



MRI Interventions, Inc.

1,589,580 Shares of Common Stock

This prospectus supplement relates to the prospectus dated October 11, 2016, as supplemented by prospectus supplement no. 1 dated November 9, 2016, prospectus supplement no. 2 dated March 9, 2017, prospectus supplement no. 3 dated April 27, 2017, prospectus supplement no. 4 dated April 28, 2017, prospectus supplement no. 5 dated May 9, 2017, prospectus supplement no. 6 dated May 11, 2017 and prospectus supplement no. 7 dated May 25, 2017, which permits the resale of up to 821,000 outstanding shares of our common stock, and 768,580 shares of our common stock issuable upon the exercise of outstanding warrants, by the selling securityholders identified in the prospectus, as amended and supplemented from time to time. We will pay the expenses of registering the shares of our common stock, but we are not selling any shares of common stock in this offering and therefore will not receive any proceeds from this offering. We will, however, receive the exercise price of the warrants, if and when the warrants are exercised for cash by the securityholders.

This prospectus supplement is being filed to update, amend and supplement the information previously included in the prospectus with the information contained in our Current Report on Form 8-K filed with the Securities and Exchange Commission (the "SEC") on May 30, 2017 (the "8-K"). Accordingly, we have attached the 8-K to this prospectus supplement. You should read this prospectus supplement together with the prospectus, which is to be delivered with this prospectus supplement.

Our common stock is traded in the over-the-counter market and is quoted on the OTCQB Marketplace and the OTC Bulletin Board under the symbol MRIC. On May 26, 2017, the last reported sale price of our common stock was \$3.20 per share.

We are an "emerging growth company" under the federal securities laws and are subject to reduced public company reporting requirements. Investing in our common stock involves risk. See "Risk Factors" beginning on page 6 of the prospectus, as amended and supplemented by the "Risk Factors" beginning on page 22 of our Annual Report on 10-K, filed with the SEC on March 9, 2017, to read about factors you should consider before buying shares of our common stock.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus or this prospectus supplement. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is May 30, 2017.

**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 Report (Date of earliest event reported): May 30, 2017 (May 26, 2017)

MRI INTERVENTIONS, INC.
(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction
of incorporation)

001-34822
(Commission
File Number)

58-2394628
(I.R.S. Employer
Identification Number)

5 Musick
Irvine, Ca. 92618
(Address of principal executive offices, zip code)

(949) 900-6833
(Registrant's telephone number, including area code)

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 the Securities Act (17 CFR 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 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 12b-2 under the Exchange Act (17 CFR 240.12b-2).

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 1.01. Entry into a Material Definitive Agreement.

On May 26, 2017, MRI Interventions, Inc. (the “Company”) completed its previously announced private placement of common stock and warrants (the “Financing Transaction”), pursuant to the terms of a Securities Purchase Agreement dated May 25, 2017 (the “Purchase Agreement”), by and among the Company and certain investors (collectively, the “Investors”). At the closing, in accordance with the terms and conditions of the Purchase Agreement, the Company sold to the Investors an aggregate of 6,625,000 units (the “Units”), with each unit consisting of: (i) one share of the Company’s common stock; and (ii) a warrant to purchase one share of the Company’s common stock (each, a “Warrant” and collectively, the “Warrants”).

In connection with the sale of the Units, the Company received aggregate gross proceeds of approximately \$13,250,000, before deducting placement agents’ fees of \$1,018,400 and offering expenses. In addition, the placement agents for the Financing Transaction received, in the aggregate, warrants (“Placement Agent Warrants”) to purchase up to approximately 509,200 shares of common stock.

The following is a brief summary of the Purchase Agreement, the Registration Rights Agreement and the Warrants, which are qualified in their entirety by reference to the full text of such documents.

Purchase Agreement

The Purchase Agreement contains representations and warranties by the Company and the Investors and covenants of the Company and the Investors (including indemnification from the Company in the event of breaches of its representations and warranties), which the Company believes are customary for transactions of this type.

