Partnerships and Investing in the Life Sciences

Tim Opler
October 14, 2015
www.torreya.com
One hundred years ago...

The combined market cap of the pharma sector was less than a half billion dollars.

Penicillin had not been invented.

Insulin was extracted from pig pancreases.

The leading treatment for psychiatric illness was lobotomy.

Leeches were still widely used in medical practice.

Outside the U.S. and Europe, practices were often even more primitive.

U.S. consumers spent less than 5% of their income on healthcare and less than 1% of their income on pharmaceuticals.

Merck and Wyeth were small chemical companies in New Jersey. Pfizer was making progress in confectionery products. J&J was building market leadership in band-aids. Some Eli Lilly labs closed for the winter.
The combined valuation of the twenty largest global pharmaceutical companies is over $2.8 trillion (see chart at right).

This is up over 100% in the last four years alone.

Mortality and morbidity rates from major diseases including heart disease, cancer and stroke are down dramatically.

Devastating mental illnesses such as depression, schizophrenia and bipolar disorder can be better managed.

Most drugs on the market have proven efficacy and safety.

U.S. consumers spent nearly a fifth of their income on healthcare and more than 3% of their income on pharmaceutical products.

The pharmaceutical business has globalized with modern drugs available in most countries in the world.

Our sector has exploded in size and importance.
Key Dynamics Driving Growth:

- Deeper understanding of the genetic mechanisms of disease
- Deeper understanding of how to control diseases at their genetic sources by restoring correctly formed proteins or preventing production of malformed proteins
- Deeper understanding of how the immune system works and impacts cancer
- New technologies in gene sequencing, gene therapy, gene editing and RNAi
- Rapidly increasing sophistication of molecular diagnostic tools
- Advent of digital health techniques
- Improved access to medicines globally
- The combined effect of these and many other innovations on human life spans in this century will be dramatic. We believe that the 21st Century will be the Century of Biology
- We think it is possible that the Life Sciences Sector will be the largest part of the economy in fifty years
Medical Spending Rises Disproportionately with National Income

The U.S. Consumer has spent an increasing percentage of wallet on medical care. Once the consumer has covered the basics of food and shelter he/she directs the marginal dollar to superior goods such as investment in life extension (medical care).

Forecast Growth in Pharmaceutical Consumption

Total Pharmaceutical Revenue by Country, 2004 - 2020

Source: Torreya Insights pharma demand model based upon relationship between pharma demand and GDP. GDP baseline growth estimates from WEFA.
As persons live longer in industrialized countries their lifetime demand for pharmaceutical and other medical products will rise rapidly.

In past decades a person may not have survived their first chronic disease whether it be cardiovascular disease or HIV.

As therapies continue to come online to treat these diseases persons are increasingly likely to face second, third and fourth line chronic disease states – particularly diseases of the aged such as Alzheimer’s disease and cancer.

**Change in Life Expectancy at Birth, 1960 - 2009**

<table>
<thead>
<tr>
<th>Country</th>
<th>2009</th>
<th>2039</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>81.6</td>
<td>87.2</td>
</tr>
<tr>
<td>France</td>
<td>81.0</td>
<td>88.4</td>
</tr>
<tr>
<td>Germany</td>
<td>80.3</td>
<td>88.6</td>
</tr>
<tr>
<td>Ireland</td>
<td>80.0</td>
<td>88.5</td>
</tr>
<tr>
<td>Japan</td>
<td>83.0</td>
<td>90.4</td>
</tr>
<tr>
<td>Poland</td>
<td>75.8</td>
<td>81.2</td>
</tr>
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</tr>
<tr>
<td>Switzerland</td>
<td>82.3</td>
<td>89.5</td>
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<tr>
<td>United States</td>
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<td>82.8</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>80.5</strong></td>
<td><strong>87.3</strong></td>
</tr>
</tbody>
</table>

Life expectancy at Birth in Ten Selected Countries in 2009 and 2039 (projected)

Note: The projected life expectancy for 2039 was made by assuming the percentage change in average life expectancy in the 30 years prior to 2009 would continue in the 30 years after 2009. When considering whether this assumption is reasonable it is important to note that improvements in life expectancy have been accelerating over the last 50 years.
Bottom Line:

Medical Products / Pharma spend is going to rise at an increasing rate for the foreseeable future.

