5 Biotech Buyout Candidates to Double Your Money Overnight
Lexicon Pharmaceuticals (Nasdaq: LXRX)

Upcoming catalysts are always critical to determining the path of small biotech stocks. Knowing when these catalysts or milestones will take place and how likely a positive result will be is one of the keys to successfully investing in the biotech sector. Today we look at a company who is highly likely to receive approval at the end of February for its first important commercial product in its history. It also has a product for diabetes that is progressing nicely and has some trial results upcoming before the end of this year.

Company Overview:

**Lexicon Pharmaceuticals (NASDAQ: LXRX)** is a late stage biopharmaceutical company developing treatments for chronic diseases and currently targeting both diabetes and Carcinoid Syndrome with two separate drugs. The company is headquartered in Texas and has a market capitalization of approximately $1.7 billion. The current share price sits at around $16.50 a share with a 52-week high of just under $20.00 a share. The company has been around since 1995 and public for more than a decade. New management that was brought in during 2014 seem to have brought Lexicon a new and improved focus and that is showing in the progress of its pipeline development.

Carcinoid Syndrome is a combination of symptoms including debilitating diarrhea and heart valve damage. This condition is caused by excessive serotonin in the blood stream stemming from metastatic carcinoid tumors which originate in the neuroendocrine system and spread to the liver. This is a rare condition affecting about 14,000 patients in the United States. About 1,500 US patients are diagnosed each year and require ongoing treatment to manage the condition.

Diabetes is a chronic metabolic disease involving insulin, which regulates blood glucose levels and is required to convert food into energy. Diabetes impairs quality of life and results in life threatening conditions such as heart disease, stroke, and kidney failure. Some 250 million people...
globally have diabetes, including 20 million in the United States, per National Institutes of Health estimates.

The company recently announced achievement of a key milestone with the release of positive top-line results from its Phase 3 trial of Sotagliflozin in patients with type 1 diabetes, as well as positive results from a separate Phase 2 study. The recent momentum around sotagliflozin and plans to announce the results of two additional trials in the near future will be key market catalysts to watch for.

**Pipeline:**

The company’s pipeline stems from its decade-long study of nearly 5,000 genes, identifying more than 100 protein targets with therapeutic potential to treat a range of human diseases. Lexicon’s resources are currently focused on the two most advanced late stage drug candidates to come out of this program, telotristat ethyl for carcinoid syndrome and sotagliflozin for type 1 and type 2 diabetes. In addition to these two compounds, Lexicon has several pre-clinical stage candidates and plans to further leverage its lead candidates for additional indications.

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**Late Stage Therapies**

**Telotristat Etiprate (LX1032)**

**What it does:** Telotristat etiprate is an orally-delivered small molecule drug candidate for carcinoid syndrome. This therapeutic inhibits tryptophan hydroxylase (TPH) which helps control serotonin production in the gastrointestinal tract.

**Key Differentiators:**

Theoretically, targeting a specific protein treats disease safely and effectively with reduced risk to healthy tissues.
Phase / Status / Expected Launch:

Phase III clinical trials for the treatment of carcinoid syndrome have been completed and an NDA was filed on March 29, 2016. The PDUFA with the FDA is now February 28th, 2017. Additionally, an application to the EMA filed in July for Europe and other countries outside the U.S. and Japan has been accepted.

Other Considerations:

- The company has plans to expand and leverage this compound for additional indications in the future.
- Ipsen has commercialization rights globally excluding US, and Japan.
- US commercialization preparations have started.

Sotagliflozin (LX4211)

**What it does:** Sotagliflozin is an orally-delivered small molecule drug candidate to treat Diabetes (types I and II). This compound inhibits sodium-glucose transporters that are most responsible for glucose reabsorption performed by the kidney and gastrointestinal tract.

Key Differentiators:

- Supports glucose control and metabolism, directly impacting the key processes affected by the disease.
- Dual inhibitor of sodium-glucose transporters 1 and 2, first candidate to target both of these proteins.
- Trial results have demonstrated comparative safety in patients with renal impairment (which is fairly prevalent among diabetes patients).
- Lexicon is the farthest along among several comparable competitors working on SGLT-2 treatments for Diabetes. (AstraZeneca’s Farxiga, Boehringer Ingelheim/Lilly’s Jardiance, and Johnson & Johnson’s Invokana.

