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OMB APPROVAL  
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 5)\*

ISIS PHARMACEUTICALS, INC.

-----  
(Name of Issuer)

Common Stock

-----  
(Title of Class of Securities)

464330 0 10 9

-----  
(CUSIP Number)

Check the following box if a fee is being paid with this statement . (A fee is not required only if the filing person: (1) has a previous statement on file reporting beneficial ownership of more than five percent of the class of securities described in Item 1; and (2) has filed no amendment subsequent thereto reporting beneficial ownership of five percent or less of such class.) (See Rule 13d-7).

\*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).

Page 1 of 16 Pages

Page 2 of 16 Pages  
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1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON  
  
BESSEMER VENTURE PARTNERS II L.P. ("Bessemer II")  
13-3174238  
-----

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
  
(a) X  
(b)

-----  
3 SEC USE ONLY

-----  
4 CITIZENSHIP OR PLACE OF ORGANIZATION  
  
Delaware

-----  
5           SOLE VOTING POWER  
759,566 shs.  
NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
-----  
6           SHARED VOTING POWER  
-0- shs.  
-----  
7           SOLE DISPOSITIVE POWER  
759,566 shs.  
-----  
EACH  
REPORTING  
PERSON  
-----  
8           SHARED DISPOSITIVE POWER  
WITH

-----  
9           AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
759,566 shs.  
-----

-----  
10          CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*  
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11          PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
2.96%  
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-----  
12          TYPE OF REPORTING PERSON\*  
PN  
-----

-----  
\*SEE INSTRUCTIONS BEFORE FILLING OUT!  
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1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

DEER II & CO. LLC ("Deer II") (Deer II is the General Partner of  
13-3174240 Bessemer II. Therefore, the shares  
reported on this page are the same  
as those reported on p.2)

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
(a) X  
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
Delaware

	5	SOLE VOTING POWER
		759,566 shs.
NUMBER OF		
SHARES	6	SHARED VOTING POWER
BENEFICIALLY		-0- shs.
OWNED BY		
EACH	7	SOLE DISPOSITIVE POWER
REPORTING		759, 566 shs.
PERSON		
WITH	8	SHARED DISPOSITIVE POWER

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
759,566 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
2.96%

12 TYPE OF REPORTING PERSON\*  
PN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON  
  
BESSEMER VENTURE PARTNERS III L.P. ("Bessemer III")  
11-3197697

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a) X  
(b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
  
Delaware

5 SOLE VOTING POWER  
770,124 shs.

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY

6 SHARED VOTING POWER  
-0- shs.

EACH  
REPORTING  
PERSON

7 SOLE DISPOSITIVE POWER  
770,124 shs.

WITH

8 SHARED DISPOSITIVE POWER  
-0- shs.

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
770,124 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
3.00%

12 TYPE OF REPORTING PERSON\*  
  
PN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
 S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

DEER III & CO. LLC ("Deer III") (Deer III is the General Partner  
 11-3197696 of Bessemer III. Therefore, the  
 shares reported on this page are  
 the same as those reported on p.4)

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
 (a) X  
 (b)

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
 Delaware

	5	SOLE VOTING POWER
		770,124 shs.
NUMBER OF		
SHARES	6	SHARED VOTING POWER
BENEFICIALLY		-0- shs.
OWNED BY		
EACH	7	SOLE DISPOSITIVE POWER
REPORTING		770,124 shs.
PERSON		
WITH	8	SHARED DISPOSITIVE POWER
		-0- shs.

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
 770,124 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
 3.00%

12 TYPE OF REPORTING PERSON\*  
 PN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON  
  
BESSEMER VENTURES, INC. ("BVI")  
13-3175227

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
  
(a)  
(b) X

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
  
Delaware

	5	SOLE VOTING POWER
		-0-
NUMBER OF		
SHARES	6	SHARED VOTING POWER
BENEFICIALLY		-0-
OWNED BY		
EACH	7	SOLE DISPOSITIVE POWER
REPORTING		-0-
PERSON		
WITH	8	SHARED DISPOSITIVE POWER
		-0-

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
  
-0-

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
  
0.00%

12 TYPE OF REPORTING PERSON\*  
  
CP

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

NEILL H. BROWNSTEIN  
###-##-####

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
(a)  
(b) X

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
U.S.A.

