#### UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

#### **SCHEDULE 13G**

## Under the Securities Exchange Act of 1934

## (Amendment No. )\*

FULCRUM THERAPEUTICS, INC. (Name of Issuer)

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

> <u>359616109</u> (CUSIP Number)

August 16, 2022 (Date of Event Which Requires Filing of this Statement)

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

- $\Box$  Rule 13d-1(b)
- $\boxtimes$  Rule 13d-1(c)
- $\Box$  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).

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)					
	RA Capital Management, L.P.					
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c					
3	SEC USE ONLY					
4	CITIZENSHIP OR PLACE OF ORGANIZATION					
	Delaware					
		5	SOLE VOTING POWER			
NILIMD	ED OE		0			
NUMB SHA	RES	6	SHARED VOTING POWER			
BENEFI OWNE			7,000,000			
EA REPOR		7	SOLE DISPOSITIVE POWER			
PERS	SON		0			
vv 1		8	SHARED DISPOSITIVE POWER			
			7,000,000			
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON					
	7,000,000					
10	CHECK BOX IF	THE AG	GREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)			
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9					
	13.45%					
12	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)					
	IA, PN					
1						

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)				
	Peter Kolchinsky				
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)				
3	SEC USE ONLY				
4	CITIZENSHIP	OR PLACE	OF ORGANIZATION		
	United States of America				
		5	SOLE VOTING POWER		
NUMF	BER OF		0		
SHA	RES	6	SHARED VOTING POWER		
OWN	ED BY		7,000,000		
REPO	.CH RTING	7	SOLE DISPOSITIVE POWER		
	SON TH:		0		
W1111.		8	SHARED DISPOSITIVE POWER		
			7,000,000		
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
	7,000,000				
10	CHECK BOX I	F THE AG	GREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) $\Box$		
11	PERCENT OF	CLASS RE	PRESENTED BY AMOUNT IN ROW 9		
	13.45%				
12	TYPE OF REPO	ORTING PE	ERSON (SEE INSTRUCTIONS)		
	HC, IN				

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)					
	Rajeev Shah					
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)					
3	SEC USE ONLY					
4	CITIZENSHIP	OF ORGANIZATION				
	United States of America					
		5	SOLE VOTING POWER			
NUME	ER OF		0			
SHA	RES	6	SHARED VOTING POWER			
BENEFI OWNI	CIALLY ED BY		7,000,000			
EA REPO	CH RTING	7	SOLE DISPOSITIVE POWER			
PER	SON		0			
WITH:		8	SHARED DISPOSITIVE POWER			
			7,000,000			
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON					
	7,000,000					
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)					
11	PERCENT OF	CLASS RE	PRESENTED BY AMOUNT IN ROW 9			
	13.45%					
12	TYPE OF REP	ORTING PE	ERSON (SEE INSTRUCTIONS)			
	HC, IN					

1	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)				
	RA Capital Health	icare Fun	d, L.P.		
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)				
3	SEC USE ONLY				
4	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware				
		5	SOLE VOTING POWER		
			0		
	BER OF ARES	6	SHARED VOTING POWER		
	CIALLY ED BY		7,000,000		
EA	CH RTING	7	SOLE DISPOSITIVE POWER		
PER	SON		0		
WI	TH:	8	SHARED DISPOSITIVE POWER		
			7,000,000		
9	9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON				
7,000,000					
10	CHECK BOX IF	THE AG	GREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) $\Box$		
11	PERCENT OF CL	LASS RE	PRESENTED BY AMOUNT IN ROW 9		
13.45%					
12	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)				
	PN				

## Item 1(a). <u>Name of Issuer</u>:

Fulcrum Therapeutics, Inc. (the "Issuer")

#### Item 1(b). Address of Issuer's Principal Executive Offices:

26 Landsdowne Street, Cambridge, MA 02139

## Item 2(a). <u>Names of Persons Filing</u>:

The names of the persons filing this report (collectively, the "Reporting Persons") are:

RA Capital Management, L.P. ("RA Capital") Peter Kolchinsky Rajeev Shah RA Capital Healthcare Fund, L.P. (the "Fund")

### Item 2(b). Address of Principal Business Office or, if None, Residence:

The address of the principal business office of each of the Reporting Persons is:

c/o RA Capital Management, L.P., 200 Berkeley Street, 18th Floor, Boston MA 02116

## Item 2(c). <u>Citizenship</u>:

RA Capital is a Delaware limited partnership. Dr. Kolchinsky and Mr. Shah are United States citizens.

#### Item 2(d). <u>Title of Class of Securities</u>:

Common Stock, \$0.001 par value per share ("Common Stock")

#### Item 2(e). <u>CUSIP Number</u>:

359616109

## 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:

Not applicable.

