

Medgenics, Inc.  
(‘Medgenics’ or the ‘Company’)

**MEDGENICS SIGNS DEVELOPMENT AGREEMENT  
WITH MAJOR INTERNATIONAL PHARMA COMPANY**

Marks first step towards commercialization of Medgenics’ Biopump tissue protein therapy technology  
Focus on sustained treatment of Hemophilia

- Feasibility agreement worth up to \$7 million (including preclinical development funding and an option to proceed to commercial agreement)
- Medgenics’ first Biopump agreement with a major healthcare corporation
- Uses Biopump in a new application to produce blood clotting Factor VIII
- Deal expected to enhance Medgenics’ ongoing efforts towards commercial agreements for other applications of the Biopump platform technology

**Misgav, Israel; London, UK and Vienna, VA, – 23 October 2009** - Medgenics (AIM: MEDG and MEDU) is pleased to announce that it has signed a preclinical development and option agreement with a major international biopharmaceutical company that is a market leader in the field of hemophilia. This groundbreaking feasibility agreement is worth up to \$7 million in payments that will include funding for preclinical development of Medgenics’ Biopump protein technology to produce and deliver clotting protein Factor VIII for the sustained treatment of hemophilia.

Under the terms of the agreement, Medgenics will receive \$4 million to work exclusively with this partner for one year to develop a Biopump to test the feasibility of continuous production and delivery of this clotting protein. Additional payments totaling \$3 million are payable upon Medgenics meeting certain technical milestones and upon the partner’s exercise of an option to extend the exclusivity through an additional period to negotiate terms to commercialize the Biopump technology for Factor VIII. This is a new application of the Biopump tissue protein therapeutic platform, which has previously demonstrated success in the production of erythropoietin (“EPO”) in treating renal anemia and interferon alpha for use in treating hepatitis-C. The market for Factor VIII is greater than \$3.2 billion per year (La Marie 2008), and according to the World Federation of Hemophilia, some 400,000 people in the world have hemophilia.

Dr. Andrew Pearlman, Chief Executive Officer of Medgenics, said:

*"We are very excited to have reached this key milestone toward commercialization of our technology. The fact that this agreement is for a new therapeutic application of our Biopump demonstrates the versatility of our platform technology. It further validates the belief that our platform can be applied to help treat many chronic diseases and will attract further interest from other major partners. The fact that a market leader in hemophilia has entered such an agreement at this early stage testifies to the promise of the Biopump technology for use in treating hemophilia. It reflects our mutual expectation that this feasibility program will be successful and will lead to a definitive agreement to complete the development and to commercialize this unique and exciting new therapeutic option which could make a major difference in the lives of hemophilic patients."*

*“Medgenics' Biopump platform technology has already achieved unprecedented results in the sustained treatment of anemia; the only indication that we have tested in patients to date. In a Phase I/II clinical study using our EPODURE Biopumps to produce and deliver EPO in patients with chronic kidney disease, a single administration of EPODURE Biopumps has been shown to provide effective anemia treatment for up to 12 months without any need for additional EPO injections. We believe our Biopump technology will address many of the current challenges in healthcare and provide an important advance for the treatment of chronic disease.”*

*“While this first agreement is directed to the treatment of hemophilia, Medgenics is continuing its discussions with other potential partners with a view to signing additional agreements for other indications using different therapeutic proteins.”*

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**About Medgenics:**

Medgenics 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 Company currently has three products in development based on this technology and addressing the indications of:

- Anemia – using EPODURE, a Biopump producing erythropoietin (EPO)
- Hepatitis-C - using INFRADURE – a Biopump producing interferon-alpha (IFN-a)
- Hemophilia - using a Biopump to produce clotting Factor VIII

The Company's Phase I/II clinical trial using EPODURE to treat anemia in patients with chronic kidney disease, has demonstrated proof of concept of the Biopump. Designed to produce and deliver a therapeutic dose of EPO steadily for six months or more, EPODURE Biopumps have already provided effective anemia treatment in most of these patients for 6-12 months, even at the low administered dose.

Medgenics intends to develop its innovative products and bring them to market via multiple strategic partnerships with major pharmaceutical and/or medical device companies. In addition to treatments for Anemia, Hepatitis-C, Hemophilia, 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 applications of Biopumps producing various proteins include multiple sclerosis, arthritis, pediatric growth hormone deficiency, obesity, and diabetes.