Registration Rights Agreement

In connection with the Financing Transaction, the Company also entered into a Registration Rights Agreement, dated as of May 26, 2017, with each of the Investors, pursuant to which the Company is required to prepare and file a registration statement (the “Registration Statement”) with the Securities and Exchange Commission (the “SEC”) under the Securities Act of 1933, as amended (the “Securities Act”), covering the resale of the shares of common stock to be issued to the Investors under the Purchase Agreement as well as the shares of common stock underlying the Warrants and the Placement Agent Warrants. The Company will be required to file such Registration Statement on or before June 25, 2017 (the “Filing Deadline”). The Company will be required to use its best efforts to have the Registration Statement declared effective as soon as practicable. Pursuant to the Registration Rights Agreement, if: (i) the Registration Statement is not filed with the SEC on or prior to the Filing Deadline; (ii) the Registration Statement is not declared effective by the SEC on or prior to August 9, 2017 (or September 3, 2017 if the SEC determines to review the Registration Statement); or (iii) the Company fails to continuously maintain the effectiveness of the Registration Statement (with certain permitted exceptions), the Company will incur certain liquidated damages to the Investors. The Registration Rights Agreement also contains mutual indemnifications by the Company and each Investor, which the Company believes are customary for transactions of this type.

Warrants

The Warrants are exercisable, in full or in part, at any time prior to May 26, 2022, at an exercise price of \$2.20 per share. The Warrants provide for certain adjustments that may be made to the exercise price and the number of shares issuable upon exercise due to future corporate events. In the case of certain fundamental transactions affecting the Company, the holders of the Warrants, upon exercise of such warrants after such fundamental transaction, have the right to receive, in lieu of shares of the Company’s common stock, the same amount and kind of securities, cash or property that such holder would have been entitled to receive upon the occurrence of the fundamental transaction, had the Warrants been exercised immediately prior to such fundamental transaction. The Warrants contain a “cashless exercise” feature that allows the holders to exercise the warrants without a cash payment to the Company upon the terms set forth in the Warrants.

The Placement Agent Warrants have the same terms and conditions as the Warrants.

The foregoing description of the terms and conditions of the Purchase Agreement, the Registration Rights Agreement and the Warrants is only a summary and is qualified in its entirety by the full text of the Purchase Agreement, the Registration Rights Agreement and the Warrants, the forms of which were previously filed as Exhibits 10.1, 10.2 and 4.1, respectively, to the Company's Current Report on Form 8-K filed with the SEC on May 25, 2017.

Item 3.02. Unregistered Sales of Equity Securities.

The information set forth under Item 1.01 above is incorporated herein by reference.

In the Financing Transaction, the Units were issued and sold to "accredited investors" (as defined by Rule 501 under the Securities Act) in reliance upon exemptions from registration under the Securities Act afforded by Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated thereunder and corresponding provisions of state securities laws as well as Regulation S of the Securities Act. The Purchase Agreement contains representations to support the Company's reasonable belief that the Investors had access to information concerning the Company's operations and financial condition, that the Investors did not acquire the securities with a view to the distribution thereof in the absence of an effective registration statement or an applicable exemption from registration, and that the Investors are accredited investors. The Company relied upon the representations made by the Investors pursuant to the Purchase Agreement in determining that such exemptions were available. The Company intends to file a Form D in accordance with the requirements of Regulation D under the Securities Act in connection with the sale of the Units.

Item 7.01. Regulation FD Disclosure.

On May 30, 2017, the Company issued a press release announcing the closing of the Financing Transaction. A copy of the press release is furnished herewith as Exhibit 99.1.

Item 8.01. Other Events.

