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

FORM 8-K

CURRENT REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Earliest Event Reported: August 2, 2010

POSITRON CORPORATION (Exact Name of Registrant as Specified in Its Charter)

000-29449

Texas (State or Other Jurisdiction of Incorporation)

(Commission file Number)

76-0083622 (I.R.S. Employer Identification No.)

7715 Loma Ct., Suite A, Fishers., IN (Address of Principle Executive Offices) 46038 (Zip Code)

(317) 576-0183 (Registrant's Telephone Number, Including Area Code)

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

Written Communications pursuant to Rule 425 under Section Act (17 CFT 230.425)

Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12).

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b)).

Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.13e-4(c)).

Item 1.01 Entry into a Material Definitive Agreement.

On July 29, 2010, Positron Corporation (the "Registrant") entered into a Settlement Agreement and Mutual Release (the "Agreement") with certain investors (the "Investors") from whom the Registrant had purchased Callable Secured Convertible Notes in the original principal amount of \$1,300,000 (the "Notes"). The Investors had commenced an action against the Registrant to recover, principal, interest and penalties based upon the Registrant's failure to repay the Notes. Pursuant to the terms of the Agreement, the Registrant agreed to pay the Investors \$1,000,000 in cash and 8,500,000 shares of the Registrant's common stock in satisfaction of all claims. The Agreement also provides for mutual releases between the Registrant and the Investors as well as the termination of the Notes and related Securities Purchase Agreements.

Item 3.02 Unregistered Sales of Equity Securities.

See Item 1.01 of this Current Report on Form 8-K, which disclosure is incorporated herein by reference.

All of the securities set forth above were issued by the Company pursuant to Section 4(2) of the Securities Act of 1933, as amended, or the provisions of Rule 504 of Regulation D promulgated under the Securities Act. All such shares issued contained a restrictive legend and the holders confirmed that they were acquiring the shares for investment and without intent to distribute the shares. All of the purchasers were friends or business associates of the Company's management and all were experienced in making speculative investments, understood the risks associated with investments, and could afford a loss of the entire investment. The Company has never utilized an underwriter for an offering of its securities.

Item 9.01 Financial Statements and Exhibits.

- (d) Exhibits
- Exhibit #Description10.1Form of Settlement Agreement and Mutual Release

SIGNATURES

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES EXCHANGE ACT OF 1934, THE REGISTRANT HAS DULY CAUSED THIS REPORT TO BE SIGNED ON ITS BEHALF BY THE UNDERSIGNED THEREUNTO DULY AUTHORIZED.

POSITRON CORPORATION

Date: August 2, 2010

By:

/s/ Patrick Rooney Patrick Rooney Chief Executive Officer