United States
Healthcare

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MIRA Pharmaceuticals, Inc.

Initiating Coverage with BUY and $11.00 Target

Large market opportunities for its Ketamir-2 and MIRA-55 drugs for depression and dementia. We believe start of clinical trials in late-2024/early-2025 to be strong catalysts for stock.

COVERAGE INITIATION

Rating: BUY

Ticker: MIRA

Price: $2.17

Target: $11.00

Initiating with BUY: We are initiating coverage of MIRA Pharmaceuticals with a BUY rating and a 12-month price target of $11.00. MIRA Pharmaceuticals is a pre-clinical stage pharmaceutical development company with two neuroscience programs targeting a range of neurologic and neuropsychiatric disorders.

Focus on Ketamir-2 and MIRA-55: MIRA Pharmaceuticals has two drugs programs (Ketamir-2 and MIRA-55) in pre-clinical development stage that are initially targeting the treatment of depression and dementia.

Ketamir-2: The company is developing Ketamir-2, a novel oral ketamine analog to potentially deliver ultra-rapid antidepressant effects, providing hope for individuals battling treatment-resistant depression (TRD), major depressive disorder with suicidal ideation (MDSI), and post-traumatic stress disorder (PTSD). Ketamir-2 is a unique novel ketamine analog that is predicted to have good gastrointestinal bioavailability.

MIRA-55: The company is also developing its novel oral synthetic marijuana analog molecule, MIRA-55, for its potential to alleviate neuropathic pain, as well as anxiety and cognitive decline, symptoms often associated with early-stage dementia. MIRA-55 unlocks the therapeutic potential of marijuana and may be a significant advancement in treating neuropsychiatric, inflammatory, and neurologic diseases and disorders.

MDD: Major Depressive Disorder (MDD) is a significant global health concern, affecting over 264 million people worldwide and is a leading cause of disability according to the World Health Organization (WHO). In the U.S., it impacts nearly 21.1 million adults, ~8.3 % of the adult population, in 2021 according to the NIH.
Dementia: MIRA-55 initial focus will be on anxiety, dementia, other pain, Alzheimer's, migraines and related conditions. The company estimates that by 2027, the U.S. CNS market will be worth $48 billion, growing between two and five percent during the period from 2023 to 2027.
Late 2024/early 2025 IND filings: In late 2024, the company plans to file its IND (Investigational New Drug) application for Ketamir-2 for TRD with expected approval and the start of clinical trials in Q1 2025. The company plans to file its IND application for MIRA-55 for anxiety and dementia in Q1 2025 with expected approval and the start of clinical trials in Q2 2025.

However, challenges exist: MIRA Pharmaceuticals 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 depression and dementia 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. MIRA Pharmaceuticals 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 MIRA Pharmaceuticals to be $11.00 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 its high growth prospects and large upside opportunities.

Company Description

Based in Miami, FL, MIRA Pharmaceuticals is a pharmaceutical company developing drugs for a range of neurologic and neuropsychiatric disorders.

Stock Data

Exchange:	NasdaqCM
52-week Range:	0.51 – 6.95
Shares Outstanding (million):	15
Market cap ($million):	$33
EV ($million):	$29
Debt ($million):	$0
Cash ($million):	$4
Avg. Daily Trading Vol. ($million):	$15
Float (million shares):	9
Short Interest (million shares):	~0
Dividend, annual (yield):	$0 (NA%)

Revenues (US$ million)

	2023A (Cur.)	2024E (Cur.)	2025E (Cur.)
Q1 Mar	0A	0A	0E
Q2 Jun	0A	0E	0E
Q3 Sep	0A	0E	0E
Q4 Dec	0A	0E	0E
Total	**0A**	**0E**	**0E**
EV/Revs	N/A	N/A	N/A

Earnings per Share (pro forma)

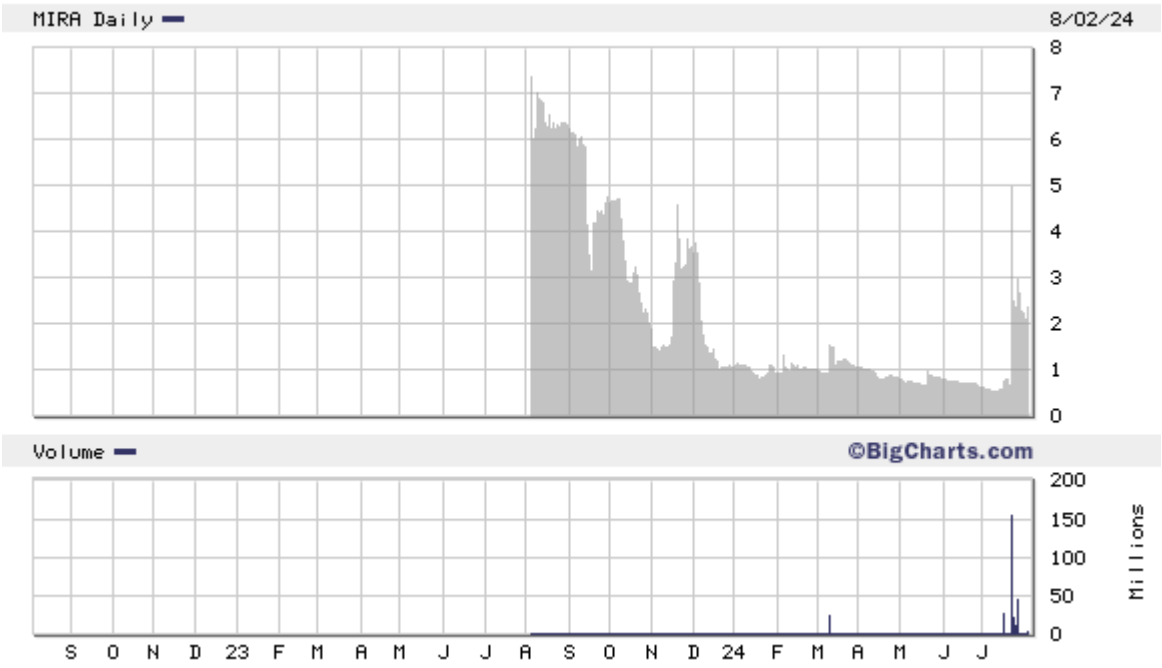
	2023A (Cur.)	2024E (Cur.)	2025E (Cur.)
Q1 Mar	(0.10)A	(0.12)A	(0.18)E
Q2 Jun	(0.10)A	(0.12)E	(0.18)E
Q3 Sep	(0.26)A	(0.13)E	(0.18)E
Q4 Dec	(0.39)A	(0.13)E	(0.18)E
Total	**(0.81)A**	**(0.50)E**	**(0.72)E**
P/E	N/A	N/A	N/A

Important Disclosures

Ascendiant 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 37.

Exhibit 1: MIRA Pharmaceuticals, Inc. Stock Price (1-year since August 2023 IPO)



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

INVESTMENT THESIS

We are initiating coverage of MIRA Pharmaceuticals with a BUY rating and a 12-month price target of $11.00.

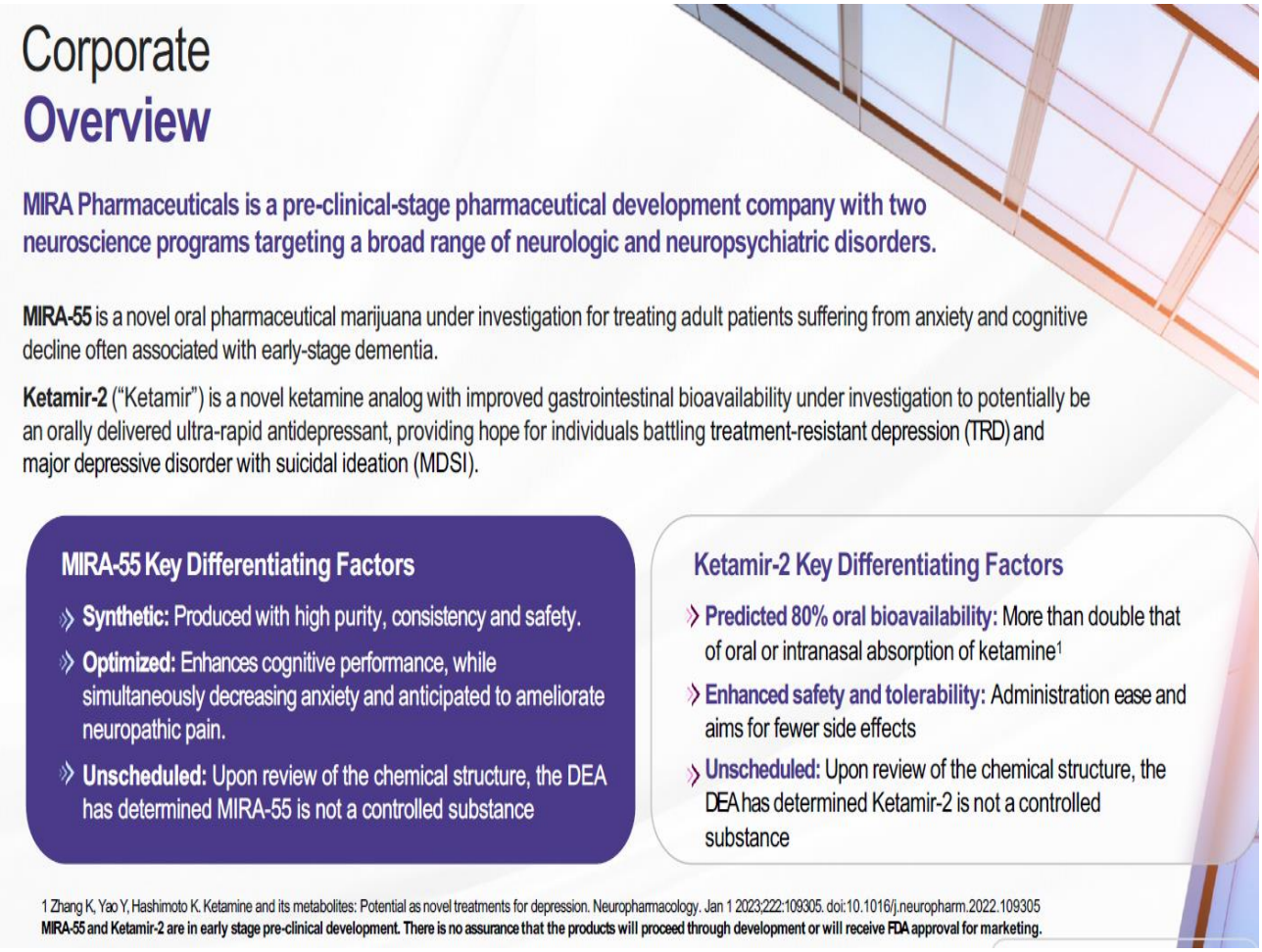
Based in Miami, FL, MIRA Pharmaceuticals is a pre-clinical stage pharmaceutical company developing two neuroscience programs targeting a broad range of neurologic and neuropsychiatric disorders.

MIRA Pharmaceuticals holds exclusive license rights in the U.S., Canada, and Mexico for Ketamir-2, a novel oral ketamine analog under pre-clinical investigation to potentially deliver ultra-rapid antidepressant effects, providing hope for individuals battling treatment-resistant depression (TRD), major depressive disorder with suicidal ideation (MDSI), and post-traumatic stress disorder (PTSD). Ketamir-2 is a unique novel ketamine analog that is predicted to have good gastrointestinal bioavailability.

MIRA Pharmaceuticals is also developing its novel oral synthetic marijuana analog molecule, MIRA-55, for its potential to alleviate neuropathic pain, as well as anxiety and cognitive decline, symptoms often associated with early-stage dementia. MIRA-55 unlocks the therapeutic potential of marijuana and may be a significant advancement in treating neuropsychiatric, inflammatory, and neurologic diseases and disorders.

Both Ketamir-2 and MIRA-55 have been determined by the U.S. Drug Enforcement Administration (DEA) not to be a controlled substance or listed chemical under the Controlled Substance Act and its governing regulations.

Exhibit 2: MIRA Pharmaceuticals, Inc. Corporate Overview



Source: Company reports.

In late 2024, the company plans to file its IND (Investigational New Drug) application for Ketamir-2 with expected approval and the start of clinical trials in Q1 2025. The company plans to file its IND application for MIRA-55 in Q1 2025 with expected approval and the start of clinical trials in Q2 2025.

Ketamir-2 is a new chemical entity, an analog (comparable) of ketamine that is designed to potentially preserve the same rapid antidepressant response but with improved bioavailability (effectiveness). It may also have decreased side effects and decreased potential for drug abuse. This combination is intended to potentially facilitate safer and less cumbersome dosing requirements, with the goal of obtaining an orally administered pill that can be taken at home. Ketamir-2's formulation as a once-daily oral medication is being developed to potentially not require health care professional supervision, improving patient compliance and ease of use.

Major Depressive Disorder (MDD) is a significant global health concern, affecting over 264 million people worldwide and is a leading cause of disability according to the World Health Organization (WHO). In the U.S., it impacts nearly 21.1 million adults, ~8.3 % of the adult population, in 2021 according to data from the National Institutes of Health (NIH). This widespread mental health disorder not only undermines the quality of life and daily functioning of individuals but also imposes a substantial economic burden, with costs in the U.S. of tens of billions of dollars annually.

The company is aiming for the submission of an Investigational New Drug (IND) application to the FDA for Ketamir-2 for TRD by the end of 2024. Additional indications for 1.) Major Depressive Disorder with Suicidal Ideation (MDSI) and 2.) Post-Traumatic Stress Disorder (PTSD) are planned to follow.

Exhibit 3: MIRA Pharmaceuticals Investment Highlights

Source: Company reports.

MIRA-55 is a new molecular synthetic THC analog (comparable) for the treatment of adult patients with anxiety and cognitive decline typically associated with early-stage dementia. The company believes that MIRA-55 enhances the therapeutic potential for treating anxiety, cognitive decline and chronic pain by potentially striking a balance between the beneficial effects of THC and CBD.

Cannabinoids are a class of chemical compounds that are naturally occurring and are primarily found in cannabis plant extracts. The two major cannabinoids found in cannabis plant extracts include tetrahydrocannabinol, a compound that is the main psychoactive ingredient of cannabis (THC) and cannabidiol, the second most prevalent active ingredient in cannabis which does not have psychoactive properties (CBD).

