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): July 31, 2018

GEMPHIRE THERAPEUTICS INC.

(Exact name of registrant as specified in its charter)

Delaware	001-37809	47-2389984
(State or other jurisdiction of incorporation)	(Commission File No.)	(IRS Employer Identification No.)

17199 N. Laurel Park Drive, Suite 401
Livonia, Michigan 48152
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (734) 245-1700

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))

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 1.01 Entry into a Material Definitive Agreement.

On July 31, 2018 (the "First Amendment Effective Date"), Gemphire Therapeutics Inc. (the "Company") and Silicon Valley Bank ("SVB") entered into a First Amendment (the "Loan Amendment") to the Loan and Security Agreement (the "Original Loan Agreement") with Silicon Valley Bank ("SVB") dated July 24, 2017 (the "Initial Effective Date").

The Original Loan Agreement established a term loan facility in the aggregate principal amount of up to $15,000,000 (the "Term Loan") to be funded in up to three tranches. Of such amount, $10,000,000 was funded on the Initial Effective Date. A third tranche of $5,000,000 ("Tranche C") was available to be drawn by the Company through July 31, 2018 conditioned on the occurrence of both a Positive Clinical Trial Event and a Pre-Clinical Event. Under the Original Loan Agreement, if a Pre-Clinical Event did not occur on or prior to July 31, 2018, on such date, the Company would have been required to either (i) provide cash security and maintain a cash balance in a restricted account at SVB in an amount of at least 100% of the amounts owed by the Company to SVB or (ii) prepay the Term Loan, including certain fees, in its entirety. The Original Loan Agreement had an interest-only monthly payment period through August 1, 2018, subject to extension to February 1, 2019 upon the occurrence of both a Positive Clinical Trial Event and a Pre-Clinical Event. Under the Original Loan Agreement, (i) a "Positive Clinical Trial Event" is defined as the Company's board of directors determining that the results from either the Company's ROYAL-1 clinical trial (GEM-301) or the Company's INDIGO-1 clinical trial (GEM-401) are sufficient to support the development plan for submission of a new drug application with the Food and Drug Administration ("FDA") and continued development of gemcabene and the public announcement of the foregoing and (ii) a "Pre-Clinical Event" is defined as the lifting by the FDA of the partial clinical hold with respect to clinical trials of longer than six months in duration for gemcabene.

As amended by the Loan Amendment, Tranche C is now available through November 30, 2018 conditioned upon, in addition to the occurrence of a Positive Clinical Trial Event (evidence of which was provided to SVB on November 10, 2017) and a Pre-Clinical Event, the occurrence of a Positive Phase 2 NASH Event. "Positive Phase 2 NASH Event" means public disclosure by the Company of evidence satisfactory to SVB, in its sole but reasonable discretion, that the Company has received positive Phase 2 interim data on either its adult familial partial lipodystrophy proof-of-concept clinical trial or its pediatric NAFLD proof-of-concept clinical trial.

Additionally, the provision requiring cash security or prepayment if a Pre-Clinical Event did not occur on or prior to July 31, 2018 was amended to provide that such cash security or prepayment, as described above, is required if a Pre-Clinical Event does not occur on or prior to September 30, 2019 or, if at any time prior to a Pre-Clinical Event, the Company's unrestricted cash balance at SVB is less than $18,000,000.

In the Loan Amendment, (i) the interest-only monthly payment period now ends November 1, 2018 subject to extension to February 1, 2019 upon the occurrence of both a Positive Clinical Trial Event and a Pre-Clinical Event and (ii) the definition of "Prepayment Fee" was revised so that the Prepayment Fee shall equal 2% (if such prepayment occurs prior to the first anniversary of the First Amendment Effective Date, rather than the first anniversary of the Initial Effective Date) or 1% (if such prepayment occurs thereafter) of the funded principal amount of the Term Loan.

In connection with the Loan Amendment, on the First Amendment Effective Date, the Company issued a warrant to SVB (the "Warrant") to purchase 36,000 shares of the Company's common stock at an exercise price of $7.47 per share. The Warrant is immediately exercisable and has a term of ten years. The exercise price and number and type of shares underlying the Warrant are subject to adjustment upon specified events, including any stock dividends and splits, reverse stock split, recapitalization, reorganization or similar transaction, as described therein. The Warrant contains a "cashless exercise" feature that allows SVB to exercise the Warrant without a cash payment to the Company, on a net issuance basis, based upon the fair market value of the Company's common stock at the time of exercise, upon the terms set forth therein.

A description of the Original Loan Agreement was included in the Company's Current Report on Form 8-K filed on July 25, 2017 (the "Initial 8-K") and is incorporated by reference, and updated by the description of the Loan Amendment, herein. Such description and the descriptions of the Loan Amendment and the Warrant contained in this Current Report on Form 8-K do not purport to be complete and are subject to, and qualified in their entirety by, the

full texts of the documents. A copy of the Original Loan Agreement was filed as Exhibit 10.1 to the Initial 8-K and copies of the Loan Amendment and Warrant are filed as Exhibits 10.1 and 4.1, respectively, to this Current Report on Form 8-K and are incorporated by reference herein.

Item 3.02. Unregistered Sales of Equity Securities.

To the extent required, the information set forth in Item 1.01 of this Current Report on Form 8-K is incorporated by reference into this Item 3.02. The Warrant was issued in a private transaction exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"), pursuant to Section 4(a)(2) thereof and Rule 506 of Regulation D thereunder, and in reliance on similar exemptions under applicable state laws. SVB represented that it is an accredited investor within the meaning of Regulation D, and is acquiring the Warrant, and any shares of common stock issuable thereunder, for investment only and not with a view towards, or for resale in connection with, the public sale or distribution thereof. The Warrant, and the shares of common stock issuable thereunder, have not been registered under the Securities Act, or state securities laws, and may not be offered or sold in the United States without being registered with the Securities and Exchange Commission or through an applicable exemption from registration requirements.

Item 8.01. Other Events.

On August 6, 2018, the Company issued a press release announcing the Loan Amendment and providing a corporate update. A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

Exhibit	Description
4.1	Warrant to Purchase Stock, dated July 31, 2018, by and between Gemphire Therapeutics Inc. and Silicon Valley Bank.
10.1	First Amendment to Loan and Security Agreement, dated as of July 31, 2018, by and between Gemphire Therapeutics Inc. and Silicon Valley Bank.
99.1	Press Release dated August 6, 2018.

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.

GEMPHIRE THERAPEUTICS INC.

