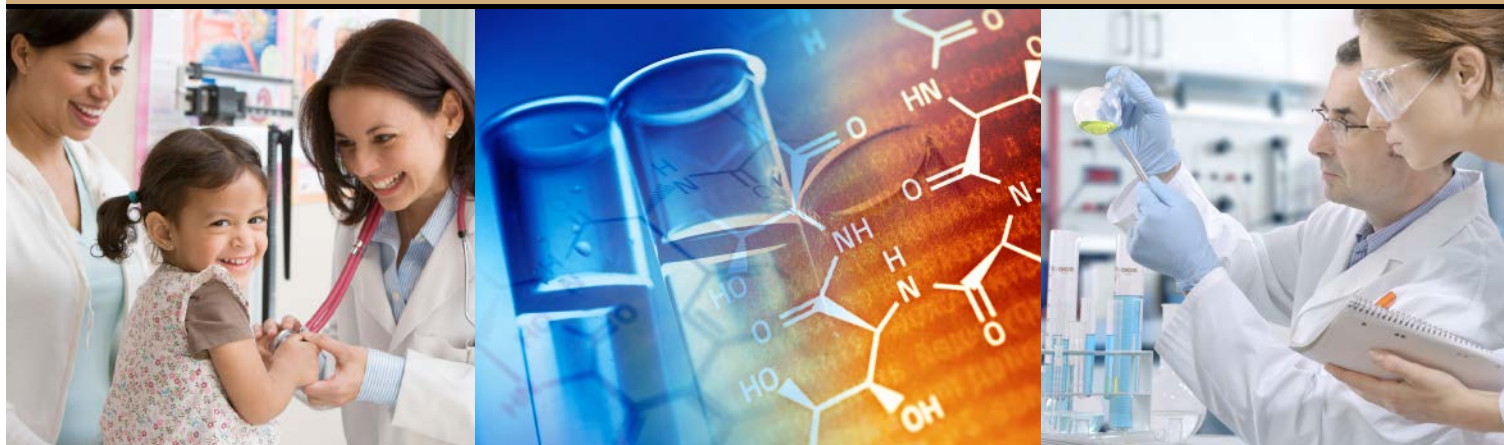


FOCUS Healthcare and Life Sciences Report



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Investment Banking

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FOCUS Investment Banking LLC provides a range of investment banking services tailored to the needs of healthcare and life sciences companies. These services include:

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FOCUS Healthcare and Life Sciences Group

FOCUS Healthcare and Life Sciences Report

By Jonathan Wilfong, Regional Managing Partner, Southeast, and Healthcare and Life Sciences Team Leader, FOCUS Investment Banking LLC

As Team Leader of the FOCUS Healthcare and Life Sciences Practice Group, I'm pleased to introduce the Autumn 2017 issue of the *FOCUS Healthcare and Life Sciences Report*.

Be sure to read Part II of a fascinating two-part series on precision medicine—"Test, Don't Guess ... Precision Medicine in Cancer Treatment," which you'll find on pages three to five of this new report.

According to the authors (an impressive group of FOCUS interns and researchers), precision medicine is a transformative approach to disease treatment and prevention, customizing healthcare based on an individual's genetic makeup, lifestyle, and environment. It guides medical decision-making by looking at patients' genes—their unique DNA and RNA—along with their health history, socioeconomic status, environment, and lifestyle choices.

Ushered in by the Human Genome Project (formally launched in 1990 and declared complete in 2003), precision medicine holds the promise of identifying economically viable methods to accurately decipher large numbers of genetic sequences. The infrastructure required to store and analyze this data, however, is staggering—and, the path forward will not be easy.

Collecting and sharing healthcare data faces considerable logistical barriers, with streamlined access for researchers and health care providers constrained by competition for scarce research dollars and institutional credit. Part I of this important series, "Precision Medicine—The Leading Edge of Medical Therapeutics," appeared in the Summer 2017 FOCUS Healthcare and Life Sciences Report.

At FOCUS, we continue to witness consolidation activity and private equity interest in historically highly-fragmented ancillary services such as care for the disabled and those with substance dependence. While the mega-deal dollars may be down, we expect the middle market to remain very strong going into 2018.

We hope you enjoy this issue of our report.

FOCUS Healthcare and Life Sciences Team

The FOCUS Healthcare and Life Sciences Practice Group is comprised of experienced executives from a broad spectrum of healthcare services, healthcare IT, medical device, pharmaceutical and life sciences companies.

Our team can leverage years of hands-on and transactional experience in the healthcare industry to manage your transaction from initial consulting to deal initiation to a successful close with experienced professional guidance every step of the process.

The FOCUS Healthcare and Life Sciences Team is uniquely qualified to help you meet your objectives because we:

- Offer strategic advisory services that enhance shareholder value.
- Supply a proven transaction methodology for delivering results.
- Devote significant C-level resources with operating expertise in the sector to executing transactions.
- Deliver the most exact, comprehensive research to help close a deal, deploying a team of research professionals dedicated to producing precise analysis.
- Leverage years of experience in the middle market to maximize opportunities for a successful transaction.
- Supply a national presence with global reach—regional offices ensure that all clients receive personalized service throughout every phase of a transaction.

Please feel free to contact me at jonathan.wilfong@focusbankers.com with your comments and suggestions.

Test, Don't Guess—Precision Medicine in Cancer Treatment

Part II of II

By Avneet Heer, M.S.; Evans Love, M.S.; Sami Rahman, M.S.; Rohan Ranadive, M.S.; and Xiyue Guo, FOCUS Investment Banking Interns

As discussed in Part I of this series in the Summer 2017 issue of the *FOCUS Healthcare and Life Sciences Report*, medical advances over the past quarter century have proceeded at a breathtaking pace. Since scientists successfully decoded the first human genome in 2003, the technology behind mapping each person's unique "genetic fingerprint" has become exponentially faster and more affordable.

Armed with this information, a disruptive new approach to treating and preventing disease—called precision medicine—personalizes healthcare decisions based on an individual's unique genetic makeup, lifestyle choices, and environment. Fundamentally changing our healthcare paradigms, precision medicine is propelling the creation of new business models from genomics to medical devices to drug development.

Precision Medicine and Oncology

As new therapies gain FDA approval, getting the right drug to the right patient at the right time has become the mantra of precision medicine and the central focus of many pharmaceutical companies. In no medical specialty is this more evident than in the treatment of cancer.

Revolutionary gains in the oncology marketplace are driven by cutting-edge innovation, cross-disciplinary collaboration, and a singular desire to win the battle against cancer. Precision medicine is a key factor spurring such victories.

By transforming treatment algorithms and encouraging cross-fertilization of ideas between numerous players in the cancer ecosystem—molecular pathologists, oncologists, hematologists, surgeons, biostatisticians, basic scientists, and genetic counselors—this new healthcare approach is opening doors to innovative treatment options (Carneiro *et al.*, 2016).

