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): June 4, 2012

Marshall Edwards, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**000-50484**	**51-0407811**
(State or other jurisdiction of incorporation or organization)	**(Commission File Number)**	**(I.R.S. Employer Identification No.)**

11975 El Camino Real, Suite 101, San Diego, California 92130
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (858) 792-6300

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 (*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 8.01 Other Events.

On June 4, 2012, Marshall Edwards, Inc. (the "Company"), announced results from a Phase I clinical trial of its lead drug candidate ME-143 in patients with solid refractory tumors. The data were presented at the American Society of Clinical Oncology Annual Meeting on June 4, 2012; a copy of the poster presentation, entitled "ME-143, a novel inhibitor of tumor-specific NADH oxidase (tNOX): Results from a first-in-human phase I study," is available at www.marshalledwardsinc.com.

The Phase I trial of ME-143 was initiated in September 2011 following the approval of an Investigational New Drug (IND) application by the U.S. Food and Drug Administration. The open label trial was designed to evaluate the safety and tolerability of intravenous ME-143, the Company's next-generation NADH oxidase inhibitor, in patients with refractory solid tumors and characterize its pharmacokinetic profile. A total of 15 patients were enrolled in escalating dose cohorts of 2.5 mg/kg, 5 mg/kg, 10 mg/kg and 20 mg/kg. The median number of prior therapies was four. Stable disease was observed in one patient at more than 15 weeks, which is comparable to Phase I studies of Phenoxodiol, the Company's first-generation NADH oxidase inhibitor, in which stable disease was also the best response observed. With the exception of a serious infusion reaction in one patient at the highest dose level, ME-143 was generally well tolerated at all dose levels on a weekly dosing schedule and the maximum tolerated dose was defined as 20 mg/kg.

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.

MARSHALL EDWARDS, INC.

By: /s/ Thomas M. Zech
Thomas M. Zech
Chief Financial Officer

Dated: June 5, 2012