



**NOTICE OF
SPECIAL GENERAL MEETING OF SHAREHOLDERS
TO BE HELD ON DECMEBER 24, 2014**

To the shareholders of Can-Fite BioPharma Ltd.:

Notice is hereby given that a Special General Meeting of Shareholders will be held on Wednesday, December 24, 2014, at 10.00 a.m. Israel time at our offices, 10 Bareket Street, Petach Tikva, Israel.

The agenda of the special meeting will be to elect Israel Shamay as one of our external directors for a three-year term ending December 24, 2017.

Only shareholders and holders of American Depositary Shares at the close of business on November 26, 2014 are entitled to notice of, and to vote at, the special meeting and any adjournment or postponement thereof. You are cordially invited to attend the special meeting in person.

If you are unable to attend the special meeting in person, you are requested to complete, date and sign the enclosed proxy and to return it promptly in the pre-addressed envelope provided. Shareholders who attend the special meeting may revoke their proxies and vote their shares in person.

Beneficial owners who hold ordinary shares through members of the Tel Aviv Stock Exchange, or the TASE, may either vote their shares in person at the special meeting by presenting a certificate signed by the TASE Clearing House member through which the shares are held, which complies with the Israel Companies Regulations (Proof of Ownership for Voting in General Meetings)-2000 as proof of ownership of the shares on the record date, or send such certificate along with a duly executed proxy (in the form filed by us on MAGNA, the distribution site of the Israeli Securities Authority, at www.magna.isa.gov.il), to us at 10 Bareket Street, Kiryat Matalon, PO Box 7537, Petach Tikva, 4951778, Israel Attention: Chief Financial Officer.

By Order of the Board of Directors

Ilan Cohen

Chairman of the Board

November 17, 2014



10 Bareket Street, Kiryat Matalon
PO Box 7537
Petach Tikva 4951778
Israel

PROXY STATEMENT

**FOR SPECIAL GENERAL MEETING OF SHAREHOLDERS
TO BE HELD ON DECEMBER 24, 2014**

This Proxy Statement is furnished to our holders of ordinary shares, par value NIS 0.25 per share, including holders of our ordinary shares that are represented by American Depository Shares, or ADSs, in connection with the Special General Meeting of Shareholders, to be held on Wednesday, December 24, 2014, at 10.00 a.m. Israel time at our offices, 10 Bareket Street, Petach Tikva, Israel, or at any adjournments thereof.

Throughout this Proxy Statement, we use terms such as "Can-Fite", "we", "us", "our" and the "Company" to refer to Can-Fite BioPharma Ltd. and terms such as "you" and "your" to refer to our shareholders and ADS holders.

Agenda Items

The agenda of the special meeting will be to elect Israel Shamay as one of our external directors for a three-year term ending December 24, 2017.

We currently are unaware of any other matters that may be raised at the special meeting. Should any other matters be properly raised at the special meeting, the persons designated as proxies shall vote according to their own judgment on those matters.

Board Recommendation

Our board of directors unanimously recommends that you vote "FOR" the proposal to elect Israel Shamay as one of our external directors for a three-year term ending December 24, 2017.

Who Can Vote

Only shareholders and ADS holders at the close of business on November 26, 2014, shall be entitled to receive notice of and to vote at the special meeting.

How You Can Vote

You can vote your ordinary shares by attending the special meeting. If you do not plan to attend the special meeting, the method of voting will differ for shares held as a record holder, shares held in "street name" (through a Tel Aviv Stock Exchange, or TASE, member) and shares underlying ADSs that you hold. Record holders of shares will receive proxy cards. Holders of shares in "street name" through a TASE member will also vote via a proxy card, but through a different procedure (as described below). Holders of ADSs (whether registered in their name or in "street name") will receive voting instruction cards in order to instruct their banks, brokers or other nominees on how to vote.

