

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No.)*

PhaseBio Pharmaceuticals, Inc.
(Name of Issuer)

Common Stock, par value \$0.001 per share
(Title of Class of Securities)

717224109
(CUSIP Number)

March 18, 2021
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

717224109

CUSIP No. _____

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Avidity Partners Management LP

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

4,285,000

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

4,285,000

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,285,000

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.4%¹

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

- 12.

IA, PN

¹ The percentage of ownership based on 29,443,225 shares of Common Stock of the Company outstanding as of March 11, 2021, as reported on the Issuer's Form 10-K filed on March 15, 2021, as adjusted for 16,000,000 shares issued in the Company's secondary offering of Common Stock, as reported in the Company's Prospectus Supplement, dated March 17, 2021, filed with the Securities and Exchange Commission on March 19, 2021.

717224109

CUSIP No. _____

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Avidity Partners Management (GP) LLC
 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)
 3. SEC USE ONLY
 4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware
- NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH
5. SOLE VOTING POWER

0
 6. SHARED VOTING POWER

4,285,000
 7. SOLE DISPOSITIVE POWER

0
 8. SHARED DISPOSITIVE POWER

4,285,000
 9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,285,000
 10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)
 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.4%²
 12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

OO

² The percentage of ownership based on 29,443,225 shares of Common Stock of the Company outstanding as of March 11, 2021, as reported on the Issuer's Form 10-K filed on March 15, 2021, as adjusted for 16,000,000 shares issued in the Company's secondary offering of Common Stock, as reported in the Company's Prospectus Supplement, dated March 17, 2021, filed with the Securities and Exchange Commission on March 19, 2021.

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CUSIP No. _____

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Avidity Capital Partners Fund (GP) LP

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

4,285,000

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

4,285,000

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,285,000

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.4%³

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

OO, PN

³ The percentage of ownership based on 29,443,225 shares of Common Stock of the Company outstanding as of March 11, 2021, as reported on the Issuer's Form 10-K filed on March 15, 2021, as adjusted for 16,000,000 shares issued in the Company's secondary offering of Common Stock, as reported in the Company's Prospectus Supplement, dated March 17, 2021, filed with the Securities and Exchange Commission on March 19, 2021.

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1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Avidity Capital Partners (GP) LLC

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

4,285,000

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

4,285,000

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,285,000

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.4%⁴

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

OO

⁴ The percentage of ownership based on 29,443,225 shares of Common Stock of the Company outstanding as of March 11, 2021, as reported on the Issuer's Form 10-K filed on March 15, 2021, as adjusted for 16,000,000 shares issued in the Company's secondary offering of Common Stock, as reported in the Company's Prospectus Supplement, dated March 17, 2021, filed with the Securities and Exchange Commission on March 19, 2021.

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1. NAME OF REPORTING PERSONS
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Avidity Master Fund LP

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Cayman Islands

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

3,298,167

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

3,298,167

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

3,298,167

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

7.3%⁵

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

OO, PN

⁵ The percentage of ownership based on 29,443,225 shares of Common Stock of the Company outstanding as of March 11, 2021, as reported on the Issuer's Form 10-K filed on March 15, 2021, as adjusted for 16,000,000 shares issued in the Company's secondary offering of Common Stock, as reported in the Company's Prospectus Supplement, dated March 17, 2021, filed with the Securities and Exchange Commission on March 19, 2021.

717224109

CUSIP No _____

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

David Witzke

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)

(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

4,285,000

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

4,285,000

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,285,000

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.4%⁶

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

- 12.

IN

⁶ The percentage of ownership based on 29,443,225 shares of Common Stock of the Company outstanding as of March 11, 2021, as reported on the Issuer's Form 10-K filed on March 15, 2021, as adjusted for 16,000,000 shares issued in the Company's secondary offering of Common Stock, as reported in the Company's Prospectus Supplement, dated March 17, 2021, filed with the Securities and Exchange Commission on March 19, 2021.

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CUSIP No

1. NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Michael Gregory

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

(a)
(b)

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

United States of America

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

0

6. SHARED VOTING POWER

4,285,000

7. SOLE DISPOSITIVE POWER

0

8. SHARED DISPOSITIVE POWER

4,285,000

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

4,285,000

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

9.4%⁷

TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

- 12.

IN

⁷ The percentage of ownership based on 29,443,225 shares of Common Stock of the Company outstanding as of March 11, 2021, as reported on the Issuer's Form 10-K filed on March 15, 2021, as adjusted for 16,000,000 shares issued in the Company's secondary offering of Common Stock, as reported in the Company's Prospectus Supplement, dated March 17, 2021, filed with the Securities and Exchange Commission on March 19, 2021.

Item 1. (a). Name of Issuer:

PhaseBio Pharmaceuticals, Inc.

