



MRI Interventions, Inc.

22,885,855 Shares of Common Stock

This prospectus supplement relates to the prospectus dated January 26, 2015, as supplemented by prospectus supplement no. 1 dated March 17, 2015, prospectus supplement no. 2 dated March 17, 2015, prospectus supplement no. 3 dated March 31, 2015, prospectus supplement no. 4 dated April 17, 2015 and prospectus supplement no. 5 dated May 7, 2010, which permits the resale of up to 15,556,398 outstanding shares of our common stock, and 7,329,457 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, 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 on May 8, 2015 (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 OTC Markets and the OTC Bulletin Board under the symbol MRIC. On May 6, 2015, the last reported sale price of our common stock was \$1.03 per share.

We are an "emerging growth company" under the federal securities laws and will be 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 20 of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, which is included in prospectus supplement no. 5, to read about factors you should consider before buying shares of our common stock.

Neither the Securities and Exchange Commission 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 8, 2015.

**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 8, 2015

MRI INTERVENTIONS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation)

000-54575

(Commission File Number)

58-2394628

(I.R.S. Employer Identification No.)

5 Musick

Irvine, California

(Address of principal executive offices)

92618

(Zip Code)

(949) 900-6833

(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- 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))
-
-

Item 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

As was previously announced and disclosed, Harold A. Hurwitz succeeded David W. Carlson as the Chief Financial Officer of MRI Interventions, Inc. (the "Company") on May 8, 2015, the day immediately after the filing date of the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2015. Mr. Hurwitz also succeeded Mr. Carlson as the Company's designated principal financial officer and principal accounting officer for Securities and Exchange Commission ("SEC") reporting purposes.

The principal terms of Mr. Hurwitz's employment agreement with the Company are summarized in a Current Report on Form 8-K filed by the Company on March 17, 2015. A copy of Mr. Hurwitz's employment agreement was filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2015.

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.

MRI INTERVENTIONS, INC.

By: /s/ Oscar Thomas
Oscar Thomas
Vice President, Business Affairs

Date: May 8, 2015

EXHIBIT INDEX

Exhibit No.	Description
10.1 ⁽¹⁾	Employment Offer Letter between MRI Interventions, Inc. and Harold A. Hurwitz
10.2 ⁽²⁾	Non-Competition Agreement between Harold A. Hurwitz and MRI Interventions, Inc.
10.3 ⁽³⁾	Non-Disclosure and Proprietary Rights Agreement between Harold A. Hurwitz and MRI Interventions, Inc.
10.4 ⁽⁴⁾	Form of Indemnification Agreement

⁽¹⁾ Filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2015, and incorporated herein by reference.

⁽²⁾ Filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2015, and incorporated herein by reference.

⁽³⁾ Filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q filed with the SEC on May 7, 2015, and incorporated herein by reference.

⁽⁴⁾ Filed as Exhibit 10.8 to the Company's registration statement on Form 10 filed with the SEC on December 28, 2011, and incorporated herein by reference.