Shareholders of Record

If you are a shareholder of record, you can submit your vote by completing, signing and submitting a proxy card, which has been published at www.magna.isa.gov.il and www.mava.tase.co.il and which will be accessible at the "Investor Information" portion of our website, as described below under "Shareholder Meetings".

Please follow the instructions on the proxy card.

Shareholders Holding in "Street Name," Through the TASE

If you hold ordinary shares in "street name," that is, through a bank, broker or other nominee that is admitted as a member of the TASE, your shares will only be voted if you provide instructions to the bank, broker or other nominee as to how to vote, or if you attend the special meeting in person.

If voting by mail, you must sign and date a proxy card in the form filed by us on MAGNA on November 18, 2014 and attach to it a certificate signed by the TASE Clearing House member through which the shares are held, which complies with the Israel Companies Regulations (Proof of Ownership for Voting in General Meetings)-2000 as proof of ownership of the shares on the record date, and return the proxy card, along with the proof of ownership certificate, to us, as described in the instructions available on MAGNA.

If you choose to attend the special meeting (where ballots will be provided), you must bring the proof of ownership certificate from the TASE's Clearing House member through which the shares are held, indicating that you were the beneficial owner of the shares on the record date.

Holders of ADSs

Under the terms of the Deposit Agreement between the Company, The Bank of New York Mellon, as depositary, or BNY Mellon, and the holders of our ADSs, BNY Mellon shall endeavor (insofar as is practicable) to vote or cause to be voted the number of shares represented by ADSs in accordance with the instructions provided by the holders of ADSs to BNY Mellon. For ADSs that are held in "street name", through a bank, broker or other nominee, the voting process will be based on the underlying beneficial holder of the ADSs directing the bank, broker or other nominee to arrange for BNY Mellon to vote the ordinary shares represented by the ADSs in accordance with the beneficial holder's voting instructions. If no instructions are received by BNY Mellon from any holder of ADSs (whether held directly by a beneficial holder or in "street name") with respect to any of the shares represented by the ADSs on or before the date established by BNY Mellon for such purpose, BNY Mellon shall not vote or attempt to vote the shares represented by such ADSs.

Multiple Record Shareholders or Accounts

You may receive more than one set of voting materials, including multiple copies of this document and multiple proxy cards or voting instruction cards. For example, shareholders who hold ADSs in more than one brokerage account will receive a separate voting instruction card for each brokerage account in which ADSs are held. Shareholders of record whose shares are registered in more than one name will receive more than one proxy card. You should complete, sign, date and return each proxy card and voting instruction card you receive.

Our board of directors urges you to vote your shares so that they will be counted at the special meeting or at any postponements or adjournments of the special meeting.

Solicitation of Proxies

By appointing "proxies", shareholders and ADS holders may vote at the special meeting whether or not they attend. If a properly executed proxy in the enclosed form is received by us at least 48 hours prior to the special meeting (and received by BNY Mellon no later than the date indicated on the voting instruction card, in the case of ADS holders), all of the shares represented by the proxy shall be voted as indicated on the form or, if no preference is noted, shall be voted in favor of the matter described above, and in such manner as the holder of the proxy may determine with respect to any other business as may come before the special meeting or any adjournment thereof. Shareholders and ADS holders may revoke their proxies at any time before the deadline for receipt of proxies by filing with us (in the case of holders of ordinary shares) or with BNY Mellon (in the case of holders of ADSs), a written notice of revocation or duly executed proxy bearing a later date.

Proxies are being distributed to shareholders and ADS holders on or about November 26, 2014. Certain officers, directors, employees, and agents of ours, none of whom will receive additional compensation therefor, may solicit proxies by telephone, emails, or other personal contact. We will bear the cost for the solicitation of the proxies, including postage, printing, and handling, and will reimburse the reasonable expenses of brokerage firms and others for forwarding material to beneficial owners of shares and ADSs.

