

Medgenics, Inc.

('Medgenics' or the 'Company')

PATIENT NEARING UNPRECEDENTED 11 MONTHS OF ANEMIA RELIEF IN CLINICAL TRIAL FROM SINGLE TREATMENT OF BIOPUMP TISSUE TECHNOLOGY

NEWS FOLLOWS SIGNIFICANT INTEREST OF STRATEGIC PARTNER FOR NEW APPLICATION

- EPODURE patient approaching 11 months continuous anemia relief from single treatment, and reaching one year anniversary without any injections of EPO;
- Significant new interest from major pharmaceutical companies to develop a Biopump for new applications;
- Serious new interest from institutional investors; and
- Medgenics awarded \$1.3 million Israeli government grant.

August 27, 2009 - Medgenics (AIM:MEDG, MEDU) is pleased to announce that one of the patients, who was treated with the Company's EPODURE tissue Biopumps almost 11 months ago, continues to be effectively treated for anemia without a single erythropoietin (EPO) injection. This patient (#2) was dependent on frequent injections of the therapeutic protein (EPO) for the 18 months prior to receiving a single administration of 3 tiny EPODURE tissue Biopumps in the Company's phase I/II anemia trial in Israel. He has now gone a full year since his last EPO injection, while his hemoglobin level has been continuously maintained within the target range of 10-12 g/dl for this period. By contrast, conventional anemia treatment by EPO injections must be repeated up to 3 times every week to provide sustained treatment. To the best of the Directors' knowledge, nothing approaching EPODURE'S length of sustained anemia relief in patients has been shown from a single treatment of any other kind.

The patient (#2), stated:

*"For me the treatment has been and continues to be successful, without complications or discomfort. At 72 years old, I continue to do physical work in the citrus groves several hours a day, but unlike in the previous year, I have not needed injections. The treatment has improved my quality of life."*

Medgenics' unique tissue-based EPODURE Biopump platform technology is proving to be effective in maintaining hemoglobin levels within the target range for many months in most of the patients treated so far, even at lowest dose of treatment, according to internationally renowned nephrologist, Dr. Anatole Besarab, who is a member of Medgenics' Scientific Advisory Board. The Company plans to present the study findings at the upcoming American Society of Nephrology meeting in October.

Dr. Besarab has said:

*"With a patient now nearing 12 months without EPO injections and others for more than 6 months, it is becoming clearer that the EPODURE Biopump is able to produce sufficient erythropoietin to effectively elevate and then sustain hemoglobin levels in patients with sufficient administered dose. I am not aware of any other technology that can achieve such prolonged and sustained therapy from a single treatment. Additional studies are needed in a broader range of patients, and we look forward to them to further confirm these very positive results."*

Medgenics has also recently moved significantly ahead in discussions with major pharmaceutical companies and with institutional investment funds.

Advanced discussions are now underway towards potential partnership in the coming months to co-develop a Biopump producing Factor VIII protein for the treatment of hemophilia, a market greater than \$3.5b/year (La Marie 2007). In addition, the Company has recently entered advanced discussions with institutional investors interested in multimillion dollar investment in Medgenics in the coming months. Medgenics is also in active due diligence with an Asian biopharma company that has conveyed its written interest in a combined investment in the Company and licensing agreement for collaboration in certain Biopump applications in selected Asian markets to be agreed. The Board is also pleased by recent serious interest by companies in other new applications of the Biopump platform, and believes that such interest demonstrates the attractiveness of the Biopump platform for strategic partners.

The Directors believe that these discussions could lead to concrete steps in the coming months.

In addition to the closing and commitment of additional funds announced last week, which brought the total to \$520,000, Medgenics notes that it was awarded a government grant in Q2/09 of \$1.3 million from the Office of the Chief Scientist (OCS) at the Ministry of Industry, Trade and Labor of Israel. These funds will be received as government participation in approved R & D expenses incurred during the period April 2009 to March 2010. The OCS awards grants to industry in Israel to advance technological innovations. This is the fourth consecutive year that Medgenics has received this respected grant.

