UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **May 5, 2022**

RELMADA THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Nevada	**001-39082**	**45-5401931**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

2222 Ponce de Leon Blvd., Floor 3 Coral Gables, FL	**33134**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code **(786) 629 1376**

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of exchange on which registered
Common stock, $0.001 par value per share	**RLMD**	**The NASDAQ Stock Market LLC**

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Item 2.02 Results of Operations and Financial Condition.

On May 5, 2022, Relmada Therapeutics, Inc. (the "Company") issued a press release providing a corporate update and reporting its first quarter 2022 financial results. (These results are preliminary and unaudited.) The Company also announced that it would conduct a conference call and audio webcast on May 5, 2022, at 4:30 PM EDT, to discuss the update and results. The Company's complete unaudited condensed financial statements and notes thereto as of and for the three months ended March 31, 2022 and 2021, will be contained in its Quarterly Report on Form 10-Q to be filed with the Securities and Exchange Commission. A copy of this press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated into this Item 2.02 by reference.

In accordance with General Instruction B.2 of Form 8-K, the information in this Item 2.02 of this Current Report on Form 8-K, including the information set forth in Exhibit 99.1, is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Item 8.01 Other Events.

On May 5, 2022, the Company updated its corporate presentation, a copy of which is filed herewith as Exhibit 99.2 and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	**Description**
99.1	Press release dated May 5, 2022, regarding corporate update and first quarter 2022 financial results
99.2	Corporate Presentation dated May 5, 2022

104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: May 5, 2022

RELMADA THERAPEUTICS, INC.

By: */s/ Sergio Traversa*
Name: Sergio Traversa
Title: Chief Executive Officer

Relmada Therapeutics Provides Corporate Update and Reports First Quarter 2022 Financial Results

CORAL GABLES, Fla., May 5th, 2022 /PRNewswire/ -- Relmada Therapeutics, Inc. (Nasdaq: RLMD) ("Relmada," the "Company," "we," "us, "our"), a late-stage biotechnology company addressing diseases of the central nervous system (CNS), today provided a corporate update and announced preliminary and unaudited financial results for the first quarter ended March 31, 2022. The Company will host a conference call today, Thursday, May 5, at 4:30 PM Eastern Time/1:30 PM Pacific Time.

Recent Corporate Highlights

- Appointed Gino Santini, a global biopharmaceutical industry executive with a successful track-record in both operational and strategic roles, to serve as the Corporate Development Strategic Advisor
- Published REL-1017 preclinical Olney's lesion data in the peer-reviewed journal, *Frontiers in Pharmacology*
- Presented REL-1017 data for both HAP studies in two poster presentations and one oral presentation at the Ketamine & Related Compounds International Hybrid Conference 2022

"The expected catalyst-rich 2022 for our late-stage development program, REL-1017 as an adjunctive and monotherapy treatment for people living with major depressive disorder (MDD), continues to progress as planned," said Sergio Traversa, Relmada's Chief Executive Officer. We intend to generate REL-1017 clinical data readouts for the ongoing Reliance Phase 3 program beginning mid-year," continued Traversa. "We anticipate completing the enrollment of Reliance III, the ongoing monotherapy registrational Phase 3 trial, and present the top-line results by mid-year 2022, followed by top-line results from Reliance I and Reliance II, the adjunctive MDD studies, throughout the second half of the year."

Relmada is delighted to announce the addition of Gino Santini, a highly experienced biopharmaceutical industry executive, to support the Company. Gino is joining with global expertise in both corporate strategy and operational roles and has demonstrated strong value creation skills. He is a former member of the executive team of Eli Lilly, with responsibilities as President of US Operations and SVP of Corporate Strategy and Business Development. After a 28-year career at Lilly, Gino currently serves on the board of multiple public and private biopharmaceutical companies.

"The potential of REL-1017 to be a transformative therapy for patients suffering with major depressive disorder is an exciting opportunity in the CNS space," said Gino Santini. "I really look forward to leveraging my experience in commercializing innovative drugs and in strategic business development with the Relmada team. Our aim is to expeditiously deliver the most value for those who can potentially benefit from REL-1017."

Upcoming Anticipated Milestones for REL-1017

- Mid-'22 – Data for Reliance III monotherapy MDD trial
- 3Q '22 – Data for Reliance I adjunctive MDD trial
- 4Q '22 – Data for Reliance II adjunctive MDD trial

First Quarter 2022 Financial Results

- Research and development expense for the three months ended March 31, 2022, totaled $25.0 million, compared to $14.0 million for the three months ended March 31, 2021. The increase was primarily driven by increased costs associated with preparing and conducting Reliance, the Company's Phase 3 program for REL-1017.
- General and administrative expense for the three months ended March 31, 2022, totaled $13.3 million compared to $8.4 million for the three months ended March 31, 2021, an increase of approximately $4.9 million. The increase was primarily driven by an increase in stock-based compensation.
- The net loss for the three months ended March 31, 2022, was $39.7 million, or $1.40 per diluted share, compared with a net loss of $22.2 million, or $1.34 per diluted share, for the three months ended March 31, 2021.
- As of March 31, 2022, the Company had cash, cash equivalents, and short-term investments of $220.6 million, compared to cash, cash equivalents, and short-term investments of approximately $211.9 million at December 31, 2021.