Phase / Status / Expected Launch:

In September, Lexicon announced positive top line Phase 3 results for the treatment of type 1 diabetes. Lexicon has also completed two Phase II clinical trials to treat type 2 diabetes (one in patients with renal impairment). Lexicon is now completing a Phase 2 trial, collaborating with JDRF, in youth adults with Type 1 diabetes. Finally, a third type 1 diabetes Phase 3 trial is investigating the candidate for type 1 diabetes without insulin optimization prior to randomization.

Other Considerations:

- Worldwide collaboration and license agreement with Sanofi excluding type 1 diabetes in the US.
- The Sanofi partnership is taking the lion’s share of work to complete the Type 2 diabetes filing.

In addition, the company is conducting pre-clinical investigations into the following small molecule compounds:
• LX2761 is an orally-delivered candidate for diabetes treatment in the pre-clinical stage.
• On Monday November 7th, Lexicon obtained exclusive rights to research, develop, and commercialize LX9211, a candidate for the treatment of neuropathic pain which it developed in partnership with Bristol-Myers Squibb Company. Phase I trial is set to commence in 2017.
• LX1033 is an orally-delivered candidate to treat irritable bowel syndrome.
• LX2931 is an orally-delivered candidate to treat autoimmune diseases.
• LX7101 is a topically-delivered candidate to treat glaucoma.

Balance Sheet and Analyst Commentary:

As of the third quarter earnings report, the company had just under $400 million in cash and investments and is burning through approximately $35 to $40 million per quarter to fund development work primarily. The company maintains that they are “well-capitalized [to fund their] clinical trials and potentially even expand telotristat etiprate to other indications.” Based on the company’s burn rate and cash balance, Lexicon seems well-funded into at least 2019 at the earliest.

The median price target on Lexicon that cover the stock is currently north of $26.00 a share implying some 75% upside from current trading levels. The one analyst firm with a Hold rating on the stock currently still expects that telotristat etiprate will be approved.

H.C. Wainwright initiated coverage on the stock in early October with a buy rating and a price target of $26.00. Its analyst noted Lexicon’s “Strong partnerships, positive pivotal data, and over $400M in cash put Lexicon in an enviable position going into 2017, in our opinion.” Also recommending buying Lexicon at current levels recently are Citigroup and Stifel Nicolaus.

The current consensus believes that telotristat etiprate approval is a slam dunk at this point. It is hard to peg peak sales for any drug still in development but estimates I have seen have peak sale potential in the range of $250 million to $500 million annually.

Obviously, sotagliflozin aims at a much, much bigger audience and has more potential to develop into a billion-dollar drug over time. The FDA has been noticeably demanding in approving new diabetes drugs in the past and I expect the company will have go through a gauntlet to garner approval.

However, results from a Phase III trial released in September showed “strong efficacy” and should alleviate safety concerns. This was a key reason Citigroup lifted their price target to $25 from $21 on Lexicon right after this data came out. Most analysts seem to be modeling roughly a 75% chance of eventual approval of sotagliflozin.

Outlook:

The company should receive FDA approval for telotristat etiprate on February 28th and Lexicon will announce top-line results for sotagliflozin by the end of this quarter. Both of which should be nice positive catalysts for the stock.
The company has several shots on goal and a large bank of potential therapies to invest in over the long haul. Lexicon has license and collaboration agreements some of the heavy hitters in the industry such Sanofi, Ipsen Pharmaceuticals, Bristol-Myers Squibb, and Genentech, Inc. to support its advancing pipeline. The company also has the potential to receive $1.7 billion in milestone payments as well as sales royalties from Sanofi for the diabetes treatment sotagliflozin.

Finally, the company is well funded, has strong analyst support and a nice pipeline of potential drug candidates outside of its two core drugs. Given the potential sales of both telotristat etiprate and sotagliflozin, its pipeline, collaboration deals and some $400 million in cash, Lexicon seems to be offering an attractive risk to reward profile at its current price of under $17.00 a share. If telotristat etiprate is approved as expected at the end of February and sotagliflozin delivers more positive trial results by the end of 2016, I can see the stock rising 25% to 50% from current levels over the next few months.