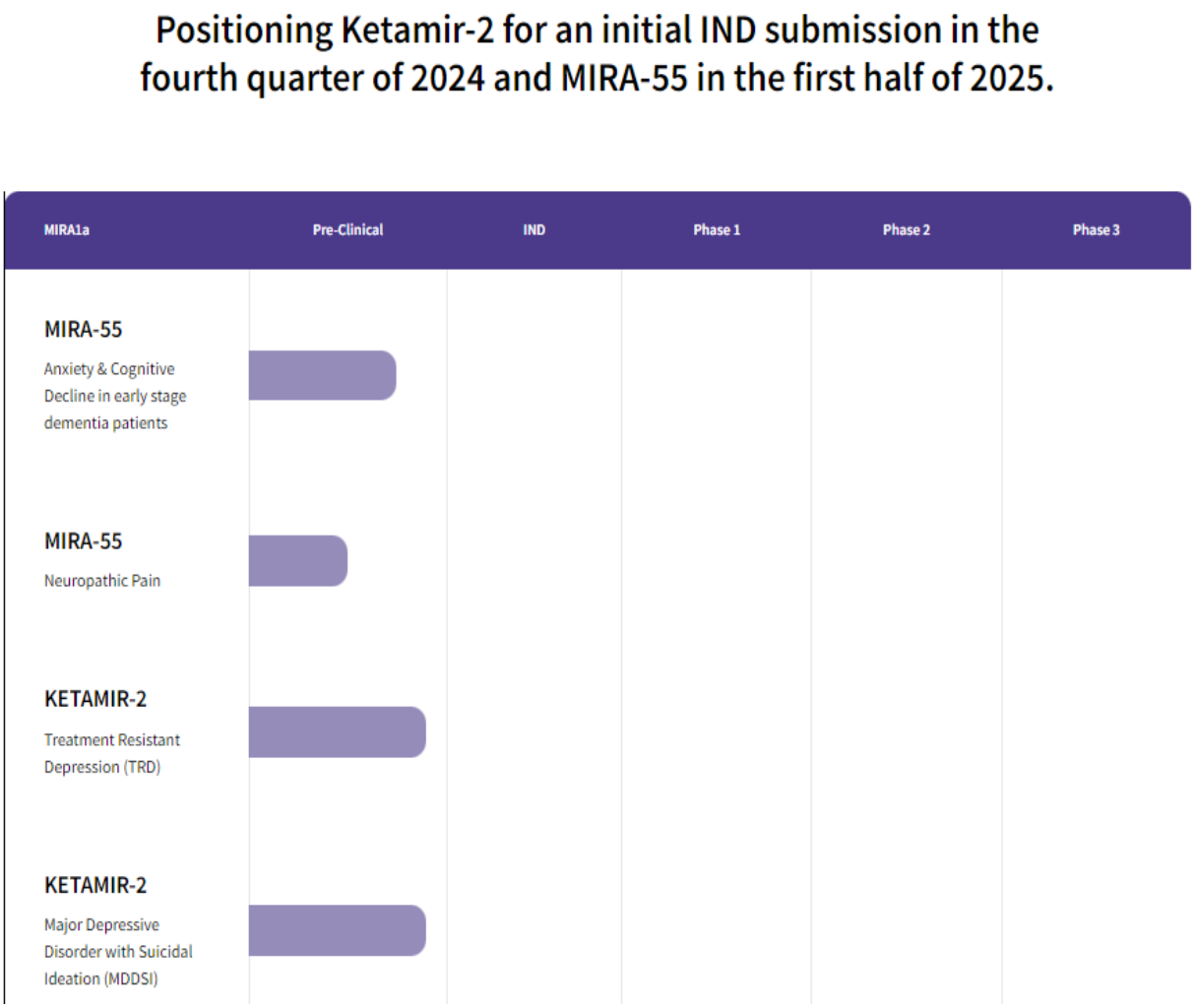
THC has been demonstrated to have biphasic physiological effects (meaning effects in two phases): at low levels THC has positive effects while high doses cause the opposite, undesirable symptoms. In contrast to THC, which displays an initial maximally stimulatory and then inhibitory response at CB1, MIRA-55 appears to act as a monophasic partial agonist (meaning it has a lower intrinsic activity than full agonists) in that it creates a stimulation throughout its dose range, achieving a moderate activation of the CB1 even at high

doses. This accounts for the potential broad therapeutic efficacy of MIRA-55 and the observed absence of negative symptoms even at maximal doses of the drug.

MIRA-55 initial focus will be primarily within the CNS market that encapsulates anxiety, dementia, other pain, Alzheimer's, migraines and related conditions. Based on the market size of the CNS opportunity as set forth in IQVIA's Global Use of Medicines 2023 analysis (the "IQVIA Report"), the company estimates that by 2027, the U.S. CNS market will be worth $48 billion, growing between two and five percent during the period from 2023 to 2027. Within that market opportunity, anxiety is worth between approximately $10 billion and $15 billion in annual sales.

The company's first IND application for MIRA-55 for the treatment of elderly patients suffering from anxiety with some cognitive decline is currently planned for Q1 2025. Additional IND for MIRA-55 for the treatment of neuropathic pain is expected to follow.

Exhibit 4: MIRA Pharmaceuticals Pipeline Overview



Source: Company reports.

Exhibit 5: MIRA Pharmaceuticals Growth Strategy

Source: Company reports.

MIRA Pharmaceuticals' share price has been volatile and weak in the past year. In the past year, MIRA Pharmaceuticals' share price was -71% (was $7.42 on 8/3/23 (first day of IPO) and to the current share price of $2.17 on 8/2/24), but so far in 2024 has been very strong at +107% (was $1.05 on 12/29/23).

The company's balance sheet has $4 million in cash and no debt as of March 2024. We believe the company has enough cash into 2025 (Q1 2025 (March 2025)), but we estimate that it will need to raise capital by Q4 2024 (December 2024).

We believe that there are near term catalysts that can drive the stock (particularly for key milestones expected in late 2024 and early 2025). 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.

The company's near term plans over the next year is to advance Ketamir-2 (depression) and MIRA-55 (dementia) in its clinical trials towards a FDA approval. We believe expected positive milestones and clinical data (particularly for the filing of INDs and the start of clinical trials) over the next year to be strong catalysts for stock.

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/drug therapy. We believe that the current valuation for MIRA Pharmaceuticals 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 MIRA Pharmaceuticals.

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 MIRA Pharmaceuticals to be $11.00, 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 MIRA Pharmaceuticals 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
MIRA Pharmaceuticals 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 MIRA Pharmaceuticals main drug candidates (Ketamir-2 and MIRA-55) are still in pre-clinical development, there are significant risks and a long time horizon to receive FDA approval. We estimate that it likely at least three years before any of its drug therapies can receive FDA approval. With a high likelihood of binary outcomes (either success or failure), the risks are very high but the potential rewards can also be 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, better or newer drugs or technologies, lack of reasonable reimbursements, or lack of market acceptance). While there are currently no good therapeutics to prevent or treat dementia and Alzheimer and the current treatment options for antidepressants remains limited, 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, MIRA Pharmaceuticals 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
MIRA Pharmaceuticals 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 MIRA Pharmaceuticals 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, none of which are currently in FDA clinical trials (both are in pre-clinical pre-IND stage). If MIRA Pharmaceuticals were to experience difficulties with development of its Ketamir-2 and MIRA-55 drugs, then it may have a material negative impact on its business and financials as there are no meaningful products that are as far along in development 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 most of the 2010s, the global macroeconomic environment can change significantly quickly as was shown with the start of the COVID-19 pandemic in March 2020. Since then, due to huge government stimulus the U.S. economy has been very strong the past 4 years. 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. We note that the economy is currently back to normal, but potential economic weakness or volatility may result in depressed government, enterprise, and consumer spending levels; this may have a negative impact on MIRA Pharmaceuticals, its business partners, government, and consumers.

Capital Markets Risks

We believe MIRA Pharmaceuticals has enough cash to fund its operations into 2025 (Q1 (March) 2025), but we estimate that it will need to raise capital by Q4 2024 (December 2024). 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 healthcare), there is always the chance that market interests and valuations for companies in this industry decline significantly. Share price weakness and volatility for small/micro cap and biotech stocks may make capital raising much more difficult and expensive.

VALUATION

We are initiating coverage of MIRA Pharmaceuticals with a BUY rating and a 12-month price target of $11.00, which is based on a NPV analysis. As the company is a clinical stage drug therapy 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 drug 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 MIRA Pharmaceuticals which is still in pre-clinical trials with its two drug candidates.

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 drug product pipelines (based on estimated future sales, a probability rate of success, and discounted this back to a current value), mainly focused on its 2 drug candidates (Ketamir-2 and MIRA-55). 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 $11.00, which we believe appropriately balances out the company's risks with its high growth prospects.

Exhibit 6: Company Valuation (DCF) (in $ millions)

Drug Products	Estimated NPV	% of Success	Calculated NPV	Discount Rate	Estimated Annual Sales	% of Market Share	Market Potential per year
Ketamir-2	$ 167	20%	$ 833	30%	$ 250	25%	$ 1,000
MIRA-55	$ 45	15%	$ 300	30%	$ 90	15%	$ 600
Total	**$ 212**						

Net cash	$ 4
Estimated additional investments (& debt) required	$ 51
Current Value for existing shareholders	$ 165
Shares Outstanding (mils)	15
Estimated Value per share	**$ 11.00**

Source: Ascendiant Capital Markets estimates.

MIRA Pharmaceuticals' share price has been volatile and weak in the past year. In the past year, MIRA Pharmaceuticals' share price was -71% (was $7.42 on 8/3/23 (first day of IPO) and to the current share price of $2.17 on 8/2/24), but so far in 2024 has been very strong at +107% (was $1.05 on 12/29/23). This is in contrast with general stock price weakness and volatility with small/microcap tech stocks in 2022 and then a sharp rebound in 2023 (Russell 2000 Index of small-cap U.S. stocks was -20% in 2022 and +19% in 2023). While the Russell 2000 Index has been up slightly in 2024 (+4% YTD and compares to the S&P500 +12% and NASDAQ +12%), it and small and micro-cap companies have remained volatile even as the overall stock market has been strong and positive.

We believe that there are near term catalysts that can drive the stock (particularly for key milestones expected in late 2024 and early 2025). 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 MIRA Pharmaceuticals 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 and depression are 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.

COMPANY

Based in Miami, FL, MIRA Pharmaceuticals is a pre-clinical stage pharmaceutical company developing two neuroscience programs targeting a broad range of neurologic and neuropsychiatric disorders.

MIRA Pharmaceuticals holds exclusive license rights in the U.S., Canada, and Mexico for Ketamir-2, a novel oral ketamine analog under pre-clinical investigation to potentially deliver ultra-rapid antidepressant effects, providing hope for individuals battling treatment-resistant depression (TRD), major depressive disorder with suicidal ideation (MDSI), and post-traumatic stress disorder (PTSD). Ketamir-2 is a unique novel ketamine analog that is predicted to have good gastrointestinal bioavailability.

MIRA Pharmaceuticals is also developing its novel oral synthetic marijuana analog molecule, MIRA-55, for its potential to alleviate neuropathic pain, as well as anxiety and cognitive decline, symptoms often associated with early-stage dementia. MIRA-55 unlocks the therapeutic potential of marijuana and may be a significant advancement in treating neuropsychiatric, inflammatory, and neurologic diseases and disorders.

Both Ketamir-2 and MIRA-55 have been determined by the U.S. Drug Enforcement Administration (DEA) not to be a controlled substance or listed chemical under the Controlled Substance Act and its governing regulations.

MIRA Pharmaceuticals was incorporated in Florida in September 2020 and commenced substantive operations, including its pharmaceutical development program, in late 2020. The company was previously based in Baltimore, MD and was known as MIRA1a Therapeutics, Inc. In August 2023, the company completed its IPO (initial public offering) raising $8 million. As of March 2024, MIRA Pharmaceuticals had ~3 employees plus additional consultants providing support.

Exhibit 7: MIRA Pharmaceuticals Management and Advisors

Source: Company reports.

Management Team

Erez Aminov (age 46) Chief Executive Officer and Chairman - Mr. Aminov has served as Chief Executive Officer since April 2023 and Chairman since March 2024. Mr. Aminov is an experienced biotechnology consultant and investor and initially joined MIRA Pharmaceuticals as a consultant in 2022. Mr. Aminov's experience in the biotech consulting sector began in 2021 when he founded Locate Venture Corp. in September 2021. Locate Venture is a strategy and investment consulting firm focused on advancing and supporting early-stage biotech startups. Prior to founding Locate Venture Corp., from February 2015 to September 2020, Mr. Aminov served as the President of Finds4less Inc., a global distributor of electronics and gaming products. Mr. Aminov earned a B.A. in Accounting from Touro University in New York.

Michelle Yanez, MBA (age 52) Chief Financial Officer, Secretary and Treasurer - Ms. Yanez has served as Chief Financial Officer since April 2023, prior to which she served as Corporate Controller since May 2022. Ms. Yanez is a senior financial executive with over 25 years of experience in public and privately held biotech, pharmaceutical, and life science companies. Since May 2022, Ms. Yanez is part-time Corporate Controller at Telomir Pharmaceuticals, Inc., a publicly traded pre-clinical-stage pharmaceutical company, focusing on the development and commercialization of therapeutic treatment for human stem cells (Nasdaq: TELO). From May 2002 until its acquisition in April 2022, Ms. Yanez held various positions, including the Director of Financial Reporting, of BioDelivery Sciences International, Inc. (Nasdaq: BDSI). Ms. Yanez also serves as a director of Inhibitor Therapeutics, Inc. (OTCQB: INTI), a publicly traded pharmaceutical development company focused on therapeutics for certain cancers and non-cancerous proliferation disorders, since December 2022. Ms. Yanez is a member of the Institute of Management Accountants and a member of the SEC Professionals Group. Ms. Yanez earned her B.A. in Business Management from University of South Florida and her MBA degree cum laude from Rutgers Business School.

Dr. Itzchak Angel, Chief Scientific Advisor - Dr. Angel has been Chief Scientific Advisor since March 2024. Dr. Angel has over 40 years of experience in the pharmaceutical industry, guiding strategic drug and business development initiatives in both large and emerging companies. Dr. Angel has served as Head of Pharmacology of Synthelabo (Paris, France, now Sanofi) for numerous years, where he was instrumental in the development and bringing into the market of several drugs such as Xatral (Alfuzosin), Ambien (Zolpidem) and Mizollen (Mizolastine). He formerly served as President and Chief Executive Officer of stem-cell company Accellta (Haifa, Israel) and Vice President for Research and Development at Proteologics Ltd, and at D-Pharm Biopharmaceuticals (Rehovot, Israel) where he developed several neurology compounds (stroke, Alzheimer's and Parkinson's Disease) into advanced clinical development and was involved in submitting numerous INDs of drugs under development. Dr. Angel is the author of more than 100 book chapters, papers, and abstracts as well as the named inventor of a number of pharmaceutical patents. Dr. Angel received his B.S. and M.Sc. in Biology from Tel-Aviv University, Israel, cum laude in 1979, and received Ph.D. cum laude from the Hamburg University, Germany in 1982.