To the extent you would like to submit a position statement with respect to the proposal described in this proxy statement pursuant to the Israeli Companies law, 1999, or the Israeli Companies Law, you may do so by delivery of appropriate notice to the our offices (Attention: Chief Financial Officer) located at 10 Bareket Street, Kiryat Matalon, PO Box 7537, Petach Tikva 4951778, Israel, not later than ten days after the record date (i.e., December 4, 2014). Response of the board to the position statement may be submitted not later than five days after the deadline for sending the position statement (i.e., December 9, 2014).

Quorum

At the close of business on November 14, 2014, we had outstanding 17,721,071 ordinary shares, of which 4,417,960 were represented by ADSs. The foregoing number of outstanding ordinary shares excludes 446,827 ordinary shares that are held in treasury and have no voting rights. Each ordinary share (including ordinary shares represented by ADSs) outstanding as of the close of business on the record date are entitled to one vote upon each of the matters to be voted on at the special meeting.

Under our articles of association, the special meeting will be properly convened if at least two shareholders attend the meeting in person or sign and return proxies, provided that they hold shares representing at least 25% of our voting power. If such quorum is not present within half an hour from the time scheduled for the meeting, the meeting will be adjourned for one week (to the same day, time and place), or to later date if so specified in the notice of the meeting. At the reconvened meeting, if there is no quorum within half an hour from the time scheduled for the meeting, any number of our shareholders present in person or by proxy shall constitute a lawful quorum.

Vote Required for the Proposal

Minimally, the affirmative vote of the holders of a majority of the voting power represented at the special meeting in person or by proxy and voting thereon (which excludes abstentions) is necessary for the approval of the proposal to elect Israel Shamay.

In addition, the approval of the proposal requires that either of the following two voting requirements be met as part of the approval by an ordinary majority of shares present and voting thereon:

- the majority voted in favor of the proposal includes a majority of the shares held by non-controlling shareholders or shareholders who do not have a personal interest in the approval of the proposal, excluding a personal interest that is not related to a relationship with the controlling shareholders, that are voted at the meeting, excluding abstentions; or
- the total number of shares held by non-controlling, disinterested shareholders (as described in the previous bullet-point) voted against the proposal does not exceed two percent (2%) of the aggregate voting rights in the company.

Under the Israeli Companies Law, in general, you will be deemed to be a controlling shareholder if you have the power to direct our activities, otherwise than by reason of being a director or other office holder of ours, and you are deemed to have a personal interest if any member of your immediate family or their spouse has a personal interest in the adoption of the proposal. In addition, you are deemed to have a personal interest if a company, other than Can-Fite, that is affiliated to you has a personal interest in the adoption of the proposal. Such company is a company in which you or a member of your immediate family serves as a director or chief executive officer, has the right to appoint a director or the chief executive officer, or owns 5% or more of the outstanding shares. However, you are not deemed to have a personal interest in the adoption of the proposal if your interest in such proposal arises solely from your ownership of our shares, or to a matter that is not related to a relationship with a controlling shareholder.

If you provide specific instructions (mark boxes) with regard to certain proposals, your shares will be voted as you instruct. Note that you must indicate in writing whether you are a controlling shareholder or have a personal interest in the approval of the proposal. If you sign and return your proxy card or voting instruction form without giving specific instructions, but you do not indicate in writing whether you have a personal interest in the approval of such proposal, your shares will not be voted but will be counted in determining whether a quorum is present at the meeting.

If you are a shareholder of record and do not return your proxy card, your shares will not be voted. If you hold shares (or ADSs representing shares) beneficially in street name, your shares will also not be voted at the meeting if you do not return your proxy card or voting instruction card to instruct your broker or the Depository how to vote. A broker (and BNY Mellon) may only vote in accordance with instructions from a beneficial owner of shares or ADSs.

Availability of Proxy Materials

Copies of the proxy card and voting instruction card, the Notice of the Special General Meeting and this Proxy Statement are available at the “Investor Information” portion of our website, www.canfite.com. The contents of that website are not a part of this Proxy Statement.