You could not pick a better time in history to become a life sciences innovator in Indiana.
Torreya Insights is a 12-person research company affiliated with Torreya Partners, a life sciences investment bank based in New York and London.

Torreya Insights has been working for three years on a study of the global pharmaceutical sector.

We identified more than 24,000 pharmaceutical enterprises on a global basis and another 20,000 enterprises focused on other parts of the life sciences.
According our analysis, the value of the pharmaceutical sector in September 2015 was approximately $5.6 trillion (half in the top 20 pharms).

The value of entire life sciences sector worldwide is approximately $10 trillion.

Life Sciences represents one of the five largest industries in the world.

We are working in a huge and very complex growing part of the global economy.

Our sector is undergoing constant change due to a very high pace of innovation and increasing global wealth.
Indiana is a great place to live and the people are really nice.

But, does Indiana really matter in the life sciences industry?

Thanks to our recent study, we can answer that question definitively.
Indiana has 24 enterprises in the life sciences sector each with a value in excess of $100 million.*

Just as important, Indiana is home to more than 50 small and medium companies, many working on very early stage science – with high value potential.

The total value of enterprises in Indiana in the life sciences as of September 2015 was $139 billion.

*Includes segment data for groups like Roche Diagnostics and private groups such as the various Cook entities.
Less than one tenth of one percent of the world’s total population lives in Indiana.

6.5 million out of 7 billion people

Chances of Living in Indiana:

1 of 1000

But 1.4% of all the value in the life sciences sector is based in Indiana

$140 billion out of a 410 trillion industry

Fraction of the value in Indiana

14 of 1000

Indiana’s value share is disproportionate and reflects smart, innovative, and hard working people.

There is $22,000 in life sciences sector value in this state for every living citizen.
Innovation Stories

Three Researchers from Indiana
Dr. Stephen Ash is arguably the most important innovator in the field of renal medicine in two decades.

- Dr. Stephen Ash has been a practicing nephrologist at Clarian Arnett Health, Lafayette, IN and a Director of Dialysis since 1975. He is Adjunct at Purdue.
- Dr. Ash is a prolific inventor and holds more than 30 patents in the areas of hemodialysis, peritoneal dialysis, vascular access devices, extracorporeal medical devices, and sorbent chemicals.
- A number of Dr. Ash’s innovations have been successful including the Ash Split Cath, the leading chronic dialysis catheter, and the Centros catheter marketed by AngioDynamics. With Bob Truitt he co-founded Renal Solutions, Inc. which was purchased by Fresenius for $190 million. He also co-founded ZS Pharma, which has a value of over $1.5 billion, with Mr. Truitt.
Dr. Richard DiMarchi is one of the world’s top innovators in peptide chemistry and a leading thinker on incretin mimetics.

- Richard DiMarchi is the Standiford H. Cox Professor of Chemistry and the Linda & Jack Gill Chair in Biomolecular Sciences at Indiana University.
- He is a co-founder of Ambrx, Inc. and Marcadia Biotech.
- Led discovery of Humalog® for Eli Lilly.
- He is a scientific advisor to Ferring, Merck, Roche and three venture funds; 5AM, TMP, and Twilight.
- He is a retired Group Vice President at Eli Lilly & Company where he provided leadership in biotechnology, endocrine research and product development.
Dr. Adam Zlotnick is a world expert in the field of virology and a Professor in the Chemistry Department at Indiana University.

- Dr. Adam Zlotnick is a professor of Molecular and Cellular Biochemistry at Indiana University.
- The focus of his academic research is the physical chemistry of virus capsid assembly.
- While at IU, he co-founded Assembly Pharmaceuticals in 2012.
- Dr. Zlotnick has chaired or co-chaired the first Gordon Conference on Physical Virology (2009), the International Meeting on the Molecular Biology of Hepatitis B Viruses (2010), and the FASEB Science Research Conference on Virus Structure and Assembly (2014).

