



Alzamend Neuro, Inc.

Initiating Coverage with BUY and \$8.00 Target

Large market opportunities for its 2 drugs to treat Alzheimer's. We believe expected positive milestones and clinical data over the next year to be strong catalysts for stock.

Initiating with BUY: We are initiating coverage of Alzamend Neuro with a BUY rating. Alzamend Neuro is a clinical-stage biopharmaceutical company focused on developing novel medicines to prevent, treat, and cure Alzheimer's.

Focus on Alzheimer's: Alzamend has two novel therapeutic drug candidates for Alzheimer's disease. Alzheimer's disease is a progressive neurologic disease that causes brain cells to die and memory or other cognitive impairments. Alzheimer's is the leading cause of dementia, a decline in mental functions that negatively affects a person's ability to function independently.

AL001: AL001 is a patented ionic cocrystal technology delivering a therapeutic combination of lithium, proline, and salicylate to help combat Alzheimer's by preventing cognitive deficits, depression, irritability, and improving associative learning and memory.

AL002: AL002 is a patented method using a mutant peptide sensitized cell as a cell-based therapeutic vaccine that seeks to restore the ability of a patient's immunological system to combat Alzheimer's.

Large market potential: Of the ten most fatal diseases in the U.S., Alzheimer's is the only one with no known cure, ability to slow progression, or means of prevention. Currently available drugs for the treatment of Alzheimer's provide limited and transient effects on cognition. There are 6.2 million Americans currently living with it, and that is estimated to grow to 13 million by 2050. It is estimated that the cost of caring for people with Alzheimer's and other dementias in the U.S. will increase from an estimated \$305 billion in 2020 to a projected \$1.1 trillion per year by 2050.

Ramp up in clinical trials: The company recently (in its current Q2) has announced major clinical trials news. In September, the company has just initiated its Phase I First-in-Human clinical trial for AL001 for Dementia related to Alzheimer's Disease. This follows its receipt in July of a U.S. FDA "may proceed" letter for this study after its filing for an investigational new drug ("IND") application (also in July). In September, the company received positive feedback from its pre-IND meeting request to the FDA for AL002.

Clinical data can be catalyst: Alzamend anticipates starting/finishing its various clinical trials over the next year. We believe achieving key milestones and strong positive data will likely be catalysts for the stock.

However, challenges exist: Alzamend operates in a highly competitive environment and competes against a wide range of other drugs, therapeutics, and treatments. There is the chance that competing therapeutic treatments for Alzheimer's may be developed and launched before the company's drugs are launched.

Positive high risks versus high rewards: Overall, concerns outweighed by growth prospects and valuation. Alzamend's 2 drugs still have long development roads left and the high risks of clinical trials failures, but we believe the ~billion dollars market potential presents high rewards for the risks.

Current valuation attractive: We calculate a 12-month price target for shares of Alzamend to be \$8.00 based on a NPV analysis, representing significant upside from the current share price. We believe this valuation appropriately balances out the company's high risks with the company's high growth prospects and large upside opportunities.

Company Description

Based in Tampa, FL, Alzamend Neuro is a clinical-stage biopharmaceutical company focused on discovering and developing novel medicines to prevent, treat, and cure Alzheimer's.

United States
Healthcare

September 30, 2021

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COVERAGE INITIATION

Rating: **BUY**

Ticker: ALZN

Price: \$3.08

Target: \$8.00

Stock Data

Exchange:	NasdaqCM
52-week Range:	\$2.23 – 33.55
Shares Outstanding (million):	88
Market cap (\$million):	\$271
EV (\$million):	\$255
Debt (\$million):	\$0
Cash (\$million):	\$16
Avg. Daily Trading Vol. (\$million):	\$6
Float (million shares):	50
Short Interest (million shares):	1
Dividend, annual (yield):	\$0 (NA%)

Revenues (US\$ million)

	2021A (Cur.)	2022E (Cur.)	2023E (Cur.)
Q1 Jul	0A	0A	0E
Q2 Oct	0A	0E	0E
Q3 Jan	0A	0E	0E
Q4 Apr	0A	0E	0E
Total	0A	0E	0E
EV/Revs	N/A	N/A	N/A

Earnings per Share (pro forma)

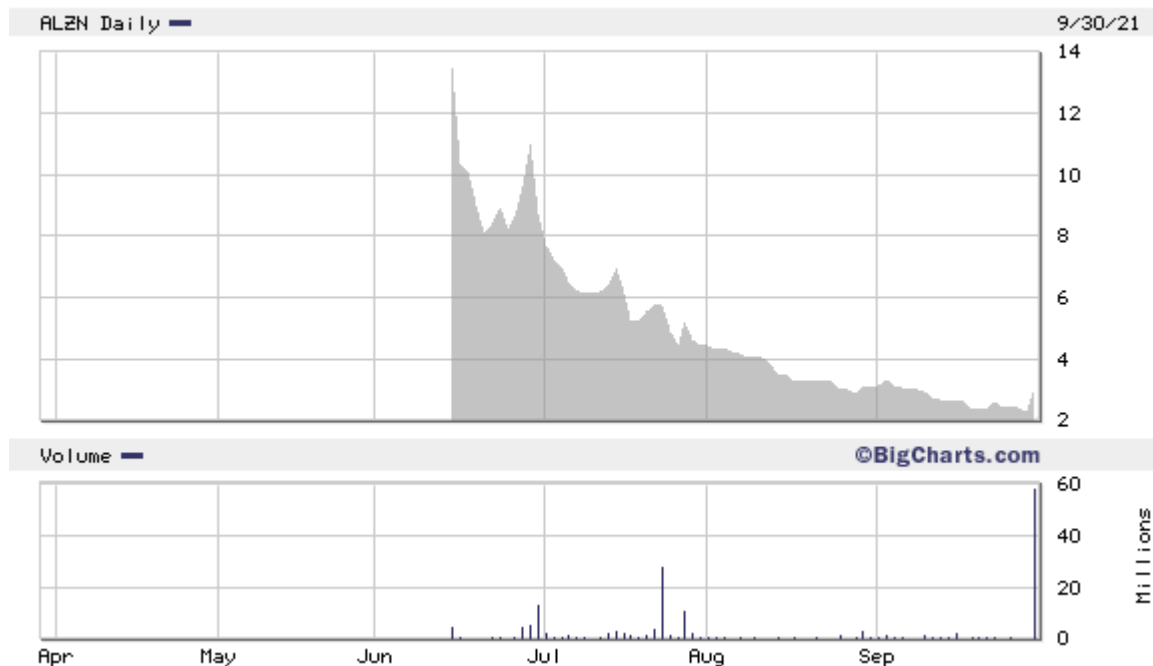
	2021A (Cur.)	2022E (Cur.)	2023E (Cur.)
Q1 Jul	(0.02)A	(0.03)A	(0.04)E
Q2 Oct		(0.03)E	(0.04)E
Q3 Jan		(0.04)E	(0.04)E
Q4 Apr		(0.04)E	(0.04)E
Total	(0.07)A	(0.15)E	(0.17)E
P/E	N/A	N/A	N/A

Important Disclosures

Ascendant Capital Markets LLC seeks to do business with companies covered by its research team. Consequently, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making an investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report, beginning on page 27.

Exhibit 1: Alzamend Neuro, Inc. Stock Price (since IPO in June 2021)



Source: <https://bigcharts.marketwatch.com/>

INVESTMENT THESIS

We are initiating coverage of Alzamend Neuro with a BUY rating and a 12-month price target of \$8.00.

Based in Tampa, FL, Alzamend Neuro is a clinical-stage biopharmaceutical company focused on discovering and developing novel medicines to prevent, treat, and cure Alzheimer's.

Alzamend has two novel therapeutic drug candidates: (i) AL001 (or LiProSal) is a patented ionic cocrystal technology delivering a therapeutic combination of lithium, proline, and salicylate to help combat Alzheimer's by preventing cognitive deficits, depression, irritability, and improving associative learning and memory, and (ii) AL002 (or CA022W) is a patented method using a mutant peptide sensitized cell as a cell-based therapeutic vaccine that seeks to restore the ability of a patient's immunological system to combat Alzheimer's.

Alzamend was founded in 2016 to acquire, develop, and commercialize technologies to prevent, treat, and cure the crippling and deadly Alzheimer's disease. Existing Alzheimer's treatments only temporarily relieve symptoms but do not slow or halt the underlying worsening of the disease and its negative impact. From his family's personal experience with relatives having been afflicted with Alzheimer's disease, Milton "Todd" Ault, III, the company's Founder and Executive Chairman, studied the landscape of treatments and medical technologies and selected USF and its intellectual property and formed the company. Alzamend's underlying goal is to get a treatment or cure for Alzheimer's to market at a reasonable cost as quickly as possible.

Exhibit 2: Alzamend Neuro Overview

Company Overview

Company history

Preclinical stage biopharmaceutical company dedicated to:

- Researching, developing and commercializing **preventions, treatments and cures** for neurodegenerative diseases and psychiatric disorders.
- Working on **two therapeutics** licensed from the **University of South Florida Research Foundation, Inc.**, one of the top 20 institutions in the nation for patented research and their portfolio of proprietary solutions.

Current projects

AL001 (aka LiProSal):

- an **ionic cocrystal of lithium** for the treatment of **Alzheimer's Disease** and other neurodegenerative diseases and **psychiatric disorders**.

AL002 (aka CAO22W):

- a **cell-based therapeutic vaccine** that seeks to **restore** the ability of the patient's **immunological system** to combat Alzheimer's Disease.



Source: Company reports.

Alzheimer's disease is a progressive neurologic disease that causes brain cells to die and memory or other cognitive impairments. Alzheimer's is the leading cause of dementia, a decline in mental functions that negatively affects a person's ability to function independently. Alzheimer's Disease is among the most-feared diseases (second only to cancer) among Americans, according to a 2011 survey by the Harvard School of Public Health. Existing Alzheimer's treatments only temporarily relieve symptoms but do not slow or halt the underlying progressing and worsening of the disease.

Of the ten most fatal diseases in the U.S., Alzheimer's is the only one with no known cure, ability to slow progression, or means of prevention. Currently available drugs for the treatment of Alzheimer's provide limited and transient effects on cognition. There is an urgent need for development of new therapies capable of treating the estimated more than 45 million people worldwide suffering from Alzheimer's today, a number expected to increase to more than 130 million by 2050.