Dated: August 6, 2018

By: /s/ Jeffrey S. Mathiesen
Jeffrey S. Mathiesen
Chief Financial Officer

Exhibit 4.1

THIS WARRANT AND THE SHARES ISSUABLE HEREUNDER HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN SECTIONS 5.3 AND 5.4 BELOW, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

WARRANT TO PURCHASE STOCK

Company: Gemphire Therapeutics Inc., a Delaware corporation
Number of Shares: 36,000, subject to adjustment
Type/Series of Stock: Common Stock, $0.001 par value per share
Warrant Price: $7.47 per Share, subject to adjustment
Issue Date: July 31, 2018
Expiration Date: July 31, 2028 **See also Section 5.1(b).**
Credit Facility: This Warrant to Purchase Stock ("**Warrant**") is issued in connection with that certain First Amendment, of even date herewith, to that certain Loan and Security Agreement dated July 24, 2017, between Silicon Valley Bank and the Company (collectively, and as may be further amended and/or modified and in effect from time to time, the "**Loan Agreement**").

THIS WARRANT CERTIFIES THAT, for good and valuable consideration, SILICON VALLEY BANK (together with any successor or permitted assignee or transferee of this Warrant or of any shares issued upon exercise hereof, "**Holder**") is entitled to purchase up to the number of fully paid and non-assessable shares (the "**Shares**") of the above-stated Type/Series of Stock (the "**Class**") of the above-named company (the "**Company**") at the above-stated Warrant Price, all as set forth above and as adjusted pursuant to Section 2 of this Warrant, subject to the provisions and upon the terms and conditions set forth in this Warrant. Reference is made to Section 5.4 of this Warrant whereby Silicon Valley Bank shall transfer this Warrant to its parent company, SVB Financial Group.

SECTION 1. EXERCISE.

1.1 Method of Exercise. Holder may at any time and from time to time on or before 6:00 PM, Pacific time, on the Expiration Date, exercise this Warrant, in whole or in part, by delivering to the Company the original of this Warrant together with a duly executed Notice of Exercise in substantially the form attached hereto as Appendix 1 and, unless Holder is exercising this Warrant pursuant to a cashless exercise set forth in Section 1.2, a check, wire transfer of same-day funds (to an account designated by the Company), or other form of payment acceptable to the Company for the aggregate Warrant Price for the Shares being purchased.

1.2 Cashless Exercise. On any exercise of this Warrant, in lieu of payment of the aggregate Warrant Price in the manner as specified in Section 1.1 above, but otherwise in accordance with the requirements of Section 1.1, Holder may elect to receive Shares equal to the value of this Warrant, or portion hereof as to which this Warrant is being exercised. Thereupon, the Company shall issue to the Holder such number of fully paid and non-assessable Shares as are computed using the following formula:

$$X = Y(A-B)/A$$

where:

X = the number of Shares to be issued to the Holder;

Y = the number of Shares with respect to which this Warrant is being exercised (inclusive of the Shares surrendered to the Company in payment of the aggregate Warrant Price);

A = the Fair Market Value (as determined pursuant to Section 1.3 below) of one Share; and

B = the Warrant Price.

1.3 Fair Market Value. If shares of the Class are then traded or quoted on a nationally recognized securities exchange, inter-dealer quotation system or over-the-counter market (a "**Trading Market**"), the fair market value of a Share shall be the closing price or last sale price of a share of the Class reported for the Business Day immediately before the date on which Holder delivers this Warrant together with its Notice of Exercise to the Company. If shares of the Class are not then traded in a Trading Market, the Board of Directors of the Company shall determine the fair market value of a Share in its reasonable good faith judgment.

1.4 Delivery of Certificate and New Warrant. Within a reasonable time after Holder exercises this Warrant in the manner set forth in Section 1.1 or 1.2 above, the Company shall deliver to Holder a certificate representing the Shares issued to Holder upon such exercise (which certificate may be in the form of an electronic certificate or DTC entry, to the extent used by the Company at the time of such exercise) and, if this Warrant has not been fully exercised and has not expired, a new warrant of like tenor representing the Shares not so acquired.

1.5 Replacement of Warrant. On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of loss, theft or destruction, on delivery of an indemnity agreement reasonably satisfactory in form, substance and amount to the Company or, in the case of mutilation, on surrender of this Warrant to the Company for cancellation, the Company shall, within a reasonable time, execute and deliver to Holder, in lieu of this Warrant, a new warrant of like tenor and amount.

1.6 Treatment of Warrant Upon Acquisition of Company.

(a) Acquisition. For the purpose of this Warrant, "**Acquisition**" means any transaction or series of related transactions involving: (i) the sale, lease, exclusive license, or other disposition of all or substantially all of the assets of the Company; (ii) any merger or consolidation of the Company into or with another person or entity (other than a merger or consolidation effected exclusively to change the Company's domicile), or any other corporate reorganization, in which the stockholders of the Company in their capacity as such immediately prior to such merger, consolidation or reorganization, own less than a majority of the Company's (or the surviving or successor entity's) outstanding voting power immediately after such merger, consolidation or reorganization (or, if such Company stockholders beneficially own a majority of the outstanding voting power of the surviving or successor entity as of immediately after such merger, consolidation or reorganization, such surviving or successor entity is not the Company); or (iii) any sale or other transfer by the stockholders of the

Company of shares representing at least a majority of the Company's then-total outstanding combined voting power. For the avoidance of doubt, "Acquisition" shall not include any sale and issuance by the Company of shares of its capital stock or of securities or instruments exercisable for or convertible into, or otherwise representing the right to acquire, shares of its capital stock to one or more investors for cash in a transaction or series of related transactions the primary purpose of which is a bona fide equity financing of the Company.

(b) Treatment of Warrant at Acquisition. In the event of an Acquisition in which the consideration to be received by the Company's stockholders consists solely of cash, solely of Marketable Securities or a combination of cash and Marketable Securities (a "**Cash/Public Acquisition**"), and the fair market value of one Share as determined in accordance with Section 1.3 above would be greater than the Warrant Price in effect on such date immediately prior to such Cash/Public Acquisition, and Holder has not previously exercised this Warrant as to all Shares, then this Warrant shall automatically be deemed to be Cashless Exercised pursuant to Section 1.2 above as to all Shares for which it shall not have been previously exercised effective immediately prior to and contingent upon the consummation of a Cash/Public Acquisition. In connection with such Cashless Exercise, Holder shall be deemed to have restated each of the representations and warranties in Section 4 of the Warrant as of the date thereof and the Company shall promptly notify the Holder of the number of Shares (or such other securities) issued upon exercise. In the event of a Cash/Public Acquisition where the fair market value of one Share as determined in accordance with Section 1.3 above would be less than the Warrant Price in effect immediately prior to such Cash/Public Acquisition, then this Warrant will expire immediately prior to the consummation of such Cash/Public Acquisition.