**Recommendation: BUY LXRX up to $17.50 a share**

Position: Long LXR
Progenics (Nasdaq: PGNX)

Company Overview:

Progenics is a small biotech company based in New York. The firm has been a public company for almost 20 years with only one notable product on the market which is just starting its long upward sales trajectory. Progenics looks like the classic “late bloomer” as not only is its key product about to get a major sales boost but its pipeline has never been more promising. The stock currently sells for just under $5.50 a share with a market capitalization of just under $400 million as of publication.

Relistor:

Relistor was developed in conjunction with Salix Pharmaceuticals (NASDAQ: SLXP) and approved for Opioid Induced Constipation (OIC) by the FDA late in 2014, and the injectable version of this drug hit the market in 2015. Salix was bought by Valeant Pharmaceuticals (NYSE: VRX) in 2015 just before it became a drug pariah. Valeant is the marketing and distribution partner for relistor. Progenics gets 15% to 19% of sales as royalties as well as a potential $200 million in additional sales milestone payments. Sales are trending nicely upward and gross sales are more than $16.5 million a quarter.

In the summer, the oral version of relistor was approved by the FDA. This triggered a $50 million milestone payment from Valeant to Progenics. This new oral version is seeing much higher sales than the injectable version of relistor due to easier use. Salix originally projected $300 million for peak sales for injectable relistor but $1 billion or better for the oral version. Overall relistor sales could hit $100 million this calendar year or at latest in 2017. This will trigger a $10 million milestone payment to Progenics leaving another $190 million in potential sales milestones in total. For a company with less than a $400 million market cap, this is indeed a big deal.

Pipeline:

It is important to remember that while the growth of relistor sales is the key near and medium-term driver of the company and stock, Progenics is a lot more than just relistor. The company is developing a number of oncological therapeutics and diagnostics in the United States and internationally. Progenics leverages expertise in radiopharmaceutical therapeutics, diagnostic imaging agents, and Prostate Specific Membrane Antigen (PSMA) to pursue a unique, multi-faceted approach to targeting, tracking, and treating cancer. Progenics has a pipeline of 11 products ranging from pre-clinical through late-stage development progress and several more products poised to generate revenue relatively soon. Six of the 11 products are focused on critical unmet diagnostic imaging and therapeutic needs of prostate cancer patients, one targets rare neuroendocrine cell tumors, two treat Opioid Induced Constipation, and two are HIV treatments.
Here are some of the key mid-to-late stage products in the pipeline:

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<th>PSMA Targeted Oncology</th>
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**Azedra**

**What it does:** Azedra is a radiotherapeutic product candidate for the treatment of pheochromocytoma and paraganglioma, very rare tumors that form from neuroendocrine cells. Neuroendocrine cells are primarily in the adrenal glands but are found throughout the body. These cells release hormones into the blood which control heart rate, metabolism, and blood pressure.

**Key Differentiators:** There are currently no approved therapies in the United States for these rare diseases. Existing treatments include adrenergic blockade, surgery, chemotherapy, and radiation which generally fail to produce a cure or any significant remission. A product chemically similar to Azedra® with a much lower specific activity and less desirable side effect profile has been used with some success; however, it is not approved by the FDA for the treatment of pheochromocytoma and paraganglioma. Effective alternative therapies are needed, especially in patients who have relapsed. The most recent study saw a more than 50% reduction in anti-hypertensive medications.
**Phase / Status / Expected Launch:** Azedra is currently in a Phase IIb clinical trial under special protocol assessment (enrollment is completed). Top Line Data is expected in late 2016 or early 2017 and NDA submission to the FDA is anticipated in the first half of 2017. The FDA granted Breakthrough Therapy designation, Ultra-Orphan Designation (given the rarity of the cancers), and Fast Track Status and has indicated it would grant a full approval instead of conditional approval based on the positive outcome of the phase 2b trial (i.e. no need for confirmatory phase 3 trial). This product has a good chance to hit the market in 2018.

**Expected Market:** Pheochromocytoma and paraganglioma’s prevalence in the U.S. is 3,000-6,000 patients (<1,000 new cases diagnosed annually).

Annual sales can be projected in the $225 million range assuming a cost of $200,000 annually per patient for 25% of the eligible patients. As the diseases are very rare and the target market is small, patients will expect to pay more for the therapy. Azedra is the next significant commercial opportunity for Progenics and the company intends to retain the rights and commercialize the drug independently in the U.S.

**Other Considerations:** The U.S. market is reachable with a small specialty sales force targeting major centers where these rare tumors are treated. Commercialization of Azedra should not be a major burden when Progenics plans to hire a small commercial team.

