

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

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JAN 08 2009

TEMPORARY
FORM D
NOTICE OF SALE OF SECURITIES
PURSUANT TO REGULATION D,
SECTION 4(6) AND/OR
UNIFORM LIMITED OFFERING EXEMPTION



Name of Offering: Washington, DC (checkbox if this is an amendment and name has changed, and indicate change.)

Filing Under (Check box(es) that apply): Rule 504 Rule 505 Rule 506 Section 4(6) ULOE
Type of Filing: New Filing Amendment

A. BASIC IDENTIFICATION DATA

1. Enter the information requested about the issuer

Name of Issuer (checkbox if this is an amendment and name has changed, and indicate change.)
Helicos BioSciences Corporation

Address of Executive Offices (Number and Street, City, State, Zip Code)
One Kendall Square, Building 700, Cambridge, MA 02139

Telephone Number (Including Area Code)
(617) 264-1800

Address of Principal Business Operations (if different from Executive Offices) (Number and Street, City, State, Zip Code)

Telephone Number (Including Area Code)

Brief Description of Business

To engage in life sciences activities

Type of Business Organization

- corporation limited partnership, already formed other (please specify):
- business trust limited partnership, to be formed

Month: 05 Year: 03

Actual or Estimated Date of Incorporation or Organization:

Actual Estimated

Jurisdiction of Incorporation or Organization: (Enter two-letter U.S. Postal Service abbreviation for State:
CN for Canada; FN for other foreign jurisdiction)

D E

GENERAL INSTRUCTIONS

Note: This is a special Temporary Form D (17 CFR 239.500T) that is available to be filed instead of Form D (17 CFR 239.500) only to issuers that file with the Commission a notice on Temporary Form D (17 CFR 239.500T) or an amendment to such a notice in paper format on or after September 15, 2008 but before March 16, 2009. During that period, an issuer also may file in paper format an initial notice using Form D (17 CFR 239.500) but, if it does, the issuer must file amendments using Form D (17 CFR 239.500) and otherwise comply with all the requirements of §230.503T.

Federal:

Who Must File: All issuers making an offering of securities in reliance on an exemption under Regulation D or Section 4(6), 17 CFR 230.501 et seq. or 15 U.S.C. 77d(6).

When to File: A notice must be filed no later than 15 days after the first sale of securities in the offering. A notice is deemed filed with the U.S. Securities and Exchange Commission (SEC) on the earlier of the date it is received by the SEC at the address given below or, if received at that address after the date on which it is due, on the date it was mailed by United States registered or certified mail to that address.

Where to File: U.S. Securities and Exchange Commission, 100 F Street, N.E., Washington, D.C. 20549

Copies Required: Two (2) copies of this notice must be filed with the SEC, one of which must be manually signed. The copy not manually signed must be a photocopy of the manually signed copy or bear typed or printed signatures.

Information Required: A new filing must contain all information requested. Amendments need only report the name of the issuer and offering, any changes thereto, the information requested in Part C, and any material changes from the information previously supplied in Parts A and B. Part E and the Appendix need not be filed with the SEC.

Filing Fee: There is no federal filing fee.

State:

This notice shall be used to indicate reliance on the Uniform Limited Offering Exemption (ULOE) for sales of securities in those states that have adopted ULOE and that have adopted this form. Issuers relying on ULOE must file a separate notice with the Securities Administrator in each state where sales are to be, or have been made. If a state requires the payment of a fee as a precondition to the claim for the exemption, a fee in the proper amount shall accompany this form. This notice shall be filed in the appropriate states in accordance with state law. The Appendix to the notice constitutes a part of this notice and must be completed.

ATTENTION

Failure to file notice in the appropriate states will not result in a loss of the federal exemption. Conversely, failure to file the appropriate federal notice will not result in a loss of an available state exemption unless such exemption is predicated on the filing of a federal notice.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

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A. BASIC IDENTIFICATION DATA

2. Enter the information requested for the following:

- Each promoter of the issuer, if the issuer has been organized within the past five years;
- Each beneficial owner having the power to vote or dispose, or direct the vote or disposition of, 10% or more of a class of equity securities of the issuer;
- Each executive officer and director of corporate issuers and of corporate general and managing partners of partnership issuers; and
- Each general and managing partner of partnership issuers.

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Lowy, Ronald A.

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Lombardi, Stephen J.

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Lapidus, Stanley N.

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Afeyan, Noubar B.

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Allison, Elisabeth K.