DRUG PIPELINE

MIRA Pharmaceuticals is a pre-clinical stage pharmaceutical development company with two neuroscience programs targeting a range of neurologic and neuropsychiatric disorders. The company is developing Ketamir-2, a novel oral ketamine analog (comparable) under pre-clinical investigation to potentially deliver ultra-rapid antidepressant effects, providing hope for individuals battling treatment-resistant depression (TRD), major depressive disorder with suicidal ideation (MDSI), and post-traumatic stress disorder (PTSD).

The company is also developing its novel oral synthetic marijuana analog molecule, MIRA-55, for its potential to alleviate neuropathic pain, as well as anxiety and cognitive decline, symptoms commonly associated with early-stage dementia and Alzheimer's disease. MIRA-55, if approved by the U.S. Food and Drug Administration (FDA), could mark a significant advancement in addressing various neuropsychiatric, inflammatory, and neurologic diseases and disorders.

In late 2024, the company plans to file its IND (Investigational New Drug) application for Ketamir-2 for TRD with expected approval and the start of clinical trials in Q1 2025. The company plans to file its IND application for MIRA-55 for anxiety and cognitive decline in Q1 2025 with expected approval and the start of clinical trials in Q2 2025.

Both Ketamir-2 and MIRA-55 have been determined by the U.S. Drug Enforcement Administration (DEA) not to be a controlled substance or listed chemical under the Controlled Substance Act and its governing regulations.

Major Depressive Disorder (MDD) is a significant global health concern, affecting over 264 million people worldwide and is a leading cause of disability according to the World Health Organization (WHO). In the U.S., it impacts nearly 21.1 million adults, ~8.3 % of the adult population, in 2021 according to data from the National Institutes of Health (NIH). This widespread mental health disorder not only undermines the quality of life and daily functioning of individuals but also imposes a substantial economic burden, with costs in the U.S. of tens of billions of dollars annually.

MDD is also a major risk factor for suicide, a leading cause of death globally, highlighting its major impact on public health and the urgent need for effective treatments. Ketamir-2 may potentially provide antidepressant therapeutic effects to treat suicidality.

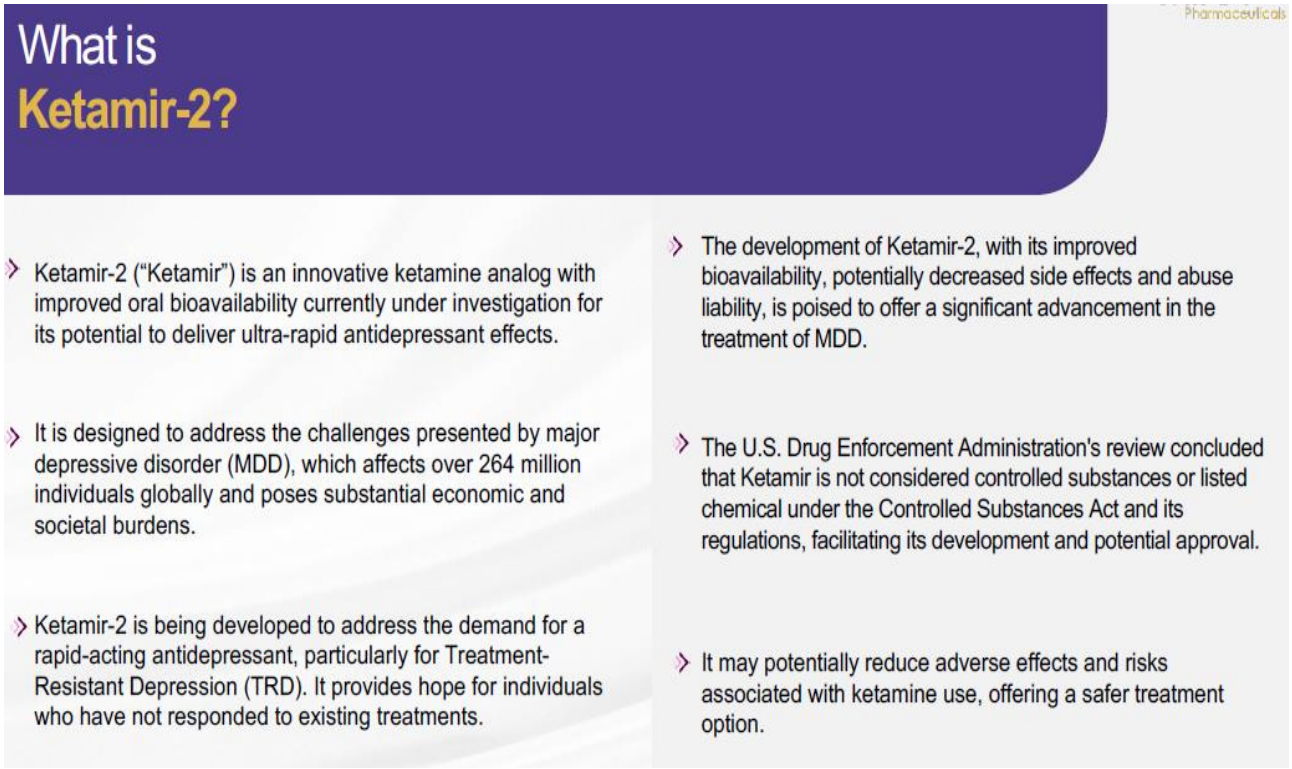
Exhibit 8: Suicidality Problem

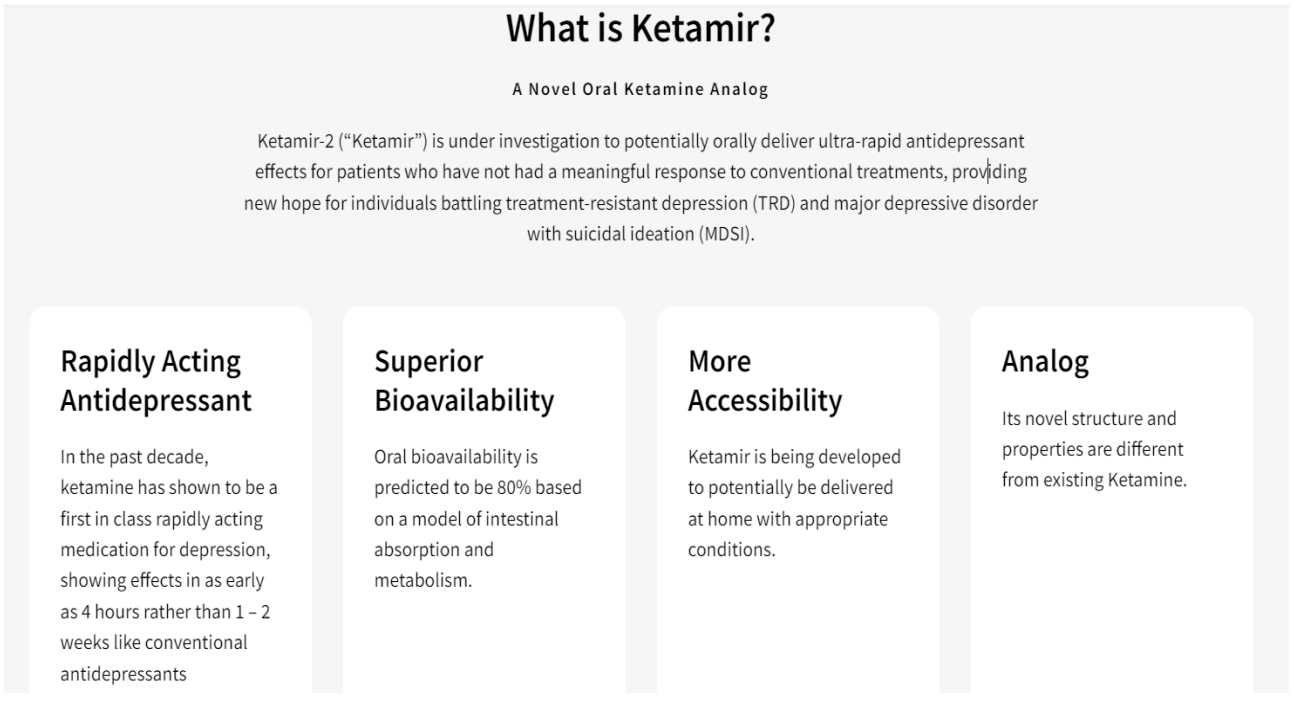
Source: NRx Pharmaceuticals presentation.

Exhibit 9: Market Opportunities for Ketamir-2 and MIRA-55

Source: Company reports.

Exhibit 10: Ketamir-2





Source: Company reports.

Despite that antidepressants have been on the market for decades, with imipramine being the first FDA-approved antidepressant in 1959, the need for a rapid-acting antidepressant that can help patients with Treatment-Resistant Depression (TRD) using a novel mechanism of action (e.g. not a monoamine reuptake inhibitor) has been growing. In 2019, ketamine was introduced but required by the FDA to utilize a Risk Evaluation and Mitigation Strategy (REMS) because of its: (1) poor oral availability requiring intravenous (or IV) or intranasal (or IN) administration, (2) ability to cause side effects including dissociation, sedation and acute hypertension, and (3) potential drug abuse.

Ketamir-2 is a new chemical entity, an analog (comparable) of ketamine that is designed to potentially preserve the same rapid antidepressant response but with improved bioavailability (effectiveness). It may also have decreased side effects and decreased potential for drug abuse. This combination is intended to potentially facilitate safer and less cumbersome dosing requirements, with the goal of obtaining an orally administered pill that can be taken at home. Ketamir-2's formulation as a once-daily oral medication is being developed to potentially not require health care professional supervision, improving patient compliance and ease of use.

The principle competitor of Ketamir-2 is ketamine or ketamine analogs. Ketamine, originally known as a dissociative anesthetic, has emerged as a significant breakthrough in the treatment of depression, particularly due to its rapid-acting antidepressant properties. The FDA approved in 2019 esketamine delivered intranasal, developed by Janssen with the brand name Spravato. This has opened new avenues in psychiatric treatment, especially for patients who do not respond to traditional antidepressants, have depression with suicidal ideation, or require rapid antidepressant responses.

In contrast to most novel antidepressants, which are multi-billion dollar drugs annually, for 2023 Janssen reported $683 million in revenue from Spravato. The company believes the primary reason for Spravato's lower revenue versus other antidepressants is because Spravato's REMS requires Spravato to be patient administered but clinician observed for 2 hours, with the patient unable to drive for the rest of the day. The company believes this presents challenges for both patients and clinicians, which has restricted the use of this form of ketamine from patients who would benefit from this treatment (e.g. those with TRD and MDSI). Ketamir-2 could potentially avoid these challenges.

Niche filled by ketamine:

1. Treatment-Resistant Depression (TRD): Ketamine has shown efficacy in cases where conventional antidepressants fail, addressing a significant gap in mental health treatment.
2. Rapid Onset of Action: Unlike traditional antidepressants that may take weeks to show effects, ketamine can produce noticeable antidepressant effects within hours to days, providing immediate relief in acute cases of depression.
3. Suicidality: Ketamine has shown promise in rapidly reducing suicidal thoughts, which is crucial in acute psychiatric emergencies.

Limitations of ketamine due to side effects:

1. Psychotomimetic Effects: Ketamine can induce dissociative symptoms, hallucinations, and other psychotomimetic effects, limiting its use to controlled settings.
2. Potential for Abuse: Given its history as a recreational drug, there are concerns about its potential for abuse and addiction.
3. Short Duration of Effect: The antidepressant effect of ketamine can be transient, requiring repeated administrations, which may increase the risk of side effects.
4. Physical Side Effects: These may include increased heart rate, elevated blood pressure, nausea, and dizziness.

The use of ketamine, especially Esketamine (a nasal spray form of ketamine approved for treatment-resistant depression), is regulated under the Risk Evaluation and Mitigation Strategy (REMS) program to ensure safe use:

1. Healthcare Setting Administration: Esketamine must be administered in a certified healthcare setting under the supervision of a healthcare provider.

2. Patient Monitoring: Patients must be monitored for at least two hours after administration due to the risk of sedation and dissociation.
3. Restricted Distribution: The drug is not available for take-home use and can only be dispensed to healthcare facilities and pharmacies enrolled in the REMS program.
4. Patient Education and Consent: Patients must be informed about the risks and provide written consent.
5. Follow-up and Reporting: Healthcare providers are required to report any serious adverse effects and ensure follow-up to monitor the patient's response to treatment.