(c) Upon the closing of any Acquisition other than a Cash/Public Acquisition, the acquiring, surviving or successor entity shall assume the obligations of the Company under this Warrant, and this Warrant shall thereafter be exercisable for the same securities and/or other property as would have been paid for the Shares issuable upon exercise of the unexercised portion of this Warrant as if such Shares were outstanding on and as of the closing of such Acquisition, subject to further adjustment from time to time in accordance with the provisions of this Warrant.

(d) As used in this Warrant, "**Marketable Securities**" means securities meeting all of the following requirements: (i) the issuer thereof is then subject to the reporting requirements of Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), and is then current in its filing of all required reports and other information under the Act and the Exchange Act; (ii) the class and series of shares or other security of the issuer that would be received by Holder in connection with the Acquisition were Holder to exercise this Warrant on or prior to the closing thereof is then traded in a Trading Market, and (iii) following the closing of such Acquisition, Holder would not be restricted from publicly re-selling all of the issuer's shares and/or other securities that would be received by Holder in such Acquisition were Holder to exercise this Warrant in full on or prior to the closing of such Acquisition, except to the extent that any such restriction (x) arises solely under federal or state securities laws, rules or regulations, and (y) does not extend beyond six (6) months from the closing of such Acquisition.

SECTION 2. ADJUSTMENTS TO THE SHARES AND WARRANT PRICE.

2.1 Stock Dividends, Splits, Etc. If the Company declares or pays a dividend or distribution on the outstanding shares of the Class payable in additional shares of the Class or other securities or property (other than cash), then upon exercise of this Warrant, for each Share acquired, Holder shall receive, without additional cost to Holder, the total number and kind of securities and/or

property which Holder would have received had Holder owned the Shares of record as of the date the dividend or distribution occurred. If the Company subdivides the outstanding shares of the Class by reclassification or otherwise into a greater number of shares, the number of Shares purchasable hereunder shall be proportionately increased and the Warrant Price shall be proportionately decreased. If the outstanding shares of the Class are combined or consolidated, by reclassification or otherwise, into a lesser number of shares, the Warrant Price shall be proportionately increased and the number of Shares shall be proportionately decreased.

2.2 Reclassification, Exchange, Combinations or Substitution. Upon any event whereby all of the outstanding shares of the Class are reclassified, exchanged, combined, substituted, or replaced for, into, with or by Company securities of a different class and/or series, then from and after the consummation of such event, this Warrant will be exercisable for the number, class and series of Company securities that Holder would have received had the Shares been outstanding on and as of the consummation of such event, and subject to further adjustment thereafter from time to time in accordance with the provisions of this Warrant. The provisions of this Section 2.2 shall similarly apply to successive reclassifications, exchanges, combinations, substitutions, replacements or other similar events.

2.3 No Fractional Share. No fractional Share shall be issuable upon exercise of this Warrant and the number of Shares to be issued shall be rounded down to the nearest whole Share. If a fractional Share interest arises upon any exercise of the Warrant, the Company shall eliminate such fractional Share interest by paying Holder in cash the amount computed by multiplying the fractional interest by (i) the fair market value (as determined in accordance with Section 1.3 above) of a full Share, less (ii) the then-effective Warrant Price.

2.4 Notice/Certificate as to Adjustments. Upon each adjustment of the Warrant Price, Class and/or number of Shares, the Company, at the Company's expense, shall notify Holder in writing within a reasonable time setting forth the adjustments to the Warrant Price, Class and/or number of Shares and facts upon which such adjustment is based. The Company shall, upon written request from Holder, furnish Holder with a certificate of its Chief Financial Officer, including computations of such adjustment and the Warrant Price, Class and number of Shares in effect upon the date of such adjustment.

SECTION 3. REPRESENTATIONS AND COVENANTS OF THE COMPANY.

3.1 Representations and Warranties. The Company represents and warrants to, and agrees with, the Holder as follows:

(a) All Shares which may be issued upon the exercise of this Warrant shall, upon issuance, be duly authorized, validly issued, fully paid and non-assessable, and free of any liens and encumbrances except for restrictions on transfer provided for herein or under applicable federal and state securities laws.

(b) The Company covenants that it shall at all times cause to be reserved and kept available out of its authorized and unissued capital stock such number of shares of the Class and other securities as will be sufficient to permit the exercise in full of this Warrant.

3.2 Notice of Certain Events. If the Company proposes at any time to:

(a) declare any dividend or distribution upon the outstanding shares of the Class, whether in cash, property, stock, or other securities and whether or not a regular cash dividend;

(b) offer for subscription or sale pro rata to the holders of the outstanding shares of the Class any additional shares of any class or series of the Company's stock (other than pursuant to contractual pre-emptive rights);

(c) effect any reclassification, exchange, combination, substitution, reorganization or recapitalization of the outstanding shares of the Class; or

(d) effect an Acquisition or to liquidate, dissolve or wind up;

then, in connection with each such event, the Company shall give Holder notice thereof at the same time and in the same manner as given to holders of the outstanding shares of the Class.

SECTION 4. REPRESENTATIONS, WARRANTIES OF THE HOLDER.

The Holder represents and warrants to the Company as follows:

4.1 Purchase for Own Account. Except for the one-time transfer by Silicon Valley Bank to its parent corporation SVB Financial Group described in Section 5.4 below, this Warrant and the Shares to be acquired upon exercise of this Warrant by Holder are being acquired for investment for Holder's account, not as a nominee or agent, and not with a view to the public resale or distribution within the meaning of the Act. Holder also represents that it has not been formed for the specific purpose of acquiring this Warrant or the Shares.

4.2 Disclosure of Information. Holder is aware of the Company's business affairs and financial condition and has received or has had full access to all the information it considers necessary or appropriate to make an informed investment decision with respect to the acquisition of this Warrant and its underlying securities. Holder further has had an opportunity to ask questions and receive answers from the Company regarding the terms and conditions of the offering of this Warrant and its underlying securities and to obtain additional information (to the extent the Company possessed such information or could acquire it without unreasonable effort or expense) necessary to verify any information furnished to Holder or to which Holder has access.

4.3 Investment Experience. Holder understands that the purchase of this Warrant and its underlying securities involves substantial risk. Holder has experience as an investor in securities of companies in the development stage and acknowledges that Holder can bear the economic risk of such Holder's investment in this Warrant and its underlying securities and has such knowledge and experience in financial or business matters that Holder is capable of evaluating the merits and risks of its investment in this Warrant and its underlying securities and/or has a preexisting personal or business relationship with the Company and certain of its officers, directors or controlling persons of a nature and duration that enables Holder to be aware of the character, business acumen and financial circumstances of such persons.