Conference Call and Webcast Details

Thursday, May 5th @ 4:30pmET

Toll Free:	1-877-256-3246
International:	1-212-231-2903
Conference ID:	22017494
Webcast:	https://viavid.webcasts.com/starthere.jsp?ei=1543079&tp_key=2a9a78ffb7

About REL-1017

REL-1017, a new chemical entity (NCE) and novel NMDA receptor (NMDAR) channel blocker that preferentially targets hyperactive channels while maintaining physiological glutamatergic neurotransmission, is currently in late-stage development for the treatment of MDD. The ongoing Reliance Clinical Research Program is designed to evaluate REL-1017 as a potential rapid-acting, oral, once-daily antidepressant treatment. In a Phase 2 trial, REL-1017 demonstrated robust, rapid, and sustained antidepressant effects with statistically significant improvements compared to placebo. The Phase 2 study also showed a favorable pharmacokinetic, safety, and tolerability profile of REL-1017 consistent with results observed in previously completed Phase 1 studies.

About Relmada Therapeutics, Inc.

Relmada Therapeutics is a late-stage biotechnology company addressing diseases of the central nervous system (CNS), with a focus on major depressive disorder (MDD). Relmada's experienced and dedicated team is committed to making a difference in the lives of patients and their families. Relmada's lead program, REL-1017, is a new chemical entity (NCE) and novel NMDA receptor (NMDAR) channel blocker that preferentially targets hyperactive channels while maintaining physiological glutamatergic neurotransmission. REL-1017 is in late-stage development as an adjunctive treatment and monotherapy treatment for MDD in adults. In addition, Relmada is advancing a clinical-stage program in neurodegenerative diseases based on psilocybin and select derivative molecules. Learn more at www.relmada.com.

Forward-Looking Statements

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements made by us or on our behalf. This press release contains statements which constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, including but not limited to statements regarding Relmada's plans to develop REL-1017; and expectations related to trials evaluating REL-1017 and potential regulatory approval of REL-1017, including those related to feedback from the FDA. Any statement that is not historical in nature is a forward-looking statement and may be identified by the use of words and phrases such as "expects," "anticipates," "believes," "will," "will likely result," "will continue," "plans to," "potential," "promising," and similar expressions. These statements are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and assumptions that could cause actual results to differ materially from those described in the forward-looking statements, including the risk factors described under the heading "Risk Factors" set forth in the Company's reports filed with the SEC from time to time. No forward-looking statement can be guaranteed, and actual results may differ materially from those projected. Relmada undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise. Readers are cautioned that it is not possible to predict or identify all the risks, uncertainties and other factors that may affect future results and that the risks described herein should not be a complete list.

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Relmada Therapeutics, Inc.
Condensed Consolidated Balance Sheets

	As of March 31, 2022 (Unaudited)	As of December 31, 2021
Assets		
Current assets:		
Cash and cash equivalents	$ 44,934,376	$ 44,443,439
Short-term investments	175,715,526	167,466,167
Lease payments receivable – short term	65,454	86,377
Prepaid expenses	5,063,960	11,301,535
Total current assets	225,779,316	223,297,518
Other assets	28,293	28,293
Total assets	$ 225,807,609	$ 223,325,811
Commitments and Contingencies (See Note 7)		
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 10,670,149	$ 11,192,502
Accrued expenses	4,739,328	3,868,423
Total current liabilities	15,409,477	15,060,925
Total liabilities	15,409,477	15,060,925
Stockholders' Equity:		
Class A convertible preferred stock, $0.001 par value, 3,500,000 shares authorized, none issued and outstanding	-	-
Common stock, $0.001 par value, 50,000,000 shares authorized, 29,402,824 and 27,740,147 shares issued and outstanding, respectively	29,403	27,740
Additional paid-in capital	555,181,624	513,304,258
Accumulated deficit	(344,812,895)	(305,067,112)
Total stockholders' equity	210,398,132	208,264,886
Total liabilities and stockholders' equity	$ 225,807,609	$ 223,325,811

Relmada Therapeutics, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)

	Three months ended March 31,	
	2022	**2021**
Operating expenses:		
Research and development	$ 25,012,853	$ 14,022,227
General and administrative	13,284,570	8,382,976
Total operating expenses	38,297,423	22,405,203
Loss from operations	(38,297,423)	(22,405,203)
Other (expenses) income:		
Interest/investment income, net	329,949	419,974
Realized loss on short-term investments	(15,022)	(52,789)
Unrealized loss on short-term investments	(1,763,287)	(177,163)
Total other (expense) income	(1,448,360)	190,022
Net loss	$ (39,745,783)	$ (22,215,181)
Loss per common share – basic and diluted	$ (1.40)	$ (1.34)
Weighted average number of common shares outstanding – basic and diluted	28,392,601	16,572,672

Disclosures

Certain statements contained in this presentation or in other documents of Relmada Therapeutics, Inc. (the "Company"), along with certain statements that may be made by management of the Company orally in presenting this material, may contain "forward-looking statements." These statements can be identified by the fact that they do not relate strictly to historic or current facts. They use words such as "estimate," "expect," "intend," "believe," "plan," "anticipate," "projected" and other words and terms of similar meaning in connection with any discussion of future operating or financial performance or condition. These statements are based upon the current beliefs and expectations of the Company's management and are subject to significant risks and uncertainties. Statements regarding future action, future performance and/or future results, those relating to the timing for completion, and results of, scheduled or additional clinical trials and the FDA's or other regulatory review and/or approval and commercial launch and sales results (if any) of the Company's formulations and products and regulatory filings related to the same may differ from those set forth in the forward-looking statements. Peak sales and market size estimates have been determined on the basis of market research and comparable product analysis, but no assurances can be given that such sales levels will be achieved, if at all, or that such market size estimates will prove accurate.

