

THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION. If you are in any doubt as to what action you should take you are advised to consult with an appropriate independent adviser (for example your stockbroker, bank manager, solicitor, accountant or other professional adviser authorised under the Financial Services and Markets Act 2000) immediately.

If you have sold or otherwise transferred all your Common Shares, please send this document and the accompanying form of Written Consent of Stockholders at once to the purchaser or transferee or to the stockbroker, bank or other agent through whom the sale or transfer was effected for transmission to the purchaser or transferee.

Medgenics, Inc.

(Registered in the State of Delaware, USA under file number.3166521)

Proposed amendment to the Company's Amended and Restated Certificate of Incorporation

and

Proposed approval and sanction of certain borrowings as required by Article VIII of the Company's Amended and Restated By-Laws

A letter from the Chairman of Medgenics, Inc. is set out on pages 2 to 8 of this document.

A form of Written Consent accompanies this document. To be valid, forms of Written Consent should be completed and returned so as to reach the Company's US Attorneys, Barack Ferrazzano Kirschbaum & Nagelberg LLP (attention: Gretchen Anne Trofa, Esq.), by hand or by post, at 200 West Madison Avenue, Suite 3900, Chicago, Illinois, 60606, by fax at (001) 312 984-3150 or by email at gretchen.trofa@bfkn.com. Due to the time sensitive nature of the proposals outlined in this document, Stockholders are respectfully requested to fax or email their completed and signed form of Written Consent of Stockholders.

Letter from the Chairman of Medgenics, Inc.

Medgenics, Inc.

(Registered in the State of Delaware, USA under file number 3166521)

Directors:

Eugene Andrew Bauer M.D. (*Non-Executive Chairman*)
Andrew Leonard Pearlman Ph. D. (*President and Chief Executive Officer*)
Joel Stephen Kanter (*Non-Executive Director*)
Gary Allan Brukardt (*Non-Executive Director*)
Stephen Devon McMurray M.D. (*Non-Executive Director*)
Lord Leonard Steinberg (*Non-Executive Director*)

Registered Office:

2711 Centreville Road,
Suite 400,
Wilmington,
New Castle,
Delaware,
USA

12 May 2009

To Stockholders

Dear Stockholder

Introduction

The board of directors of Medgenics, Inc. (the "Company") is proposing:

1. an amendment to the Amended and Restated Certificate of Incorporation of the Company (the "Restated Certificate"), which will, in order to be effective, require the consent and approval of the holders of not less than 75% of the issued and outstanding shares of common stock in the Company of \$0.0001 par value per share ("Common Shares"); and
2. approval and sanction of Stockholders to borrowings by the Company and its subsidiaries in excess of the limits currently prescribed by Article VIII of the Amended and Restated By-Laws of the Company (the "By-Laws"), which will, in order to be effective, require the affirmative vote of the holders of a majority of the issued and outstanding Common Shares

(together the "Proposals"). The form of Written Consent of Stockholders (the "Written Consent") that Stockholders are requested to sign to approve and consent to the implementation of the Proposals is enclosed with this letter.

The purpose of this letter is to provide you with an explanation of the resolutions proposed in the Written Consent, to outline the applicable procedures for giving effect to the Proposals and to make a recommendation as to the action you should take.

Background

In the lead up to the admission of the Common Shares to trading on the AIM market of the London Stock Exchange ("AIM") in December 2007, a careful and detailed review of the working capital requirements of the Company and its subsidiary, Medgenics Medical (Israel) Limited, (together the "Group") was undertaken, in compliance with the applicable AIM rule. The relevant rule requires

that the directors are satisfied that, on the basis of that review, the Company will have sufficient working capital for its requirements for at least twelve months following admission. Given that the Company was, at the time of admission to AIM and remains a "pre-revenue" company, this review was, in effect, a review of the cost of administering the Group and financing the preparation and commencement of its Phase I/II clinical trial of EPODURE, its product for treatment of anaemia. The level of costs and expenses that the Group has incurred or has accrued since admission to AIM has been broadly in line with the projections made in that pre-admission working capital review.

The Company has regularly reported progress in relation to the Phase I/II clinical trial of EPODURE over the months since the trial commenced in August 2008. The trial, which has, to date, been conducted on a total of seven patients suffering from chronic renal failure, has been successful in demonstrating that, with a single treatment, EPODURE is safe and effective in providing more than 5 months' sustained anaemia treatment and, more broadly, has demonstrated the safety and effectiveness of the Group's Biopump platform technology. These results have, in turn, drawn active interest from large pharmaceutical and medical device companies from which the Company hopes to find long term strategic partners.