Traditionally, cancer patients have undergone chemotherapy regimens using drugs that demonstrated statistically significant effectiveness in clinical trials (Agyeman & Ofori-Asenso, 2015). Yet oncologists have long recognized that while the tumors associated with lung cancer or breast cancer, for example, have many common elements, individ-

uals going through the standard drug treatment protocols for these cancers often react differently—based in part on their age, their gender, their ethnicity, their race, or other traits.

Patients who fail to respond to conventional chemotherapy not only end up bearing the burden of disease progression, but also suffer severe toxic effects from the drugs. For many patients, the uncertainty accompanying treatment outcomes is compounded by financial stress: each chemotherapy session can run thousands of dollars, leaving patients, providers, and/or insurers with significant economic costs.

Precision medicine minimizes these trial-and-error treatment approaches. Encouraging a "test, don't guess" mindset, precision medicine is grounded by genetic analyses of patients' tumor mutations coupled with predictive genomics-based diagnostic tests that help guide their strategic treatment decisions.

Pre-treatment assessments developed by companies in the molecular diagnostics sector are beginning to identify those patients most likely to respond to specific drug therapies. For example, oncologists now recognize that metastatic colorectal cancer patients carrying the KRAS gene are helped more by Vectibix® (panitumumab) and Erbitux® (cetuximab) than the three conventional colon cancer chemotherapies: 5-fluorouracil, irinotecan, and oxaliplatin (Heinemann *et al.*, 2013).

For companies entering clinical trials, precision medicine can help screen and narrow the best drug candidates for patient treatments, resulting in higher rates of clinical success and fewer regulatory failures. Payers and providers hopefully benefit with reduced healthcare costs from the elimination of ineffective treatments (Verma, 2012).

Precision medicine also can potentially rescue drugs that initially demonstrated unacceptable efficacy and toxicity when tested in small population samples. Newer genomic tools that better predict individual drug responses allow efficacy and toxicity to be assessed more discretely, improving the chances for patient benefits and commercial success.

Take, for example, the case of thalidomide, stigmatized by the infant deformities that resulted from its use by pregnant women. Recent precision medicine trials have found thalidomide safe and effective for patients struggling with multiple myeloma and Crohn's disease (Franks *et al.*, 2004)—a benefit for pharmaceutical companies and for society at large.

Companion Diagnostics

To reduce the “trial and error” results associated with cancer therapies they market, many large biopharmaceutical companies have begun to develop “companion diagnostic” tests to help doctors identify patients who might benefit from therapies that target specific cancer genetic mutations or pathways.

Companion diagnostics in drug development was first introduced in 1998 with Genentech's HercepTest™, which used measurable indicators (called “biomarkers”) to detect patient tumors that produced excessive amounts of Her2, a protein that triggered rapid spread of their breast cancers.

When treated with Genentech's drug Herceptin® (trastuzumab), patient prognosis improved considerably. On the other hand, women whose tumors tested by HercepTest™ did not show this growth-promoting protein was present on their cancers would see little benefit from using this expensive drug (Jørgensen and Hersom, 2016).

A key emerging market driver for companion diagnostics is liquid biopsies, a tool that can use a simple blood or urine test to determine the genomic makeup of patients' tumors. Liquid biopsies reduce the need for patients to undergo painful, costly surgical biopsies. This new technology relies on finding either genetic material shed by the tumor or tumor cells circulating in patients' blood streams (NCI, 2016).

“Basket” Trials

Expanding on the successful genomic identification of Her2 in breast cancer patients, researchers have recently initiated a new clinical trial design that looks for similarities across different types of cancers based on a tumor's genetic footprint rather than where it originates in patients' bodies.

Known as “basket trial,” these clinical trials test one drug against a basket of many cancer types. Researchers, for example, have located Her2 proteins on a subgroup of lung cancer tumors. Similar to breast cancers, lung cancers with Her2 grow more rapidly—and, like breast cancers, appear to respond to Genentech's drug Herceptin® (trastuzumab) (Redig *et al.*, 2014).

Immuno-oncology

An emerging field of cancer research, known as immuno-oncology, uses immunotherapy drugs to stimulate patients' own immune system to attack their cancers. The process is tricky, given the complexity of tumor physiology. Blocking one tumor pathway, for example, can leave open other options for cancer cells to grow.

MD Anderson and Memorial Sloan Kettering cancer centers have turned to precision medicine to collaboratively identify therapies that use two drugs in combination to improve patient survival by targeting multiple cancer pathways. Merck has also introduced the immunotherapy drug Keytruda® (pembrolizumab) for patients with metastatic non-small cell lung cancer. Before beginning treatment, companion diagnostic tests of patient tumors help determine whether patients would benefit from using the drug.

Precision Medicine Legislation and Policy for Oncology Treatments

Current public policy and legislation regarding oncology treatment and precision medicine is in nascent stages. Funding, insurance coverage, and privacy remain moving targets.

A significant step forward, however, was taken on December 13, 2016, when President Obama signed the 21st Century Cures Act into law. This legislation included significant funding for the FDA to accelerate the approval of new cancer drugs and for NIH to further the [Beau Biden Cancer Moonshot 2020](#), an research initiative named in honor of Vice President Joe Biden's son who died of brain cancer in 2015 (Ambrose, 2016).

The Cancer Moonshot 2020 coalition intended to rethink cancer treatment, focusing on precision medicine to identify new vaccine-based immunotherapies. Stakeholders include multinational pharmaceutical companies, biotechnology companies, academic research centers, and oncologists. In the current political climate, many provisions of the 21st Century Cures Act have yet to be implemented and its effects remain to be seen.

Future Directions

Moving forward, the next generation of precision cancer treatment comes with the power of genome sequencing to empower evidenced-based decision-making for patients and providers. These efforts center on identifying the drivers behind the mutation and spread of cancer cells.

Based on the wealth of information being generated by genomic research across diverse human populations, precision medicine helps researchers more clearly define targets for new and existing drugs. With life events as deeply personal and emotionally powerful as cancer therapy, precision medicine ensures that patients receive appropriate individualized therapies when they need it most.