Because actual results are affected by these and other potential risks, contingencies and uncertainties, the Company cautions investors that actual results may differ materially from those expressed or implied in any forward-looking statement. It is not possible to predict or identify all such risks, contingencies and uncertainties. The Company identifies some of these factors in its Securities and Exchange Commission ("SEC") filings on Forms 10-K, 10-Q and 8-K, and investors are advised to consult the Company's filings for a more complete listing of risk factors, contingencies and uncertainties affecting the Company and its business and financial performance.

The Company assumes no obligation to update forward-looking statements as circumstances change. Investors are advised to consult further disclosures that the Company makes or has made on related subjects in the Company's Form 10-K, 10-Q and 8-K reports.

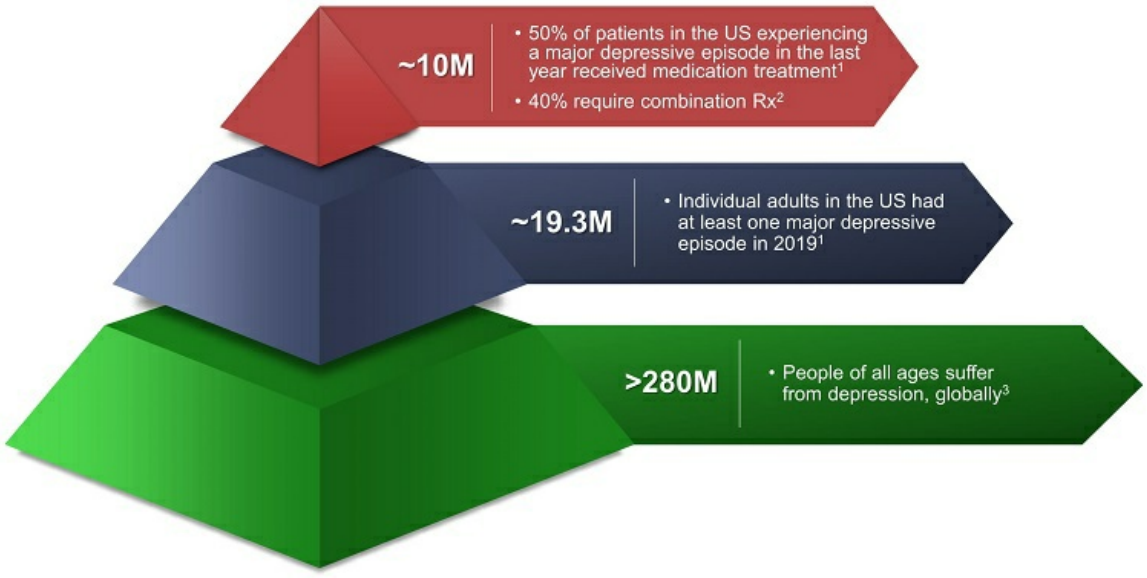
Investment Highlights

- CNS Focus with Lead Program in Major Depressive Disorder (MDD)
- Highly Compelling Opportunity in REL-1017
- Multiple Catalysts Expected Over Next 18 Months

CNS= Central Nervous System
**Our fiscal year end is December 31. The periods referred to in this slide are calendar years and quarters.

Major Depressive Disorder & REL-1017

Prevalence of Depression



Rx = prescription
1. Substance Abuse and Mental Health Services Administration (SAMHSA), U.S. Department of Health and Human Services (HHS) 2019 National Survey on Drug Use and Health; 2. Decision Resources Group Unipolar Depression 2020 report; 3. WHO Depression Fact Sheet

Limitations of Current Treatments for MDD

Limited Efficacy

~65% MDD patients do not respond to first antidepressant treatment[1]

Slow Onset of Action

Standard antidepressants, even when effective, may take up to 8 weeks to reach efficacy[1]

Safety & Tolerability Challenges

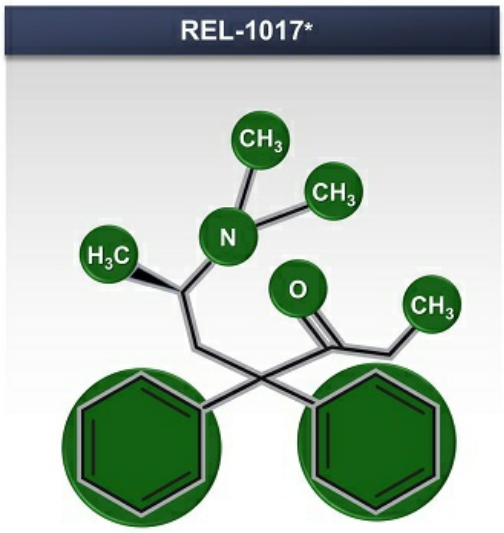
Side effects of atypical antipsychotics approved as adjunctive treatments for MDD include tardive dyskinesia, metabolic syndrome, cognitive impairment and stroke[2]

MDD = major depressive disorder
1. Trivedi MH, et al. *Am J Psychiatry*. 2006;163:28-40; 2. Ashton AK, et al. *Curr Ther Res*. 2005;66(2):97-106; 2. US Prescribing Information, brexpiprazole, quetiapine, aripiprazole

Unique Profile of REL-1017

Potential as a rapid, oral, once-daily antidepressant for MDD, if approved

- Novel Mechanism of Action: preferential targeting of NMDAR channels potentially associated with MDD[1]
- Available clinical data demonstrated:
  - Robust, rapid, and sustained statistically significant antidepressant effects on all tested scales[2]
  - Rapid onset: significant efficacy effects by Day 4[2]
  - Favorable safety and tolerability profile consistent across Phases 1 & 2 studies: no opioid and no psychotomimetic adverse events[2,3] and no metabolic side effects
  - Orally administered, once-daily tablet



