

TEKLA LIFE SCIENCES INVESTORS
Form N-CSR
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM N-CSR

**CERTIFIED SHAREHOLDER REPORT OF REGISTERED
MANAGEMENT INVESTMENT COMPANIES**

Investment Company Act file number 811-06565

Tekla Life Sciences Investors
(Exact name of registrant as specified in charter)

100 Federal Street, 19th Floor, Boston, MA
(Address of principal executive offices)

02110
(Zip code)

Laura Woodward, Chief Compliance Officer and Vice President of Fund Administration

100 Federal Street, 19th Floor, Boston, MA 02110
(Name and address of agent for service)

Registrant's telephone number, including area code: 617-772-8500

Date of fiscal year end: September 30

Date of reporting period: October 1, 2016 to September 30, 2017

ITEM 1. REPORTS TO STOCKHOLDERS.

TEKLA LIFE SCIENCES INVESTORS

Annual Report

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TEKLA LIFE SCIENCES INVESTORS

Distribution policy: The Fund has implemented a managed distribution policy (the Policy) that provides for quarterly distributions at a rate set by the Board of Trustees. Under the current Policy, the Fund intends to make quarterly distributions at a rate of 2% of the Fund's net assets to shareholders of record. The Policy would result in a return of capital to shareholders, if the amount of the distribution exceeds the Fund's net investment income and realized capital gains. A return of capital may occur, for example, when some or all of the money that you invested in the Fund is paid back to you. A return of capital distribution does not necessarily reflect the Fund's investment performance and should not be confused with "yield" or "income."

The amounts and sources of distributions reported in the Fund's notices pursuant to Section 19(a) of the Investment Company Act of 1940 are only estimates and are not being provided for tax reporting purposes. The actual amounts and sources of the amounts for tax reporting purposes will depend upon the Fund's investment experience during its fiscal year and may be subject to changes based on tax regulations. The Fund will send you a Form 1099-DIV for the calendar year that tells you how to report distributions for federal income tax purposes.

You should not draw any conclusions about the Fund's investment performance from the amount of distributions pursuant to the Policy or from the terms of the Policy. The Policy has been established by the Trustees and may be changed or terminated by them without shareholder approval. The Trustees regularly review the Policy and the frequency and rate of distributions considering the purpose and effect of the Policy, the financial market environment, and the Fund's income, capital gains and capital available to pay distributions. The suspension or termination of the Policy could have the effect of creating a trading discount or widening an existing trading discount. At this time there are no reasonably foreseeable circumstances that might cause the Trustees to terminate the Policy.

Consider these risks before investing: As with any investment company that invests in equity securities, the Fund is subject to market risk—the possibility that the prices of equity securities will decline over short or extended periods of time. As a result, the value of an investment in the Fund's shares will fluctuate with the market generally and market sectors in particular. You could lose money over short or long periods of time. Political and economic news can influence market wide trends and can cause disruptions in the U.S. or world financial markets. Other factors may be ignored by the market as a whole but may cause movements in the price of one company's stock or the stock of companies in one or more industries. All of these factors may have a greater impact on initial public offerings and emerging company shares. Different types of equity securities tend to shift into and out of favor with investors, depending on market and economic conditions. The performance of funds that invest in equity securities of Healthcare Companies may at times be better or worse than the performance of funds that focus on other types of securities or that have a broader investment style.

TEKLA LIFE SCIENCES INVESTORS

Dear Shareholders,

In the last ten to fifteen year period, the performance of the healthcare sector, and that of the biotechnology sub-sector in particular, has been impressive. Note in the following graph that both the S&P Composite 1500[®] Health Care Index* ("S15HLTH") and the NASDAQ Biotechnology Index^{®*} ("NBI") materially outperformed the broad S&P 500[®] Index* ("SPX") in the fifteen year period ending September 30, 2017.

**Biotechnology, Healthcare, and S&P 500 Performance
2002 2017**

We believe that a consistent record of discovery, development and commercialization of new drugs and products that improve quality of life, address medical need and ultimately save lives is the basis for this performance. Nearly everyone has heard of the remarkable genetic engineering and related technologies that are the basis of these new medical products. Moreover, just about everyone we know has a friend or relative who has benefitted from these products and technologies. We think that the combination of accomplishment and positive sentiment has driven healthcare/biotech sector performance.