Since the initial announcement of positive preliminary results in its Phase I/II clinical trial in November 2008, and in tandem with the implementation of the Company's strategy for seeking out strategic partnering opportunities, the directors have focused on raising further capital for the Company. This capital is required to ensure the Group's ability to: continue to finance its operations; pursue strategic partnering alliances with major corporations; continue its device development program; advance the development of additional products towards clinical trial and commercialisation; and, most importantly, conclude the Phase I/II clinical trial of EPODURE.

In this regard, the Group has been successful in:

- obtaining further grants from the Office of the Chief Scientist of the Ministry of Industry, Trade & Tourism of the state of Israel (the "OCS") totaling approximately US \$2.3 million, though draw down of these amounts is by instalments over a period of 18 months and will be subject to satisfactory progress reporting to the OCS and certain other conditions; and
- through the implementation of the recent warrant re-pricing and exercise programme, raising further funds totalling approximately US \$406,000.

Notwithstanding these efforts, the main focus of the board in its fundraising endeavours, which has been to seek to raise additional funding through a significant equity raise, has been frustrated to date due, in large part, to general market conditions in the UK, the USA and Israel and, more pertinently, a lack of investor appetite for early-stage "biotech" stocks since the Company's admission to AIM. However, the directors believe that the Company may be able to raise much needed capital through the issue of convertible debentures (the "Debentures"), together with the issuance of warrants to purchasers of the Debentures upon conversion of the Debentures. Initially, the Company is seeking to raise up to US\$ 5 million (with the option to increase such amount to US \$7 million in aggregate) through the issue by the Company of Debentures and associated warrants in the coming weeks (the "Initial Fundraising") but the directors anticipate that their fundraising endeavours will continue beyond this initial target with a view to achieving a more substantial fundraising in the short to medium term, potentially to be effected in conjunction with an application for a listing on a US stock exchange.

In order to facilitate the Initial Fundraising in the proposed manner, it is necessary:

1. to repeal Article XII of the Restated Certificate, which currently grants Stockholders pre-emptive rights in certain circumstances; compliance with which will otherwise unduly delay and hinder the proposed Initial Fundraising effort; and

2. obtain sanction and approval from Stockholders to the issue of Debentures in the original principal amount of up to US \$5 million, (with discretion to increase the principal amount to up to US \$7 million) notwithstanding that such borrowings level will be in excess of the limit currently prescribed by the By-Laws.

More detail concerning these Proposals is given below.

SHOULD THE RESOLUTIONS SET OUT IN THE WRITTEN CONSENT NOT BE APPROVED AND CONSENTED TO BY STOCKHOLDERS HOLDING THE REQUISITE NUMBER OF THE ISSUED COMMON SHARES, THEN, IN THE ABSENCE OF ANY ALTERNATIVE FINANCE BEING ARRANGED AND MADE AVAILABLE WITHIN A VERY SHORT PERIOD OF TIME, IT IS UNLIKELY THAT THE GROUP WILL BE ABLE TO MEET ITS FINANCIAL OBLIGATIONS OR CONTINUE ITS OPERATIONS AND MAY, THEREFORE, BE UNABLE TO CONTINUE ITS PHASE I/II CLINICAL TRIAL OF EPODURE THROUGH TO CONCLUSION.

Amendment to the Restated Certificate of Incorporation and sanction for excess borrowings

The Restated Certificate, which is available for review by Stockholders at the Company's website www.medgenics.com, incorporates certain pre-emptive rights for the benefit of Stockholders. These pre-emptive rights assure to Stockholders the right to have offered to them, in proportion to their existing holdings of Common Shares, the opportunity to purchase new Common Shares intended to be issued by the Company before those Common Shares are offered to persons, firms or companies who are not existing Stockholders. These pre-emptive rights are subject to certain limited exceptions, including the right for the directors to issue new Common Shares (or securities or other instruments convertible into Common Shares) in any twelve month period where the aggregate number of those new Common Shares does not exceed 10% of the issued Common Shares on the first day of such twelve month period. This limitation would, at the present time and based on the mid market price of an issued Common Share in the Company on at the close of trading on AIM on 8 May 2009 (being the latest practicable date prior to the despatch of this document), restrict the potential scale of any equity fundraising that could be undertaken by the Company without conducting a rights issue, to a maximum of approximately £521,200 (approximately US\$785,544).

The By-Laws, which are available for review by Stockholders at the Company's website www.medgenics.com, contain certain limitations on the amount of the Group's aggregate borrowings. Such limitations would prohibit the proposed financing structured through the issue of Debentures, in the proposed aggregate principal amount of US \$5 - 7 million, as such amount would exceed the current borrowings limitation. The directors anticipate that any Debentures issued will, ultimately, convert into equity of the Company, however, there can be no assurance that such conversion will occur. Given the limitations imposed by Article VIII of the By-Laws, the Group has no capacity to incur borrowings at this time or for the foreseeable future. The Company needs capacity to borrow in order to issue the proposed amount of Debentures in order to finance its continued operations and to strive to achieve its objectives.