MDD = major depressive disorder; NMDAR = N-methyl-D-aspartate receptor
*Diagram reflects chemical structure of REL-1017 (esmethadone); molecules are CH_3 = Methyl Group, O = Oxygen, N = Nitrogen

1. Bettini et al. Esmethadone (REL-1017) Reduces Glutamate-Induced Currents in NMDA Receptors With the GluN2D Subunit. Biological Psychiatry, 89(9), S198-S199. 2. Fava et al. Rapid and Sustained Antidepressant Effects of REL-1017 (dextromethadone) as an Adjunctive Treatment for Major Depressive Disorder: A Phase 2 Trial. 2021. Poster presented at: American Psychiatric Association Annual Meeting. 3. Bernstein, et al. *2019 Journal of Clinical Psychopharmacology;*

REL-1017 Ph 1 & 2 Efficacy & Safety Data

Phase 1 SAD & MAD Studies for REL-1017, Data Published 2019

Single Ascending Dose (SAD) Study Design
Parallel group, double-blind, placebo controlled

Objectives

Establish PK, PD, and safety of single dose administration

Treatment Administration

- 6 Cohorts: 5, 20, 60, 100, 150, 200 mg
- N = 42

Study Conclusions

- Maximum Tolerated Dose (MTD) = 150 mg
- PK demonstrated linear proportionality of C_{max}, $AUC_{0\text{-}inf}$ vs. dose
- No clinically significant opioid or NMDA AESI signal

Multiple Ascending Dose (MAD) Study Design
Parallel group, double-blind, placebo controlled

Objectives

Establish PK, PD, and safety of once daily, 10-day administration

Treatment Administration

- 3 Cohorts: 25, 50, 75 mg
- N = 24

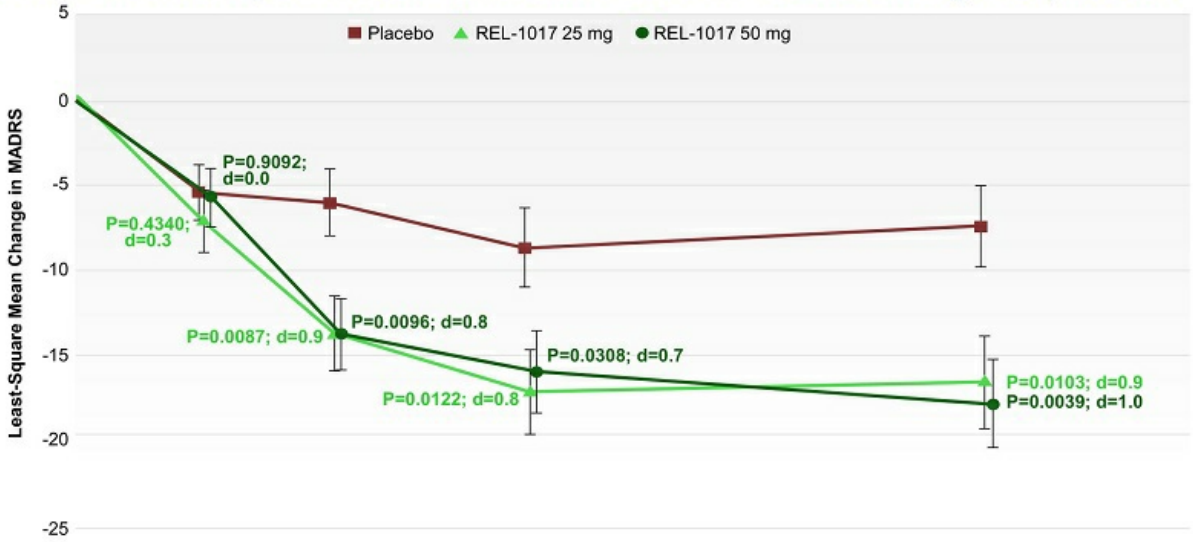
Study Conclusions

- The highest dose studied, 75mg daily, was well tolerated
- Favorable safety and tolerability profile
- No clinically significant opioid or NMDA AESI signal

PK = pharmacokinetics; PD = pharmacodynamics; MTD: =maximum tolerated dose; C_{max} = maximum plasma concentration; $AUC_{0\text{-}inf}$ = area under the curve 0 to infinite time; AUC_t = area under the curve to the end of dosing period; N = number of patients; NMDA = N-methyl-D-aspartate receptor antagonist; AESI = adverse event of special interest
Source: Bernstein, G. et al., J. Clin. Psychopharmacology 2019 May/Jun; 39(3):226-237.

Phase 2 Study REL-1017: Primary Efficacy Endpoint

REL-1017 showed rapid and sustained differences in MADRS change vs. placebo

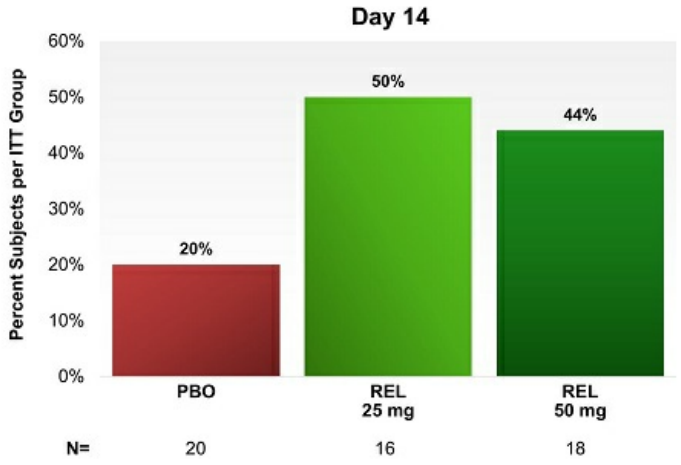


	Day 2	Day 4	Day 7	Day 14
ΔMADRS REL-1017 vs Placebo				
25mg	-1.9	-7.9*	-8.7*	-9.4*
50mg	-0.3	-7.6*	-7.2*	-10.4*

