Topco helps PPD expand its presence in the U.K.

¹ Outsourcing-pharma

CRO Index

Below is an index of CRO companies compared to the S&P 500 over the past five years.



*CRO index includes: Bioanalytical Systems Inc.; Charles River Laboratories International, Inc.; CMIC HOLDINGS Co., Ltd.; Cyprotex plc; Ergomed Plc; EPS Holdings, Inc.; Eurofins Scientific SE; ICON Public Limited Company; I'rom Group Co., Ltd.; PAREXEL International Corporation; and Quintiles Transnational Holdings Inc.

Source: Capital IQ

Comparable Company Analysis

Below is a snapshot of selected companies in the CRO market.

Company	Price	52-Week		EV*	Net Debt	Market Cap	EV/Sales			EV/EBITDA		
		High	Low				2014	2015	LTM	2014	2015	LTM
Bioanalytical Systems Inc.	\$ 132	\$ 195	\$ 0.90	\$ 15.5	\$ 4.9	\$ 10.5	1.0x	0.8x	0.7x	12.2x	17.8x	22.2x
Charles River Laboratories International, Inc.	\$ 88.41	\$ 88.56	\$ 59.99	\$ 4,867.3	\$ 685.6	\$ 4,148.4	2.8x	3.3x	3.5x	13.0x	14.5x	14.7x
CMIC HOLDINGS Co., Ltd.	\$ 15.30	\$ 17.29	\$ 12.34	\$ 400.3	\$ 110.0	\$ 286.2	0.8x	0.7x	0.7x	11.2x	8.2x	5.7x
Cyprotex plc	\$ 1.83	\$ 1.97	\$ 0.70	\$ 58.9	\$ 17.8	\$ 41.1	1.3x	2.1x	2.6x	31.7x	10.3x	12.4x
Ergomed Plc	\$ 1.58	\$ 2.47	\$ 1.54	\$ 57.1	\$ (5.8)	\$ 62.9	NA	NA	1.3x	NA	NA	12.5x
EPS Holdings, Inc.	\$ 14.25	\$ 15.77	\$ 10.12	\$ 537.8	\$ (106.6)	\$ 640.6	1.0x	0.9x	1.2x	8.4x	6.0x	8.2x
Eurofins Scientific SE	\$ 378.67	\$ 404.15	\$ 294.41	\$ 7,211.6	\$ 1,002.6	\$ 6,075.5	2.6x	2.9x	3.4x	14.5x	16.0x	18.8x
ICON Public Limited Company	\$ 77.04	\$ 84.14	\$ 62.31	\$ 4,404.9	\$ 97.4	\$ 4,307.5	1.9x	2.8x	2.7x	11.0x	13.2x	12.2x
I'rom Group Co., Ltd.	\$ 9.84	\$ 19.63	\$ 6.61	\$ 102.3	\$ (2.3)	\$ 104.5	6.4x	2.9x	2.8x	NA	NA	NA
PAREXEL International Corporation	\$ 67.37	\$ 76.17	\$ 56.00	\$ 3,893.3	\$ 357.7	\$ 3,535.6	1.6x	1.9x	1.9x	10.6x	12.2x	11.4x
Quintiles Transnational Holdings Inc.	\$ 78.76	\$ 78.84	\$ 55.01	\$ 10,899.9	\$ 1,471.4	\$ 9,198.9	2.1x	2.3x	2.4x	12.6x	13.1x	13.2x

*Enterprise Value (EV) = market capitalization + net debt + noncontrolling interest
All currency figures in USD. Price figures in actual dollars; EV, Net Debt, and Market Cap in millions
Market Cap and Enterprise Value as of 08/30/2016
Source: Capital IQ

	EV/Sales			EV/EBITDA		
	2014	2015	LTM	2014	2015	LTM
High	6.4x	3.3x	3.5x	31.7x	17.8x	22.2x
Mean	2.2x	2.1x	2.1x	13.9x	12.4x	13.1x
Median	1.7x	2.2x	2.4x	12.2x	13.1x	12.5x
Low	0.8x	0.7x	0.7x	8.4x	6.0x	5.7x

Comparable Transaction Analysis

Below is a selection of recent transactions in the CRO industry.