In connection with the Financing Transaction described in Items 1.01 and 3.02 of this Current Report on Form 8-K and the Purchase Agreement, pursuant to which the Company issued and sold to the Investors an aggregate of 6,625,000 Units, composed of an aggregate of 6,625,000 shares of the Company's common stock and warrants to purchase approximately 6,625,000 shares of the Company's common stock, for an aggregate purchase price of approximately \$13,250,000, the Company's stockholder equity (deficit) increased from a deficit of approximately \$2,200,000 to equity of approximately \$9,600,000 as of March 31, 2017, on a pro forma basis. In connection with the foregoing, an unaudited condensed consolidated pro forma balance sheet of the Company as of March 31, 2017 is attached as Exhibit 99.2 to this Current Report on Form 8-K.

The attached unaudited condensed consolidated pro forma financial information does not necessarily reflect the financial position or results of operations that would have actually resulted had the Financing Transaction occurred as of the date indicated, nor should it be taken as necessarily indicative of the future financial position or results of operations of the Company.

The unaudited condensed consolidated pro forma financial information should be read in conjunction with the Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed with the SEC on March 9, 2017 (the "10-K") and the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 filed with the SEC on May 9, 2017 (the "10-Q"). The unaudited condensed consolidated pro forma financial information gives effect to the Financing Transaction as if it had occurred as of March 31, 2017 for the purposes of the unaudited consolidated pro forma balance sheet.

The pro forma financial information is subject to risks and uncertainties, including those discussed in the Form 10-K and the Form 10-Q under the caption "Risk Factors".

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

See Exhibit Index immediately following signature page.

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 hereunto duly authorized.

Date: May 30, 2017

MRI INTERVENTIONS, INC.

By: /s/ Harold A. Hurwitz

Harold A. Hurwitz
Chief Financial Officer

EXHIBIT INDEX

Exhibit No.	Description
4.1 ⁽¹⁾	Form of Warrant
10.1 ⁽²⁾	Form of Securities Purchase Agreement by and between the Company and the Investors
10.2 ⁽³⁾	Form of Registration Rights Agreement by and between the Company and the Investors
99.1	Press Release dated May 30, 2017
99.2	Pro Forma Balance Sheet of MRI Interventions, Inc. as of March 31, 2017

⁽¹⁾ Filed as Exhibit 4.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 25, 2017 and incorporated herein by reference.

⁽²⁾ Filed as Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 25, 2017 and incorporated herein by reference.

⁽³⁾ Filed as Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on May 25, 2017 and incorporated herein by reference.



MRI Interventions Announces Closing of \$13.25 Million Private Placement

IRVINE, CA, May 30, 2017 – MRI Interventions, Inc. (OTCQB: MRIC) today announced the closing on May 26, 2017 of its previously disclosed private placement of equity units, which resulted in gross proceeds of \$13.25 million, before deducting placement agents' fees and estimated offering expenses.

The equity units are composed of an aggregate of 6,625,000 shares of MRI Interventions' common stock and warrants to purchase 6,625,000 shares of its common stock and were sold at a negotiated price of \$2.00 per unit. The exercise price of the warrants is \$2.20 per share, with the warrants being exercisable for a five-year period beginning on the original date of issuance.

The proceeds of the offering are expected to be used primarily for working capital and general corporate purposes, which may include expansion of sales and clinical teams commensurate with MRI Interventions' revenue growth, and for its participation in two recently announced development agreements with Mayo Clinic and Acoustic MedSystems.

Joseph Gunnar & Co., LLC acted as Lead Placement Agent and Brookline Capital Markets, a division of CIM Securities, LLC, acted as Co-Placement Agent for the transaction.

The securities offered and sold by MRI Interventions in the private placement were not registered under the Securities Act of 1933 or state securities laws and may not be offered or sold in the United States absent registration with the U.S. Securities and Exchange Commission or an applicable exemption from such registration requirements. MRI Interventions has agreed to file a registration statement with the Securities and Exchange Commission covering the resale of the shares of common stock, including shares of common stock issuable upon exercise of the warrants, to be issued in the private placement. Any resale of MRI Interventions' securities under such resale registration statement will be made only by means of a prospectus.