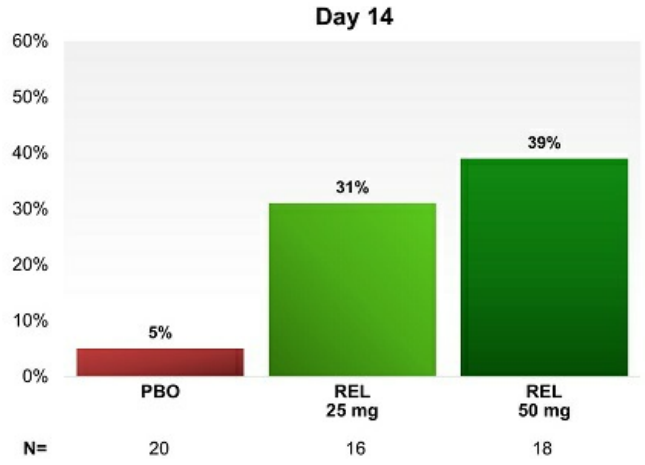
* P-value <.05

REL-1017 Phase 2 Study Efficacy: Response & Remission

% of Subjects Achieving Response
(≥ 50% MADRS Improvement from Baseline)



% of Subjects Achieving Remission
(MADRS ≤10)



Day 14: last efficacy assessment, 7 days after last dose of study drug
MADRS=Montgomery-Asberg Depression Rating Scale
Source: Relmada Data on File

Safety & Tolerability Findings from Phase 2

Safety & Tolerability Comparable to Placebo

- Only Mild and Moderate transient AEs – no SAEs
- No increased prevalence of specifically relevant organ group AEs in treatment groups vs placebo
- No evidence of opiate effects or withdrawal symptoms in treatment groups vs placebo
- No evidence of treatment-induced dissociative or psychotomimetic symptoms in the treatment groups vs placebo

AE = adverse event; SAE = serious adverse event
Source: Fava et al. Rapid and Sustained Antidepressant Effects of REL-1017 (dextromethadone) as an Adjunctive Treatment for Major Depressive Disorder: A Phase 2 Trial. 2021. Poster presented at: American Psychiatric Association Annual Meeting

REL-1017 Phase 2 Study Safety: Treatment Emergent Adverse Events

Treatment-emergent adverse events by preferred term in patients with MDD in the safety analysis set*

Variable	Placebo (N = 23)		REL-1017 25 mg (N=19)		REL-1017 50 mg (N=21)		All Patients (N = 62)	
	N	%	N	%	N	%	N	%
Patients with a serious adverse event	0	0.0	0	0.0	0	0.0	0	0.0
Patients with a severe treatment-emergent adverse event	0	0.0	0	0.0	0	0.0	0	0.0
Patients with at least one adverse event	12	54.5	9	47.4	15	71.4	36	58.1
Treatment-emergent adverse events occurring in three or more patients								
Constipation	3	13.6	1	5.3	3	14.3	7	11.3
Nausea	2	9.1	1	5.3	2	9.5	5	8.1
Diarrhea	3	13.6	0	0.0	0	0.0	3	4.8
Headache	3	13.6	2	10.5	3	14.3	8	12.9
Somnolence	2	9.1	1	5.3	1	4.8	4	6.5
Dizziness	1	4.5	1	5.3	1	4.8	3	4.8
Back Pain	0	0.0	1	5.3	2	9.5	3	4.8

Source: Fava et al. 2021 *American Journal of Psychiatry*
*Treatment-emergent adverse event was defined as an adverse event that started or worsened after treatment with the trial drug

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Human Abuse Potential (HAP) Studies:

REL-1017 vs. Oxycodone
REL-1017 vs. Ketamine

Human Abuse Potential (HAP) Studies of REL-1017

HAP Studies, per FDA's *Guidance for Industry*[1]:

- Typically required for CNS-active drugs
- Should be conducted in experienced recreational drug users
- Should use standardized questionnaires at specific timepoints
- Positive controls should be FDA-approved controlled substances pharmacologically similar to the test drug
- HAP studies are included in the New Drug Application (NDA) and used in determination of drug scheduling

The HAP Program for REL-1017 includes two studies:

- Mu Opioid Agonist HAP
  - Oxycodone as active control
  - **Completed in July 2021**
- NMDA Receptor Antagonist HAP
  - Ketamine as active control
  - **Completed in February 2022**

1 Assessment of Abuse Potential of Drugs Guidance for Industry 2017 https://www.fda.gov/media/116739/download

Primary Endpoint – "Drug Liking at This Moment" [Emax] REL-1017 vs. Oxycodone, Completer Population*

Statistic Parameter	Placebo	REL-1017 25 mg	REL-1017 75 mg	REL-1017 150 mg	Oxycodone 40 mg
n	47	47	47	47	47
Mean	**52.7**	**54.2**	**58.7**	**64.9**	**83.2**
Median	**50**	**50**	**50**	**58**	**85**
SD	6.52	10.35	15.82	16.58	16.57
SE	0.95	1.51	2.31	2.42	2.42

Consistent results were seen for the secondary endpoints

*Previously reported results for the oxycodone REL-1017-124 study analyzed the Modified Completer Population (44 subjects) instead of the Completer Population (47 patients)

SD = Standard Deviation; SE = Standard Error
Source: Relmada data on file.