Close Date	Target	Acquirer	Description	Transaction Value (\$M)	Enterprise Value (\$M)	EV / Revenue	EV / EBITDA
8/22/2016 (Announced)	BioClinica, Inc.	Cinven Limited	Bioclinica, a U.S. based company that offers integrated clinical research technology solutions to pharmaceutical, biotechnology, medical device companies, and contract research organizations, was acquired by U.K.-based private equity firm, Cinven Limited as part of its investment strategy.	1,400.0	1,400.0	NA	14.0x
8/16/2016	Key Intellectual Property and Human Resource Assets, Bioanalytical Laboratory Services	BioPharma Services Inc.	Through the acquisition of key intellectual property and human resources assets with a list of validated assays from Bioanalytical Laboratory Services, an early stage CRO, BioPharma Services, a Canadian-based CRO, expands and fortifies its analytical services.	NA	NA	NA	NA
8/16/2016	Clinical Research Solutions, LLC	Brixey & Meyer Capital	Brixey & Meyer, a Southwest Ohio-based private equity group, acquired Clinical Research Solutions, a CRO that performs phase I to IV clinical trials for large and small pharmaceutical companies across the world, to take advantage of growing investment opportunities in the CRO space.	NA	NA	NA	NA
8/9/2016 (Announced)	EVIDERA	Pharmaceutical Product Development LLC	Through the acquisition of EVIDERA, a North Carolina-based CRO, Pharmaceutical Product Development, LLC further strengthens its peri- and post-approval capabilities. Pharmaceutical Product Development is a U.S.-based CRO providing pharmaceutical development and laboratory management.	NA	NA	NA	NA
8/3/2016	InClinica, Inc. (f/k/a Indipharm)	Velocity Fund Management	Inclinica, a Philadelphia-based CRO that assists small to mid-sized companies entering first in man and phase 2 clinical studies, was acquired by Velocity Fund Partners, a Pittsburgh private equity group, to leverage Velocity's expertise in the CRO space.	NA	NA	NA	NA
8/1/2016 (Announced)	inVentiv Health Inc.	Advent International Corporation	Advent International, a Boston-based private equity group, made a significant investment into inVentiv Health to take advantage of the potential growth in the clinical research organization and contract commercial organization markets.	NA	3,800.0	1.7x	11.1x
8/1/2016	Acorn Applications LLC	Clintrax Global, Inc.	Through the acquisition of Acorn Applications, a North Carolina-based developer of cloud-based analytic clinical research solutions, Clintrax Global can expand its analytic capabilities.	NA	NA	NA	NA
8/1/2016	Novex Clinical Research	BTC Network, LLC	BTC Network, a fully integrated network of clinical research sites in the U.S., acquired Novex Clinical Research, a Massachusetts-based multi-specialty research practice, to strengthen BTC Network's expertise to therapeutic areas, such as psychiatry, neurology, pain, and internal medicine.	NA	NA	NA	NA
8/1/2016	Stellar Technologies, Inc.	Cirtec Medical Systems, LLC	Stellar Technologies, a leading provider of precision machining, component manufacturing, and assembly services for medical devices based in Minnesota, has been acquired by Cirtec Medical Systems, a L.A.-based provider of outsourced medical device design, engineering and manufacturing services.	NA	NA	NA	NA
7/27/2016	ClinicalRM, Inc.	ICON Public Limited Company (NasdaqGS: ICLR)	ICON acquired Ohio-based ClinicalRM to strengthen its service offerings in Phase I to Phase IV clinical research, and product development.	NA	NA	NA	NA
7/25/2016	Compass Research, LLC	BioClinica, Inc.	Bioclinica, a Pennsylvania-based provider of specialized technology-enabled services supporting clinical trials, acquired Florida-based Compass Research to expand its global research network by adding investigational sites and expertise in the patient care space.	NA	NA	NA	NA
7/19/2016	BioDuro, LLC	The Bridgewest Group	The Bridgewest Group, a private equity firm based in California, acquired BioDuro, a San Diego-based research organization that provides drug discovery services, from Pharmaceutical Product Development.	NA	NA	NA	NA
7/14/2016	Accel Biotech, Inc.	Ximedica, LLC	Ximedica, a Rhode Island-based provider of product development services, acquired California-based Accel Biotech to enhance its current domestic biotech and medical device solutions portfolio in the diagnostics, disposables, medical products, and life sciences markets.	NA	NA	NA	NA
6/27/2016	Blue Stream Laboratories, Inc.	Charles River Laboratories (NYSE: CRL)	Charles River Laboratories acquired Massachusetts-based Blue Stream Laboratories to expand its capabilities in the contract analytical, formulations, and development-support laboratory services segments.	NA	NA	NA	NA
6/23/2016 (Announced)	Adesis, Inc.	Universal Display Corp. (NasdaqGS: OLED)	The acquisition of Delaware-based Adesis by Universal Display, a New Jersey-based developer and researcher of organic light emitting diode (OLED), strengthens Universal's organic synthesis research capabilities.	36.0	36.0	NA	NA
6/16/2016	THERAMetrics S.p.A	Accelovance, Inc.	Accelovance, a U.S.-based CRO focused on vaccines, oncology, and general medicine, acquired THERAMetrics Holding's three CRO subsidiaries to boost its presence Germany, Italy, and Romania, and integrate its service providers.	NA	NA	NA	NA
6/8/2016	Quinta-Analytica spol. s.r.o.	Genesis Capital Ltd.	Genesis Capital, a private equity firm, acquired Quinta-Analytica S.R.O., a Czech research, development, and regulatory services provider for the pharmaceutical and biotechnology industries.	NA	NA	NA	NA
6/5/2016	Bonne Santé Sp. z o.o.	JSS Medical Research Inc.	JSS Medical Research, a global CRO based in Canada, acquired Bonne Santé, a clinical research services provider for Phase II-IV studies in Poland, to extend its global reach and service portfolio.	NA	NA	NA	NA
6/4/2016	Synexus Clinical Research Topco Ltd	Pharmaceutical Product Development LLC	Pharmaceutical Product Development, a U.S.-based CRO providing pharmaceutical development and laboratory management, acquired Synexus Clinical Research Topco to expand its presence in the U.K. and bolster its feasibility, consultancy, project management, and medical imaging services.	257.8	257.8	3.7x	16.2x
5/31/2016	Medelis, Inc.	WCCT Global, LLC	Medelis, an oncology CRO based in Nevada, was acquired by California-based WCCT Global to expand its CRO capabilities in the oncological market and enhance its domestic operations.	NA	NA	NA	NA
5/25/2016	SyneractHCR	Amulet Capital Partners LP	Amulet Capital Partners, a U.S.-based private equity firm, acquired SyneractHCR, a California-based CRO specializing in project and data management, clinical operations, and other web-based solutions.	NA	NA	NA	NA
5/23/2016	Cirrus Pharmaceuticals, Inc.	Recipharm AB (publ) (OM:RECI B)	Recipharm, a Swedish pharmaceutical contract manufacturer, acquired Cirrus Pharmaceuticals, a U.S.-based CRO with a wide product and service portfolio including inhalation and nasal products, novel delivery systems, analytical services, and manufacturing support, to complement its current offering.	NA	NA	NA	NA

