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): November 6, 2025

RHYTHM PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**001-38223**	**46-2159271**
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification Number)

222 Berkeley Street
12th Floor
Boston, MA 02116
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(857) 264-4280**

N/A
(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:

☐ 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(s)	Name of each exchange on which registered
Common Stock, $0.001 par value per share	RYTM	The Nasdaq Stock Market LLC (Nasdaq Global Market)

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 November 7, 2025, Rhythm Pharmaceuticals, Inc. (the "Company") issued a press release and published a presentation in connection with the matters disclosed in Item 8.01 of this Current Report on Form 8-K. A copy of the related press release and presentation is furnished as Exhibit 99.1 and Exhibit 99.2, respectively, to this Current Report on Form 8-K.

The information contained in Item 7.01 of this Current Report on Form 8-K (including Exhibits 99.1 and 99.2 attached hereto) shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act, except as expressly provided by specific reference in such a filing.

Item 8.01. Other Events.

On November 6, 2025, the U.S. Food and Drug Administration notified the Company that the Prescription Drug User Fee Act ("PDUFA") goal date for the supplemental New Drug Application for IMCIVREE® (setmelanotide) for the treatment of acquired hypothalamic obesity has been extended by three months from December 20, 2025 to March 20, 2026.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

The following Exhibits 99.1 and 99.2 shall be deemed to be furnished and not filed.

Exhibit No.	Description
99.1	Press release dated November 7, 2025
99.2	Presentation dated November 7, 2025
104	Cover Page Interactive Data File (embedded within the inline XBRL document)

SIGNATURES

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

RHYTHM PHARMACEUTICALS, INC.

Date: November 7, 2025

By: /s/ Hunter Smith
Hunter Smith
Chief Financial Officer

Rhythm Pharmaceuticals Announces FDA Extension of Review Period for IMCIVREE® (setmelanotide) for Patients with Acquired Hypothalamic Obesity

-- FDA sets updated PDUFA goal date of March 20, 2026 –

-- Company to hold conference today at 8:00 a.m. --

BOSTON, November 7, 2025 – Rhythm Pharmaceuticals, Inc. (Nasdaq: RYTM), a global commercial-stage biopharmaceutical company focused on transforming the lives of patients living with rare neuroendocrine diseases, today announced that the U.S. Food and Drug Administration (FDA) has extended by three months the review period for the supplemental New Drug Application (sNDA) for IMCIVREE® (setmelanotide) for the treatment of acquired hypothalamic obesity. On Nov. 6, the FDA notified the Company that the Prescription Drug User Fee Act (PDUFA) goal date has been extended from December 20, 2025 to March 20, 2026.

The FDA in October requested additional sensitivity analyses of clinical efficacy data from Rhythm's Phase 3 pivotal trial in acquired hypothalamic obesity. No new data were requested. The additional information has been deemed a 'major amendment,' which allows for additional time for the FDA to review. The major amendment did not include any information relating to the safety or manufacturing of setmelanotide.

"Setmelanotide has demonstrated a compelling product profile, and we have every confidence that these additional sensitivity analyses confirm the strength of the data and setmelanotide's potential to benefit patients with hypothalamic obesity," said David Meeker, M.D., Chairman, Chief Executive Officer and President of Rhythm. "We appreciate and continue to collaborate with the FDA review team and we also are continuing to advance our preparations to deliver setmelanotide to a patient community that currently has no treatment options approved for acquired hypothalamic obesity."

Conference Call Information
Rhythm Pharmaceuticals will host a live conference call and webcast at 8:00 a.m. ET today to discuss this update. Participants may register for the conference call here. It is recommended that participants join the call ten minutes prior to the scheduled start.

A webcast of the call will also be available under "Events and Presentations" in the Investor Relations section of the Rhythm Pharmaceuticals website at https://ir.rhythmtx.com/. The archived webcast will be available on Rhythm Pharmaceuticals' website approximately two hours after the conference call and will be available for 30 days following the call.