Primary Endpoint – "Drug Liking at This Moment" [Emax] REL-1017 vs. Oxycodone, Completer Population*

Statistical Analysis

REL-1017 vs. Oxycodone

Treatment 1	Treatment 2	P-value
Oxycodone 40 mg	Placebo	**<0.001**
Oxycodone 40 mg	REL-1017 25 mg	**<0.001**
Oxycodone 40 mg	REL-1017 75 mg	**<0.001**
Oxycodone 40 mg	REL-1017 150 mg	**<0.001**

All REL-1017 doses are statistically different from oxycodone (p<.05)

REL-1017 vs. Placebo

Treatment 1	Treatment 2	P-value
REL-1017 25 mg	Placebo	**<0.001**
REL-1017 75 mg	Placebo	**<0.001**
REL-1017 150 mg	Placebo	**<0.05**

All REL-1017 doses are statistically equivalent to placebo (p<0.05)

* Previously reported results for the oxycodone REL-1017-124 study analyzed the Modified Completer Population (44 subjects) instead of the Completer Population (47 patients)

SD = Standard Deviation; SE = Standard Error
Source: Relmada data on file.

Human Abuse Potential (HAP) Studies of REL-1017 vs. Oxycodone Primary endpoint, Drug Liking (Emax) Completer Population*

- All REL-1017 doses including 150 mg (6x therapeutic dose and MTD) were statistically different from oxycodone 40 mg (p<0.05)
- All REL-1017 doses including 150 mg (6x therapeutic dose and MTD) were statistically equivalent to placebo (p<0.05)
- Key secondary endpoint results were consistent with primary endpoint

*Statistical analysis were performed on the Completer Population which includes all patients who completed all treatments. Previously reported results for the oxycodone REL-1017-124 study analyzed the Modified Completer Population (44 subjects) instead of the Completer Population (47 patients).

MTD = Maximum tolerated dose; IV = Intravenous.
Source: Relmada data on file.

Primary Endpoint – "Drug Liking at This Moment" [Emax] REL-1017 vs. IV Ketamine, Completer Population

Statistic Parameter	Placebo	REL-1017 25 mg	REL-1017 75 mg	REL-1017 150 mg	Dextromethorphan 300 mg	Ketamine 0.5mg/Kg
n	51	51	51	51	51	51
Mean	**50.9**	**51.4**	**54.9**	**59.2**	**68.4**	**90**
Median	**50**	**50**	**50**	**51**	**60**	**100**
SD	2.23	3.28	9.58	14.38	18.39	14.52
SE	0.31	0.46	1.34	2.01	2.57	2.03

Consistent results were seen for the secondary endpoints

SD = Standard Deviation; SE = Standard Error; IV = intravenous
Source: Relmada data on file.

Primary Endpoint – "Drug Liking at This Moment" [Emax] REL-1017 vs. IV Ketamine, Completer Population

Statistical Analysis

REL-1017 vs. IV Ketamine

Treatment 1	Treatment 2	P-value
Ketamine 0.5 mg/ Kg	Placebo	**<0.001**
Ketamine 0.5 mg/ Kg	REL-1017 25 mg	**<0.001**
Ketamine 0.5 mg/ Kg	REL-1017 75 mg	**<0.001**
Ketamine 0.5 mg/ Kg	REL-1017 150 mg	**<0.001**

All REL-1017 doses are statistically different from ketamine (p<0.05)

REL-1017 vs. Placebo

Treatment 1	Treatment 2	P-value
REL-1017 25 mg	Placebo	**<0.001**
REL-1017 75 mg	Placebo	**<0.001**
REL-1017 150 mg	Placebo	**0.003**

All REL-1017 doses are statistically equivalent to placebo (p<0.05)

SD = Standard Deviation; SE = Standard Error; IV = intravenous
Source: Relmada data on file.

Human Abuse Potential (HAP) Studies of REL-1017 vs. IV Ketamine, Primary endpoint, Drug Liking (Emax) Completer Population*

- All REL-1017 doses including 150 mg (6x therapeutic dose and MTD) were statistically different from IV ketamine 0.5 mg/Kg ($p<0.05$)
- All REL-1017 doses including 150 mg (6x therapeutic dose and MTD) were statistically equivalent to placebo ($p<0.05$)
- Key secondary endpoint results were consistent with primary endpoint

*Statistical analysis was performed on the Completer Population which includes all patients who completed all treatments.

MTD = Maximum tolerated dose; IV = Intravenous.
Source: Relmada data on file.

Exploratory Endpoint – "Drug Liking at This Moment" [Emax] Dextromethorphan, Completer Population

Statistical Analysis

Dextromethorphan vs. REL-1017

Treatment 10	Treatment 2	P-value
Dextromethorphan 300 mg	REL-1017 25 mg	**<0.001**
Dextromethorphan 300 mg	REL-1017 75 mg	**<0.001**
Dextromethorphan 300 mg	REL-1017 150 mg	**<0.002**

Emax for all REL-1017 doses is statistically lower compared to dextromethorphan ($p<0.05$)

Dextromethorphan vs. Ketamine

Treatment 1	Treatment 2	P-value
Dextromethorphan 300 mg	Ketamine 0.5 mg/ Kg	**<0.001**

Emax for dextromethorphan was statistically lower compared to ketamine ($p<0.05$)

Dextromethorphan vs. Placebo

Treatment 1	Treatment 2	P-value
Dextromethorphan 300 mg	Placebo	**0.001**

Emax for dextromethorphan was statistically higher compared to placebo ($p<0.05$)

SD = Standard Deviation; SE = Standard Error; IV = intravenous
Source: Relmada data on file.