Comparable Transaction Analysis, continued

Close Date	Target	Acquirer	Description	Transaction Value (\$M)	Enterprise Value (\$M)	EV / Revenue	EV / EBITDA
5/20/2016	Xendo B.V	Sovereign Capital Partners LLP & Xendo Management	Xendo, a Dutch provider of consultancy and project management services in pharmaceuticals and life sciences, was acquired in a management buyout backed by Sovereign Capital Partners.	NA	NA	NA	NA
5/3/2016 (Announced)	IMS Health Holdings, Inc. (NYSE: IMS)	Quintiles Transnational Holdings Inc. (NYSE:Q)	Quintiles merged with IMS Health to offer their clients improved clinical trial design, recruitment and execution by combining IMS Health's global information solutions with Quintiles' product development skills. They also will improve their healthcare technology platform to address issues of cost, value and patient outcomes.	13,548.5	13,170.5	4.3x	17.7x
5/3/2016	Applied Immunology, Inc.	Precision Medicine Group, Inc.	Applied Immunology, a U.S. developer of cell-based and immunoassay solutions, was acquired by Maryland-based Precision Medical Group, to add to its infrastructure of pharmaceutical and life sciences companies.	NA	NA	NA	NA
5/3/2016	ACT Oncology LLC	Precision Medicine Group, Inc.	Maryland-based Precision Medicine Group, a specialist in vitro diagnostic and medical device studies, acquired ACT Oncology, a New Jersey-based drug development support service company, to enhance its service offering to current and potential clients.	NA	NA	NA	NA
5/2/2016	Spero Oncology Ltd.	Veristat, Inc.	Veristat, a U.S. provider of CRO services for pharmaceutical, biotechnology, and medical device companies, acquired Spero Oncology, a U.K.-based CRO focused on clinical operations support for oncology clinical trials, to strengthen its oncological support offering.	NA	NA	NA	NA
4/15/2016	Crelex GmbH	WuXi PharmaTech (Cayman) Inc.	WuXi PharmaTech, a Chinese biotechnology, pharmaceutical, and medical device research company, acquired Crelex, a German research firm focused on protein research, to geographically diversify and strengthen its specialized research capabilities.	NA	NA	NA	NA
4/11/2016	Nitin Lifesciences Limited	Recipharm AB (publ) (OM:RECI B)	Nitin Lifesciences Limited, an Indian pharmaceutical contract manufacturer, was acquired by Recipharm, a Swedish CRO and CDMO, in an effort to expand Recipharm's global reach into Southeast Asia.	103.2	139.5	2.9x	12.4x
4/4/2016	WIL Research Company, Inc.	Charles River Laboratories (NYSE: CRL)	Charles River Laboratories acquired US-based WIL Research, a specialty toxicology and pathology research company to enhance its position as a leading global early-stage contract research organization (CRO) and strengthen its ability to partner with global clients across the drug discovery and development continuum.	585.0	585.0	2.7x	12.9x
4/1/2016	Advantar Laboratories, Inc.	Eurofins Scientific SE (ENXTPA:ERF)	Luxembourg-based Eurofins Scientific SE, an analytical testing services provider, acquired Advantar Laboratories, a contract product development company, to expand its U.S. presence and enhance its current capabilities.	NA	NA	NA	NA
3/29/2016	PVR Technologies, Inc.	Alten SA (ENXTPA: ATE)	PVR Technologies, a U.S.-based technology company, was acquired by Alten, a French global engineering and technology consultant, to strengthen its capabilities in the SAS programming, biostatistics, and other technological solutions.	NA	NA	NA	NA
3/25/2016	Taizhou Jyton & Techray Pharmaceutical Technology Co.	Hangzhou Tigermed Consulting Co., Ltd. (SZSE:300347)	Hangzhou Tigermed, a CRO based in China, acquired Jyton & Techray, a CRO focused on medical devices, to expand its clinical study capabilities in China.	92.1	92.1	1.3x	NA
3/22/2016	Blue Sky Biotech, Inc.	LakePharma, Inc.	California-based CRO, LakePharma, a provider of protein and antibody engineering, acquired Massachusetts-based Blue Sky Biotech, a molecular biology, scale-up bioprocess, and protein expression provider to pharmaceutical companies, to expand its current service portfolio.	NA	NA	NA	NA
3/18/2016	Nextrials, Inc.	PRA Health Sciences, Inc. (NasdaqGS:PRAH)	PRA Health Sciences, a North Carolina-based CRO focused on outsourced clinical development services to pharmaceutical and biotechnology companies, acquired Nextrials, a California-based provider of internet software solutions for the clinical research industry, to expand its service portfolio.	7.7	7.7	NA	NA
3/9/2016	Clintrax Global, Inc.	WIRB - Copernicus Group, Inc.	Clintrax Global, a clinical trial contract investigator based in North Carolina, was acquired by New Jersey-based WIRB-Copernicus Group, a regulatory review service for human research, to expand its domestic service offering.	NA	NA	NA	NA
3/8/2016	eResearchTechnology, Inc. (ERT)	Nordic Capital	Through the acquisition of eResearchTechnology, a US-based leading provider of high-quality patient safety and efficacy endpoint data collection solutions for use in clinical drug development, Nordic Capital, a Nordic-based private equity group, has entered the CRO industry.	1,780.0	1,780.0	5.9	NA
3/1/2016	PreClinOmics, Inc.	Crown Bioscience, Inc. (GTSM:6554)	PreClinOmics, an Indianapolis-based CRO specializing in vivo drug discovery, was acquired by California-based Crown Bioscience, to enhance its current drug discovery and development services.	NA	NA	NA	NA
3/1/2016	Research Across America Inc.	Pharmaceutical Product Development, LLC	Pharmaceutical Product Development, a CRO providing pharmaceutical development and laboratory management, acquired Research Across America, a clinical research trial service company, to expand its U.S. service offering.	NA	NA	NA	NA
2/25/2016	Molecular NeuroImaging LLC	inviCRO, LLC	Molecular NeuroImaging, a Connecticut-based clinical research organization focused on brain imaging research, was acquired by inviCRO, a Massachusetts-based provider of software and services for medical imaging analysis, to expand its capabilities within the neuro imaging market.	NA	NA	NA	NA
2/22/2016	IPM Biotech GmbH	BioAgilytix Labs, LLC	BioAgilytix Labs, a U.S.-based bioanalytical CRO, acquired German-based IPM Biotech to build its presence in the German pharmaceutical CRO market.	NA	NA	NA	NA
2/10/2016	Triacys SAS	Telemedicine Technologies S.A.S.	Telemedicine Technologies, a French software engineering company, acquired Triacys in an effort to fortify its life sciences technology and services offering throughout France.	NA	NA	NA	NA
2/4/2016	Quotient Bioresearch Limited	Pharmaron, Inc.	Quotient Bioresearch, a British provider of specialist and early stage pharmaceutical services, was acquired by Pharmaron, a U.S.-based manufacturing and laboratory services company, to expand its operations in the European market.	NA	NA	NA	NA
2/1/2016	syneed medidata GmbH	Take Solutions Ltd. (BSE: 532890)	Take Solutions, an Indian provider of consultancy and IT services internationally, acquired syneed medidata, a German CRO, to enhance its service offering for phase II and phase IV clinical trials and observational studies.	NA	NA	NA	NA
1/25/2016	Q-Biologics NV	Amatsigroup	Q-Biologics, a Belgian manufacturer of biological substances, was acquired by Amatsigroup, a French CRO focused on human and veterinary pharmaceutical development services, to improve its biologics development capabilities.	NA	NA	NA	NA