4.4 Accredited Investor Status. Holder is an "accredited investor" within the meaning of Regulation D promulgated under the Act.

4.5 The Act. Holder understands that this Warrant and the Shares issuable upon exercise hereof have not been registered under the Act in reliance upon a specific exemption therefrom,

which exemption depends upon, among other things, the bona fide nature of the Holder's investment intent as expressed herein. Holder understands that this Warrant and the Shares issued upon any exercise hereof must be held indefinitely unless subsequently registered under the Act and qualified under applicable state securities laws, or unless exemption from such registration and qualification are otherwise available. Holder is aware of the provisions of Rule 144 promulgated under the Act.

4.6 No Stockholder Rights. Without limiting any provision of this Warrant, Holder agrees that as a Holder of this Warrant it will not have any rights (including, but not limited to, voting rights) as a stockholder of the Company with respect to the Shares issuable hereunder unless and until the exercise of this Warrant and then only with respect to the Shares issued on such exercise.

SECTION 5. MISCELLANEOUS.

5.1 Term; Automatic Cashless Exercise Upon Expiration.

(a) Term. Subject to the provisions of Section 1.6 above, this Warrant is exercisable in whole or in part at any time and from time to time on or before 6:00 PM, Pacific time, on the Expiration Date and shall be void thereafter.

(b) Automatic Cashless Exercise upon Expiration. In the event that, upon the Expiration Date, the fair market value of one Share as determined in accordance with Section 1.3 above is greater than the Warrant Price in effect on such date, then this Warrant shall automatically be deemed on and as of such date to be exercised pursuant to Section 1.2 above as to all Shares for which it shall not previously have been exercised, and the Company shall, within a reasonable time, deliver a certificate representing the Shares issued upon such exercise to Holder (which certificate may be in the form of an electronic certificate or DTC entry, to the extent used by the Company at the time of such exercise).

5.2 Legends. Each certificate evidencing Shares shall be imprinted with a legend in substantially the following form:

> THE SHARES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "**ACT**"), OR THE SECURITIES LAWS OF ANY STATE AND, EXCEPT AS SET FORTH IN THAT CERTAIN WARRANT TO PURCHASE STOCK ISSUED BY THE ISSUER TO SILICON VALLEY BANK DATED JULY 31, 2018, MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED UNLESS AND UNTIL REGISTERED UNDER SAID ACT AND LAWS OR, IN THE OPINION OF LEGAL COUNSEL IN FORM AND SUBSTANCE SATISFACTORY TO THE ISSUER, SUCH OFFER, SALE, PLEDGE OR OTHER TRANSFER IS EXEMPT FROM SUCH REGISTRATION.

5.3 Compliance with Securities Laws on Transfer. This Warrant and the Shares issued upon exercise of this Warrant may not be transferred or assigned in whole or in part except in compliance with applicable federal and state securities laws by the transferor and the transferee (including, without limitation, the delivery of investment representation letters and legal opinions reasonably satisfactory to the Company, as reasonably requested by the Company). The Company shall not, and shall cause its transfer agent not to, require Holder to provide an opinion of counsel if the

transfer is to SVB Financial Group (Silicon Valley Bank's parent company) or any other affiliate of Holder, provided that any such transferee is an "accredited investor" as defined in Regulation D promulgated under the Act.

5.4 Transfer Procedure. After receipt by Silicon Valley Bank of the executed Warrant, Silicon Valley Bank will transfer all of this Warrant to its parent company, SVB Financial Group. By its acceptance of this Warrant, SVB Financial Group hereby makes to the Company each of the representations and warranties set forth in Section 4 hereof and agrees to be bound by all of the terms and conditions of this Warrant as if the original Holder hereof. Subject to the provisions of Section 5.3 and upon providing the Company with written notice, SVB Financial Group and any subsequent Holder may transfer all or part of this Warrant to any transferee, provided, however, in connection with any such transfer, SVB Financial Group or any subsequent Holder will give the Company notice of the portion of the Warrant being transferred with the name, address and taxpayer identification number of the transferee and Holder will surrender this Warrant to the Company for reissuance to the transferee(s) (and Holder if applicable); and provided further, that any subsequent transferee of this Warrant or of any portion hereof other than SVB Financial Group shall agree in writing with the Company to be bound by all of the terms and conditions of this Warrant.

5.5 Notices. All notices and other communications hereunder from the Company to the Holder, or vice versa, shall be deemed delivered and effective (i) when given personally, (ii) on the third (3rd) Business Day after being mailed by first-class registered or certified mail, postage prepaid, (iii) upon actual receipt if given by facsimile or electronic mail and such receipt is confirmed in writing by the recipient, or (iv) on the first Business Day following delivery to a reliable overnight courier service, courier fee prepaid, in any case at such address as may have been furnished to the Company or Holder, as the case may be, in writing by the Company or such Holder from time to time in accordance with the provisions of this Section 5.5. All notices to Holder shall be addressed as follows until the Company receives notice of a change of address in connection with a transfer or otherwise:

SVB Financial Group
Attn: Treasury Department
3003 Tasman Drive, HC 215
Santa Clara, CA 95054
Telephone: (408) 654-7400
Facsimile: (408) 988-8317
Email address: svbfgwarrants@svb.com

Notice to the Company shall be addressed as follows until Holder receives notice of a change in address:

Gemphire Therapeutics Inc.
Attn: Chief Financial Officer
17199 North Laurel Park Drive, Suite 401
Livonia, MI 48152
Telephone: (734) 245-1700
Email: jmathiesen@gemphire.com

With a copy (which shall not constitute notice) to:

Honigman Miller Schwartz and Cohn LLP
650 Trade Centre Way, Suite 200
Kalamazoo, Michigan 49002-0402
Attn: Phillip D. Torrence, Esq.
Fax: (269) 337-7703
Email: ptorrence@honigman.com

5.6 Waiver. This Warrant and any term hereof may be changed, waived, discharged or terminated (either generally or in a particular instance and either retroactively or prospectively) only by an instrument in writing signed by the party against which enforcement of such change, waiver, discharge or termination is sought.

5.7 Attorneys' Fees. In the event of any dispute between the parties concerning the terms and provisions of this Warrant, the party prevailing in such dispute shall be entitled to collect from the other party all reasonable out-of-pocket costs incurred in such dispute, including reasonable attorneys' fees.