	5	SOLE VOTING POWER
		74,073 shs.
NUMBER OF		
SHARES	6	SHARED VOTING POWER
BENEFICIALLY		-0-
OWNED BY		
EACH	7	SOLE DISPOSITIVE POWER
REPORTING		74,073 shs.
PERSON		
WITH	8	SHARED DISPOSITIVE POWER
		-0-

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
74,073 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
0.29%

12 TYPE OF REPORTING PERSON\*  
IN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

ROBERT H. BUESCHER  
###-##-####

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
(a)  
(b) X

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
U.S.A.

5 SOLE VOTING POWER  
9,666 shs.  
NUMBER OF

6 SHARED VOTING POWER  
-0-  
SHARES BENEFICIALLY OWNED BY

7 SOLE DISPOSITIVE POWER  
9,666 shs.  
EACH REPORTING PERSON

8 SHARED DISPOSITIVE POWER  
-0-  
WITH

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
9,666 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
0.04%

12 TYPE OF REPORTING PERSON\*  
IN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

WILLIAM T. BURGIN  
###-##-####

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
(a)  
(b) X

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
U.S.A.

	5	SOLE VOTING POWER
		104,859 shs.
NUMBER OF		
SHARES	6	SHARED VOTING POWER
BENEFICIALLY		-0-
OWNED BY		
EACH	7	SOLE DISPOSITIVE POWER
REPORTING		104,859 shs.
PERSON		
WITH	8	SHARED DISPOSITIVE POWER
		-0-

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
104,859 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
0.41%

12 TYPE OF REPORTING PERSON\*  
IN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

G. FELDA HARDYMON  
###-##-####

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)  
(b) X

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

U.S.A.

5 SOLE VOTING POWER

34,545 shs.

NUMBER OF

SHARES  
BENEFICIALLY  
OWNED BY

6 SHARED VOTING POWER

-0-

EACH  
REPORTING  
PERSON

7 SOLE DISPOSITIVE POWER

34,545 shs.

WITH

8 SHARED DISPOSITIVE POWER

-0-

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

34,545 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

0.13%

12 TYPE OF REPORTING PERSON\*

IN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

CHRISTOPHER F.O. GABRIELI  
###-##-####

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*

(a)  
(b) X

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

U.S.A.

5 SOLE VOTING POWER

163,062 shs.

NUMBER OF

SHARES  
BENEFICIALLY  
OWNED BY

6 SHARED VOTING POWER

-0-

EACH  
REPORTING  
PERSON

7 SOLE DISPOSITIVE POWER

163,062 shs.

WITH

8 SHARED DISPOSITIVE POWER

-0-

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

163,062 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

0.63%

12 TYPE OF REPORTING PERSON\*

IN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

1 NAME OF REPORTING PERSON  
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

MICHAEL I. BARACH  
###-##-####

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\*  
(a)  
(b) X

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
U.S.A.

	5	SOLE VOTING POWER
		1,449 shs.
NUMBER OF		
SHARES	6	SHARED VOTING POWER
BENEFICIALLY		-0-
OWNED BY		
EACH	7	SOLE DISPOSITIVE POWER
REPORTING		1,449 shs.
PERSON		
WITH	8	SHARED DISPOSITIVE POWER
		-0-

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
1,449 shs.

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES\*

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9  
0.006%

12 TYPE OF REPORTING PERSON\*  
IN

\*SEE INSTRUCTIONS BEFORE FILLING OUT!

Item 1.

(a) Name of Issuer:

ISIS Pharmaceuticals, Inc.