Comparable Transaction Analysis, continued

Close Date	Target	Acquirer	Description	Transaction Value (\$M)	Enterprise Value (\$M)	EV / Revenue	EV / EBITDA
1/25/2016	QLife, Inc.	M3, Inc. (TSE:2413)	M3, a Japanese provider of medical-related services to healthcare professionals, acquired Tokyo-based QLife to strengthen its domestic medical support, media, and promotional services.	NA	NA	NA	NA
1/20/2016	MedQualis Inc.	Keyrus Société Anonyme (ENXTPA:KEY)	Keyrus, a French performance management and solutions integration services provider, acquired Canada-based MedQualis to strengthen its medical clinical research services.	NA	NA	NA	NA
1/19/2016	Clinverse, Inc.	BioClinica, Inc.	BioClinica, a Pennsylvania-based provider of clinical research technology solutions, acquired Clinverse to strengthen its cloud-based financial services for clinical payments in the U.S.	NA	NA	NA	NA
1/12/2016	Net Solutions Europe Limited	Phlexglobal Ltd.	British document management solutions provider, Phlexglobal, acquired Net Solutions Europe, a U.K.-based outsourced software development and cloud-based solutions provider, to broaden its current service offering in Europe.	NA	NA	NA	NA
12/31/2015	Columbus Center for Women's Health Research	Aventiv Research, Inc.	To enhance its ability to conduct Women's studies, Aventiv, an Ohio-based clinical trial and medical research service, acquired Columbus Center for Women's Health Research, a provider of clinical studies in Ohio.	NA	NA	NA	NA
12/31/2015	Manipal Acunova Limited	Take Solutions Ltd. (BSE:532890)	India-based Take Solutions acquired Manipal Acunova, an Indian CRO service for clinical testing/studies, pharma, biotech, and the medical device industry, from Orbimed Advisors, a private equity fund, and other investors, for its clinical trials services.	17.4	17.4	less than 1x	NA
12/28/2015	Sogo Rinsho Holdings Co., Ltd. (TSE:2399)	EPS Holdings, Inc. (TSE:4282)	Sogo Rinsho Holdings, a site management and CRO based in Japan, was acquired by EPS Holdings, a CRO, site management, and contract sales service provider for pharmaceutical and medical device companies also based in Japan, to bolster its product and service offerings.	82.8	72.2	1.5x	10.3x
12/17/2015	Clintara, LLC	Bracket Global, LLC	Pennsylvania-based Bracket Global's acquisition of Massachusetts-based Clintara positions itself to reap benefits from quality assurance technology, rater training, and electronic clinical outcomes assessments, and strengthens its medical research support service platform.	NA	NA	NA	NA
12/16/2015	Co-Formulate Ltd.	Pharmaron, Inc.	U.S.-based Pharmaron, a CRO focused on manufacturing and laboratory services, acquired Co-Formulate, a contract pharmaceutical product developer based in the U.K., to enhance its service capabilities and international presence.	NA	NA	NA	NA
12/15/2015	Whitehouse Analytical Laboratories	Albany Molecular Research, Inc. (NasdaqGS:AMRI)	Albany Molecular Research acquired New Jersey-based Whitehouse Analytical Laboratories, a provider of analytical laboratory solutions and various raw material testing services in the U.S., to expand its discovery and development services business segment.	57.0	56.0	5.6x	10.5x
12/15/2015	Bioptra Ltd	ReproCELL, Inc. (JASDAQ:4978)	ReproCELL, a Japanese biotechnology company focused on stem cell technology development, acquired Bioptra to add contract research services to its platform, and expand into the United Kingdom.	8.3	NA	NA	NA
12/11/2015	The Chemistry Research Solution LLC	Abzena Plc (AIM:ABAZA)	U.K.-based Abzena plc, a service and technologies provider for the development of biopharmaceutical products globally, acquired The Chemistry Research Solution, a U.S.-based CRO focused on chemistry services, to strengthen its specialty chemistry solutions offering.	13.8	NA	3.3x	NA