We also feel that, despite the long history of fundamental progress, angst over drug industry profitability in general, and over drug pricing in particular, has had a negative effect on sector sentiment as of late. These issues were front and center during the recently concluded presidential election cycle and have remained a controversial topic since then as Congress debated the potential repeal and/or replacement of Obamacare. In particular, we think that outrage over drug pricing, justified or (maybe) not, has hurt sentiment for the healthcare/biotech sector.

Despite these challenges, recent sector performance has been quite positive. In fact, the broad SPX was up approximately 20% in calendar 2017 while the healthcare and biotech indices we track were up closer to 30%. As the quarter ended, we were quite upbeat.

However, third quarter 2017 healthcare/biotech sector company reports (made in the month or so after the September 30, 2017 end of the Fund's fiscal year) were mediocre overall, particularly for the large bellwether biotech and pharma companies. This has caused a pullback of approximately 10% in the healthcare sector. As of this writing in early November 2017, both the broad SPX and the healthcare and biotech indices are up approximately 20% in calendar 2017. Such a move in the markets in a ten-month period would always be welcome. However, given both the apparent sentiment and a weak quarter, we have taken a step back to review our thoughts on the healthcare/biotech sector.

More detail is provided later in this note, but in summary, we remain optimistic about the sector. Overall, we expect a continuation of the impressive innovation we have seen. In just the last few years, there have been remarkable developments in immuno-oncology, gene therapy and other areas. In addition, the FDA (while remaining formidable) appears to have become incrementally more accommodative. The IPO market continues to produce new public companies. Our aggregate view is that, in combination with the broad creation and funding of a new generation of public companies, this continued innovation will lead to the discovery and development of many new and novel medical products that will propel the healthcare and biotech sectors forward. We expect these newly formed companies to either be acquired by or to replace the current industry leaders forming the next generation of healthcare/biotech growth. Although we may see some volatility as this renewal process sorts itself out, this makes us optimistic about the medium- and long-term.

As always, we thank you for your consideration of the Tekla Funds. Please call us if you have any questions.

Respectfully yours,

Daniel R. Omstead. Ph.D.
President and Portfolio Manager

Perspective on the Biotechnology and Healthcare Sectors

For some time, Tekla has been positive about the long-term prospects for the healthcare/biotech sector. Over any reasonable multi-year timeframe, we are bullish. As we and others have noted, this sector continues to be a large portion of the US GDP. Healthcare spending is expected to reach 20% of the US economy within the next decade. While the sector comprises a smaller portion of the GDP of other countries, spending is considerable and expected to grow meaningfully in many developed countries. Furthermore, it is reported that overall US Medicare health spending is expected to grow at 5.8% for at least the next decade. In particular, prescription drug spending is expected to grow at 6.7% per year in this same timeframe. We think these projections make the sector attractive.

Actual and Projected Net Medicare Spending 2010 2027

Long-term sector fundamentals are also attractive when we consider healthcare spending on an individual basis. As seen in the figure below and the citation above, the population of the largest countries is expected to age in the coming years. Since more is spent on healthcare as individuals get older, overall healthcare spending should grow. This suggests that, over the long-term, demand for healthcare products and services should continue to grow, likely at an attractive rate.

Population 65 to 84 and 85 Years and Over in the World's Four Largest Countries: 2012, 2030, and 2050

In the intermediate term, we see the continued creation of new and differentiated medical products that are safer and/or more efficacious than existing products and that address currently unmet medical needs in the US and non-US population. These products will be the basis for continued growth in the sector.

The creation of new and novel products depends on the advancement of science in key areas, the identification and clinical testing of newly discovered drugs, and the regulatory approval of such drugs. We see evidence of these accomplishments. The following three charts present favorable trends in the publication of new NIH papers, in the number of registered clinical trials and in the approval of new drugs. For additional data and information, visit fda.gov, clintrials.gov and i2.wp.com.