**EXINI Bone BSI**

**What it does:** Analytical software that assists physicians and patients with analysis of bone scan index from bone scintigraphy images, expected to assist with Prostate Cancer quantification and tracking.

**Key Differentiators:** Removes observer variability and reduces the time to quantify the tumor burden of the skeleton. Over time, this product is expected to enhance the other prostate cancer imaging programs in the pipeline (1404 and PyL).

**Phase / Status / Expected Launch:** Approved for use in the EU, Japan, and the U.S., Progenics’ goal is to commercialize this product in the U.S. in 2016.

**Expected Market:** There are approximately 1,100 teaching hospitals in the US and approximately 7,000 in the EU (not counting other types of medical facilities). Prostate cancer is the second most common form of cancer affecting men in the United States; an estimated one in seven men will be diagnosed with prostate cancer in his lifetime. The American Cancer Society estimates that each year approximately 220,800 new cases of prostate cancer will be diagnosed and about 27,540 men will die of the disease. Approximately 2.9 million men in the U.S. currently count themselves among prostate cancer survivors.

**Other Considerations:** Acquisition of this product brought with it existing relationships with key European partners, clinicians, and researchers to support the late-stage pipeline.
1404

**What it does:** 1404 is a TC (technetium) 99m labeled small molecule diagnostic imaging agent to diagnose and detect prostate cancer.

**Key Differentiators:** 1404 targets a specific antigen on the surface of >95% of prostate cancer cells and is more sensitive in detecting cancer versus an MRI in the Phase II tests. Per patient, there are multiple opportunities to use this imaging agent (i.e. during diagnoses, surveillance, staging, planning, and monitoring). According to a recent study, 40-50% of men are choosing active surveillance over treatment and this agent will better support that choice.

**Phase / Status / Expected Launch:** Phase II testing has been completed in detecting cancer in the prostate gland with 94% sensitivity (versus 86% for an MRI). The Company’s goal for this product is to release interim analysis for the pivotal Phase III trial in 2016.

**Expected Market:** Refer to the prostate cancer statistics above.

**Other Considerations:** This product will be enhanced by E-INI BSI in the future.

**PSMA ADC**

**What it does:** PSMA ADC is an antibody-drug conjugate therapeutic for the treatment of prostate cancer. It binds to a cancer marker known as prostate specific membrane antigen (PSMA) along with a potent toxin.

**Key Differentiators:** According to Progenics, this therapeutic has the potential to transform clinical practice in prostate cancer by selectively attacking tumor cells while sparing healthy tissues. Progenics boasts a leadership position in PSMA targeted therapeutics.

**Phase / Status / Expected Launch:** PSMA ADC has completed Phase II testing in chemotherapy-experienced patients (demonstrating activity and tolerability) and there is an ongoing second PII test in chemotherapy-naive patients.

**Expected Market:** Refer to the prostate cancer statistics above.

**Upcoming Catalysts and Balance Sheet:**

The company ended 2015 with just under $75 million in net cash on the balance sheet. Combined with royalties from relistor and milestone payouts in 2016, especially the expected $50 million payout from the oral version of relistor, the company is in an excellent position to fund development of its pipeline.
The fact that relistor’s distribution rights are owned by Valeant has been an overhang on the stock until recently and makes any sort of buyout of Progenics more complicated. However, Valeant needs to sell off assets to pay down its $30 billion debt load and its ownership of the relistor rights is a valuable asset to sell. After the oral version of relistor is approved, I could easily see the likes of Allergan (NYSE: AGN) being a bidder for relistor which could also put Progenics in play as a buyout candidate given their pipeline and the number of milestone payouts and royalties it will earn over time from relistor. Even at twice the current price, a purchase should be accretive over time and the pipeline assets certainly have considerable value.

Outlook:

Progenic’s stock price had been dragged down by ongoing bad news related to its Relistor distribution partner Valeant Pharmaceuticals in the past, but has been on the move of late.

**Recommendation:** Buy PGNX up to $6.25 a share. Price target range over next 12-18 months $10 to $12 a share.

Position: Long PGNX
Exelixis (Nasdaq: EXEL)

Company Overview:

Exelixis (NASDAQ: EXEL) has just over a $2.5 billion market capitalization and is based in San Francisco. Exelixis has the lead cancer drug cabozantinib, branded as CABOMETYX, for the treatment of patients with advanced renal cell carcinoma (‘RCC’) who have received prior anti-angiogenic therapy. The product was approved for the market and has been well received. The company has high hopes for CABOMETYX for other indications of cancer as well.