This press release does not constitute an offer to sell or the solicitation of an offer to buy the securities, nor will there be any sale of the securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of such jurisdiction.

About MRI Interventions, Inc.

Building on the imaging power of magnetic resonance imaging ("MRI"), MRI Interventions is creating innovative platforms for performing the next generation of minimally invasive surgical procedures in the brain. The ClearPoint Neuro Navigation System, which has received 510(k) clearance and is CE marked, utilizes a hospital's existing diagnostic or intraoperative MRI suite to enable a range of minimally invasive procedures in the brain. For more information, please visit www.mriinterventions.com.

Forward-Looking Statements

This press release contains forward-looking statements based upon the Company's current expectations. Forward-looking statements include, without limitation, all statements relating to the use of proceeds from the private placement transaction as described in this press release. Forward-looking statements are subject to risks and uncertainties, and the Company's actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of such risks and uncertainties. You should not place undue reliance on forward-looking statements, which apply only as of the date of this press release. The Company's Annual Report on Form 10-K for the year ended December 31, 2016 filed with the Securities and Exchange Commission on March 9, 2017 and the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017 filed with the Securities and Exchange Commission on May 9, 2017 contain, under the heading "Risk Factors" a comprehensive description of risks to which the Company is subject. The Company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in its expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based.

Contact Information:

MRI Interventions, Inc.
Harold A. Hurwitz, CFO, (949) 900-6833

MRI INTERVENTIONS, INC.
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

	March 31, 2017	Pro Forma Adjustments	Pro Forma March 31, 2017
ASSETS			
Current Assets:			
Cash and cash equivalents	\$ 1,969,597	\$ 12,068,105 ⁽¹⁾	\$ 14,037,702
Accounts receivable	1,009,775		1,009,775
Inventory, net	1,809,020		1,809,020
Prepaid expenses and other current assets	95,625		95,625
Total current assets	<u>4,884,017</u>	<u>12,068,105</u>	<u>16,952,122</u>
Property and equipment, net	383,534		383,534
Software license inventory	906,900		906,900
Other assets	16,300		16,300
Total assets	<u>\$ 6,190,751</u>	<u>\$ 12,068,105</u>	<u>\$ 18,258,856</u>
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)			
Current liabilities:			
Accounts payable	\$ 1,308,056	\$	\$ 1,308,056
Accrued compensation	811,951		811,951
Other accrued liabilities	618,839		618,839
Derivative liabilities	224,219	252,919 ⁽²⁾	477,138
Deferred product and service revenues	263,097		263,097
Total current liabilities	<u>3,226,162</u>	<u>252,919</u>	<u>3,479,081</u>
Accrued interest	577,125		577,125
Senior secured note payable	2,000,000		2,000,000
2014 junior secured notes payable, net of unamortized discount and deferred issuance costs	1,814,312		1,814,312
2010 junior secured notes payable, net of unamortized discount	778,064		778,064
Total liabilities	<u>8,395,663</u>	<u>252,919</u>	<u>8,648,582</u>
Commitments and contingencies			
Stockholders' deficit:			
Preferred stock	-		-
Common stock	36,220	66,250 ⁽¹⁾	102,470
Additional paid-in capital	93,283,370	12,001,855 ⁽¹⁾	105,285,225
Accumulated deficit	(95,524,502)	(252,919) ⁽²⁾	(95,777,421)
Total stockholders' equity (deficit)	<u>(2,204,912)</u>	<u>11,815,186</u>	<u>9,610,274</u>
Total liabilities and stockholders' equity (deficit)	<u>\$ 6,190,751</u>	<u>\$ 12,068,105</u>	<u>\$ 18,258,856</u>

(1) Reflects the receipt of net proceeds of \$12,068,105 in the Financing Transaction.

(2) Reflects the change in value of certain common stock warrants accounted for as derivative liabilities due to their net-cash settlement provisions, which provisions were triggered by the Financing Transaction.