
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

SCHEDULE 13D

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

Health Sciences Acquisitions Corporation 2
(Name of Issuer)

Ordinary Shares, \$0.0001 par value
(Title of Class of Securities)

G4411D 109
(CUSIP Number)

RTW Investments, LP
Attn: Roderick Wong
40 10th Avenue, Floor 7
New York, New York 10014
(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

October 12, 2022
(Date of Event which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box.

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

* 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 disclosures provided in a prior cover page.

The information required on 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. RTW Investments, LP	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,000,000
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,000,000
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,000,000	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 8.9%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) PN, IA	

1	NAMES OF REPORTING PERSONS. RTW Master Fund, Ltd.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 352,577
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 352,577
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 352,577	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 3.1%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) CO	

1	NAMES OF REPORTING PERSONS. RTW Innovation Master Fund, Ltd.	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) WC	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION Cayman Islands	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 647,423
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 647,423
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 647,423	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 5.8%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) CO	

1	NAMES OF REPORTING PERSONS. Roderick Wong	
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS) (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>	
3	SEC USE ONLY	
4	SOURCE OF FUNDS (SEE INSTRUCTIONS) AF	
5	CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) <input type="checkbox"/>	
6	CITIZENSHIP OR PLACE OF ORGANIZATION United States of America	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON	7	SOLE VOTING POWER 0
	8	SHARED VOTING POWER 1,000,000
	9	SOLE DISPOSITIVE POWER 0
	10	SHARED DISPOSITIVE POWER 1,000,000
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 1,000,000	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS) <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 8.9%	
14	TYPE OF REPORTING PERSON (SEE INSTRUCTIONS) IN, HC	

Schedule 13D

Item 1. Security and Issuer.

This statement relates to the ordinary shares, \$0.0001 par value (the "Ordinary Shares"), of Health Sciences Acquisitions Corporation 2 (the "Issuer"), having its principal executive office at 40 10th Avenue, Floor 7, New York, New York 10014.

Item 2. Identity and Background

This statement is being filed by RTW Investments, LP, a Delaware limited partnership ("RTW Investments"), RTW Master Fund, Ltd., a Cayman exempted company ("RTW Master Fund"), RTW Innovation Master Fund, Ltd., a Cayman exempted company ("RTW Innovation"), and Roderick Wong, M.D., a United States citizen ("Dr. Wong").

RTW Master Fund and RTW Innovation are managed by RTW Investments. Dr. Wong is the Managing Partner and Chief Investment Officer of RTW Investments. Dr. Wong is the President, Chief Executive Officer and Chairman of the Board of Directors of the Issuer, and is a member of its board of directors. Dr. Wong is also a member of the three-member board of directors of HSAC Holdings 2, LLC (the "Sponsor"). Naveen Yalamanchi, M.D., who is Executive Vice President and Chief Financial Officer of the Issuer, and a member of its board of directors, is a Partner and Portfolio Manager at RTW Investments. Dr. Yalamanchi also serves on the Sponsor's board of directors. Alice Lee, the Issuer's Vice President of Operations and Secretary and Treasurer, also serves on the Sponsor's board of directors and is Senior Counsel at RTW Investments.

Each of RTW Investments, RTW Master Fund, RTW Innovation, and Dr. Wong (each a "Reporting Person" and together, the "Reporting Persons") is filing this statement.

The address of the principal business office of RTW Investments and Dr. Wong is 40 10th Avenue, Floor 7, New York, New York 10014. The address of the principal business office of RTW Master Fund and RTW Innovation is c/o Intertrust Corporate Services (Cayman) Limited, One Nexus Way, Camana Bay, Grand Cayman KY1-9005, Cayman Islands.

The principal business of RTW Investments is serving as investment advisor to RTW Master Fund and RTW Innovation. The principal business of RTW Master Fund and RTW Innovation is investments. The principal business of Dr. Wong is to manage the investment activities of RTW Investments.

During the five years prior to the date hereof, none of the Reporting Persons has been convicted in a criminal proceeding or has been a party to a civil proceeding ending in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.

Item 3. Source and Amount of Funds or Other Consideration.

The source of funds used for the purchase of the Ordinary Shares reported herein was the working capital of RTW Master Fund and RTW Innovation. The Ordinary Shares reported herein were purchased for an aggregate purchase price of \$10,010,000.

Item 4. Purpose of Transaction.

The Reporting Persons acquired the Ordinary Shares in connection with their affiliation with the Sponsor, which acts as sponsor for the Issuer's initial public offering and potential business combination.

