



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

MEDGENICS ANNOUNCES POSITIVE DATA FROM PHASE I/II CLINICAL TRIAL OF EPODURE TREATMENT OF ANEMIA IN CHRONIC KIDNEY DISEASE

- EPODURE Biopump demonstrates safety and efficacy for four months with single administration
- Institutional Review Board confirms safety and efficacy of low dose and approves continuation of trial with higher doses
- Biopump may offer alternative to months of expensive injections

Misgav, Israel and London, UK – 3 February, 2009 — Medgenics (AIM: MEDU/MEDG), today announces that the EPODURE Biopump, the Company's unique tissue-based technology, has successfully demonstrated safety and efficacy for the sustained protein therapy of anemia in patients with chronic kidney disease (CKD).

In the Company's ongoing Phase I/II clinical trial, a one-time administration of EPODURE, producing and delivering the low dose of 18-25 IU/kg/day of the protein erythropoietin (EPO), was sufficient to sustain therapeutic elevation of hemoglobin in most patients. The earliest patients to receive treatment have shown sustained hemoglobin within the target range for four months without receiving any EPO injections. By contrast, in standard practice today, EPO injections are required up to several times per week, and the comparable low dose does not result in sufficient hemoglobin levels in most patients.

By having maintained hemoglobin levels in the target range for several months in more than one patient, the study has already demonstrated that when administered at an appropriate dose for the patient, EPODURE can provide sustained anemia treatment for at least four months while alleviating the need for frequent EPO injections.

The Phase I/II clinical trial was approved for three escalating dose groups, beginning with six patients at the lowest dose, and called for a safety review after treatment of these first six patients prior to treatment using higher doses. The Institutional Review Board (IRB) of Hadassah Hebrew University Hospital in Jerusalem, Israel, where the study is being conducted, has now reviewed the results for this first group of patients and has confirmed the safety and efficacy of EPODURE at the low dose and approved the continued recruitment and treatment of patients in the trial using higher EPODURE doses,

Even with the low dose, the hemoglobin levels of most of the patients have remained within 10-12 grams per deciliter, the target range indicated by FDA guidelines for CKD patients, with no adverse effects reported or observed. Five of the six patients have now had EPODURE for more than one month, with target range having been maintained for four months in two of them, and for more than a month thus far in another. The results from the patients to date indicate that EPODURE is safe and well tolerated and suggests that it can provide effective treatment of chronic anemia.

Commenting on the results, Dr. Andrew Pearlman, Chief Executive Officer of Medgenics, said, "This is a very exciting and important milestone for the Company, particularly because we have shown such a clear effect in most patients, even in the lowest dose group of our trial. The fact that

hemoglobin levels continue to show sustained elevation in most of these patients indicates the immune acceptance of the implanted EPODURE Biopumps, and suggests that in the right dose for a given patient, we can indeed treat anemia effectively for at least four months with a single EPODURE treatment without the need for additional EPO injections. This strongly supports the Directors' belief that the EPODURE Biopump can be an effective long-term treatment for anemia. We look forward to seeing EPODURE's performance in the next group of patients who will be receiving higher doses."

Professor Eugene Bauer, MD, Dean Emeritus, Stanford University School of Medicine and Chairman of Medgenics commented:

"This is a groundbreaking study. These continuing results demonstrate that EPODURE can provide a sustained therapy for anemia. We are aware of no other anemia therapy that has demonstrated maintenance of hemoglobin levels for months from a single treatment. Our results thus far appear to offer a major advantage over current therapies and to represent a paradigm shift in the treatment of anemia. More generally, these results suggest that Medgenics' Biopump may offer the first practical treatment to provide sustained protein therapy and serve as an alternative to expensive, bolus injections of proteins mass-produced in animal cells."

Medgenics' Biopump is a unique tissue-based platform technology that processes a toothpick sized sliver of the inner layer of the subject's skin and is intended to provide sustained-action protein therapy for the treatment of a range of chronic diseases, including Hepatitis C, hemophilia, and multiple sclerosis. The technology represents a major advancement over today's protein therapy which involves frequent, costly, and painful bolus injections. A breakthrough in personalized medicine, the Biopump is intended to increase efficacy, reduce side effects, and improve patient compliance and quality of life, as well as lower treatment costs and extend treatment to populations currently under-treated.

Medgenics intends to develop its technology for a variety of chronic conditions, initially focusing on anemia and hepatitis C, with the intent to bring it to market via multiple strategic alliances in the relevant therapeutic space. The Company is in active discussions with major potential strategic partners for one or more applications.

"We are excited by the continued and sustained positive trial results, as well as the strong interest we are receiving from several potential partners," concluded Dr. Pearlman. "The EPODURE Biopump represents the first of a line of Biopump products designed to vastly improve the treatment of chronic diseases."

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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.

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

- EPODURE – producing erythropoietin (EPO) to treat anaemia
- INFRADURE – producing interferon-alpha (IFN- α) to treat hepatitis C

The Company has demonstrated proof of concept of the Biopump treatment procedure in a clinical trial of EPODURE in anemic subjects. The Company's Phase I/II clinical trial for its long-acting version of EPODURE, designed to produce and deliver a therapeutic dose of EPO steadily for six months or more commenced in August 2008. Medgenics plans to follow with a clinical trial of INFRADURE in 2009.

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.

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- β), 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

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.