

Biotechnology

May 20, 2014

Closing Price 5/20/2014	\$0.30
12-Month Target Price:	\$7.00
52-Week Range:	\$0.23-\$0.87
Market Cap (M):	\$34
Shares O/S (M):	112
Float (M):	101
Avg. Vol. (000)	130
Cash (M)	\$9
Debt (M)	\$0.0
Dividend/Yield:	\$0.00/0.00%
Risk Profile:	High

FYE: December	GAAP EPS	P/E
2013E	(\$0.12)	nm
2014E	(\$0.11)	nm
2015E	(\$0.18)	nm
2016E	(\$0.08)	nm

Anavex Life Sciences Corp (AVXL)



Source: Thomson Reuters as of 05/20/2014

Jason Kolbert (212) 895-3516
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Initiation

Buy

Anavex Life Sciences Corporation

(AVXL – OTC:QB – \$0.30)

Novel Drug Platform with a Phase I/II in Alzheimer's Disease

- **We Are Initiating Coverage of Anavex with a Buy Rating and \$7.00 Price Target.** Anavex has a novel drug technology with several applications in central nervous system (CNS) conditions and cancers. The first indication is Alzheimer's disease, in which the company plans to start a phase I/II trial in late 2014/early 2015. Additional research has shown potential in Parkinson's disease, depression, epilepsy, stroke, pain, and solid tumors.
- **The Lead Alzheimer's Drug Has Unique and Synergistic Mechanisms of Action.** Anavex Plus is a drug that combines the company's proprietary Anavex 2-73 molecule with generic Aricept (donepezil). Anavex 2-73 appears to reduce the accumulation of toxic proteins within cells, a key event early in the process of cellular dysfunction and disease pathways. This is a differentiated mechanism of action from the typical approaches of prior failed molecules, which have not shown benefits in Alzheimer's disease.
- **Synergistic Effect with an Established Drug.** Preclinical trials of Anavex 2-73 demonstrated that it prevents cell death, protects against cell damage, and results in improved memory. Donepezil, the most widely prescribed drug for Alzheimer's, works by extending the action of neurotransmitters in surviving brain neurons. Study data have shown that the combination of both drugs may provide an 80% improvement over donepezil alone.
- **An Alzheimer's Therapy Would Serve a Large Market.** There are an estimated 5.2 million people with Alzheimer's disease in the US and 11 million worldwide. Disabilities accumulate for the remainder of patients' lives, requiring increasing care and higher medical expenses, so any therapy that has a benign AE profile and benefits is welcome in the space.
- **Anavex's Pipeline Is Based on Sigma Receptor Technology.** The company's drug discovery platform is based on interactions of the sigma receptor, an intracellular receptor that activates several key pathways in the cell. Turning these pathways on or off has potential therapeutic value in many neurological disorders and several types of cancer.
- **Anavex 2-73 Clinical Progress.** Anavex 2-73 has cleared its first clinical hurdle, demonstrating safety in healthy volunteers. We expect to see the clinical program continue to explore early efficacy through cognitive measures in target patient populations (P1b/2a) and, upon success, expand into a larger PII trial targeting mild to moderate Alzheimer's disease patients, as well as explore utility in related neurodegenerative conditions.
- **Valuation.** We value Anavex primarily on the potential of Anavex Plus in Alzheimer's disease. We apply an 80% risk cut to the market model based on the early nature of the product. We then use our normalized metrics to apply a high 30% discount rate in our FCF, discounted EPS, and sum-of-the-parts models to arrive at a \$7.00 price target.

CORPORATE PROFILE

Anavex Life Sciences Corp (AVXL)51 West 52nd Street, 7th Floor

New York, NY 10019

Website: www.anavex.com

Senior Management:**Christopher Missling, PhD**

Dr. Christopher Missling, the Chief Executive Officer (CEO) of Anavex, has more than 20 years of healthcare industry experience within large pharmaceutical companies, the biotech industry, and investment banking. He has been an investment banker in the healthcare practice at Deutsche Bank, serving pharmaceutical, biotech, and diagnostic companies, and most recently was head of healthcare investment banking at Brimberg & Co. in New York. At Aventis (now Sanofi), Dr. Missling worked as head of financial planning on all aspects of financial strategy and M&A. He was the Chief Financial Officer of Curis (NASDAQ: CRIS \$1.80-NR) and ImmunoGen (NASDAQ: IMGN \$10.98-NR). Dr. Missling has an MS and PhD from the University of Munich in Chemistry, and an MBA from Northwestern University's Kellogg School of Management.

Company Background

Anavex Life Sciences Corp. uses its proprietary technology to develop drugs based on sigma receptors. These receptors regulate oxidative stress and multiple pathways in the cell.

The company's lead drug candidate exhibits a high affinity and selectivity to sigma-1 receptors, and also has shown a synergistic action with other receptors, such as Muscarinic and N-methyl-D-aspartate (NMDA). Data have shown strong evidence of anti-amnesic, neuroprotective, and anxiolytic properties, making this class of drugs candidates for development in neurological diseases, such as Alzheimer's disease, Parkinson's disease, epilepsy, and depression, as well as cancer.

Investment Risks

Development Risks:

- The company has only one product in human clinical trials.
- Additional products in preclinical trials may not advance to clinical trials as expected.
- Timing of regulatory approval risk.
- Indications of efficacy seen in a small trial may not be confirmed in a larger trial.

Financial risks:

- Anavex is likely to need to raise additional capital to continue its later-stage clinical trials.
- It is in the early stages of product development and is not profitable.
- The stock trades at under \$5 per share and is considered a penny stock.

(PLEASE SEE PAGE 22 FOR A MORE DETAILED OUTLINE OF OUR "INVESTMENT RISKS")

Institutional Ownership:	8%
Inside Ownership:	17%
Shares Short:	49K

Balance Sheet Summary:	\$MM
<i>(As of March 31, 2014)</i>	
Cash & Restricted Cash:	\$9M
Long-Term Debt: (M)	\$0M

Analysts Following the Co.:	0
<i>(Excluding Maxim Group)</i>	

INVESTMENT SUMMARY AND CONCLUSION

***Anavex Life Sciences Corp
Proprietary Technology for Alzheimer's
disease and cancer***

We are initiating coverage of Anavex Life Sciences Corp with a Buy rating and a price target of \$7.00

THE BULL CASE, BEAR CASE, AND OUR TAKE

The Bull Case. Anavex Life Sciences has a drug development platform based on the sigma receptor, trademarked as Sigmaceptor™. This platform is based on the company's proprietary work, showing the sigma receptor's role in the disease process of several neurological conditions and cancers.

The first application in Anavex's portfolio is Alzheimer's disease. Its first drug, Anavex 2-73, showed encouraging results alone and in combination with Aricept (donepezil), an approved drug that is a standard of care for Alzheimer's patients. The two drugs have a synergistic mechanism of action and have been combined as Anavex Plus. These drugs, given together, could be a disease-modifying therapy that reverses memory deficits, prevents cell death, and helps the recovery of dying cells. The company plans to start phase I/II clinical trials for Anavex Plus in late 2014/early 2015.

Although most Alzheimer's research has focused on beta-amyloid, the mechanism of action in Anavex 2-73 is based on a different theory of how Alzheimer's develops. The drug targets misfolded proteins and cellular stress to prevent the activation of pathways that lead to Alzheimer's disease. Existing drugs, which have failed development, target later stages in the disease process.

There are an estimated 5.2 million Alzheimer's disease patients in the US, making this a large market with a dire need for effective drugs. No new drugs have been approved since 2003, and the four drugs on the market only lessen symptoms for a limited time. Still, these drugs had sales of about \$6 billion. In addition to drug spending, the additional Medicare health care costs are estimated in the range of \$200 billion. Further, the burden of caring for Alzheimer's on the patients' families makes it the leading cause of nursing home admissions. Clearly, a drug that could have even a modest impact on the course and severity of the disease would be highly valuable.

While Alzheimer's disease is the lead indication for the company, it is only the first from the Sigmaceptor™ platform. Drugs that use the company's sigma receptor technology are in development for neurological diseases and oncology, and others are being considered for in-licensing. These indications could broaden the development pipeline.

Alzheimer's disease has had many clinical trials that have shown no success. We believe this has increased the perception of risk for all Alzheimer's drugs, reducing the valuation below what we would expect for a multi-billion dollar product in 2020-21.

The company has recently raised cash to fund the phase I/II trial, which it plans to start in late 2014 or early 2015. With an exploratory efficacy treatment plan, data could be available by mid-2015. This would be followed by a phase II/III study, which we estimate could start in late 2015/2016. Success in each of these events should create a significant valuation inflection.

The Bear Case. Alzheimer's disease is a complex disorder in which the disease pathway is still unknown. The most widely accepted theory is based on beta-amyloid, one of two unique diagnostic features found on the brain of Alzheimer's patients, as the cause of the disease. The cause of the disease is not as clear as previously thought, and many drugs based on the beta-amyloid theory have failed clinical trials. Despite more than 20 years of research and a history of product failures, many in the academic community and thought leaders continue to believe beta-amyloid is the cause of disease.

Anavex is focusing on a mechanism of disease that differs from established dogma. Its theory of disease is based on an event in the cell death pathway that has much less data available. Oxidative stress and protein misfolding are two (among many simultaneous events), and operate on parallel pathways. Any (or all) of these could be the true cause of Alzheimer's disease. The exact target of the drug and the key steps it impacts in the development of Alzheimer's pathologies is not precisely known. Some of the company's data comes from animal and computer models, which have not yet been confirmed in humans. The drug could act on its target as intended but still not improve clinical symptoms. Everything needs to be validated in humans.

Most of the large pharmaceutical companies have research programs with greater resources and many years of experience in the field. While the academic community is gradually becoming more accepting of other theories of the disease, enrolling patients in clinical trials may be difficult and the timeframes delayed.

Companies, large and small, have achieved multi-billion dollar valuations for Alzheimer's drugs in phase III development, only to lose it all upon an announcement of failure. The perception that Alzheimer's disease is an "investment graveyard" or the indication is too difficult may cause investors to avoid the field entirely until late stage trials show efficacy. Other products are at preclinical stages, so if the phase I/II study for Anavex Plus is not successful in Alzheimer's disease, it is hard to predict when a second product will reach clinical development or the market.

Our Take. We see Anavex Plus, the Alzheimer's drug, as the first product from the sigma receptor platform. Anavex 2-73 has data showing that it prevents cell death, protects brain cells from damage, and restores brain cell function. When given along with donepezil, the results were significantly better than either drug alone.