Exploratory Endpoint – "Drug Liking at This Moment" [Emax] Dextromethorphan, Completer Population

- Emax for "drug liking at this moment" for dextromethorphan 300 mg was statistically lower compared to ketamine ($p<0.05$)
- Emax for "drug liking at this moment" for dextromethorphan 300 mg was statistically higher compared to placebo ($p<0.05$)
- Emax for" drug liking at this moment" for all REL-1017 doses was statistically lower compared to dextromethorphan 300 mg ($p<0.05$)
- In summary, Emax for "drug liking at this moment" for REL-1017 at all doses was statistically equivalent to placebo and was statistically significantly lower compared to dextromethorphan 300 mg

Source: Relmada data on file.

The results of these two human abuse potential studies support the DEA statement below:

"**The *d*-isomer lacks significant respiratory depressant action and addiction liability...**"

US Drug Enforcement Administration
December 2019[1]

1.US DEA Statement on Methadone, December 2019 https://www.deadiversion.usdoj.gov/drug_chem_info/methadone/methadone.pdf#search=methadone last access February 2022

RELIANCE: The Phase 3 Program for REL-1017

REL-1017 Phase 3 Program for the Treatment of MDD

Reliance I / Reliance II

Two sister two-arm, placebo-controlled pivotal studies as adjunctive treatment for MDD:

- In MDD patients with inadequate response to 1-3 ADT (n= ~364 per study)
- Primary Endpoint: Change in MADRS at Day 28
- Key Secondary Endpoints:
  - Change in CGI-S score at Day 28
  - Change in MADRS score at Day 7

Reliance III

Two-arm, placebo-controlled pivotal study as a monotherapy treatment for MDD:

- In MDD patients with ≤ 1 prior use of ADT for current MDE (n=~364)
- Primary Endpoint: Change from baseline in MADRS at Day 28
- Key Secondary Endpoints:
  - Change in CGI-S score at Day 28
  - Change in MADRS score at Day 7

Reliance OLS

Long-term, open-label safety study:

- Patients continuing from RELIANCE I, II & III
- Patients new to REL-1017

MDD = major depressive disorder; ADT = antidepressant treatment ; OLS = open label study; MADRS = Montgomery-Asberg Depression Rating Scale; CGIs = Clinical Global Impression scales; MDE = major depressive episode

Pivotal Phase 3 Trial Design for Adjunctive Therapy

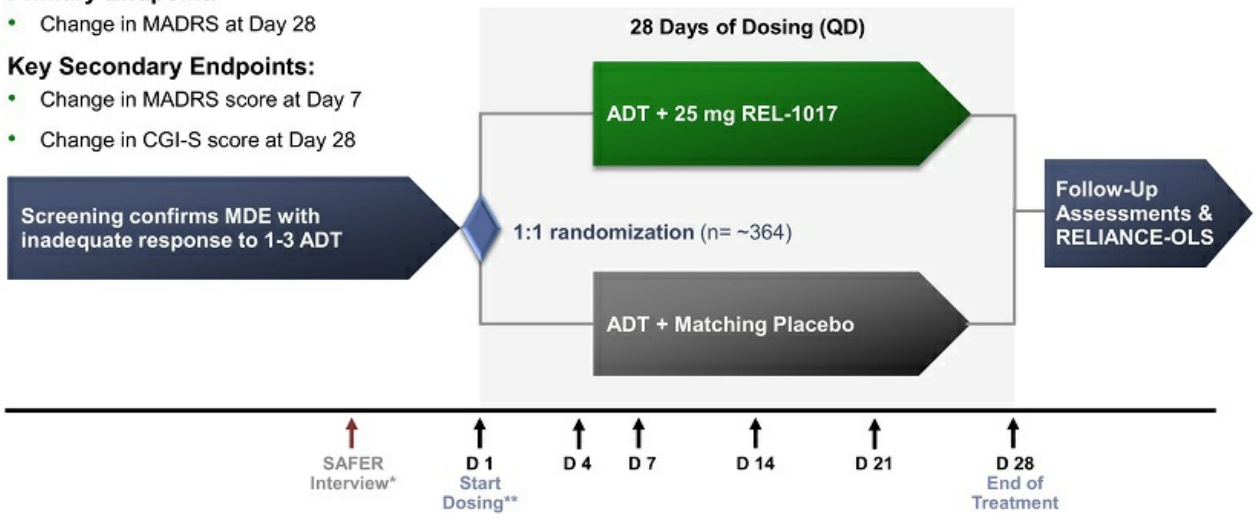
Reliance I
Reliance II

Primary Endpoint:

- Change in MADRS at Day 28

Key Secondary Endpoints:

- Change in MADRS score at Day 7
- Change in CGI-S score at Day 28



MADRS = Montgomery-Asberg Depression Rating Scale; CGIs = Clinical Global Impression scales; MDE = major depressive episode; ADT = antidepressant treatment; QD = once daily; OLS = open label study
*SAFER interview confirms that the illness is a specific state and excludes patients with any symptoms that are nonspecific or not readily assessable. Desseilles M, et al 2013. Massachusetts General Hospital SAFER criteria for clinical trials and research. Harv Rev Psychiatry. Sep-Oct;21(5):269-74.
**75mg loading dose on Day 1 of REL-1017