Pipeline:

CABOMETYX will compete with nivolumab from Bristol-Myers Squibb (NYSE: BMY) which was approved last year for use as a treatment against renal cell carcinoma and a host of older less effective treatment options.

CABOMETYX, since it has a different mechanism of action, could find plenty of use with the majority of patients who do not respond to nivolumab. The current market for second and later line RCC includes about 17,000 patients in the U.S. and approximately 37,000 patients worldwide, the global revenues for current second line RCC agents of approximately $1 billion in 2014.

In late February, Exelixis closed an exclusive licensing deal with Ipsen for the commercialization and further development of Exelixis’ lead cancer drug CABOMETYX worldwide except for the United States, Canada, and Japan. The deal also includes the rights to branded COMETRIQ, currently approved in the European Union for the treatment of adults with progressive, unresectable, locally advanced or metastatic medullary thyroid cancer.
Exelixis will retain exclusive commercialization rights in the United States and Canada and is in the process of negotiating a commercial partnership in Japan. COMETRIQ is currently available in the States for the treatment of medullary thyroid cancer and as stated above was approved for the treatment of renal cell carcinoma. It brought in nearly $10 million in revenue during the fourth quarter of 2015.

As part of this deal, Exelixis will receive a $200 million upfront payment, regulatory milestones of $110 million or greater, up to $545 million in commercial milestones and tiered royalties of up to 26% of CABOMETYX net sales. Approval in Europe will bring in a $60 million portion of those regulatory milestones sometime in 2016.

Obviously, for a company with a $2.5 billion market capitalization, this is a big deal. The upfront payment should alleviate the need to raise any developmental funding in the near future as the company ended 2015 with over $250 million in cash on the balance sheet. The company anticipates $240 million to $270 million in developmental and operating costs in 2016, offset somewhat from rising sales of its three now approved drugs. The deal with Ipsen is the biggest of several collaboration deals Exelixis has in place.

In November of last year, the FDA approved cobimetinib known by its brand name COTELLIC for the treatment of unresectable or metastatic melanoma with a BRAF V600E or V600K mutation, in combination with vemurafenib. The compound was approved soon thereafter in Europe for the same condition. COTELLIC is a selective inhibitor of MEK, also known as mitogen-activated protein kinase. MEK is a dual specificity kinase that is a component of the RAS/RAF/MEK/ERK pathway. This pathway mediates signaling downstream of growth factor receptors, and is activated in a wide variety of human tumors.

Exelixis discovered COTELLIC but developed the drug in conjunction with partner Genentech within a collaboration deal it signed with the drug giant. Exelixis is entitled to an initial equal share of U.S. profits and losses and will share in the U.S. marketing and commercialization costs. Exelixis is eligible to receive royalties on any sales of the product outside the United States. COTELLIC is also in early stage trials for the treatment of a variety of other cancer indications.

The company has a couple of interesting partnered compounds in the pipeline as well. Most of them are in early Phase II testing or pre-clinical work. The company also has smaller collaboration deals with Sanofi (NYSE: SNY), Merck (NYSE: MRK), Bristol-Myers Squibb (NYSE: BMY) and Daiichi Sankyo. Given the early stages of this development, we will not at this time factor these compounds in the pipeline into our immediate investment outlook but instead will look at them as additional “shots on goal” at some point in the future. The fact that a small cap like Exelixis could attract so many high profile names in the industry speaks well to the merits of its underlying technology.

Not surprisingly, analysts reiterate position with a Buy rating and $18 average price target on Exelixis, whose shares now fetch just over $10 a share. Only five analyst firms cover this stock currently. Price targets range from $16 to $21 a share.
I think this will change and the company will attract more positive analyst coverage as it moves from a developmental concern to a commercial concern. Revenues should nearly triple this year to $100 million and then double again in FY2017 according to the current consensus. Even as losses are cut substantially next year, Exelixis will probably not turn profitable on a consistent basis until late 2018 or 2019. The company certainly has more than enough cash in the coffers to sustain itself until that time without coming back to the capital markets.