Anavex 2-73 acts by controlling protein misfolding and oxidative stress, which are processes that have been implicated in the Alzheimer's disease pathway and the formation of beta-amyloid. The published data show that Anavex 2-73 acts early in the cell death pathway to protect brain cells and allows damaged cells to recover. We know of no other drugs that have been tested for Alzheimer's disease that have used this mechanism of action. The medical community is becoming more willing to test new theories, and we do not think the numerous failures of beta-amyloid drugs have implications for Anavex. The science is completely different.

Anavex's data show it could be the first disease-modifying therapy for Alzheimer's disease. Early data for Anavex Plus, the combination of Anavex 2-73 with donepezil, have shown it to be 80% more efficacious than either 2-73 or donepezil alone. This has the potential to prevent, delay, or slow the progression of Alzheimer's disease. If the data can be reproduced in the upcoming clinical trials, Anavex would be the most efficacious drug for Alzheimer's disease to date.

A drug that could have a significant impact on Alzheimer's disease would serve a current market of 5.2 million patients in the US and an estimated 11 million worldwide. Due to the aging population and increased lifespans, human population is increasing. The current drugs for Alzheimer's disease have a limited window of efficacy for patients that can tolerate the side effects, yet recent sales of these drugs were around \$6 billion, with about \$4 billion for Aricept (the pre-generic branded version of donepezil). Even if it were only seen as a second-generation, improved version of donepezil, it could still be commercially successful.

Pharmaceutical companies have spent billions to develop drugs for Alzheimer's disease through their own research programs and acquiring marketing rights from other companies. We believe that successful phase I/II data or phase II/III data could bring interest in a marketing partnership with licensing fees, milestone payments, and a share of sales revenue.

The company is also developing other drugs based on sigma receptors. These are in preclinical research, and could move to clinical trials for cancer and neurological conditions later this year. Other products that could compliment the pipeline are being considered for licensing.

The company plans to start the phase I/II trial for Anavex Plus around YE 2014/2015. This would be the first clinical trial seeking to show evidence of dosing and efficacy. The initiation of phase II could begin by late 2015/2016, followed by data in late 2016. We believe that the current market valuation of just \$15 million reflects its early stages of development and a lack of investor interest in its mechanism of action. If the phase I/II shows significant proof-of-concept data, we would expect increased attention, lower discount rates, and a higher stock price.

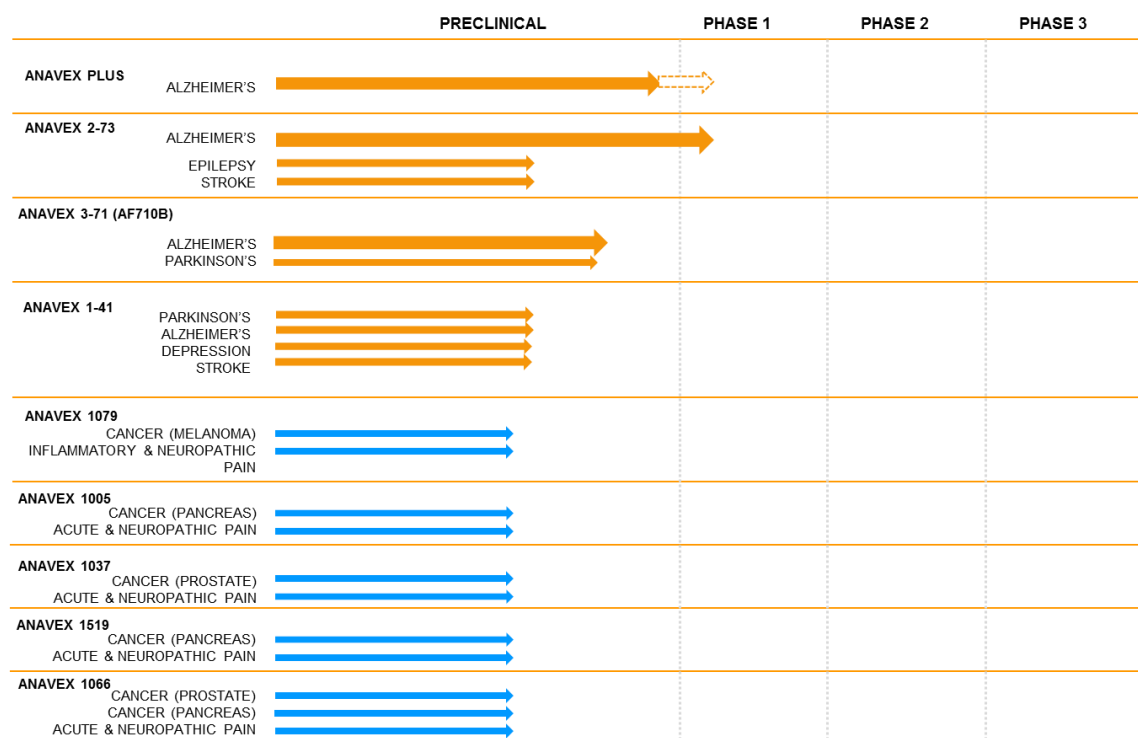
Exhibit 1. Upcoming Catalysts For Anavex Life Corporation, Inc.

Product	Geography	Indication	Event	Timeline	Impact	Peak Sales
Anavex Plus	US / EU	Alzheimer's disease	Start Phase I/II trial	YE 2014/2015	++	
" "			Report data from Phase I/II trial	Mid 2015	++	
" "			Begin Phase II/III trial	YE 2015	++	
Anavex 3-71			Advance to Phase I clinical trials	Mid 2015	+	
Anavex 1-41			Advance to Phase I clinical trials	Mid 2015	+	
Cancer Candidates			Advance to Phase I clinical trials	Mid 2015	+	

Stock Significance Scale: + of moderate importance; ++ higher level; +++ highly
Source: Maxim Forecasts and Company reports.

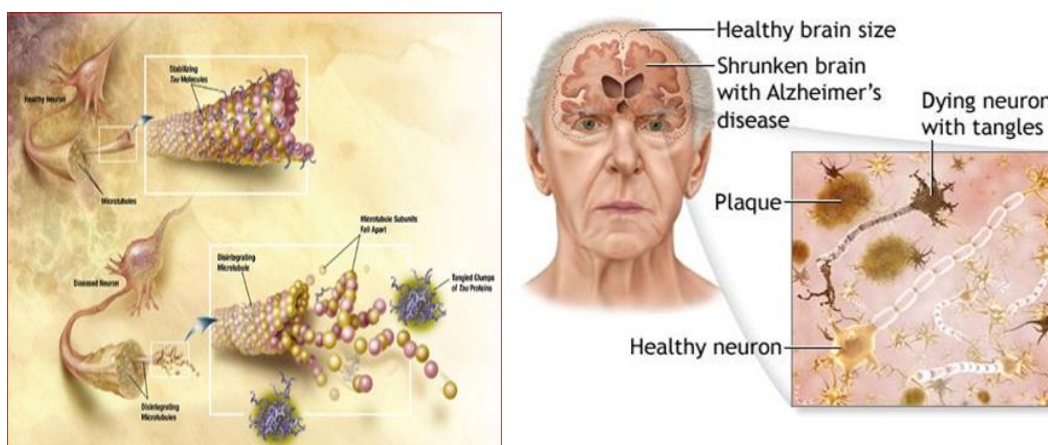
Stock Significance Scale: + of moderate importance; ++ higher level; +++ highly

Exhibit 2. Anavex Product Pipeline



Source: Anavex Life Sciences Corporation & Maxim

Exhibit 3. Current Challenges in Alzheimer's. Recent failures of both “bapi” [Elan, J&J (JNJ-\$100.25-NR), Pfizer] and “sola” (Eli Lilly) provide evidence that treating Alzheimer's disease may not be as simple as removing Abeta plaques in the brain. Free-floating particles of Abeta (oligomers) damage brain cells in conjunction with hyperphosphorylation of tau, inflammation, and mitochondrial dysfunction. Healthy brain cells actually have the ability to clear Abeta proteins very quickly when not distressed. A further “upstream” neuroprotective strategy may help the brain to preserve this ability in distressed cells. Hence, targeting multiple Alzheimer's disease pathways simultaneously at different levels of the disease stage might be needed; the company hopes to achieve this goal with Anavex Plus.



Source: Anavex

COMPANY OVERVIEW

Anavex Life Sciences Corp was founded in 2006 and has developed a technology platform based on interactions of the sigma receptor. The Anavex portfolio comprises novel, sigma receptor agonists and antagonists, known as the Sigmaceptor™ platform, for the treatment of neurological diseases and cancer.

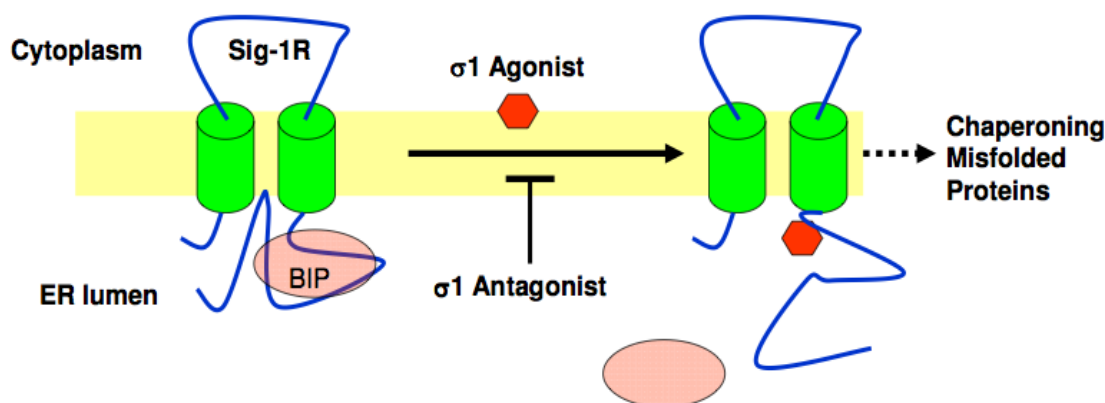
The Anavex portfolio comprises novel, proprietary sigma receptor agonists and antagonists. In addition to the phase I/II trial, the company is in preclinical testing with three candidates for malignant melanoma, prostatic cancer, and epilepsy. The company has produced more than 30 novel small molecule candidates, which are potential treatments for depression, neuropathic pain, and several types of cancer.

