



Pittsburgh Pharmacy Investment Portfolio

Intro Meeting 9/10/19

Leadership Team

- Managing Partner- Corey Rantz
- VP/Partner- Mo Kashkoush
- Business Partner- Vince Piro
- Communications Director- Annalisa Nguyen
- Lead Analyst- Colin Pfeiffer
- Lead Analyst- Josh Cinicola
- Reporting Chair- Ryan Jaehne

What is PPIP?

- Founded by four recent PharmD graduates two years ago
- “The Pittsburgh Pharmacy Investment Portfolio (PPIP) is a student-run investment portfolio that focuses on securities with a high exposure to healthcare.”
- Create healthcare professionals that understand the value healthcare companies bring to the market

What PPIP Does

- Run a mock investment portfolio of \$50,000
- Securing real future funding
- Educate pharmacy students on industry trends

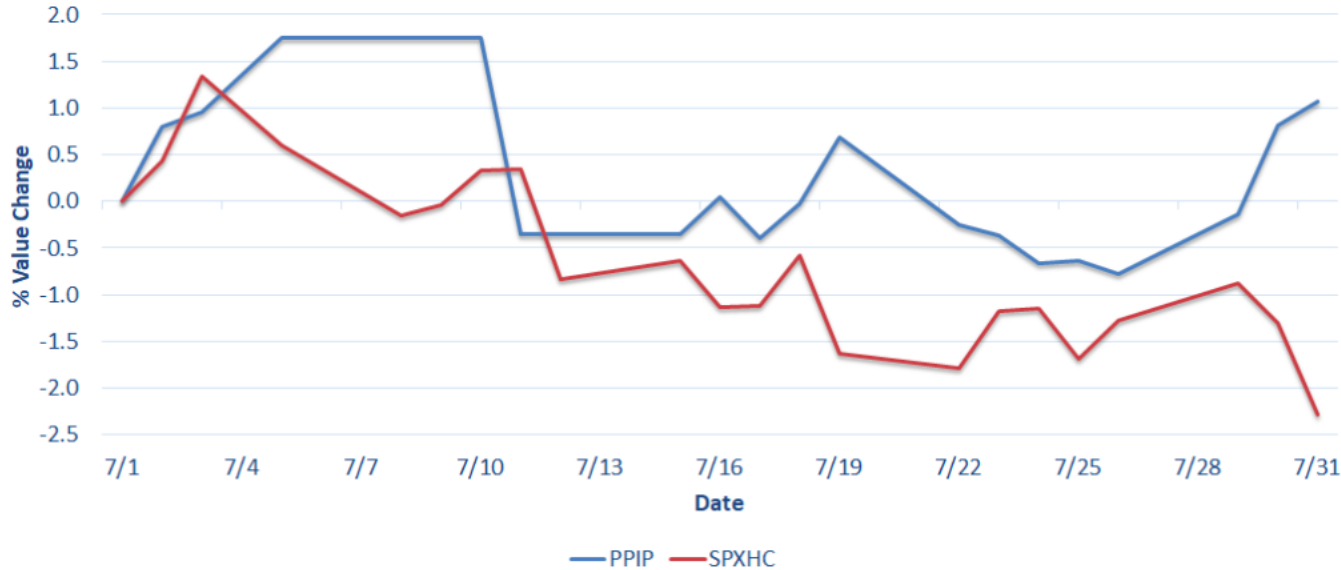
Company	Actual Percent
Johnson & Johnson	12.14%
Abbott	10.02%
Medtronic	9.95%
Merck	9.92%
UnitedHealth	9.79%
AbbVie	8.42%
Novartis	8.22%
AstraZeneca	7.53%
CVS Health	7.07%
Mylan	5.02%
IDEXX	4.64%
GlaxoSmithKline	4.11%
Sarepta	2.57%
Intra-Cellular	2.50%
Agios	1.90%

What PPIP can do for you

- No matter where you end up, it is always important to understand new medications and where they come from!
- PPIP will:
 - Teach basic financial knowledge (no prior experience necessary)
 - Provide tangible work to showcase for employers
 - Create a framework for analyzing complex cases
- Guarantee that you will walk out of PPIP with skills and knowledge you didn't have before

Performance

Figure 1. PPIP vs. SPXHC Performance: 7/1/2019 - 7/31/2019



- Outperformed SPXHC index in July
- SPXHC index (-2.28%)
 - Weighted average of S&P 500 Healthcare companies
 - PPIP (+1.07%)

 **CVS**
Health.

 **Pfizer**

 **Johnson & Johnson**

 **NOVARTIS**

Performance

Figure 4. PPIP vs. SPXHC Performance: 8/1/2018 - 7/31/2019



- Outperformed SPXHC index in past year
- SPXHC (+2.44%)
- PPIP (+3.11%)