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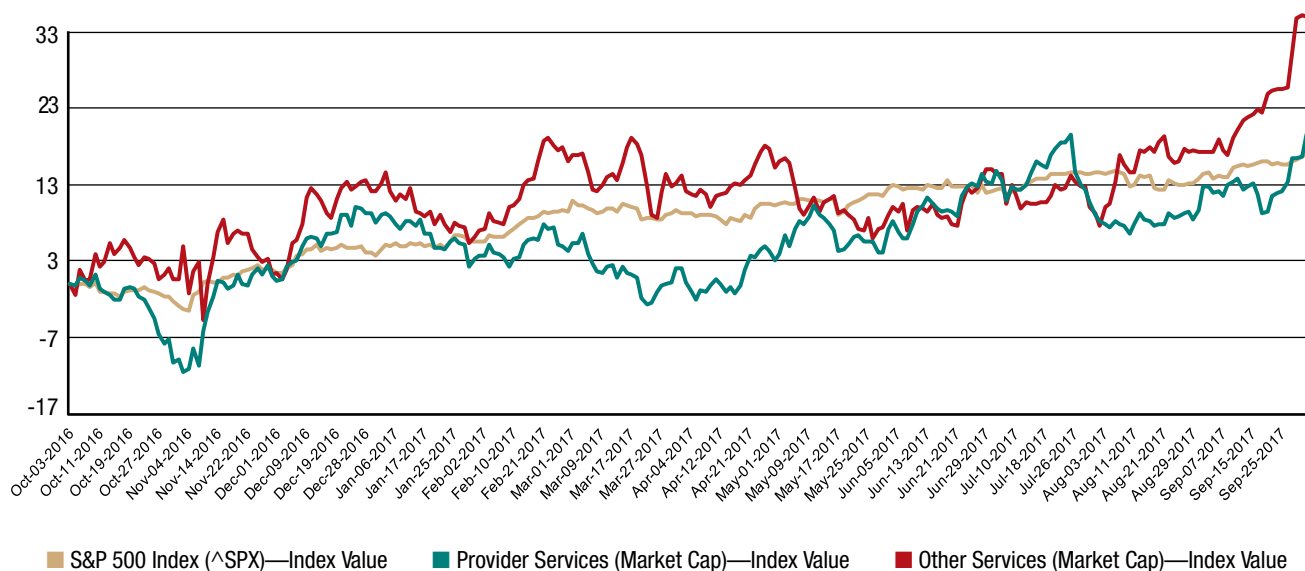
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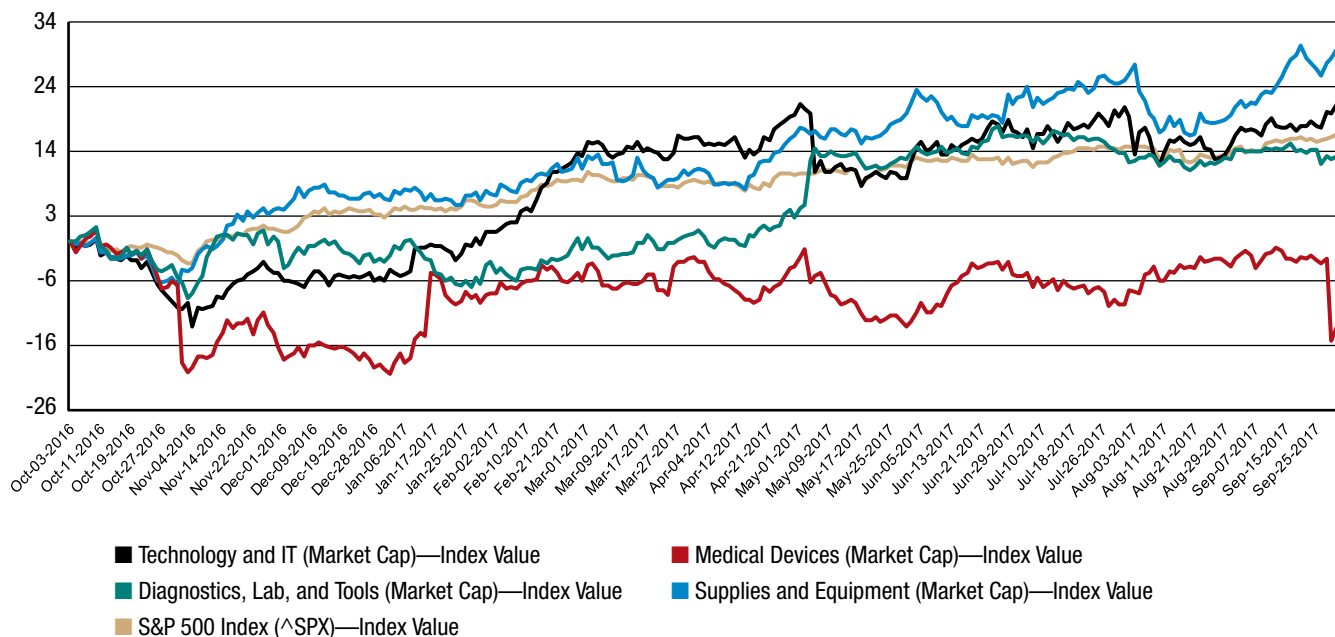
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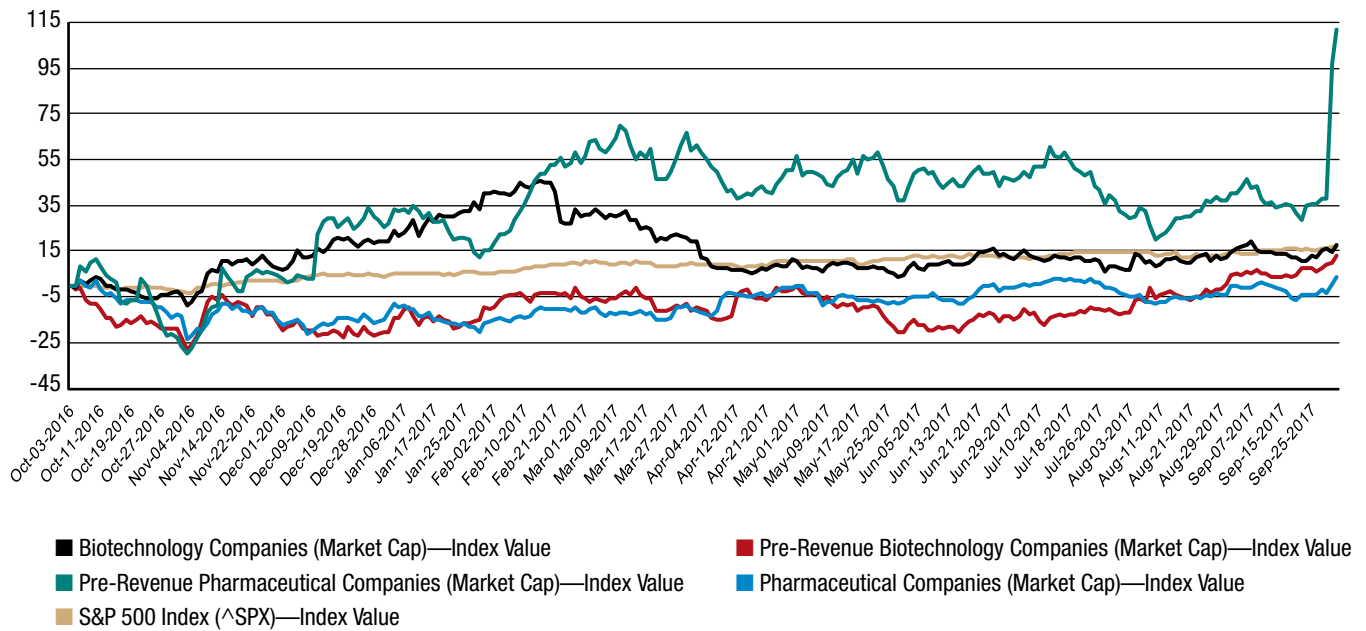
Performance: S&P 500 vs. Public Medical Service Companies (9/30/2016-9/30/2017)



Performance: S&P 500 vs. Public Medical Product Companies (9/30/2016-9/30/2017)