Sigma receptors are protein chaperones that protect the cell from the accumulation of misfolded proteins, a common feature in many neurological diseases and dementias. Once inside the cell, the misfolded proteins can start pathological processes. Sigma receptors detect the misfolded proteins and mark them for cell degradation and elimination. This prevents their accumulation and the stress they cause, and helps cell survival.

Sigma receptors are normally upregulated by cell stress. Anavex Plus upregulates sigma receptors and acts as a sigma receptor agonist, giving it potential to treat diseases where chronic misfolding of proteins is a contributing factor. These include Alzheimer's disease, Parkinson's disease, and several types of dementia.

The drug is believed to have three modes of action: muscarinic, sigma receptor agonist, and Ca^{2+} modulation. By reducing mitochondrial dysfunction and oxidative stress, it indirectly targets beta-amyloid and tau. Sigma receptors regulate cellular stress, or imbalances within the cell that lead to abnormal processes and/or cell death. The two receptor types, sigma-1 and sigma-2, function as controls for the signaling mechanisms that are involved in many processes, including cell death, disease pathways, and apoptosis, as well as neuroprotection and recovery.

Exhibit 4. The Sigma Receptor Removes Improperly Folded Proteins From The Cells. Anavex 2-73/Anavex Plus upregulates the receptor and acts as an agonist, removing detrimental proteins from the cell.



Source: Anavex Life Sciences Corp

Clinical Trials and Research Stage Products

In addition to one product ready to start phase I/II trials, three pipeline compounds are expected to reach final preclinical stages in the near term. These programs are targeting malignant melanoma, prostatic cancer, and Parkinson's disease. Other early-stage, preclinical research involves drug candidates that target diseases like depression, neuropathic pain, and various types of cancer.

Anavex 2-73 and Anavex Plus. Anavex 2-73 is based on the theory that protecting against misfolded proteins and oxidative stress are important events in the development of Alzheimer's disease. This differs from widely accepted theories, in which the formation of beta-amyloid and/or tau proteins are thought to cause the disease. Anavex 2-73 completed a phase I, single ascending dose clinical trial in 2011.

After completing the Anavex 2-73 study, the company found that, when the drug was combined with donepezil, there was a synergistic improvement over the two drugs individually. The company has combined the two into a new drug, Anavex Plus, for which a patent is pending. Anavex Plus is expected to start a phase I/II trial toward year-end 2014/early 2015.

The modeling data from the combination showed an improvement in cognitive skills on the Alzheimer's Disease Assessment Scale, cognitive subscale (ADAS-Cog) of seven points at 12 weeks and 5.5 points at 26 weeks. These data represent more than double the ADAS-Cog response exhibited by donepezil alone. If the early studies were to be duplicated in larger clinical trials, Anavex would have the first disease-modifying drug that can slow progression and reverse the cognitive damage caused by the disease. This would represent a significant advance in the treatment of Alzheimer's disease and a multi-billion dollar commercial opportunity.

Anavex 3-71. Anavex 3-71, previously named AF710B, is a preclinical drug candidate with a novel mechanism of action via sigma-1 receptor activation and M1 muscarinic allosteric modulation, which has been shown to enhance neuroprotection and cognition in Alzheimer's disease. Anavex 3-71 is a CNS-penetrable mono-therapy that bridges treatment of both cognitive impairments with disease modifications. It is highly effective in very small doses against the major Alzheimer's hallmarks in transgenic (3xTg-AD) mice, including cognitive deficits, and amyloid and tau pathologies, and also has beneficial effects on inflammation and mitochondrial dysfunctions. Anavex 3-71 indicates extensive therapeutic advantages in Alzheimer's and other protein-aggregation-related diseases, given its ability to enhance neuroprotection and cognition via sigma-1 receptor activation and M1 muscarinic allosteric modulation.

Anavex 1-41. Anavex 1-41 is a small molecule agonist that targets sigma-1 receptors. It is in preclinical research for important CNS disorders, including depression and Alzheimer's disease. Data from animal models show that Anavex 1-41 prevented the expression of caspase-3, an enzyme that plays a key role in apoptosis (programmed cell death) and the loss of cells in the hippocampus. This is a part of the brain that regulates learning, emotion, and memory, and is severely affected by Alzheimer's disease.

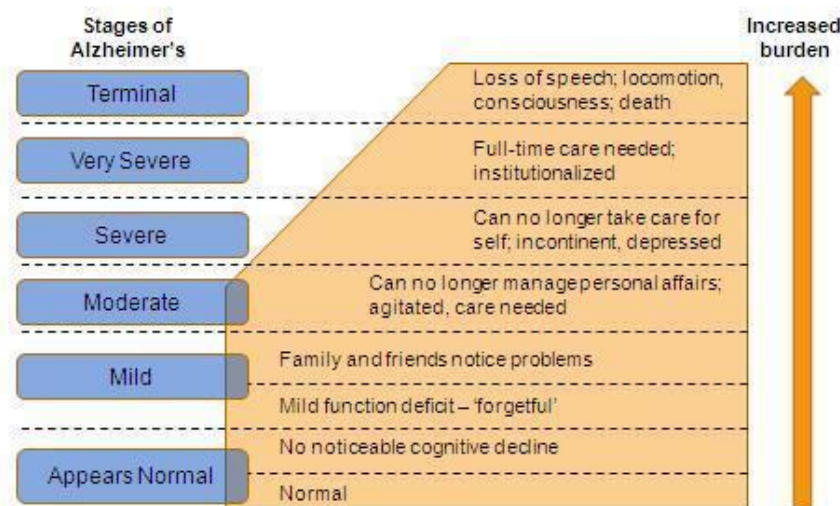
Development in Oncology. Sigma receptors are highly expressed in different tumor cell types. Research is focusing on using sigma-1 and/or sigma-2 ligands to induce selective apoptosis. In addition, through tumor cell membrane reorganization and interactions with ion channels, these drug candidates may play an important role in inhibiting the processes of metastasis, angiogenesis, and tumor cell proliferation. The company's oncology candidates have shown high affinity to sigma receptors with strong evidence for selective apoptosis of cancerous cells, without affecting healthy cells; anti-metastatic and low toxicity properties in various types of cancer, such as melanoma, prostate, and pancreas; and neuropathic pain. In advanced preclinical studies, compounds revealed antitumor potential with no toxic side effects. Several potential candidates have also been shown to selectively kill human cancer cells without affecting normal/healthy cells and to significantly suppress tumor growth in immune-deficient mice models.

ALZHEIMER'S DISEASE

Clinical Background On Alzheimer's Disease. Alzheimer's disease is a degenerative condition that causes progressive loss of memory and cognitive skills. It primarily involves the areas of the brain that control thought, memory, and language. As the most common form of dementia among people aged 65 and older, it is a leading factor for admission into nursing homes.

Mild memory problems are early symptoms of Alzheimer's disease. As the disease progresses, it causes the loss of thinking abilities and leads to severe brain impairment. A mild but noticeable loss of memory and thinking skills is known as mild cognitive impairment, or MCI, which is considered an early stage of Alzheimer's disease. The rate of progression varies widely from person to person. On average, Alzheimer's patients live from eight to 10 years after they are diagnosed, although the disease can last as long as 20 years. The cost of caring for patients is estimated at \$200 billion per year, excluding the unpaid care given by family members. The time spent by family members who provide care increases to the point that assisted living or nursing homes become necessary.

Exhibit 5. Stages of Alzheimer's Disease. As the disease progresses, patients become more dependent on caregivers and medical personnel.

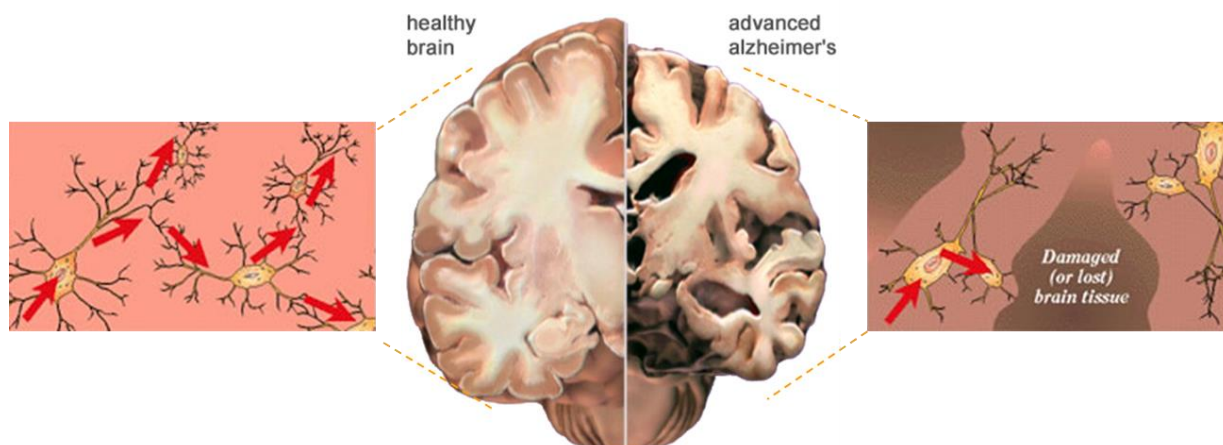


Source: Anavex Life Sciences Corp

By the age of 65, about 5% of the elderly population will start to show symptoms of Alzheimer's disease. This rate doubles with every additional five years of life, so about 40% of the population over age 80 will show some symptoms. The disease affects neurons in the brain, causing dysfunction and then cell death in the affected areas. Regions where new memories are formed and recalled, and where abstract thinking occurs are affected first. As the cells die, the number of nerve-to-nerve connections (synapse count) is reduced. Progression of the disease leads to dementia, which affects the ability to carry out daily activities, as well as behavioral and personality changes.

The body's normal mechanisms for the removal of dead tissue result in atrophy and the loss of brain mass. Amyloid plaques and neurofibrillary tangles form in the temporal lobes and hippocampus regions. As the disease progresses and additional symptoms develop, these lesions can also be found in the cortex and other parts of the brain.

Exhibit 6. Comparison of Normal Brain and Alzheimer's Patient's Brain. Note the loss of tissue mass, enlargement of the ventricles and sulci, and shrinking of the areas involved in memory and language.



Source: Anavex Life Sciences Corp

History of Alzheimer's Disease and Drugs to Treat It

There is no cure for Alzheimer's disease. There are four approved medications on the market that treat the symptoms, but do not have the ability to stop its onset or its progression. An estimated 5.2 million people in the US and 11 million worldwide have Alzheimer's disease. The Alzheimer's Association estimates that, by 2025, the patient population will grow to 6.7 million in the US alone.