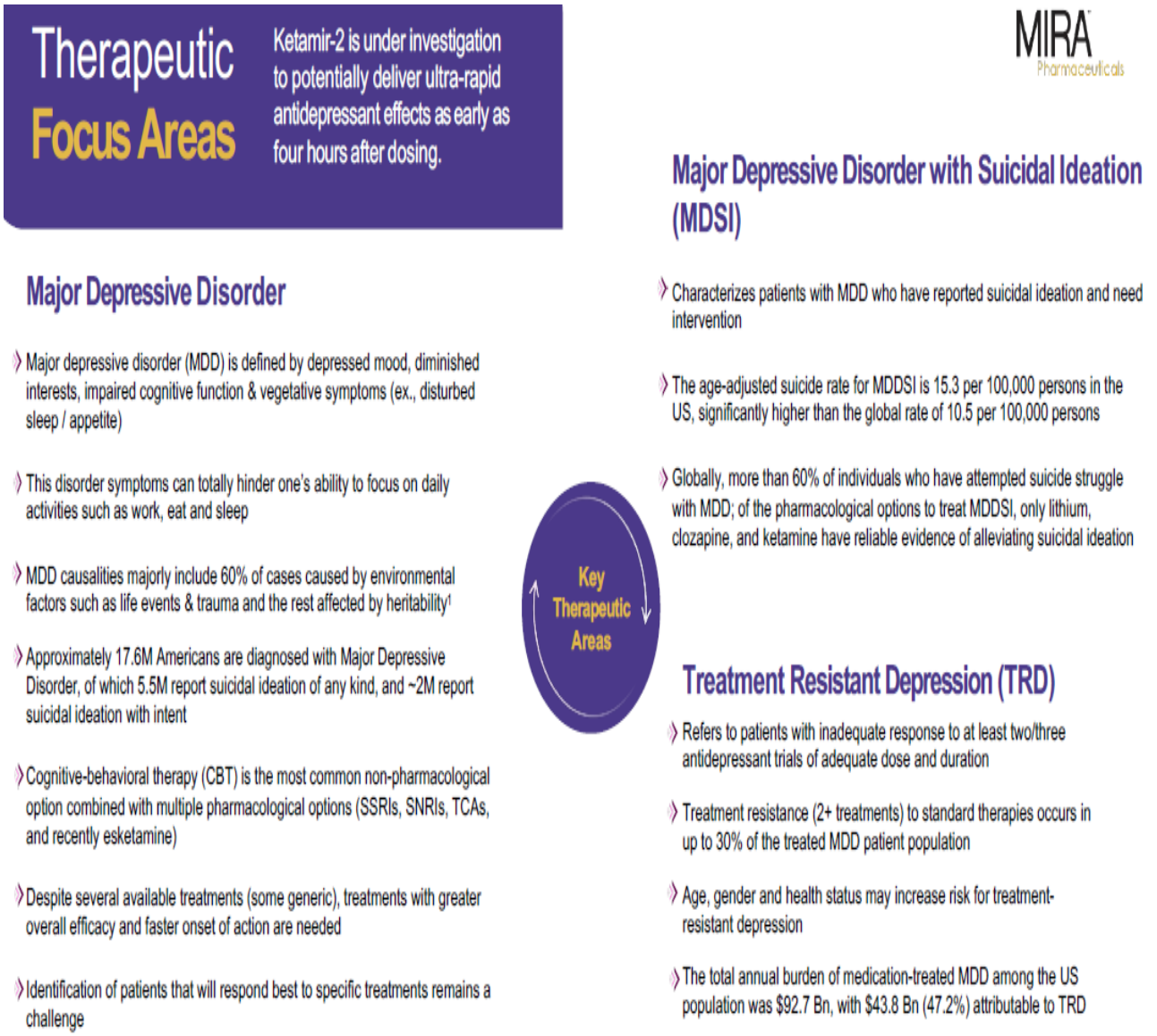
Ketamir-2's mechanism of action (or MOA) as a rapid acting antidepressant is the same as ketamine's, as the two share a common inhibitory effect on the N-methyl-D-aspartate (NMDA) receptor, a type of glutamate receptor that is believed to be integral to the antidepressant effects of both ketamine and Ketamir-2. This subunit combination is prominently linked to neuroplasticity, believed to be a key factor in depression and the action of antidepressants such as ketamine.

Ketamine's mechanism of action (MOA) as a rapidly acting antidepressant is multifaceted and distinct from traditional antidepressants like selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants. While ketamine has shown promise as a rapid-acting antidepressant, especially in treatment-resistant depression, its use is limited due to potential side effects and abuse potential that Ketamir-2 has been targeted to minimize. Moreover, whereas ketamine has a poor oral bioavailability and must therefore be given IV or IN, Ketamir-2 has a much better bioavailability suggesting it may be appropriate for oral use.

Current evidence suggests a complex and involved synergistic action on various neural pathways, primarily through the modulation of glutamatergic neurotransmission, enhancement of neuroplasticity, and potentially through anti-inflammatory and neuroendocrine mechanisms. Both drugs rapid onset and efficacy in treatment-resistant cases make them potentially valuable tools in psychiatry, but the potentially improved side effect profile and oral bioavailability are what differentiate Ketamir-2 and ketamine.

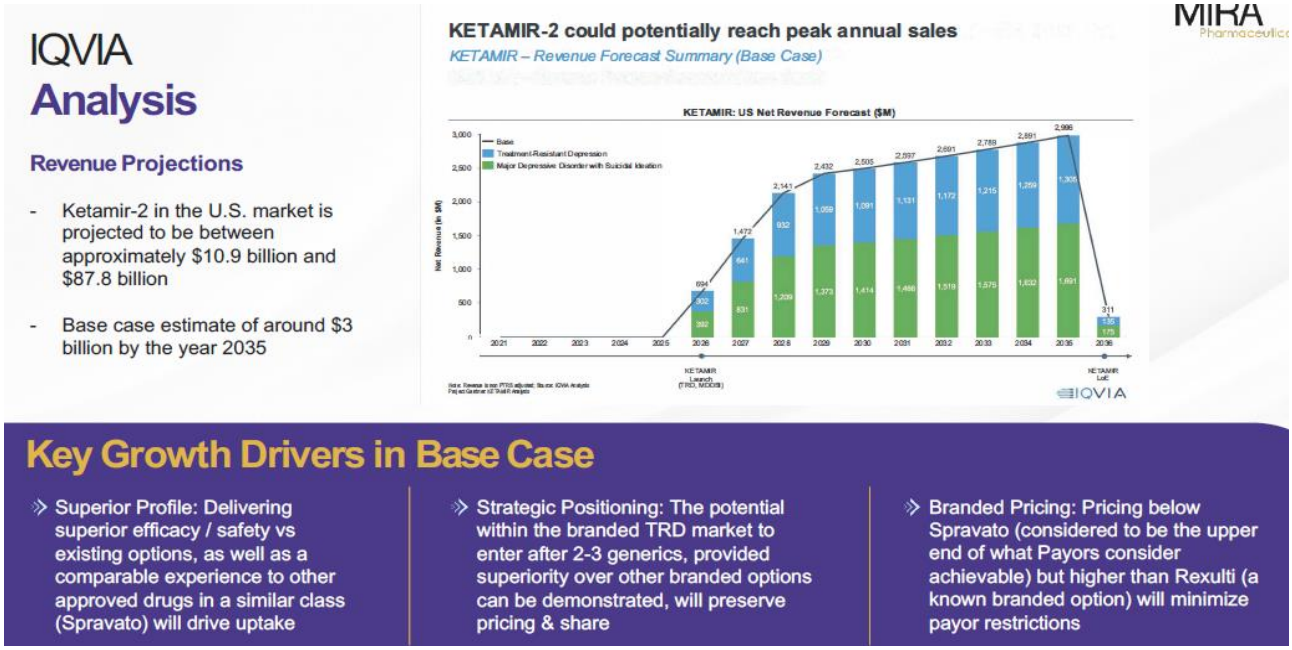
The clinical development plan for Ketamir-2 focuses initially on treating psychiatric conditions like TRD, Major Depressive Disorder with Suicidal Ideation (MDSI), and PTSD. The company is currently completing IND-enabling pre-clinical research studies and is aiming for the submission of an Investigational New Drug (IND) application to the FDA for Ketamir-2 for TRD by the end of 2024. Additional indications for 1.) Major Depressive Disorder with Suicidal Ideation (MDSI) and 2.) Post-Traumatic Stress Disorder (PTSD) are planned to follow.

Exhibit 11: Ketamir-2 Therapeutic Focus Areas



Source: Company reports.

Exhibit 12: Ketamir-2 Market Potential Analysis



Source: Company reports.

Exhibit 13: Ketamir-2 Pre-Clinical Research

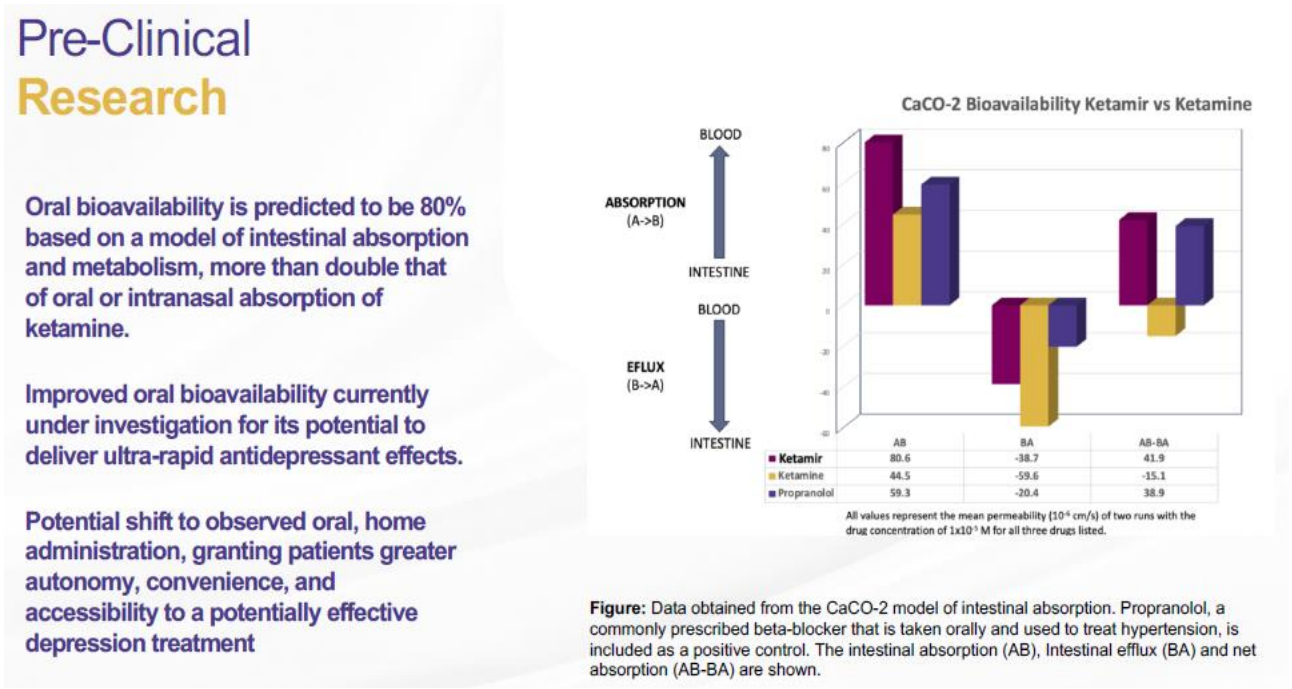
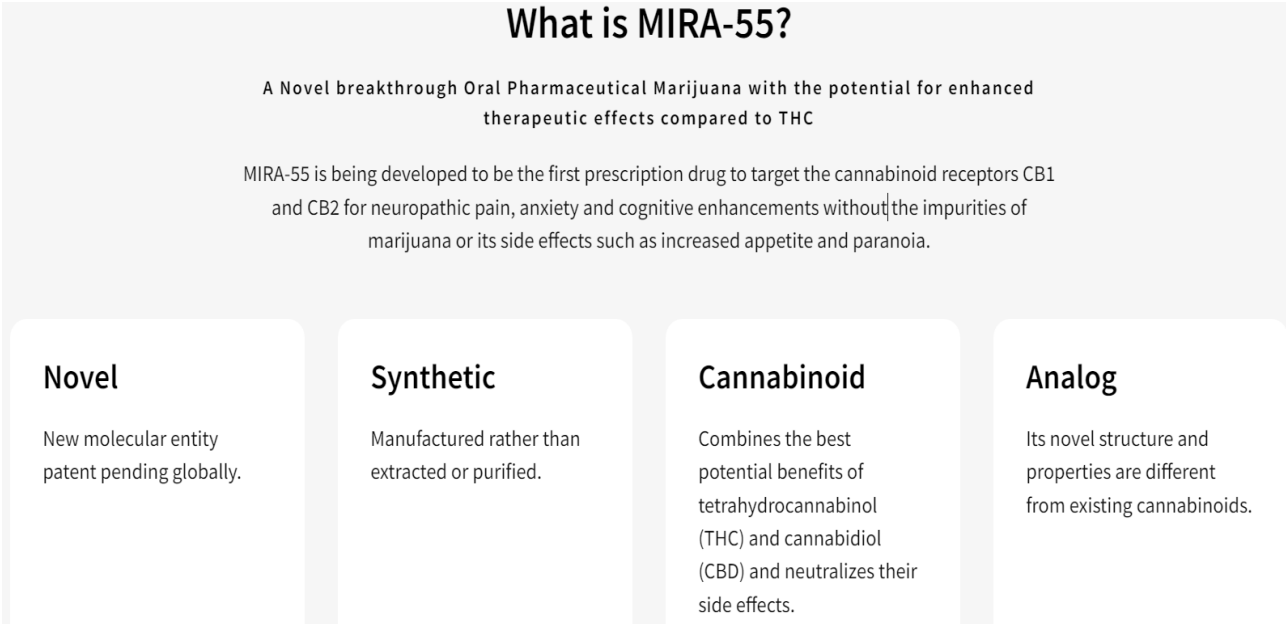


Figure: Data obtained from the CaCO-2 model of intestinal absorption. Propranolol, a commonly prescribed beta-blocker that is taken orally and used to treat hypertension, is included as a positive control. The intestinal absorption (AB), Intestinal efflux (BA) and net absorption (AB-BA) are shown.

Source: Company report.

Exhibit 14: MIRA-55



Source: Company report.

In February 2024, the company made a significant discovery during the manufacturing and scale-up process of its patented molecule known as "MIRA1a", which it believed was the molecule used in its pre-clinical trials and had been synthesized by a contract manufacturer. Through this process, the company identified a novel and improved version of the molecule, which it calls "MIRA-55". The company had used the MIRA-55 compound in the MIRA1a Studies, leading to the positive pre-clinical outcomes reported. Consequently, all previously disclosed pre-clinical testing results are attributable to MIRA-55 and not to MIRA1a.

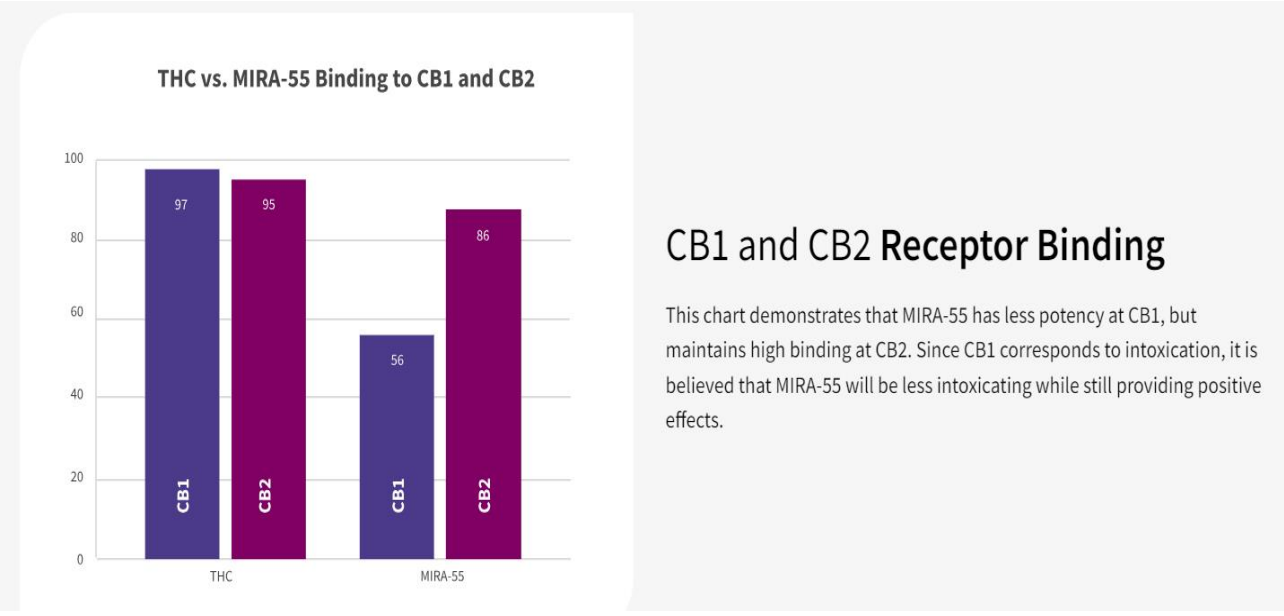
Importantly, based on its pre-clinical analyses, the company believes that MIRA-55 is an improvement over MIRA1a in that it displays enhanced potency and potential for efficacy. The company has decided to advance MIRA-55 as its lead compound for its oral pharmaceutical marijuana drug candidate while still retaining its rights to MIRA1a. The company's objective for MIRA-55 is to develop new treatment options for neuropsychiatric, inflammatory, and neurologic diseases and disorders.