Performance: S&P 500 vs. Public Pharmaceutical and Biotechnology Companies (9/30/2016-9/30/2017)



Revenue Earning Pharmaceutical Companies

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
Akorn, Inc. (NasdaqGS:AKRX)	4,635.8	1,020.3	372.0	4.5X	12.5X	Jun-30-2017
Alimera Sciences, Inc. (NasdaqGM:ALIM)	169.1	36.0	(16.8)	4.7X	N/A	Jun-30-2017
BioDelivery Sciences International, Inc. (NasdaqCM:BDSI)	171.4	44.3	(31.8)	3.9X	N/A	Jun-30-2017
DepoMed Inc. (NasdaqGS:DEPO)	877.5	425.3	112.6	2.1X	7.8X	Jun-30-2017
Emergent BioSolutions, Inc. (NYSE:EBS)	1,600.1	512.2	160.0	3.1X	10.0X	Jun-30-2017
Horizon Pharma plc (NasdaqGS:HZNP)	3,409.4	1,029.4	(46.5)	3.3X	N/A	Jun-30-2017
Impax Laboratories Inc. (NasdaqGS:IPXL)	2,121.4	812.8	144.4	2.6X	14.7X	Jun-30-2017
Lannett Company, Inc. (NYSE:LCI)	1,446.7	637.3	245.0	2.3X	5.9X	Jun-30-2017
Pacira Pharmaceuticals, Inc. (NasdaqGS:PCRX)	1,402.0	281.5	(34.9)	5.0X	N/A	Jun-30-2017
Pernix Therapeutics Holdings, Inc. (NasdaqGM:PTX)	315.5	135.7	8.6	2.3X	36.7X	Jun-30-2017
Supernus Pharmaceuticals, Inc. (NasdaqGM:SUPN)	1,936.5	252.6	82.4	7.7X	23.5X	Jun-30-2017
VIVUS Inc. (NasdaqGS:VVUS)	98.1	133.4	67.1	0.7X	1.5X	Jun-30-2017
Summary Statistics						
High	\$4,635.8	\$1,029.4	\$372.0	7.7X	36.7X	
Low	\$98.1	\$36.0	(\$46.5)	0.7X	1.5X	
Mean	\$1,515.3	\$443.4	\$88.5	3.5X	14.1X	
Median	\$1,424.4	\$353.4	\$74.8	3.2X	11.2X	

Pre-Revenue Earning Pharmaceutical Companies

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
AcelRx Pharmaceuticals, Inc. (NasdaqGM:ACRX)	168.6	15.6	(35.2)	10.8X	N/A	Jun-30-2017
Achaogen, Inc. (NasdaqGM:AKAO)	469.0	35.5	(68.1)	13.2X	N/A	Jun-30-2017
Corbus Pharmaceuticals Holdings, Inc. (NasdaqGM:CRBP)	316.1	2.8	(27.5)	112.9X	N/A	Jun-30-2017
Imprimis Pharmaceuticals, Inc. (NasdaqCM:IMMY)	41.5	23.6	(13.2)	1.8X	N/A	Jun-30-2017
Zogenix, Inc. (NasdaqGM:ZGNX)	827.5	27.4	(72.5)	30.2X	N/A	Jun-30-2017
Summary Statistics						
High	\$827.5	\$35.5	(\$13.2)	112.9X	-	
Low	\$41.5	\$2.8	(\$72.5)	1.8X	-	
Mean	\$364.5	\$21.0	(\$43.3)	33.8X	-	
Median	\$316.1	\$23.6	(\$35.2)	13.2X	-	

Source: Capital IQ—stock prices as of 9/30/2017

TEV/EBITDA LTM multiples with n/a values indicate negative LTM EBITDA values and were not used for the Summary Statistics.

Revenue Earning Biotechnology Companies

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
Array BioPharma Inc. (NasdaqGM:ARRY)	2,302.7	43.7	(100.0)	52.7X	N/A	Jun-30-2017
Cytori Therapeutics, Inc. (NasdaqCM:CYTX)	18.2	8.7	(17.7)	2.1X	N/A	Jun-30-2017
NewLink Genetics Corporation (NasdaqGM:NLNK)	963.7	113.5	(83.1)	8.5X	N/A	Jun-30-2017
Momenta Pharmaceuticals, Inc. (NasdaqGS:MNTA)	192.1	41.2	(55.6)	4.7X	N/A	Jun-30-2017
United Therapeutics Corporation (NasdaqGS:UTHR)	4,225.9	1,632.3	1,006.5	2.6X	4.7X	Jun-30-2017
Summary Statistics						
High	\$4,225.9	\$1,632.3	\$1,006.5	52.7X	4.2X	
Low	\$18.2	\$8.7	(\$100.0)	2.1X	4.2X	
Mean	\$1,540.5	\$367.9	\$150.0	14.1X	4.2X	
Median	\$963.7	\$43.7	(\$55.6)	4.7X	4.2X	

Pre-Revenue Earning Biotechnology Companies

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
ACADIA Pharmaceuticals Inc. (NasdaqGS:ACAD)	4,193.5	63.0	(305.3)	66.6X	N/A	Jun-30-2017
Achillion Pharmaceuticals, Inc. (NasdaqGS:ACHN)	264.1	15.0	(70.5)	17.6X	N/A	Jun-30-2017
ArQule Inc. (NasdaqGM:ARQL)	62.4	2.4	(26.8)	26.0X	N/A	Jun-30-2017
Opexa Therapeutics, Inc. (NasdaqCM:OPXA)	5,241.9	6.3	(220.0)	832.0X	N/A	Jun-30-2017
Rigel Pharmaceuticals, Inc. (NasdaqGS:RIGL)	233.7	10.3	(67.7)	22.7X	N/A	Jun-30-2017
TrovaGene, Inc. (NasdaqCM:TROV)	21.1	0.4	(29.4)	52.8X	N/A	Jun-30-2017
Windtree Therapeutics, Inc. (NasdaqCM:WINT)	25.3	3.2	(28.3)	7.9X	N/A	Jun-30-2017
Summary Statistics						
High	\$5,241.9	\$63.0	(\$26.8)	832.0X	-	
Low	\$21.1	\$0.0	(\$305.3)	7.9X	-	
Mean	\$1,434.6	\$14.4	(\$106.9)	146.5X	-	
Median	\$233.7	\$6.3	(\$67.7)	26.0X	-	

Source: Capital IQ—stock prices as of 9/30/2017

TEV/EBITDA LTM multiples with n/a values indicate negative LTM EBITDA values and were not used for the Summary Statistics.