On July 4, 2022, the Issuer entered into an agreement and plan of merger agreement (as amended on July 21, 2022, the "Merger Agreement") with HSAC Olympus Merger Sub, Inc., a Delaware corporation and wholly owned

subsidiary of the Issuer (“Merger Sub”), and Orchestra BioMed, Inc., a Delaware corporation (“Orchestra”). Pursuant to the terms of the Merger Agreement, a business combination between the Issuer and Orchestra (the “Business Combination”) will be effected in two steps. First, before the closing of the Business Combination, the Issuer will deregister in the Cayman Islands and domesticate as a Delaware corporation. Second, at the closing of the Business Combination, Merger Sub will merge with and into Orchestra, with Orchestra surviving such merger as the surviving entity. Upon consummation of the Business Combination, Orchestra will become a wholly owned subsidiary of the Issuer. The Issuer will then change its name to “Orchestra BioMed Holdings, Inc.”

Simultaneously with the execution of the Merger Agreement, the Issuer and Orchestra entered into separate forward purchase agreements (the “Forward Purchase Agreements”) with certain funds managed by RTW Investments (the “RTW Funds”) and Covidien Group S.a.r.l., an affiliate of Medtronic plc (“Medtronic” and the RTW Funds, each a “Purchasing Party”), pursuant to which each of the Purchasing Parties agreed to purchase approximately \$10.0 million of the Issuer’s Ordinary Shares, for a total of approximately \$20.0 million, less the dollar amount of the Issuer’s Ordinary Shares holding redemption rights that the Purchasing Party acquires and holds until immediately prior to the domestication.

Simultaneously with the execution of the Merger Agreement and Forward Purchase Agreements, the Issuer, Orchestra, and the RTW Funds entered into a Backstop Agreement (the “Backstop Agreement”) pursuant to which the RTW Funds, jointly and severally, agreed to purchase such number of the Issuer’s Ordinary Shares at a price of \$10.00 per share to the extent that the amount of Parent Closing Cash (as defined in the Merger Agreement) as of immediately prior to the closing of the Business Combination is less than \$60 million (inclusive of the \$10 million commitment by the RTW Funds pursuant to the Forward Purchase Agreement described above).

On August 3, 2020, the Sponsor entered into an agreement with the Issuer to purchase an aggregate of 2,500,000 of the Ordinary Shares or their equivalent in the securities of a target company for an aggregate purchase price of \$25,000,000 prior to, concurrently with, or following the closing of a business combination. This commitment was satisfied in two parts: (a) the RTW Funds made an investment of \$15,000,000 in Orchestra’s Series D financing, and (b) on July 22, 2022, the RTW Funds purchased 1,000,000 shares in the Issuer pursuant to the relevant Forward Purchase Agreement.

On August 6, 2020, the Sponsor purchased 1,500,000 private warrants (the “Private Warrants”) from the Issuer for an aggregate purchase price of \$1,500,000. Each Private Warrant entitles the Sponsor to purchase one share of the Ordinary Shares at a price of \$11.50 and will become exercisable 30 days after the completion of the Issuer’s initial business combination. In connection with the Business Combination, the Sponsor agreed to forfeit 750,000 of the Private Warrants for no consideration.

Each Reporting Person expects to continuously review such person’s investment in the Issuer and, depending on various factors including but not limited to, the price of the Ordinary Shares, the terms and conditions of the transaction, prevailing market conditions and such other considerations as such Reporting Person deems relevant, may at any time or from time to time, and subject to any required regulatory approvals, acquire additional Ordinary Shares, preferred stock or other securities convertible into or exercisable or exchangeable for Ordinary Shares from time to time on the open market, in privately-negotiated transactions, directly from the Issuer, or upon the exercise or conversion of securities convertible into or exercisable or exchangeable for Ordinary Shares.

Except as indicated herein, no Reporting Person, as a stockholder of the Issuer, has any plans or proposals that relate or would result in any of the transactions or other matters specified in clauses (a) through (j) of Item 4 of Schedule 13D. Each Reporting Person may, at any time and from time to time, review or reconsider its or his position and/or change its or his purpose and/or formulate plans or proposals with respect thereto.

The information set forth in Item 3 above is incorporated by reference to this Item 4.

Item 5. Interest in Securities of the Issuer.

- (a) RTW Master Fund is the record owner of 352,577 shares of the Ordinary Shares. RTW Innovation is the record owner of 647,423 shares of the Ordinary Shares. As the investment manager of RTW Master Fund and RTW Innovation, RTW Investments may be deemed to own beneficially the Ordinary Shares. As the Managing Partner of RTW Investments, Dr. Wong may be deemed to own beneficially the Ordinary Shares.