Pivotal Phase 3 Trial Design for Monotherapy

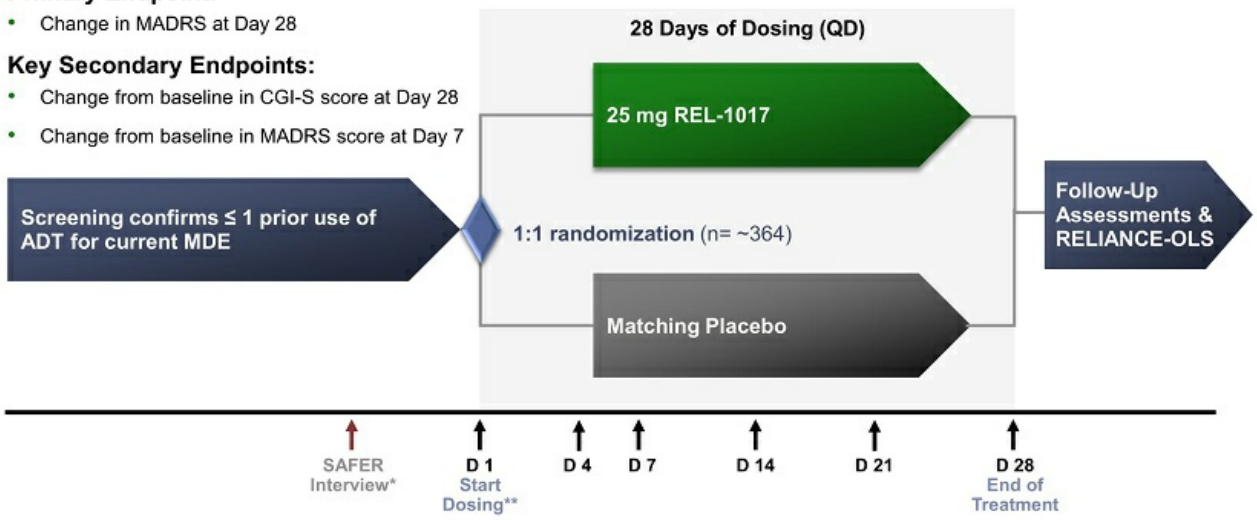
Reliance III

Primary Endpoint:

- Change in MADRS at Day 28

Key Secondary Endpoints:

- Change from baseline in CGI-S score at Day 28
- Change from baseline in MADRS score at Day 7



MADRS = Montgomery-Asberg Depression Rating Scale; CGIs = Clinical Global Impression scales; MDE = major depressive episode; ADT = antidepressant treatment; QD = once daily; OLS = open label study
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**75mg loading dose on Day 1 of REL-1017

Relmada Development Programs & Timeline*

Program	4Q 21	1Q 22	2Q 22	3Q 22	4Q 22
REL-1017	Human Abuse Potential vs. Ketamine				
	RELIANCE-III: MDD Monotherapy				
	RELIANCE I: 1st Pivotal Adjunctive MDD trial				
	RELIANCE II: 2nd Pivotal Adjunctive MDD trial				
	RELIANCE-OLS: Long-Term, Open-Label Study in MDD				

MDD = Major Depressive Disorder; OLS = Open Label Study
*Subject to FDA feedback **Our fiscal year end is December 31. The periods referred to in this slide are calendar years and quarters

Neuroplastogen™ Program

We have a pipeline of molecules with neural plasticity modulating activity for the treatment of CNS disorders

Novel esmethadone derivatives

We have synthesized a series of novel esmethadone derivatives with NMDAR regulating activity. We are in the process of selecting the most promising candidates for advancing their development in the treatment of CNS disorders

Novel psilocybin formulation and novel psilocybin derivatives

We are developing a novel psilocybin formulation and we are synthetizing psilocybin derivatives with promising activity for the treatment of CNS disorders

CNS = Central Nervous System; NMDAR = N-methyl-D-aspartate receptor

Corporate Information

Financial Overview

* Does not include $13.3 million net proceeds from an ATM equity offerings which closed on April 8, 2022
**As converted share count of 42.8 MM share as of 3/31/2022 and does not include 484,900 shares from an ATM equity offering which closed on April 8, 2022

Investment Highlights

Focus on CNS diseases and Lead Program in Major Depressive Disorder (MDD)

- REL-1017, lead candidate, is in Phase 3 for depression, a leading cause of disability worldwide[1]
- CNS focus, with expertise in developing novel therapeutics that show potential for neuroplasticity
- 50%–66% of patients with depression do not fully recover on an antidepressant medication[2]
- Standard anti-depressants can take 2-8 weeks to work and have significant side-effects

Highly Compelling Lead Product Opportunity in REL-1017

- Novel MOA with successful Phase 2 trial in adjunctive MDD that showed statistically significant, robust, rapid, and sustained anti-depressant effects with favorable safety and tolerability profile[3]
- **Phase 3 program underway** following successful end of Phase 2 Meeting with the FDA
- Fast track designation from FDA
- Strong intellectual property position around REL-1017 with expirations through the mid/late-2030s

Key Catalysts Expected Over Next 3-18 Months

- Mid 22 – Completion of RELIANCE III monotherapy MDD trial
- 3Q 22 – Completion of RELIANCE I adjunctive MDD trial
- 4Q 22 – Completion of RELIANCE II adjunctive MDD trial
- 4Q 22 – Completion of RELIANCE – OLS (Long-term, Open-label study in MDD)

CNS= Central Nervous System;; MDD = major depressive disorder; MOA = mechanism of action
**Our fiscal year end is December 31. The periods referred to in this slide are calendar years and quarters.
1. WHO Depression Fact Sheet; 2. Al-Harbi K.S. 2012 *Patient Preference and Adherence; 3.* . Fava et al. Rapid and Sustained Antidepressant Effects of REL-1017 (dextromethadone) as an Adjunctive Treatment for Major Depressive Disorder: A Phase 2 Trial. 2021. Poster presented at: American Psychiatric Association Annual Meeting