Medical Devices

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
DexCom, Inc. (NasdaqGS:DXCM)	4,065.6	632.7	(63.3)	6.4X	N/A	Jun-30-2017
Endologix Inc. (NasdaqGS:ELGX)	525.3	190.8	(54.4)	2.8X	N/A	Jun-30-2017
ICU Medical, Inc. (NasdaqGS:ICUI)	3,513.9	772.0	92.5	4.6X	38.0X	Jun-30-2017
LivaNova PLC (NasdaqGS:LIVN)	3,460.3	1,212.4	191.7	2.9X	18.1X	Jun-30-2017
Nxstage Medical, Inc. (NasdaqGS:NXTM)	1,778.1	378.0	14.3	4.7X	N/A	Jun-30-2017
STAAR Surgical Company (NasdaqGM:STAA)	505.2	84.5	(0.7)	6.0X	N/A	Jun-30-2017
Summary Statistics						
High	\$4,065.6	\$1,212.4	\$191.7	6.4X	38.0X	
Low	\$505.2	\$84.5	(\$63.3)	2.8X	18.1X	
Mean	\$2,308.1	\$545.1	\$30.0	4.5X	28.0X	
Median	\$2,619.2	\$505.4	\$6.8	4.6X	28.0X	

Supplies and Equipment

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
ATRION Corp. (NasdaqGS:ATRI)	1,197.1	145.8	48.8	8.2X	24.5X	Jun-30-2017
Bovie Medical Corporation (AMEX:BVX)	6,337.8	2,084.9	233.6	3.0X	27.1X	Jun-30-2017
Bio-Rad Laboratories, Inc. (NYSE:BIO)	97.0	37.7	(3.6)	2.6X	N/A	Jun-30-2017
Cantel Medical Corp. (NYSE:CMN)	4,019.0	770.2	149.6	5.2X	26.9X	Jul-31-2017
Invacare Corporation (NYSE:IVC)	595.5	980.1	(13.6)	0.6X	N/A	Jun-30-2017
Retractable Technologies, Inc. (AMEX:RVP)	10.1	30.9	(3.2)	0.3X	N/A	Jun-30-2017
Sharps Compliance Corp. (NasdaqCM:SMED)	74.4	38.2	1.0	1.9X	74.4X	Jun-30-2017
Summary Statistics						
High	\$6,337.8	\$2,084.9	\$233.6	8.2X	74.4X	
Low	\$10.1	\$30.9	(\$13.6)	0.3X	24.5X	
Mean	\$1,761.6	\$584.0	\$58.9	3.1X	38.2X	
Median	\$595.5	\$145.8	\$1.0	2.6X	27.0X	

Source: Capital IQ—stock prices as of 9/30/2017

TEV/EBITDA LTM multiples with n/a values indicate negative LTM EBITDA values and were not used for the Summary Statistics.

Diagnostics, Laboratories, and Tools

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
Abaxis, Inc. (NasdaqGS:ABAX)	875.8	227.8	49.8	3.8X	17.6X	Jun-30-2017
Chembio Diagnostics, Inc. (NasdaqCM:CEMI)	72.6	18.4	(7.2)	3.9X	N/A	Jun-30-2017
CONMED Corporation (NasdaqGS:CNMD)	1,921.5	772.6	123.9	2.5X	15.5X	Jun-30-2017
Enzo Biochem Inc. (NYSE:ENZ)	424.1	107.8	0.5	3.9X	N/A	Jul-31-2017
Fluidigm Corporation (NasdaqGS:FLDM)	301.3	96.7	(62.6)	3.1X	N/A	Jun-30-2017
Genomic Health Inc. (NasdaqGS:GHDX)	1,002.0	334.5	2.6	3.0X	N/A	Jun-30-2017
Luminex Corporation (NasdaqGS:LMNX)	792.3	297.7	49.8	2.7X	15.9X	Jun-30-2017
Repligen Corporation (NasdaqGS:RGEN)	1,602.0	113.3	29.5	14.1X	54.3X	Jun-30-2017
VWR Corporation (NasdaqGS:VWR)	6,481.7	4,580.8	492.1	1.4X	13.2X	Jun-30-2017
Summary Statistics						
High	\$6,481.7	\$4,580.8	\$492.1	14.1X	54.3X	
Low	\$72.6	\$18.4	(\$62.6)	1.4X	13.2X	
Mean	\$1,497.0	\$727.7	\$75.4	4.3X	23.3X	
Median	\$875.8	\$227.8	\$29.5	3.1X	15.9X	

Technology and IT

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
Accuray Incorporated (NasdaqGS:ARAY)	403.6	383.4	0.6	1.1X	N/A	Jun-30-2017
Allscripts Healthcare Solutions, Inc. (NasdaqGS:MDRX)	4,284.5	1,657.4	160.1	2.6X	26.8X	Jun-30-2017
Analogic Corporation (NasdaqGS:ALOG)	895.1	486.4	42.0	1.8X	21.3X	Jul-31-2017
Computer Programs & Systems Inc. (NasdaqGS:CPSI)	548.1	261.0	28.5	2.1X	19.2X	Jun-30-2017
Fonar Corp. (NasdaqCM:FONR)	191.6	94.2	22.4	2.0X	8.6X	Jun-30-2017
iCAD, Inc. (NasdaqCM:ICAD)	65.7	26.1	(9.6)	2.5X	N/A	Jun-30-2017
Masimo Corporation (NasdaqGS:MASI)	4,164.5	730.1	182.1	5.7X	22.9X	Jul-01-2017
Omniceil, Inc. (NasdaqGS:OMCL)	2,079.5	680.2	42.7	3.1X	48.7X	Jun-30-2017
Summary Statistics						
High	\$4,284.5	\$1,657.4	\$182.1	5.7X	48.7X	
Low	\$65.7	\$26.1	(\$9.6)	1.1X	8.6X	
Mean	\$1,579.1	\$539.9	\$58.6	2.6X	24.6X	
Median	\$721.6	\$434.9	\$35.3	2.3X	22.1X	

Source: Capital IQ—stock prices as of 9/30/2017

TEV/EBITDA LTM multiples with n/a values indicate negative LTM EBITDA values and were not used for the Summary Statistics.

Provider Services

Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
Addus HomeCare Corporation (NasdaqGS:ADUS)	434.1	411.4	33.4	1.1X	13.0X	Jun-30-2017
Civitas Solutions, Inc. (NYSE:CIVI)	1,296.8	1,456.3	150.2	0.9X	8.6X	Jun-30-2017
Kindred Healthcare Inc. (NYSE:KND)	3,914.2	7,081.4	470.6	0.6X	8.3X	Jun-30-2017
Magellan Health, Inc. (NasdaqGS:MGLN)	2,403.2	5,280.3	242.6	0.5X	9.9X	Jun-30-2017
Providence Service Corp. (NasdaqGS:PRSC)	1,168.9	908.6	118.3	1.3X	9.9X	Jun-30-2017
RadNet, Inc. (NasdaqGM:RDNT)	1,401.3	1,751.1	121.8	0.8X	11.5X	Jun-30-2017
The Ensign Group, Inc. (NasdaqGS:ENSG)	751.9	1,606.2	68.1	0.5X	11.0X	Jun-30-2017
US Physical Therapy Inc. (NYSE:USPH)	925.3	377.2	60.4	2.5X	15.3X	Jun-30-2017
Summary Statistics						
High	\$3,914.2	\$7,081.4	\$470.6	2.5X	15.3X	
Low	\$434.1	\$377.2	\$33.4	0.5X	8.3X	
Mean	\$1,537.0	\$2,359.1	\$158.2	1.0X	11.0X	
Median	\$1,232.9	\$1,531.3	\$120.1	0.8X	10.5X	