**Outlook:**

Given its recent successes, broadening product portfolio, and developing pipeline, one would expect an oncology business like this would be a major buyout target. However, the collaboration deals it has in place might complicate that possibility with only Ipsen or Genentech making non-complicated buyers at this point.

However, one must love the company’s prospects as a standalone entity given recent events. Increasing sales from multiple drugs on the market and trial milestones will continue to provide positive catalysts and possibly momentum around the stock. Given recent approvals one must view the company’s pipeline as “derisked” at this point.

In summary, Exelixis seems to be moving its pipeline successfully into approved products that will be commercialized. It has some key partnerships, plenty of cash on the balance sheet, an emerging product portfolio and several significant collaboration deals and even more partnerships. As such, it is hard not to be positive on the company’s risk/reward profile as it ramps up sales across a growing product portfolio.

**Recommendation:** Buy EXEL up to $15.00 a share.

Position: Long EXEL
BioDelivery (Nasdaq: BDSI)

Company Overview:

**BioDelivery Sciences International (NASDAQ: BDSI)** is a small specialty pharmaceutical company based in Raleigh, North Carolina. The company engages in the development and commercialization of pharmaceutical products principally in the areas of pain management and addiction. The company provides its products based on its patented BioErodible MucoAdhesive (BEMA) drug delivery technology, which consists of a small, bi-layered erodible polymer film for application to the buccal mucosa.

It is basically a company building a better delivery system. Think of its products as film strip you can use as a substitute for a breath mint. In that way, it reminds me of **Eagle Pharmaceuticals (NASDAQ: EGRX)** which provided an over 450% gain for our Small Cap Gems portfolio in 2015. By taking an existing drug and giving it a new delivery system, the development and approval process should be easier and expedited which has proved to work well with Eagle. It has also already attracted a deep pocketed partner who is helping with development, marketing, and distribution.

The stock has a market capitalization of around $130 million and enough cash on hand to fund itself through at least mid-2017. BioDelivery has three approved product on the market and two more that are on their way to approval. The company also has a couple of other products in its pipeline as well as some small but frequent insider buying in 2015. The stock trades at right around $2.50 a share. The equity traded at $6.50 a share earlier in the year to put its potential in perspective. The stock also seems to have built some technical support right under where it is trading which should hopefully mitigate downside.
Product Lineup and Pipeline:

In June of 2014 the FDA approved BUNAVAIL. The compound was BioDelivery’s first approved product and has rolled out to the market. BUNAVAIL is the first mucoadhesive buccal film formulation of buprenorphine to compete directly with Suboxone sublingual film. In 2014, sales of Suboxone sublingual film totalled approximately $1.3 billion in the U.S. while the total market grew to more than $1.7 billion, driven by an 11 percent increase in prescriptions according to data from Symphony Health Solutions. BUNAVAIL has gotten off to a slow rollout but I am optimistic growth will pick up in the near future.

In late October of last year the company’s second pain focused medication “BELBUCA” was approved by the FDA. This drug is a mu-opioid receptor partial agonist and a potent analgesic with a long duration of action that utilizes BDSI’s patented BioErodible MucoAdhesive (BEMA®) drug delivery technology. Through the BEMA delivery technology, buprenorphine is efficiently and conveniently delivered across the buccal mucosa (inside lining of the cheek).

This product has been marketed by partner Endo Pharmaceuticals (NASDAQ: ENDP). Endo will also be responsible for any additional development costs for this product. FDA approval triggered a $50 million milestone payment to BioDelivery and the company will also receive royalties in the mid to high teens depending on net sales. BioDelivery could also receive up to four sales milestones totaling $55 million from Endo as well.

Stern Agee estimated peak sales of BELBUCA could reach $500 million or better in annual sales. Royalties to BioDelivery would be around $75 million a year which would be almost pure profit if this scenario played out. If these projections come even close to fruition, BDSI is undervalued just on this one product alone given the current $130 million market capitalization.
The FDA has also approved ONSOLIS®. This is an opioid agonist indicated for the management of breakthrough pain in cancer patients 18 years of age and older who are already receiving opioid therapy for their underlying persistent cancer pain. This product might one day contribute meaningfully to the company’s revenues but for the purpose of our analysis we will concentrate on BELBUCA as it should be the main driver of growth for the foreseeable future.

**Market:**

Opioid dependence is a significantly undertreated condition in the United States with approximately 2.5 million people dependent on prescription opioids according to the National Survey on Drug Use and Health, conducted by the U.S. Department of Health and Human Services. This dependence has costs for both the individuals that get addicted but society at large as well.