According to the Alzheimer's Association, in the United States alone, 1 in 9 persons over the age of 65 have Alzheimer's, with roughly 6.2 million Americans currently living with it. It is estimated that this number will grow to 13 million by 2050 barring the development of major medical breakthroughs to prevent, slow, or cure the disease.

It is estimated that the cost of caring for people with Alzheimer's and other dementias in the U.S. will increase from an estimated \$305 billion in 2020 to a projected \$1.1 trillion per year by 2050 with Medicare and Medicaid covering approximately 70% of such costs. Alzheimer's also impacts more than 11 million Americans who provide an estimated 15 billion hours of unpaid care per year for people with Alzheimer's or other dementias, according to the Alzheimer's Association. Patients and caregivers suffer from the burden created by this devastating, and often fatal, disease.

Exhibit 3: Alzheimer's Disease

Alzheimer's Disease



Key Statistics:

6th leading cause of death in the United States

Every 65 seconds someone in the United States develops Alzheimer's Disease

13 million Americans are projected to be living with Alzheimer's Disease by 2050

1-in-9 Americans over the age of 65 are estimated to be afflicted with Alzheimer's Disease



Alzheimer's Disease:

Alzheimer's Disease is an **irreversible, progressive brain disorder** that **slowly destroys memory** and **cognitive skills**, and eventually the **ability to carry out the simplest tasks**. In most people with Alzheimer's Disease, symptoms first appear in their early to mid-60's. Estimates vary, but experts suggest that more than **6.2 million Americans** may have Alzheimer's Disease, considered by many as **"the most feared" disease**.

Alzheimer's Disease has **no current cure**, but four treatments for symptoms are available today while research continues.

Source: Company reports.

Alzamend's lead drug candidate is AL001 is an ionic cocrystal of lithium for the treatment of Alzheimer's and other neurodegenerative diseases and psychiatric disorders. Based on preclinical data, AL001 treatment prevents cognitive deficits, depression and irritability in mice, and is superior in improving associative learning and memory and irritability compared with lithium carbonate treatments, supporting the potential of this lithium formulation for the treatment of Alzheimer's and psychiatric disorders in humans.

Results from recent clinical studies suggest that lithium treatment may reduce dementia development while preserving cognitive function and reducing biomarkers associated with Alzheimer's. Recent evidence suggests that lithium may be efficacious for both the treatment and prevention of Alzheimer's and AL001 may be a means of treating Alzheimer's and other neurodegenerative diseases and psychiatric disorders.

Alzamend's other drug candidate is AL002, a patented method using a mutant peptide sensitized cell as a cell-based therapeutic vaccine which seeks to restore the ability of the patient's immunological system to combat Alzheimer's. The proposed mechanism of action is through the pulsed-Dendritic Cell ("DC") activation of T-cells that stimulates the immune system, resulting in the clearance of brain amyloid (suspected to be connected to Alzheimer's).

We note that recently (in its current Q2) the company has announced major clinical trials news. In September, the company has just initiated its Phase I First-in-Human clinical trial for AL001 for Dementia related to Alzheimer's Disease. This follows its receipt in July of a U.S. FDA "may proceed" letter for this study after its filing for an investigational new drug ("IND") application (also in July). In July, the company has also submitted a pre-IND meeting request to the U.S. FDA for AL002. In September, the company received positive feedback from its pre-IND meeting request. Based on this feedback, Alzamend anticipates filing the IND for AL002 by November 2021 and initiating a combined Phase 1/2 clinical trial of AL002 in Q1 CY2022.

The company's near term plans over the next year is to advance (AL001 and AL002) in its clinical trials towards a FDA approval for the treatment of Alzheimer's. In September, Alzamend has just dosed its first patients in its six-month Phase 1 study. Over the next year, Alzamend should finish its Phase 1 clinical trial for AL001 and have submitted its IND and started its Phase 1/2 clinical trial for AL002. We believe expected positive milestones and clinical data over the next year to be strong catalysts for stock.

Exhibit 4: Alzamend Neuro Product Pipeline (as of June 2021)

Product Candidate	Potential Indication	Potential IND Submission	Pre-Clinical	Phase I	Phase II	Phase III	FDA Approval
AL001	• Alzheimer’s disease	• June 30, 2021	IND-Enabling →				
	• Bipolar disorder	• May 31, 2022	IND-Enabling →				
	• Depression	• May 31, 2022	IND-Enabling →				
	• Post Traumatic Stress Disorder (PTSD)	• May 31, 2022	IND-Enabling →				
AL002	• Alzheimer’s Disease	• November 31, 2021	Pre-Clinical →				

*IND - Investigational New Drug

Source: Company reports.

The company’s balance sheet had \$16 million in cash and no debt as of July 2021. In Q1, the company had its IPO and raised ~\$14 million (2.9 million shares of common stock at \$5.00 per share). The company should have enough cash through Q2 (October 2022) FY23, but we estimate that it will need to raise capital by Q3 (January 2023) FY23.

Our investment thesis factors in an uncertain drug development process and very competitive industry which is offset by the very large potential upside opportunities created from a successful drug. We believe that the current valuation for Alzamend has already factored in many of its risks (principally drug approval and successful commercialization) but is under valuing its overall growth prospects and product portfolio, resulting in a positive risk versus reward scenario for an investment in Alzamend.

We believe the current valuation is attractive.

Based on our expectations and assumptions and our NPV analysis, we calculate a 12-month price target for shares of Alzamend to be \$8.00, representing significant upside from current share price. We believe this valuation appropriately balances out the company’s high risks with the company’s high growth prospects and large upside opportunities. We acknowledge that Alzamend is still at a very early stage in its drug development and product commercialization, but we believe key milestones over the next year should be positive catalysts for the stock.

INVESTMENT RISKS

Long and Uncertain Drug Development Cycles

Alzamend is highly dependent upon securing drug approvals for its products in order to sell them (produce revenue). The drug development cycle can be long (average of 12 years), expensive (average of \$350 million), complicated, and uncertain. On average only about 10% of drugs entering clinical trials ever make it to final approval. Because Alzamend’s main 2 drugs (AL001 and AL002) are still very early in development in various preclinical and Phase 1 trials, there are still significant risks and a long time horizon to receive FDA approval. We estimate that it likely at least three years before either drugs can receive FDA approval. With a high likelihood of binary outcomes (either success or failure), the risks are high but the potential rewards can also be very high as well.

Product Commercialization Risks

Even after obtaining drug approvals, there is still a chance that commercial success will not be achieved (due to competition, changes in the market, lack of reasonable reimbursements, or lack of market acceptance). While there are currently no good therapeutics to prevent or treat Alzheimer's, there is the chance that other potential therapeutic treatments and options may be developed and launched before the company's drugs are launched. In addition, Alzamend will need to replace existing therapies and treatments being used currently as standards of care. Like most health care drugs, the company will also need to get suitable insurance and government reimbursements for its products.

High Level of Competition

Alzamend operates in a highly competitive environment and competes against a wide range of other biopharmaceutical companies that are attempting to replicate or already have comparable treatments as the company's drugs. Some of these competitors are much larger or have greater resources, and proprietary technology; which could result in lower projected sales for its drugs and higher costs, reduced margins, and lowered profitability for the company. Even if Alzamend were to be successful with its drug development, its products will have to compete with existing or new standards of care.

Concentrated Product Pipeline

The company is currently developing 2 drug therapeutics (AL001 and AL002). If Alzamend were to experience difficulties with development of any of these, then it may have a material negative impact on its business and financials as there are no meaningful products which can offset.

Coronavirus and Economic Uncertainties

While healthcare costs tends to be less correlated with economic activity and income levels due to their nondiscretionary nature, major deterioration in economic conditions tends to result in an overall decline in consumer spending. This was demonstrated during the 2008 and 2009 Great Recession and global economic slowdown. While consumer spending levels and economic conditions have rebounded since and have been strong the past several years, the global macroeconomic environment can change significantly quickly as was shown with last year's start of the pandemic in March 2020. Since then, due to huge government stimulus the U.S. economy is now very strong. However, the pandemic has still negatively impacted many businesses and has been a huge disruption to the U.S. (and global) economy. This includes biotechs as many have seen FDA drug development reviews, feedback, and approvals delayed along with disruptions in clinical trials. Further economic weakness may result in depressed enterprise and consumer spending levels; this may have a negative impact on Alzamend, its business partners, government, and consumers.

Capital Markets Risks

We believe Alzamend has enough cash to fund its operations through Q2 (October 2022) FY23, but we estimate that it will need to raise capital by Q3 (January 2023) FY23. We believe that it will be at least several years before the company can be cash flow self-sufficient from operations. Many biopharmaceutical companies fund their operations from the sale of equity or debt capital until their products reach commercial success or until they sell off the commercial rights to other companies. Biopharmaceuticals ("biotechs") valuations tend to fluctuate widely, and though they are reasonably strong now (due to a strong M&A market for biotechs and large government funding for COVID-19), there is always the chance that market interests and valuations for companies in this industry decline significantly. The lack of a long shares trading history along with share price volatility since its recent IPO (with a stock price range of \$2.23 – 33.55 (though we note most of the extreme volatility was concentrated in the immediate period post IPO)) in Alzamend's share price may make capital raising much more difficult and expensive.