(b) Address of Issuer's Principal Executive Office:

2280 B Faraday Avenue  
Carlsbad, California 92008

Item 2.

(a), (b) and (c) Name of Persons Filing, Address of Principal Business Office and Citizenship:

This statement is filed by Bessemer Venture Partners II L.P. and Bessemer Venture Partners III L.P. (collectively referred to as "Bessemer"), both Delaware limited partnerships having their principal office at 1025 Old Country Road, Suite 205, Westbury, New York, 11590. Bessemer's principal business is making venture capital investments for its own account and is carried on at its principal office.

This statement is also filed by Deer II & Co. LLC, a Delaware general partnership whose partners are Neill H. Brownstein, Robert H. Buescher, William T. Burgin, G. Felda Hardymon and Christopher Gabrieli, and by Deer III & Co. LLC, a Delaware general partnership whose partners are Neill Brownstein\*, Robert H. Buescher, William T. Burgin, G. Felda Hardymon, Christopher F.O. Gabrieli, Michael I. Barach and David J. Cowan. All of such individuals are United States citizens. This statement is also filed by each of such individuals (except David J. Cowan). Deer II & Co. LLC and Deer III & Co. LLC are, respectively, the General Partners of Bessemer Venture Partners II L.P. and Bessemer Venture Partners III L.P. and have their principal offices at the same address as Bessemer. The principal business of Deer II & Co. LLC and Deer III & Co. LLC is making venture capital investments for the account of Bessemer and is carried on at their principal offices, at 3000 Sand Hill Road, Menlo Park, CA 94025 and at 83 Walnut Street, Wellesley Hills, MA 02181-2101. Mr. Brownstein's and Mr. Cowan's principal business address is the Menlo Park address. Mr. Buescher's is the principal office of Bessemer. Mr. Burgin's, Mr. Hardymon's, Mr. Gabrieli's and Mr. Barach's principal business address is the Wellesley Hills address.

\*As of January 1, 1995 Mr. Brownstein became a Special General Partner of Bessemer III with no power to participate in the management of its affairs.

This statement is also filed by Bessemer Ventures, Inc. ("BVI"), a Delaware corporation which is the principal limited partner of Bessemer and whose principal business office is at 630 Fifth Avenue, New York, NY 10111. BVI is a wholly-owned subsidiary of Bessemer Securities Corporation, a Delaware corporation and a privately-held investment company, whose principal business address is the same as BVI's.

(d) Title of Class of Securities:

Common Stock

(e) CUSIP Number:

464330 0 10 9

Item 3. If this statement is filed pursuant to Rule 13d-1(b), or 13d-2(b), check whether the person filing is a:

Not Applicable

Item 4. Ownership as of December 31, 1995

Items 5 through 9 and Pages 2-12 of this Statement incorporated herein by reference.

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

Not applicable.

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

Not applicable.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company

Not applicable.

Item 8. Identification and Classification of Members of the Group

See the answer to Item 2(a), (b) and (c).

Item 9. Notice of Dissolution of Group

Not applicable.

Item I0. Certification

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

Dated: February 12, 1997

BESSEMER VENTURE PARTNERS II L.P.

By: Deer II & Co. LLC, General Partner

By: /s/ Robert H. Buescher

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Robert H. Buescher, Manager

DEER II & Co. LLC

By: /s/ Robert H. Buescher

-----  
Robert H. Buescher, Manager

BESSEMER VENTURE PARTNERS III L.P.

By: Deer III & Co. LLC, General Partner

By: /s/ Robert H. Buescher

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Robert H. Buescher, Manager

DEER III & Co. LLC

By: /s/ Robert H. Buescher

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Robert H. Buescher, Manager

BESSEMER VENTURES, INC.

By: \*

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Robert H. Buescher, Attorney-in-Fact

NEILL H. BROWNSTEIN

By: \*

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Robert H. Buescher, Attorney-in-Fact