**Outlook:**

The stock cratered in the past when a clonidine topical gel that BioDelivery was developing for the treatment of painful diabetic neuropathy (PDN) and potentially other indications failed Phase III trials. Clonidine is thought to relieve pain by decreasing the abnormal excitability of these functional nociceptors. This again is always why I recommend biotech firms with multiple “shots on goal” as most products do fail somewhere in trials.

The company plans to use the cash infusion from Endo to develop an injectable version of Bunavail and Belbuca. This would be delivered to patients in a sustained-release formulation. Patients could receive an injection as infrequently as once per month. Its current delivery method typically requires one or two doses per day. BioDelivery will also use these funds to develop an indication to treat opioid dependence.

The seven analysts that cover the company have a median price target of $7.50 a share on BDSI, which is three times its current price of $2.50 a share. Insiders have also made small but frequent purchases of the shares, all at prices higher than the current level of the stock.
At these prices, the market seems to be severely undervaluing the drugs that BioDelivery already has approved, let alone its pipeline. Yes, the company had a disappointing phase III trial and a slow initial sales ramp of BUNAVAIL. However, it has strong underlying technology that should not be discounted. Thanks to the recent milestone payment from Endo its balance sheet is also in very good shape.

In addition to quickening sales growth, I would not be surprised if the company enters into further collaboration deals or perhaps gets bought out in the year ahead. Endo International seems like the perfect acquirer. It has been acquisitive in the past and certainly has the firepower to pick up bite-sized BioDelivery even with a hefty premium thrown in. It could then claw back its $50 million milestone payment, forgo future sales milestone payouts and royalties while picking up BioDelivery’s underlying technology and pipeline for basically nothing. Regardless if that logical transactions occurs, it does seem an appropriate time to get involved with this undervalued company and stock.

**Recommendation: BUY BDSI up to $4.00 a share**

**Position: Long BDSI**
Dynavax Technologies (Nasdaq: DVAX)

Company Overview:

Dynavax Technologies Corporation (NASDAQ: DVAX) is a small clinical-stage biopharmaceutical company with multiple product candidates in development for the prevention of infectious disease, the treatment of autoimmune and inflammatory disease, and the treatment of cancer. The company currently has a market capitalization of just under $200 million, a stock price of around $5.00 a share and is based in Berkeley, California. Dynavax is developing what it hopes will be cutting edge immunotherapies based on Toll-Like Receptor (TLR) biology and its ability to modulate the immune system.

TLR signaling plays an important role in a variety of immune-mediated diseases including asthma and certain autoimmune and inflammatory diseases. Through modulation of TLR signaling, Dynavax is developing product candidates that can inhibit stimulation of TLRs that lead to autoimmune and inflammatory diseases.

HEPLISAV – B Approval Pending:

The company’s hepatitis B vaccine completed Phase III trials late in 2015 and successfully hit its co-primary endpoints in a study involving over 8,000 subjects. Specifically, Heplisav demonstrated clear superiority in seroprotection vs. Engerix-B in the general population and especially in diabetics, with a similar safety profile. Engerix-B is the current primary vaccine for hepatitis B and is manufactured and distributed by drug giant GlaxoSmithKline (NYSE: GSK). It has to be administered in three separate doses. HEPLISAV – B was effective in two doses, another clear advantage for this new vaccine over the current standard.

Hepatitis B can be a chronic disease that may lead to cirrhosis of the liver, hepatocellular carcinoma, and death. There is no current cure for hepatitis B, and disease prevention through effective vaccines is critical to reducing the spread of the disease. Engerix-B had just over $1 billion in sales in 2013. However, the global market for hepatitis B vaccines is generally believed to be roughly $600 million to $750 million annually with just under $300 million of that in the United States.

Given its superior protection to Engerix-B (95.4% versus 81.3% in recently concluded Phase III trial and 90% versus 65.1% for the diabetic population in the trial) and fewer doses needed to achieve protection, Dynavax’s new vaccine should quickly garner the lion’s share of the global market.

