

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): **March 15, 2021**

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

**Nevada**

(State or other jurisdiction  
of incorporation)

**001-39082**

(Commission File Number)

**45-5401931**

(IRS Employer  
Identification No.)

**880 Third Avenue, 12<sup>th</sup> Floor**  
**New York, NY**

(Address of principal executive offices)

**10022**

(Zip Code)

Registrant's telephone number, including area code **(212) 547-9591**

(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
<b>Common stock, \$0.001 par value per share</b>	<b>RLMD</b>	<b>The NASDAQ Stock Market LLC</b>

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 7.01 Regulation FD Disclosure.**

On March 15, 2021, Relmada Therapeutics, Inc., released the conclusions of the preclinical abuse studies on REL-1017 (esmethadone) recently completed as part of its ongoing abuse assessment program. The full abstracts will be presented at upcoming scientific conferences. A copy of these conclusions is attached as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated into this Item 7.01 by reference.

The Securities and Exchange Commission encourages registrants to disclose forward-looking information so that investors can better understand the future prospects of a registrant and make informed investment decisions. This Current Report on Form 8-K and exhibits may contain these types of statements, which are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, and which involve risks, uncertainties and reflect the Registrant's judgment as of the date of this Current Report on Form 8-K. Forward-looking statements may relate to, among other things, operating results and are indicated by words or phrases such as "expects," "should," "will," and similar words or phrases. These statements are subject to inherent uncertainties and risks that could cause actual results to differ materially from those anticipated at the date of this Current Report on Form 8-K. Investors are cautioned not to rely unduly on forward-looking statements when evaluating the information presented within.

*The information in this Item 7.01 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 9.01. Financial Statements and Exhibits.**

(d) Exhibits

Exhibit No.	Description
99.1	Conclusions of preclinical abuse studies on REL-1017 (esmethadone)

**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: March 15, 2021

**RELMADA THERAPEUTICS, INC.**

By: /s/ Sergio Traversa

Name: Sergio Traversa

Title: Chief Executive Officer

**Abstract to be presented at the ASPET Annual Meeting at Experimental Biology on April 27 to April 30, 2021****Title: REL-1017 (esmethadone) did not produce initial or cumulative neurotoxic effects or other evidence of damage to cortical neurons**

The objective of this study was to determine if Olney's lesions are induced by REL-1017 administered once daily via oral gavage for 1-4 days to Sprague-Dawley (SD) rats.

Olney's lesion is a characteristic vacuolization which can be seen by light microscopy in H&E stained brain sections in neurons of rats. These lesions are mainly observed in the posterior cingulate and retro-splenial cortices after administration of NMDAR antagonists, including MK-801, ketamine and dextromethorphan at 1 mg/kg, 40 mg/kg and 75 mg/kg, respectively.

The brains of animals treated with REL-1017 up to 110 mg/kg/day did not show the microscopic features of Olney's lesions.

Our data indicated that administration of the uncompetitive NMDAR channel blocker REL-1017 produced neither initial nor cumulative neurotoxic effects or other evidence of damage to cortical neurons.

**Abstracts accepted for the 83<sup>rd</sup> Annual Scientific Virtual Meeting of College on Problems of Drug Dependence (CPDD) on June 21 to June 24 2021****Title: REL-1017 (esmethadone) Showed No Reinforcing Properties Compared to Oxycodone in Rat Self-Administration Study- Relmada Study 022**

The purpose of this study was to evaluate the potential reinforcing effects of REL-1017 compared to oxycodone in an intravenous (IV) rat self-administration study. REL-1017 did not produce reinforcing effects in this study.

**Title: REL-1017 (esmethadone) Demonstrates No Withdrawal Effects or Evidence of Physical Dependence in a Rat Study- Relmada Study 023**

We assessed the potential of REL-1017 to produce physical dependence and signs of withdrawal. The active comparators were morphine and ketamine. REL-1017 produced no evidence of physical dependence or withdrawal syndrome.

Results from studies 022 and 023 are consistent with the conclusion that REL-1017 differs substantially from methadone in its pharmacology and abuse potential.

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