(b). Address of issuer's principal executive offices:

1 Great Valley Parkways, Suite 30
Malvern, Pennsylvania 19355
United States of America

Item 2. (a). Name of person filing:

Avidity Partners Management LP
Avidity Partners Management (GP) LLC
Avidity Capital Partners Fund (GP) LP
Avidity Capital Partners (GP) LLC
Avidity Master Fund LP
David Witzke
Michael Gregory

(b). Address or principal business office or, if none, residence:

Avidity Partners Management LP
2828 N Harwood Street, Suite 1220
Dallas, Texas 75201
United States of America

Avidity Partners Management (GP) LLC
2828 N Harwood Street, Suite 1220
Dallas, Texas 75201
United States of America

Avidity Capital Partners Fund (GP) LP
2828 N Harwood Street, Suite 1220
Dallas, Texas 75201
United States of America

Avidity Capital Partners (GP) LLC
2828 N Harwood Street, Suite 1220
Dallas, Texas 75201
United States of America

Avidity Master Fund LP
2828 N Harwood Street, Suite 1220
Dallas, Texas 75201
United States of America

David Witzke
c/o Avidity Partners Management LP
2828 N Harwood Street, Suite 1220
Dallas, Texas 75201
United States of America

Michael Gregory
c/o Avidity Partners Management LP
2828 N Harwood Street, Suite 1220
Dallas, Texas 75201
United States of America

(c). Citizenship:

Avidity Partners Management LP– Delaware
Avidity Partners Management (GP) LLC – Delaware
Avidity Capital Partners Fund (GP) LP – Delaware
Avidity Capital Partners (GP) LLC – Delaware
Avidity Master Fund LP – Cayman Islands
David Witzke – United States of America
Michael Gregory – United States of America

(d). Title of class of securities:

Common Stock, par value \$0.001 per share

(e). CUSIP No.:

717224109

Item 3. If This Statement is filed pursuant to §§.240.13d-1(b) or 240.13d-2(b), or (c), check whether the person filing is a

- (a) Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
 - (b) Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
 - (c) Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
 - (d) Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).
 - (e) An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);
 - (f) An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);
 - (g) A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
 - (h) A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C.1813);
 - (i) A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
 - (j) A non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J);
 - (k) Group, in accordance with §240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution:
-

Item 4. Ownership.

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount beneficially owned:

Avidity Partners Management LP: 4,285,000
Avidity Partners Management (GP) LLC: 4,285,000
Avidity Capital Partners Fund (GP) LP: 4,285,000
Avidity Capital Partners (GP) LLC: 4,285,000
Avidity Master Fund LP: 3,298,167
David Witzke: 4,285,000
Michael Gregory: 4,285,000

(b) Percent of class:

Avidity Partners Management LP: 9.4%
Avidity Partners Management (GP) LLC: 9.4%
Avidity Capital Partners Fund (GP) LP: 9.4%
Avidity Capital Partners (GP) LLC: 9.4%
Avidity Master Fund LP: 7.3%
David Witzke: 9.4%
Michael Gregory: 9.4%

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote

Avidity Partners Management LP: 0
Avidity Partners Management (GP) LLC: 0
Avidity Capital Partners Fund (GP) LP: 0
Avidity Capital Partners (GP) LLC: 0
Avidity Master Fund LP: 0
David Witzke: 0
Michael Gregory: 0

(ii) Shared power to vote or to direct the vote

Avidity Partners Management LP: 4,285,000
Avidity Partners Management (GP) LLC: 4,285,000
Avidity Capital Partners Fund (GP) LP: 4,285,000
Avidity Capital Partners (GP) LLC: 4,285,000
Avidity Master Fund LP: 3,298,167
David Witzke: 4,285,000
Michael Gregory: 4,285,000

(iii) Sole power to dispose or to direct the disposition of

Avidity Partners Management LP: 0
Avidity Partners Management (GP) LLC: 0
Avidity Capital Partners Fund (GP) LP: 0
Avidity Capital Partners (GP) LLC: 0
Avidity Master Fund LP: 0
David Witzke: 0
Michael Gregory: 0

(iv) Shared power to dispose or to direct the disposition of

Avidity Partners Management LP: 4,285,000
Avidity Partners Management (GP) LLC: 4,285,000
Avidity Capital Partners Fund (GP) LP: 4,285,000
Avidity Capital Partners (GP) LLC: 4,285,000
Avidity Master Fund LP: 3,298,167
David Witzke: 4,285,000
Michael Gregory: 4,285,000

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [___].

N/A

Item 6. Ownership of More Than Five Percent on Behalf of Another Person.