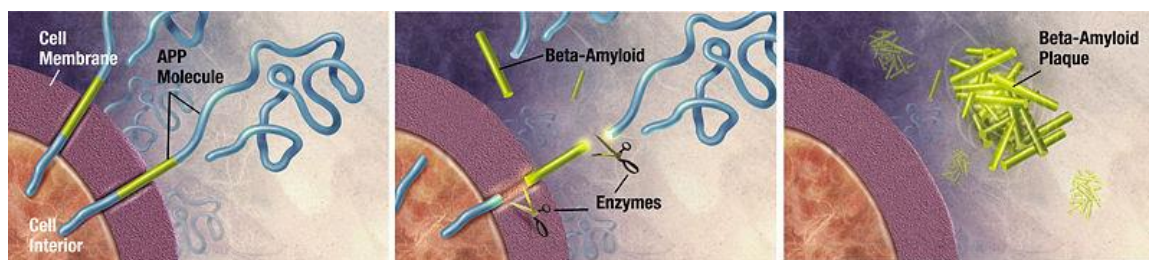
The disease was first described in 1906 by Dr. Alois Alzheimer, a German psychiatrist. There are two features used for a conclusive diagnosis of the disease at autopsy:

- Amyloid plaque, an insoluble mass of beta-amyloid protein that collects outside the cells; and
- Neurofibrillary tangles, twisted fibers made largely of a protein known as tau.

These two lesions have given rise to theories about the pathogenesis of Alzheimer's disease. The "amyloid hypothesis" and "tau hypothesis" attribute the cause of the disease to the formation of beta-amyloid and tau, respectively.

The amyloid hypothesis was developed in the early 1990s after discoveries about the content and formation of amyloid plaques. According to the theory, a normal protein in brain cells, known as amyloid precursor protein (APP), is normally cleaved at the alpha site by alpha secretase. If cleaved at the beta site by beta and gamma secretase, it results in an amyloid protein form, known as $A\beta_{42}$, which then forms insoluble fibers. These fibers assemble into plaques outside the neurons. These beta-amyloid deposits were believed to be toxic to the cells and the primary cause of the disease.

Exhibit 7. Processing APP To Form Beta-Amyloid. Secretase enzymes act on the APP and cut it into fragments by the beta and gamma secretase enzymes. One of these fragments forms beta-amyloid and leads to the formation of senile plaques in Alzheimer's.



Source: ADEAR Alzheimer's Disease Education and Referral Center, National Institute on Aging.

The production of beta-amyloid and its aggregation into plaques were seen as the event that triggered a cascade of toxic and damaging events. Thus, preventing beta-amyloid formation or accumulation of the plaques was seen as the next step toward a cure.

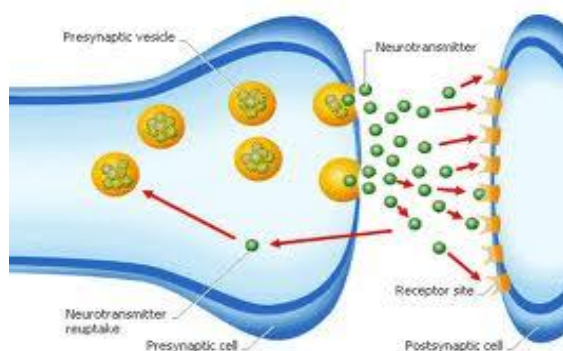
Over the last 25 years, anti-beta-amyloid drugs have dominated research and drug development. Drugs were developed to prevent amyloid formation, prevent it from aggregating, or remove existing plaques. Many of the drugs have successfully reduced beta-amyloid levels as intended, but did not affect the clinical symptoms. All of the anti-amyloid drugs have failed to meet their clinical endpoints, often with patients in treatment groups doing worse than the placebo controls.

Interestingly, clinical trial failures have not lead to significant changes to the amyloid hypothesis. Subsequent studies have explained these failures and undermined the hypothesis itself, yet beta-amyloid remains an overwhelmingly popular target for pharmaceutical intervention. Although beta-amyloid remains the predominant theory, other scientists have proposed new theories. One of these is the oxidative stress theory, on which Anavex products are based.

Approved Drugs For Alzheimer's Disease

Donepezil is the generic name for Aricept, the leading drug for Alzheimer's that was introduced in 1996 by Pfizer (PFE - \$29.25 - NYSE) and Esai. The drug works by blocking the breakdown of acetylcholine, a neurotransmitter that is reduced in quantity by the disease process.

Exhibit 8. Schematic Diagram of Neurotransmitter Release Across A Synapse

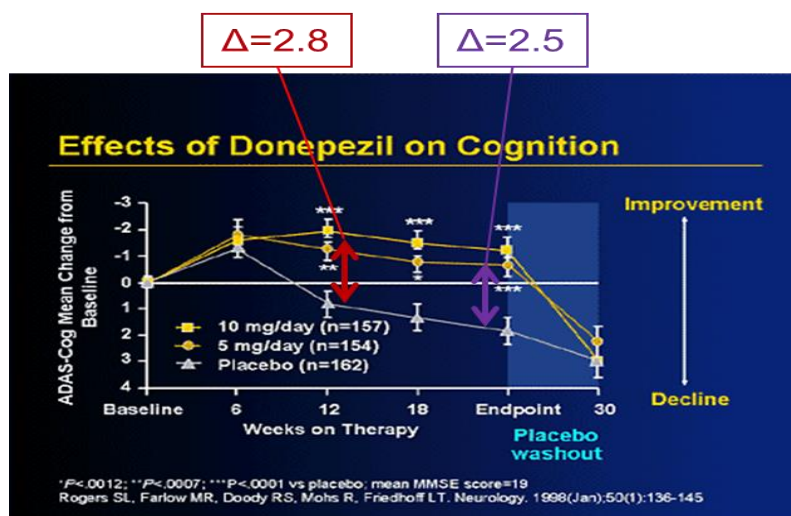


Source: Anavex

Neurons transmit messages by conducting impulses to their distal end, where they release neurotransmitters (chemical messengers). These neurotransmitters are released into the space between the end of one nerve and the beginning of the next connecting nerve, known as the synaptic space. After transmitting the signal to the connecting nerve, the neurotransmitter in the synaptic space is broken down by acetylcholinesterase (AChE). The components are reabsorbed into the distal end of the first neuron, where they are reused to synthesize more neurotransmitters.

As Alzheimer's disease affects the neurons in the brain, they produce less acetylcholine and die. As the disease progresses, fewer neurons produce less acetylcholine to carry out their functions. This results in a reduction of the transmission of impulses between cells and cognitive dysfunction. Donepezil acts by inhibiting the action of the AChE enzyme that breaks down acetylcholine. This attempts to offset the loss of quantity by prolonging the duration and action of the acetylcholine, improving symptoms. In its clinical trials, donepezil treatment for 24 weeks showed an improvement of 2.8 to 3.1 ADAS-Cog points over placebo controls.

Exhibit 9. Effects of Donepezil on Cognition. Over the 26-treatment period, data show a decline in placebo of about 2.0 ADAS-Cog points from baseline, compared with an improvement of about 1 to 1.5 points over baseline. After the drug is withdrawn, the treatment groups decline rapidly to the placebo level.



Source: Anavex Life Sciences Corp

Namenda. Another drug for Alzheimer's is Namenda (memantine), from Forrest Labs (FRX - \$92.66- NR). The drug is an NMDA receptor antagonist that was approved in 2003 for the treatment of moderate to severe Alzheimer's disease. When the NMDA receptor is stimulated by glutamate, the receptor opens a channel to allow calcium influx. Under pathological conditions, overstimulation of the NMDA receptor can occur, which is an event that leads to excessive influx of calcium into the cell.

Excessive calcium levels activate cell death cascades through apoptotic and necrotic mechanisms. Memantine modulates the NMDA receptor to maintain calcium at normal physiological levels. Although only approved for symptomatic treatment of moderate to severe Alzheimer's disease, in vivo and in vitro studies have suggested that memantine may possess neuroprotective activity. Combination use of memantine with donepezil to treat mild Alzheimer's disease has not been shown to have a clear benefit over single therapy.

Mitochondrial Dysfunction and Oxidative Stress. Mitochondria are the structures inside cells that are primarily responsible for producing cellular energy. They contain enzymes that are necessary for metabolism, including free radicals and reactive oxygen species (peroxides). Disease processes or imbalances can cause free radicals to react with cellular proteins and components, which alter their function or damage the cell. This is known as oxidative stress.

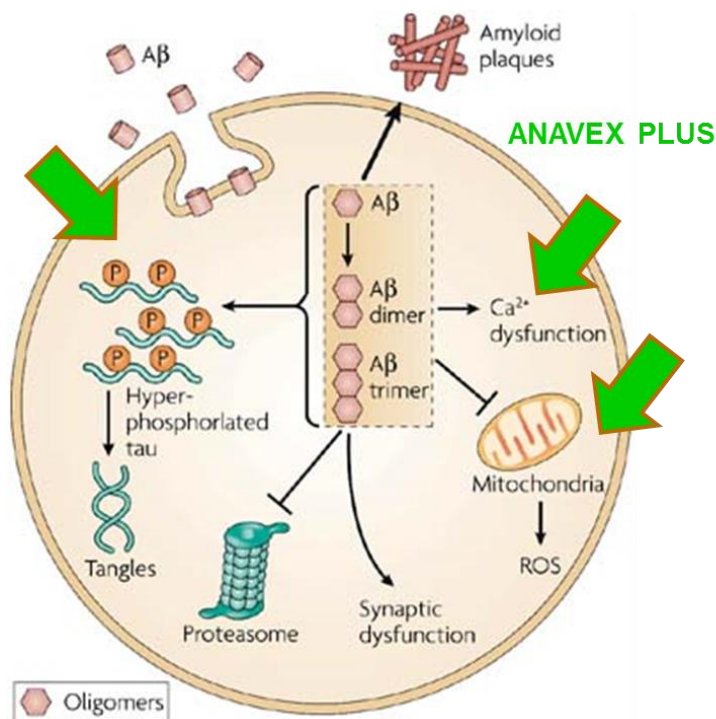
Memory, thinking, and other cognitive processes depend on normal mitochondrial function and synaptic activity. Mitochondrial dysfunction and oxidative stress have been shown to occur early in the development and progression of Alzheimer's disease. Studies have correlated oxidative stress with several events early in the Alzheimer's disease process, showing that it has a role in the initiation of the disease process. Oxidative stress also has a role in beta-amyloid deposition, disease duration, and apoptosis, and correlates with genetic factors. In our opinion, these data support the theory that Anavex 2-73's action to reduce or prevent oxidative stress can affect the disease process.