## Item 4. <u>Ownership</u>.

The information required by this item with respect to each Reporting Person is set forth in Rows 5 through 9 and 11 of the cover pages to this Schedule 13G. The ownership percentages reported are based on 50,598,997 total shares of Common Stock, as reported in the Issuer's Prospectus with the Securities and Exchange Commission on August 17, 2022 and giving effect to an additional 1,438,618 shares issued and sold pursuant to the underwriters' option.

The Fund directly holds 7,000,000 shares of Common Stock.

RA Capital Healthcare Fund GP, LLC is the general partner of the Fund. The general partner of RA Capital is RA Capital Management GP, LLC, of which Dr. Kolchinsky and Mr. Shah are the controlling persons. RA Capital serves as investment adviser for the Fund and may be deemed a beneficial owner, for purposes of Section 13(d) of the Securities Exchange Act of 1934 (the "Act"), of any securities of the Issuer held by the Fund. The Fund has delegated to RA Capital the sole power to vote and the sole power to dispose of all securities held in the Fund's portfolios, including the shares of the Issuer's Common Stock reported herein. Because the Fund has divested itself of voting and investment power over the reported securities they hold and may not revoke that delegation on less than 61 days' notice, the Fund disclaims beneficial ownership of the securities under Section 13(d) of the Act. As managers of RA Capital, Dr. Kolchinsky and Mr. Shah may be deemed beneficial owners, for purposes of Section 13(d) of the Act, of any securities reported in this Schedule 13G Statement (the "Statement") other than for the purpose of determining their obligations under Section 13(d) of the Act, and the filing of the Statement shall not be deemed an admission that either RA Capital, Dr. Kolchinsky, or Mr. Shah is the beneficial owner of such securities for any other purpose.

## Item 5. <u>Ownership of Five Percent or Less of a Class</u>.

If this statement is being filed to report the fact that as of the date hereof the Reporting Persons have ceased to be the beneficial owner of more than five percent of the class of securities, check the following  $\Box$ .

## Item 6. <u>Ownership of More than Five Percent on Behalf of Another Person</u>.

Not applicable.

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

Not applicable.

#### Item 8. <u>Identification and Classification of Members of the Group</u>.

Not applicable.

#### Item 9. <u>Notice of Dissolution of Group</u>.

Not applicable.

#### Item 10. <u>Certification</u>.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were 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.

## <u>Exhibit List</u>

Exhibit 1: Joint filing agreement

## **SIGNATURE**

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

Date: August 26, 2022

RA CAPITAL MANAGEMENT, L.P.

By: <u>/s/ Peter Kolchinsky</u> Name: Peter Kolchinsky Title: Authorized Signatory

## PETER KOLCHINSKY

/s/ Peter Kolchinsky

RAJEEV SHAH

/s/ Rajeev Shah

## RA CAPITAL HEALTHCARE FUND, L.P.

By: RA Capital Healthcare Fund GP, LLC Its: General Partner

By: <u>/s/ Peter Kolchinsky</u> Name: Peter Kolchinsky Title: Manager

## AGREEMENT

This Joint Filing Agreement, dated as of August 26, 2022, is by and among RA Capital Management, L.P., Peter Kolchinsky, Rajeev Shah, and RA Capital Healthcare Fund, L.P. (the foregoing are collectively referred to herein as the "Filers").

Each of the Filers may be required to file with the United States Securities and Exchange Commission a statement on Schedule 13G and/or 13D with respect to Common Stock \$0.001 per share of Fulcrum Therapeutics, Inc. beneficially owned by them from time to time.

Pursuant to and in accordance with Rule 13(d)(1)(k) promulgated under the Securities Exchange Act of 1934, as amended, the Filers hereby agree to file a single statement on Schedule 13G and/or 13D (and any amendments thereto) on behalf of each of such parties, and hereby further agree to file this Joint Filing Agreement as an exhibit to such statement, as required by such rule.

This Joint Filing Agreement may be terminated by any of the Filers upon one week's prior written notice or such lesser period of notice as the Filers may mutually agree.

Executed and delivered as of the date first above written.

RA CAPITAL MANAGEMENT, L.P.

By: <u>/s/ Peter Kolchinsky</u> Name: Peter Kolchinsky Title: Authorized Signatory

#### PETER KOLCHINSKY

/s/ Peter Kolchinsky

#### RAJEEV SHAH

/s/ Rajeev Shah

#### RA CAPITAL HEALTHCARE FUND, L.P.

- By: RA Capital Healthcare Fund GP, LLC
- Its: General Partner
- By: <u>/s/ Peter Kolchinsky</u> Name: Peter Kolchinsky Title: Manager