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Atwood, Brian

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Barrett, Peter

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Higgins, Robert

Business or Residence Address (Number and Street, City, State, Zip Code)

(Use blank sheet, or copy and use additional copies of this sheet, as necessary.)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Melas-Kyriazi, Theo

Business or Residence Address (Number and Street, City, State, Zip Code)

c/o Helicos BioSciences Corporation, One Kendall Square, Building 200, Cambridge, MA 02139

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Atlas Venture

Business or Residence Address (Number and Street, City, State, Zip Code)

890 Winter St., Ste. 320, Waltham, MA 02451

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

MPM Capital

Business or Residence Address (Number and Street, City, State, Zip Code)

200 Clarendon St., 54th Fl., Boston, MA 02116

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Highland Capital Partners

Business or Residence Address (Number and Street, City, State, Zip Code)

92 Hayden Ave., Lexington, MA 02421

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Versant Ventures

Business or Residence Address (Number and Street, City, State, Zip Code)

3000 Sand Hill Road, Building 4, Suite 210, Menlo Park, CA 94025

Check Box(es) that Apply: Promoter Beneficial Owner Executive Officer Director General and/or Managing Partner

Full Name (Last name first, if individual)

Flagship Ventures

Business or Residence Address (Number and Street, City, State, Zip Code)

One Memorial Drive, 7th Floor, Cambridge, MA 02142

B. INFORMATION ABOUT OFFERING

1. Has the issuer sold, or does the issuer intend to sell, to non accredited investors in this offering?..... Yes No

Answer also in Appendix, Column 2, if filing under ULOE.

2. What is the minimum investment that will be accepted from any individual?..... \$ N/A

Yes No

3. Does the offering permit joint ownership of a single unit?.....

4. Enter the information requested for each person who has been or will be paid or given, directly or indirectly, any commission or similar remuneration for solicitation of purchasers in connection with sales of securities in the offering. If a person to be listed is an associated person or agent of a broker or dealer registered with the SEC and/or with a state or states, list the name of the broker or dealer. If more than five (5) persons to be listed are associated persons of such a broker or dealer, you may set forth the information for that broker or dealer only.

Full Name (Last name first, if individual)

N/A

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States)..... All States

[AL]	[AK]	[AZ]	[AR]	[CA]	[CO]	[CT]	[DE]	[DC]	[FL]	[GA]	[HI]	[ID]
[IL]	[IN]	[IA]	[KS]	[KY]	[LA]	[ME]	[MD]	[MA]	[MI]	[MN]	[MS]	[MO]
[MT]	[NE]	[NV]	[NH]	[NJ]	[NM]	[NY]	[NC]	[ND]	[OH]	[OK]	[OR]	[PA]
[RI]	[SC]	[SD]	[TN]	[TX]	[UT]	[VT]	[VA]	[WA]	[WV]	[WI]	[WY]	[PR]

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States)..... All States

[AL]	[AK]	[AZ]	[AR]	[CA]	[CO]	[CT]	[DE]	[DC]	[FL]	[GA]	[HI]	[ID]
[IL]	[IN]	[IA]	[KS]	[KY]	[LA]	[ME]	[MD]	[MA]	[MI]	[MN]	[MS]	[MO]
[MT]	[NE]	[NV]	[NH]	[NJ]	[NM]	[NY]	[NC]	[ND]	[OH]	[OK]	[OR]	[PA]
[RI]	[SC]	[SD]	[TN]	[TX]	[UT]	[VT]	[VA]	[WA]	[WV]	[WI]	[WY]	[PR]

Full Name (Last name first, if individual)

Business or Residence Address (Number and Street, City, State, Zip Code)

Name of Associated Broker or Dealer

States in Which Person Listed Has Solicited or Intends to Solicit Purchasers

(Check "All States" or check individual States)..... All States

[AL]	[AK]	[AZ]	[AR]	[CA]	[CO]	[CT]	[DE]	[DC]	[FL]	[GA]	[HI]	[ID]
[IL]	[IN]	[IA]	[KS]	[KY]	[LA]	[ME]	[MD]	[MA]	[MI]	[MN]	[MS]	[MO]
[MT]	[NE]	[NV]	[NH]	[NJ]	[NM]	[NY]	[NC]	[ND]	[OH]	[OK]	[OR]	[PA]
[RI]	[SC]	[SD]	[TN]	[TX]	[UT]	[VT]	[VA]	[WA]	[WV]	[WI]	[WY]	[PR]

(Use blank sheet, or copy and use additional copies of this sheet, as necessary.)

C. OFFERING PRICE, NUMBER OF INVESTORS, EXPENSES AND USE OF PROCEEDS

1. Enter the aggregate offering price of securities included in this offering and the total amount already sold. Enter "0" if answer is "none" or "zero." If the transaction is an exchange offering, check this box and indicate in the columns below the amounts of the securities offered for exchange and already exchanged.