About Rhythm Pharmaceuticals
Rhythm is a commercial-stage biopharmaceutical company committed to transforming the lives of patients and their families living with rare neuroendocrine diseases. Rhythm's lead asset, IMCIVREE® (setmelanotide), an MC4R agonist designed to treat hyperphagia and severe obesity, is approved by the U.S. Food and Drug Administration (FDA) to reduce excess body weight and maintain weight reduction long term in adult and pediatric patients 2 years of age and older with syndromic or monogenic obesity due to Bardet-Biedl syndrome (BBS) or genetically confirmed pro-opiomelanocortin (POMC), including proprotein convertase subtilisin/kexin type 1 (PCSK1), deficiency or leptin receptor (LEPR) deficiency. Both the European Commission (EC) and the UK's Medicines & Healthcare Products Regulatory Agency (MHRA) have authorized setmelanotide for the treatment of obesity and the control of hunger associated with genetically

confirmed BBS or genetically confirmed loss-of-function biallelic POMC, including PCSK1, deficiency or biallelic LEPR deficiency in adults and children 2 years of age and above. Additionally, Rhythm is advancing a broad clinical development program for setmelanotide in other rare diseases, as well as investigational MC4R agonists bivamelagon and RM-718, and a preclinical suite of small molecules for the treatment of congenital hyperinsulinism. Rhythm's headquarters is in Boston, MA.

Setmelanotide Indication
In the United States, setmelanotide is indicated to reduce excess body weight and maintain weight reduction long term in adult and pediatric patients 2 years of age and older with syndromic or monogenic obesity due to Bardet-Biedl syndrome (BBS), POMC, PCSK1 or LEPR deficiency as determined by an FDA-approved test demonstrating variants in *POMC, PCSK1* or *LEPR* genes that are interpreted as pathogenic, likely pathogenic, or of uncertain significance (VUS).

In the European Union and the United Kingdom, setmelanotide is indicated for the treatment of obesity and the control of hunger associated with genetically confirmed BBS or loss-of-function biallelic POMC, including PCSK1, deficiency or biallelic LEPR deficiency in adults and children 2 years of age and above. In Europe, setmelanotide should be prescribed and supervised by a physician with expertise in obesity with underlying genetic etiology.

Limitations of Use
Setmelanotide is not indicated for the treatment of patients with the following conditions as setmelanotide would not be expected to be effective:

- Obesity due to suspected POMC, PCSK1 or LEPR deficiency with *POMC*, *PCSK1* or *LEPR* variants classified as benign or likely benign.
- Other types of obesity not related to POMC, PCSK1 or LEPR deficiency, or BBS, including obesity associated with other genetic syndromes and general (polygenic) obesity.

Contraindication
Prior serious hypersensitivity to setmelanotide or any of the excipients in IMCIVREE. Serious hypersensitivity reactions (e.g., anaphylaxis) have been reported.

WARNINGS AND PRECAUTIONS

Skin Hyperpigmentation, Darkening of Pre-existing Nevi, and Development of New Melanocytic Nevi: Generalized increased skin pigmentation and darkening of pre-existing nevi have occurred because of its pharmacologic effect. Full body skin examinations prior to initiation and periodically during treatment should be conducted to monitor pre-existing and new pigmentary lesions.

Disturbance in Sexual Arousal: Spontaneous penile erections in males and sexual adverse reactions in females have occurred. Inform patients that these events may occur and instruct patients who have an erection lasting longer than 4 hours to seek emergency medical attention.

Depression and Suicidal Ideation: Depression, suicidal ideation and depressed mood have occurred. Monitor patients for new onset or worsening depression or suicidal thoughts or behaviors. Consider discontinuing IMCIVREE if patients experience suicidal thoughts or behaviors, or clinically significant or persistent depression symptoms occur.