Performance

Figure 5. PPIP vs. SPXHC Performance: 4/23/2018 - 7/31/2019



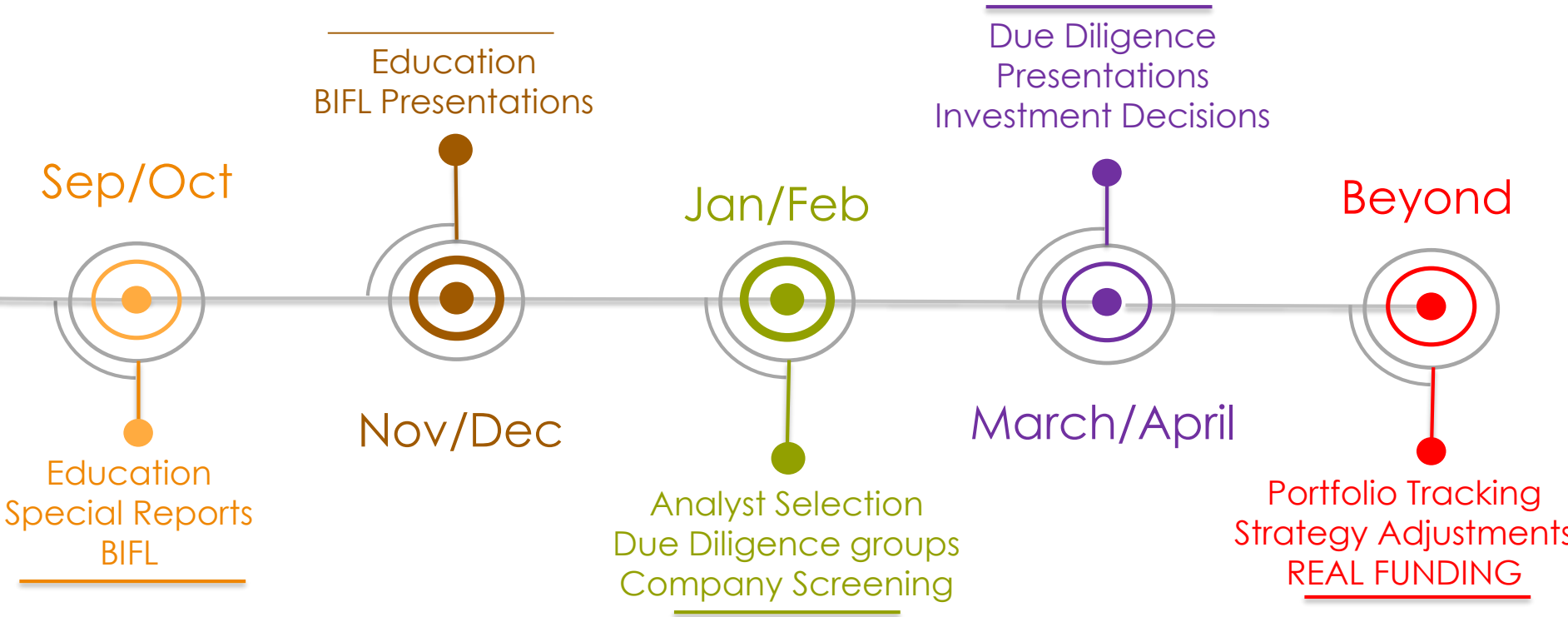
- Outperformed SPXHC index since inception
- SPXHC (+10.53%)
- PPIP (+11.71%)
- \$50,000 investment would have yielded a \$5,855 gain.

What was the catalyst?

DRUG STORES/PHARMACIES	DRUG DISTRIBUTORS
(CVS) CVS HEALTH 63.46 -6.59 [-9.41%]	(MCK) MCKESSON 133.56 -11.10 [-7.67%]
(WBA) WALGREENS BOOTS 59.34 -6.92 [-10.44%]	(ABC) AMERISOURCEBERGEN 84.40 -5.42 [-6.03%]
(RAD) RITE AID 1.78 -0.21 [-10.35%]	(CAH) CARDINAL HEALTH 49.20 -3.73 [-7.05%]

Amazon buys PillPack, an online pharmacy, for just under \$1B

Timeline



Opportunities for P1 Involvement

- BIFL- Biotech Investment Fantasy League
 - \$50,000 of fake money and 8 weeks
 - Winners present in front of a panel for prizes
- Specialized content and reports
- LinkedIn manager
- Analyst positions come spring semester



Questions?

Industry Updates

May

- Novartis buys Xiidra from Takeda for \$3.4 billion
- Zolgensma FDA approved

June

- BMS finalizes purchase of Celgene for \$74 billion
- INSYS files for bankruptcy
- Pfizer buys Array BioPharma for \$11.4 billion
- AbbVie buys Allergan for \$63 billion

July

- Pfizer combines Upjohn with Mylan to form new company

Aug

- Zolgensma data controversy
- J&J pays \$572 million in opioid lawsuit

A Case Study- Novartis and Zolgensma

Zolgensma (onasemnogene abeparvovec-xioi) from Novartis and Avexis was approved by the FDA on May 24, 2019 for the treatment of Spinal Muscular Atrophy (SMA). Novartis acquired this therapy by purchasing Avexis for \$8.7B. It is a one-time gene therapy that is priced at \$2.1 million dollars. Before its approval, Spinraza (nusinersen) from Biogen was the only FDA-approved treatment for SMA with the price tag of \$750k for the first year and \$375k thereafter.



Basic financials for Zolgensma

- Estimated 4891 SMA patients in the US, with 481 new cases each year
 - Various inclusion criteria for Zolgensma treatment eligibility
 - Important: must be under 2 years, older than 6 months
- Potential revenue: $481(1.5) * 2.1M = 1.5B$ per year
- Assuming an average treatment rate of 50% over 10 years, does the acquisition price make sense for Novartis?
 - $5.05 B - 8.70B = -3.70B$ loss

Critical thinking about Zolgensma

- What are some barriers for Zolgensma to enter the SMA market?
- Spinraza costs \$750,000 the first year and \$375,000 every year afterwards. Zolgensma is a one-time cost of 2.1M. Assuming equal efficacy between the two, why would a payer prefer Spinraza over Zolgensma?