

6,765,463 Shares of Common Stock Warrants to Purchase up to 7,692,307 Shares of Common Stock Pre-Funded Warrants to Purchase up to 926,844 Shares of Common Stock

This prospectus supplement updates and should be read in conjunction with the prospectus dated January 8, 2021, or the Prospectus, relating to the offering of up to 6,765,463 shares of our common stock, warrants to purchase up to 7,692,307 shares of our common stock and pre-funded warrants to purchase 926,844 shares of our common stock, as well as an option to the underwriter in the offering to purchase up to an additional 1,153,846 shares of common stock and/or warrants to purchase up to 1,153,846 shares of our common stock, in any combination thereof. To the extent that there is any conflict between the information contained herein and the information contained in the Prospectus, the information contained herein supersedes and replaces such information.

Current Report

This prospectus supplement incorporates into the Prospectus the information contained in our attached Current Report on Form 8-K that we filed with the Securities and Exchange Commission on August 18, 2021, or the Form 8-K. The Form 8-K, as filed, is set forth below.

The information contained in this Prospectus Supplement No. 15 supplements and supersedes, in relevant part, the information contained in the Prospectus, as amended and supplemented to date. This Prospectus Supplement No. 15 is incorporated by reference into, and should be read in conjunction with, the Prospectus, as amended and supplemented to date, and is not complete without, and may not be delivered or utilized except in connection with, the Prospectus, as amended and supplemented to date.

The Prospectus, together with Prospectus Supplement No. 1, Prospectus Supplement No. 2, Prospectus Supplement No. 3, Prospectus Supplement No. 4, Prospectus Supplement No. 5, Prospectus Supplement No. 6, Prospectus Supplement No. 7, Prospectus Supplement No. 8, Prospectus Supplement No. 10, Prospectus Supplement No. 11, Prospectus Supplement No. 12, Prospectus Supplement No. 13, Prospectus Supplement No. 14 and Prospectus Supplement No. 15, constitutes the prospectus required to be delivered by Section 5(b) of the Securities Act of 1933, as amended, with respect to offers and sales of the securities as set forth in the Prospectus, as amended and supplemented. All references in the Prospectus to "this prospectus" are amended to read "this prospectus (as supplemented and amended to date)."

Our common stock is traded on the NASDAQ Capital Market under the symbol "KMPH." The last reported sale price of our common stock on August 19, 2021 was \$8.90 per share. You are urged to obtain current market quotations for our common stock.

Investing in our securities is highly speculative and involves a significant degree of risk. See "Risk Factors" beginning on page 9 of the Prospectus and the Risk Factors identified in our Annual Report for the year ended December 31, 2020 and in our Quarterly Report for the quarter ended June 30, 2021 for a discussion of information that should be considered before making a decision to purchase our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is August 20, 2021.

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 Exchang	e Act of 1934
	Date of	Report (Date of Earliest Event Reported): Augu	ıst 18, 2021
	(E	KemPharm, Inc.	urter)
Delaware (State or Other Jurisdiction of Incorporation)		001-36913 (Commission File Number)	20-5894398 (IRS Employer Identification No.)
1180 Celebration Boulevard, Suite 103, Celebration, FL (Address of Principal Executive Offices)			34747 (Zip Code)
	Registran	t's Telephone Number, Including Area Code: (3	21) 939-3416
			filing obligation of the registrant under any of the
	Written communications pursuant to Rule 4	25 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))		
Secu	rities registered pursuant to Section 12(b) of the	e Act:	
	Title of each class	Trading Symbol(s)	Name of each exchange on which registered
	Common Stock	КМРН	The Nasdaq Stock Market LLC (Nasdaq Capital Market)
	cate by check mark whether the registrant is a ter) or Rule 12b-2 of the Securities Exchange A		405 of the Securities Act of 1933 (§ 230.405 of this
Eme	rging growth company \square		
		mark if the registrant has elected not to use the ex ursuant to Section 13(a) of the Exchange Act. \Box	tended transition period for complying with any new

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

Appointment of Tamara A. Seymour to Board of Directors

Effective August 18, 2021, the board of directors (the "Board") of KemPharm, Inc. (the "Company") appointed Tamara A. Seymour to serve as a director of the Company and as the chair of the Company's audit committee. Ms. Seymour will serve as a Class I director whose term will expire at the Company's 2022 annual meeting of stockholders.