The percentage of outstanding Ordinary Shares of the Issuer which may be deemed to be beneficially owned by each Reporting Person is set forth on Line 13 of such Reporting Person's cover sheet. Such percentage was calculated based on 11,212,117 shares of Ordinary Shares reported by the Issuer to be outstanding on the Issuer's Form 10-Q filed with the Securities and Exchange Commission on August 15, 2022.

The Reporting Persons could be deemed to constitute a Section 13(d) group with the Sponsor. The Sponsor has reported beneficial ownership of 4,360,956 shares of Ordinary Shares. In aggregate, the Reporting Persons and the Sponsor would beneficially own an aggregate of 5,360,956 shares of Ordinary Shares, representing 47.8% of the outstanding shares. The Reporting Persons disclaim the existence of a 13(d) group.

- (b) Regarding the number of shares as to which such person has:
- (i) sole power to vote or to direct the vote: See line 7 of cover sheets
 - (ii) shared power to vote or to direct the vote: See line 8 of cover sheets
 - (iii) sole power to dispose or to direct the disposition: See line 9 of cover sheets
 - (iv) shared power to dispose or to direct the disposition: See line 10 of cover sheets
- (c) On July 22, 2022, RTW Investments effected a purchase of 1,000,000 Ordinary Shares for a per-share price of \$10.01.
- (d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of, Ordinary Shares beneficially owned by any of the Reporting Persons.
- (e) Not applicable.

Item 6. Contracts, Arrangements, Undertakings or Relationships with Respect to Securities of the Issuer.

The information set forth in Item 4 herein is incorporated by reference.

Item 7. Material to be Filed as Exhibits.

Exhibit 1 Joint Filing Agreement

Exhibit 2 Agreement and Plan of Merger, dated as of July 4, 2022, by and among Health Sciences Acquisitions Corporation 2, HSAC Olympus Merger Sub, Inc., and Orchestra BioMed, Inc. (incorporated by reference to Exhibit 2.1 of Health Sciences Acquisitions Corporation 2's Form 8-K filed on July 5, 2022).

Exhibit 3 Forward Purchase Agreement, dated as of July 4, 2022, by and among Health Sciences Acquisitions Corporation 2, Orchestra BioMed, Inc., and Covidien Group S.à.r.l. (incorporated by reference to Exhibit 10.1 of Health Sciences Acquisitions Corporation 2's Form 8-K filed on July 5, 2022).

Exhibit 4 Forward Purchase Agreement dated as of July 4, 2022, by and among Health Sciences Acquisitions Corporation 2, Orchestra BioMed, Inc., RTW Master Fund, Ltd., RTW Innovation Master Fund, Ltd., and RTW Venture Fund Limited (incorporated by reference to Exhibit 10.2 of Health Sciences Acquisitions Corporation 2's Form 8-K filed on July 5, 2022).

Exhibit 5 Backstop Agreement, dated as of July 4, 2022, by and among Health Sciences Acquisitions Corporation 2, Orchestra BioMed, Inc., RTW Master Fund, Ltd., RTW Innovation Master Fund, Ltd., and RTW Venture Fund Limited (incorporated by reference to Exhibit 10.3 of Health Sciences Acquisitions Corporation 2's Form 8-K filed on July 5, 2022).

Exhibit 6 Subscription Agreement, dated August 3, 2020, between Health Sciences Acquisitions Corporation 2 and HSAC 2 Holdings, LLC (incorporated by reference to Exhibit 10.6 of Health Sciences Acquisitions Corporation 2's Form 8-K filed on August 7, 2020).

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.

EXECUTED this 12th day of October, 2022.

RTW INVESTMENTS, LP

By: /s/ Roderick Wong

Name: Roderick Wong, M.D.

Title: Managing Partner

RTW MASTER FUND, LTD.

By: /s/ Roderick Wong

Name: Roderick Wong, M.D.

Title: Director

RTW INNOVATION MASTER FUND, LTD.

By: /s/ Roderick Wong

Name: Roderick Wong, M.D.

Title: Director

/s/ Roderick Wong

Roderick Wong, M.D.

AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of shares of stock of Health Sciences Acquisitions Corporation 2,

EXECUTED this 12th day of October, 2022.

RTW INVESTMENTS, LP

By: /s/ Roderick Wong

Name: Roderick Wong, M.D.

Title: Managing Partner

RTW MASTER FUND, LTD.

By: /s/ Roderick Wong

Name: Roderick Wong, M.D.

Title: Director

RTW INNOVATION MASTER FUND, LTD.

By: /s/ Roderick Wong

Name: Roderick Wong, M.D.

Title: Director

/s/ Roderick Wong

Roderick Wong, M.D.