Reporting Requirements

We are subject to the information reporting requirements of the Securities Exchange Act of 1934, as amended, or Exchange Act, applicable to foreign private issuers. We fulfill these requirements by filing reports with the Securities and Exchange Commission, or the Commission. Our filings with the Commission may be inspected without charge at the Commission’s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the Commission at 1-800-SEC-0330. Our filings are also available to the public on the Commission’s website at <http://www.sec.gov>.

As a foreign private issuer, we are exempt from the rules under the Exchange Act related to the furnishing and content of proxy statements. The circulation of this notice and proxy statement should not be taken as an admission that we are subject to the proxy rules under the Exchange Act.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding the beneficial ownership of our outstanding ordinary shares as of November 14, 2014 by the members of our senior management, and board of directors, individually and as a group, and each person who we know beneficially owns 5% or more of our outstanding ordinary shares. The beneficial ownership of ordinary shares is based on the 17,721,071 ordinary shares outstanding as of November 14, 2014 (which excludes 446,827 ordinary shares held in treasury) and is determined in accordance with the rules of the SEC and generally includes any ordinary shares over which a person exercises sole or shared voting or investment power. For purposes of the table below, we deem shares subject to options or warrants that are currently exercisable or exercisable within 60 days of November 14, 2014, to be outstanding and to be beneficially owned by the person holding the options or warrants for the purposes of computing the percentage ownership of that person but we do not treat them as outstanding for the purpose of computing the percentage ownership of any other person.

Name of Beneficial Owner	Number of Ordinary Shares	Percentage of Class*
Senior Management and Directors		
Ilan Cohn, PhD. <i>Chairman of the Board</i>	231,652(1)	1.3%
Pnina Fishman, PhD. <i>Chief Executive Officer and Director</i>	569,863(2)	3.2%
Motti Farbstein <i>Chief Operating Officer</i>	40,945(3)	*
Guy Regev <i>Director</i>	54,430(4)	*
Abraham Sartani, Ph.D. <i>Director</i>	4,167(5)	*
Gil Oren <i>Director</i>	4,167(6)	*
Yechezkel Barenholz <i>Director</i>	-	-
Directors and Executive Officers as a group (7 persons)	905,224	5.1%
5% or More Shareholders		
Shaked Group (Tal Shaked & Haya Shaked)	994,067(7)	5.6%

* Denotes less than 1%

(1) Includes (i) 133,567 ordinary shares, (ii) 420,000 registered warrants (Series 9) to purchase 16,800 ordinary shares at an exercise price of NIS 0.85 per warrant and expiring on May 1, 2015, and (iii) 2,032,136 unregistered options to purchase 81,285 ordinary shares at an exercise price of NIS 1.247 per option and expiring on March 20, 2017. All such warrants and options are fully vested.