12/10/2015	WuXi PharmaTech (Cayman) Inc.	Ally Bridge Group, Boyu Capital, Ping An Insurance, Temasek Holdings, and Hillhouse Capital	WuXi PharmaTech, a Chinese biotechnology, pharmaceutical, and medical device research company, was acquired by a consortium of investors, and the management team, to take the company private.	3,431.1	3,092.9	4.4x	21.6x
12/10/2015	Fluofarma SA	Porsolt SAS	Porsolt, a French preclinical pharmacology service provider, acquired Fluofarma, also based in France, to strengthen its preclinical service offering in contract research.	NA	NA	NA	NA
12/4/2015	Farm Design, Inc.	Flextronics International Ltd. (NasdaqGS:FLEX)	Farm Design, a U.S. research and usability services firm, was acquired by Flextronics, a Singaporean engineering, manufacturing, and supply chain solutions provider, to expand its global reach, and diversify its service offering.	NA	NA	NA	NA
12/2/2015	Clinquest Europe BV	Accelovance, Inc.	Accelovance, a U.S.-based CRO focused on vaccines, oncology, and general medicine, acquired Netherlands-based Clinquest Europe to boost its European operational presence and enhance its clinical trial capabilities.	NA	NA	NA	NA
12/2/2015	Quotient Clinical Limited	GHO Capital Partners LLP	GHO Capital Partners, a healthcare focused private equity firm based in the U.K., acquired Quotient Clinical, a U.K.-based drug development services company, to take advantage of its wide service offerings including first-in-human to proof of concept, clinical formulation optimization, and human ADME.	NA	NA	NA	NA
11/18/2015	Oncotest GmbH	Charles River Laboratories International, Inc. (NYSE:CRL)	Charles River's acquisition of Oncotest, based in Germany, strengthens its presence in the CRO market, and more specifically, its reach in preclinical pharmacological services.	38.3	38.3	NA	11.0x
11/11/2015	Formex LLC	BioDuro LLC	BioDuro, a life sciences research firm based in California, acquired Formex, a California-based pharmaceutical contract manufacturer focused on oral and topical solutions, to expand its current specialty solutions service offering.	NA	NA	NA	NA
10/21/2015	Seoul Clinical Laboratories (Cytogenetic and Human Genome division)	Biocore Co., Ltd	Biocore, a South Korea-based CRO providing research services for medical device, biotechnology, and pharmaceutical companies, acquired the Cytogenetic and Human Genome Division of South Korea-based Seoul Clinical Laboratories to strengthen its reach in the molecular genetics market.	2.4	2.4	NA	NA
10/19/2015	Kinesis Pharma B.V.	Venn Life Sciences Holdings plc (AIM:VENN)	Venn Life Sciences Holdings, a U.K.-based CRO providing clinical trial services to medical device, pharmaceutical, and biotechnology companies, acquired Netherlands-based Kinesis Pharma to enhance its consultancy and contract research capabilities.	7.2	7.2	1.1x	10.7x
10/14/2015	Yes Pharmaceutical Development Services GmbH	PharmaLex GmbH	Pharmalex, a German drug development, regulatory and pharmacovigilance company, acquired German-based Yes Pharmaceutical Development Services, a drug development and pharma-covigilance service provider, from AUCTUS Capital Partners and other shareholders.	NA	NA	Na	NA
10/1/2015	SAFC Pharmorphix Ltd.	Johnson Matthey Plc (LSE:JMAT)	U.K.-based Johnson Matthey, a specialty chemical company, acquired U.K.-based SAFC Pharmorphix to strengthen its solid-form research service offering to pharmaceutical and biotechnology companies in the U.S and Europe.	NA	NA	NA	NA
9/22/2015	DreamCIS, Inc.	Hangzhou Tigermed Consulting Co., Ltd. (SZSE:300347)	DreamCIS, a South Korean CRO offering observational study and registry, pharmacovigilance, and clinical trials, was acquired by Hangzhou Tigermed, a Chinese CRO, to expand its reach in the northeast Asian market.	28.6	29.2	1.8x	NA