MIRA-55 is a new molecular synthetic THC analog (comparable) for the treatment of adult patients with anxiety and cognitive decline typically associated with early-stage dementia. The company believes that MIRA-55 enhances the therapeutic potential for treating anxiety, cognitive decline and chronic pain by potentially striking a balance between the beneficial effects of THC and CBD.

Cannabinoids are a class of chemical compounds that are naturally occurring and are primarily found in cannabis plant extracts. The two major cannabinoids found in cannabis plant extracts include tetrahydrocannabinol, a compound that is the main psychoactive ingredient of cannabis (THC) and cannabidiol, the second most prevalent active ingredient in cannabis which does not have psychoactive properties (CBD).

These compounds bind to CB1 and CB2 cannabinoid receptors, which are found throughout the body. Specifically, CB1 receptors are concentrated in the central nervous system (CNS), while CB2 receptors are found mostly in peripheral organs and are associated with the immune system. When the chemical compounds bind to these cannabinoid receptors, the process elicits certain physiological responses.

Exhibit 15: THC vs. MIRA-55 Receptor Binding

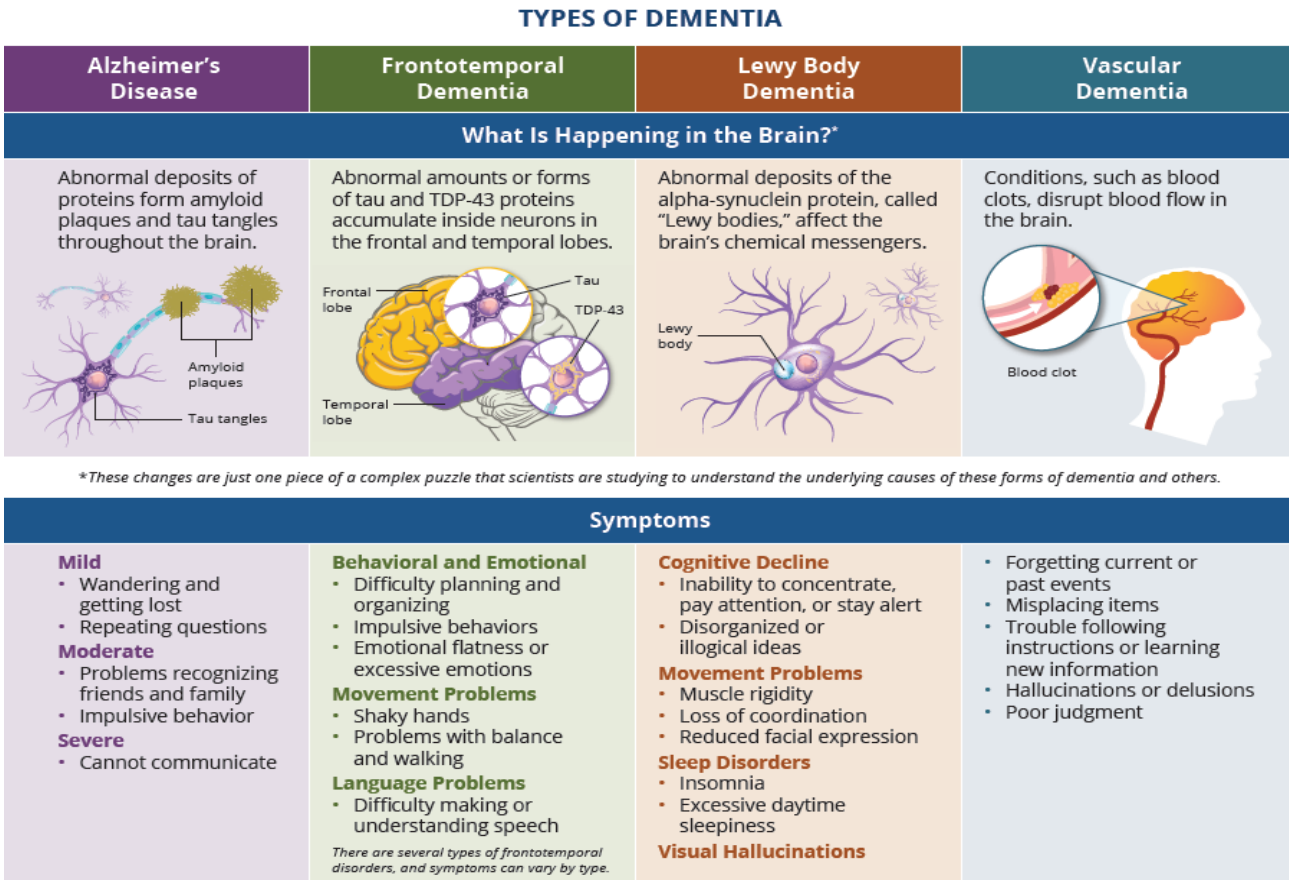


Source: Company reports.

Physiological responses to cannabinoids vary among individuals. Some of the effects of cannabinoids have been shown to impact nervous system functions, immune responses, muscular motor functions, gastrointestinal maintenance, blood sugar management, and the integrity of ocular functions. Based on pre-clinical testing, MIRA-55 appears to have a strong selectivity for CB2 versus CB1, and is designed to minimize the risk of psychoactive adverse events associated with CB1 activation. The company believes that the effects of MIRA-55 at the cannabinoid receptors CB1 and CB2 is predicted to account for the majority of its potential therapeutic effects, especially as it relates to its anti-anxiety, anti-pain, and anti-inflammatory properties.

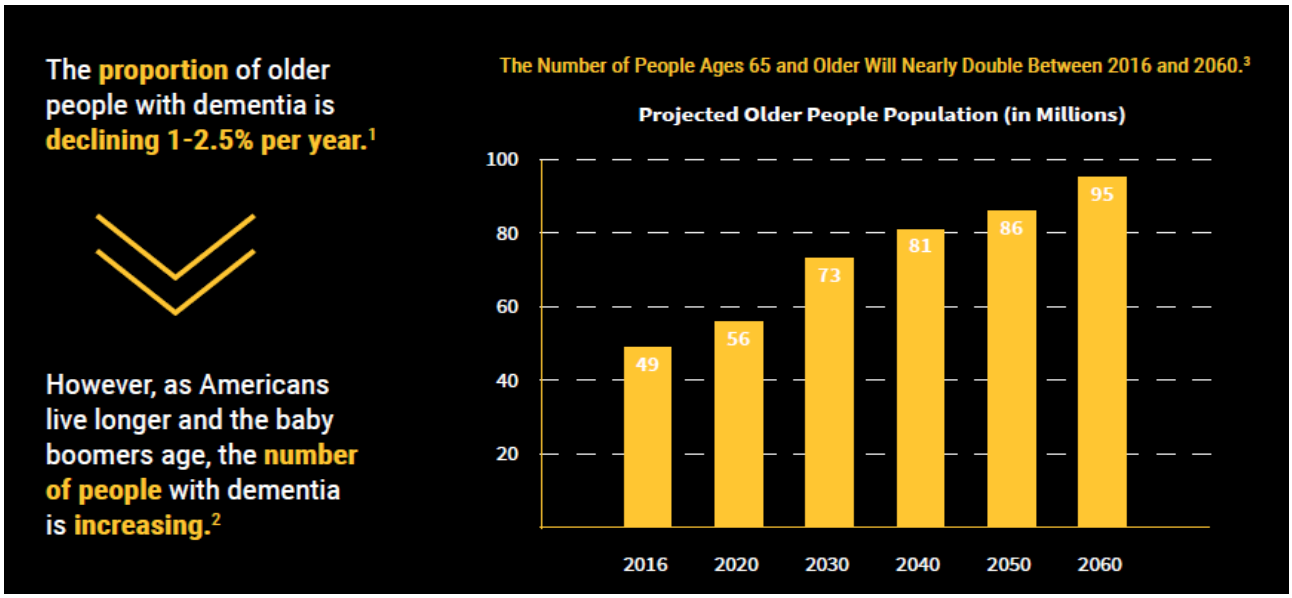
THC has been demonstrated to have biphasic physiological effects (meaning effects in two phases): at low levels THC has positive effects while high doses cause the opposite, undesirable symptoms. Examples of biphasic effects at low versus high levels of THC include the anti-anxiety versus pro-anxiety effects. In contrast to THC, which displays an initial maximally stimulatory and then inhibitory response at CB1, MIRA-55 appears to act as a monophasic partial agonist (meaning it has a lower intrinsic activity than full agonists) in that it creates a stimulation throughout its dose range, achieving a moderate activation of the CB1 even at high doses. This accounts for the potential broad therapeutic efficacy of MIRA-55 and the observed absence of negative symptoms even at maximal doses of the drug.

Exhibit 16: Types Of Dementia



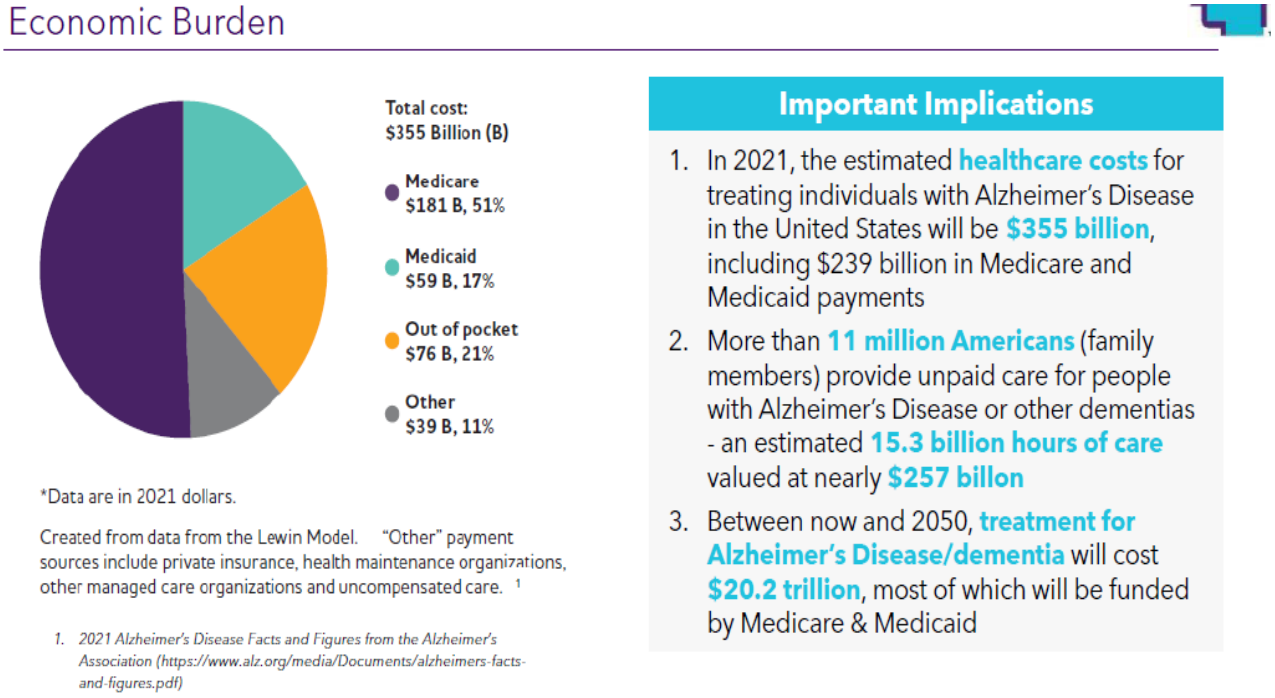
Source: National Institutes of Health (NIH).

Exhibit 17: U.S. Aging & Dementia Trends



Source: Population Reference Bureau 2018.

Exhibit 18: Alzheimer's Impact



Source: Alzheimer's Association and Alzamend Neuro, Inc.

MIRA-55 will compete in three key overlapping growth markets: the anxiety, cognitive decline (CNS/dementia), and neuropathic pain markets where multiple products with varying safety and efficacy profiles are already on the market. MIRA-55 initial focus will be primarily within the CNS market that encapsulates anxiety, dementia, other pain, Alzheimer's, migraines and related conditions. Based on the market size of the CNS opportunity as set forth in IQVIA's Global Use of Medicines 2023 analysis (the "IQVIA Report"), the company estimates that by 2027, the U.S. CNS market will be worth $48 billion, growing between two and five percent during the period from 2023 to 2027. Within that market opportunity, anxiety is worth between approximately $10 billion and $15 billion in annual sales.

Anxiety and pain are expected to grow approximately five percent over the same period according to the IQVIA Report, while Alzheimer's is expected to grow approximately twelve percent. According to the Alzheimer's Association 2023 Alzheimer's Disease Facts and Figures analysis (the "Alzheimer Association"), 500,000 new Alzheimer cases emerge in the U.S. each year. According to the Alzheimer Association, about 60 to 80 percent of Alzheimer cases evolve into dementia.

Thus, Alzheimer case directions are an important signal and gateway for MIRA-55-related opportunities in dementia. Based on that epidemiology, the U.S. Center for Disease Control ("CDC") estimates that approximately 5.8 million Americans are living with Alzheimer's, with that number expected to grow to 14 million by 2060 ("CDC Alzheimer").