**National Institute of Health (NIH)
Funded Papers Per Year**

Number of Registered Clinical Trials

**New Molecular Entity (NME) and New Biologic License
Application (BLA) Approvals by Calendar Year**

These data suggest that the pipeline of new drugs should continue to grow over time. As previously reported, an entirely new generation of public companies has been created and funded in the last several years. For example, note that Bloomberg reports that since 2014, there have been 839 IPOs and follow-on financings which raised an aggregate of \$49.21 billion.

In combination with existing corporations, this new generation of well-funded companies will sponsor the new and novel products we anticipate. We continue to see encouraging technological and clinical results. As an example, we point to the coming of age of cell, gene and RNAi therapies. These technologies have been in development for many years; each of these somewhat related approaches have accomplished major milestones. For example, we have seen the approval of an antisense product (Biogen's SPINRAZA™) which treats an otherwise lethal pediatric condition called Spinal Muscular Atrophy, the approval of two T cell based therapies (Novartis AG's KYMRIAH™ and Gilead Sciences, Inc./Kite's Yescarta) that are remarkably effective in certain hematologic cancers, and clear proof of principle by an RNAi based product (Alnylam Pharmaceuticals, Inc.'s patisiran) in the treatment of a form of amyloidosis, and finally, a positive FDA panel recommendation for Spark Therapeutic's Luxturna to treat a rare genetic form of blindness.

These are just a few examples of the encouraging developments we are seeing. There are certainly many challenges to overcome but, in aggregate, these and other developments are an important part of our underlying optimism toward the healthcare/biotech sector.

TEKLA LIFE SCIENCES INVESTORS**Fund Essentials****Objective of the Fund**

The Fund's investment objective is to seek long-term capital appreciation by investing primarily in securities of Life Sciences companies.

Description of the Fund

Tekla Life Sciences Investors ("HQL") is a non-diversified closed-end healthcare fund traded on the New York Stock Exchange under the ticker HQL. HQL primarily invests in the life sciences industries and will emphasize the smaller, emerging companies with a maximum of 40% of the Fund's assets in restricted securities of both public and private companies.

Investment Philosophy

Tekla Capital Management LLC, the Investment Adviser to the Fund, believes that:

- Aging demographics and adoption of new medical products and services can provide long-term tailwinds for healthcare companies
- Late stage biotechnology product pipeline could lead to significant increases in biotechnology sales
- Robust M&A activity in healthcare may create additional investment opportunities

Fund Overview and Characteristics as of 9/30/17

Market Price ¹	\$	21.48
NAV ²	\$	21.62
Premium/(Discount)		-0.65%
Average 30 Day Volume		47,299
Net Assets	\$	466,350,804
Ticker		HQL
NAV Ticker		XHQLX
Commencement of Operations Date		5/8/92
Fiscal Year to Date Distributions Per Share	\$	1.59

¹ The closing price at which the Fund's shares were traded on the exchange.

² Per-share dollar value of the Fund, calculated by dividing the total value of all the securities in its portfolio, plus any other assets and less liabilities, by the number of Fund shares outstanding.

Holdings of the Fund (Data is based on net assets)

Asset Allocation as of 9/30/17

Sub-Sector Allocation as of 9/30/17

*Amount is less than 0.05%

This data is subject to change on a daily basis.

TEKLA LIFE SCIENCES INVESTORS**Largest Holdings by Issuer****(Excludes Short-Term Investments)***As of September 30, 2017*

