CHICAGO

(City)

IL

1. Name and Address of Reporting Person*

(State)

60631

(Zip)

FORM 3

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF **SECURITIES**

OMB APPROVAL OMB Number: 3235-0104 Estimated average burden r response: 0.5

| | | | | | 3 | ECORITIES | | | | | hours pe | r response: | 0.5 |
|--|----------------------|---------------------------------------|-----------------|--|--------------------|---|----------------|--------------------------------|------------------------------------|--|--|--|--------|
| | | | | | | 6(a) of the Securities Exchange he Investment Company Act of | | .934 | | | | | |
| 1. Name and Ad ARCH VE | | ting Person* | <u> </u> | 2. Date of Event Requiring Staten Month/Day/Year 02/13/2015 | nent | 3. Issuer Name and Ticker or T Bellerophon Therape | rading Sy | | BLPH] | | | | |
| (Last) (First) (Middle) 8725 WEST HIGGINS ROAD, SUITE 290 | | | | 02/13/2013 | | 1 | | 10% Owner | | 5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) Form filed by One Reporting Person X Form filed by More than One Reporting Person | | | |
| (Street) CHICAGO IL 60631 | | | | | | Officer (give title Other (specify below) below) | | | | | | | |
| (City) | (State) | (Zip) | | able I Non | Dorivati | ve Securities Benefici | ally Ou | wnod | | | | | |
| 1. Title of Secu | rity (Instr. 4) | | • | able I - Non | 2. | Amount of Securities eneficially Owned (Instr. 4) | 3. Ov Form | vnersh n: Direc direct (| t (D) (Ins | lature tr. 5) | | Beneficial Own | ership |
| Common Sto | ck | | | | | 752,994 | | D(1)(2) | | | | | |
| | | | (e.c | | | Securities Beneficiall | | | s) | | | | |
| 1. Title of Derivative Security (Instr. 4) | | | ,,, | 2. Date Exercisable a Expiration Date (Month/Day/Year) | | | | ities 4. Co | | n O e Fo | 5. Ownership Form: Direct (D) | 6. Nature of Indirect Beneficial Ownershi (Instr. 5) | |
| | | | | Date Exercisable | Expiration Date | Title | or Nu of | nount mber ares | Price of Derivative Security | O | r Indirect) (Instr. 5) | | |
| 1. Name and Ad ARCH VE | | ting Person [*] UND VI LI | 2 | | | | | | | | | | |
| (Last) 8725 WEST | (First) HIGGINS R | OAD, SUITE | (Middle) 290 | | | | | | | | | | |
| (Street) | IL | | 60631 | | | | | | | | | | |
| (City) | (State |) | (Zip) | | | | | | | | | | |
| 1. Name and Ad ARCH VE | | ting Person* ARTNERS | VI LP | | | | | | | | | | |
| (Last) 8725 WEST | (First) HIGGINS R | OAD, SUITE | (Middle) 290 | | | | | | | | | | |
| (Street) CHICAGO | IL | | 60631 | | | | | | | | | | |
| (City) | (State |) | (Zip) | | | | | | | | | | |
| 1. Name and Ad | | ting Person* ARTNERS | VI LL | <u>C</u> | | | | | | | | | |
| (Last) 8725 WEST | (First) HIGGINS R | OAD, SUITE | (Middle) 290 | | | | | | | | | | |
| (Street) | | | | | | | | | | | | | |

| CRANDELL | <u>KEITH</u> | | | | | | | |
|-----------------------------------|----------------------|-----------------|--|--|--|--|--|--|
| (Last) | (First) | (Middle) | | | | | | |
| 8725 WEST HIGGINS ROAD, SUITE 290 | | | | | | | | |
| (Street) | | | | | | | | |
| CHICAGO | IL | 60631 | | | | | | |
| (City) | (State) | (Zip) | | | | | | |
| 1. Name and Address BYBEE CLI | ss of Reporting Pers | on [*] | | | | | | |
| (Last) | (First) | (Middle) | | | | | | |
| 8725 WEST HIGGINS ROAD, SUITE 290 | | | | | | | | |
| (Street) | | | | | | | | |
| CHICAGO | IL | 60631 | | | | | | |
| (City) | (State) | (Zip) | | | | | | |

Explanation of Responses:

1. ARCH Venture Partners VI, L.P. (the "GPLP"), as the sole general partner of ARCH Venture Fund VI, L.P. ("ARCH"), may be deemed to beneficially own certain of the shares held by ARCH. The GPLP disclaims beneficial ownership of all shares held by ARCH in which the GPLP does not have an actual pecuniary interest. ARCH Venture Partners VI, LLC (the "GPLLC"), as the sole general partner of the GPLP, may be deemed to beneficially own certain of the shares held by ARCH.

2. The GPLLC disclaims beneficial ownership of all shares held by ARCH in which it does not have an actual pecuniary interest. The managing directors of the GPLLC, Robert T. Nelsen, Keith Crandell and Clinton Bybee (together, the "Managing Directors"), are deemed to have voting and dispositive power over the shares held by ARCH, and may be deemed to beneficially own certain of the shares held by ARCH. The Managing Directors disclaim beneficial ownership of all shares held by ARCH in which they do not have an actual pecuniary interest.

/s/ Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director of 02/13/2015 the general partner of the general partner of ARCH /s/ Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director of 02/13/2015 the general partner of the general partner of GPLP /s/ Mark McDonnell, as Attorney-in-Fact for Keith Crandell, Managing Director of **GPLLC** /s/ Mark McDonnell, as Attorney-in-Fact for Keith 02/13/2015 Crandell /s/ Mark McDonnell, as Attorney-in-Fact for Clinton 02/13/2015 **Bybee** ** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- * If the form is filed by more than one reporting person, see Instruction 5 (b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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 Number.