

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: June 1, 2012
(Date of earliest event reported)

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

Delaware
(State or other jurisdiction
of incorporation or organization)

000-54575
(Commission File
Number)

58-2394628
(I.R.S. Employer
Identification No.)

One Commerce Square, Suite 2550
Memphis, Tennessee
(Address of principal executive offices)

38103
(Zip Code)

(901) 522-9300
(Registrant's telephone number, including area code)

Not Applicable
(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 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))
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Item 7.01. Regulation FD Disclosure.

On June 1, 2012, MRI Interventions, Inc. (the “Company”) issued a press release announcing that it will be exhibiting its ClearPoint® Neuro Intervention System at the American Society for Stereotactic and Functional Neurosurgery Biennial Meeting to be held June 3-6, 2012 in San Francisco, California. A copy of the press release is furnished herewith as Exhibit 99.1.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

See Exhibit Index immediately following signature page.

SIGNATURE

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 L. Thomas

Oscar L. Thomas

Vice President, Business Affairs

Date: June 1, 2012

EXHIBIT INDEX

| Exhibit No. | Description |
|--------------------|---|
| 99.1 | Press Release of the Company dated June 1, 2012 |



MRI Interventions to Exhibit at American Society for Stereotactic and Functional Neurosurgery Biennial Meeting

MEMPHIS, TENNESSEE, June 1, 2012 – MRI Interventions, Inc. (OTCBB: MRIC), a commercial stage medical technology company focused on creating innovative platforms for performing the next generation of minimally invasive surgical procedures in the brain and heart, today announced that it will be exhibiting its ClearPoint® Neuro Intervention System at the 2012 American Society for Stereotactic and Functional Neurosurgery (ASSFN) Biennial Meeting to be held June 3-6 in San Francisco, California.

According to the ASSFN, its Biennial Meeting “emphasizes cutting-edge clinical applications and recent discoveries in the basic neurosciences and the impact they will have on future advances in stereotactic and functional neurosurgery.”

About MRI Interventions, Inc.

Founded in 1998, MRI Interventions, Inc. is creating innovative platforms for performing the next generation of minimally invasive surgical procedures in the brain and heart. Utilizing a hospital’s existing MRI suite, the company’s FDA-cleared ClearPoint® system is designed to enable a range of minimally invasive procedures in the brain. In partnership with Siemens Healthcare, MRI Interventions is developing the ClearTrace™ system to enable MRI-guided catheter ablations to treat cardiac arrhythmias, including atrial fibrillation. Building on the imaging power of MRI, the company’s interventional platforms strive to improve patient care while reducing procedure costs and times. MRI Interventions is also working with Boston Scientific Corporation to incorporate its MRI-safety technologies into Boston Scientific’s implantable leads for cardiac and neurological applications. For more information, please visit www.MRIinterventions.com.

Contacts

MRI Interventions, Inc.
David Carlson, CFO 901.522.9300

Forward-Looking Statements

Certain matters in this press release may constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements often can be identified by words such as “anticipates,” “believes,” “could,” “estimates,” “expects,” “intends,” “may,” “plans,” “potential,” “predicts,” “projects,” “should,” “will,” “would,” or the negative of these words or other words of similar meaning. Forward-looking statements by their nature address matters that, to different degrees, are uncertain and involve risk. Uncertainties and risks may cause MRI Interventions’ actual results and the timing of events to differ materially from those expressed in or implied by MRI Interventions’ forward-looking statements. For MRI Interventions, particular uncertainties and risks include, among others: demand and market acceptance of its products; its ability to successfully complete the development of, and to obtain regulatory clearance or approval for, future products, including its current product candidates; availability of third party reimbursement; the sufficiency of its cash resources to maintain planned commercialization efforts and research and development programs; future actions of the FDA or any other regulatory body that could impact product development, manufacturing or sale; its ability to protect and enforce its intellectual property rights; its dependence on collaboration partners; the retention of its sales representatives and independent distributor; the impact of competitive products and pricing; and the impact of the commercial and credit environment on it and its customers and suppliers. More detailed information on these and additional factors that could affect MRI Interventions’ actual results are described in MRI Interventions’ filings with the Securities and Exchange Commission, including, without limitation, the quarterly report on Form 10-Q for the quarterly period ended March 31, 2012. Except as required by law, MRI Interventions undertakes no obligation to publicly update or revise any forward-looking statements contained in this press release to reflect any change in MRI Interventions’ expectations or any change in events, conditions or circumstances on which any such statements are based.