Issuer	Sector	% of Net Assets
Gilead Sciences, Inc.	<i>Biotechnology</i>	8.8%
Celgene Corporation	<i>Biotechnology</i>	8.4%
Biogen Inc.	<i>Biotechnology</i>	7.9%
Vertex Pharmaceuticals Incorporated	<i>Biotechnology</i>	5.4%
Incyte Corporation	<i>Biotechnology</i>	4.9%
Alexion Pharmaceuticals, Inc.	<i>Biotechnology</i>	4.8%
Regeneron Pharmaceuticals, Inc.	<i>Biotechnology</i>	4.7%
Amgen Inc.	<i>Biotechnology</i>	4.6%
Illumina, Inc.	<i>Life Sciences Tools & Services</i>	3.6%
BioMarin Pharmaceutical Inc.	<i>Biotechnology</i>	3.0%
SPDR S&P Biotech ETF	<i>Exchanged Traded Fund</i>	2.3%
IDEXX Laboratories, Inc.	<i>Health Care Equipment & Supplies</i>	1.8%
Neurocrine Biosciences, Inc.	<i>Biotechnology</i>	1.8%
Jazz Pharmaceuticals plc	<i>Pharmaceuticals</i>	1.8%
Mylan NV	<i>Pharmaceuticals</i>	1.6%
Galapagos NV	<i>Biotechnology</i>	1.4%
Shire plc	<i>Pharmaceuticals</i>	1.4%
Pieris Pharmaceuticals, Inc.	<i>Biotechnology</i>	1.0%
Thermo Fisher Scientific Inc.	<i>Life Sciences Tools & Services</i>	1.0%
Alnylam Pharmaceuticals, Inc.	<i>Biotechnology</i>	0.9%

Fund Performance

HQL is a closed-end fund which invests predominantly in life science companies. Subject to regular consideration, the Trustees of HQL have instituted a policy of making quarterly distributions to shareholders. The Fund seeks to make such distributions in the form of long-term capital gains.

The Fund considers investments in companies of all sizes and in all life science subsectors, including but not limited to, biotechnology, pharmaceuticals, healthcare equipment, healthcare supplies, life science tools and services, healthcare distributors, managed healthcare, healthcare technology, and healthcare facilities. The Fund emphasizes innovation, investing both in public and pre-public venture companies. The Fund considers its venture investments to be a differentiating characteristic. Among the various healthcare subsectors, HQL has considered the

biotechnology subsector, including both pre-public and public companies, to be a key contributor to the healthcare sector. The Fund holds biotech assets, including both public and pre-public, often representing 65-75% of net assets.

There is no commonly published index which matches the investment strategy of HQL. The S15HLTH consists of more than 160 companies representing most or all of the healthcare subsectors in which HQL typically invests; biotechnology often represents 15-20% of this index. By contrast, the NBI, which contains approximately 160 securities, is much more narrowly constructed. The vast majority of this index is comprised of biotechnology, pharmaceutical and life science tools companies. In recent years, biotechnology has often represented 72-82% of the NBI. Neither the S15HLTH nor NBI indices contain any material amount of pre-public company assets.

We present both NAV and stock returns for the Fund in comparison to several commonly published indices. One index, the SPX, is a commonly considered broad based index comprised of companies in many areas of the economy, including, but not limited to healthcare. As described above, the NBI is a healthcare index mostly focused in three healthcare sectors with a uniquely high level of biotechnology comparison. The S15HLTH contains a wider representation of healthcare subsectors, but typically contains a much lower biotechnology composition.

HQL generally invests in a combination of large cap growth-oriented and earlier stage innovative healthcare companies with a focus on the biotechnology sector. Generally, HQL targets biotechnology exposure below that of the NBI and targets a higher biotechnology exposure than does the S15HLTH. We note that in recent periods, biotechnology has been a significant contributor to returns (both positive and negative) associated with those indices. We believe this sector continues to have significant potential for growth in the future.

All performance over one-year has been annualized.

Performance data quoted represents past performance, which is no guarantee of future results, and current performance may be lower or higher than the figures shown. The NAV total return takes into account the Fund's total annual expenses and does not reflect transaction charges. If transaction charges were reflected, NAV total return would be reduced. All distributions are assumed to be reinvested either in accordance with the dividend reinvestment plan (DRIP) for market price returns or NAV for NAV returns. The market price returns reflect the reinvestment at the closing market price on the last business day of the month.

Portfolio Highlights as of September 30, 2017

Among other investments, HQL's performance benefitted in the past year by the following:

Incyte Corporation (INCY) is a large cap biopharmaceutical company that has outperformed based on progression of their lead immuno-oncology asset into pivotal phase III clinical studies earlier than expected. We look forward to seeing further clinical data at the American Society of Hematology (ASH) conference in December.