- (2) Includes (i) 263,433 ordinary shares, (ii) 90,000 registered warrants (Series 9) to purchase 3,600 ordinary shares at an exercise price of NIS 0.85 per warrant and expiring on May 1, 2015, and (iii) 7,570,761 unregistered options to purchase 302,830 ordinary shares, of which 4,890,761 options have an exercise price of NIS 0.50 per option and expire on August 23, 2016 and 2,680,000 options have an exercise price of NIS 0.644 per option and expire on January 13, 2021. All such warrants and options are fully vested.
- (3) Includes (i) 1,133 ordinary shares, and (ii) 995,312 unregistered options to purchase 39,812 ordinary shares, of which (1) 322,175 are exercisable into 12,887 ordinary shares at an exercise price of NIS 0.45 per option and expire on November 29, 2015, (2) 554,387 are exercisable into 22,175 ordinary shares at an exercise price of NIS 0.307 per option and expire on November 26, 2018, (3) 68,750 are exercisable into 2,750 ordinary shares at an exercise price of NIS 0.385 per option and expire on May 2, 2022, and (4) 50,000 are exercisable into 2,000 ordinary shares at an exercise price of NIS 0.326 per option and expire on March 20, 2023. All such options are fully vested or will vest within 60 days from November 14, 2014. Excludes 81,250 unregistered options to purchase 3,250 ordinary shares that vest in more than 60 days from November 14, 2014.
- (4) Includes (i) 24,240 ordinary shares, (ii) 36,000 registered warrants (Series 9) to purchase 1,440 ordinary shares at an exercise price of NIS 0.85 per warrant and expiring on May 1, 2015, (iii) 250,000 registered warrants (Series 10) to purchase 10,000 ordinary shares at an exercise price of NIS 0.394 per warrant and expiring on October 31, 2015, (iv) 250,000 registered warrants (Series 11) to purchase 10,000 ordinary shares at an exercise price of NIS 0.392 per warrant and expiring on April 30, 2016, and (v) 218,750 unregistered options are exercisable into 8,750 ordinary shares at an exercise price of NIS 0.60 per option and expire on May 2, 2023. All such warrants and options are fully vested or will vest within 60 days from November 14, 2014. Excludes 31,250 unregistered options to purchase 1,250 ordinary shares that vest in more than 60 days from November 14, 2014.
- (5) Includes (i) 613 ordinary shares, and (ii) 308,653 unregistered options to purchase 12,345 ordinary shares, of which 193,305 are exercisable into 7,732 ordinary shares at an exercise price of NIS 0.45 per option and expire on August 23, 2016, and 100,000 are exercisable into 4,000 ordinary shares at an exercise price of NIS 0.385 per option and expire on August 14, 2022. All such options are fully vested. Excludes 5,833 unregistered options to purchase 5,833 ordinary shares that vest in more than 60 days from November 14, 2014.
- (6) Includes 4,167 unregistered options to purchase 4,167 ordinary shares, at an exercise price of NIS 12.00 per option and expire on July 14, 2024.
- (7) Includes 238,422 ordinary shares held by Mrs. Haya Shaked and 755,645 ordinary shares held by her daughter, Mrs. Tal Shaked.

PROPOSAL TO ELECT EXTERNAL DIRECTOR

Background

In accordance with the Israeli Companies Law and the relevant regulations, we must have at least two external directors who meet the statutory requirements of independence. Under Israeli Companies Law, an external director serves for a term of three years, which may be extended for two additional three-year terms. Further, an external director can be removed from office only under very limited circumstances. In addition, under the Israeli Companies Law, all of the external directors must serve on our audit committee and compensation committee (including one external director serving as the chair of our audit committee and as the chair of our compensation committee), and at least one external director must serve on each other committee of our board of directors. If elected as an external director, Israel Shamay will become a member of our audit committee and compensation committee.

To qualify as an external director, an individual must meet various independence requirements, including that such individual may not have, and may not have had at any time during the previous two years, any "affiliation" (as defined in the Israeli Companies Law) with the company or with certain of its affiliates. In addition, no individual may serve as an external director if the individual's position or other activities create or may create a conflict of interest with his or her role as an external director.

Gil Oren and Yechezkel Barenholz are our external directors under the Israeli Companies Law. The current term of office of Messrs. Oren and Barenholz expires on July 9, 2017 and December 25, 2014, respectively. Mr. Barenholz may not be re-elected to serve as an external director as he was elected for the maximum number of terms already and therefore Israel Shamay is standing for election to replace Mr. Barenholz as an external director and as a member of our audit committee and compensation committee. Biographical information concerning Mr. Shamay is set forth below.