Other Services

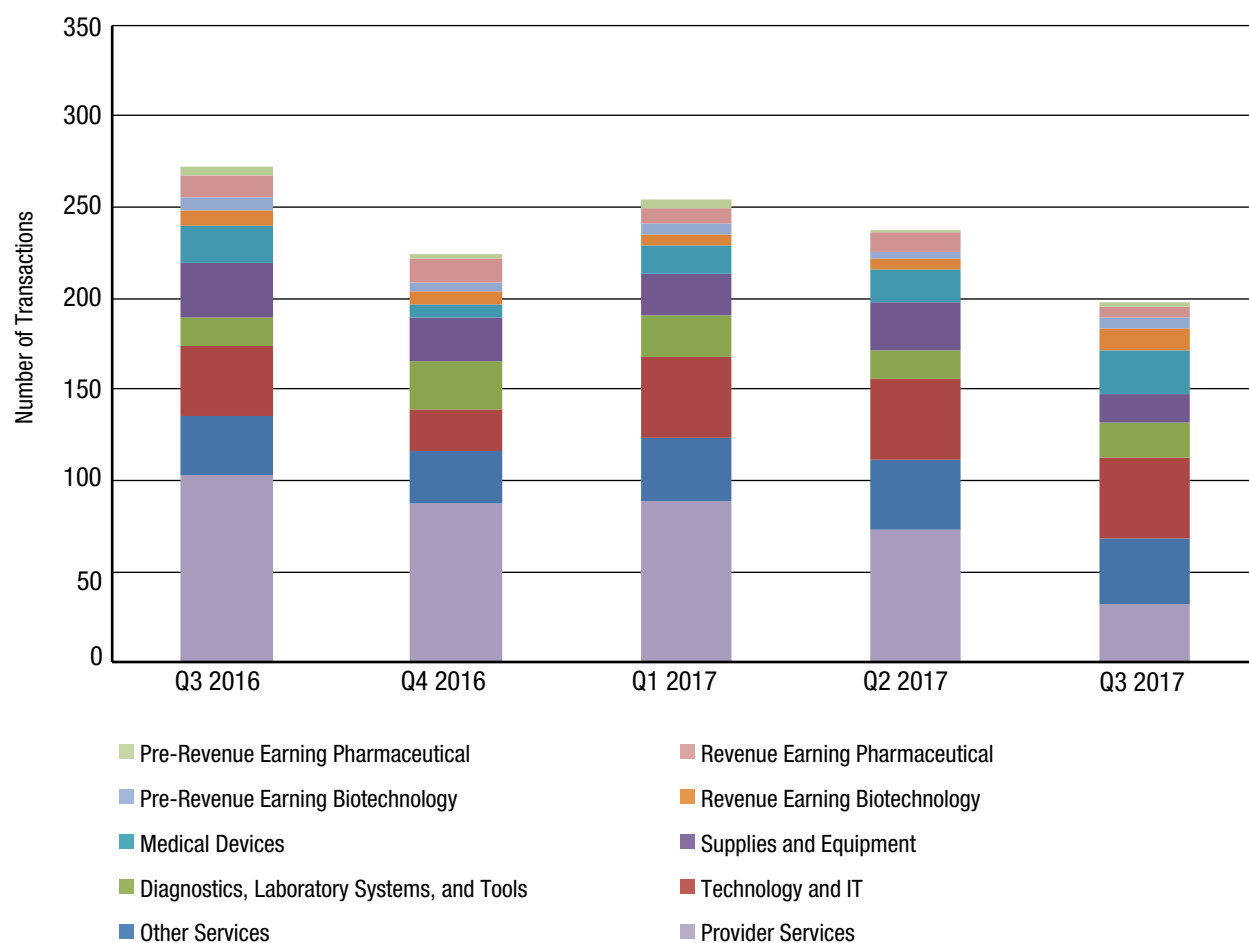
Company Name	Total Enterprise Value Latest (\$ millions)	LTM Total Revenue (\$ millions)	LTM EBITDA (\$ millions)	TEV/Total Revenues LTM—Latest	TEV/EBITDA LTM—Latest	LTM Period Date, Income Statement
AMN Healthcare Services Inc. (NYSE:AHS)	2,505.8	1,945.5	236.0	1.3X	10.6X	Jun-30-2017
Bioanalytical Systems Inc. (NasdaqCM:BASI)	19.5	23.5	1.7	0.8X	11.5X	Jun-30-2017
Cross Country Healthcare, Inc. (NasdaqGS:CCRN)	521.4	854.4	38.8	0.6X	13.4X	Jun-30-2017
National Research Corp. (NasdaqGS:NRCI.B)	947.8	114.1	39.0	8.3X	24.3X	Jun-30-2017
PDL BioPharma, Inc. (NasdaqGS:PDLI)	324.8	143.4	69.4	2.3X	4.7X	Jun-30-2017
Summary Statistics						
High	\$2,505.8	\$1,945.5	\$236.0	8.3X	24.3X	
Low	\$19.5	\$23.5	\$1.7	0.6X	4.7X	
Mean	\$863.9	\$616.2	\$77.0	2.7X	12.9X	
Median	\$521.4	\$143.4	\$39.0	1.3X	11.5X	

Source: Capital IQ—stock prices as of 9/30/2017

TEV/EBITDA LTM multiples with n/a values indicate negative LTM EBITDA values and were not used for the Summary Statistics.

M&A Activity in Healthcare and Life Sciences

Healthcare M&A Transactions by Quarter (Q3 2016 to Q3 2017)



Source: Capital IQ

Notable Healthcare Industry Transactions

Selected Healthcare Transactions Q3 2017

The following healthcare industry transactions have caught the attention of FOCUS Investment Banking:

Acer Therapeutics Inc. Acquires Opexa Therapeutics, Inc.

Acer Therapeutics Inc. has acquired Opexa Therapeutics, Inc. for an undisclosed amount. Opexa develops personalized immunotherapy to treat multiple sclerosis (MS) and other autoimmune diseases based on its proprietary T-cell technology. The company's lead product candidate is Tcelna, a T-cell immunotherapy for the treatment of patients with secondary progressive MS. The company was founded in 2003 and is based in The Woodlands, Texas. (July 3, 2017)

3i Group Plc Acquires Cirtec Medical Systems, LLC

3i Group plc has acquired Cirtec Medical Systems, LLC for \$105 million. Cirtec Medical is a medical device consulting company that provides outsourced engineering, design, and contract manufacturing services for the medical device industry. It offers medical device development program management services; design and development services, including medical device product development, mechanical engineering, electrical engineering, software development, human factors engineering and industrial design, and design verification and validation. The company was founded in 2009 and is based in Los Gatos, California. (July 4, 2017)

Vision Technologies Systems, Inc. Acquires Aethon Inc.