In the view of the directors:

- the restrictions imposed by the pre-emptive rights provision of Article XII of the Restated Certificate and the borrowing limitations of Article VIII of the By-Laws combine to seriously impede an adequate level of fundraising to meet the requirements of the business of the Group at this time;
- the cost and expense, possible need for the issue of a prospectus in the UK and regulatory filings in the USA, length of timetable and uncertainty associated with a full rights issue of new Common Shares makes a non-pre-emptive equity fundraising the only viable route to a speedy and cost effective fundraising; and

- in order to meet the initial fundraising objectives:
 - (i) the limitations on the issue of the new Common Shares should be lifted entirely by the removal of the pre-emptive rights contained in Article XII of the Articles contained in the Restated Certificate;
 - (ii) Stockholders will need to sanction and approve additional borrowings by the Group of up to US \$5 million (with discretion to increase the principal amount to up to US \$7 million), which is in excess of the current limit prescribed by the By-Laws.

Accordingly, the first resolution set out in the Written Consent proposes that Article XII of the Restated Certificate be repealed, such that Stockholders' pre-emption rights will cease to apply in relation to the proposed Initial Fundraising and all future issues of Common Shares by the Company. Further, the second resolution set out in the Written Consent proposes that Stockholders sanction borrowings by the Company of up to US \$5 million (with discretion to increase the principal amount to up to US \$7 million) by the issue of Debentures or other debt securities or other borrowings, notwithstanding that such borrowings will cause the Company to exceed the limit on borrowings prescribed by Article VIII of the By-Laws.

The proposed Initial Fundraising

A summary of the terms of the Initial Fundraising project is set out below. It should be noted, however, that, as the Company engages in its fundraising efforts it may be necessary to amend such terms, including in ways that may cause additional dilution to the current Stockholders. Furthermore, there can be no assurance that the Initial Fundraising will be consummated or, if consummated, that the same can be achieved on the terms described below. The securities proposed to be offered in the Initial Fundraising will not be or have not been registered under the U.S. Securities Act of 1933 (as amended) and may not be offered or sold in the United States of America, absent registration or an applicable exemption from the registration requirements.

The Company currently proposes to offer in a private transaction to certain accredited investors in the United States of America up to US \$5 million (with discretion to increase the principal amount to up to US \$7 million) of Debentures. It is proposed that the Debentures will: not be redeemable by the Company; be unsecured; mature on the second anniversary of the date of issuance; and accrue interest at a rate of 10% per annum. In the event of a default by the Company under the Debentures, the interest rate shall increase 2% per month for every month that the Company shall be in default up to a maximum of 18% per annum.

It is contemplated that the Debentures (including accrued interest) will automatically convert into Common Shares upon the closing of:

- an underwritten, initial public offering of Common Shares on one or more specified U.S. stock market(s) (an "IPO") for gross proceeds of at least US \$5 million; or
- a merger/reverse merger or acquisition transaction with a public company the common stock of which is traded on at least one or more specified U.S. stock market(s) and having at least US \$5 million in cash available or raised in connection with such merger/reverse merger or acquisition transaction (a "Merger/Acquisition Transaction")

(each a "Qualified Transaction")

The terms currently proposed for the Debentures stipulate that the conversion price will be the lower of US \$0.12 per share or a price equivalent to a 40% discount to the price at which the relevant Qualified Transaction is effected (i.e. the IPO price or per share value of merger or acquisition consideration in a Merger/Acquisition Transaction) (the "Qualified Transaction

Price”), provided that, if (i) the Qualified Transaction Price is less than US \$0.12, but at least US \$0.07, then the conversion price will be US \$0.07 and (ii) if the Qualified Transaction Price is less than US \$0.07, then the conversion price will equal the Qualified Transaction Price and the holders of Debentures will receive twice as many warrants as they would otherwise have received. On the assumptions that: the conversion price of the Debentures is US \$0.07; the full conversion of US \$5 million in principal amount of Debentures; there will be no conversion of accrued interest and the insurance of 10% broker warrants as commission (the "Assumptions"), the conversion in full of the Debentures will give rise to the issuance of 71,428,571 new Common Shares, equivalent to approximately 37 per cent. of the outstanding Common Shares as enlarged by such issue.