5.8 Counterparts; Facsimile/Electronic Signatures. This Warrant may be executed in counterparts, all of which together shall constitute one and the same agreement. Any signature page delivered electronically or by facsimile shall be binding to the same extent as an original signature page with regards to any agreement subject to the terms hereof or any amendment thereto.

5.9 Governing Law. This Warrant shall be governed by and construed in accordance with the laws of the State of Delaware, without giving effect to its principles regarding conflicts of law.

5.10 Headings. The headings in this Warrant are for purposes of reference only and shall not limit or otherwise affect the meaning of any provision of this Warrant.

5.11 Business Days. "**Business Day**" is any day that is not a Saturday, Sunday or a day on which Silicon Valley Bank is closed.

[Remainder of page left blank intentionally]
[Signature page follows]

IN WITNESS WHEREOF, the parties have caused this Warrant to Purchase Stock to be executed by their duly authorized representatives effective as of the Issue Date written above.

"COMPANY"

GEMPHIRE THERAPEUTICS INC.

By: /s/ Jeff Mathiesen

Name: Jeff Mathiesen
(Print)
Title: Chief Financial Officer

"HOLDER"

SILICON VALLEY BANK

By: /s/ Tom Hertzberg

Name: Tom Hertzberg
(Print)
Title: Director

Exhibit 10.1

FIRST AMENDMENT
TO
LOAN AND SECURITY AGREEMENT

This First Amendment to Loan and Security Agreement (this "**Amendment**") is entered into this 31st day of July, 2018, by and between **SILICON VALLEY BANK**, a California corporation with a loan production office located at 380 Interlocken Crescent, Suite 600, Broomfield, Colorado 80021 ("**Bank**") and **GEMPHIRE THERAPEUTICS INC**., a Delaware corporation with offices located at 17199 N. Laurel Park Drive, Suite 401, Livonia, Michigan 48152 ("**Borrower**").

RECITALS

A . Bank and Borrower have entered into that certain Loan and Security Agreement dated as of July 24, 2017 (as the same may from time to time be further amended, modified, supplemented or restated, the "**Loan Agreement**").

B. Bank has extended credit to Borrower for the purposes permitted in the Loan Agreement.

C . Borrower has requested that Bank amend the Loan Agreement to (i) extend the Tranche C Draw Period; (ii) extend the amortization and interest only period on the Term Loan; and (iii) make certain other revisions to the Loan Agreement as more fully set forth herein.

D . Bank has agreed to so amend certain provisions of the Loan Agreement, but only to the extent, in accordance with the terms, subject to the conditions and in reliance upon the representations and warranties set forth below.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

1 . Definitions. Capitalized terms used but not defined in this Amendment shall have the meanings given to them in the Loan Agreement.

2. Amendments to Loan Agreement.

2 . 1 Section 2.1.1(e) (Term Loan Cash Security Event). Section 2.1.1(e)(ii) is amended in its entirety and replaced with the following:

> " (ii) From and after the First Amendment Effective Date, in the event either (x) at any time prior to a Pre-Clinical Event the balance of Borrower's unrestricted cash at Bank is less than Eighteen Million Dollars ($18,000,000.00), OR (y) a Pre-Clinical Event does not occur on or prior to September 30, 2019, Borrower shall have the option, to either (i) promptly, and in any event on or prior

to September 30, 2019, provide cash security and maintain a cash balance at all time in a restricted account at Bank, in an amount equal to not less than one hundred percent (100%) of the outstanding Obligations of Borrower owed to Bank; or (ii) prepay all, but not less than all, of the Term Loan, provided Borrower (X) delivers written notice to Bank of its election to prepay the Term Loan at least three (3) days prior to such prepayment, and (Y) pays, on the date of such prepayment (I) the outstanding principal plus accrued and unpaid interest with respect to the Term Loan, (II) the Final Payment Fee, (III) the Success Fee, if applicable, and (IV) all other sums, if any, that shall have become due and payable with respect to the Term Loan, including interest at the Default Rate with respect to any past due amounts. For the avoidance of doubt, no Prepayment Fee shall be payable by Borrower as a result of a prepayment of the Term Loan under this Section 2.1.1(e)(ii). The providing of cash security or repayment in full of the Term Loan under Section 2.1.1(e) (i) and/or (ii) being a "**Term Loan Cash Security Event**". For the avoidance of doubt, in no event shall Borrower be required to simultaneously maintain the balance referred to in clause (ii)(x) above plus maintain a cash balance in a restricted account at Bank in an amount equal to not less than one hundred percent (100%) of the outstanding Obligations of Borrower owed to Bank."

2.2 Section 2.3 (Fees). Subsection (b) of Section 2.3 is amended in its entirety and replaced with the following:

" (b) Prepayment Fee. Upon termination of this Agreement for any reason prior to the Term Loan Maturity Date, in addition to the payment of any other amounts then-owing, a prepayment fee (the "**Prepayment Fee**") in an amount equal to (i) two percent (2.00%) of the funded amount of the Term Loan if such prepayment occurs prior to the first anniversary of the First Amendment Effective Date, or (ii) one percent (1.00%) of the funded amount of the Term Loan if such termination occurs on or at any time after the first anniversary of the First Amendment Effective Date; provided that no Prepayment Fee shall be charged if (i) the credit facility hereunder is replaced with a new facility from Bank; or (ii) the credit facility is repaid in full in connection with the occurrence of the Term Loan Cash Security Event;"

2.3 Section 3.2 (Conditions Precedent to all Credit Extensions). (i) subsection (a) of Section 3.2 is hereby amended by deleting the word "and" appearing at the end thereof: (ii) subsection (b) of Section 3.2 is hereby amended by deleting the "." appearing at the end thereof and inserting "; and" in lieu thereof; and (iii) the following new subsection (c) is hereby inserted immediately following Section 3.2(b):

" (c) Bank determines to its satisfaction that there has not been any material impairment in the general affairs, management, results of operation, financial condition or the prospect of repayment of the Obligations, nor any material adverse deviation by Borrower from the most recent business plan of Borrower presented to and accepted by Bank."

2.4 Section 6.2 (Financial Statements, Reports, Certificates). (i) subsection

(h) of Section 6.2 is hereby amended by deleting the word "and" appearing at the end thereof: (ii) subsection (i) of Section 6.2 is hereby amended by deleting the "." appearing at the end thereof and inserting "; and" in lieu thereof; and (iii) the following new subsection (j) is hereby inserted immediately following Section 6.2(i):

" (j) prompt written notice of any changes to the beneficial ownership information set forth in items 2(d) through and including 2(g) of the Perfection Certificate. Borrower understands and acknowledges that Bank relies on true, accurate and up-to-date beneficial ownership information to meet Bank's regulatory obligations to obtain, verify and record information about the beneficial owners of its legal entity customers."