Shareholder Control

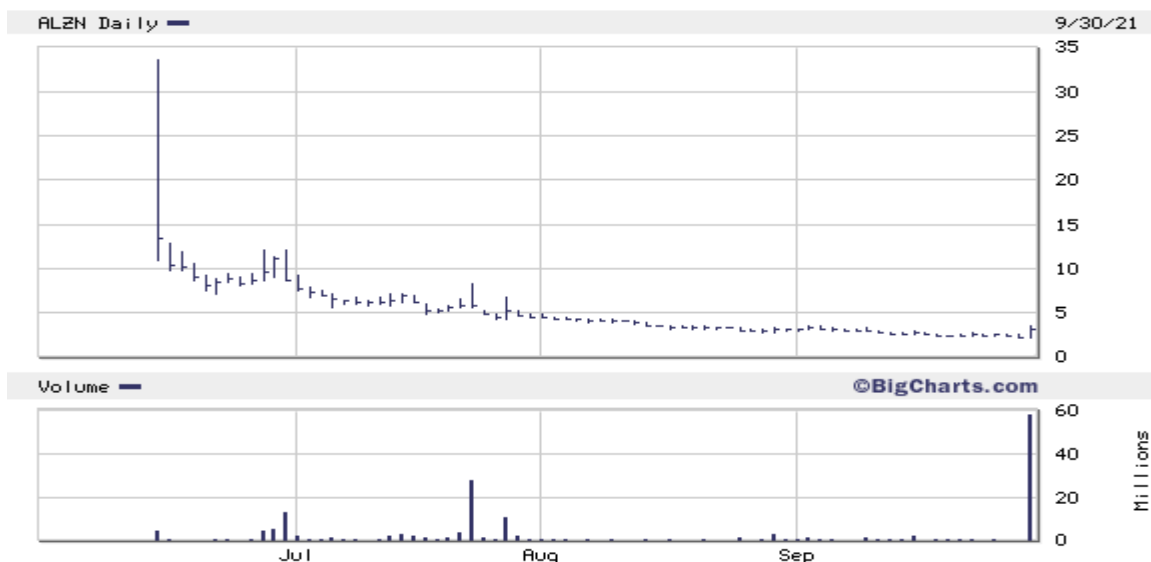
Milton "Todd" Ault, III, the company's Founder and Executive Chairman, controls and owns (directly and indirectly) approximately 50% of Alzamend's outstanding shares. As such, Mr. Ault has effective control of the company and will be able to influence management and stockholder matters, including the election of directors and approval of significant corporate transactions. There may be conflicts of interests with other shareholders as well as the company's control status may deter other investors from investing in the company.

VALUATION

We are initiating coverage of Alzamend Neuro with a BUY rating and a 12-month price target of \$8.00, which is based on a NPV analysis. As the company is a clinical stage drug development company, it currently generates no revenue and significant losses so traditional valuation metrics are not useful. We believe a more accurate valuation should take into consideration the potential value of its product pipeline. We do acknowledge that this valuation is complex and requires a large number of forward assumptions that we have to estimate that may be imprecise and may vary significantly from actual results. This is particularly so for a company like Alzamend Neuro which is still in early clinical trials with its 2 main drugs.

However, we believe our assumptions are fair and provide a reasonable basis for our valuation analysis. Our analysis considers future estimated revenue from each of its major product pipelines (based on estimated future sales, a probability rate of success, and discounted this back to a current value), currently focused on its AL001 and AL002 drugs. We apply a high discount rate and a low probability of success to capture the high uncertainties associated generally with drugs in development. We then added up the values, made an assumption about future investments required and allocated the value based on current share count. Based on our NPV analysis, we arrived at our 12-month price target of \$8.00, which we believe appropriately balances out the company's risks with its high growth prospects.

Exhibit 5: Alzamend Neuro, Inc. Stock Price (since IPO in June 2021)



Source: <https://bigcharts.marketwatch.com/>

Alzamend just recently (in June 2021) had its IPO (initial public offering) so there is not a lot of share price trading history for the company yet. In June 2021, the company had its IPO selling 2.9 million shares of stock at \$5.00 per share (raising ~\$14 million). Though the share price since has been weak (~-50%), we believe this is more likely due to limited news flow typical for clinical stage drug development companies along with general stock price volatility with small/microcap biotech stocks. We believe that there are near term catalysts that can drive the stock (particularly for key milestones expected in 2021/22). As the company is likely to make significant progress (and milestones) in its drug development and product commercialization over the next several years, we believe this will result in much improved visibility into future cash flows and higher share price. Although it is very likely that the company

will have to keep raising capital to achieve its product development goals, we believe that positive progress will make future financings accretive to current shareholders.

We expect valuations for Alzamend to improve as visibility into cash flow generation becomes clearer (though we acknowledge that product commercialization is likely at least 3 years away), resulting in significant upside to the current share price. We also want to note that investor's interest in drugs development to treat and prevent Alzheimer's are very high with many companies in this area attributed high valuations due to the large market opportunities given lack of good treatment options and the high incidence rate.

Exhibit 6: Company Valuation (DCF)

Valuation of Products (in millions)

Product	Estimated NPV	% of Success	Calculated NPV	Discount Rate	Estimated Annual Sales	% of Market Share	Market Potential per year
AL001	\$ 375	25%	\$ 1,500	50%	\$ 750	25%	\$ 3,000
AL002	\$ 375	25%	\$ 1,500	50%	\$ 750	25%	\$ 3,000
Total	\$ 750						

Estimated additional investments (& debt) required	\$ 46
Current Value for existing shareholders	\$ 704
Shares Outstanding (mils)	88
Estimated Value per share	\$ 8.00

Source: Ascendant Capital Markets estimates

Exhibit 7: Recent IPOs of Alzheimer's Focused Biotechs

Recent IPOs of Biotechnology Companies with AD Indication

Company	Science/Treatment	Use of Funds	Employees	IPO Date	IPO Price	IPO Proceeds	Total Shares	IPO Valuation
Athira Pharma	Alzheimer's + Neurodegeneration	Phase II for two drugs	22	9/18/2020	\$17	\$204M	12M	\$527.3M
Annovis Bio	Alzheimer's + Neurodegeneration	Phase II for two drugs	2	1/29/2020	\$6	\$12M	2M	\$41.5M
Cortexyme	Alzheimer's + Neurodegeneration	Phase II/III	19	5/9/2019	\$17	\$78M	5M	\$1B
Alector	Alzheimer's + Immuno-neurology	Phase I for two drugs	78	2/7/2019	\$19	\$176M	68.4M	\$1.3B
Denali	Alzheimer's + Neurodegeneration	Phase I for three drugs	125	12/8/2017	\$18	\$287M	16M	\$1.5B

Source: Company reports.

COMPANY

Based in Tampa, FL, Alzamend Neuro is a clinical-stage biopharmaceutical company focused on discovering and developing novel medicines to prevent, treat, and cure Alzheimer's.

Alzamend has two novel therapeutic drug candidates: (i) AL001 (or LiProSal) is a patented ionic cocrystal technology delivering a therapeutic combination of lithium, proline, and salicylate to help combat Alzheimer's by preventing cognitive deficits, depression, irritability and improving associative learning and memory, and (ii) AL002 (or CA022W) is a patented method using a mutant peptide sensitized cell as a cell-based therapeutic vaccine that seeks to restore the ability of a patient's immunological system to combat Alzheimer's. Both drug candidates are licensed from the University of South Florida (USF Research Foundation) on an exclusive worldwide license limited to the field of Alzheimer's Immunotherapy and Diagnostics.

Alzamend was founded in 2016 to acquire, develop, and commercialize technologies to prevent, treat, and cure the crippling and deadly Alzheimer's disease. Existing Alzheimer's treatments only temporarily relieve symptoms but do not slow or halt the underlying worsening of the disease and its negative impact. From his family's personal experience with relatives having been afflicted with Alzheimer's disease, Milton "Todd" Ault, III, the company's Founder and Executive Chairman, studied the landscape of treatments and medical technologies and selected USF and its intellectual property and formed the company. Alzamend's underlying goal is to get a treatment or cure for Alzheimer's to market at a reasonable cost as quickly as possible.

Alzamend just recently (in June 2021) had its IPO (initial public offering). As of July 2021, Alzamend has ~2 full time employees but it receives management support from several part time employees and from Mr. Ault (Chairman) and his affiliates. Mr. Ault controls and owns (directly and indirectly) approximately 50% of Alzamend's outstanding shares.

Exhibit 8: Alzamend Neuro's Management Team

Alzamend Leadership Team



Stephan Jackman

Chief Executive Officer and Director
20+ years multi-industry experience, specialized in Biotech and Pharmaceutical



Henry Nisser

Executive Vice President, General Counsel and Director
20+ years experience, U.S. securities compliance, M&A, equity/debt financings and corporate governance



Lien T. Escalona

Chief Financial Officer
25+ years multi-industry experience with an emphasis on accounting and finance, system implementation and SEC reporting



David J. Katzoff

Chief Operating Officer
30+ years multi-industry experience, including Healthcare and Technology



Kenneth S. Cragun

Senior Vice President of Finance
30+ years SEC reporting, CFO of publicly-traded company on Nasdaq, multi-industry experience, including Biotech and Healthcare



Milton "Todd" Ault, III

Founder/Chairman Emeritus of Alzamend
Executive Chairman of Ault Global Holdings
27+ years Financial Industry experience, seasoned Wall Street CEO & activist investor

<u>Name</u>	<u>Age</u>	<u>Position</u>
Milton C. (Todd) Ault III	50	Founder and Executive Chairman of the Board
Stephan Jackman	45	Chief Executive Officer and Director
Henry C.W. Nisser	52	Executive Vice President, General Counsel and Director
Kenneth S. Cragun	60	Senior Vice President of Finance
David Katzoff	59	Chief Operating Officer
Lien T. Escalona	52	Chief Financial Officer

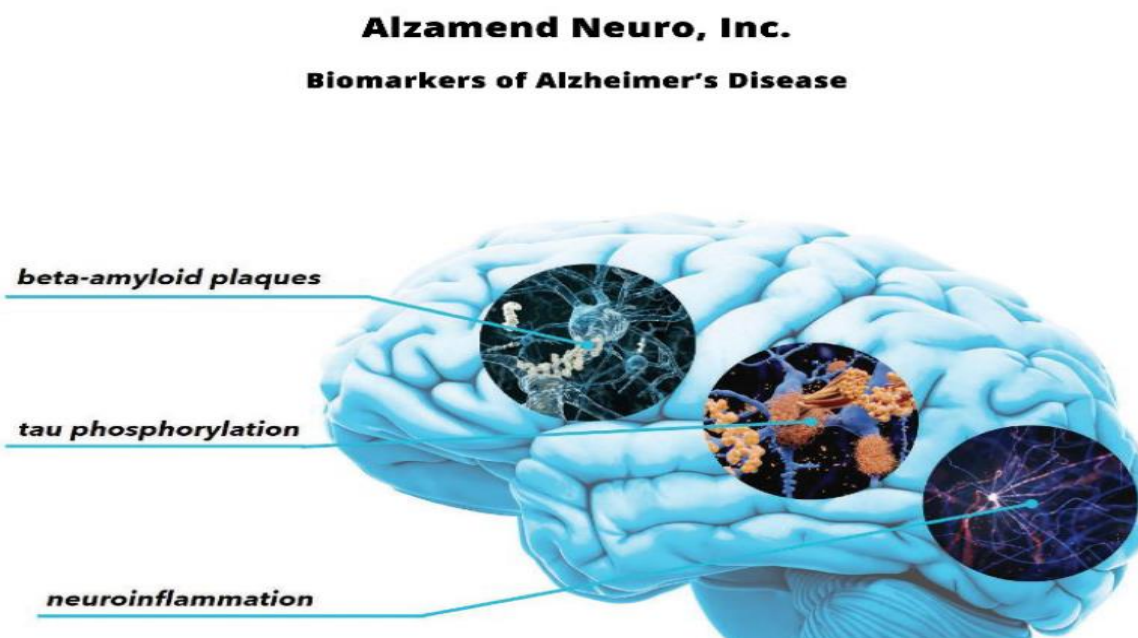
Source: Company reports.