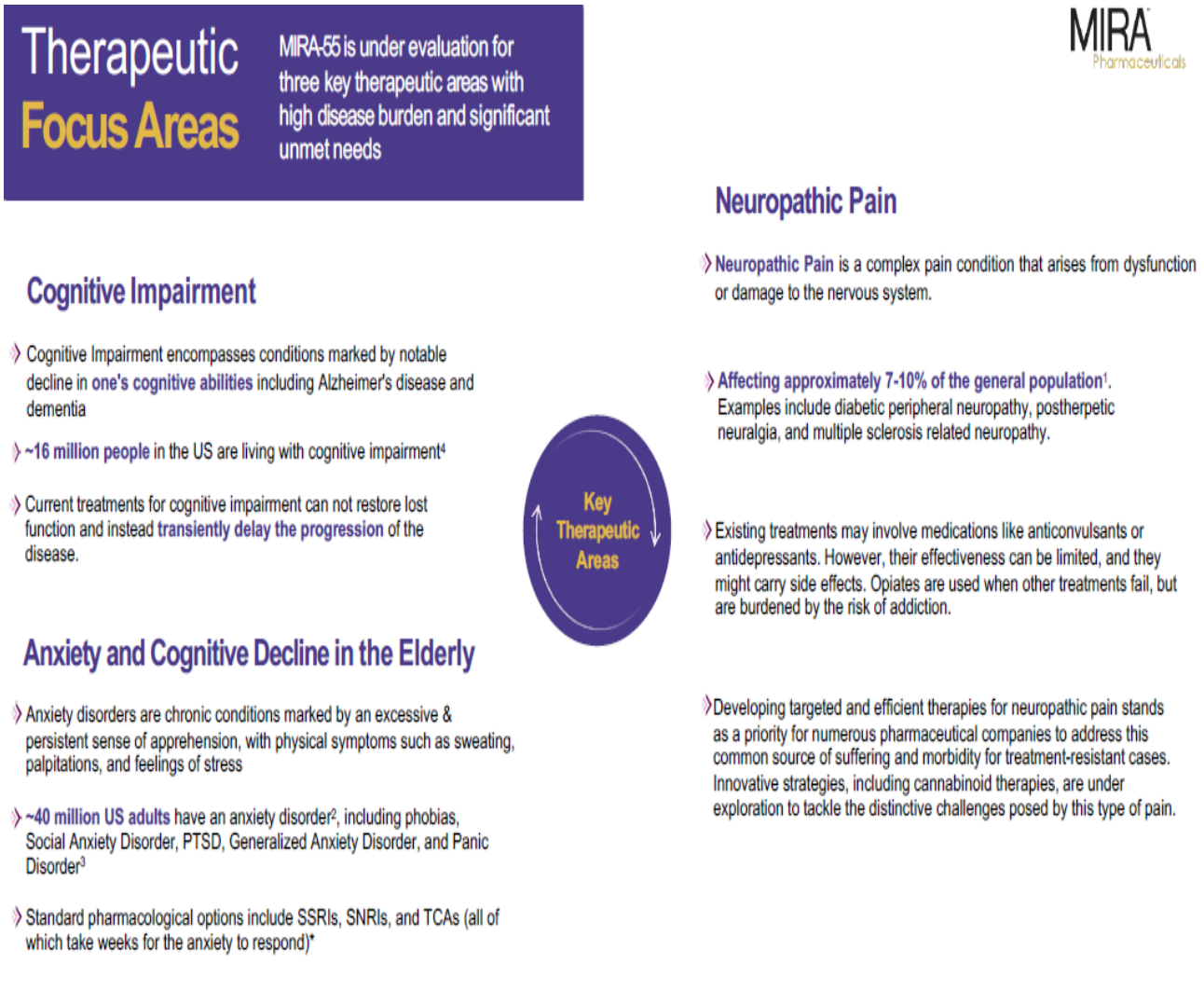
MIRA-55's other key market will be the neuropathic pain market. Developing targeted and efficient therapies for neuropathic pain stands as a priority to address this common source of suffering and morbidity. According to the International Association for The Study of Pain, neuropathic pain affects approximately 7-10% of the world's population.

According to Grandview Research, legal medical marijuana is a $11.6 billion industry whereas legal recreational marijuana is a $26.9 billion industry. Both are sub-sets of the traditional pain and anxiety markets. However, in many patient populations, non-U.S. legal, and cultural settings, marijuana may not be the first or a viable option for treatment of neurological disorders. As a result, these patients will typically use non-steroidal anti-inflammatory drugs (NSAIDs) or various mood management drugs, opening them up to a range of non-ideal outcomes. The objective of MIRA-55 is to offer physicians and patients an approved, viable synthetic (not derived from the marijuana plant) option.

MIRA-55 is being developed as the first manufactured prescription drug to potentially target the CB1 and CB2 receptors for neuropathic pain and anxiety without the impurities of marijuana or its side effects, such as increased appetite and paranoia. MIRA-55 has demonstrated the ability to rapidly and significantly improve cognitive performance with acute use—i.e. doubling cognitive performance after a single dose in normal mice. Unlike other cannabinoids in the market, MIRA-55 is not derived from plants. Plants generate alkaloids as a defense mechanism, and it has been speculated that plant-derived cannabinoids have adverse side effects in humans.

The company's first IND application for MIRA-55 for the treatment of elderly patients suffering from anxiety with some cognitive decline is currently planned for Q1 2025. Additional IND for MIRA-55 for the treatment of neuropathic pain is expected to follow.

Exhibit 19: MIRA-55 Therapeutic Focus Areas



Source: Company reports.

Exhibit 20: MIRA-55 Pre-Clinical Research

Pre-Clinical Research

What was tested: The effect of MIRA-55 on anxiety in mice.

How it was done: Mice received an injection of either MIRA-55 or a placebo (like saline). They were then placed in a special maze called the Elevated Plus Maze, designed to measure anxiety.

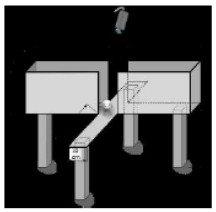
Why this maze: The maze has open and closed areas. Generally, anxious mice avoid open areas.

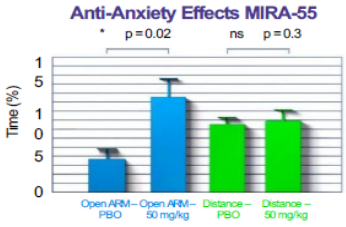
Results: Mice treated with MIRA-55 spent more time in open areas, suggesting they were less anxious. Importantly, they didn't show signs of being sedated or intoxicated.

Implication: MIRA-55 could potentially be a good treatment for anxiety disorders without the side effects of drowsiness or intoxication.

Pharmaceuticals

Elevated Plus Maze (EPM) for Anxiety





The Elevated Plus Maze (EPM) test was conducted to evaluate the anti-anxiety effects of a Mira-55. In this study, mice were administered an intraperitoneal injection of either a placebo or MIRA-55 at a dosage of 50mg/kg. Thirty minutes following the administration, the mice were introduced to the EPM for testing. The EPM test is designed to measure anxiety levels in rodents, where the X-Axis of the data representation indicates the two different conditions (Placebo and MIRA-55 treatment), and the Y-Axis represents the percentage of time spent in the open arms of the maze. This duration is a crucial indicator of the reduced anxiety levels in the subjects. The findings from this test were significant; MIRA-55 demonstrated a remarkable anti-anxiety effect, as evidenced by a notable increase in the time spent in the open arms of the maze by the mice treated with MIRA-55, in comparison to those who received the placebo.

Source: Company report.

Exhibit 21: MIRA-55 Pre-Clinical Research

Pre-Clinical Research

What was tested: The pain-relieving potential of MIRA-55.

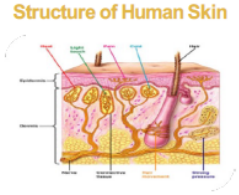
How it was done: Mice were given MIRA-55 or a placebo. Then, they were placed on a warm plate, and the time they took to react to the heat (by lifting their paws) was measured.

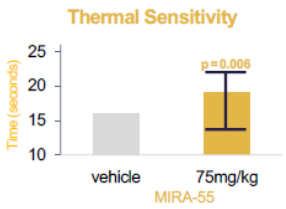
Results: Mice treated with, MIRA-55 took longer to react, meaning they felt less pain.

Implication: MIRA-55 could be an effective pain reliever, potentially for conditions where managing pain is crucial.

Pharmaceuticals

Thermal Sensitivity for Pain





The Thermal Sensitivity test aimed to assess the potential of MIRA-55 for this type of pain relief. In this model, following the treatment with either a placebo or MIRA-55, mice were placed on a heated plate. The response to the heat stimulus was measured by recording the time taken for each mouse to lift its paw, an action indicative of experiencing pain. The data representation for this test included an X-Axis, which delineated the treatment conditions (Placebo and MIRA-55), and a Y-Axis, which showed the latency to paw lifting, a measure of pain sensitivity. The findings from this study were promising; mice treated with MIRA-55 exhibited a significantly increased latency in paw lifting, suggesting that MIRA-55 is effective in providing pain relief and enhancing pain tolerance, as compared to the placebo group.

Source: Company report.

Exhibit 22: MIRA-55 Pre-Clinical Research

Pre-Clinical Research

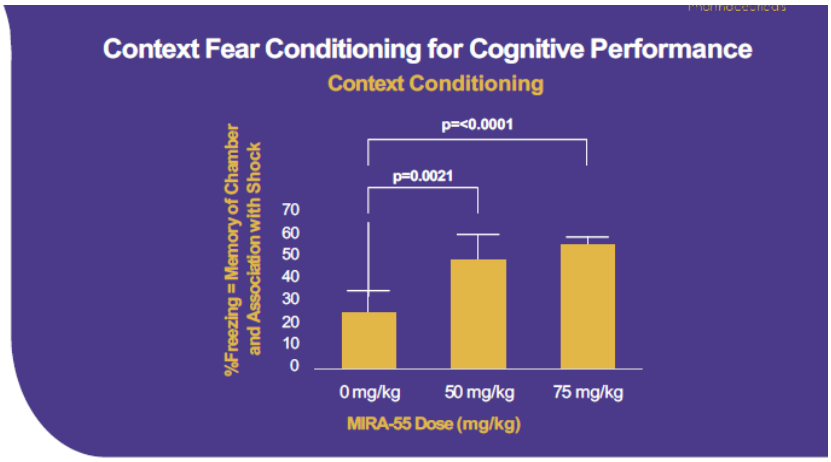
What was tested: The impact of MIRA-55 on memory and learning in mice.

How it was done: This study used a special test where mice learn to associate a specific place with a mild shock. After training, they were given MIRA-55 before being placed back in the same place the next day.

Measure of memory: Researchers measured how much the mice 'froze' in the place they associated with the shock. More freezing indicates better memory.

Results: Mice given MIRA-55 showed significantly more freezing behavior, indicating they remembered the shock association better than those who didn't receive MIRA-55.

Implication: MIRA-55 could enhance memory and learning, separate from its anti-anxiety effects, which is a unique finding not seen in other similar compounds.



The Context Fear Conditioning test was designed to evaluate the impact of MIRA-55a on cognitive performance, focusing particularly on memory and associative learning. The method involved conditioning mice with a mild foot shock in a specific chamber on the first day, followed by a test on the second day for memory recall of this event on the second day when the mice received for the first time MIRA-55. The X-Axis in the data representation highlighted the different treatment conditions – Placebo and various doses of MIRA-55. In contrast, the Y-Axis represented the percentage of time the mice spent freezing, a behavioral response indicative of memory recall. The findings from this test were groundbreaking; MIRA-55 significantly enhanced memory recall, as demonstrated by the increased duration of freezing behavior in mice. This marked improvement in cognitive performance, particularly in memory and associative learning, was noted as being unprecedented among cannabinoid compounds, highlighting the potential of MIRA-55 in cognitive enhancement.

Source: Company report.

Exhibit 23: MIRA-55 Regulatory Pathway

Source: Company reports.

Exhibit 24: Recent Positive Pre-Clinical Data for Ketamir-2

MIRA Pharmaceuticals Announces Positive Discovery of Ketamir-2's Selective NMDA Binding Mechanism of Action

Latest positive preclinical data provides another step in the path to potential IND submission this year for novel ketamine analog

MIAMI, FL / ACCESSWIRE / July 25, 2024 /MIRA Pharmaceuticals, Inc. (NASDAQ:MIRA) ("MIRA" or the "Company"), a leading pre-clinical-stage pharmaceutical company, today announced new insights garnered from additional, recently received preclinical study data regarding the mechanism of action and toxicology data for its novel oral ketamine analog, Ketamir-2.

Ketamir-2 is MIRA's drug candidate being investigated as a potential treatment for **neurological and neuropsychiatric disorders.** The new preclinical study results announced today are the latest in a string of positive research developments which are progressing MIRA's goal of submitting an Investigational New Drug Application (NDA) to the U.S. Food and Drug Administration (FDA) for Ketamir-2 later this year.

Mira Pharmaceuticals Announces Positive Preclinical Study Results For Its Novel Oral ketamine Analog, Ketamir-2, Paving the Way for IND Submission Later This Year

The positive results from this preclinical study underscore Ketamir-2's potential as a superior alternative to traditional ketamine

Unlike ketamine, which requires intravenous or intranasal administration, Ketamir-2's oral formulation promises ease of use and better patient compliance and is not a controlled substance under DEA rules

MIAMI, June 10, 2024 /PRNewswire/ -- **MIRA Pharmaceuticals, Inc. (NASDAQ: MIRA)** ("MIRA" or the "Company"), a pre-clinical-stage pharmaceutical company focused on the treatment of neurologic and neuropsychiatric disorders, today announced positive preclinical study results highlighting the potential efficacy and safety profile of **Ketamir-2**, MIRA's novel oral ketamine analog designed to treat depression and treatment-resistant depression (TRD).

Mira Announces Positive Preclinical Study Results For Its Novel Oral ketamine Analog, Ketamir-2

The highly encouraging study results further MIRA's goal of submitting an Investigational New Drug Application (IND) to the U.S. Food and Drug Administration (FDA) later this year which, if granted, would allow for human clinical trials of Ketamir-2.

Source: Company reports.

Exhibit 25: Recent Positive Pre-Clinical Data for MIRA-55

Mira Pharmaceuticals Announces Promising Results for MIRA-55 in Multiple Preclinical Tests Compared to THC

Testing confirms MIRA's preliminary beliefs regarding potential treatment for neurological and neuropsychiatric disorders

MIAMI, FL / ACCESSWIRE / July 15, 2024 /MIRA Pharmaceuticals, Inc. (Nasdaq:MIRA) ("MIRA" or the "Company"), a pre-clinical-stage pharmaceutical development company, today announced promising new findings from recent preclinical studies of its novel oral pharmaceutical marijuana analog, MIRA-55, which is being studied as a potential treatment for anxiety and cognitive decline.

The new data confirms MIRA's earlier beliefs regarding MIRA-55's pharmacological profile and potential for potency and efficacy. Importantly, however, the new preclinical data compared MIRA-55 directly to THC, the main psychoactive component in marijuana, and showed promising results.

