MARSHALL EDWARDS INC
Pioneering new therapies for cancer

Ausio Pharmaceuticals, LLC
Medicines for an Aging Population™

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MARSHALL EDWARDS AND AUSIO PHARMACEUTICALS ANNOUNCE EXCLUSIVE LICENSE AGREEMENT

San Diego and Cincinnati – October 27, 2011 – Marshall Edwards, Inc.(Nasdaq: MSHL), an oncology company focused on the clinical development of novel therapeutics targeting cancer metabolism, and Ausio Pharmaceuticals, LLC, a biopharmaceutical company focused on the development of safe and effective medicines for the aging population, announced today the signing of an exclusive, royalty-bearing license agreement.

The agreement gives Ausio exclusive, worldwide rights under certain Marshall Edwards patents to develop, manufacture and sell products utilizing the isoflavone metabolite known as equol for non-oncology applications. In exchange, Marshall Edwards is entitled to receive royalty payments on sales ofany potential Ausioproductsthat containequol. In addition, the agreement gives Marshall Edwards a royalty-free license to certain issued manufacturing-related intellectual property owned by Ausio.Further terms of the agreement were not disclosed.

“We are very pleased to enter into this licensing agreement with Ausio, our first since completing the acquisition of our isoflavone-based intellectual property portfolio earlier this year,” said Daniel P. Gold, Ph.D., President and Chief Executive Officer of Marshall Edwards.“This agreement demonstrates our commitment to maximizing the value of these assetswhile maintaining our focus on the clinical development of our two current lead oncology drug candidates, ME-143 and ME-344.”

“This exclusive license to Marshall Edward’s worldwide patents claiming the composition and therapeutic uses of equol further strengthens our global patent portfolio for S- and R-equol,” said Richard L. Jackson, Ph.D., President and Chief Executive Officer ofAusio Pharmaceuticals. “S-equol, the S enantiomer of equol, is a first-in-class, non-hormonal, non-steroidal estrogen receptor βagonist that is in Phase 2 clinical development for the treatment of vasomotor symptoms in postmenopausal women and benign prostatic hyperplasia in men, and for various topical uses.”

About Ausio Pharmaceuticals

Ausio Pharmaceuticals, LLC, is a private biotechnology development company focused on the advancement of safe and effective medicines for the aging population. Ausio was founded in 2006 by Richard Jackson, Ph.D. based on technologies licensed from the Australian Health and Nutrition Association and Cincinnati Children’s Hospital Medical Center. The Company has garnered a strong patent position for its lead compound, AUS 131 (also referred to as S-equol). It has rapidly developed AUS-131 by working with excellent service providers. Ausio’s strategic

goal is to collaborate with international pharmaceutical partners for AUS-131 in the U.S. and other markets worldwide. For further information on Ausio, please visit the Company's website atwww.ausiopharma.com.

About Marshall Edwards

Marshall Edwards, Inc. (Nasdaq: MSHL) is a San Diego-based oncology company focused on the clinical development of novel anti-cancer therapeutics. The Company's lead programs focus on two families of small molecules that result in the inhibition of tumor cell metabolism. The first and most advanced is a NADH oxidase inhibitor program that includes lead candidate ME-143. The second is a mitochondrial inhibitor program that includes lead candidate ME-344.The Company initiated a Phase I clinical trial of intravenous ME-143 in September 2011 and expects to submit an IND application for ME-344 by the first quarter of 2012. For more information, please visit www.marshalledwardsinc.com.

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Under U.S. law, a new drug cannot be marketed until it has been investigated in clinical trials and approved by the FDA as being safe and effective for the intended use. Statements included in this press release that are not historical in nature are "forward-looking statements" within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. You should be aware that our actual results could differ materially from those contained in the forward-looking statements, which are based on management's current expectations and are subject to a number of risks and uncertainties, including, but not limited to, our failure to successfully commercialize our product candidates; costs and delays in the development and/or FDA approval, or the failure to obtain such approval, of our product candidates; uncertainties or differences in interpretation in clinical trial results; our inability to maintain or enter into, and the risks resulting from our dependence upon, collaboration or contractual arrangements necessary for the development, manufacture, commercialization, marketing, sales and distribution of any products; competitive factors; our inability to protect our patents or proprietary rights and obtain necessary rights to third party patents and intellectual property to operate our business; our inability to operate our business without infringing the patents and proprietary rights of others; general economic conditions; the failure of any products to gain market acceptance; our inability to obtain any additional required financing; technological changes; government regulation; changes in industry practice; and one-time events. We do not intend to update any of these factors or to publicly announce the results of any revisions to these forward-looking statements.