Pieris Pharmaceuticals, Inc. (PIRS). A global deal with Astra-Zeneca on the company's second asset has drawn the market's attention to Pieris Pharmaceuticals and the stock has performed well. The growing immuno-oncology pipeline based on their novel modular anticalin platform has advanced to the clinic and the market has begun to give it credit.

Galapagos NV (GLPG) a Belgium based biotech has potential best in class treatments for cystic fibrosis (partnered with Abbvie Inc.) and a JAK inhibitor for the treatment of Rheumatoid arthritis. GLPG also has a deep pipeline that is starting to generate interest in the stock beyond the JAKs and the CF programs, namely the wholly-owned IPF (idiopathic pulmonary fibrosis) program, and partnered OA (osteoarthritis) and atopic dermatitis programs. We continue to believe that the depth of GLPG's pipeline make it an attractive take-out target for 2018.

Among other examples, HQL's performance was negatively impacted by the following:

The Fund was underweight in *Kite Pharma, Inc. (KITE)* a mid cap biopharmaceutical company. We have largely avoided the CAR T-cell platform companies that utilize a patient's own cells as product material except for selectively investing in particular clinical trial events. This has been due to concerns with competitive technologies that use more "off-the-shelf" products that could enter the market in the mid-term. For that reason, we did not have exposure to Kite Pharma when Gilead purchased them for a high multiple after a large run up in stock price.

*The trademarks NASDAQ Biotechnology Index[®], S&P Composite 1500[®] Healthcare Index, and S&P 500[®] Index referenced in this report are the property of their respective owners. These trademarks are not owned by or associated with the Fund or its service providers, including Tekla Capital Management LLC.

TEKLA LIFE SCIENCES INVESTORS

SCHEDULE OF INVESTMENTS

SEPTEMBER 30, 2017

**CONVERTIBLE PREFERRED AND
WARRANTS (a) (b) -**

SHARES	2.8% of Net Assets	VALUE
	<i>Biotechnology - 1.1%</i>	
1,400,000	Amphivena Therapeutics, Inc. Series B (Restricted)	\$ 2,100,000
1,153,847	BioClin Therapeutics, Inc. Series A (Restricted)	750,001
445,633	BioClin Therapeutics, Inc. Series B (Restricted)	333,333
2,568,939	EBI Life Sciences, Inc. Series A (Restricted) (c)	13,102
933,333	GenomeDx Biosciences, Inc. Series C (Restricted)	1,400,000
90,000	Trillium Therapeutics, Inc. Series II (d)	463,500
		5,059,936
	<i>Health Care Equipment & Supplies (Restricted) - 0.8%</i>	
2,338,198	AlterG, Inc. Series C	865,133
79,330	CardioKinetix, Inc. Series C	0
142,574	CardioKinetix, Inc. Series D	0
439,333	CardioKinetix, Inc. Series E	0
481,378	CardioKinetix, Inc. Series F	0
N/A (e)	CardioKinetix, Inc. Warrants (expiration 12/11/19)	0
N/A (e)	CardioKinetix, Inc. Warrants (expiration 6/03/20)	0
8,822	CardioKinetix, Inc. Warrants (expiration 8/15/24)	0
951,000	IlluminOss Medical, Inc. Series AA	0
895,848	IlluminOss Medical, Inc. Junior Preferred	0
71,324	IlluminOss Medical, Inc. Warrants (expiration 3/31/27)	0
3,280,000	Tibion Corporation Series B	0
N/A (e)	Tibion Corporation Warrants (expiration 10/30/17)	0
N/A (e)	Tibion Corporation Warrants (expiration 11/28/17)	0
2,606,033	Veniti, Inc. Series A (c)	1,563,620
1,307,169	Veniti, Inc. Series B (c)	823,516
716,720	Veniti, Inc. Series C (c)	530,373
		3,782,642
	<i>Life Sciences Tools & Services (Restricted) - 0.7%</i>	

2,446,016

Labcyte, Inc. Series C

3,081,980