Israel Shamay has served since 2012 as Executive Director, Strategic Initiatives and Head of the Americas Operations of MATIMOP (Israeli Industry Center for R&D), the International Operations agency of the Israeli Office of the Chief Scientist, focusing on developing and implementing cooperation platforms for industrial R&D and innovation projects in the Americas region. From 2006 until 2012 Mr. Shamay served as Executive Director of European Cooperations at MATIMOP, where he was in charge of architecting, realizing and evaluating industrial innovation cooperation frameworks at bilateral and European level, making them a major R&D cooperation instrument for Israeli industry with Europe. Between 2010 and 2011, Mr. Shamay was Head of the Israeli EUREKA Chairmanship Program (EUREKA is Europe's largest innovation network with nearly 40 member states). The Israeli EUREKA Chairmanship focused on developing new financial instruments for innovative small and medium sized enterprises and on expanding EUREKA's international dimension. From 2002 Mr. Shamay served as Israel's National Representative in several international R&D programs, from 2005 as an expert evaluator for the EU Framework Programs for R&D and from 2006 until 2009 managed the Israeli R&D collaboration with the EU Global Satellite Navigation Program – GALILEO. From 1991 till 2001 Mr. Shamay served in senior technical, marketing and executive positions in Israeli hi-tech companies operating globally, including the RAD group and Comverse Technologies. Mr. Shamay is an MBA graduate of the Recanati School of Business at the Tel-Aviv University and a graduate of the Technion in Haifa, faculty of Information Systems Engineering.

Proposed Resolution

It is proposed that at the special meeting the following resolution be adopted:

"RESOLVED, that the election of Israel Shamay as an external director of the Company, to serve for a three-year term ending December 24, 2017, be, and hereby is, approved in all respects."

Required Vote

The affirmative vote of the holders of a majority of the voting power represented and voting on this proposal in person or by proxy is necessary to elect Mr. Shamay as an external director. In addition, the shareholders' approval must *either* include at least a majority of the ordinary shares voted by shareholders who are not controlling shareholders nor are they shareholders who have a personal interest in the election of the external directors (excluding a personal interest that is not related to a relationship with the controlling shareholders), *or* the total ordinary shares of non-controlling shareholders and non-interested shareholders voted against this proposal must not represent more than 2% of the outstanding ordinary shares.

For this purpose, you are asked to indicate on the enclosed proxy card or voting instruction card whether you are a controlling shareholder or have a personal interest in the election of the outside directors (excluding a personal interest that is not related to a relationship with a controlling shareholder). Under the Israeli Companies Law, in general, you will be deemed to be a controlling shareholder you have the power to direct our activities, otherwise than by reason of being a director or other office holder of ours, and you are deemed to have a personal interest if any member of your immediate family or their spouse has a personal interest in the adoption of the proposal. In addition, you are deemed to have a personal interest if a company, other than Can-Fite, that is affiliated to you has a personal interest in the adoption of the proposal. Such company is a company in which you or a member of your immediate family serves as a director or chief executive officer, has the right to appoint a director or the chief executive officer, or owns 5% or more of the outstanding shares. However, you are not deemed to have a personal interest in the adoption of the proposal if your interest in such proposal arises solely from your ownership of our shares, or to a matter that is not related to a relationship with a controlling shareholder.

Board Recommendation

Our board of directors recommends a vote FOR the election of the foregoing external director nominee.

OTHER BUSINESS

Other than as set forth above, as of the mailing of this Proxy Statement, management knows of no business to be transacted at the special meeting, but, if any other matters are properly presented at the special meeting, the persons named in the enclosed form of proxy will vote upon such matters in accordance with their best judgment.

By Order of the Board of Directors

Ilan Cohen

Chairman of the Board

Dated: November 17, 2014

CAN-FITE BIOPHARMA LTD.

**PROXY FOR A SPECIAL GENERAL MEETING OF SHAREHOLDERS
TO BE HELD ON DECEMBER 24, 2014**

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS.

The undersigned hereby appoints Ilan Cohen, Chairman of the Board and Dr. Pnina Fishman, Chief Executive Officer and each of them, attorneys, agents and proxies of the undersigned, with full power of substitution to each of them, to represent and to vote on behalf of the undersigned all the ordinary shares in Can-Fite BioPharma Ltd. (the "Company") which the undersigned is entitled to vote at the Special General Meeting of Shareholders (the "Special Meeting") to be held at the offices of the Company, 10 Bareket Street, Petach Tikva, Israel, on Wednesday, **December 24, 2014** at 10:00 a.m. (Israel time), and at any adjournments or postponements thereof, upon the following matters, which are more fully described in the Notice of Special General Meeting of Shareholders (the "Notice") and Proxy Statement relating to the Special Meeting ("Proxy Statement").