Dr. Andrew Pearlman, CEO of Medgenics said

*"We are excited that we have a patient who is now reaching a full year of effective anemia treatment without any EPO injections and with only a single treatment of EPODURE. In this period a typical patient in the U.S. being treated per the FDA guidelines for EPO administration would receive up to 150 injections. Month by month we have drawn growing encouragement from the continuing positive results of the Biopump anemia study. We are pleased by the significant progress with potential partners and institutional investors which gives us great hope that this will yield concrete results in the coming months. Meanwhile, the Company continues its focused efforts to raise several million US\$ in the coming months to enable it to continue and expand the clinical trial and our other operations and to realize the potential of the great opportunities it now has."*

The Company would also like to clarify that, further to the announcement made on 20 August 2009, included within the \$55,000 debenture investment by "shareholders who are physicians with expertise in the clinical field addressed by Medgenics' lead product, EPODURE" was an investment of US \$5,000 from Stephen McMurray, a director of the Company.

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#### **NOTES TO EDITORS:**

Medgenics, Inc. is a clinical-stage biopharmaceutical company developing its unique tissue-based Biopump platform technology to provide sustained-action protein therapy for the treatment of a range of chronic diseases.

The Biopump is a toothpick sized sliver of the patient's own dermal tissue obtained under local anesthetic, that has been processed within 2 weeks to become a unit producing a selected protein for a specific clinical application. Injected under the skin, the Biopump produces and delivers the therapeutic protein to the patient for several months.

Medgenics currently has two products in development based on this technology:

- EPODURE – producing erythropoietin (EPO) to treat anemia
- INFRADURE – producing interferon-alpha (IFN-a) to treat Hepatitis-C

The Company's ongoing Phase I/II clinical trial for EPODURE in anemic patients continues to demonstrate proof of concept of the Biopump. Designed to produce and deliver a therapeutic dose of EPO steadily for up to six months or more, EPODURE Biopumps are already maintaining effective anemia treatment for more than 10 months in earliest patients in the ongoing study, even with low dose administered.

Medgenics intends to develop its innovative products and bring them to market via multiple strategic partnerships with major pharmaceutical and/or medical device companies, starting with EPODURE and INFRADURE.

Medgenics plans to raise the requisite funds during 2009/10 to commence a Phase I/II trial of INFRADURE in Hepatitis-C patients in Israel during 2010. The Company hopes that partnering discussions will lead to collaboration also in the next stage of EPODURE development, likely to be a Phase IIb multicenter study in anemic patients.

Beyond these, Medgenics plans to develop and/or out-license a pipeline of future Biopump products targeting the large and rapidly growing global protein therapy market, which is forecast to reach US \$87 billion by 2010. Other potential areas include multiple sclerosis (interferon- $\beta$ ), hemophilia (Factor VIII), pediatric growth hormone deficiency (human growth hormone) and diabetes (insulin).

Founded in 2000, Medgenics is a US-incorporated company with major operations in Misgav, Israel. Medgenics was admitted to the London AIM in December 2007 (AIM: MEDG and AIM: MEDU).

[www.medgenics.com](http://www.medgenics.com)

#### **CAUTIONARY NOTICE REGARDING FORWARD-LOOKING STATEMENTS**

*This release contains forward-looking statements, which include all statements other than statements of historical fact, including (without limitation) those regarding the Company's financial position, business strategy, plans and objectives of management for future operations. These statements relate to future events, prospects, developments and strategies. Forward-looking statements are sometimes identified by their use of the terms and phrases such as "estimate," "project," "intend," "forecast," "anticipate," "plan," "planning," "expect," "believe," "will," "will likely," "should," "could," "would," "may" or the negative of such terms and other comparable terminology. All such forward-looking statements are based on current expectations and are subject to risks and uncertainties. Should any of these risks or uncertainties materialize, or should any of the Company's assumptions prove incorrect, actual results may differ materially from those included within these forward-looking statements. Accordingly, no undue reliance should be placed on these forward-looking statements, which speak only as of the date made. The Company expressly disclaims any obligation or undertaking to disseminate any updates or revisions to any forward-looking statements contained herein to reflect any change in the Company's expectations with regard thereto or any change in events, conditions or circumstances on which any such statements are based. As a result of these factors, the events described in the forward-looking statements contained in this release may not occur.*