There is no arrangement or understanding between Ms. Seymour and any other person pursuant to which she was selected as a director of the Company, and there is no family relationship between Ms. Seymour and any of the Company's other directors or executive officers. The Company is not aware of any transaction involving Ms. Seymour requiring disclosure under Item 404(a) of Regulation S-K.

Additional information about Ms. Seymour is set forth below:

Tamara A. Seymour, age 63, has served on the Board of Directors and chair of the audit committee of Artelo Biosciences, Inc. and Kintara Therapuetics, Inc., both publicly traded companies, since March 2021 and April 2021, respectively. Previously, Ms. Seymour served as a member of the board of directors and chair of the audit committee of Beacon Discovery, Inc., a drug discovery company in San Diego, California, from 2018 until its acquisition by Eurofins Scientific in March 2021. Ms. Seymour served as Interim Chief Financial Officer of Immunic, Inc., clinical-stage drug development company in 2019. She was Chief Financial Officer of Signal Genetics, Inc., a publicly traded molecular diagnostics company, from 2014 to 2017. She served as Chief Financial Officer of HemaQuest Pharmaceuticals, Inc., a venture-backed clinical-stage drug development company, from 2010 to 2014. From 2001 to 2009, she served as Chief Financial Officer of Favrille, Inc., a publicly traded clinical-stage drug development company. Ms. Seymour has also served as consulting chief financial officer for a number of biotechnology companies, served Director of Finance and Controller of Agouron Pharmaceuticals, Inc. (now Pfizer, Inc.) and spent eight years in public accounting with Deloitte & Touche LLP and PricewaterhouseCoopers LLP, including three years as audit manager. Ms. Seymour is a Certified Public Accountant (inactive). She received an MBA, emphasis in Finance, from Georgia State University, and a bachelor's degree in Business Administration, emphasis in Accounting, from Valdosta State University. Ms. Seymour also participated in an executive management program at Kellogg Graduate School of Management at Northwestern University.

Pursuant to an offer letter, upon commencement of her service as a director, Ms. Seymour was granted an initial option grant to purchase 22,500 shares of the Company's common stock under its Amended and Restated 2014 Equity Incentive Plan, with the shares vesting in three equal annual installments, subject to her continued service as a director through the applicable vesting date. Additionally, in accordance with the Company's non-employee director compensation policy, Ms. Seymour will be entitled to receive a \$35,000 annual retainer for her service as director and a \$22,500 annual retainer for her service as chairperson of the audit committee. At each annual stockholder meeting following which Ms. Seymour's term as a director continues (beginning with the 2022 annual meeting of stockholders), Ms. Seymour will be entitled to receive an additional stock option to purchase 15,000 shares of the Company's common stock, which option will vest and become exercisable in full on the earliest of (i) the first anniversary of the grant date, (ii) the day before the first annual stockholders meeting occurring after the grant date or (iii) immediately prior to a change in control of the Company, subject in each case to her continued service on such vesting date. Ms. Seymour has also entered into the Company's standard form of indemnification agreement.

The foregoing description of Ms. Seymour's offer letter is not complete and is qualified in its entirety by reference to the full text of the offer letter, which the Company expects to file as an exhibit to its Quarterly Report on Form 10-Q for the quarter ending September 30, 2021.

Item 8.01 Other Events.

On August 18, 2021, the Company issued a press release (the "Press Release") announcing the appointment of Tamara A. Seymour to serve on the Company's board of directors and as chair of the Company's audit committee. The Press Release is filed, here within, as Exhibit 99.1 to this Current Report on Form 8-K.

Item 9.01 Financial Statements and Exhibits.

Exhibits

Exhibit No. Description 99.1

Press Release titled "KemPharm Appoints Tamara A. Seymour to Board of Directors" dated August 18, 2021.

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 thereunto duly authorized.

KemPharm, Inc.

Date: August 18, 2021

By: /s/ R. LaDuane Clifton

R. LaDuane Clifton, CPA

Chief Financial Officer, Secretary and Treasurer



KemPharm Appoints Tamara A. Seymour to Board of Directors

Celebration, FL – **August 18, 2021** – KemPharm, Inc. (NASDAQ: KMPH), a specialty pharmaceutical company focused on the discovery and development of proprietary prodrugs, announced today the appointment of Tamara A. Seymour to serve on its Board of Directors and as Chair of the Audit Committee.