Vision Technologies Systems, Inc. has acquired Aethon Inc. for an undisclosed amount. Aethon develops autonomous mobile delivery robot systems that transport medications, meals, and materials through hospitals. The company offers TUG, a smart autonomous mobile robot that delivers goods and materials, such as medications, laboratory specimens, and food and linens, as well as removes trash and waste, and used in manufacturing, assembly, distribution, and hospitality applications. The company also provides MedEx, a software system that tracks and maintains chain-of-custody control of medication delivery; and allows hospitals to automate, manage, and track the internal logistics in hospital operations. The company was founded in 1997 and is based in Pittsburgh, Pennsylvania. (July 17, 2017)

Invitae Corporation Acquires Good Start Genetics, Inc.

Invitae Corporation has acquired Good Start Genetics, Inc. for \$40 million. Good Start Genetics is a molecular diagnostics company that provides genetic screening of inherited diseases. It offers EmbryVu, a preimplantation genetic screening test to improve in vitro fertilization by identifying embryos for the implantation and pregnancy. The company was founded in 2007 and is based in Cambridge, Massachusetts. (July 31, 2017)

Sun Pharmaceutical Industries Limited Acquires Krystal Biotech, Inc.

Sun Pharmaceutical Industries Limited has acquired Krystal Biotech, Inc. for an undisclosed amount. Krystal Biotech, a gene therapy company, develops and commercializes pharmaceutical products for patients suffering from dermatological diseases. The company's lead product candidate includes KB103, which is in preclinical studies to treat dystrophic epidermolysis bullosa, a genetic disease. The company was founded in 2015 and is based in Pittsburgh, Pennsylvania. (August 8, 2017)

Sverica Capital Management, LLC Acquires Women's Health USA, Inc.

Sverica Capital Management, LLC has acquired Women's Health USA, Inc. for an undisclosed amount. Women's Health USA provides back room business support solutions and services to physician practices. It offers physician practice management services, such as billing and collection, coding, credentialing, compliance, risk management, human resource, legal and insurance services, EMRs, and information technology; and insurance and risk management services, including underwriting and credentialing guidelines, funding analyses, risk management policies and procedures, accounting functions, tax filings, and claims management. The company was founded in 1997 and is based in Avon, Connecticut. (August 9, 2017)

Notable Healthcare Industry Transactions (continued)

Selected Healthcare Transactions Q3 2017

Vestar Capital Partners, Inc. Acquires Quest Analytics, L.L.C.

Vestar Capital Partners, Inc. has acquired Quest Analytics, L.L.C. for an undisclosed amount. Quest Analytics designs and develops health plan provider network management software with desktop, server, and developer platforms. Its quest analytics suite offers access analysis, quality analysis, adequacy analysis, geocoder, disruption analysis, and automation. The company was founded in 2003 and is based in Appleton, Wisconsin. (August 22, 2017)

Rocket Pharmaceuticals, Ltd. Acquires Inotek Pharmaceuticals Corporation

Rocket Pharmaceuticals, Ltd. has acquired Inotek Pharmaceuticals Corporation for an undisclosed amount. Inotek focuses on the discovery, development, and commercialization of therapies for glaucoma and other diseases of the eye. The product pipeline includes Trabodenoson, a monotherapy dosed in an eye drop that is in Phase III clinical trials; Trabodenoson-Latanoprost Fixed-Dose Combination, which has completed Phase II study for use in patients with higher intraocular pressures; and Trabodenoson for optic neuropathy and degenerative retinal diseases. The company was founded in 1999 and is headquartered in Lexington, Massachusetts. (September 12, 2017)

Audax Group, Inc. Acquires WellSpring Pharmaceutical Corporation





Audax Group, Inc. has acquired WellSpring Pharmaceutical Corporation for an undisclosed amount. WellSpring manufactures, markets, and distributes prescription and over-the-counter medicines. It also offers pharmaceutical contract manufacturing services to the companies in North America and Europe. The company offers heart burn relief products; remedy products for motion sickness and nausea; products for infection protection; therapy for prophylaxis of potassium deficiency; skin moisturizers, skin creams, and lotions; and washes, sprays, and cleansing cloths. The company was founded in 1999 and is headquartered in Sarasota, Florida. (September 26, 2017)

Dynatronics Corporation Acquires Bird and Cronin, Inc.

Dynatronics Corporation has acquired Bird and Cronin, Inc. for \$15 million. Bird and Cronin manufactures orthopedic soft goods, sports medicine related items, and specialty patient care products for healthcare professionals and their patients. It offers rehabilitation collars; cervical pillows and tractions; arm slings and wrist supports and braces; lumbar/low back products and back cushions. The company was founded in 1970 and is based in Eagan, Minnesota. (September 27, 2017)

**Source: Transaction material sourced from S&P Capital IQ Database and mergermarket.com*

FOCUS Healthcare and Life Sciences Transactions

<p>This announcement appears as a matter of record only</p>  <p>has acquired</p>  <hr/> <p>The undersigned initiated this transaction, assisted in the negotiations, and acted as financial advisor to ncgCARE.</p> <hr/> 	<p>This announcement appears as a matter of record only</p>  <p>has obtained growth financing from</p>  <hr/> <p>The undersigned initiated this transaction, assisted in the negotiations, and acted as financial advisor to ncgCARE, Inc.</p> <hr/> 	<p>This announcement appears as a matter of record only</p>  <p>has been acquired by</p>  <hr/> <p>The undersigned initiated this transaction, assisted in the negotiations, and acted as financial advisor to ACI Support Specialists, Inc.</p> <hr/> 
<p>This announcement appears as a matter of record only</p>  <p>has acquired</p>  <hr/> <p>The undersigned initiated this transaction, assisted in the negotiations, and acted as financial advisor to ncgCARE.</p> <hr/> 	<p>This announcement appears as a matter of record only</p>  <p>has been acquired by</p>  <hr/> <p>The undersigned initiated this transaction, assisted in the negotiations and acted as financial advisor to Alpha Systems.</p> <hr/> 	<p>This announcement appears as a matter of record only</p>  <p>sold its home and community based services business to</p>  <hr/> <p>The undersigned initiated this transaction, assisted in the negotiations and acted as financial advisor to Arrow Child & Family Ministries.</p> <hr/> 

“We are grateful for the expertise and professionalism FOCUS brought to this transaction. The sale of Alpha Systems to Databank would not have gone as seamlessly as it did had it not been for FOCUS. They understand the needs of both buyers and sellers and ensured the transaction went as smoothly as possible. Their bankers bring a methodical execution strategy that delivers consistent results. This is the second transaction FOCUS has completed for us, which demonstrates the confidence we have in their process and in their firm.” **Brett Griffith**, President, Alpha Systems

**Testimonials may not be representative of the experience of all clients; testimonials are not a guarantee of future performance or success.*

FOCUS Healthcare and Life Sciences Transactions

This announcement appears as a matter of record only



Forging Momentum

has been sold to




PIVOTAL PERFORMANCE


The undersigned initiated this transaction, assisted in the negotiations and acted as financial advisor to Forgentum.

FOCUS
Investment Banking

This announcement appears as a matter of record only



Sidby, England
has been acquired by



Northwood, Ohio

The undersigned initiated this transaction, assisted in the negotiations and acted as financial advisor to Medvance.