DRUG PIPELINE

Alzamend has two novel therapeutic drug candidates:

- 1) AL001 (or LiProSal) is a patented ionic cocrystal technology delivering a therapeutic combination of lithium, proline, and salicylate to help combat Alzheimer's by preventing cognitive deficits, depression, irritability and improving associative learning and memory.
- 2) AL002 (or CA022W) is a patented method using a mutant peptide sensitized cell as a cell-based therapeutic vaccine that seeks to restore the ability of a patient's immunological system to combat Alzheimer's.

Exhibit 9: Biomarkers of Alzheimer's Disease



Our lead product candidate that we have licensed and will first move to clinical development in humans is an ionic cocrystal of lithium for the treatment of Alzheimer's and other neurodegenerative diseases and psychiatric disorders.

Source: Company reports.

Both drug candidates are licensed (AL002 in 2016 and AL001 in 2018) from the University of South Florida (USF Research Foundation) on an exclusive worldwide license limited to the field of Alzheimer's Immunotherapy and Diagnostics. The company has royalty payments of 4% (AL002) and 4.5% (AL001) on net sales of products developed from the licensed technologies. In addition, the company issued ~6 million shares to USF (the licensor) and has various milestone deadlines and payment obligations.

In 2020, Alzamend obtained two additional exclusive worldwide licenses from USF for AL001, one is for the treatment of neurodegenerative diseases excluding Alzheimer's and the other is for the treatment of psychiatric diseases and disorders. There are also various milestone deadlines and payment obligations and has royalty payments of 3%.

Exhibit 10: License Milestone Obligations (as of July 2021)

Original AL001 License:

Payment	Due Date	Event
\$ 50,000 Completed		Pre-IND meeting
\$ 65,000 Completed		IND application filing
\$ 190,000 12 months from IND filing date		Upon first dosing of patient in a clinical trial
\$ 500,000 12 months from first patient dosing		Upon completion of first clinical trial
\$ 1,250,000 24 months from completion of the first clinical trial		Upon first patient treated in a Phase III clinical trial
\$ 10,000,000 8 years from the effective date of the agreement		Upon FDA approval

AL002 License:

Payment	Due Date	Event
\$ 50,000 January 1, 2022		IND application filing
\$ 50,000 12 months from IND application filing date		Upon first dosing of patient in first Phase I clinical trial
\$ 175,000 12 months from first patient dosed in Phase I		Upon completion of first Phase I clinical trial
\$ 500,000 24 months from completion of first Phase I Trial		Upon completion of first Phase II clinical trial
\$ 1,000,000 12 months from completion of the first Phase II clinical trial		Upon first patient treated in a Phase III clinical trial
\$ 10,000,000 7 years from the effective date of the agreement		Upon receipt of FDA BLA approval

Additional AL001 Licenses:

Payment	Due Date	Event
\$ 30,000 Upon first pre-IND meeting		Pre-IND meeting
\$ 50,000 December 31, 2022		IND application filing
\$ 150,000 12 months from IND filing date		Upon first dosing of patient in a clinical trial
\$ 400,000 12 months from first patient dosing		Upon completion of first clinical trial
\$ 1,000,000 36 months from completion of the first Phase II clinical trial		Upon first patient treated in a Phase III clinical trial
\$ 8,000,000 August 1, 2029		First commercial sale

Source: Company reports.

Alzamend's lead drug candidate is AL001 is an ionic cocrystal of lithium for the treatment of Alzheimer's and other neurodegenerative diseases and psychiatric disorders. Based on preclinical data, AL001 treatment prevents cognitive deficits, depression and irritability in mice, and is superior in improving associative learning and memory and irritability compared with lithium carbonate treatments, supporting the potential of this lithium formulation for the treatment of Alzheimer's and psychiatric disorders in humans. Lithium has been marketed for more than 35 years and human toxicology regarding lithium use has been well characterized, potentially mitigating the regulatory burden for safety data.

Alzamend’s other drug candidate is AL002, a patented method using a mutant peptide sensitized cell as a cell-based therapeutic vaccine which seeks to restore the ability of the patient’s immunological system to combat Alzheimer’s. The proposed mechanism of action is through the pulsed-Dendritic Cell (“DC”) activation of T-cells that stimulates the immune system, resulting in the clearance of brain amyloid (suspected to be connected to Alzheimer’s).

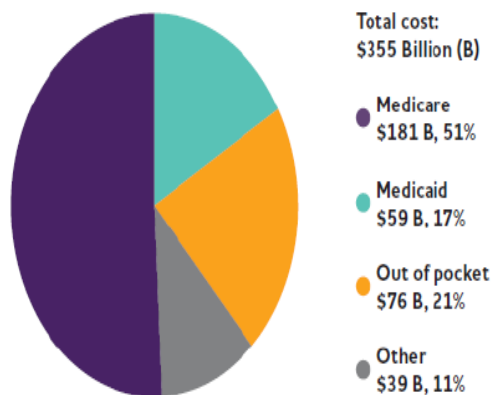
We note that recently (in its current Q2) the company has announced major clinical trials news. In September, the company has just initiated its Phase I First-in-Human clinical trial for AL001 for Dementia related to Alzheimer’s Disease. This follows its receipt in July of a U.S. FDA “may proceed” letter for this study after its filing for an investigational new drug (“IND”) application (also in July). In July, the company also submitted a pre-IND meeting request to the FDA for AL002, and in September, it received positive feedback.

The AL001 Phase I study will investigate the pharmacokinetics (the movement of drug through the body) of lithium following a single dose of AL001 (the “study drug”) compared to a typical single dose of a marketed 300 mg immediate-release lithium carbonate capsule (the “comparator” – currently indicated to treat mood disorders) in healthy male and female subjects. The lithium and salicylate components of AL001 will be given within the amounts already approved for use in patients.

The purpose of this research study is to test the safety, tolerability, and bioavailability (how much and when drug gets in the body) of the study drug, AL001, compared to the currently marketed formulation of the comparator, lithium carbonate. This is expected to ascertain what AL001 doses should be given, and how often, in subsequent Phase 2 safety and efficacy trials involving Alzheimer’s disease patients. At least 24 healthy male and female human subjects will complete the Phase I trial.

Exhibit 11: Alzheimer’s Impact

Economic Burden



*Data are in 2021 dollars.

Created from data from the Lewin Model. “Other” payment sources include private insurance, health maintenance organizations, other managed care organizations and uncompensated care. ¹

1. 2021 Alzheimer’s Disease Facts and Figures from the Alzheimer’s Association (<https://www.alz.org/media/Documents/alzheimers-facts-and-figures.pdf>)

Important Implications

1. In 2021, the estimated **healthcare costs** for treating individuals with Alzheimer’s Disease in the United States will be **\$355 billion**, including \$239 billion in Medicare and Medicaid payments
2. More than **11 million Americans** (family members) provide unpaid care for people with Alzheimer’s Disease or other dementias - an estimated **15.3 billion hours of care** valued at nearly **\$257 billion**
3. Between now and 2050, **treatment for Alzheimer’s Disease/dementia** will cost **\$20.2 trillion**, most of which will be funded by Medicare & Medicaid

Source: Company reports.

Alzheimer's disease is a progressive neurologic disease that causes brain cells to die and memory or other cognitive impairments. Alzheimer's is the leading cause of dementia, a decline in mental functions that negatively affects a person's ability to function independently. Alzheimer's Disease is among the most-feared diseases (second only to cancer) among Americans, according to a 2011 survey by the Harvard School of Public Health. Existing Alzheimer's treatments only temporarily relieve symptoms but do not slow or halt the underlying progressing and worsening of the disease.

Of the ten most fatal diseases in the U.S., Alzheimer's is the only one with no known cure, ability to slow progression, or means of prevention. Currently available drugs for the treatment of Alzheimer's provide limited and transient effects on cognition. There is an urgent need for development of new therapies capable of treating the estimated more than 45 million people worldwide suffering from Alzheimer's today, a number expected to increase to more than 130 million by 2050.

Alzheimer's is the most common cause of dementia, estimated to be associated with some 60 to 70% of cases. We believe that the potential marketplace for a commercialized therapy, treatment, preventions, and cures would be tremendously significant with large financial support available from numerous major international pharmaceutical companies and various governments and worldwide agencies.

Currently, Alzheimer's is the sixth leading cause of death in the U.S. Since 1990, overall life expectancy worldwide has increased by six years and this trend is likely to continue to increase. With the increase in the mean age of the population, the prevalence of deteriorating neurological diseases including Alzheimer's has also increased and is expected to continue to increase.

According to the Alzheimer's Association, in the United States alone, 1 in 9 persons over the age of 65 have Alzheimer's, with roughly 6.2 million Americans currently living with it. It is estimated that this number will grow to 13 million by 2050 unless there are major medical developments and breakthroughs to prevent, slow, or cure the disease.

Alzheimer's average annual incidence for individuals ages 65 to 74 was 0.4%. In individuals ages 75 to 84, the annual incidence was 3.2%, and for ages 85 and older, the incidence was 7.6%. The fastest growing age group in the United States is the "over 85" group within which one in three individuals have Alzheimer's.