Misfolded proteins are another characteristic of certain diseases. These proteins are known to impact the efficiency of cellular processes. Sigma receptors detect and prevent them from accumulating in cells. Therefore, it is likely to impact disease progression.

History of Anavex 2-73 Development. Anavex 2-73 is a drug that activates sigma-1 receptors. Laboratory data have shown pharmacological, histological, and behavioral evidence as a potential neuroprotective, anti-amnesic, anti-convulsive, and anti-depressive therapeutic agent.

The Anavex 2-73 mechanism of action may have an effect on the formation of both beta-amyloid plaques and tau deposits. In the transgenic animal model of Alzheimer's disease (Tg2576), Anavex 2-73 had a significant effect against the development of oxidative stress in the brains of mice. It also statistically reduced learning deficits and reversed memory loss in laboratory animals.

Exhibit 10. Anavex 2-73 Targets Multiple Pathways of Alzheimer's Disease



Source: Anavex Life Sciences Corp: Nature Reviews/Neuroscience

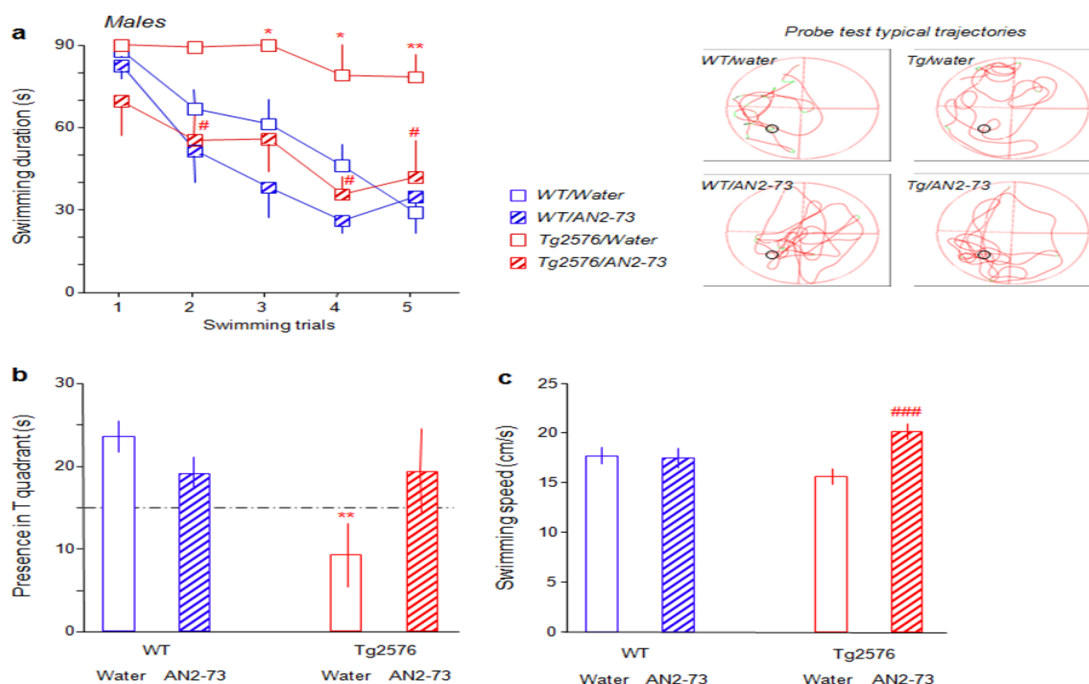
A phase I human clinical trial was completed in 2011. The trial was a randomized, placebo-controlled study to test basic safety and pharmacokinetics. The drug was well-tolerated below the predefined 55mg-60mg maximum dose, with only some mild adverse events. Doses above the maximum dose showed some moderate adverse events, such as headache and dizziness. There were no significant changes in laboratory or electrocardiogram (ECG) parameters. In comparison, several approved drugs for Alzheimer's disease have intolerable side effects on the stomach and gastrointestinal system that force patients to discontinue therapy.

In preparation for the next clinical trial of Anavex 2-73, the company tested it with the approved drugs donepezil and Namenda (memantine). The results showed that the combination of donepezil and Anavex 2-73 showed a greater effect than would be expected from the two drugs if they had independent mechanisms of action. This effect was not seen with Namenda.

As shown in Exhibit 12, the combination of donepezil with Anavex 2-73 showed an improvement of 80% versus the drugs given individually. Data from two animal tests are shown in the left bars, labeled YMT (Y-Maze Test: a short term memory test) and PAT (Passive Avoidance Test: long term memory test). Memantine, an approved drug that acts through a different mechanism, is shown in the two bars on the right. Memantine did not show the synergistic effect seen with donepezil.

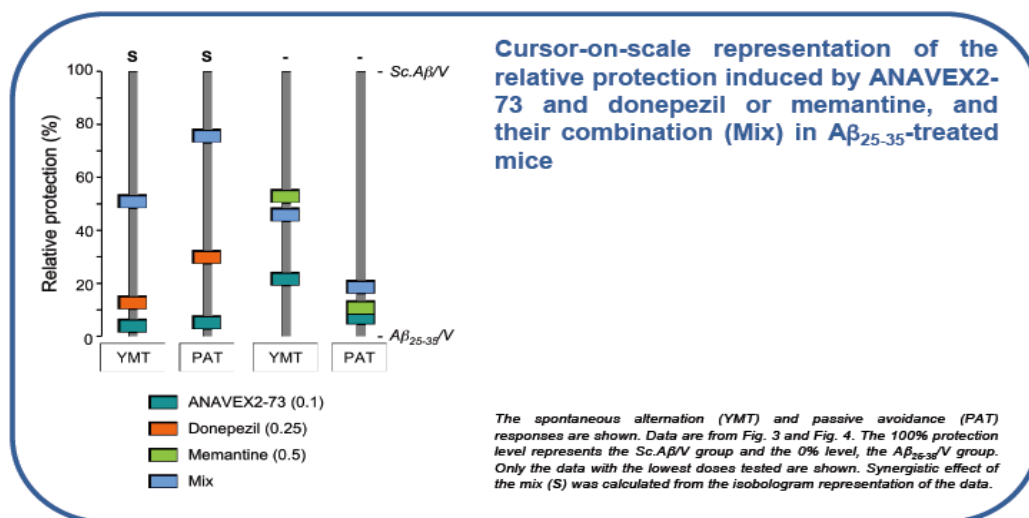
Exhibit 11. Anavex 2-73 Significantly Reduces Pathology in Transgenic Alzheimer's Disease Model as Shown in the Following Experiments. A 10 month-old Tg2576 and WT male mice were administered p.o. (oral) with tap water or Anavex 2-73 (3mg/kg/day). After two months, they were tested for place learning in the water-maze test: acquisition of memory profiles (a), time in T quadrant (b), and swimming speed during the probe test (c) N = 6-12 per group.

* p < 0.05, ** p < 0.01 vs. V-treated WT mice; # p < 0.05, ## p < 0.01, ### p < 0.001 vs. V-treated Tg2576 mice



Source Anavex: Note: Presented at SfN Neuroscience Meeting 2013

Exhibit 12. Synergistic Effect of Anavex 2-73 With Donepezil. When tested with donepezil and memantine, the combination of Anavex 2-73 and donepezil showed more efficacy than would be expected by the sum of the individual results, which is a clear synergistic effect.



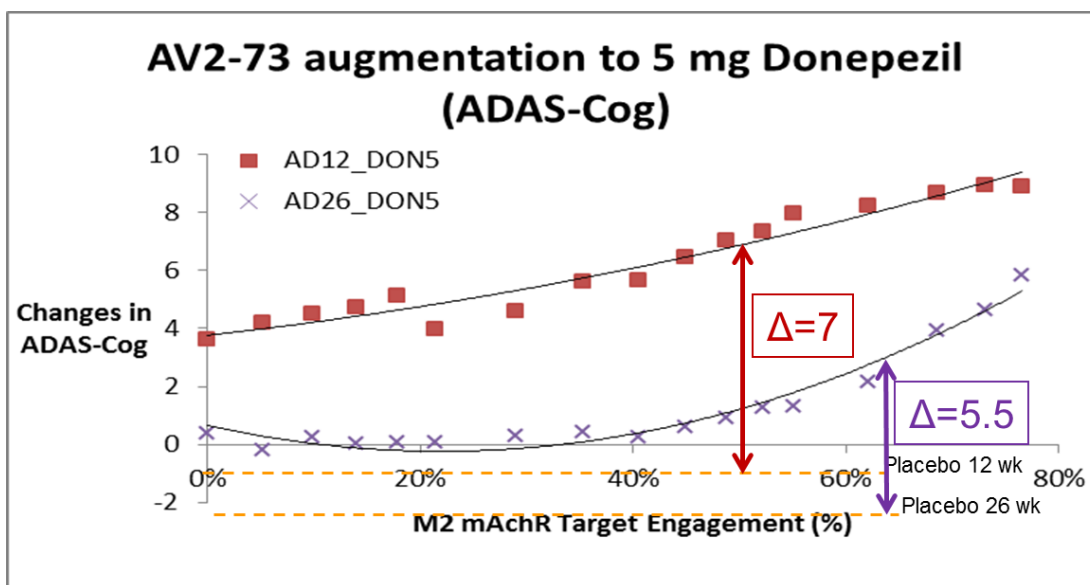
Source: Anavex Life Sciences Corp

The company also used a validated computer model for predicting drug trial outcomes to project the results for the combination in the phase I/II trial. The model predicted changes in the standard of measurement for Alzheimer's disease, ADAS-Cog. This scale includes measurements of memory, orientation, attention, reasoning, language, and praxis. The scale rates patients from 0 to 70, with higher scores indicating greater impairment. Patients commonly decline at a rate of about two to four points per year.

Anavex Plus data predict an improvement of 7.0 ADAS-Cog points at 12 weeks and 5.5 points at 26 weeks. This would more than double the effect of donepezil alone. If Anavex Plus can replicate these results in clinical trials, it could be a commercial opportunity at least as large as the Aricept was before generic competition in 2010. We believe these data are quite compelling, and see the potential for a 7.0 to 5.5 point improvement as a highly significant clinical benefit.

