

Prospectus Supplement No. 13
(To Prospectus dated March 30, 2023)

Comera Life Sciences Holdings, Inc. 7,218,726 Shares of Common Stock

This prospectus supplement no. 13 (this “Prospectus Supplement”) updates, amends and supplements the prospectus dated March 30, 2023 (as amended or supplemented from time to time, the “Prospectus”) which forms a part of the Registration Statement on Form S-1 (Registration Statement No. 333-269564) filed by Comera Life Sciences Holdings, Inc. (“Holdco”). Capitalized terms used in this Prospectus Supplement and not otherwise defined herein have the meanings specified in the Prospectus.

This Prospectus Supplement is being filed to update, amend and supplement the information included or incorporated by reference in the Prospectus with the information contained in our Current Report on Form 8-K, filed with the Securities and Exchange Commission (the “SEC”) on January 30, 2024 (the “Current Report”). Accordingly, we have attached the Current Report to this Prospectus Supplement.

This Prospectus Supplement is not complete without, and may not be delivered or utilized except in combination with, the Prospectus, including any amendments or supplements thereto. This Prospectus Supplement should be read in conjunction with the Prospectus and any amendments or supplements thereto. If there is any inconsistency between the information in the Prospectus and this Prospectus Supplement, you should rely on the information in this Prospectus Supplement.

The Holdco Common Stock is listed on the OTCQB of OTC Markets Group Inc. (the “OTCQB”) under the symbol “CMRA”, and the Holdco Warrants are listed on the OTC Pink Marketplace under the symbol “CMRAW”. On January 29, 2024, the closing price of the Holdco Common Stock as reported on the OTCQB was \$0.07 per share, and the last sale price of the Holdco Warrants as reported on the OTC Pink Marketplace was \$0.006 per warrant.

Investing in our securities is highly speculative and involves a high degree of risk. Before buying any securities, you should review carefully the risks and uncertainties of investing in our securities described in the section titled “Risk Factors” beginning on page 14 of the Prospectus, and under similar headings in any amendments or supplements thereto.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities to be issued under the Prospectus or passed upon the accuracy or adequacy of the Prospectus. Any representation to the contrary is a criminal offense.

The date of this Prospectus Supplement is January 30, 2024

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): January 26, 2024

Comera Life Sciences Holdings, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

1-41403
(Commission
File Number)

87-4706968
(IRS Employer
Identification No.)

12 Gill Street
Suite 4650
Woburn, Massachusetts
(Address of principal executive offices)

01801
(Zip Code)

Registrant's telephone number, including area code: (617) 871-2101

Not Applicable
(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	CMRA	The Nasdaq Stock Market LLC
Warrants	CMRAW	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 Triggering Events that Accelerate or Increase a Direct Financial Obligation or an Obligation
2.04. under an Off-Balance Sheet Arrangement.**

On January 29, 2024, Comera Life Sciences Holdings, Inc. (the “Company”) delivered a notice (the “Event of Default Notice”) to the holders (the “Holders”) of its outstanding 12.0% Senior Secured Convertible Notes due December 29, 2024 (collectively, the “Notes”), of which \$1.5 million in aggregate original principal amount is outstanding. The Event of Default Notice notified the Holders that the Regeneration Event (as defined in Item 8.01 below) occurred on January 26, 2024 and constituted a Material Adverse Effect (as defined in the Notes) and an Event of Default (as defined in the Notes).

Upon receipt of the Event of Default Notice, Holders representing at least two-thirds of the aggregate principal amount of the then outstanding Notes (the “Required Holders”) may require the Company to redeem all or any portion of the Notes by delivering written notice thereof (the “Event of Default Redemption Notice”) to the Company, which Event of Default Redemption Notice shall indicate the portion of the Notes the Required Holders are electing to require the Company to redeem. Each portion of the Notes subject to redemption by the Company shall be redeemed by the Company in cash by wire transfer of immediately available funds at a price equal to the amount being redeemed (the “Event of Default Redemption Price”). Until the Event of Default Redemption Price is paid in full, the Holders may elect to convert all or a portion of such amount into shares of the Company’s common stock, par value \$0.0001 per share (the “Common Stock”), pursuant to Section 3 of the Notes at a conversion price of \$0.055 per share of Common Stock (subject to adjustment as provided in the Notes). Any such converted amount shall reduce the Event of Default Redemption Price payment by an equivalent amount.