Assembly Biosciences went public in 2014 via a reverse merger and has had a market value in excess of $300 million. The company is well positioned to introduce a functional cure for Hepatitis B based on Dr. Zlotnick’s research. The company maintains a research presence in Indiana.
### What These Three Researchers Have in Common

<table>
<thead>
<tr>
<th>Each solved a big problem (High potassium, diabetes, and Hepatitis B)</th>
<th>Each pursued a patentable solution that was not obvious and required many years of thought and research</th>
<th>Each researcher worked in a small team and was very focused (almost maniacally so)</th>
<th>Each formed a company in Indiana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each struggled to raise money</td>
<td>Each got help to facilitate business formation and then allowed their businesses to evolve</td>
<td>Each created tremendous value that was not well recognized at the beginning</td>
<td>Each is still humble, doing research and looking for the next big innovation</td>
</tr>
</tbody>
</table>
Conclusion

Indiana is an Amazing Place for Innovation

These are Just Three of Dozen’s of Stories of Extraordinary Life Sciences Innovation in Indiana
If Ash, DiMarchi and Zlotnick Were Here Today on a Panel, What Would They Say (I think)

<table>
<thead>
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<tr>
<td>• Solve big problems</td>
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<td>• Encourage innovation</td>
<td>• Keep building up the Indiana bio-ecosystem (Biocrossroads fantastic – we need more of this)</td>
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<td>• Keep investing in Indiana</td>
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<td>• Never give up</td>
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<td>• Don’t be afraid to get help</td>
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Capital Strategies

Accessing Funds to Advance Innovation
Raising capital for life sciences companies is brutal. Private capital markets are tough because failure rates of innovation are high and a high degree of expertise is required to select and analyze winning investments. Companies tend to underestimate funds needed.
Raised seed capital from friends and high net worth investors – many in Indiana. Then skipped venture capital and went straight to public markets via a reverse merger. Has raised $110 million without declaring a lead molecule.

Raised seed capital from Twilight Ventures, an Indiana-based angel investment fund. Was acquired by a strategic before could complete a larger institutional round.

Moved to Texas and raised capital from Emerging Technology Fund (state money) and friends and family. Then did a larger round with Alta Partners before going public.
# Key Private Capital Sources for Early Stage Life Sciences Companies

- Friends and Family
- Angel Investors
- Venture Capital
- Government Sources
- Foundations and Non-Profits
- Strategic Investors
- Crossover Investors
## Pro’s and Con’s of Various Investor Types

<table>
<thead>
<tr>
<th></th>
<th>Corporate</th>
<th>Wealthy Individuals / Family Offices</th>
<th>Venture Capital (and select PE firms)</th>
<th>Crossover Investors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pros</strong></td>
<td>Attracted to strong management and products that could be associated with their business</td>
<td>Attracted to very good stories</td>
<td>Stage-independent</td>
<td>Public investors cross over to a private before and IPO</td>
</tr>
<tr>
<td></td>
<td>Will pay strategic premiums</td>
<td>Interested in financing projects that have medical impact and benefit humanity</td>
<td>Sophisticated and medically savvy</td>
<td>In practice, the presence of crossover investors can be a major plus in structuring</td>
</tr>
<tr>
<td></td>
<td>Some prefer late-stage</td>
<td>Most take small bite sizes but a subset of super high net worth investors and associated family offices can invest $50m or more into biotech companies</td>
<td>Can perform due diligence that others can leverage near closing</td>
<td>executing a successful IPO</td>
</tr>
<tr>
<td></td>
<td>Can be patient</td>
<td></td>
<td>Like to lead</td>
<td>Crossover institutions offer implicit support for an IPO and often explicitly in the form of either insider commitments or in the form of anchor orders at the time of the IPO</td>
</tr>
<tr>
<td></td>
<td>Like to have a seat at the table, especially if other corporate investors involved</td>
<td></td>
<td>Collaborative and value add</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May drive M&amp;A and create sense of urgency</td>
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<td></td>
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</tr>
</tbody>
</table>