Comparable Transaction Analysis, continued

Close Date	Target	Acquirer	Description	Transaction Value (\$M)	Enterprise Value (\$M)	EV / Revenue	EV / EBITDA
9/21/2015	Synowledge LLC	Biolincina, Inc.	Biolincina, a provider of clinical research technology solutions based in Pennsylvania, acquired Florida-based Synowledge to expand its drug safety, IT, and regulatory affairs offering to biotechnology, pharmaceutical, and medical device capabilities.	NA	NA	NA	NA
9/12/2015	Medicross Corp.	Temp Holdings Co., Ltd. (TSE:2181)	Temp Holdings, a Japanese human resource and staffing services company that provides work-related solutions, acquired Tokyo-based Medicross to diversify into the clinical trials CRO space.	NA	NA	NA	NA
9/11/2015	Theorem Clinical Research Inc.	Chiltern International Ltd.	Chiltern International, a U.K.-based CRO focused on collaborative technological applications for pharmaceutical and biotechnology companies, acquired U.S.-based Theorem Clinical Research to add a number of analytic development, data applications, and combination trials to its platform.	NA	NA	NA	NA
9/8/2015	Particle Sciences, Inc.	Berkshire Hathaway Inc. (NYSE: BRK.A) (Lubrizol Corporation)	Berkshire Hathaway acquired U.S.-based Particle Sciences as an bolt-on acquisition to its subsidiary, The Lubrizol Corporation, and for its unique integrated drug delivery contract development and manufacturing platform.	NA	NA	NA	NA
9/7/2015	TFS Trial Form Support International AB (60% Stake)	Ratos AB (OM:RATO B)	Ratos, a private equity firm specializing in buyouts and turnarounds acquired a 60% stake in TFS Trial Form Support, a Swedish clinical CRO. Ratos plans to use TFS as a platform for further acquisitions, to participate in the consolidation trend in the industry.	31.8	53.0	1.0x	NA
8/25/2015	Cellular Research, Inc.	Becton, Dickinson and Company (NYSE:BDX)	The acquisition of California-based Cellular Research by Becton Dickinson, a manufacturer and seller of medical devices, instrument systems and reagents, enables the identification of new approaches for targeted clinical diagnostics and therapies in a variety of fields.	NA	NA	NA	NA
7/6/2015	MediciGroup, Inc.	BioClinica, Inc.	MediciGroup, a patient recruitment service based in Pennsylvania, was acquired by BioClinica, a Pennsylvania-based clinical research technology provider to pharmaceutical, biotechnology, and medical device companies, to add recruitment and customer retention tools to its portfolio.	NA	NA	NA	NA
6/15/2015	OnTarget Chemistry AB	Recipharm AB (publ) (OM:RECI B)	OnTarget Chemistry, a Swedish CRO specialized in medicinal chemistry and offering synthesis and analytical services, was acquired by Recipharm, also of Sweden, to broaden its pharmaceutical development capabilities and to improve current relationships for new, high potential customer projects.	1.8	1.8	0.5x	NA
5/4/2015	Max Neeman Medical International Limited	JSS Medical Research Inc.	JSS Medical Research, a global CRO based in Canada, acquired Max Neeman Medical to expand their network of high quality research sites into India.	1.5	1.5	NA	NA
4/10/2015	Accovion GmbH	Clinipace Worldwide, Inc.	Clinipace, a global digital CRO based in the U.K. acquired Germany-based Accovion to expand its European clinical operations.	NA	NA	NA	NA
3/31/2015	Clinport s.c. (75% Stake)	Neuca Spolka Akcyjna (WSE:NEU)	Neuca, a Polish company that engages in the wholesale distribution of pharmaceuticals to pharmacies and hospitals, acquired a 75% stake in Clinport, also based in Poland, to enter the CRO space.	NA	NA	NA	NA