It is estimated that the cost of caring for people with Alzheimer's and other dementias in the U.S. will increase from an estimated \$305 billion in 2020 to a projected \$1.1 trillion per year by 2050 with Medicare and Medicaid covering approximately 70% of such costs. Alzheimer's also impacts more than 11 million Americans who provide an estimated 15 billion hours of unpaid care per year for people with Alzheimer's or other dementias, valued at \$257 billion, according to the Alzheimer's Association. Patients and caregivers suffer from the burden created by this devastating, and often fatal, disease.

According to the Alzheimer's Association, it is widely accepted that, with the increasing trend towards a longer lifespan coupled with the baby-boomer population approaching retirement, the incidence of Alzheimer's is likely to double in the next 30 years. The exponential increase in the expected number of patients with Alzheimer's not only represents a major area of unmet medical need, but it also constitutes a significant market opportunity for diagnostics for this disease. Alzheimer's biomarker sales in 2011 were reported at \$1.5 billion and was estimated to have doubled in 2018 to over \$3 billion.

Exhibit 12: What is Alzheimer's Disease?



Alzheimer's is a brain disease that causes problems with memory, thinking and behavior.

The brain has three main parts:



The **cerebrum** fills up most of your skull. It is involved in remembering, problem solving, thinking, and feeling. It also controls movement.



The **cerebellum** sits at the back of your head, under the cerebrum. It controls coordination and balance.



The **brain stem** sits beneath your cerebrum in front of your cerebellum. It connects the brain to the spinal cord and controls automatic functions such as breathing, digestion, heart rate and blood pressure.

Alzheimer's Changes the Whole Brain

Alzheimer's disease leads to nerve cell death and tissue loss throughout the brain. Over time, the brain shrinks dramatically, affecting nearly all its functions.

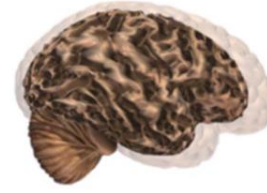
These images show:



A brain without the disease.



A brain with advanced Alzheimer's.



How the two brains compare.

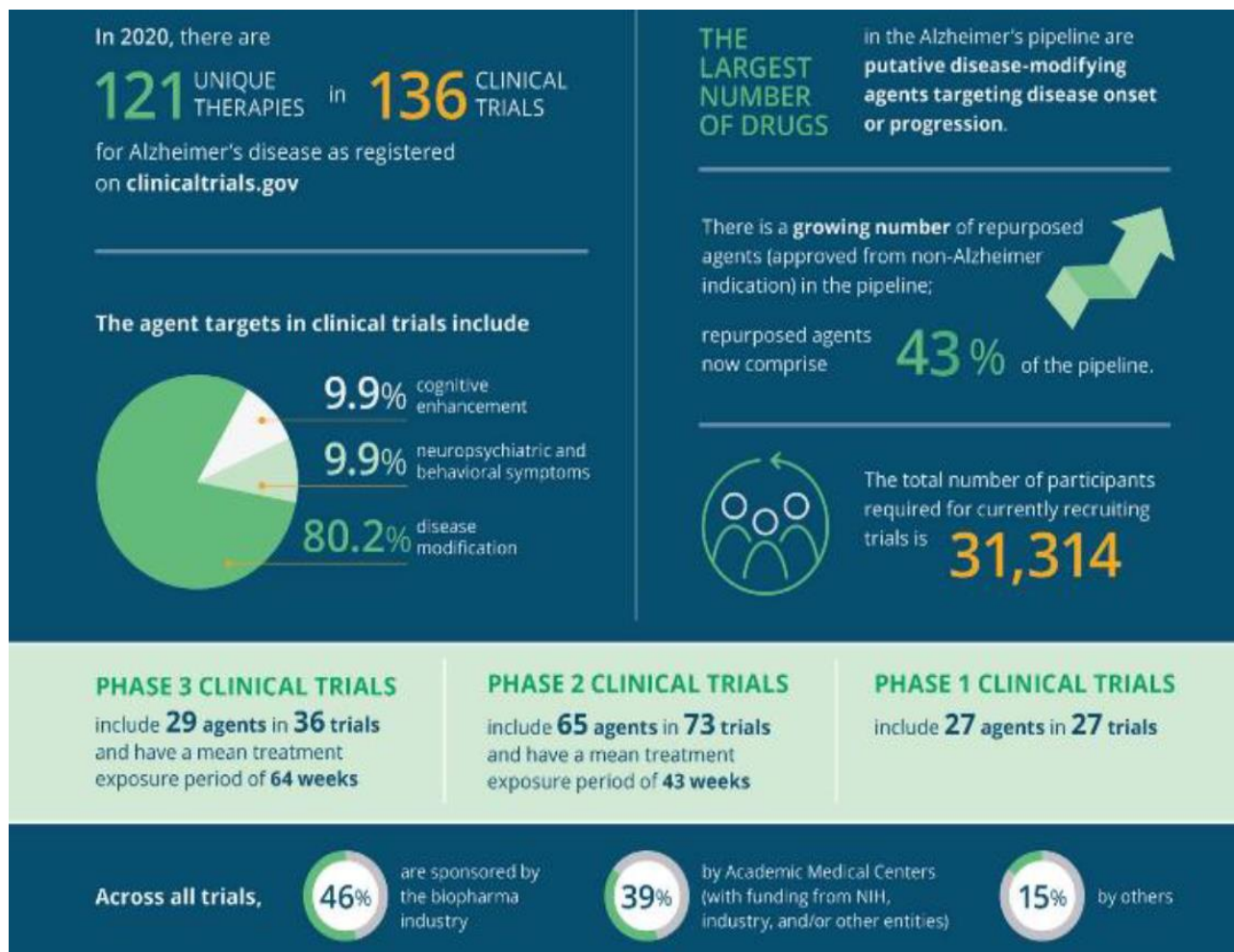
Source: Alzheimer's Association

The cause and progression of Alzheimer’s are not well understood even as there have been significant research and money focused on it. Through 2020, more than 2,444 clinical trials have been or are being conducted to find ways to treat or prevent the disease, but there has not been any discovered or developed consistent and effective treatments that works. Sixteen years ago, the federal government spent \$450 million a year on Alzheimer’s research, but now spends over \$3 billion annually.

Even the recent drug approval by the FDA for major biotech company Biogen’s Alzheimer’s disease drug Aduhelm (aducanumab) in June 2021 was controversial. The FDA gave its approval despite the unanimous rejection conclusion of a FDA advisory committee due to mixed data and results from clinical studies. The FDA cited that the lack of a new drug for Alzheimer’s disease in almost 20 years and the large unmet needs for patients with Alzheimer’s disease as reasons for its approval despite limited efficacy and safety data.

Current clinical research focuses on the early phases of the disease. However, no accurate and convenient tools are available today for pre-dementia diagnosis of Alzheimer’s to support these efforts. Currently, Alzheimer’s is diagnosed using a process that combines cognition assessments with imaging- and spinal-fluid tests. This diagnostic procedure may last for several months to a year and is usually initiated late in the disease development.

Exhibit 13: Alzheimer’s Therapeutic Landscape



Source: Company reports.

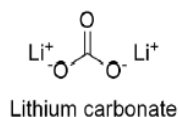
Alzamend believes that its ability to re-engineer lithium solid dosage forms in order to optimize performance has the potential to address a wide range of clinical applications ranging from neurodegenerative disorders, such as Alzheimer’s, amyotrophic lateral sclerosis (known as ALS and Lou Gehrig’s disease), Huntington’s disease, multiple sclerosis, Parkinson’s disease and traumatic brain injury, to more psychiatric conditions such as bipolar disorder, depression, mania, post-traumatic stress disorder and suicidality.

This novel approach is intended to achieve the desired therapeutic outcome of enhanced penetration through the blood-brain barrier and sustained brain lithium concentrations while systemic exposures (and toxicities) are mitigated for other organ systems. The optimal modified-release lithium dosing approach should avoid acutely toxic peak concentrations in blood, as well as in the brain, and should maintain such blood concentrations for a predictable, clinically relevant time, with overall low systemic exposures that mitigate the potential for adverse events.

Alzamend anticipates that the lithium delivery system will be adaptable to a dosing regimen that maintains therapeutic brain lithium concentrations consistently for the longest possible time while allowing only modest exposures and providing adequate recovery periods between doses for other organ systems.

Exhibit 14: AL001 (LiProSal)

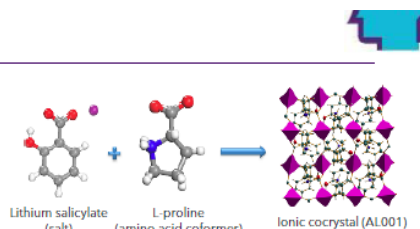
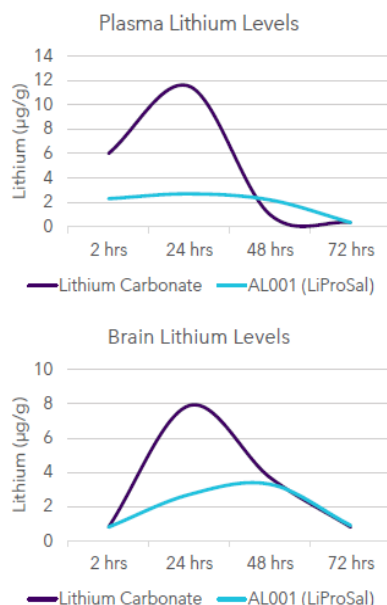
AL001 (LiProSal)



Narrow therapeutic window that requires **regular blood monitoring** of plasma lithium levels and blood chemistry by a clinician **to mitigate adverse events**

Multiple administrations throughout the day are required to safely reach therapeutic plasma concentrations

Suffer from **chronic toxicity, poor physicochemical properties** and **poor brain bioavailability**



- AL001 is a patented ionic cocrystal technology delivering a therapeutic combination of **lithium, proline** and **salicylate**
- AL001 exhibits **improved nonclinical pharmacokinetics** and **bioavailability** compared to the currently FDA approved lithium drugs on the market
- AL001 exhibits **improved brain bioavailability**, without demonstrating an initial spike in lithium concentration that is associated with negative side effects of treatment
- AL001 **exhibits plateau-like pharmacokinetics** compared to the problematic peak and trough pharmacokinetics of other lithium forms

Source: Company reports.