| **Cons**            | Some prefer early-stage                                                  | Often not medically sophisticated and able to evaluate opportunities            | Valuation sensitive                                                         | Not hands on and not always knowledgeable                                         |
|                     | Generally followers                                                      | Often have volatile taste for investment opportunities                         | Can be conflicted                                                           | Can abandon a company early on                                                  |
|                     | Sometimes request business or licensing rights / options                  |                                                                              | Non transparent agendas                                                     |                                                                                  |
|                     |                                                                          |                                                                              | Slow process                                                                |                                                                                  |
|                     |                                                                          |                                                                              | Like control and demand board representation                                |                                                                                  |

*Note: The table above outlines the key characteristics and considerations for various investor types, including Corporate, Wealthy Individuals/ Family Offices, Venture Capital (and select PE firms), and Crossover Investors. It highlights both the pros and cons associated with each type of investor, providing insights into their preferences, decision-making processes, and potential impacts on companies seeking investments.*
On March 25, 2015, the SEC adopted key amendments to Regulation A (known as Reg A+)

The rules provide an exemption for U.S. and Canadian companies that are not required to file reports under the Exchange Act to raise up to $50 million in a 12-month period.

The rules created two tiers: Tier 1 for smaller offerings raising up to $20 million in any 12-month period, and Tier 2 for offerings raising up to $50 million.

Tier 1 is the most interesting offering for life sciences companies. Basically, a Canadian or US private company can issue up to $20mm of tradable securities with no ongoing reporting obligations.

A form A-1 needs to be filed with the SEC and state securities regulators at the time of issue.

A good resource to learn more is the website of Bill Hambrecht, our public equity partner: www.wrhambrecht.com
The Current Environment

A Volatile Stock Market is Impacting Access to Capital
We are in a highly volatile market environment for life sciences companies – heightened by concerns on drug pricing and a Fed tightening.

1. The biotech market is now down 25% from its peak in the Summer.
2. Key things to note:
   - Overall, the market is still up over 400% in ten years – most of it in the last three years.
   - Valuations remain at record levels
   - Concerns about pricing driving the market decline
“Biotech shares fall after Clinton tweet sparks selloff...
Biotechnology shares fell [dramatically] after Democratic presidential candidate Hillary Clinton's tweet about price gouging by drugmakers sent biotechnology shares lower [week of Sep. 21]. The Nasdaq's Biotechnology Index fell about 14%. Much of the selling was profit taking in a market that has rallied nearly 600% since the bull market began in 2009.”

T. Rowe Price analysts

- IPO’s getting pulled although a few are going through. It’s obviously going to be tougher going for public equity access.
- This does not bode well for the crossover market nor for the VC market.
- Our discussions with the public buyside suggest that most think the market will not rebound until 2016. Most funds going to sidelines.
- As a result, we are in the most bearish period for life sciences stocks since 2009.
- We think that Medicare reforms on pricing of orphan drugs that are off patent are likely but that pricing of on-patent drugs for rare conditions will remain robust.
- Payors unlikely to unilaterally change pricing of rare disease drugs. No precedent or support in the system.
- The credit market remains strong although more speculative pharma deals not getting done. Asset consolidators hurt.
- Big Pharma not yet in bargain hunting mode on biotech. Waiting for prices to level out at a lower level. This is risky for them.
- The deal market is slowing considerably. CEO’s do deals when they and their investors are confident.
- Despite this bearish news, we think the market is still open for good companies. The fundamentals of our industry are still strong and valuations are still strong by historical standards.
M&A Market

The M&A Market Has Been Impacted in the Last Month
Buyside Motives are the Core Driver of M&A