In comparison, another drug for Alzheimer's is solanezumab, a monoclonal antibody tested in mild to moderate Alzheimer's disease by Eli Lilly (LLY - \$58.66 – NR). In 2012, two phase III clinical trials with more than 1,100 patients each were treated for 18 months and failed to show significant improvement on cognition or functional ability. However, a subgroup analysis showed a trend toward benefit in some patients. In 2013, Eli Lilly started a three-year phase III trial in 2,100 patients with mild Alzheimer's disease. This trial is designed to detect a change of 1.25 ADAS-Cog points at 18 months. In our view, this trial size is intended to be large enough to detect slight changes and allows more time for the placebo patients to decline enough for the drug to show a slowing of the disease. The benefit of 1.25 ADAS-Cog points for the drug would be just half the benefit of donepezil at six months.

Exhibit 13. Anticipated Results For The Combination Study at 12 and 26 Weeks. At 12 weeks, the improvement over placebo would be 7.0 ADAS-Cog points. At 26 weeks, the effect would be 5.5 ADAS-Cog points. In comparison, donepezil alone shows a 2.8 to 3.1 point improvement.



Source: Anavex Life Sciences Corp, Note that this data were presented at CNS Summit 2013

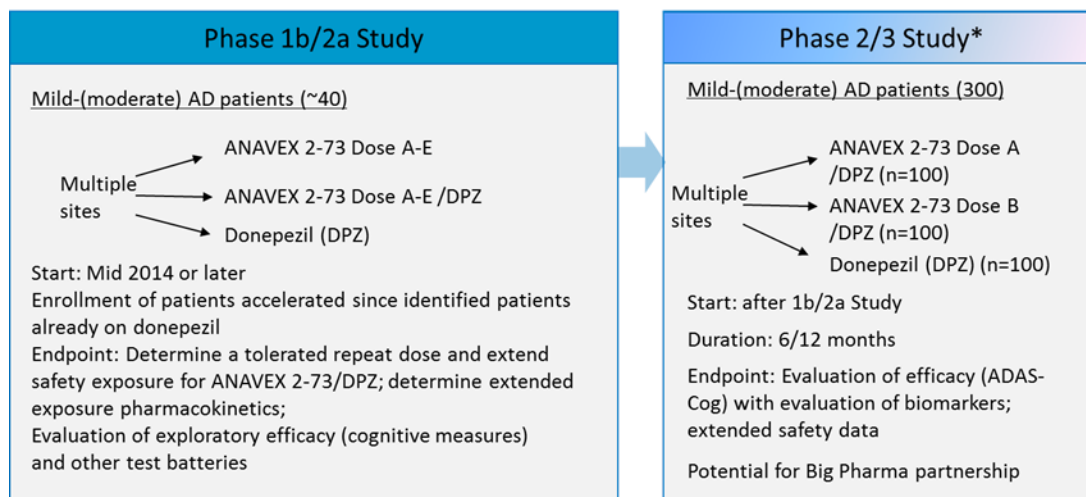
The combination of Anavex 2-73 with donepezil was renamed Anavex Plus. Since donepezil is a generic drug, Anavex can produce it without product licensing or royalties. Anavex has filed a patent application claiming donepezil use with Anavex 2-73. Upon issuance, this would extend the patent life of Anavex 2-73 and protect its use with donepezil.

Anavex Plus is expected to start a phase I/II clinical trial around year-end 2014/early 2015. It is planned as a multiple site, safety and efficacy study. Enrollment is planned to approximately n=40 patients with treatment for exploratory efficacy measures, with an extension option to an open label trial. The trial is designed to have multiple doses of Anavex 2-73 in combination with donepezil compared to a donepezil-only control. The trial will determine safety and tolerance of repeated dosing, and gather human pharmacokinetic data. Exploratory efficacy will be assessed by standard cognitive measures.

Following the phase I/II trial, the company is planning a phase II/III trial with an estimated 300 patients. This will also be a multiple site trial with at least two dose levels of Anavex 2-73 with donepezil compared to donepezil only.

This clinical trial plan is intended to accelerate the timeframe and minimize the cost of the trial. The phase II/III trial is designed to have enough statistical power so that, if the results are strong enough, the company may be able to file for regulatory approval. However, this would depend on the FDA's position at that time regarding the unmet need, the efficacy and safety, and the agency's priorities.

Our models assume that a phase III trial will be needed for approval. If the phase II/III data are strong enough for an NDA, revenues would come about 18 to 24 months sooner.

Exhibit 14. Schematic Plan For Anavex Plus Clinical Trials

**Potential for first registration Study*

*Source: Anavex Life Sciences Corp, *Potential for pivotal registration Study*

Market and Competitors

The size of the patient population, demographic trends, and the lack of therapies have made Alzheimer's disease an area of interest for many pharmaceutical companies. We have identified at least 65 products in clinical trials. Action on beta-amyloid is the predominant mechanism of action. Other products' targets range from tau proteins, serotonin 5-HT₆ antagonists, and cholesterol metabolism to dietary supplements, such as omega-3 fish oil.

We have not found another company working with sigma receptors that would be a direct competitor. The market is so large and the disease so variable that we do not expect a single drug to work for all patients. The need is large enough for patients to take a combination of drugs, as with the current practice of giving donepezil and Namenda.

The company has stated publicly that it may look for a marketing partner at some point in the future. The target prescribers would be primary care givers, neurologists, and geriatric physicians, so a marketing partner with a large sales force would be a good strategy.

A marketing agreement would depend on the data and stage of development when the deal was signed. In 2008, Pfizer created a marketing collaboration with Medivation for Dimebon, a novel drug that was in phase III trials at the time. The licensing agreement included a \$225 million up-front fee plus research support, milestone payments, and a share of revenues. Although the Dimebon data were controversial, the company achieved a valuation for the product of nearly \$1 billion before it failed phase III trials.

Other Potential Indications

Parkinson's Disease. Anavex announced the findings of a research study published in the April 2014 issue of the peer-reviewed scientific journal, *Brain*. For the first time, scientific data have shown that a sigma-1 receptor agonist produced functional neurorestoration in animal models of Parkinson's disease.

Anavex is encouraged by the report, because its results point to the efficacy of Anavex's sigma-1 receptor drug candidates Anavex 2-73, Anavex 3-71, and Anavex 1-41 as potential disease-modifying treatments for Parkinson's disease. Anavex plans to explore preclinical work with these sigma-1 receptor agonist drug candidates in the Parkinson's disease model.

The *Brain* publication describes how the sigma-1 receptor agonist, "PRE-084," produced a dose-dependent behavioral and histological neurorestoration accompanied by an upregulation and activation of cell survival pathways in animal models. A neuroplasticity-boosting action is likely to be the main mechanism through which chronic treatment with PRE-084 alone improves behavior. This study indicates that treatments restoring synaptic connectivity in models of Parkinson's disease may produce functional recovery independent of an increase in dopamine levels.

Amyotrophic Lateral Sclerosis (ALS). A research report published in the March 2014 issue of the peer-reviewed scientific journal, *Neuroscience Letters* (Volume 559, 24 January 2014, Pages 174–178), discussed a linkage between sigma-1 receptor agonists as being effective in suppressing motor neuron degeneration and symptom progression in ALS animal models. The study findings are exciting, as they suggest a therapeutic potential of the sigma-1 receptor agonists (in this case, Anavex 2-73) as warranting further scientific exploration.

ALS is a devastating and usually fatal neurodegenerative disease characterized by progressive degeneration of the motor neurons in the CNS. Most people with ALS die from respiratory failure within three to five years from the onset of symptoms. Recently, mutations in the gene of the sigma-1 receptor have been identified as a cause of familial juvenile ALS.

The *Neuroscience Letters* report describes how the sigma-1 receptor agonist "SA4503" protected motor neuronal cells against induced cell death in both in vitro and in vivo animal models. One important mechanism by which motor neuronal injury is caused involves inhibition of specific components of the mitochondrial electron transfer chain. Therapeutic measures aimed at protecting mitochondrial respiratory chain function may be useful in related familial and possibly other forms of ALS.

Anavex 2-73, developed to treat Alzheimer's through potential disease modification, may have a similar beneficial effect on respiratory cell mitochondria, which could be valuable in treating ALS. The drug candidate recently demonstrated its ability to repair mitochondrial functionality in the hippocampus, the part of the brain involved with learning, memory, and emotions. Mitochondrial dysfunction has been consistently reported as an early cause of Alzheimer's disease.

Front Temporal Dementia. Anavex announced publication in the April 2014 issue of the scientific journal, *Neuropathology* (Volume 34, Issue 2, pages 148–158, April 2014), potentially extends the opportunity for Anavex Plus to additional neurodegenerative diseases beyond Alzheimer's to front temporal dementia, Huntington's disease, and other related CNS indications.

The report demonstrates for the first time, evidenced by human brain autopsies, that the sigma-1 receptor is also involved in a family of neurodegenerative genetic disorders, including Huntington's disease, dentatorubral-pallidoluysian atrophy (DRPLA), and spinocerebellar ataxia types 1, 2, and 3 (SCA1, SCA2, and SCA3, respectively). They are caused by the abnormal expansion of a polyglutamine stretch in each of the unrelated causative proteins. The sigma-1 receptor was consistently expressed and co-localized with neuronal nuclear inclusions in these

polyglutamine diseases, confirming the implication of sigma-1 receptors in cell survival in these neurodegenerative diseases.

Accumulation of misfolded proteins in brain cells is a common feature of most neurodegenerative diseases. Misfolded proteins may cause cell stress or cell dysfunction, leading to neuronal cell death. The sigma-1 receptor has previously been shown to facilitate the proper folding of newly synthesized proteins. It also prevents the accumulation of misfolded proteins by consigning them to degradation, which is why the cell is able to survive. These actions confirm that increasing sigma-1 receptor expression might play a key role in cellular survival in neurodegenerative diseases like Alzheimer's.

According to the newly published report, neurodegenerative diseases, characterized by neuronal nuclear inclusions, apparently also utilize the sigma-1 receptor-related degradation machinery as a pathway for the degradation of aberrant proteins. This indicates that the sigma-1 receptor expands its cellular protective reach and is even able to shuttle between the nucleus and the cytoplasm in order to prevent cell degeneration.

The sigma-1 receptor might promote critically needed cellular survival in additional neurodegenerative diseases beyond Alzheimer's. This potentially expands the scope of indications for Anavex Plus, which is believed to increase the expression of the sigma-1 receptor to help cells regain functionality and survive.