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

N/A

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

If a parent holding company or control person has filed this schedule, pursuant to Rule 13d-1(b)(1)(ii)(G), so indicate under Item 3(g) and attach an exhibit stating the identity and the Item 3 classification of the relevant subsidiary. If a parent holding company or control person has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identification of the relevant subsidiary.

N/A

Item 8. Identification and Classification of Members of the Group.

If a group has filed this schedule pursuant to §240.13d-1(b)(1)(ii)(J), so indicate under Item 3(j) and attach an exhibit stating the identity and Item 3 classification of each member of the group. If a group has filed this schedule pursuant to Rule 13d-1(c) or Rule 13d-1(d), attach an exhibit stating the identity of each member of the group.

N/A

Item 9. Notice of Dissolution of Group.

Notice of dissolution of a group may be furnished as an exhibit stating the date of the dissolution and that all further filings with respect to transactions in the security reported on will be filed, if required, by members of the group, in their individual capacity. See Item 5.

N/A

Item 10. Certification.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above acquired and are held in the ordinary course of business and were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, the undersigned certify that the information set forth in this statement is true, complete and correct.

March 22, 2021
(Date)

David Witzke
Avidity Partners Management LP
Avidity Partners Management (GP) LLC
Avidity Capital Partners Fund (GP) LP
Avidity Capital Partners (GP) LLC
Avidity Master Fund LP

By: /s/ David Witzke

David Witzke, for himself and as Managing Member of Avidity Partners Management (GP) LLC (for itself and as general partner of Avidity Partners Management LP) and Avidity Capital Partners (GP) LLC (for itself and as general partner of Avidity Capital Partners Fund (GP) LP (for itself and as general partner of Avidity Master Fund LP))

Michael Gregory
Avidity Partners Management LP
Avidity Partners Management (GP) LLC
Avidity Capital Partners Fund (GP) LP
Avidity Capital Partners (GP) LLC
Avidity Master Fund LP

By: /s/Michael Gregory

Michael Gregory, for himself and as Managing Member of Avidity Partners Management (GP) LLC (for itself and as general partner of Avidity Partners Management LP) and Avidity Capital Partners (GP) LLC (for itself and as general partner of Avidity Capital Partners Fund (GP) LP (for itself and as general partner of Avidity Master Fund LP))

The original statement shall be signed by each person on whose behalf the statement is filed or his authorized representative. If the statement is signed on behalf of a person by his authorized representative other than an executive officer or general partner of the filing person, evidence of the representative's authority to sign on behalf of such person shall be filed with the statement, provided, however, that a power of attorney for this purpose which is already on file with the Commission may be incorporated by reference. The name and any title of each person who signs the statement shall be typed or printed beneath his signature.

Note. Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See s.240.13d-7 for other parties for whom copies are to be sent.

Attention. Intentional misstatements or omissions of fact constitute Federal criminal violations (see 18 U.S.C. 1001).

Exhibit 1

JOINT FILING AGREEMENT

In accordance with Rule 13d-1(k) under the Securities Exchange Act of 1934, as amended, the persons named below agree to the joint filing on behalf of each of them of a Statement on Schedule 13G (including amendments thereto) with respect to the Common Stock of PhaseBio Pharmaceuticals, Inc., and further agree that this Joint Filing Agreement be included as an Exhibit to such joint filing

The undersigned further agree that each party hereto is responsible for the timely filing of such Statement on Schedule 13G and any amendments thereto, and for the accuracy and completeness of the information concerning such party contained therein; provided, however, that no party is responsible for the accuracy or completeness of the information concerning any other party, unless such party knows or has reason to believe that such information is inaccurate.

IN WITNESS WHEREOF, the undersigned hereby execute this Agreement as of March 22, 2021.

David Witzke
Avidity Partners Management LP
Avidity Partners Management (GP) LLC
Avidity Capital Partners Fund (GP) LP
Avidity Capital Partners (GP) LLC
Avidity Master Fund LP

/s/ David Witzke

David Witzke, for himself and as Managing Member of Avidity Partners Management (GP) LLC (for itself and as general partner of Avidity Partners Management LP) and Avidity Capital Partners (GP) LLC (for itself and as general partner of Avidity Capital Partners Fund (GP) LP (for itself and as general partner of Avidity Master Fund LP))

Michael Gregory
Avidity Partners Management LP
Avidity Partners Management (GP) LLC
Avidity Capital Partners Fund (GP) LP
Avidity Capital Partners (GP) LLC
Avidity Master Fund LP

By: /s/ Michael Gregory

Michael Gregory, for himself and as Managing Member of Avidity Partners Management (GP) LLC (for itself and as general partner of Avidity Partners Management LP) and Avidity Capital Partners (GP) LLC (for itself and as general partner of Avidity Capital Partners Fund (GP) LP (for itself and as general partner of Avidity Master Fund LP))