Dynavax will submit a NDA (New Drug Application) to the FDA by the end of the quarter. Then, the FDA should grant approval of the vaccine within six months allowing Dynavax to begin commercializing the biologic compound by the end of this year.
Dynavax has two other intriguing compounds in mid-stage development, SD-101 and AZD149. SD-101 is a proprietary TLR9 agonist designed to elicit a potent and focused immune response to cancer. SD-101 was designed for highly efficient activation of the two principal TLR9 signaling pathways. One pathway leads to rapid Interferon-α production which stimulates a number of critical activities including activating natural killer cells, blocking immune suppression, and promoting Th1 and CD8+ T cell homing into the tumor. The second pathway leads to efficient generation and activation of tumor-specific cytotoxic CD8+ T cells. By stimulating the natural immune response SD-101 has the potential to be broadly effective in multiple tumor types.

SD-101 has completed two Phase 1 trials in 60 subjects which have provided safety data and dose optimization for biological activity. Dynavax is currently conducting a Phase 1/2 study (known as LYM-01) to assess the safety and preliminary efficacy of Intratumoral SD-101 in adults with untreated low-grade B-cell lymphoma in combination with low-dose radiation. At least one investment analyst has stated SD-101 has more possible potential than HEPLISAV-B.

AZD1419 is seen as a possible treatment for asthma, under their worldwide collaboration with AstraZeneca (NYSE: AZN). AZD1419 is another proprietary TLR9 agonist and represents a new strategy for the treatment of allergic respiratory diseases. Obviously, this compound has a huge target market. According to the World Health Organization, asthma affects 300 million people worldwide. In addition, 210 million people worldwide are affected by COPD, a term used to describe chronic lung diseases that limit airflow in the lungs. Analysts estimate the current worldwide market opportunity for asthma and COPD therapies to be over $15 billion annually. Just a small piece of that market would be significant to state the obvious.
Dynavax has completed a Phase 1 study in healthy subjects which demonstrated an acceptable safety and tolerability profile and proof of mechanism observed through induction of interferon regulated genes stimulated by AZD1419. A Phase 2 study in moderate to severe asthmatics in partnership with AstraZeneca is in the works currently.

Balance Sheet:

The company has just over $200 million of cash on the balance sheet. However, it will need to generate additional funding to support the worldwide rollout of HEPLISAV – B. This has been an overhang on the stock recently as demand for secondary offerings has dried up. However, I believe this will be resolved without significant dilution given the visibility of potential hepatitis B vaccine sales. A straight debt deal ala one Merrimack Pharmaceuticals (NASDAQ: MACK) did in late December that raised $175 million of funding from the debt market with no equity dilution is one possibility. Merrimack was able to do this debt offering after its first primary drug candidate “MM-398” was approved by the FDA. A position Dynavax should be in as well in the near future.

In January, Dynavax amended its development deal with AstraZeneca so the latter will now conduct the Phase 2 trial for AZD1419. This strategic move will help free up resources and allow Dynavax to concentrate more fully on the rollout of HEPLISAV – B. AstraZeneca also possesses expertise in international clinical development of respiratory products.

Analyst Commentary and Outlook:

Only four analysts cover the company. Their price targets range from $16.00 to $45.00 a share. The average price target is $35.00, over three times the current price of DVAX. This is hardly outlandish as the stock traded near the lower end of that range before the recent “washout” in the biotech sector.

A buyout is also a distinct possibility. This would alleviate Dynavax’s funding needs and would make sense even at a substantial premium for a variety of larger players. GlaxoSmithKline would be a logical suiter given it is going to be the biggest loser from the rollout of HEPLISAV – B. It is also
a very big player in the vaccine market and is in the process of rolling out new vaccines for malaria and shingles. It already has a global sales force in place for this niche of the market as well.

**Gilead Sciences (NASDAQ: GILD)** also makes sense as it has said it is looking for acquisitions in the $1 billion to $5 billion range. The company is testing treatments for hepatitis B as well and SD-101 would be a nice addition to its growing oncology pipeline.

Whether as a standalone entity or as an acquisition target, the shares of Dynavax are deeply undervalued at present levels. The company has multiple “shots on goal,” is on its way to its first commercialized product that should soon generate hundreds of millions of dollars in annual sales, and has upcoming milestones promising drug candidates. Catalysts in the coming months should include the NDA filing on HEPLISAV-B, FDA approval, and the resolution of funding needs. The risk/reward on this biotech concern is very attractive after the pullback in the biotech sector brought the stock down to deeply oversold levels.

**Recommendation: BUY DVAX up to $8.00 a share**

Position: Long DVAX