In addition, pursuant to the terms of the Notes, once an Event of Default has occurred and is continuing, the Required Holders may do any or all of the following: (a) enter (or cause their representatives to enter) the Company’s property where the Collateral (as defined in the Notes) is located and take possession of the Collateral without demand or legal process; (b) require the Company to assemble and make available the Collateral at a specific time and place designated by the Required Holders; (c) sell, lease, or otherwise dispose of the Collateral at any public or private sale in accordance with the law; and (d) enforce payment of the Secured Obligations (as defined in the Notes) and exercise any rights and remedies available to the Required Holders under law, including, but not limited to, those rights and remedies available to the Required Holders under Article 9 of the Uniform Commercial Code as in effect in any relevant jurisdiction.

**Item Costs Associated with Exit or Disposal Activities.
2.05.**

On January 29, 2024, the Company’s board of directors approved the termination of all of the Company’s employees, including all of its executive officers, effective as of January 31, 2024. As of the filing of this Current Report on Form 8-K, the Company cannot estimate the charges it will incur under generally accepted accounting principles as a result of the termination of its employees. The Company will file a Current Report on Form 8-K within four business days after it determines the amount of the estimated charges.

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

On January 29, 2024, William Wexler resigned from the Company’s board of directors effective immediately. As of the time of his resignation, Mr. Wexler did not serve on any committees of the board of directors and his resignation was not due to any disagreement with the Company on any matter relating to its operations, policies or practices.

On January 29, 2024, the Company terminated the employment of Jeff Hackman, President, Chief Executive Officer and Director, Michael Campbell, Executive Vice President and Chief Financial Officer, and Robert Mahoney, Chief Scientific Officer effective January 31, 2024. In accordance with the terms of his employment letter agreement, Mr. Hackman resigned as a director of the Company and its subsidiaries and from all other positions with the Company and its affiliates effective upon the termination of his employment on January 31, 2024. Mr.

Hackman did not serve on any committees of the board of directors and his resignation was not due to any disagreement with the Company on any matter relating to its operations, policies or practices.

On January 30, 2024, the Company engaged Mr. Campbell as a consultant and appointed him to serve as the Company's Chief Executive Officer and Chief Financial Officer effective immediately following the termination of his employment on January 31, 2024. Accordingly, Mr. Campbell will serve as the Company's principal executive officer, principal financial officer and principal accounting officer effective immediately following the termination of his employment on January 31, 2024. Mr. Campbell's biographical information is incorporated by reference to the Company's definitive proxy statement filed with the SEC on August 11, 2023. Pursuant to the terms of his consulting arrangement, Mr. Campbell will be paid at a rate of \$2,400 per day and his consulting engagement can be terminated by the Company at any time and for any reason.

Item Other Events.

8.01.

On January 26, 2024, Regeneron Pharmaceuticals, Inc. ("Regeneron") notified the Company that it would not negotiate a license with the Company following completion of a technical evaluation as part of the Company's ongoing research collaboration with Regeneron (the "Regeneron Event").

As previously disclosed, on January 2, 2024, the purchasers (the "Purchasers") of the Notes and accompanying warrants sold and issued to the Purchasers in connection with the Company's December 2023 private placement exercised a contractual right to purchase all outstanding shares of Common Stock not then held by the Purchasers (the "Share Purchase Option"). On January 29, 2024, Mr. Charles Cherington, on behalf of the Purchasers, notified the Company that the Purchasers were withdrawing their prior exercise of the Share Purchase Option and would not proceed with an acquisition of the outstanding shares of Common Stock not held by the Purchasers.

SIGNATURE

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: January 30, 2024

COMERA LIFE SCIENCES HOLDINGS, INC.

By: /s/ Michael Campbell

Name: Michael Campbell

Title: Executive Vice President and Chief Financial Officer