FOCUS
Investment Banking

This announcement appears as a matter of record only



Stirling, Scotland
has been acquired by




Vernon, Italy


The undersigned initiated this transaction, assisted in the negotiations and acted as financial advisor to Pleiad Devices, LTD.

FOCUS
Investment Banking

This announcement appears as a matter of record only




has acquired




The undersigned initiated this transaction, assisted in the negotiations, and acted as financial advisor to PositiveID Corporation.

FOCUS
Investment Banking

This announcement appears as a matter of record only



has been acquired by



Inspired Science. Trusted Solutions.®

The undersigned initiated this transaction, assisted in the negotiations, and acted as financial advisor to Bioline.

FOCUS
Investment Banking

This announcement appears as a matter of record only

VERIFY SOLUTIONS

has been acquired by



The undersigned initiated this transaction, assisted in the negotiations and acted as financial advisor to Verify Solutions, LLC.

FOCUS
Investment Banking

This announcement appears as a matter of record only



has been recapitalized by



\$8,000,000 Series A Preferred Stock

The undersigned initiated this transaction, assisted in the negotiations, and acted as financial advisor to Agentek, Inc.

FOCUS
Investment Banking

This announcement appears as a matter of record only



has acquired



BENEFIT MARKETING SOLUTIONS


The undersigned initiated negotiations and acted as financial advisor to Alliance HealthCard.

FOCUS
Investment Banking

This announcement appears as a matter of record only

PROTECT Emergency Response Systems, Inc.

has been sold to



The undersigned initiated the transaction, acted as financial advisor to, and assisted in the negotiations as the representative of PROTECT Emergency Response Systems, Inc.

FOCUS
Investment Banking

FOCUS Healthcare and Life Sciences Team



Jonathan Wilfong

*Regional Managing Partner, Southeast, and
Healthcare and Life Sciences Team Leader*
Atlanta

jonathan.wilfong@focusbankers.com
404-963-8252

Jonathan E. Wilfong has almost 40 years of broad industry experience in mergers and acquisitions, business development, and capital formation. He was a founder and co-founder of two physician practice management companies.



Mark L. Braunstein, MD

Senior Advisor
Atlanta

mark.braunstein@cc.gatech.edu
404-385-3448

Dr. Braunstein teaches health informatics and is involved in fostering research and community outreach aimed at the wider adoption of health information technology to improve the quality and efficiency of care delivery.



Gareth Clarke

Senior Advisor
Atlanta

garethc@bellsouth.net
770-335-8397

Mr. Clarke is a seasoned, internationally experienced CEO with a background featuring strong strategic, financial and marketing skills with a particular emphasis on the healthcare sector. Mr. Clarke currently serves as Chairman & CEO at Innovation Technologies Inc. a privately held medical device company, marketing Irrisept, a product focused upon reducing surgical site infections.



Greg Hagfors

Senior Advisor
Los Angeles, CA

greg.hagfors@live.com
406-788-6532

Greg Hagfors, a healthcare executive for over 25 years, specializes in strategy development and deployment, operational and financial performance enhancement, and leadership development. He has an M.S. in Business Administration from Minnesota State University.



James "Jim" W. Hawkins, MBA, PhD

Managing Director

Washington, DC
jim.hawkins@focusbankers.com
202-470-1971

Jim Hawkins, former President and CEO of five early stage biotechnology companies, has experience in all major areas of the biopharmaceutical industry.



Evans Love

Research Associate

Washington, DC
evans.love@focusbankers.com
301-938-9337

Evans Love has experience with the biotechnology, pharmaceutical development, and medical device industries, primarily concentrating on M&A projects in the clinical/contract research organization sector. His responsibilities include financial modeling and analysis, researching and forecasting market trends, and assisting in business development.



Les Mace

Senior Advisor

Bend, OR
les_mace@bendcable.com
541-554-7409

Les Mace has over 35 years of experience in the medical device industry including co-founder, market research, technology assessment, manufacturing operations, and much more.



Michael J. McGregor

Managing Director

Charlotte, NC
michael.mcgregor@focusbankers.com
704-369-5900

Michael McGregor has 10 years of experience advising on business transfers, capital raises, and management buyouts. He has been a founder or co-founder of three start-up businesses, and received his M.B.A. from The University of Pennsylvania's Wharton School of Business.

**Barry Michael***Senior Advisor*

Clifton, VA

barry.michael@focusbankers.com

301-535-4805

Barry Michael has more than 30 years' experience in medical devices. Previously Mr. Michael held marketing and sales positions at Abbott Diagnostics as well as senior positions at Kimberly-Clark Professional Healthcare.

**James Snodgrass***Managing Director*

Atlanta

jim.snodgrass@focusbankers.com

678-879-3572

Jim Snodgrass is an astute business leader with experience driving multimillion-dollar revenue production and organizational change. Jim has a B.A. in Economics from Virginia Tech, an M.B.A. from Northwestern University Kellogg Graduate School of Management, and a J.D. from Chicago-Kent College of Law.

**Timothy Tankosic, MD***Senior Advisor*

Marina del Rey, CA

ttankosic@aquapartners.net

310-773-0665

Dr. Tankosic has over 25 years of experience as a consultant, advisor, and director for pharmaceutical, biotechnology, diagnostics, and device industries. He has broad experience in major therapeutic areas and technologies and expertise in neuroscience and oncology.

**Gerald Turner***Managing Director*

Washington, DC

gerald.turner@focusbankers.com

202-470-1972

Gerald Turner has over 25 years of executive level experience in a wide range of sectors including diverse financial services, direct marketing, specialty retailing, commercial data base management, and consumer brand marketing and packaging.

About FOCUS Investment Banking LLC

FOCUS Investment Banking LLC provides a range of middle market investment banking services with an emphasis on mergers, acquisitions, divestitures and corporate finance. FOCUS is a national firm serving clients from offices in major cities across the United States. FOCUS specializes in business units with transactions or revenues in the \$5-300 million range, serving entrepreneurs, corporate owners and various types of investors across a broad range of industries, throughout the U.S. and worldwide. FOCUS bankers are seasoned operating and financial executives with extensive transaction experience. Securities transactions conducted by FOCUS Securities LLC, an affiliated company, registered Broker/Dealer and member FINRA/SIPC. For more information on FOCUS, visit www.focusbankers.com.

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FOCUS

Investment Banking

MID-ATLANTIC REGION

FOCUS Investment Banking LLC
Headquarters
1133 20th Street, NW
Suite 200
Washington, DC 20036
202.785.9404
202.785.9413 (fax)

SOUTHEAST REGION

FOCUS Investment Banking LLC
Atlanta Office
3353 Peachtree Road, NE
Suite 1160
Atlanta, GA 30326
404.504.8620
404.814.9141 (fax)

WESTERN REGION

FOCUS Investment Banking LLC
Los Angeles Office
355 South Grand Avenue
Suite 2450
Los Angeles, CA 90071
213.943.1395
213.943.1397 (fax)

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