Ms. Seymour brings to KemPharm more than 30 years of life sciences industry experience, including 20 years in the role of chief financial officer. She currently serves as a board member and audit committee chair of Artelo Biosciences, Inc. and Kintara Therapeutics, Inc., both publicly-traded clinical-stage biopharmaceutical companies.

"The addition of Tamara to our Board of Directors and her appointment as Chair of the Audit Committee comes at an important phase in the evolution of KemPharm and continues what has been a transformative period for the company," said Travis C. Mickle, Ph.D., KemPharm's Chairman, President and Chief Executive Officer. "Tamara possesses an unrivaled combination of financial and life sciences industry experience, which will bring new perspective and a depth of business acumen that will benefit our shareholders as we seek to leverage our strong financial position to target organic and external growth opportunities that, we believe, will ultimately build shareholder value. On behalf of the Board, I am pleased to welcome Tamara to KemPharm and look forward to benefitting from her knowledge and expertise."

Ms. Seymour has served as CFO for several companies, including Signal Genetics, Inc. (now Viridian Therapeutics, Inc.), a publicly-traded molecular diagnostics company, HemaQuest Pharmaceuticals, Inc., a venture-backed clinical-stage drug development company and Favrille, Inc. (now MMR Global, Inc.), a publicly-traded clinical-stage drug development company, and Interim CFO for Immunic, Inc., a publicly-traded clinical-stage drug development company. Her extensive experience includes leading multiple private and public financings, M&A transactions, the initial public offering for Favrille, as well as leading finance, investor relations, human resources, administration, and managed care payor reimbursement functions.

Ms. Seymour also served in public accounting for eight years, primarily with Deloitte & Touche LLP and PricewaterhouseCoopers LLP. Ms. Seymour is a Certified Public Accountant (inactive). She earned an MBA, emphasis in Finance, from Georgia State University, and a BBA, emphasis in Accounting, from Valdosta State University.

"It is an honor to join the KemPharm Board at this exciting and transformational juncture for the Company. I look forward to working with the Board and management to build upon the work that has been done to create long-term value for all stakeholders," said Ms. Seymour.

About KemPharm:

KemPharm is a specialty pharmaceutical company focused on the discovery and development of proprietary prodrugs to treat serious medical conditions through its proprietary LAT® (Ligand Activated Therapy) technology. KemPharm utilizes its proprietary LAT® technology to generate improved prodrug versions of FDA-approved drugs as well as to generate prodrug versions of existing compounds that may have applications for new disease indications. KemPharm's prodrug product candidate pipeline is focused on the high need areas of attention deficit hyperactivity disorder, or ADHD, stimulant use disorder (SUD) and CNS rare diseases, including idiopathic hypersomnia (IH). KemPharm's lead clinical development candidate for the treatment of SUD, KP879, is based on its prodrug of d-methylphenidate, known as serdexmethylphenidate (SDX). In addition, KemPharm has received FDA approval for AZSTARYSTM, a new once-daily treatment for ADHD in patents age six years and older, and for APADAZ®, an immediate-release combination product containing benzhydrocodone, a prodrug of hydrocodone, and acetaminophen. For more information on KemPharm and its pipeline of prodrug product candidates visit www.kempharm.com or connect with us on Twitter, LinkedIn, Facebook and YouTube.

Caution Concerning Forward Looking Statements:

This press release may contain forward-looking statements made in reliance upon the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements include all statements that do not relate solely to historical or current facts and can be identified by the use of words such as "may," "will," "expect," "project," "estimate," "anticipate," "plan," "believe," "potential," "should," "continue" or the negative versions of those words or other comparable words. Forward-looking statements are not guarantees of future actions or performance. These forward-looking statements are based on information currently available to KemPharm and its current plans or expectations and are subject to a number of uncertainties and risks that could significantly affect current plans. Risks concerning KemPharm's business are described in detail in KemPharm's Quarterly Report on Form 10-Q for the quarter ended June 30, 2021, and KemPharm's other filings with the Securities and Exchange Commission. KemPharm is under no obligation to, and expressly disclaims any such obligation to, update or alter its forward-looking statements, whether as a result of new information, future events or otherwise.

KemPharm Contacts:

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