Hypersensitivity Reactions: Serious hypersensitivity reactions (e.g., anaphylaxis) have been reported. If suspected, advise patients to promptly seek medical attention and discontinue setmelanotide.

Pediatric Population: The prescribing physician should periodically assess response to setmelanotide therapy. In growing children, the impact of weight loss on growth and maturation should be evaluated. In Europe, the prescribing physician should monitor growth (height and weight) using age- and sex-appropriate growth curves.

Risk of Serious Adverse Reactions Due to Benzyl Alcohol Preservative in Neonates and Low Birth Weight Infants: Setmelanotide is not approved for use in neonates or infants. Serious and fatal adverse reactions including "gasping syndrome" can occur in neonates and low birth weight infants treated with benzyl alcohol-preserved drugs.

ADVERSE REACTIONS

Most common adverse reactions (incidence ≥20%) included skin hyperpigmentation, injection site reactions, nausea, headache, diarrhea, abdominal pain, vomiting, depression, and spontaneous penile erection.

USE IN SPECIFIC POPULATIONS

Lactation: Not recommended when breastfeeding.
To report SUSPECTED ADVERSE REACTIONS, contact Rhythm Pharmaceuticals at +1 (833) 789-6337 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch. See section 4.8 of the Summary of Product Characteristics for information on reporting suspected adverse reactions in Europe.

Please see the full U.S. Prescribing Information and EU Summary of Product Characteristics for additional Important Safety Information.

Forward-looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this press release that do not relate to matters of historical fact should be considered forward-looking statements, including without limitation statements regarding the potential, safety, efficacy, and regulatory and clinical progress, potential regulatory submissions, approvals of setmelanotide and other product candidates, including in relation to the PDUFA goal date for the sNDA for setmelanotide in acquired hypothalamic obesity, the potential benefits of any of the Company's products or product candidates for any specific disease indication or at any dosage, including the potential benefits of setmelanotide for patients with BBS or POMC, PCSK1, or LEPR deficiency;

expectations surrounding pending and potential regulatory submissions and approvals, including within the United States, the EU and other regions; business strategy and plans, including regarding commercialization of setmelanotide in the United States, the EU and other regions; and the timing of any of the foregoing . Statements using words such as “expect”, “anticipate”, “believe”, “may”, “will” and similar terms are also forward-looking statements. Such statements are subject to numerous risks and uncertainties, including, but not limited to, our ability to enroll patients in clinical trials, the design and outcome of clinical trials, the impact of competition, the ability to achieve or obtain necessary regulatory approvals, risks associated with data analysis and reporting, our ability to successfully commercialize setmelanotide, our liquidity and expenses, our ability to retain our key employees and consultants, and to attract, retain and motivate qualified personnel, and general economic conditions, and the other important factors discussed under the caption “Risk Factors” in Rhythm’s Quarterly Report on Form 10-Q for the three months ended September 30, 2025 and other filings with the Securities and Exchange Commission. Except as required by law, we undertake no obligations to make any revisions to the forward-looking statements contained in this release or to update them to reflect events or circumstances occurring after the date of this release, whether as a result of new information, future developments or otherwise.

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Rhythm Pharmaceuticals

November 7, 2025

On Today's Call

- David Connolly, VP, Investor Relations and Corporate Communications
- David Meeker, MD, Chair, President and Chief Executive Officer
- Alicia Fiscus, SVP, Head of Regulatory
- Hunter Smith, Chief Financial Officer