2.5 Section 6.6 (Operating Accounts). Section 6.6 is amended in its entirety and replaced with the following:

" **6.6 Operating Accounts**.

(a) Maintain all of its and all of its Subsidiaries' operating and other deposit accounts and securities accounts with Bank and Bank's Affiliates; provided, that Borrower shall be permitted to maintain its existing accounts with financial institutions other than Bank and Bank's Affiliates, (the "**Existing Accounts**"), so long as (X) such Existing Accounts are subject to Control Agreements in favor of Bank and in form and substance reasonably acceptable to Bank, subject to Section 6.12(c); (Y) the maximum aggregate daily balance in such Existing Accounts does not at any time exceed the lesser of (i) Five Million Dollars ($5,000,000.00); and (ii) twenty percent (20%) of Borrower total cash; and (Z) on or before September 30, 2018, such Existing Accounts are closed, with the proceeds of such Existing Accounts transferred to an account of Borrower maintained at Bank; provided, further, that Borrower shall be permitted to maintain, and the foregoing requirement shall not apply to, (i) the Excluded Accounts (as hereinafter defined); (ii) one or more petty cash accounts (the "**Petty Cash Accounts**"), so long as the maximum aggregate daily balance in all such Petty Cash Accounts does not at any time exceed Fifty Thousand Dollars ($50,000.00); and (iii) one cash deposit account maintained at PJC (the "**PJC Account**"), so long as the cash in such PJC Account is promptly, and in any event within two (2) Business Days, transferred to an account of Borrower maintained at Bank.

(b) Provide Bank five (5) days prior written notice before establishing any Collateral Account at or with any bank or financial institution other than Bank or Bank's Affiliates. Subject to Section 6.12(c), for each Collateral Account that Borrower at any time maintains (including, without limitation, the Existing Accounts), Borrower shall cause the applicable bank or financial institution (other than Bank) at or with which any Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Bank's Lien in such Collateral Account in accordance with the terms hereunder which Control Agreement may not be terminated without the prior written consent of Bank. The provisions of the previous sentence shall

not apply to (i) the Petty Cash Accounts; (ii) the PJC Account; (iii) deposit accounts exclusively used for Borrower's credit cards; and (iv) deposit accounts exclusively used for payroll, payroll Taxes and other employee wage and benefit payments to or for the benefit of Borrower's employees and identified to Bank by Borrower as such (such accounts being the "**Excluded Accounts**")."

2.6 Section 12.1 (Successor and Assigns). Section 12.1 is amended in its entirety and replaced with the following:

" **12.1 Successors and Assigns**. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not assign this Agreement or any rights or obligations under it without Bank's prior written consent (which may be granted or withheld in Bank's discretion). Bank has the right, without the consent of or notice to Borrower, to sell, transfer, assign, negotiate, or grant participation in all or any part of, or any interest in, Bank's obligations, rights, and benefits under this Agreement and the other Loan Documents. Notwithstanding the foregoing, so long as an Event of Default has not occurred and is continuing, Bank shall not assign any interest in the Loan Documents to any Person which is a direct competitor of Borrower (other than the Warrant, as to which assignment, transfer and other such actions are governed by the terms thereof)."

2.7 Section 13 (Definitions). The following defined terms and their respective definitions in Section 13.1 are amended in their entirety and replaced with the following:

" "**Loan Documents**" are, collectively, this Agreement and any schedules, exhibits, certificates, notices, and any other documents related to this Agreement, the Perfection Certificate, the Warrant, any subordination agreement, any note, or notes or guaranties executed by Borrower, and any other present or future agreement by Borrower with or for the benefit of Bank in connection with this Agreement, all as amended, restated, or otherwise modified."

" "**Obligations**" are Borrower's obligations to pay when due any debts, principal, interest, fees, Bank Expenses, and other amounts Borrower owes Bank now or later, whether under this Agreement, the other Loan Documents (other than the Warrant), or otherwise, including, without limitation, all obligations relating to letters of credit (including reimbursement obligations for drawn and undrawn letters of credit), cash management services, and foreign exchange contracts, if any, and including interest accruing after Insolvency Proceedings begin and debts, liabilities, or obligations of Borrower assigned to Bank, and to perform Borrower's duties under the Loan Documents (other than the Warrant)."

" "**Term Loan Amortization Date**" is November 1, 2018; provided, that if the Term Loan I/O Extension Event has occurred, the "Term Loan Amortization Date" will be February 1, 2019."

" "**Term Loan Amortization Schedule**" is twenty-seven (27) equal monthly

payments of principal, based on a twenty-seven (27) month amortization schedule; provided, that if the Term Loan I/O Extension Event has occurred, the "Term Loan Amortization Schedule" shall be twenty-four (24) equal monthly payments of principal, based on a twenty-four (24) month amortization schedule."

" "**Term Loan I/O Extension Event**" means the occurrence of both a Positive Clinical Trial Event and a Pre-Clinical Event."

" "**Tranche C Availability Amount**" is Five Million Dollars ($5,000,000.00)."

" "**Tranche C Availability Event**" means the occurrence of each of (i) a Positive Clinical Trial Event; (ii) a Pre-Clinical Event; and (iii) a Positive Phase 2 NASH Event."

"**Tranche C Draw Period**" is the period commencing on the occurrence of the Tranche C Availability Event through the earlier to occur of (i) an Event of Default that has occurred and is continuing; or (ii) November 30, 2018."

2.8 Section 13 (Definitions). The following new defined terms are hereby inserted alphabetically in Section 13.1:

" "**First Amendment Effective Date**" is July 31, 2018."

" "**PJC Account**" is defined in Section 6.6(a)."

" "**Positive Phase 2 NASH Event**" means public disclosure by Borrower of evidence satisfactory to Bank, in its sole but reasonable discretion, that Borrower has received positive Phase 2 interim data on either the adult familial partial lipodystrophy proof-of-concept clinical trial or the pediatric NAFLD proof-of-concept clinical trial."

" "**Warrant**" is that certain Warrant to Purchase Stock dated as of the First Amendment Effective Date between Borrower and Bank, as amended, modified, supplemented and/or restated from time to time."

2.9 Section 13 (Definitions). Clause (j) of the definition of "Permitted Liens" appearing in Section 13.1 is amended in its entirety and replaced with the following:

" (j) Liens in favor of other financial institutions arising in connection with Borrower's deposit and/or securities accounts held at such institutions; provided that to the extent required pursuant to Section 6.6(b), Bank has a perfected security interest in the amounts held in such deposit and/or securities accounts."