Background on MIRA1a and Discovery of MIRA-55

MIRA initially focused its marijuana analog preclinical study program around an oral compound called "MIRA1a." As previously disclosed in March 2024, in late 2023, MIRA, based on discussions with its contract manufacturers, began to suspect that MIRA1a was in fact a new molecule with a distinct chemical structure, which MIRA named "MIRA-55". This discovery led to the filing by MIRA of a global provisional patent application for MIRA-55 in March 2024. At that time, MIRA indicated its belief that MIRA-55 displayed enhanced potency and potential for efficacy over MIRA1a but noted that additional testing was required to confirm MIRA's preliminary beliefs. The new testing results announced today provide such confirmation.

Mira Pharmaceuticals Announces DEA Rules MIRA-55, a Novel Oral Pharmaceutical Marijuana Analog, Is Not Classified as a Controlled Substance

Ruling removes potential complications for manufacturing, pre-clinical development, IND submission, clinical development, and ultimately commercialization.

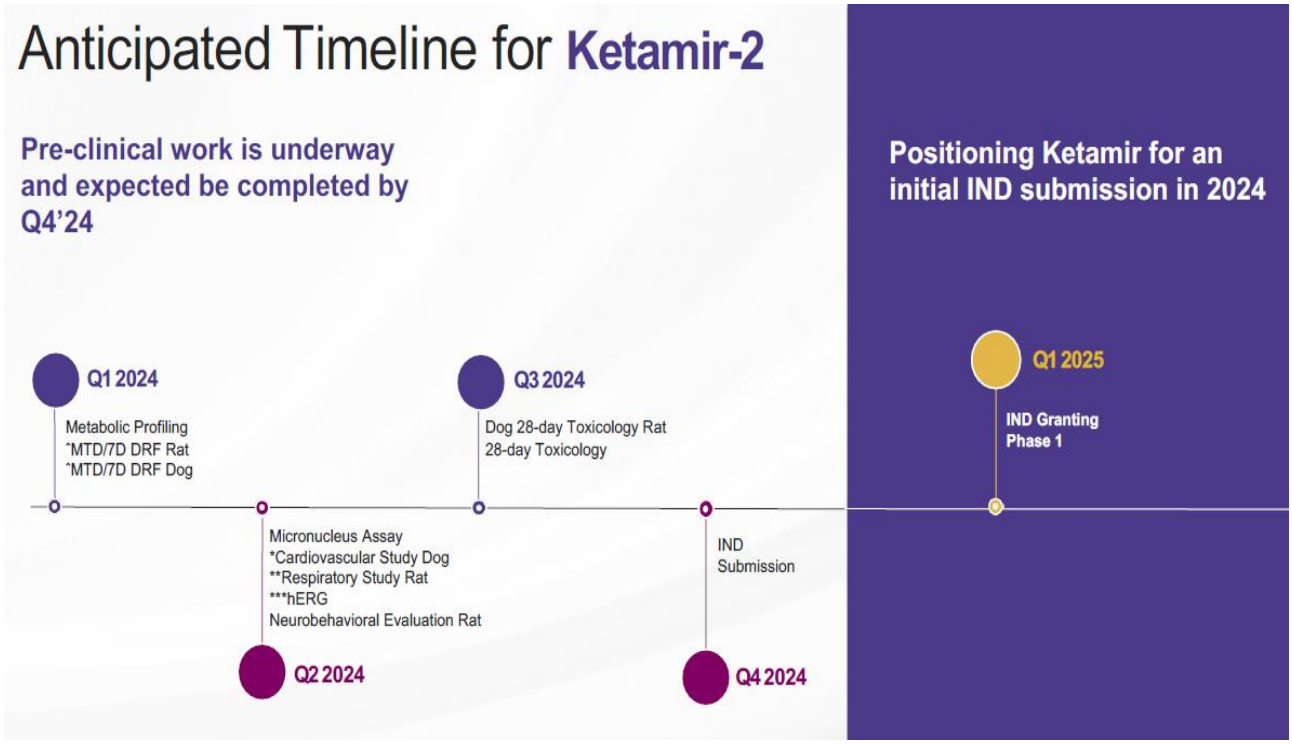
MIAMI, May 29, 2024 /PRNewswire/ -- **MIRA Pharmaceuticals, Inc. (NASDAQ: MIRA)** ("MIRA" or the "Company"), a pre-clinical-stage pharmaceutical company focused on the treatment of neurologic and neuropsychiatric disorders, announced that ***MIRA-55***, has been determined by the **U.S. Drug Enforcement Administration (DEA)** not to be a controlled substance or listed chemical under the Controlled Substance Act and its governing regulations.

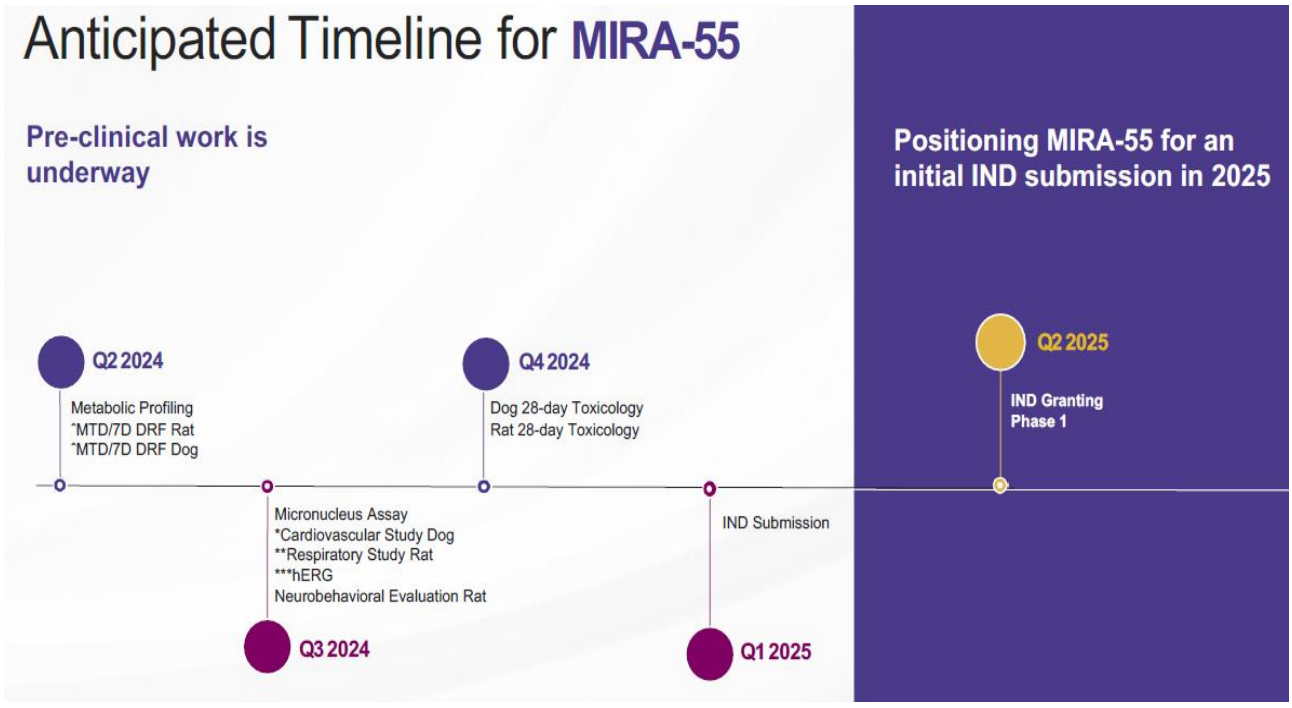
Mira Pharmaceuticals Announces DEA Rules MIRA-55 Is Not Classified as a Controlled Substance

MIRA-55 is under investigation for treating adult patients suffering from neuropathic pain as well as anxiety and cognitive decline often associated with early-stage dementia. Unlike THC (the principal psychoactive compound in marijuana), which can impair cognitive function, MIRA-55 has demonstrated in pre-clinical studies that it can improve memory by 100% in wild-type mice.

Source: Company reports.

Exhibit 26: Drug Pipeline Timeline





Source: Company reports.

FINANCIALS

MIRA Pharmaceuticals' fiscal year ends on December 31. We expect its next earnings report (for Q2 2024 ending June 2024) to be in mid-August. 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 27: MIRA Pharmaceuticals Historical and Projected Financials

FYE December 31 (in millions except EPS)	2021A	2022A	2023A	2024E	2025E
Total Revenue	-	-	-	-	-
Research & development costs	0.7	2.4	1.6	3.3	5.2
Operating income (loss)	**(2.2)**	**(7.0)**	**(8.5)**	**(7.5)**	**(11.0)**
Net income (pro forma)	**(2.2)**	**(7.1)**	**(12.0)**	**(7.4)**	**(11.2)**
EPS	**$ (0.17)**	**$ (0.53)**	**$ (0.81)**	**$ (0.50)**	**$ (0.72)**

Source: Company reports and Ascendiant Capital Markets estimates.

Recent Results (fiscal Q1 2024 ending March 2024)

MIRA Pharmaceuticals' recent financial performance is reflective of its developmental stage. In its Q1 2024 report (on May 13, 2024), the company reported no revenue and net loss was $1.7 million. Operating expenses were $1.8 million (down from $3.1 million in Q4 2023), consisting mainly of drug development costs and general and administrative expenses. Q1 EPS was $(0.12).

Exhibit 28: Corporate Update (as of February 5, 2024)

MIRA Pharmaceuticals Provides Corporate Update

Announces Research Collaboration with Pharmaseed to Conduct Pre-Clinical Studies on the Use of Ketamir for Patients with Major Depressive Disorder (MDD) and Post-Traumatic Stress Disorder (PTSD)

Studies will Investigate Antidepressant Properties of Ketamir to Position for Initial IND Application in 2024

BALTIMORE, Feb. 5, 2024 /PRNewswire/ -- MIRA Pharmaceuticals, Inc. (NASDAQ: MIRA) ("MIRA" or the "Company"), an innovative pre-clinical-stage pharmaceutical company focused on the treatment of neurologic and neuropsychiatric disorders, today provided a corporate and operational update.

The Company has partnered with Pharmaseed Ltd., a clinical research organization ("CRO"), to research and evaluate Ketamir-2 ("Ketamir"), a novel ketamine analog with improved gastrointestinal bioavailability under investigation to potentially be an orally delivered ultra-rapid antidepressant.

Pharmaseed is Israel's largest GLP-certified pre-clinical and early clinical CRO specializing in translational and regenerative studies. The MIRA team will utilize Pharmaseed's neurological disorder expertise to conduct pre-clinical research on Ketamir, focusing primarily on investigating its antidepressant properties. The studies will include safety and efficacy evaluation in various animal models. Additionally, MIRA has initiated a Toxicology program for Ketamir in collaboration with Frontage Laboratories. The Company anticipates positioning Ketamir for an initial Investigational New Drug (IND) application with the FDA by the end of 2024.

Ketamir is a novel compound designed to address the challenges presented by major depressive disorder (MDD), a significant health concern affecting approximately 18 million people in the U.S., of which 5.5 million reported suicide ideation (MDSI)[1]. Tailored for convenient home use, it offers administration ease and aims for fewer side effects, eliminating the need for clinical supervision associated with existing treatments like Spravato. The total annual burden of medication-treated MDD among the US population was $92.7 billion, with $43.8 billion (47.2%) attributable to Treatment Resistant Depression (TRD)[2].

Moreover, Ketamir is also under investigation for treating Post Traumatic Stress Disorder (PTSD), a market that is projected to reach $26 billion by 2031[3]. Ketamir aims to serve as an alternative to commonly prescribed drugs for PTSD including SSRIs such as Sertraline (Zoloft), Paroxetine (Paxil), as well as SNRIs such as Venlafaxine (Effexor).

Source: Company reports.

We note that in late 2024 the company plans to file its IND (Investigational New Drug) application for Ketamir-2 with expected approval and the start of clinical trials in Q1 2025. The company plans to file its IND application for MIRA-55 in Q1 2025 with expected approval and the start of clinical trials in Q2 2025.

The company does not provide specific quarterly financial guidance, but we believe that R&D expenses should remain relatively stable until the company expands clinical trial activities. Going forward, we believe operating expenses of ~$2 million is a reasonable near term quarterly cash burn rate. The company expects continued progress on its drug development milestones in 2024/2025. 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 three years away. We have modeled operating costs to increase over the next year, primarily driven by its expected increase in drug clinical trials expenses in 2025.

For 2024 (ending December 2024), we expect no revenues and a net loss of $7 million and EPS of $(0.50). For 2025 (ending December 2025), we expect no revenues and a net loss of $11 million and EPS of $(0.72).

We believe investors should be focused on its progress on its drug development, which will likely take at least three years before a potential FDA approval. Within this year (expected late 2024), the company should file its IND application for Ketamir-2 with expected approval and the start of clinical trials in Q1 2025.

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 Ketamir-2 and MIRA-55 drugs under development. It is these approvals that are ultimately how MIRA Pharmaceuticals 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, MIRA Pharmaceuticals faces a big challenge to successfully commercialize its products. However, given the lack of good treatment options for Alzheimer and its poor prognosis along with and antidepressants, we believe MIRA Pharmaceuticals commercial prospects are very positive if it obtains FDA approval.

The company's balance sheet has $4 million in cash and no debt as of March 2024. In August 2023, the company raised ~$8 million selling stock (1.3 million shares at $7.00 per share) in its IPO (initial public offering). We believe the company has enough cash into 2025 (Q1 2025 (March 2025)), but we estimate that it will need to raise capital by Q4 2024 (December 2024).

Exhibit 29: MIRA Pharmaceuticals Financial Metrics

Recent Share Price (8/2/24)	$ 2.17
52-Weeks Share Price (Low - High)	$0.51 - 6.95
Shares Outstanding	15 million
Market Capitalization	$33 million
Enterprise Value	$29 million
Cash (3/31/24)	$4 million
Debt (3/31/24)	$0
2023A Revenue	$0
2023A Net loss	$12.0 million
2023A EPS	$ (0.81)
2024E Revenue	$0
2024E Net loss	$7.4 million
2024E EPS	$ (0.50)
2025E Revenue	$0
2025E Net loss	$11.2 million
2025E EPS	$ (0.72)

Source: Company reports and Ascendiant Capital Markets estimates.

FINANCIAL MODEL

MIRA Pharmaceuticals, Inc.

