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): April 10, 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 April 10, 2012, Marshall Edwards, Inc. (the "Company"), announced that it has received approval from the U.S Food and Drug Administration of its Investigational New Drug application for ME-344, the Company's lead mitochondrial inhibitor. The Company is now in the process of initiating a Phase I clinical trial of intravenous ME-344 in patients with solid refractory tumors.

The Phase I clinical trial of ME-344 is being conducted in collaboration with the Sarah Cannon Research Institute. The open-label, dose-escalation trial will evaluate the safety and tolerability of intravenous ME-344 in patients with refractory solid tumors. In addition, the trial is designed to characterize its pharmacokinetic profile and describe any preliminary clinical anti-tumor activity observed. Patients will be administered intravenous infusions of ME-344 once weekly for three weeks and, after safety assessment, may continue weekly dosing if a clinical benefit is determined. The trial is expected to enroll up to 24 patients at three sites. Additional information regarding the trial, including enrollment criteria and site information, is available on the U.S. National Institutes of Health clinical trials database at www.clinicaltrials.gov.

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/ Daniel P. Gold
Daniel P. Gold
President and Chief Executive Officer

Dated: April 11, 2012