3. Limitation of Amendments.

3.1 The amendments set forth in Section 2, above, are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) be a consent

to any amendment, waiver or modification of any other term or condition of any Loan Document, or (b) otherwise prejudice any right or remedy which Bank may now have or may have in the future under or in connection with any Loan Document.

3.2 This Amendment shall be construed in connection with and as part of the Loan Documents and all terms, conditions, representations, warranties, covenants and agreements set forth in the Loan Documents, except as herein amended, are hereby ratified and confirmed and shall remain in full force and effect.

4. Representations and Warranties. To induce Bank to enter into this Amendment, Borrower hereby represents and warrants to Bank as follows:

4.1 Immediately after giving effect to this Amendment (a) the representations and warranties contained in the Loan Documents are true, accurate and complete in all material respects as of the date hereof (except to the extent such representations and warranties relate to an earlier date, in which case they are true and correct as of such date), and (b) no Event of Default has occurred and is continuing;

4.2 Borrower has the power and authority to execute and deliver this Amendment and to perform its obligations under the Loan Agreement, as amended by this Amendment;

4.3 The organizational documents of Borrower previously delivered to Bank remain true, accurate and complete and have not been amended, supplemented or restated and are and continue to be in full force and effect, or will otherwise be re-submitted to Bank in connection with the execution of this Amendment;

4.4 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, have been duly authorized;

4.5 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not and will not contravene (a) any material law or regulation binding on or affecting Borrower, (b) any material contractual restriction with a Person binding on Borrower, (c) any order, judgment or decree of any court or other governmental or public body or authority, or subdivision thereof, binding on Borrower, or (d) the organizational documents of Borrower;

4.6 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by any governmental or public body or authority, or subdivision thereof, binding on Borrower, except as already has been obtained or made; and

4.7 This Amendment has been duly executed and delivered by Borrower and is the binding obligation of Borrower, enforceable against Borrower in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization,

liquidation, moratorium or other similar laws of general application and equitable principles relating to or affecting creditors' rights.

5 . Perfection Certificate. Borrower hereby ratifies, confirms and reaffirms, all and singular, the terms and disclosures contained in a certain Perfection Certificate dated on or about July 31, 2018, as amended as set forth on Schedule 1 attached hereto (the "**Perfection Certificate**") and acknowledges, confirms and agrees the disclosures and information Borrower provided to Bank in the Perfection Certificate, as amended, have not changed, as of the date hereof. Borrower hereby agrees that all references to the "Perfection Certificate" in any Loan Document shall be deemed to be a reference to the Perfection Certificate as defined herein.

6 . Integration. This Amendment and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Amendment and the Loan Documents merge into this Amendment and the Loan Documents.

7 . Counterparts. This Amendment may be executed in any number of counterparts and all of such counterparts taken together shall be deemed to constitute one and the same instrument.

8 . Effectiveness. This Amendment shall be deemed effective upon due execution and/or delivery of the following, as applicable:

8.1 This Amendment, the Warrant and each other Loan Document, by each applicable party hereto;

8 . 2 Borrower's payment of Bank's reasonable out-of-pocket legal fees and expenses incurred in connection with this Amendment and the other Loan Documents;

8.3 Certified copies, dated as of a recent date, of financing statement searches, as Bank may request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the First Amendment Effective Date, will be, terminated or released;

8.4 The Operating Documents (to the extent amended, amended and restated, modified or otherwise supplemented since last delivered to Bank) and long-form good standing certificates of Borrower certified by the Secretary of State (or equivalent agency) of Borrower's jurisdiction of organization or formation and each jurisdiction in which Borrower is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the date hereof, but in each case only to the extent required by Bank;

8 . 5 An officer's certificate of Borrower with respect to Borrower's Operating Documents, incumbency, specimen signatures and resolutions authorizing the execution and delivery of this Amendment and the other Loan Documents to which it is a party;

8.6 A completed Schedule 2 hereto, updating the Perfection Certificate, as necessary;

8.7 Evidence satisfactory to Bank that the insurance policies and endorsements required by Section 6.5 of the Loan Agreement are in full force and effect, together with appropriate evidence showing lender loss payable and/or additional insured clauses or endorsements in favor of Bank; and

8.8 Such other documents as Bank shall reasonably request.

[Signature page follows.]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the date first written above.

BANK	**BORROWER**
Silicon Valley Bank	Gemphire Therapeutics Inc.
By: /s/ Tom Hertzberg	By: /s/ Jeff Mathiesen
Name: Tom Hertzberg	Name: Jeff Mathiesen
Title: Director	Title: Chief Financial Officer

Exhibit 99.1

Gemphire Provides Update On Development of Gemcabene

FDA requests the Company provide additional data regarding the partial clinical hold

Company continues Phase 2 development of gemcabene for NAFLD/NASH

Company amends loan agreement with SVB to provide additional flexibility

Conference call and webcast today, Monday, August 6, at 4:30 p.m. Eastern Time

LIVONIA, Mich., Aug. 06, 2018 -- Gemphire Therapeutics Inc. (NASDAQ: GEMP), a clinical-stage biopharmaceutical company focused on developing and commercializing therapies for cardiometabolic disorders, including dyslipidemia and nonalcoholic steatohepatitis (NASH), today announced that the U.S. Food and Drug Administration (FDA) has requested that the Company produce data from a sub-chronic toxicology study to provide information to support lifting the partial clinical hold on gemcabene with respect to clinical trials of longer than six months in duration. The FDA also informed the Company that the End of Phase 2 meeting, and consequently the initiation of Phase 3 trials investigating gemcabene in dyslipidemia indications and long-term safety exposure trials needed for registration, will not take place until the partial hold has been lifted.

Gemphire's ongoing Phase 2a proof-of-concept (POC) studies investigating gemcabene as a treatment for familial partial lipodystrophy (FPL) and for pediatric NAFLD are not affected by the FDA's request for additional data and the Company continues to expect that these studies will produce top-line interim data in late 2018 and in the first half of 2019, respectively. In addition, the Company continues to be free to conduct clinical trials that do not extend beyond six months in duration.

Beginning in 2004, the FDA began issuing partial clinical holds to all sponsors of PPAR agonists or agents deemed to have PPAR-like properties from preclinical studies. The FDA takes the position that PPAR agonists are potential liver toxins, but recognizes that rodent observations are often not relevant to humans. In 2004, the FDA determined that gemcabene has PPAR agonist properties and issued a partial clinical hold. The partial clinical hold permits clinical trials of up to six months for gemcabene and also required the Company to conduct two- year rat and mouse carcinogenicity studies that are reviewed by the agency in view of all other preclinical data and completed clinical trials before allowing clinical trials of longer than six months.