The undersigned acknowledges receipt of the Notice and Proxy Statement of the Company relating to the Special Meeting. All terms that are not defined in this Proxy shall have the same meaning of such terms in the Notice and/or the Proxy Statement.

This Proxy, when properly executed, will be voted in the manner directed herein by the undersigned. If no direction is made with respect to any matter, this Proxy will be voted FOR such matter. Any and all proxies heretofore given by the undersigned are hereby revoked.

(Continued and to be signed on the reverse side)

**SPECIAL GENERAL MEETING OF SHREHOLDERS OF
CAN-FITE BIOPHARMA LTD.**

December 24, 2014, 10.00 a.m. (Israel time)

**Please date, sign and mail
your proxy card in the
envelope provided as soon
as possible.**

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE PROPOSAL AT THE MEETING

**PLEASE SIGN, DATE AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE.
PLEASE MARK YOUR VOTE IN BLUE OR BLACK INK AS SHOWN HERE**

To elect Israel Shamay as one of the Company's external directors for a three-year term ending December 24, 2017.

FOR **AGAINST** **ABSTAIN**

Are you a controlling shareholder in the Company, or have a personal interest in the election of Mr. Shamay other than a personal interest unrelated to relationships with a controlling shareholder of the Company? *Please note: If you do not mark either Yes or No, your shares will not be voted for this proposal.*

Yes **No**

In their discretion, the proxies are authorized to vote upon such other matters as may properly come before the Special Meeting or any adjournment or postponement thereof.

_____, Date: _____, 2014 _____ Date _____, 2014
SIGNATURE SIGNATURE

Please sign exactly as your name appears on this Proxy. When shares are held jointly, each holder should sign. When signing as executor, administrator, trustee or guardian, please give full title as such. If the signed is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.

**Special General Meeting of Shareholders of
Can-Fite BioPharma Ltd.**

Date: December 24, 2014
See Voting Instruction On Reverse Side.

Please make your marks like this: Use pen only

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE
"FOR" THE PROPOSAL AT THE MEETING**

- To elect Israel Shamay as one of the Company's external directors for a three-year term ending December 24, 2017.
- Are you a controlling shareholder in the Company, or have a personal interest in the election of Mr. Shamay other than a personal interest unrelated to relationships with a controlling shareholder of the Company? Please note: If you do not mark either Yes or No, your shares will not be voted for this proposal.

For Against Abstain

Yes No

In their discretion, the proxies are authorized to vote upon such other matters as may properly come before the Special Meeting or any adjournment or postponement thereof.

**Special General Meeting of Shareholders of Can-Fite BioPharma Ltd.
to be held December 24, 2014 at 10:00 a.m. (Israel time)
For Holders as of November 26, 2014**



- Mark, sign and date your Voting Instruction Form.
- Detach your Voting Instruction Form.
- Return your Voting Instruction Form in the postage-paid envelope provided.

All votes must be received by 12:00 p.m. Israel time December 18, 2014.

**PROXY TABULATOR FOR
CAN-FITE BIOPHARMA LTD.
P.O. BOX 8016
GARY, NC 27512-9903**

↑ Please separate carefully at the perforation and return just this portion in the envelope provided. ↓



EVENT #

CLIENT #

**Authorized Signatures - This section must be
completed for your instructions to be executed.**

Please Sign Here

Please Date Above

Please Sign Here

Please Date Above

Can-Fite BioPharma Ltd.