3/1/2015	JCL Bioassay Corporation	CMIC Holdings Co., Ltd. (TSE: 2309)	CMIC Holdings, a provider of research, manufacturing, development, and sale of pharmaceuticals in Japan, acquired JCL Bioassay Corporation, a Japanese drug development contract research company, to fortify its domestic presence and complement its current operations.	25.0	22.0	1.1x	6.4x
2/13/2015	SSCI, Inc.	Albany Molecular Research Inc. (NasdaqGS: AMRI)	Albany Molecular Research acquired SSCI, a Maryland-based CRO with expertise in solid-state chemistry and analytical services, to expand AMRI's drug product development and aseptic clinical manufacturing capabilities.	36.0	36.0	2.4x	12.0x
1/9/2015	Aptuit (Glasgow) Ltd.	Albany Molecular Research Inc. (NasdaqGS: AMRI)	Aptuit's Glasgow, Scotland, operation strengthens Albany Molecular Research's front end formulation expertise in its sterile injectable business and provides Albany with an expanded footprint and customer base in Europe.	24.0	24.0	2.0x	8.6x
1/5/2015	ClinGenuity, LLC	Certara, L.P.	Certara, a New Jersey-based biosimulation and regulatory writing consultancy firm, acquired Ohio-based ClinGenuity to provide automated clinical trial solutions to its clients.	NA	NA	NA	NA
1/5/2015	Optum, Inc., Select Optum Life Sciences Services	MAPI Developpement, SAS	The acquisition of Select Optum Life Sciences Services, the North American and European Late phase CRO portion of Select Optum Life, makes France-based MAPI the largest independent company exclusively dedicated to Health Research and Commercialization services.	NA	NA	NA	NA
12/26/2014	EP-Mint Co., Ltd. (nka: EP-SOGO Co., Ltd.) (remaining 46.8% stake)	EPS Holdings, Inc. (TSE:4282)	EPS Corporation acquired the remaining 46.8% stake in EP-Mint Co., a Japanese clinical trial support service, from Tashiro Nobuo and JAFCO Co.	28.8	61.4	NA	NA
12/19/2014	NEUES Co., Ltd. (90.0% stake)	M3, Inc. (TSE:2413)	The acquisition of a 90.0% stake in Neues will allow M3 to expand its affiliate relationships, increase its ability to incorporate more clinical cases, and obtain higher quality of human resources. Neues is a site management organization with 20 offices across Japan.	1.5	1.7	NA	NA
12/17/2014	Axis Group Ltd., portfolio of clinical projects	KCR S.A.	The acquisition of a portfolio of clinical projects from AXIS, a Ukraine-based CRO, better positions Poland-based KCR's ability to capitalize on the large clinical studies market.	NA	NA	NA	NA
12/3/2014	Advanced Biosciences Research	bioRASI, LLC	The addition of Advanced Biosciences' U.K. regional base to bioRASI's strength in Russia, Ukraine, and a decade-long established presence in Czech Republic, Poland, Serbia and Latvia, increases bioRASI's footprint in Europe.	NA	NA	NA	NA
12/2/2014	Spring Valley Laboratories, Inc.	Noble Life Sciences, Inc.	The acquisition of Spring Valley Laboratories, a full service, preclinical CRO based in Maryland, enhances Maryland-based Noble Life Sciences' in vitro drug discovery expertise and its animal testing capabilities.	NA	NA	NA	NA
12/1/2014	NUVISAN CDD Germany GmbH	Linalco Co., Ltd. (TSE:2183)	The acquisition of Nuvisan CDD, a German contract research organization, allows Japan-based Linalco to provide European coverage to pharmaceutical companies and is in line with Linalco's interest of being a global clinical full service CRO.	8.2	8.2	NA	NA
11/14/2014	Ricera Biosciences, LLC	Main Market Partners, LLC	Main Market Partners, a U.S. private equity firm, acquired Ohio-based Ricera Biosciences, a preclinical CRO specializing in drug development services.	NA	NA	NA	NA