VALUATION

We provide detailed models in the exhibits that follow. We anticipate Anavex Plus to start phase I/II clinical trials toward year-end 2014 to early 2015. The treatment is planned for exploratory efficacy through cognitive measures, not including an extension option. This could allow for a data announcement in mid-2015. A phase II/III trial could start shortly afterward, with a treatment period of six months.

Although the company is designing its trials to allow for early approval, our models anticipate a phase III confirmatory trial. Our current assumption is for first product approval in 2020 and the rest of the world starting in 2021.

The population is estimated at 5.2 million patients in the US and 11 million worldwide. The current drugs have side effects that cause about half to discontinue treatment, while the other half have a small benefit for a brief period. We have not included any use in mild patients, since the number of patients with MCI is difficult to estimate.

If Anavex Plus is successful in its clinical trials, it could potentially replace the current drugs and expand the \$6 billion market. These drugs range in price from \$250 to \$450 per month. The cost to Medicare for treating a patient before Alzheimer's disease is estimated at \$14,772, but increases to \$27,465 in a community setting and \$73,511 in a residential treatment facility. We believe our estimated treatment cost of \$10,000 per year is reasonable.

We apply an 80% risk cut to the market model based on the early nature of the product. We then use our normalized metrics to apply a high 30% discount rate in our FCF, discounted EPS, and sum-of-the-parts models to arrive at a \$7.00 price target.

Exhibit 15. Market Model for Anavex Plus in Mild to Moderate Alzheimer's

Anavex Plus (US)	2015E	2016E	2017E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E
Prevalence	5,200,000	5,200,000	5,252,000	5,464,181	5,573,464	5,684,934	5,798,632	5,914,605	6,032,897	6,153,555	6,276,626
Growth		1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Target Population					1,114,693	1,136,987	1,159,726	1,182,921	1,206,579	1,230,711	1,255,325
Market Share					15%	35%	45%	45%	45%	50%	50%
Treated Patients					167,204	397,945	521,877	532,314	542,961	615,356	627,663
Cost per year					\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
% Price Increase					0%	0%	0%	0%	0%	0%	0%
Risk Adjustment					80%	80%	80%	80%	80%	80%	80%
Total sales (\$ '000)		\$0	\$0	\$0	\$334,407,865	\$795,890,719	\$1,043,753,828	\$1,064,628,905	\$1,085,921,483	\$1,230,711,014	\$1,255,325,234
Anavex Plus (Rest of World)	2015E	2016E	2017E	2019E	2020E	2021E	2022E	2023E	2024E	2025E	2026E
Prevalence	5,200,000	5,200,000	5,200,000	5,200,000	5,200,000	5,200,000	5,304,000	5,410,080	5,518,282	5,628,647	5,741,220
Growth						2%	2%	2%	2%	2%	2%
Target Population						1,040,000	1,060,800	1,082,016	1,103,656	1,125,729	1,148,244
Market Share						25%	30%	40%	40%	45%	45%
Treated Patients						260,000	318,240	432,806	441,463	506,578	516,710
Cost per year						\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
% Price Increase						0%	0%	0%	0%	0%	0%
Risk Adjustment						80%	80%	80%	80%	80%	80%
Total sales (\$ '000)		\$0	\$0	\$0	\$0	\$520,000,000	\$636,480,000	\$865,612,800	\$882,925,056	\$1,013,156,502	\$1,033,419,632

Source: Maxim

Exhibit 16. FCF Model

Average	\$	7
Price Target	\$	9
Year		2014

DCF Valuation Using FCF (mln):											
units (000)	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
EBIT	(3,700)	359	(1,019)	(10,156)	(22,796)	(23,269)	(26,687)	214,717	920,125	1,178,419	1,354,233
Tax Rate	0%	0%	0%	0%	0%	0%	0%	0%	37%	37%	37%
EBIT(1-t)	(3,700)	359	(1,019)	(10,156)	(22,796)	(23,269)	(26,687)	214,717	579,678	742,404	853,167
CapEx	(10)	(10)	(40)	(48)	(58)	(69)	(83)	(100)	(119)	(143)	(172)
Depreciation		0	8	11	16	22	31	43	60	84	118
Change in NWC (ex cash)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
FCF	(3,700)	349	(1,051)	(10,193)	(22,838)	(23,316)	(26,740)	214,660	579,619	742,345	853,113
PV of FCF	(4,810)	349	(808)	(6,031)	(10,395)	(8,164)	(7,202)	44,473	92,372	91,004	80,448
Discount Rate		30%									
Long Term Growth Rate		1%									
Terminal Cash Flow		2,971,186									
Terminal Value YE2023		280,182									
NPV		556,227									
NPV-Debt		-									
Projected Shares out (thousands)		62,927	2023E								
NPV Per Share	\$	8.84									

Source: Maxim estimates

Exhibit 17. Discounted EPS Model

Current Year	2014
Year of EPS	2023
Earnings Multiple	10
Discount Factor	30%
Selected Year EPS	\$ 5.18
NPV	\$ 4.88

Source: Maxim estimates

Discount Rate and Earnings Multiple Varies, Year is Constant							
		2023 EPS					
Earnings Multiple	4.88	5%	10%	15%	20%	25%	30%
	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
	5	\$16.69	\$10.98	\$7.36	\$5.02	\$3.48	\$2.44
	10	\$33.38	\$21.96	\$14.72	\$10.04	\$6.95	\$4.88
	15	\$50.08	\$32.95	\$22.08	\$15.06	\$10.43	\$7.33
	20	\$66.77	\$43.93	\$29.44	\$20.07	\$13.90	\$9.77
	25	\$83.46	\$54.91	\$36.80	\$25.09	\$17.38	\$12.21
	30	\$100.15	\$65.89	\$44.17	\$30.11	\$20.85	\$14.65
	35	\$116.84	\$76.87	\$51.53	\$35.13	\$24.33	\$17.09

Exhibit 18. Sum-of-the-Parts Model

Anavex Sum of the Parts	LT Gr	Discount Rate	Yrs. to Mkt	% Success	Peak Sales MMs	Term Val
Anavex Plus (US)	5%	30%	6	40%	\$2,060	\$8,239
NPV						\$7.05
Other	1%	30%	7	50%	\$200	\$690
NPV						\$0.57
Net Margin						65%
MM Shrs OS (2023E)						63
Total						\$7.1

Source: Maxim estimates

FUNDAMENTAL RISKS

Developmental Risk: Anavex's products are still in their early stages and may never lead to marketable drug products. There is also an inherent risk in successfully running, managing, and sorting data in clinical trials. The trial designs could change, and the running of the trials could induce errors and delays. In addition, the company's partners may terminate the development agreements or lack the resources to complete them.

Regulatory Risk: Anavex must be able to obtain the approval of the FDA before commercial sales of the product candidates commence in the United States. The timing of these approvals is uncertain.

Competitive Landscape: The pharmaceutical market is intensely competitive. Anavex must compete with existing and new treatment methods, as well as new technologies for its disease targets. In addition, the company faces intense competition, including large pharma companies, most of which are well-financed.

Financing Risk: Anavex is not a profitable company. While the company has a cash balance today, it is likely that it might need to raise additional capital prior to commercialization. The company's ability to do so could be critical in keeping the current programs moving forward and providing a value creation event in the future.

Exhibit 19. Anavex Income Statement

Anavex Life Sciences Corp		Dec-14		Jan.-14											
Anavex: YE Sept 30	2013A	1Q14A	2Q14A	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
Revenue															
Anavex Plus (US Only)												300,967	716,302	939,378	958,166
Anavex Plus (Rest of World)													468,000	572,832	779,052
Total Revenues (\$000)	-	-	-	-	-	-	-	-	-	-	-	300,967	1,184,302	1,512,210	1,737,218
Expenses															
Cost of Goods Sold (15%)												45,145	177,645	226,832	260,583
Research and Development	263.8	5	118	1,500	1,500	3,123	6,000	8,000	20,000	20,251	20,659	21,076	21,500	21,934	22,376
General and Administrative	1,873.5	304	903	271	289	1,768	2,000	2,130	2,770	2,985	6,000	20,000	65,000	85,000	100,000
Operating expenses	2,137.4	310	1,021	1,771	1,789	4,891	8,000	10,130	22,771	23,238	26,661	86,222	264,147	333,767	382,960
Oper. Inc. (Loss)	(2,137.4)	(310)	(1,021)	(1,771)	(1,789)	(4,891)	(8,000)	(10,130)	(22,771)	(23,238)	(26,661)	214,745	920,155	1,178,444	1,354,258
Oper Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	1	1	1	1
Other income (expense)															
Interest and financing fees	(51.3)	(3)	(5)	(7)	(8)	(22)	(28)	(26)	(25)	(31)	(27)	(28)	(30)	(25)	(25)
Other non-operating income	(1,511.3)	672	7	21	(6)	694	(20)	-	-	-	-				
Non-operating Income (expense)	(1,562.7)	668	2	15	(14)	672	(48)	(26)	(25)	(31)	(27)	(28)	(30)	(25)	(25)
Financial Income, Net															
Financial Expenses, Net	(3,700.0)	359	(1,019)	(1,757)	(1,802)	(4,219)	(8,048)	(10,156)	(22,796)	(23,269)	(26,687)	214,717	920,125	1,178,419	1,354,233
Pretax Income	(3,700.0)	359	(1,019)	(1,757)	(1,802)	(4,219)	(8,048)	(10,156)	(22,796)	(23,269)	(26,687)	214,717	920,125	1,178,419	1,354,233
Pretax Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Income Tax Benefit (Provision)	-	-	-	-	-	-	-	-	-	-	-	340,446	436,015	501,066	501,066
Tax Rate	-	-	-	-	-	-	-	-	-	-	-	-	37%	37%	37%
GAAP Net Income (loss)	(3,700.0)	359	(1,019)	(1,757)	(1,802)	(4,219)	(8,048)	(10,156)	(22,796)	(23,269)	(26,687)	214,717	579,678	742,404	853,167
Net Margin			NM	NM	NM	NM	NM	NM	NM	NM	NM	0.71	0.49	0.49	0.49
GAAP-EPS	(0.12)	0.01	(0.03)	(0.05)	(0.05)	(0.11)	(0.18)	(0.08)	(0.18)	(0.17)	(0.19)	1.47	3.81	4.69	5.18
Non GAAP EPS (dil)	(0.12)	0.01	(0.01)	(0.02)	(0.02)	(0.04)	(0.07)	(0.08)	(0.18)	(0.17)	(0.19)	1.47	3.81	4.69	5.18
Wgtd Avg Shrs (Bas)	31,908.4	37,485	37,881	37,919	37,957	37,811	45,559	51,253	54,712	58,688	61,929	62,177	62,426	62,676	62,927
Wgtd Avg Shrs (Dil)	31,908.4	43,934	112,373	113,497	114,632	96,109	119,599	126,250	129,759	135,028	140,510	146,216	152,152	158,330	164,759