Type of Security	Aggregate Offering Price	Amount Already Sold
Debt	\$ 0	\$ 0
Equity	\$ 18,597,933*	\$ 18,597,933
<input checked="" type="checkbox"/> Common <input type="checkbox"/> Preferred		
Convertible Securities (including warrants)	\$ 0	\$ 0
Partnership Interests	\$ 0	\$ 0
Other (Specify _____)	\$ 0	\$ 0
Total	\$ 0	\$ 0

Answer also in Appendix, Column 3, if filing under ULOE.

2. Enter the number of accredited and non-accredited investors who have purchased securities in this offering and the aggregate dollar amounts of their purchases. For offerings under Rule 504, indicate the number of persons who have purchased securities and the aggregate dollar amount of their purchases on the total lines. Enter "0" if answer is "none" or "zero."

	Number Investors	Aggregate Dollar Amount of Purchases
Accredited Investors	24	\$ 18,597,933
Non-accredited Investors	0	\$ 0
Total (for filings under Rule 504 only)	N/A	\$ N/A

Answer also in Appendix, Column 4, if filing under ULOE.

3. If this filing is for an offering under Rule 504 or 505, enter the information requested for all securities sold by the issuer, to date, in offerings of the types indicated, the twelve (12) months prior to the first sale of securities in this offering. Classify securities by type listed in Part C - Question 1.

Type of offering	Type of Security	Dollar Amount Sold
Rule 505	N/A	\$ N/A
Regulation A	N/A	\$ N/A
Rule 504	N/A	\$ N/A
Total	N/A	\$ N/A

4. a. Furnish a statement of all expenses in connection with the issuance and distribution of the securities in this offering. Exclude amounts relating solely to organization expenses of the issuer. The information may be given as subject to future contingencies. If the amount of an expenditure is not known, furnish an estimate and check the box to the left of the estimate.

Transfer Agent's Fees	<input checked="" type="checkbox"/> \$ 1,000
Printing and Engraving Costs	<input type="checkbox"/> \$ _____
Legal Fees	<input checked="" type="checkbox"/> \$ 200,000
Accounting Fees	<input type="checkbox"/> \$ _____
Engineering Fees	<input type="checkbox"/> \$ _____
Sales Commissions (specify finders' fees separately)	<input type="checkbox"/> \$ _____
Other Expenses (identify) <u>filing fees, etc.</u>	<input type="checkbox"/> \$ 500,000
Total	<input type="checkbox"/> \$ 701,000

* The issued securities were units purchased by the investors for \$0.435 per unit. Each unit consists of (i) one share of common stock and (ii) one warrant to purchase 0.6 shares of common stock (representing the closing bid price plus an additional amount for the warrants). Units were not issued or certificated. The shares of common stock and warrants are immediately separable and were issued separately.

C. OFFERING PRICE, NUMBER OF INVESTORS, EXPENSES AND USE OF PROCEEDS

b. Enter the difference between the aggregate offering price given in response to Part C - Question 1 and total expenses furnished in response to Part C - Question 4.a. This difference is the "adjusted gross proceeds to the issuer."

\$ 17,896,933

5. Indicate below the amount of the adjusted gross proceeds to the issuer used or proposed to be used for each of the purposes shown. If the amount for any purpose is not known, furnish an estimate and check the box to the left of the estimate. The total of the payments listed must equal the adjusted gross proceeds to the issuer set forth in response to Part C - Question 4.b above.

	Payments to Officers, Directors, & Affiliates	Payments To Others
Salaries and fees	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Purchase of real estate	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Purchase, rental or leasing and installation of machinery and equipment	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Construction or leasing of plant buildings and facilities	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Acquisition of other businesses (including the value of securities involved in this offering that may be used in exchange for the assets or securities of another issuer pursuant to a merger).....	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Repayment of indebtedness	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Working Capital	<input type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ <u>17,896,933</u>
Other (specify): _____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
_____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
_____	<input type="checkbox"/> \$ _____	<input type="checkbox"/> \$ _____
Column Totals	<input type="checkbox"/> \$ _____	<input checked="" type="checkbox"/> \$ <u>17,896,933</u>
 Total Payments Listed (Column totals added)		<input checked="" type="checkbox"/> \$ <u>17,896,933</u>

D. FEDERAL SIGNATURE

The issuer has duly caused this notice to be signed by the undersigned duly authorized person. If this notice is filed under Rule 505, the following signature constitutes an undertaking by the issuer to furnish to the U.S. Securities and Exchange Commission, upon written request of its staff, the information furnished by the issuer to any non-accredited investor pursuant to paragraph (b)(2) of Rule 502.

Issuer (Print or Type) Helicos BioSciences Corporation	Signature 	Date January 6, 2009
Name of Signer (Print or Type) Stephen P. Hall	Title of Signer (Print or Type) Senior Vice President and Chief Financial Officer	

ATTENTION

Intentional misstatements or omissions of fact constitute federal criminal violations. (See 18 U.S.C. 1001.)

END