



Medgenics, Inc.
('Medgenics' or the 'Company')

**MEDGENICS GRANTED APPROVAL FOR EXTENSION OF ANAEMIA TRIAL TO MAJOR
NEW MEDICAL CENTRE**

Misgav, Israel and London, UK –27 April 2010 — Medgenics (AIM: MEDG, MEDU) is pleased to announce that it has received approval from Israel’s Ministry of Health (MOH) to proceed with higher dose groups in the phase I-II clinical trial of its novel sustained anaemia treatment, EPODURE, at an additional new site, the Tel Aviv Sourasky Medical Centre, one of the largest teaching hospitals in Israel. Following the first closing of the Company’s interim fund raising, as announced on 5 March 2010, patient recruitment will commence shortly for the new centre, with the first patients expected to receive their Biopumps within a few weeks of enrollment. Medgenics has already reported sustained anaemia treatment of unprecedented duration from a single treatment in most patients in the low dose group in this study and hopes to prove the efficacy of EPODURE further in this higher dose study.

The new higher dose study groups aim to assess the safety and efficacy of EPODURE at increased, controlled dose ranges, noting that among the seven patients already treated in the Company’s clinical trial to date, no signs of adverse reactions have been noted, and all patients tolerated all study procedures very well. From the clinical efficacy perspective, the six patients in the low dose group received sufficient EPODURE Biopumps to provide the lowest recommended dosage of erythropoietin (EPO) on a continuous basis: 20 EPO units or IU/kg/day. All patients showed delivery of active EPO, with most showing sustained elevation of haemoglobin levels (the primary endpoint) in the target range of 10-12 g/dl for 6-12 months, without receiving any further injections of EPO. One of these patients maintained haemoglobin levels in the normal range for more than 18 months without any EPO injections. The seventh patient has already received the midrange dose of 40 IU/kg/day and also maintained haemoglobin levels for six months without adverse events.

Medgenics’ unique platform approach to providing safer, more effective and lower cost protein therapy uses the patient’s own tissue to act as a biological pump or “Biopump” to continuously produce their own therapeutic proteins. Needle biopsies are taken from the lower layer of the patient’s skin under local anesthetic, and processed during 10-14 days to become tissue biofactories producing the required protein. The requisite number of Biopumps are then injected under the patient’s skin to provide sustained protein production and delivery for many months.

In the next dose group of the study, sufficient EPODURE Biopumps will be administered to each patient to provide 40 IU/kg/per day or 60 IU/kg per day, which may enable more of the patients to maintain haemoglobin in the target range for extended periods of time. Dr. Doron Schwartz, Head of the Nephrology department at the centre, as the new Principal Investigator, has already recruited the active support of his department for the study.

Commenting on the approval, Dr. Andrew Pearlman, Chief Executive Officer of Medgenics, said:

“The extension of our study to one of Israel’s largest and most prestigious medical centres is an important milestone for EPODURE and the Medgenics Biopump platform technology for the continuous production and delivery of therapeutic proteins in the patient. This important step has been made possible by the encouraging results achieved to date, together with the first closing of our current round of fundraising, and we look forward to moving ahead on this and other steps in our program as additional funds are raised in the coming months.

The enthusiastic involvement of Dr. Schwartz and his department is particularly welcomed as we proceed towards completion of this trial in a timely manner, and we hope that we will now have more rapid patient recruitment than we have had to date.

Given the very encouraging results at low dose levels, we are looking much forward to seeing the results from the higher doses in this trial.”

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NOTES TO EDITORS:

Medgenics is a pre-revenue, commercialization stage biopharmaceutical company developing its unique tissue-based Biopump platform technology capable of producing and delivering months of sustained protein therapy. A single administration of Biopump has already been shown to provide at least 6-12 months of safe, effective, treatment in its first application in patients. Biopumps could potentially provide safer, more effective and lower cost treatment for a wide range of chronic diseases. The Company, which has signed its first commercial development agreement with a major Pharmaceutical company which is now in progress, currently has three products in development based on this technology and addressing the indications of:

- Anaemia - using EPODURE, a Biopump producing erythropoietin (EPO) – Has proven concept in clinical trials.
- Hepatitis-C - using INFRADURE - a Biopump producing interferon-alpha (IFN- α) - Proven in the lab, in preclinical preparations.
- Haemophilia - using a Biopump to produce clotting Factor VIII - under development with a major Pharmaceutical company that is a leader in the haemophilia market.

In the Company's Phase I/II clinical trial using EPODURE to treat anaemia in patients with chronic kidney disease, 6-12 months of effective anaemia treatment from a single treatment of a few Biopumps has already been shown in most of the patients treated, even at the lowest administered dose. Taken together with the EPODURE results, the production of IFN- α by INFRADURE demonstrates that the Biopump is a platform for sustained protein therapy in a range of applications.

While developing its innovative products, Medgenics has already reached its first commercial development agreement in its strategy of forging multiple strategic partnerships with major pharmaceutical and/or medical device companies to bring products thru final approval and sales. Medgenics is developing its core technology to implement automated Biopump processing stations employing single use cassettes, to enable practical and cost-effective scale-up for commercial implementation. In addition to treatments for Anaemia, Hepatitis-C, Haemophilia, Medgenics plans to develop and/or out-license a pipeline of future Biopump products targeting the large and rapidly growing global protein therapy market, forecast to exceed US \$80 billion in 2010. Other pipeline Biopump applications include multiple sclerosis, obesity, diabetes, arthritis, and paediatric growth hormone deficiency, among others.

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