Forward-looking Statements

This presentation and the accompanying oral presentation contain forward-looking statements within the meaning of the Private Securities Litigat Reform Act of 1995. All statements contained in this presentation that do not relate to matters of historical fact should be considered forward-lool statements, including without limitation statements regarding the safety, efficacy, potential benefits of, and clinical design or progress of any of products or product candidates at any dosage or in any indication, including, setmelanotide, bivamelagon, and RM-718; the potential use setmelanotide in patients with acquired hypothalamic obesity; our expectations surrounding potential regulatory submissions, progress, or approvals timing thereof for any of our product candidates including in relation to the PDUFA goal date for the sNDA for setmelanotide in acquired hypothala obesity; our business strategy and plans, including regarding commercialization of setmelanotide and our other product candidates and the commer growth of IMCIVREE; the estimated market size and addressable population for our drug products; the announcement of data from our clinical tri including our Phase 3 trial evaluating setmelanotide for patients with acquired hypothalamic obesity, the substudy evaluating setmelanotide for patie with congenital hypothalamic obesity, the Phase 3 EMANATE trial evaluating setmelanotide in genetically caused MC4R pathway diseases, our Phase 2 the anticipated Phase 3 trial evaluating the oral MC4R agonist bivamelagon in acquired hypothalamic obesity, Part C of the Phase 1 trial evaluating R 718, and the open-label Phase 2 trial evaluating setmelanotide in patients with Prader-Willi syndrome; the ongoing enrollment in our clinical tri existing or future collaboration agreements; our anticipated financial performance and financial position for any period of time, including estimated N GAAP Operating Expenses for 2025; and the sufficiency of our cash, cash equivalents and short-term investments to fund our operations for at least months; and the timing of any of the foregoing. Statements using words such as “expect”, “anticipate”, “believe”, “may”, “will”, “aim” and similar terms also forward-looking statements. Such statements are subject to numerous risks and uncertainties, including, but not limited to, our ability to en patients in clinical trials, the design and outcome of clinical trials, the ability to achieve necessary regulatory approvals, risks associated with data anal and reporting, failure to identify and develop additional product candidates, unfavorable pricing regulations, third-party reimbursement practices healthcare reform initiatives, risks associated with the laws and regulations governing our international operations and the costs of any rela compliance programs, the impact of competition, risks relating to product liability lawsuits, inability to maintain collaborations, or the failure of th collaborations, our reliance on third parties, risks relating to intellectual property, our ability to hire and retain necessary personnel, general econo conditions, risks related to internal control over financial reporting, and the other important factors discussed under the caption “Risk Factors” in our Fo 10-Q for the quarter ended September 30, 2025 and our other filings with the Securities and Exchange Commission. Except as required by law, undertake no obligations to make any revisions to the forward-looking statements contained in this press release or to update them to reflect event circumstances occurring after the date of this press release, whether as a result of new information, future developments or otherwise.

Timeline of Information Requests and Responses

Oct. 20	• FDA requests additional sensitivity analyses
Oct. 27	• Rhythm submits response
Nov. 6	• FDA notifies Rhythm that October 27th response deemed a major amendment • PDUFA goal date extended from December 20, 2025 to March 20, 2026

Key Secondary Endpoint 1: Proportion of Adult Patients with ≥ 5% Reduction in BMI or Pediatric Patients with ≥0.2 BMI Z-Score Reduction

Statistic	January 1 Birth Date				July 1 Birth Date			
	Primary Analysis N=120		Sensitivity Analysis N=142		Sensitivity Analysis N=120		Sensitivity Analysis N=142	
	Setmelanotide n=81	Placebo n=39	Setmelanotide n=94	Placebo n=48	Setmelanotide n=81	Placebo n=39	Setmelanotide n=94	Placebo n=48
Estimated %	82.73	20.90	75.93	21.88	83.37	20.92	76.69	21.90
95% CI	74.13, 91.33	8.01, 33.78	66.82, 85.05	9.95, 33.80	75.06, 91.68	8.03, 33.82	67.83, 85.56	9.94, 33.86
Risk Difference (SE)	**62.53** (7.393)		**56.08** (6.938)		**63.18** (7.324)		**56.73** (6.883)	
95% CI	48.04, 77.02		42.48, 69.68		48.83, 77.54		43.24, 70.22	
p-value	**<0.0001**		**<0.0001**		**<0.0001**		**<0.0001**	

BMI, body mass index.

Questions