R&D Pipeline
- A traditional catalyst for M&A activity
- Driven by long-term revenue gaps / LOEs
- We are witnessing a migration to more risk mitigated M&A structures
- The line between licensing and M&A deals is becoming increasingly blurred

Revenue Consolidation
- Definition: A company which effects an M&A transaction which brings revenue with it
- Cheap debt and tax inversions very important
- Examples: Valeant (Canada), Teva (Israel), Jazz (US), Actavis/Allergan (US), Perrigo (Ireland), Concordia (Canada)

Global Expansion
- Definition: A formerly regional company which has expanded to become a global player
- Example: Takeda (Japan)
- Aspirants: Lupin (India), Otsuka (Japan), Fosun (China), CSL (Australia), Sun Pharma (India)
M&A Deal Value / Volume Broke a Record in 2014

**Large Pharma**
Refine focus: asset swaps and regional acquisitions; pipeline replenishment

**Mid-Sized Pharma**
“Acquire or be acquired”

**Regional Companies**
Tax inversions; acquiring into new geographies

**Generics**
Restructuring to include patent-protected products

**Divestitures**
 Fallout from previous M&A with overlaps

Source: Evaluate Pharma as of 31 Aug 2015
2014 levels were achieved by the rush by big US companies to complete tax inversion deals abroad

### Notable Transactions in 2014 Involving Tax Inversions, or Acquirers Which Inverted Before

Reduction of corporate tax rate through transaction

**Notes:** Bubble sizes represent relative deal size; top logo is merging non-US company; bottom logo is merging US-company.

**Source:** IMAP GLOBAL M&A Report Pharma / Biotech 2015 Report
Global Pharma M&A Deal Pace Even Higher at Start of 2015 (...Until Recently)

2015 Has Been a Period of M&A Frenzy in Pharma: Until the Last Six Weeks

M&A Transactions / Quarter, Q1 2014-Present
(Pharmaceutical Sector Deals > $10mm, Globally)
Partnering Strategies

Accessing Capital Through Licensing & Strategic Partners
Stages of a Partnering Process

<table>
<thead>
<tr>
<th>Preparation</th>
<th>Diligence</th>
<th>Contacting counterparties</th>
<th>Soliciting offers</th>
<th>Negotiation</th>
<th>Closing a deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teaser</td>
<td>Data room</td>
<td>Building a call list</td>
<td>Phone chatter</td>
<td>Objectives</td>
<td>APAs</td>
</tr>
<tr>
<td>CDA</td>
<td>Preparing for diligence</td>
<td>Approaches</td>
<td>Process letters</td>
<td>Building leverage</td>
<td>SPAs</td>
</tr>
<tr>
<td>The management presentation</td>
<td></td>
<td></td>
<td></td>
<td>Importance of relationship build</td>
<td>Schedule of exceptions</td>
</tr>
<tr>
<td>Consulting work</td>
<td></td>
<td></td>
<td></td>
<td>Negotiation styles</td>
<td>Issues that blow up deals</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Instinct</td>
<td></td>
</tr>
</tbody>
</table>
The most important element of partnering and M&A is understanding how the other side’s process works. It is critical to listen well when talking to potential partners.

The most important thing you can do is to get your partner the information that they need to build their business case.

AstraZeneca’s website is unusually helpful and transparent in this regard.

Please forgive me for a little plagiarism from their website.
Both project evaluation and due diligence require stringent assessment criteria. To achieve this, we have created the “5 Rs” evaluation framework (Right target, Right tissue/exposure, Right safety, Right patients, Right commercial), providing a rigorous assessment and facilitating both speed and quality of execution. This evaluation takes place for all projects whether they are from partners or from our own laboratories, allowing us to take forward the most attractive opportunities regardless of source.