Source: Company reports and Maxim

Exhibit 20. Anavex Balance Sheet

Anavex Life Sciences Corp Balance Sheet (\$'000) Sept YE											
Assets	2013A	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
Cash and Cash Equivalents	\$345	\$5,727	\$7,496	\$13,371	\$31,769	\$55,411	\$31,948	\$250,806	\$835,804	\$1,585,041	\$2,446,985
Prepaid Expenses	\$48	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28	\$28
Deferred financing charge	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Current Assets	\$393	\$5,756	\$7,525	\$13,399	\$31,797	\$55,440	\$31,976	\$250,834	\$835,832	\$1,585,069	\$2,447,014
Property & Equipment (net)	\$0	\$9	\$41	\$78	\$120	\$167	\$219	\$276	\$335	\$394	\$448
Deferred Finance Charge		\$1,069	\$1,069	\$1,069	\$1,069	\$1,069	\$1,069	\$1,069	\$1,069	\$1,069	\$1,069
Total Non-Current Assets	\$0	\$1,078	\$1,110	\$1,147	\$1,189	\$1,236	\$1,288	\$1,344	\$1,404	\$1,463	\$1,517
Total Assets	\$393	\$6,833	\$8,634	\$14,546	\$32,986	\$56,676	\$33,264	\$252,179	\$837,236	\$1,586,532	\$2,448,530
Liabilities:											
Current Liabilities											
Accounts payable and accrued liabilities	\$1,742	\$1,690	\$1,690	\$1,690	\$1,690	\$1,690	\$1,690	\$1,690	\$1,690	\$1,690	\$1,690
Promissory note payable	\$211	\$194	\$194	\$194	\$194	\$194	\$194	\$194	\$194	\$194	\$194
Total Current Liabilities	\$1,953	\$1,883	\$1,883	\$1,883	\$1,883	\$1,883	\$1,883	\$1,883	\$1,883	\$1,883	\$1,883
Non-Current Liabilities											
Derivative liability	\$904										
Debentures		\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Total Non-current Liabilities	\$904	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1	\$1
Total liabilities	\$2,857	\$1,884	\$1,884	\$1,884	\$1,884	\$1,884	\$1,884	\$1,884	\$1,884	\$1,884	\$1,884
Stockholders' equity:											
Ordinary Shares	\$37	\$38	\$38	\$38	\$38	\$38	\$38	\$38	\$38	\$38	\$38
Additional Paid-In Capital	\$38,645	\$49,695	\$59,544	\$75,744	\$116,980	\$163,939	\$167,215	\$171,412	\$176,791	\$183,683	\$192,515
Share subscriptions received	\$60	\$640	\$640	\$640	\$640	\$640	\$640	\$640	\$640	\$640	\$640
Accumulated Deficit	(\$41,205)	(\$45,424)	(\$53,472)	(\$63,761)	(\$86,557)	(\$109,826)	(\$136,513)	\$78,204	\$657,883	\$1,400,286	\$2,253,453
Total Equity	(\$2,463)	\$4,949	\$6,750	\$12,661	\$31,102	\$54,792	\$31,380	\$250,294	\$835,352	\$1,584,648	\$2,446,646
Total Liab & Equity	\$393	\$6,834	\$8,635	\$14,546	\$32,986	\$56,676	\$33,264	\$252,179	\$837,236	\$1,586,532	\$2,448,530
Shares Iss'd (000)	\$31,908	\$37,811	\$45,559	\$51,253	\$54,712	\$58,688	\$61,929	\$62,177	\$62,426	\$62,676	\$62,927
Shares Out (000)	\$31,908	\$96,109	\$119,599	\$126,250	\$129,759	\$135,028	\$140,510	\$146,216	\$152,152	\$158,330	\$164,759

Source: Company reports and Maxim

Exhibit 21. Anavex Cash Flow Statement

Anavex Life Sciences Corp Cash Flow Statement (\$000)	Dec-13		Jan.-14		2013A	2014A	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
	1Q14A	2Q14E	3Q14E	4Q14E												
Cash Flows From Operating Activities:																
Net Loss For the Period	(3,700)	359	(660)	(2,417)	(4,219)	(4,219)	(8,048)	(10,289)	(22,796)	(23,269)	(26,687)	214,717	579,678	742,404	853,167	
Adjustments required to reflect net cash used in operating activities																
Amortization and depreciation	1	0	0	0	0	0	8	11	16	22	31	43	60	84	118	
Accretion of debt discount			1	1	1	1										
Stock based compensation	1,003		610	610	610	610										
Amortization of deferred financing charge	1		1	1	1	1										
Change in fair value of derivative liability	(15)	(683)	(683)	(683)	(683)	(683)										
Consulting expenses recorded in exchange for shares to be issued																
Common shares used for consulting expenses																
Promissory note issued for severance																
Common shares used for severance																
Common shares issued for research and development expenses																
Management fees contributed																
Debt conversion expense																
Loss on settlement of accounts payable	977															
Loss on extinguishment of debt	495															
Rent contributed																
Unrealized foreign exchange	(5)	(10)	(17)	(17)	(17)	(17)	0	0	0	0	0	0	0	0	0	0
Changes in non-cash working capital balances related to operations																
VAT recoverable																
Prepaid expenses		(20)	(12)	(12)	(12)	(12)										
Accounts payable and accrued liabilities	466	(80)	(22)	(22)	(22)	(22)										
Total	2,922	(794)	(122)	(122)	(122)	(122)	8	11	16	22	31	43	60	84	118	
Net Cash Used In Operating Activities	(778)	(435)	(783)	(2,540)	(4,342)	(4,342)	(8,040)	(10,278)	(22,780)	(23,247)	(26,657)	214,760	579,739	742,488	853,285	
Changes in assets and liabilities:																
(Increase) decrease in prepaid expenses																
(Increase) decrease in other current assets																
(Decrease) increase in account payable & accrued liabilities																
(Decrease) increase in accrued income taxes																
Net Cash Used in Operating Activities																
Cash Flows From Investing Activities:																
Acquisition of equipment		(2)	(2)	(7)	(10)	(10)	(40)	(48)	(58)	(69)	(83)	(100)	(119)	(143)	(172)	
Net cash provided by investing activities	0	(2)	(2)	(7)	(10)	(10)	(40)	(48)	(58)	(69)	(83)	(100)	(119)	(143)	(172)	
Cash flows from financing activities:																
Issuance of common shares, net of issue costs	801	188	398	398	398	398	29,393	47,940	69,989	49,842	7,227	9,260	11,866	15,205	19,484	
Issuance of convertible debentures			10,000	10,000	10,000	10,000										
Proceeds from warrant exercise				100	100	100										
Share subscriptions received	60		(30)	(30)	(30)	(30)										
Proceeds from promissory notes	250															
Financing fees			(735)	(735)	(735)	(735)										
Repayment of promissory note																
Due to related parties																
Shareholder advances						0										
Net cash provided by financing activities	1,111	188	9,633	9,734	9,734	9,734	9,848	16,200	41,236	46,959	3,276	4,198	5,379	6,892	8,832	
Increase (decrease) in Cash and Cash Equivalents	334	(249)	8,848	7,187	5,382	5,382	1,769	5,874	18,398	23,643	(23,464)	218,858	584,998	749,237	861,944	
Cash and Cash Equivalents - Beginning Of Period	11	345	345	345	345	345	5,727	7,496	13,371	31,769	55,411	31,948	250,806	835,804	1,585,041	
Exchange Differences on Cash and Cash Equivalents																
Cash and Cash Equivalents - End of Period	345	96	9,194	7,533	5,727	5,727	7,496	13,371	31,769	55,411	31,948	250,806	835,804	1,585,041	2,446,985	

Source: Company reports and Maxim

DISCLOSURES

Maxim Group LLC Stock Rating System		As of: 5/1/2014	
		% of Coverage Universe with Rating	% of Ratings for which Firm provided Banking Services in the last 12 months
Buy	Fundamental metrics and/or identifiable catalysts exist such that we expect the stock to outperform its relevant index over the next 12 months.	81.8%	33.1%
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*See valuation section for company specific relevant indices			

-Maxim Group managed/co-managed/acted as placement agent for an offering of the securities for Anavex Life Sciences Corp. in the past 12 months

Maxim Group expects to receive or intends to seek compensation for investment banking services from Anavex Life Sciences Corp. in the next 3 months

Maxim Group received compensation for investment banking services from Anavex Life Sciences Corp. in the past 12 months

An affiliate of Maxim Group beneficially owns warrants/shares of Anavex Life Sciences Corp.

Maxim Group makes a market in Anavex Life Sciences Corp.

I, **Jason Kolbert**, attest that the views expressed in this research report accurately reflect my personal views about the subject security and issuer. Furthermore, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report.

The research analyst(s) primarily responsible for the preparation of this research report have received compensation based upon various factors, including the firm's total revenues, a portion of which is generated by investment banking activities.

Valuation Methods (AVXL): We value Anavex primarily on the potential of Anavex Plus in Alzheimer's disease. If successful, we could see approval by 2020-2021. We apply an 80% risk cut to the market model based on the early nature of the product. We then use our normalized metrics to apply a high 30% discount rate in our FCF, discounted EPS, and sum-of-the-parts models to arrive at a \$7.00 price target. For Anavex, we use the BTK (NYSE Biotechnology Index) as the relevant index.

Price Target and Investment Risks (AVXL): Anavex faces multiple risks, from clinical data (will it work?) to the execution of the clinical trial, regulatory interactions, and the ability to raise capital and commercialize products.

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Risk ratings take into account both fundamental criteria and price volatility.

Speculative – Fundamental Criteria: This is a risk rating assigned to early-stage companies with minimal to no revenues, lack of earnings, balance sheet concerns, and/or a short operating history. Accordingly, fundamental risk is expected to be significantly above the industry. **Price Volatility:** Because of the inherent fundamental criteria of the companies falling within this risk category, the price volatility is expected to be significant with the possibility that the investment could eventually be worthless. Speculative stocks may not be suitable for a significant class of individual investors.

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