

REGISTRATION NO. 333-87669

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

AMENDMENT NO. 5
TO

FORM S-3

REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

BIOCRYST PHARMACEUTICALS, INC.

(Exact name of Registrant as specified in its Charter)

DELAWARE
(State or other jurisdiction of
incorporation or organization)

62-1413174
(I.R.S. Employer
Identification Number)

2190 PARKWAY LAKE DRIVE, BIRMINGHAM, ALABAMA 35244
(205) 444-4600
(Address, including zip code, and telephone number,
including area code, of Registrant's principal executive offices)

CHARLES E. BUGG, PH.D.
CHAIRMAN AND CHIEF EXECUTIVE OFFICER
BIOCRYST PHARMACEUTICALS, INC.
2190 PARKWAY LAKE DRIVE
BIRMINGHAM, ALABAMA 35244
(205) 444-4600
(Name, address, including zip code, and telephone number,
including area code, of agent for service of process)

COPIES TO:

RICHARD R. PLUMRIDGE, ESQ.
LUCI STALLER ALTMAN, ESQ.
BRUCE E. CUNNINGHAM, ESQ.
BROBECK, PHLEGER & HARRISON LLP
370 INTERLOCKEN BLVD., SUITE 500
BROOMFIELD, COLORADO 80021
(303) 410-2000

JOHN W. WHITE, ESQ.
CRAVATH, SWAINE & MOORE
WORLDWIDE PLAZA
825 EIGHTH AVENUE
NEW YORK, NEW YORK 10019-7475
(212) 474-1000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable on or after this Registration Statement is declared effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. / /

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. / /

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box

and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / /

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. / /

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. / /

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SECTION 8(A), MAY DETERMINE.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth all costs and expenses, other than the underwriting discounts and commissions, payable by the company in connection with the sale of common stock being registered hereby. All of the amounts shown are estimates except the SEC registration fee, the NASD filing fee and the Nasdaq National Market additional listing fee.

	AMOUNT TO BE PAID -----
SEC registration fee.....	\$ 15,985
NASD filing fee.....	6,250
Nasdaq additional listing of shares fee.....	17,500
Accounting fees and expenses.....	40,000
Legal fees and expenses.....	260,000
Printing and engraving expenses.....	150,000
Transfer Agent and registrar fees.....	5,000
Miscellaneous.....	55,265

Total.....	\$550,000 =====

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's Board of Directors to grant, indemnification to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended (the "Act"). Article Eight of the Registrant's Composite Certificate of Incorporation provides for indemnification of its directors and officers and permissible indemnification of employees and other agents to the maximum extent permitted by the Delaware General Corporation Law. The Registrant has liability insurance for its Directors and Officers.

ITEM 16. EXHIBITS

The following is a list of Exhibits filed as part of the Registration Statement:

- 1.1 Form of Underwriting Agreement.+
- 4.1 Specimen certificate for shares of the Registrant's Common Stock, incorporated herein by reference to Exhibit 4.1 the Registrant's Registration Statement No. 33-73868.
- 4.2 Provisions of the Composite Certificate of Incorporation and By-Laws of the Registrant defining rights of holders of Common Stock of the Registrant, incorporated herein by reference to Exhibits 3.1 and 3.2 to the Company's Form 10-Q for the second quarter ending June 30, 1995 dated August 11, 1995.
- 5.1 Opinion of Brobeck, Phleger & Harrison LLP.+
- 23.1 Consent of Brobeck, Phleger & Harrison LLP (included in the opinion filed as Exhibit 5.1).+
- 23.2 Consent of Ernst & Young LLP, independent accountants.+
- 23.3 Consent of Pollock, Vande Sande & Amernick, R.L.L.P., special patent counsel to the Registrant.++
- 24.1 Power of Attorney (included with signature page).+
- 27.1 Financial Data Schedule.+

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+ Previously filed

++Filed herewith.

ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions described in Item 15 above, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made of the securities offered hereby, a post-effective amendment to this Registration Statement;
- (i) To include any prospectus required by Section 10(a)(3) of the Act;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if,

in the aggregate, the changes in volume and

price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that the undertakings set forth in paragraphs (i) and (ii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 (the "Exchange Act") that are incorporated by reference in this registration statement.

(2) That, for the purpose of determining any liability under the Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on our behalf by the undersigned, thereunto duly authorized, in the City of Birmingham, State of Alabama, on November 2, 1999.

BIOCRYST PHARMACEUTICALS, INC.

By: /s/ CHARLES E. BUGG

 Charles E. Bugg, Ph.D. Chairman and Chief
 Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities indicated on November 2, 1999.

SIGNATURE

TITLE

----- SIGNATURE -----	----- TITLE -----
/s/ CHARLES E. BUGG ----- Charles E. Bugg, Ph.D. *	Chairman, Chief Executive Officer and Director (principal executive officer)
----- J. Claude Bennett, M.D. *	President, Chief Operating Officer and Director
----- John A. Montgomery, Ph.D. *	Senior Vice President, Secretary, Chief Scientific Officer and Director
----- Ronald E. Gray *	Chief Financial Officer (principal financial and accounting officer)
----- William W. Featheringill *	Director
----- Edwin A. Gee, Ph.D. *	Director
----- Zola P. Horovitz, Ph.D. *	Director
----- Joseph H. Sherrill, Jr. *	Director
----- William M. Spencer, III *	Director
----- Randolph C. Steer, M.D., Ph.D.	Director

*By: /s/ CHARLES E. BUGG

 Charles E. Bugg, Ph.D.
 ATTORNEY-IN-FACT**

** Pursuant to the power of attorney filed as part of the signature page to the
Registration Statement on Form S-3, No. 333-87669, filed September 23, 1999.

EXHIBIT INDEX

- 1.1 Form of Underwriting Agreement.+
- 4.1 Specimen certificate for shares of the Registrant's Common Stock, incorporated herein by reference to Exhibit 4.1 the Registrant's Registration Statement No. 33-73868.
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+ Previously filed

++Filed herewith.

CONSENT OF EXPERTS

We hereby consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3, No. 333-87669) and the related Prospectus of BioCryst Pharmaceuticals, Inc. for the registration of 2,300,000 shares of its common stock.

/s/ BURTON A. AMERNICK

Burton A. Amernick
Pollock, Vande Sande & Amernick,
R.L.L.P.

Washington, D.C.
November 2, 1999