| Right target | • Strong link between target and disease  
|             | • Differentiating efficacy  
|             | • Available and predictive biomarkers |
| Right tissue/exposure | • Adequate bioavailability and tissue exposure  
|                     | • Human Pharmacokinetics / Pharmacodynamics (PD) prediction  
|                     | • PD biomarkers  
|                     | • Drug-drug interaction |
| Right safety | • Clear assessment of safety risks  
|             | • Clear understanding of risk / benefit  
|             | • Availability of predictive biomarkers |
| Right patients | • Scientific evidence in lead indication  
|               | • Risk / benefit stratification of patient population  
|               | • Personalised healthcare strategy including diagnostic / biomarkers |
| Right commercial | • Differentiated value proposition vs. future standard of care  
|                  | • Priority geographies  
|                  | • Market access / payer / provider focus  
|                  | • Personalized healthcare strategy including diagnostic / biomarkers |
Case Study: Negotiation Process

Negotiation Process in a Torreya Partners Licensing/Partnership Transaction

- Mean Offer in Stage
- Range of Offers
- Numbers of Counterparties in Process

Mean Offer in Stage:
- 7.2x Initial Interest
- 4.5x Initial Interest
- 2.8x Initial Interest

Range of Offers:
- 0 to 60

Numbers of Counterparties in Process:
- Contacted
- Initial Interest
- Letter of Intent
- Late Stage
- Negotiation Exclusivity & Deal

Stages of Negotiation Process:
- Mean Offer in Stage
- Range of Offers
- Numbers of Counterparties in Process
1. Growing global wealth and longer life spans are creating a long-term bullish trend for the life sciences sector.

2. The global life sciences sector is huge and highly innovative.

3. Indiana is the perfect place to be to engage in that innovation.

4. If you are an entrepreneur, follow your passion, never give up and try to solve big problems.

5. Despite a recent downdraft in the market, the capital markets remain open to good companies.

6. It’s critical to master different financing and partnering techniques. Both sides of the game have become more sophisticated.

7. The most important advice we can give to entrepreneurs is to understand what the other side needs and address those needs.

Good Luck!
APPENDIX: SPEAKER BIOGRAPHY + TORREYA PARTNERS BACKGROUND

Torreya Partners:

A Boutique Investment Bank Focused on the Life Sciences
Torreya Partners is a Life Sciences Boutique Investment Bank Focused on Licensing, M&A and Capital Raising

Total Life Sciences Focus

Operating Perspective

Traditional Investment Banks
- Global Footprint

Boutique Advisory Firms
- Independent Advice
- Senior Level Attention

Torreya Last 6-Month Transaction by Region
- North America: 17%
- Europe: 28%
- Asia & ROW: 55%

Torreya Last 6-Month Transaction by Sector
- Pharma: 22%
- Biotech: 56%
- Devices/Dx: 22%

Industry Background of Senior Professionals

Percent of Pharma Transactions with Torreya Involvement

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Sept 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.0%</td>
<td>3.9%</td>
<td>9.6%</td>
<td>12.5%</td>
</tr>
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2.0% 3.9% 9.6% 12.5%
Global Focus and Reach

Life sciences advisory in North America, Europe and Asia. Has 30 employees and advisors. Focused on strategic transaction work and capital raising.

Information services company. Has staff of 12. Maintains life sciences databases and does transaction enabling work including research.

Our partner for public underwriting. Known for excellence in IPOs and identifying exceptional companies early.

* Key affiliate partners are Lucas Advisors in Africa, Latin America and MidEast; IDFC in India; GEP in Australia; BFC in China and GCA-Savvian in Japan.
Torreya has advised on 40 assignments in the last year. Examples of assignments are shown at right.

Recent Transaction Activity

- **Midatech Pharma**: Acquisition of DARA BIOSciences
  - $30 million
  - Pending

- **XOMA**: License of TGFβ Ab to Novartis
  - $517 million
  - ($37mm upfront)
  - October 2015

- **Crown Laboratories, Inc.**: Debt Facility via Hayfin
  - $20 million
  - September 2015

- **BioReference Laboratories**: Sale to OPKO
  - $1.47 billion
  - August 2015

- **cCAM Biotherapeutics**: Company Sale to Merck
  - $605 million
  - ($95 million upfront)
  - July 2015