Upon conversion, it is also proposed that purchasers of Debentures will receive warrants (“Warrants”) to purchase a number of Common Shares equal to 25% of the number of Common Shares issued to such purchasers upon conversion of their Debentures; provided that purchasers of the first US \$1 million of Debentures will receive warrants to purchase a number of Common Shares equal to 50% of the number of Common Shares issued to such purchasers upon conversion of their Debentures. The Warrants will be immediately exercisable upon issuance and shall expire five years from the date of issuance. The exercise price per Common Share under the Warrants shall be 110% of the Qualified Transaction Price. Based on the Assumptions, the maximum number of Common Shares to be issued on exercise in full of the warrants to be issued under these arrangements will be 28,571,728 Common Shares, which would result in an additional US \$2,199,999 in proceeds to the Company upon payment of the exercise price.

It should be noted, however, that there can be no assurance that the actual conversion price will not be less or greater than the assumed \$0.07 conversion price or that the other Assumptions will, ultimately, be proved to be correct. It is expected that the Debentures will contain customary warranties, representations and covenants in favour of the purchasers and shall also include an obligation on the Company to register the Common Shares under the Securities Exchange Act of 1934 (as amended) (the “Exchange Act”) and list the Common Shares on one or more specified U.S. stock market(s) within 12 months of the closing on the sale of a minimum of US \$2.5 million in original principal value of Debentures in the Initial Fundraising. It is also expected that purchasers of Debentures would receive registration rights and standard anti-dilution protection.

The Company seeks the consent of the Stockholders to the resolutions set out in the Written Consent irrespective of the final terms of the Initial Fundraising. In other words, by executing the Written Consent, (i) you will be approving the repeal of the pre-emptive rights provision for the Initial Fundraising and all other issuance of Common Shares or securities convertible or exchangeable into Common Shares that the Company may pursue and (ii) you will be sanctioning and approving the issuance of borrowings (whether in the form of the Debentures described above or otherwise) of up to US \$7 million.

Any material amendments to the terms of the Initial Fundraising will be announced in due course.

Preliminary announcement of results

The preliminary announcement of the results of the Group for the year ended 31 December 2008 is due to be published during the week of 18 May 2009.

Voting and action to be taken

The first resolution set out in the Written Consent requires consent and approval by at least 75 per cent. of the issued and outstanding Common Shares in the Company. The second resolution set out in the Written Consent requires consent and approval by more than 50 per cent. of the issued and outstanding Common Shares in the Company.

If you wish to respond affirmatively in respect of the Written Consent and to vote “IN FAVOUR” of the amendment to the Restated Certificate and to sanction the proposed excess borrowings, you are urgently requested to sign and date the page marked “SIGNATURE PAGE” in the enclosed Written Consent and to return it to the Company’s US attorneys, Barack Ferrazzano Kirschbaum & Nagelberg LLP (attention: Gretchen Anne Trofa, Esq.), by any of the following means:

- by facsimile transmission to: (001) 312 984-3150;
- by email to: gretchen.trofa@bfkn.com; or
- by post or by hand to 200 West Madison Avenue, Suite 3900, Chicago, Illinois, 60606.

The first resolution will be passed and the proposed amendment to the Restated Certificate will become effective immediately upon receipt of Written Consents signed by Stockholders holding in aggregate between them not less than 75 per cent. of the issued and outstanding Common Shares in the Company. The second resolution will be passed and the proposed sanction and approval to borrowings by the Group beyond the limit prescribed in the By-Laws will become effective immediately upon receipt of Written Consents signed by Stockholders holding in aggregate between them more than 50 per cent. of the issued and outstanding Common Shares in the Company.

If you are in favour of the Proposals, you are requested not to delay on returning your duly completed and signed Written Consent. By executing and returning the Written Consent as provided therein, you will be voting all of your Common Shares to approve the Proposals. In addition, by executing the Written Consent, you will also be confirming the number of Common Shares you currently own.

If you do not wish to approve the Proposals, you need take no action in relation to the Written Consent; however, the Proposals may be approved by a sufficient number of other Stockholders without any action by you.

If you have any questions regarding this letter or the other materials referenced herein, please contact Dr. Andrew Pearlman, Chief Executive Officer, by telephone on +1-646-239-1690 or by email at andy@medgenics.com or Phyllis Bellin, Secretary, by telephone on +972-4-9028904 or by email at phyllis@medgenics.com.

Recommendation

The directors consider that the resolutions set out in the Written Consent are in the best interests of the Company and its Stockholders as a whole and are required at this time to allow the Company to continue its business operations and promote the success of the Group for the benefit of its Stockholders. Accordingly, the directors unanimously recommend that you vote in favour of and approve and consent to the resolutions set out in the Written Consent as they intend to do (or, as appropriate, intend to procure that the holders of Common Shares in which they are interested do) in relation to holdings amounting in aggregate to of 35,505,614 Common Shares (representing approximately 30 per cent. of the existing Common Shares and voting rights in the Company).

Yours sincerely

Eugene Bauer
Chairman

This letter does not constitute an offer to sell or the solicitation of an offer to buy nor will there be any sale of these securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such state or jurisdiction.