Alzamend lead drug candidate AL001 is an ionic cocrystal of lithium for the treatment of Alzheimer’s and other neurodegenerative diseases and psychiatric disorders. Lithium salts have a long history of human consumption beginning in the 1800s. In psychiatry, they have been used to treat mania and as a prophylactic for depression since the mid-20th century. Today, lithium salts are used as a mood stabilizer for the treatment of bipolar disorder. Although the FDA has approved no medications as safe and effective treatments for suicidality, lithium has proven to be the only drug that consistently reduces suicidality in patients with neuropsychiatric disorders. Despite these effective medicinal uses, current FDA-approved lithium pharmaceuticals (lithium carbonate and lithium citrate) are limited by a narrow therapeutic window that requires regular blood monitoring of plasma lithium levels and

blood chemistry by a clinician to mitigate adverse events. Because conventional lithium salts (carbonate and citrate) are eliminated relatively quickly, multiple administrations throughout the day are required to safely reach therapeutic plasma concentrations. Existing lithium drugs, such as lithium chloride and lithium carbonate, suffer from chronic toxicity, poor physicochemical properties and poor brain bioavailability. Because lithium is so effective at reducing manic episodes in patients with bipolar disorder, it is still used clinically despite its narrow therapeutic index. This has led researchers to begin to look for alternatives to existing lithium with similar bioactivities.

Scientists from the University of South Florida (USF) have developed a new lithium cocrystal composition and method of preparation that, under certain clinical and/or testing conditions, have been shown to allow for lower dosages to achieve therapeutic brain levels of lithium for psychiatric disorders, which could lead to a broadening of lithium’s therapeutic index. Studies and testing have indicated that the compound offers improved physicochemical properties compared to existing forms of lithium, giving it the potential to be developed as an anti-suicidal drug or for use against mood disorders.

Unlike traditional medications which only address a single therapeutic target, lithium appears to be neuroprotective through several modes of action. For example, recent studies have indicated that it exerts neuroprotective effects, in part, by increasing a brain-derived neurotrophic factor leading to restoration of learning and memory.

Results from recent clinical studies suggest that lithium treatment may reduce dementia development while preserving cognitive function and reducing biomarkers associated with Alzheimer’s. Recent evidence suggests that lithium may be efficacious for both the treatment and prevention of Alzheimer’s and AL001 may be a means of treating Alzheimer’s and other neurodegenerative diseases and psychiatric disorders.

Exhibit 15: AL001 (LiProSal) Preclinical Studies

AL001 (LiProSal)



The results of our preclinical studies, conducted from May 2016 to June 2017, are summarized below:

- AL001 had no effect on renal COX2 activity (Tg-Ctrl vs. AL001: $p > 0.05$), a biomarker of renal toxicity, while markedly **reducing abnormal biomarkers** associated with AD **by 50%**; **beta-amyloid pathology, tau phosphorylation** and **neuro-inflammation** (Tg-Ctrl vs. AL001: $p < 0.01$)(FIGS. 14-15).
- AL001 treatment **did not induce tissue pathological damage in the heart, kidneys, liver and lungs** by a general autopsy (Tg-Ctrl vs. AL001: $p > 0.05$). In contrast, **equimolar doses** (using a similar structure of moles but different active pharmaceutical ingredient) **of lithium carbonate enhanced renal COX2 expression** while **having little or no impact on Alzheimer’s Disease pathology** (Tg-Ctrl vs. LC: $p < 0.01$).
- AL001, at the effective dose, **yielded 50% higher lithium levels** (LC vs. AL001; $p < 0.01$) **in the brain** compared with equimolar doses of lithium carbonate (AL001 vs. LC; $p < 0.05$), while producing low nontoxic steady state levels in the body.

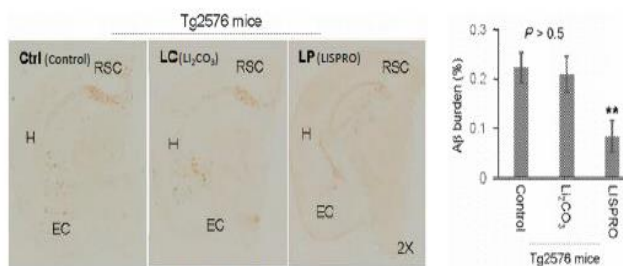


FIG. 14A & 14B: Beta Amyloid Burden

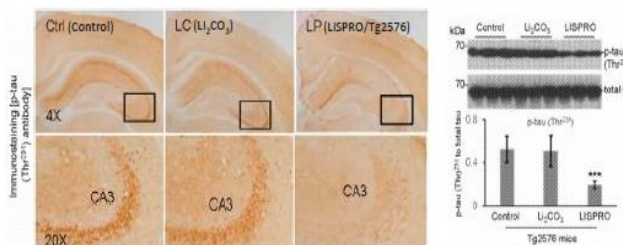


FIG. 15A & 15B: Tau Phosphorylation Burden

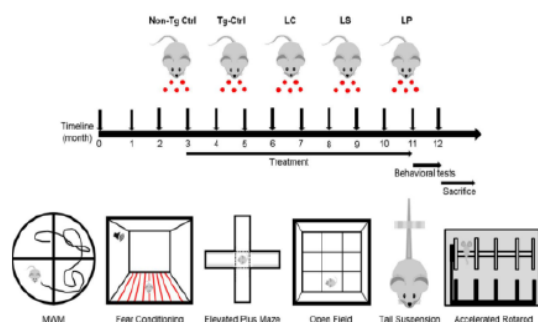
Source: Company reports.

The results of Alzamend’s preclinical studies, conducted from May 2016 to June 2017 using transgenic (or genetically modified) and non-transgenic mice with lithium carbonate and AL001, are summarized below:

- AL001 treatment improved cognitive function by 50% (Tg-Ctrl vs. AL001: $p < 0.01$), in comparison with the control group, through behavioral tests administered to mice with Alzheimer’s. The tests resulted in 50% lower escape latency (Tg-Ctrl vs. AL001: $p < 0.01$) during the training and probe trial of the Morris water maze test and 50% longer contextual freezing time (Tg-Ctrl vs. AL001: $p < 0.05$) during the fear conditioning test.
- AL001 treatment reduced depression by 25% (Tg-Ctrl vs. AL001: $p < 0.001$), as assessed by the tail suspension test, and irritability by 50% (Tg-Ctrl vs. AL001: $p < 0.01$), as assessed by the touch escape test.
- In comparison with lithium carbonate treatment, AL001 treatment afforded superior protection against cognitive impairment by 50% (LC vs. AL001; $p < 0.05$), as shown by the contextual fear conditioning test, and irritability by 50% (LC vs. AL001: $p < 0.01$).
- Continued AL001 treatment prevented cognitive deficits, depression and irritability and, compared to lithium carbonate treatments, was superior in improving associative learning and memory (LC vs. AL001: $p < 0.05$) and in reducing irritability (LC vs. AL001: $p < 0.01$), supporting the potential of this lithium formulation for the treatment of Alzheimer’s.
- AL001 had no effect on renal COX2 activity (Tg-Ctrl vs. AL001: $p > 0.05$), a biomarker of renal toxicity, while markedly reducing abnormal biomarkers associated with Alzheimer’s by 50%, in particular beta-amyloid pathology, tau phosphorylation and neuro-inflammation (Tg-Ctrl vs. AL001: $p < 0.01$).
- AL001 treatment did not induce tissue pathological damage in the heart, kidneys, liver and lungs by a general autopsy (Tg-Ctrl vs. AL001: $p > 0.05$). In contrast, equimolar doses (using a similar structure of moles but different active pharmaceutical ingredient) of lithium carbonate enhanced renal COX2 expression while having little or no impact on Alzheimer’s pathology (Tg-Ctrl vs. LC: $p < 0.01$).
- AL001, at the effective dose, yielded 50% higher lithium levels (LC vs. AL001; $p < 0.01$) in the brain compared with equimolar doses of lithium carbonate (AL001 vs. LC; $p < 0.05$), while producing low nontoxic steady state levels in the body.
- No significant differences in body weight, brain, heart, lungs, spleen, liver or kidneys were found between cohorts treated with AL001 and untreated cohorts. (Tg-Ctrl vs. AL001: $p > 0.05$).

Exhibit 16: AL001 (LiProSal) Preclinical Studies Results

AL001 (LiProSal)



- Our preclinical studies encompassed the treatment of **28 transgenic** (or genetically modified) and **10 non-transgenic mice** with lithium carbonate and AL001.
- **Female APPSWE/PS1dE9 mice** at 4 months of age were **orally treated** with LiProSal (LP), lithium salicylate (LS), or lithium carbonate (LC) for **9 months** followed by **determination of body weight, growth of internal organs, and cognitive and non-cognitive behavior**.
- Untreated age-matched non-transgenic littermates served as wild-type (WT) controls.

The Results

- **No significant differences** in **body weight, brain, heart, lung, spleen, liver or kidney** were found between lithium treated and untreated APPSWE/PS1dE9 cohorts (Tg-Ctrl vs. AL001: $p > 0.05$).
- AL001 treatment **improved cognitive function by 50%** (Tg-Ctrl vs. AL001: $p < 0.01$), in comparison with the control group, through **behavioral tests** administered to mice with AD. The tests resulted in **50% lower escape latency** (Tg-Ctrl vs. AL001: $p < 0.01$) during the training and probe trial of the Morris water maze test and **50% longer contextual freezing time** (Tg-Ctrl vs. AL001: $p < 0.05$) during the fear conditioning test.
- AL001 treatment **reduced depression by 25%** (Tg-Ctrl vs. AL001: $p < 0.001$), as assessed by the tail suspension test, and **irritability by 50%** (Tg-Ctrl vs. AL001: $p < 0.01$), as assessed by the touch escape test.
- Continued AL001 treatment **prevented cognitive deficits, depression and irritability** and, compared to lithium carbonate treatments, was **superior in improving associative learning and memory** (LC vs. AL001: $p < 0.05$) and in **reducing irritability** (LC vs. AL001: $p < 0.01$), supporting the potential of this lithium formulation for the treatment of Alzheimer’s Disease.

Source: Company reports.

Alzamend’s other drug candidate for Alzheimer’s is AL002, which is in preclinical study and evaluation.

AL002 is based on the theory that Alzheimer’s symptoms may be caused in large part by plaque deposits (toxic lumps of proteins) that can cluster in the brain composed of protein fragments called beta-amyloids that build up between nerve cells. Alzamend’s hypothesis is that a special type of immune cell, natural beta-amyloid antibodies, may play a role in preventing plaque build-up in people without Alzheimer’s.