- **TEVA**: Sale of ANDA Portfolio to ani Pharmaceuticals, Inc.
  - $25 million + Profit Share
  - July 2015

- **ProSolus**: Sale to Mission Pharmacal
  - Up to $50 million
  - June 2015

- **IPSEN**: Acquisition of Octreopharm Sciences
  - $116 million
  - ($5 million upfront)
  - May 2015

- **atGEN-X**: License of Antibody to LEO
  - Up to $470 million
  - January 2015

- **Phenex Pharmaceuticals AG**: Sale of FXR Program to Gilead

TORREYA PARTNERS
Our expertise is strongest in biotechnology, specialty pharmaceuticals and generic pharmaceuticals.

- Concordia acquired Donnatal® from Revive for $200mn in cash and 3.6mn shares of common stock.
  - Donnatal adds significant and sustainable EBITDA to Concordia’s portfolio.
  - Concordia stock up 200%+ since announcement and has allowed it to make much bigger acquisitions.
  - Torreya advised Concordia.

- Chelsea was acquired by Lundbeck for $6.44/share in cash and up to $1.50/share in a CVR.
  - Lundbeck will launch Chelsea’s orphan drug Northera® in the United States
  - A great outcome for management and investors who stayed with the company through the bumpy ride with the FDA.
  - Torreya advised Chelsea.

- Chelsea was acquired by Lundbeck for $200mn in cash and 3.6mn shares of common stock.
  - Donnatal adds significant and sustainable EBITDA to Concordia’s portfolio.
  - Concordia stock up 200%+ since announcement and has allowed it to make much bigger acquisitions.
  - Torreya advised Concordia.

- Gilead acquired Phenex’s FXR programs, which are in the preclinical development for NASH, for up to $470mn.
  - Phenex is a German biotech focused on small molecule drug discovery with nuclear receptors.
  - The transaction further strengthened GILD’s blockbuster liver disease franchise.
  - Torreya advised Phenex.

- Fibrotech was acquired by Shire with $75mn upfront and up to $482mn in potential regulatory milestones.
  - Fibrotech’s FT011 program had just completed a FIH study.
  - Share was attracted to a novel approach to fibrosis and potential for FT011 to make a difference in a rare disease- FSGS.
  - Torreya advised Fibrotech.

- Chelsea was acquired by Lundbeck for $6.44/share in cash and up to $1.50/share in a CVR.
  - Lundbeck will launch Chelsea’s orphan drug Northera® in the United States
  - A great outcome for management and investors who stayed with the company through the bumpy ride with the FDA.
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Our Approach to Assignments

We are analytical and proactive

- We take on high quality business where we can really impact a company or transaction
- But we also develop ideas of how our sector should change and very proactively work to make it happen
- We have been active in Indiana – working closely with three companies in recent years – to create value
- We work closely on this through our consulting arm, Torreya Insights
- We have done this repeatedly with companies in specialty pharmaceuticals, oncology research, diagnostics and nutritionals
At Torreya Tim has advised on over 150 successfully completed assignments including the Genentech sale to Roche and the Sale of Chelsea Therapeutics to H. Lundbeck. Transaction work prior to Torreya includes running the largest share buyback in history for Pfizer (2003-2006); the sale of Chiron to Novartis (2006); carrying out a major structured transaction for GlaxoSmithKline (2005); leading a $3.9 billion convertible bond exchange for Amgen (2005); leading $2 billion in bond issuances for Eli Lilly (2005); managing Genentech’s inaugural $2 billion bond issue (2005); advising Pfizer on the sale of Heumann to Torrent (2005); and leading a $365 million securitization and equity raise for Royalty Pharma (2004). Prior to getting involved in life sciences industry investment banking Tim was also involved in advisory and transaction work for 3M, AMR, BHP, BMW, BP, Coca-Cola Enterprises, Daimler, Dell, Diageo, Dow, Ford, GE, GM, the State of Israel, Microsoft, Philip Morris, the State of Poland, Royal Dutch Shell, SBC, Toys R Us and Wal-Mart.