Income Statement ($ mils)	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024	Mar-25	Jun-25	Sep-25	Dec-25	2025
Fiscal Year End: December 31	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	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**	**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	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000
General & administrative	1.468	0.989	2.151	1.093	0.463	4.696	1.068	1.071	2.145	2.669	6.953	1.006	1.000	1.100	1.100	4.206	1.400	1.400	1.500	1.500	5.800
Research & development	0.684	0.482	0.269	0.715	0.885	2.351	0.272	(0.101)	1.015	0.387	1.573	0.762	0.800	0.800	0.900	3.262	1.300	1.300	1.300	1.300	5.200
Restructuring and other						0.000					0.000					0.000					0.000
Total operating expenses	2.152	1.471	2.421	1.808	1.348	7.048	1.339	0.970	3.160	3.056	8.526	1.768	1.800	1.900	2.000	7.468	2.700	2.700	2.800	2.800	11.000
Operating income (loss)	**(2.152)**	**(1.471)**	**(2.421)**	**(1.808)**	**(1.348)**	**(7.048)**	**(1.339)**	**(0.970)**	**(3.160)**	**(3.056)**	**(8.526)**	**(1.768)**	**(1.800)**	**(1.900)**	**(2.000)**	**(7.468)**	**(2.700)**	**(2.700)**	**(2.800)**	**(2.800)**	**(11.000)**
Interest income (expense)	(0.024)	(0.004)	(0.002)	(0.002)	(0.002)	(0.010)	(0.002)	(0.296)	(0.428)	(2.731)	(3.456)	0.050	0.000	0.000	0.000	0.050	(0.056)	(0.056)	(0.056)	(0.056)	(0.225)
Other income (expense)						0.000					0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Income before income taxes	(2.177)	(1.475)	(2.423)	(1.811)	(1.349)	(7.058)	(1.341)	(1.266)	(3.588)	(5.787)	(11.982)	(1.718)	(1.800)	(1.900)	(2.000)	(7.418)	(2.756)	(2.756)	(2.856)	(2.856)	(11.225)
Income taxes						0.000					0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net income (loss)	(2.177)	(1.475)	(2.423)	(1.811)	(1.349)	(7.058)	(1.341)	(1.266)	(3.588)	(5.787)	(11.982)	(1.718)	(1.800)	(1.900)	(2.000)	(7.418)	(2.756)	(2.756)	(2.856)	(2.856)	(11.225)
Nonrecurring/noncash adjustments						0.000				0.010	0.010					0.000					0.000
Net income (pro forma)	**(2.177)**	**(1.475)**	**(2.423)**	**(1.811)**	**(1.349)**	**(7.058)**	**(1.341)**	**(1.266)**	**(3.588)**	**(5.777)**	**(11.972)**	**(1.718)**	**(1.800)**	**(1.900)**	**(2.000)**	**(7.418)**	**(2.756)**	**(2.756)**	**(2.856)**	**(2.856)**	**(11.225)**
EBITDA																					
Shares, Basic	12.674	13.055	13.093	13.169	13.313	13.313	13.313	13.313	13.639	14.781	14.781	14.781	14.881	14.981	15.081	14.931	15.281	15.481	15.681	15.881	15.581
Shares, Diluted	12.674	13.055	13.093	13.169	13.313	13.313	13.313	13.313	13.639	14.781	14.781	14.781	14.881	14.981	15.081	14.931	15.281	15.481	15.681	15.881	15.581
EPS Basic (pro forma)	**($0.17)**	**($0.11)**	**($0.19)**	**($0.14)**	**($0.10)**	**($0.53)**	**($0.10)**	**($0.10)**	**($0.26)**	**($0.39)**	**($0.81)**	**($0.12)**	**($0.12)**	**($0.13)**	**($0.13)**	**($0.50)**	**($0.18)**	**($0.18)**	**($0.18)**	**($0.18)**	**($0.72)**
EPS Diluted (pro forma)	($0.17)	($0.11)	($0.19)	($0.14)	($0.10)	($0.53)	($0.10)	($0.10)	($0.26)	($0.39)	($0.81)	($0.12)	($0.12)	($0.13)	($0.13)	($0.50)	($0.18)	($0.18)	($0.18)	($0.18)	($0.72)
Margins																					
Gross margin																					
General & administrative																					
Research & development																					
Operating margin																					
Tax rate, GAAP																					
Net margin																					
Y/Y % change																					
Total Revenue																					
Gross margin																					
General & administrative						220%	8%	-50%	96%	477%	48%	-6%	-7%	-49%	-59%	-40%	39%	40%	36%	36%	38%
Research & development						244%	-44%	-137%	42%	-56%	-33%	181%	-892%	-21%	132%	107%	71%	63%	63%	44%	59%
Operating income (loss)						227%	-9%	-60%	75%	127%	21%	32%	86%	-40%	-35%	-12%	53%	50%	47%	40%	47%
Net income (loss)						224%	-9%	-48%	98%	329%	70%	28%	42%	-47%	-65%	-38%	60%	53%	50%	43%	51%
EPS Diluted (pro forma)						209%	-11%	-49%	91%	286%	53%	15%	27%	-52%	-66%	-39%	55%	47%	44%	36%	45%

Source: Company reports and Ascendiant Capital Markets estimates.

MIRA Pharmaceuticals, Inc.

Balance Sheet ($ mils) Fiscal Year End: December 31	Dec-21 Q4A	Dec-22 Q4A	Mar-23 Q1A	Jun-23 Q2A	Sep-23 Q3A	Dec-23 Q4A	Mar-24 Q1A	Jun-24 Q2E	Sep-24 Q3E	Dec-24 Q4E	Mar-25 Q1E	Jun-25 Q2E	Sep-25 Q3E	Dec-25 Q4E
Assets														
Cash and cash equivalents	2.810	0.351	0.001	0.025	5.868	4.603	3.529	1.929	0.229	0.014	(2.542)	(5.098)	(7.755)	(8.211)
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	0.100	0.143	0.250	0.396	0.203	0.256	0.185	0.185	0.185	0.100	0.100	0.100	0.100	0.100
Total current assets	2.910	0.494	0.251	0.421	6.071	4.858	3.714	2.114	0.414	0.114	(2.442)	(4.998)	(7.655)	(8.111)
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	0.446	0.364	0.147	3.404	2.947	0.074	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
Total assets	**3.355**	**0.858**	**0.398**	**3.825**	**9.018**	**4.932**	**3.809**	**2.209**	**0.509**	**0.209**	**(2.347)**	**(4.904)**	**(7.560)**	**(8.016)**
Liabilities and stockholders' equity														
Accounts payable	0.228	0.812	0.919	0.659	0.780	0.539	0.636	0.636	0.636	0.636	0.636	0.636	0.636	0.636
Accrued expenses	0.548	0.116	0.186					0.000	0.000	0.000	0.000	0.000	0.000	2.200
Deferred income tax								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	0.025	0.309	0.795	0.115	0.089	0.020	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
Short term debt	0.293	0.133	0.220	1.803				0.000	0.000	1.500	1.500	1.500	1.500	1.500
Total current liabilities	**1.094**	**1.370**	**2.119**	**2.577**	**0.868**	**0.558**	**0.652**	**0.652**	**0.652**	**2.152**	**2.152**	**2.152**	**2.152**	**4.352**
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		0.084	0.068	0.051	0.035			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**	**0.084**	**0.068**	**0.051**	**0.035**	**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
Common stock	0.006	0.007	0.007	0.007	0.001	0.001	0.001	0.201	0.401	0.601	0.801	1.001	1.201	1.401
Additional paid-in capital	4.500	8.700	8.848	13.100	23.612	25.658	26.158	26.158	26.158	26.158	26.158	26.158	26.158	26.158
Retained earnings	(2.245)	(9.303)	(10.644)	(11.910)	(15.498)	(21.285)	(23.003)	(24.803)	(26.703)	(28.703)	(31.459)	(34.215)	(37.072)	(39.928)
Other								0.000	0.000	0.000	0.000	0.000	0.000	0.000
Accumulated other comprehensive income								0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total stockholders' equity	**2.261**	**(0.596)**	**(1.789)**	**1.197**	**8.115**	**4.374**	**3.157**	**1.557**	**(0.143)**	**(1.943)**	**(4.499)**	**(7.056)**	**(9.712)**	**(12.368)**
Total stockholders' equity and liabili	**3.355**	**0.858**	**0.398**	**3.825**	**9.018**	**4.932**	**3.809**	**2.209**	**0.509**	**0.209**	**(2.347)**	**(4.904)**	**(7.560)**	**(8.016)**

Balance Sheet Drivers

	Dec-21 Q4A	Dec-22 Q4A	Mar-23 Q1A	Jun-23 Q2A	Sep-23 Q3A	Dec-23 Q4A	Mar-24 Q1A	Jun-24 Q2E	Sep-24 Q3E	Dec-24 Q4E	Mar-25 Q1E	Jun-25 Q2E	Sep-25 Q3E	Dec-25 Q4E
Book & Cash Value (per share)														
Book Value per Share (diluted)	$0.18	-$0.04	-$0.13	$0.09	$0.59	$0.30	$0.21	$0.10	-$0.01	-$0.13	-$0.29	-$0.46	-$0.62	-$0.78
Cash per Share (diluted)	$0.22	$0.03	$0.00	$0.00	$0.43	$0.31	$0.24	$0.13	$0.02	$0.00	-$0.17	-$0.33	-$0.49	-$0.52
Net cash per Share (diluted)	$0.20	$0.02	-$0.02	-$0.13	$0.43	$0.31	$0.24	$0.13	$0.02	-$0.10	-$0.26	-$0.43	-$0.59	-$0.61

Source: Company reports and Ascendiant Capital Markets estimates

MIRA Pharmaceuticals, Inc.

Cash Flow Statement ($ mils)	2021	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024	Mar-25	Jun-25	Sep-25	Dec-25	2025
Fiscal Year End: December 31	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
Cash flow from operating activities																					
Net income	(2.177)	(1.475)	(2.423)	(1.811)	(1.349)	(7.058)	(1.341)	(1.266)	(3.588)	(5.787)	(11.982)	(1.718)	(1.800)	(1.900)	(2.000)	(7.418)	(2.756)	(2.756)	(2.856)	(2.856)	(11.225)
Depreciation						0.000					0.000					0.000					0.000
Amortization						0.000					0.000					0.000					0.000
Non-cash lease expense						0.000					0.000					0.000					0.000
Debt related amortization exper	0.024	0.004	0.002	0.002	0.002	0.010	0.002	0.296	0.414	3.477	4.189					0.000					0.000
Stock comp			1.001	0.148	0.148	1.297	0.148	0.737	1.452	0.464	2.801	0.500	0.200	0.200	0.200	1.100	0.200	0.200	0.200	0.200	0.800
Deferred income taxes						0.000					0.000		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					0.000					0.000
Lease		(0.006)				(0.006)				0.006	0.006					0.000					0.000
Inventory reserve						0.000					0.000					0.000					0.000
Accrued interest						0.000					0.000					0.000					0.000
Writedowns and impairments						0.000					0.000					0.000					0.000
Other gains/losses						0.000					0.000					0.000					0.000
Other						0.000					0.000					0.000					0.000
Changes in operating assets and liabilities:																					
Prepaid expenses & other current assets			(0.050)	(0.002)	0.052	0.000	(0.060)	0.018	(0.160)	(0.053)	(0.256)	0.058	0.000	0.000	0.085	0.144	0.000	0.000	0.000	0.000	0.000
Income tax						0.000					0.000					0.000					0.000
Other assets						0.000					0.000	0.012	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000
Accounts payable	0.776	(0.566)	0.198	0.348	0.172	0.152	0.176	(0.445)	0.120	(0.241)	(0.390)	0.098	0.000	0.000	0.000	0.098	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	2.200	2.200
Deferred revenue						0.000					0.000					0.000					0.000
Other liabilities						0.000				1.100	1.100		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Net cash (used in) provided by	**(1.376)**	**(2.043)**	**(1.272)**	**(1.315)**	**(0.975)**	**(5.605)**	**(1.075)**	**(0.661)**	**(1.761)**	**(1.035)**	**(4.532)**	**(1.050)**	**(1.600)**	**(1.700)**	**(1.715)**	**(6.064)**	**(2.556)**	**(2.556)**	**(2.656)**	**(0.456)**	**(8.225)**
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	0.000	0.000
Purchases of short-term investments						0.000					0.000					0.000					0.000
Acquisitions						0.000					0.000					0.000					0.000
Other						0.000					0.000					0.000					0.000
Net cash used in investing acti	**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**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Cash flow from financing activities																					
Issuance of debt	0.209				0.446	0.446	0.772	0.981	(1.610)	2.148	2.291		0.000	0.000	1.500	1.500	0.000	0.000	0.000	0.000	0.000
Repayment of debt	(0.527)	(0.228)	(0.160)	(0.224)	0.408	(0.203)	(0.046)	(0.297)	0.160	(1.029)	(1.212)	(0.024)				(0.024)					0.000
Issuance of stock	4.500	1.584	0.135	0.900	0.285	2.904			9.054	(1.350)	7.704		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Proceeds from stock option exercises						0.000					0.000					0.000					0.000
Other						0.000					0.000					0.000					0.000
Dividends and distributions						0.000					0.000					0.000					0.000
Cash provided by (used in) fina	**4.182**	**1.356**	**(0.025)**	**0.676**	**1.139**	**3.146**	**0.726**	**0.684**	**7.605**	**(0.231)**	**8.784**	**(0.024)**	**0.000**	**0.000**	**1.500**	**1.476**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**
Effect of exchange rate on cash						0.000					0.000					0.000					0.000
Net increase (decrease) in cash	**2.806**	**(0.687)**	**(1.297)**	**(0.639)**	**0.164**	**(2.459)**	**(0.350)**	**0.023**	**5.844**	**(1.266)**	**4.252**	**(1.074)**	**(1.600)**	**(1.700)**	**(0.215)**	**(4.589)**	**(2.556)**	**(2.556)**	**(2.656)**	**(0.456)**	**(8.225)**
Beginning cash and equivalents	**0.003**	**2.810**	**2.123**	**0.826**	**0.187**	**2.810**	**0.351**	**0.001**	**0.025**	**5.868**	**0.351**	**4.603**	**3.529**	**1.929**	**0.229**	**4.603**	**0.014**	**(2.542)**	**(5.098)**	**(7.755)**	**0.014**
Ending cash and equivalents	**2.810**	**2.123**	**0.826**	**0.187**	**0.351**	**0.351**	**0.001**	**0.025**	**5.868**	**4.603**	**4.603**	**3.529**	**1.929**	**0.229**	**0.014**	**0.014**	**(2.542)**	**(5.098)**	**(7.755)**	**(8.211)**	**(8.211)**

Source: Company reports and Ascendiant Capital Markets estimates

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			Investment Banking Services Past 12 months	
Rating	**Count**	**Percent**	**Count**	**Percent**
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Total	59	100%	21	36%

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