As people age, their immune system may degrade, and some people may be unable to produce natural beta-amyloid antibodies which leads to the plaque build-up causing Alzheimer’s. AL002 is intended to elicit an immune response to produce anti-amyloid antibodies, which can then neutralize circulated beta-amyloids and prevent additional plaque build-up. The mutant antigen within AL002 was selected specifically for its high HLA binding affinity.

AL002 is an autologous modified pulsed-Dendritic Cell (“DC”) treatment. It is a patient-specific therapy where the patient undergoes leukapheresis, a nonsurgical treatment used to reduce the quantity of white blood cells in the bloodstream, to isolate peripheral blood monocytes that are subsequently matured into DCs. The DCs are incubated with a modified amyloid beta (A β) peptide (“AL002 peptide”) to sensitize them, and then administered to the same patient.

Significant evidence has accumulated recently suggesting that immunotherapy is a highly promising modality of treatment in Alzheimer’s. Most current immune-based active investigations are focused on passive immunization by pre-prepared A β antibody administration. Active immunization may offer additional or more lasting effects on the clearance of amyloid and a safer approach due to its reliance on autologous immune mechanisms. Further, preliminary evidence suggests a recurrence of the amyloid accumulation after clearance with the immunoglobulins.

Exhibit 17: AL002 (CAO22W)

AL002 (CAO22W)



A cell-based therapeutic vaccine which seeks to restore the ability of the patient’s immunological system to combat Alzheimer’s Disease



Hypothesis:

- AL002 is intended to **elicit an immune response to produce anti-amyloid antibodies**, which can then neutralize circulated beta-amyloids and prevent additional plaque build-up.
- AL002 is a **patient-specific therapy** where the patient undergoes leukapheresis, a nonsurgical treatment used to reduce the quantity of white blood cells in the bloodstream, **to isolate peripheral blood monocytes** that are subsequently **matured into dendritic cells (“DCs”)** using an **IL4+ GM-CSF cocktail**.
- The **DCs** are **incubated** with a modified amyloid beta (A β) peptide (“**AL002 peptide**”) to sensitize them, and then **administered to the same patient**.

Source: Company reports.

Upcoming Milestones

In September, Alzamend has just dosed its first patients in its six-month Phase 1 study. Over the next year, Alzamend should finish its Phase 1 clinical trial for AL001 and have submitted its IND and started its Phase 1/2 clinical trial for AL002. In September, the company received positive feedback from its pre-IND meeting request (submitted in July) from the FDA for AL002. Based on this feedback, Alzamend anticipates filing the IND for AL002 by November 2021 and initiating a combined Phase 1/2 clinical trial of AL002 in Q1 CY2022.

Alzamend is pursuing the following key business strategies:

- 1) Advance clinical development of AL001 and AL002 for Alzheimer's disease treatment.
- 2) Expand its pipeline of pharmaceuticals to include additional indications and delivery methods for AL001.
- 3) Focus on translational and functional endpoints to efficiently develop product candidates.
- 4) Optimize the commercial value of AL001 and AL002 in key major markets.

FINANCIALS

Alzamend's fiscal year ends on April 30. We expect its next earnings report (for Q2 FY22 ending October 2021) to be in mid-December. Its next earnings report will be its first full quarter as a publicly traded company. Because the company is a clinical stage drug development company, it currently generates no revenue and significant losses as it funds its drug development.

Exhibit 18: Alzamend Neuro's Historical Financials

FYE April 30					
(in millions except EPS)	2019A	2020A	2021A	2022E	2023E
Operating income (loss)	(5.0)	(4.4)	(5.0)	(12.7)	(15.2)
Net income	(4.9)	(4.4)	(5.0)	(12.7)	(15.2)
EPS	\$ (0.08)	\$ (0.06)	\$ (0.07)	\$ (0.15)	\$ (0.17)
Cash flow from operations	(1.0)	(2.3)	(2.7)	(9.4)	(12.2)

Source: Company reports and Ascendant Capital Markets estimates.

Recent Results (fiscal Q1 ending July 2021)

Alzamend's recent financial performance is reflective of its developmental stage. In its Q1 FY22 report (on September 13, 2021), the company reported no revenue and net loss was \$2.3 million. Operating expenses were \$2.3 million, mainly due to drug development costs and general and administrative expenses. Q1 EPS was \$(0.03).

We note that recently (in its current Q2) the company has announced major clinical trials news. In September, the company has initiated its Phase I First-in-Human clinical trial for AL001 for Dementia related to Alzheimer’s Disease. This follows its receipt in July of a U.S. FDA “may proceed” letter for this study after its filing for an investigational new drug (“IND”) application (also in July). In July, the company has also submitted a pre-IND meeting request to the U.S. FDA for AL002. In September, the company received positive feedback from its pre-IND meeting request.

The company does not provide specific quarterly financial guidance, but we believe that R&D expenses should increase as the company expands clinical trial activities. Going forward, we believe operating expenses of \$3 - 4 million is a reasonable near term quarterly burn rate. The company expects continued progress on its drug development milestones in 2021/22. We do not expect the company to experience revenue until its drugs make significant progress towards FDA approval (either from product sales or from the sales of drug marketing rights to new partners), which is likely at least several years away. We have modeled relatively steady operating costs over the next year, primarily driven by its expected two drug clinical trials expenses.

For FY22, we expect a net loss of \$13 million and EPS of \$(0.15). For FY23, we expect a net loss of \$15 million and EPS of \$(0.17).

Exhibit 19: Alzamend Neuro’s Use of IPO Proceeds

Use of Proceeds

Description	Amount	Over-allotment
Phase I Clinical Trials for AL001	\$5,300,000	\$5,300,000
Phase I Clinical Trials for Phase I AL002	\$3,600,000	\$3,600,000
AL001 IND Filing License Fee	\$65,000	\$65,000
AL001 Dosing First Patient License Fee	\$190,000	\$190,000
AL002 IND Filing License Fee	\$50,000	\$50,000
Working Capital	\$2,105,000	\$3,848,750
Total	\$11,310,000	\$13,053,750

Source: Company report.

The company estimates that the costs for its two Phase 1 studies for AL001 and AL002 will be approximately \$9 million. The company also believes it has enough funding through both of these Phase 1 studies, after which it will likely need to raise additional capital.

We believe investors should be focused on its progress on its drug development, which will likely take at least several years before a potential FDA approval. Within the next year, we should get Top-Line data from at least one of its Phase 1 studies.

We believe that the biggest potential variable in our financial model is the ability of the company to get FDA (or equivalent) approval for its AL001 and AL002 Alzheimer's drugs under development. It is these approvals that are ultimately how Alzamend will be able to finally be able to generate revenue. If the company can make significant progress towards these goals, then revenue and earnings will likely be able to grow significantly. However, if the company has difficulties in making progress towards getting drug approvals, then revenue and profitability may not be achieved or will likely grow at a moderate rate or even not at all. Even after drug approvals, Alzamend faces a big challenge to successfully commercialize its products.

The company's balance sheet had \$16 million in cash and no debt as of July 2021. In Q1, the company had its IPO and raised ~\$14 million (2.9 million shares of common stock at \$5.00 per share). The company should have enough cash through 2022 (its Q2/Q3 FY23) but will likely need to raise additional cash to fund its operations by Q3 (January 2023) FY23. We note that the company recently (in July in its current Q2) raised an additional \$2 million selling shares (1.3 million shares at \$1.50 per share) to an affiliate of its Chairman Mr. Ault. There is also an additional funding commitment of \$4 million (2.67 million shares at \$1.50 per share) by the same affiliate once its Phase 1 human clinical trial for AL001 has been completed.

Exhibit 20: Alzamend Neuro's Financial Metrics

Recent Share Price (9/30/21)	\$ 3.08
52-Weeks Share Price (Low - High)	\$2.23 - 33.55
Shares Outstanding	88 million
Market Capitalization	\$271 million
Enterprise Value	\$255 million
Cash (7/31/21)	\$16 million
Debt (7/31/21)	\$0 million
FY2021A Net loss	\$5 million
FY2021A EPS	\$ (0.07)
FY2022E Net loss	\$13 million
FY2022E EPS	\$ (0.15)

Source: Company reports and Ascendant Capital Markets estimates.

FINANCIAL MODEL

Alzamend Neuro, Inc.

Income Statement (\$ mils)	2019	2020	Jul-20	2021	Jul-21	Oct-21	Jan-22	Apr-22	2022	Jul-22	Oct-22	Jan-23	Apr-23	2023
Fiscal Year End: April 30	FY-A	FY-A	Q1A	FY-A	Q1A	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
Total Revenue	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cost of Revenues	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Gross Profit	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Research and development	3.700	1.069	0.309	1.311	0.916	1.500	2.000	2.000	6.416	2.000	2.000	2.000	2.000	8.000
General and administrative	1.309	3.355	1.009	3.641	1.390	1.500	1.700	1.700	6.290	1.800	1.800	1.800	1.800	7.200
Restructuring and other									0.000					0.000
Total operating expenses	5.009	4.424	1.318	4.952	2.306	3.000	3.700	3.700	12.706	3.800	3.800	3.800	3.800	15.200
Operating income (loss)	(5.009)	(4.424)	(1.318)	(4.952)	(2.306)	(3.000)	(3.700)	(3.700)	(12.706)	(3.800)	(3.800)	(3.800)	(3.800)	(15.200)
Interest income (expense)	0.146	0.014	0.002	(0.157)	(0.014)	0.000	0.000	0.000	(0.014)	0.000	0.000	0.000	0.000	0.000
Other income (expense)				0.062		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Income before income taxes	(4.862)	(4.410)	(1.317)	(5.047)	(2.320)	(3.000)	(3.700)	(3.700)	(12.720)	(3.800)	(3.800)	(3.800)	(3.800)	(15.200)
Income taxes						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net income (loss)	(4.862)	(4.410)	(1.317)	(5.047)	(2.320)	(3.000)	(3.700)	(3.700)	(12.720)	(3.800)	(3.800)	(3.800)	(3.800)	(15.200)
Nonrecurring/noncash adjustments									0.000					0.000
Net income (pro forma)	(4.862)	(4.410)	(1.317)	(5.047)	(2.320)	(3.000)	(3.700)	(3.700)	(12.720)	(3.800)	(3.800)	(3.800)	(3.800)	(15.200)
EBITDA	(4.613)	(2.169)	(0.727)	(2.541)	(1.567)	(2.260)	(2.960)	(2.960)	(9.748)	(3.060)	(3.060)	(3.060)	(3.060)	(12.242)
Shares, Basic	58.8	71.3	72.3	72.7	84.6	87.5	88.0	88.5	87.1	89.0	89.5	90.0	90.5	89.8
Shares, Diluted	58.8	71.3	72.3	72.7	84.6	87.5	88.0	88.5	87.1	89.0	89.5	90.0	90.5	89.8
EPS Basic (pro forma)	(\$0.08)	(\$0.06)	(\$0.02)	(\$0.07)	(\$0.03)	(\$0.03)	(\$0.04)	(\$0.04)	(\$0.15)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.17)
EPS Diluted (pro forma)	(\$0.08)	(\$0.06)	(\$0.02)	(\$0.07)	(\$0.03)	(\$0.03)	(\$0.04)	(\$0.04)	(\$0.15)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.04)	(\$0.17)
Margins														
Gross margin														
Research and development														
General and administrative														
Operating margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Tax rate, GAAP	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Net margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Y/Y % change														
Total Revenue														
Gross margin														
Research and development		-71%		23%					390%	118%	33%	0%	0%	25%
General and administrative		156%		9%					73%	30%	20%	6%	6%	14%
Operating income (loss)		-12%		12%					157%	65%	27%	3%	3%	20%
Net income (loss)		-9%		14%					152%	64%	27%	3%	3%	19%
EPS Diluted (pro forma)		-25%		12%					110%	56%	24%	0%	0%	16%