As previously disclosed, we believe gemcabene acts through PPARα to cause peroxisome proliferation and tumor formation in rodents and these effects are likely rodent-specific phenomena. Based on historical nonclinical and clinical experience on these type of compounds, we believe rodents share little apparent relevance for human risk assessment. In recently completed PPAR agonist receptor binding assays, we observed weak or no gemcabene direct binding to the mouse, rat, or human PPARα, PPARβ/d, or PPARγ receptors. We have also observed that gemcabene induces markers of peroxisome proliferation in wild-type mice but not in PPARα knockout mice. We believe the PPARα responses in rats and mice are secondary and perhaps related to the mobilization or formation of a naturally occurring molecule that binds to PPARα in response to gemcabene administration.

The Company recently submitted the results of the two-year rat and mouse carcinogenicity studies to the FDA. As would be expected for an activator of PPARα, the results showed the presence of liver tumors. The Company also provided results from a short-term, 8 day study demonstrating that in PPARα knockout mice, gemcabene did not induce known markers of peroxisome proliferation, providing

evidence that gemcabene works through PPARα. Similar observations in PPARα knockout mice have been seen with other agents, such as gemfibrozil, that cause tumors in rodents but not in humans.

In response the FDA has requested that, as part of a complete response, Gemphire must provide additional data including a subchronic (13 week) study in PPARα knock-out mice and PPAR transactivation assays using monkey and canine PPAR isoforms, to further understand the human relevance of the preclinical findings. The Company has initiated plans to conduct these required studies and expects to submit the additional results to the FDA in the second quarter of 2019.

"We are working closely with the FDA to release the partial clinical hold on gemcabene, with the goal of proceeding to an End of Phase 2 meeting and reaching agreement on the design of a Phase 3 clinical program," said Dr. Steven Gullans, CEO of Gemphire. "Our confidence in gemcabene's safety profile is supported by the fact that it has been observed to be safe in nearly 1,200 human subjects in 24 Phase 1 and 2 clinical trials. In fact, gemcabene's safety performance in previous human clinical provided the basis for the FDA to allow the agent to be evaluated in a multi-center, investigator-led ongoing NAFLD trial in pediatric patients."

"In the meantime, we are continuing to execute on our ongoing Phase 2a POC clinical trials of gemcabene in NALFD/NASH. Gemphire is well capitalized, with $28 million cash on hand as of June 30 2018. Based on current projections, taking into account the delay of significant cash expenditures for clinical trials and manufacturing and the amended terms of the loan agreement with SVB, we believe we have sufficient resources to fund operations into the fourth quarter of 2019."

Amended loan agreement with SVB

On July 31, 2018, Gemphire amended its loan agreement with Silicon Valley Bank ("SVB") to provide additional flexibility to the Company. The original agreement established a term loan facility of up to $15 million in aggregate principal amount to be funded in up to three tranches. The Company received the first two tranches, $10 million in aggregate, in July 2017.

Among other provisions, the loan amendment with SVB:

1) Extends the date by which the FDA must lift the 6-month partial clinical hold from July 31, 2018 to September 30, 2019 for purposes of the requirement to provide cash security to SVB or prepayment of the loan, which could also be required if the Company's unrestricted cash balance falls below a minimum amount prior to such time.

2) Extends the date that the third tranche of $5 million is available for draw down by the Company to November 30, 2018, should the conditions set forth in the amended loan agreement be met by such date.

3) Extends the interest-only monthly payment period from August 1, 2018 to November 1, 2018, which may be subject to further extension if certain conditions set forth in the loan agreement are met.

For further details on the amendment to the loan agreement with SVB, refer to our Current Report on Form 8-K filed with the Securities and Exchange Commission on August 6, 2018.

Second Quarter Financial Results

Gemphire plans to announce its financial results for the second quarter ending June 30, 2018 after market close on Monday, August 13.

Conference Call

The Company will host a conference call today Monday, August 6, at 4:30 pm Eastern Time. To access the audio conference, please dial (844) 494-0188 (domestic) or +1 (425) 278-9114 (international) and reference conference ID 1056909. A webcast replay will be available on the News & Events section of the Gemphire website for all interested parties following the call and will be archived and available for 90 days.

About Gemphire

Gemphire is a clinical-stage biopharmaceutical company that is committed to helping patients with cardiometabolic disorders, including dyslipidemia and NASH. The Company is focused on providing new treatment options for cardiometabolic diseases through its complementary, convenient, cost-effective product candidate gemcabene as add-on to the standard of care, especially statins that will benefit patients, physicians, and payors. Gemphire's Phase 2 clinical program is evaluating the efficacy and safety of gemcabene in hypercholesterolemia, including FH and ASCVD, SHTG and NASH/NAFLD. Two trials supporting hypercholesterolemia and one trial in SHTG have been completed under NCT02722408, NCT02634151 and NCT02944383, respectively, and the Company has initiated two proof-of-concept trials for NAFLD/NASH. Please visit www.gemphire.com for more information.

Forward Looking Statements

Any statements in this press release about Gemphire's future expectations, milestones, goals, plans and prospects, including statements about Gemphire's financial prospects, future operations and sufficiency of funds for future operations, clinical development of Gemphire's product candidate, expectations regarding future clinical trials, expected timing of top-line results of such trials, timing and expectations for regulatory submissions and meetings and future expectations and plans and prospects for gemcabene, expectations for the future competitive environment for gemcabene, expectations regarding operating expenses and cash used in operations, and other statements containing the words "believes," "anticipates," "estimates," "expects," "intends," "plans," "predicts," "projects," "promising," "targets," "may," "potential," "will," "would," "could," "should," "continue," "scheduled" and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: developments in the capital markets, the success and timing of Gemphire's regulatory submissions and pre-clinical and clinical trials; regulatory requirements or developments; changes to Gemphire's clinical trial designs and regulatory pathways; changes in Gemphire's capital resource requirements; the actions of Gemphire's competitors; Gemphire's ability to obtain additional financing; Gemphire's ability to successfully market and distribute its product candidate, if approved; Gemphire's ability to obtain and maintain its intellectual property protection; and other factors discussed in the "Risk Factors" section of Gemphire's annual report and in other filings

Gemphire makes with the SEC from time to time. In addition, the forward-looking statements included in this press release represent Gemphire's views as of the date hereof. Gemphire anticipates that subsequent events and developments will cause Gemphire's views to change. However, while Gemphire may elect to update these forward-looking statements at some point in the future, Gemphire specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Gemphire's views as of any date subsequent to the date hereof.

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