Comparable Transaction Analysis, continued

Close Date	Target	Acquirer	Description	Transaction Value (\$M)	Enterprise Value (\$M)	EV / Revenue	EV / EBITDA
11/6/2014	eClinical Insights, Inc.	eResearchTechnology, Inc.	The acquisition of Massachusetts-based eClinical Insights further strengthens Pennsylvania-based eResearchTechnology's capabilities in data collection, analytics, visibility and exchange. eClinical Insights provides cloud-based clinical trials management software.	NA	NA	NA	NA
10/29/2014	ChanTest Corporation	Charles River Laboratories International, Inc. (NYSE:CRL)	The acquisition of ChanTest helps Charles River broaden its existing discovery-focused ion channel capabilities. ChanTest is an Ohio based provider of ion channel testing services.	54.0	54.0	NA	7.6x
10/27/2014	Jasper Clinical Research & Development, Inc.	MPI Research, Inc.	The acquisition of Jasper, a U.S.-based phase I-III clinical CRO service provider, helps Michigan-based MPI Research become a 'one-stop' resource for the early drug development community.	NA	NA	NA	NA
10/3/2014	ClinIntel, Limited	PAREXEL International Corporation (Nasdaq: PRXL)	U.S.-based PAREXEL acquired U.K.-based ClinIntel, a clinical randomization and trial supply management service, to extend its leadership in randomization and trial supply management.	24.6	24.6	NA	NA
9/30/2014	XenoBiotic Laboratories, Inc.	WuXi PharmaTech (Cayman) Inc.	The acquisition of New Jersey-based XenoBiotic Laboratories (XBL) bolsters China-based WuXi's bioanalytical and DMPK/ADME capabilities and helps WuXi expand in the U.S. XBL is a CRO that provides bioanalytical, drug metabolism, and pharmacokinetic services.	NA	NA	NA	NA
9/24/2014	Pacific Clinical Research Pte Ltd.	Chiltern International Ltd.	The acquisition of Singapore-based Pacific Clinical Research allows U.K.-based Chiltern to offer integrated services throughout the Asia-Pacific region, and strengthens its particular Chiltern's oncology and anti-infective offerings.	NA	NA	NA	NA
9/24/2014	ePharmaSolutions, Inc.	WIRB - Copernicus Group, Inc.	WIRB, based in New Jersey, acquired Pennsylvania-based ePharmaSolutions to expand into other areas of CRO services after acquiring 3 institutional review board (IRB) companies in the last four months. ePharmaSolutions provides a host of technology-enabled service solutions.	NA	NA	NA	NA
9/10/2014	J Trotter Research and Consulting, LLC	Continuum Clinical LLC	Illinois-based Blue Chip Patient Recruitment (BCPR) and Illinois-based J Trotter Research & Consulting (JTRC) merged to form Continuum Clinical. Continuum combines BCPR's specialty in clinical trial patient recruitment with JTRC's expertise in post-approval research, and will also offer medical communications services.	NA	NA	NA	NA
8/31/2014	Heritage Labs, Inc. and Hooper Holmes Services	Clinical Reference Laboratory, Inc.	Kansas-based CRL's acquisition of Hooper Holmes and Heritage Labs, both based in Kansas, expands its life insurance service offerings. Hooper Holmes is a risk assessment and risk management service, Heritage Holmes is a testing lab that helps aid insurers.	3.5	3.5	NA	NA
8/27/2014	Helderberg Clinical Trials Centre	Pharmaceutical Product Development LLC	The acquisition of Helderberg, a specialist clinical trial site in Cape Town, expands North Carolina-based PPD's geographic presence in South Africa to four centers.	NA	NA	NA	NA
7/30/2014	Frontage Laboratories, Inc. (70% Stake)	Hangzhou Tigermed Consulting Co., Ltd. (SZSE:300347)	The acquisition of a 70% stake in Pennsylvania-based Frontage Laboratories, a CRO with specialties in early stage development, complements Tigermed's strength in late stage clinical development in China.	50.3	72.0	NA	NA
7/30/2014	Karmic Lifesciences	Cliantha Research Limited	The acquisition of Karmic Lifesciences, a ICH-GCP compliant CRO based in Mumbai, expands India-based Cliantha Research's clinical data management, pharmaceutical analytics and medical marketing businesses.	NA	NA	NA	NA

*Enterprise Value (EV) = market capitalization + net debt + noncontrolling interest

Maximum	5.9x	17.7x
Average	2.6x	11.5x
Median	2.2x	11.0x
Minimum	0.5x	6.4x