Source: Company reports and Ascendant Capital Markets estimates.

Alzamend Neuro, Inc.

Balance Sheet (\$ mils) Fiscal Year End: April 30	Apr-19 Q4A	Apr-20 Q4A	Apr-21 Q4A	Jul-21 Q1A	Oct-21 Q2E	Jan-22 Q3E	Apr-22 Q4E	Jul-22 Q1E	Oct-22 Q2E	Jan-23 Q3E	Apr-23 Q4E
Assets											
Cash and cash equivalents	0.043	0.090	1.929	15.618	15.358	12.397	9.437	6.377	3.316	0.256	(2.804)
Short term investments					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Deferred income taxes					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Prepaid expenses and other	1.458	1.724	0.983	1.199	1.199	1.199	1.199	1.199	1.199	1.199	1.199
Total current assets	1.501	1.814	2.913	16.818	16.557	13.597	10.637	7.576	4.516	1.455	(1.605)
Property and equipment, net					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Intangibles, net					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Deferred income tax					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total assets	1.501	1.814	2.913	16.818	16.557	13.597	10.637	7.576	4.516	1.455	(1.605)
Liabilities and stockholders' equity											
Accounts payable	1.105	0.930	0.504	1.073	1.073	1.073	1.073	1.073	1.073	1.073	1.073
Accrued expenses	0.079	0.063	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061	0.061
Deferred income tax					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Short term debt			0.335	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340
Total current liabilities	1.184	0.992	0.900	1.473	1.473	1.473	1.473	1.473	1.473	1.473	1.473
Deferred income taxes					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Warrant liabilities					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other long term liabilities					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Long term debt					0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total other liabilities	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Preferred stock	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Common stock	0.006	0.006	0.007	0.009	0.748	1.488	2.228	2.967	3.707	4.446	5.186
Additional paid-in capital	22.686	27.584	33.722	49.371	49.371	49.371	49.371	49.371	49.371	49.371	49.371
Retained earnings	(7.376)	(11.786)	(16.832)	(19.152)	(22.152)	(25.852)	(29.552)	(33.352)	(37.152)	(40.952)	(44.752)
Accumulated other comprehensive income					2.000	2.000	2.000	2.000	2.000	2.000	2.000
Other	(15.000)	(14.983)	(14.883)	(14.883)	(14.883)	(14.883)	(14.883)	(14.883)	(14.883)	(14.883)	(14.883)
Total stockholders' equity	0.317	0.822	2.013	15.344	15.084	12.124	9.163	6.103	3.042	(0.018)	(3.078)
Total stockholders' equity and liabili	1.501	1.814	2.913	16.818	16.557	13.597	10.637	7.576	4.516	1.455	(1.605)

Balance Sheet Drivers

	Apr-19 Q4A	Apr-20 Q4A	Apr-21 Q4A	Jul-21 Q1A	Oct-21 Q2E	Jan-22 Q3E	Apr-22 Q4E	Jul-22 Q1E	Oct-22 Q2E	Jan-23 Q3E	Apr-23 Q4E
Book & Cash Value (per share)											
Book Value per Share (diluted)	0.01	0.01	0.03	0.18	0.17	0.14	0.10	0.07	0.03	(0.00)	(0.03)
Cash per Share (diluted)	0.00	0.00	0.03	0.18	0.18	0.14	0.11	0.07	0.04	0.00	(0.03)
Net cash per Share (diluted)	0.00	0.00	0.02	0.18	0.17	0.14	0.10	0.07	0.03	(0.00)	(0.03)

Source: Company reports and Ascendant Capital Markets estimates

Alzamend Neuro, Inc.

Cash Flow Statement (\$ mils)	2019	2020	Jul-20	2021	Jul-21	Oct-21	Jan-22	Apr-22	2022	Jul-22	Oct-22	Jan-23	Apr-23	2023
Fiscal Year End: April 30	FY-A	FY-A	Q1A	FY-A	Q1A	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
Cash flow from operating activities														
Net income	(4.862)	(4.410)	(1.317)	(5.047)	(2.320)	(3.000)	(3.700)	(3.700)	(12.720)	(3.800)	(3.800)	(3.800)	(3.800)	(15.200)
Depreciation						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Amortization									0.000					0.000
Debt related amortization exper	(0.037)			0.138	0.005				0.005					0.000
Stock comp	0.396	2.255	0.591	2.411	0.740	0.740	0.740	0.740	2.958	0.740	0.740	0.740	0.740	2.958
Deferred income taxes						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Change in fair value of warrant liability									0.000					0.000
Writedowns and impairments									0.000					0.000
Other gains/losses				(0.062)					0.000					0.000
Other	2.228								0.000					0.000
Changes in operating assets and liabilities:														
Prepaid expenses & other curre	0.215	(0.016)	0.347	0.261	(0.216)	0.000	0.000	0.000	(0.216)	0.000	0.000	0.000	0.000	0.000
Other assets						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Accounts payable	1.015	(0.175)	0.174	(0.413)	0.569	0.000	0.000	0.000	0.569	0.000	0.000	0.000	0.000	0.000
Accrued expenses						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other liabilities						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net cash (used in) provided by	(1.045)	(2.346)	(0.205)	(2.712)	(1.223)	(2.260)	(2.960)	(2.960)	(9.404)	(3.060)	(3.060)	(3.060)	(3.060)	(12.242)
Cash flow from investing activities														
Purchases of property and equipment						0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Purchases of short-term investm	0.234	0.105	0.101	0.101					0.000					0.000
Acquisitions									0.000					0.000
Other									0.000					0.000
Net cash used in investing activ	0.234	0.105	0.101	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Cash flow from financing activities														
Issuance of debt	0.073	0.017	0.062	2.352		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Repayment of debt		(0.017)	0.015	(0.002)					0.000					0.000
Issuance of stock	0.236	2.288		2.100	14.911	0.000	0.000	0.000	14.911	0.000	0.000	0.000	0.000	0.000
Proceeds from stock option exercises					0.000				0.000					0.000
Other						2.000			2.000					0.000
Dividends and distributions									0.000					0.000
Cash provided by (used in) fina	0.309	2.288	0.077	4.450	14.912	2.000	0.000	0.000	16.912	0.000	0.000	0.000	0.000	0.000
Effect of exchange rate on cash									0.000					0.000
Net increase (decrease) in cash	(0.502)	0.048	(0.027)	1.839	13.689	(0.260)	(2.960)	(2.960)	7.508	(3.060)	(3.060)	(3.060)	(3.060)	(12.242)
Beginning cash and equivalents	0.545	0.043	0.090	0.090	1.929	15.618	15.358	12.397	1.929	9.437	6.377	3.316	0.256	9.437
Ending cash and equivalents	0.043	0.090	0.063	1.929	15.618	15.358	12.397	9.437	9.437	6.377	3.316	0.256	(2.804)	(2.804)

Source: Company reports and Ascendant Capital Markets estimates

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Alzamend Neuro, Inc.

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Ascendant Capital Markets, LLC Rating System

BUY: We expect the stock to provide a total return of 15% or more within a 12-month period.

HOLD: We expect the stock to provide a total return of negative 15% to positive 15% within a 12-month period.

SELL: We expect the stock to have a negative total return of more than 15% within a 12-month period.

Total return is defined as price appreciation plus dividend yield.

Ascendant Capital Markets, LLC Rating System

Prior to January 31, 2014, ASCM used the following rating system:

- Strong Buy:** We expect the stock to provide a total return of 30% or more within a 12-month period.
- Buy:** We expect the stock to provide a total return of between 10% and 30% within a 12-month period.
- Neutral:** We expect the stock to provide a total return of between minus 10% and plus 10% within a 12-month period.
- Sell:** We expect the stock to provide a total return of minus 10% or worse within a 12-month period.
- Speculative Buy:** This rating is reserved for companies we believe have tremendous potential, but whose stocks are illiquid or whose equity market capitalizations are very small, often in the definition of a nano cap (below \$50 million in market cap). In general, for stocks ranked in this category, we expect the stock to provide a total return of 50% or more within a 12-month period. However, because of the illiquid nature of the stock's trading and/or the nano cap nature of the investment, we caution that these investments may not be suitable for all parties.

Total return is defined as price appreciation plus dividend yield.

Ascendant Capital Markets, LLC Distribution of Investment Ratings (as of July 15, 2021)

Rating	Count	Percent	Investment Banking Services Past 12 months	
			Count	Percent
Buy	40	98%	13	33%
Hold	0	0%	0	0%
Sell	1	2%	0	0%
Total	41	100%	13	32%

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