**Instructions to The Bank of New York Mellon, as Depository
(Must be received prior to 12:00 p.m. Israel time on December 18, 2014)**

The undersigned hereby appoints Ilan Cohen, Chairman of the Board and Dr. Prina Fishman, Chief Executive Officer and each of them, attorneys, agents and proxies of the undersigned, with full power of substitution to each of them, to represent and to vote on behalf of the undersigned all the ordinary shares in Can-Fite BioPharma Ltd. (the "Company") which the undersigned is entitled to vote at the Special General Meeting of Shareholders (the "Special Meeting") to be held at the offices of the Company, 10 Bareket Street, Petach Tikva, Israel, on Wednesday, **December 24, 2014** at 10:00 a.m. (Israel time), and at any adjournments or postponements thereof, upon the following matters, which are more fully described in the Notice of Special General Meeting of Shareholders (the "Notice") and Proxy Statement relating to the Special Meeting ("Proxy Statement").

The undersigned acknowledges receipt of the Notice and Proxy Statement of the Company relating to the Special Meeting. All terms that are not defined in this Proxy shall have the same meaning of such terms in the Notice and/or the Proxy Statement.

This Proxy, when properly executed, will be voted in the manner directed herein by the undersigned. If no direction is made with respect to any matter, this Proxy will be voted FOR such matter. Any and all proxies heretofore given by the undersigned are hereby revoked.

(Continued and to be marked, dated and signed, on the other side)

PROXY TABULATOR FOR
Can-Fite BioPharma Ltd.
P.O. Box 8016
CARY, NC 27512-9905



Can-Fite Announces Special General Meeting of Shareholders to Elect External Director

PETACH TIKVA, Israel, November 17, 2014 -- Can-Fite BioPharma Ltd. (NYSE MKT: CANF) (TASE: CFBI), a biotechnology company advancing a pipeline of proprietary small molecule drugs that address cancer and inflammatory diseases, today announced that it is convening a Special General Meeting of Shareholders on Wednesday, December 24, 2014 at 10.00 a.m. (Israel time) at Can-Fite's offices located at 10 Bareket Street, Petach Tikva, Israel. The record date for shareholders entitled to vote at the meeting is close of business on November 26, 2014.

At the Special General Meeting of Shareholders, shareholders will vote on the election of Israel Shamay as an external director of the Company for a three-year term.

Additional Information and Where to Find It

In connection with the meeting, Can-Fite will make available to its shareholders of record a proxy statement describing the various matters to be voted upon at the meeting, along with a proxy card enabling them to indicate their vote on each matter. The Company will also furnish copies of the proxy statement and proxy card to the Securities and Exchange Commission (SEC) on Form 6-K, which may be obtained for free from the SEC's website at www.sec.gov and in the "Investor Information" portion of the Company's website at www.canfite.com.

About Can-Fite BioPharma Ltd.

Can-Fite BioPharma Ltd. (NYSE MKT: CANF) (TASE: CFBI) is an advanced clinical stage drug development company with a platform technology that is designed to address multi-billion dollar markets in the treatment of cancer and inflammatory diseases. The Company's CF101 is in Phase II/III trials for the treatment of psoriasis and the Company is preparing for a Phase III CF101 trial for rheumatoid arthritis. Can-Fite's liver cancer drug CF102 is commencing Phase II trials and has been granted Orphan Drug Designation by the U.S. Food and Drug Administration. CF102 has also shown proof of concept to potentially treat other cancers including colon, prostate, and melanoma. These drugs have an excellent safety profile with experience in over 1,200 patients in clinical studies to date. For more information, please visit: www.can-fite.com



Forward-Looking Statements

This press release may contain forward-looking statements, about Can-Fite's expectations, beliefs or intentions regarding, among other things, its product development efforts, business, financial condition, results of operations, strategies or prospects. In addition, from time to time, Can-Fite or its representatives have made or may make forward-looking statements, orally or in writing. Forward-looking statements can be identified by the use of forward-looking words such as "believe," "expect," "intend," "plan," "may," "should" or "anticipate" or their negatives or other variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical or current matters. These forward-looking statements may be included in, but are not limited to, various filings made by Can-Fite with the U.S. Securities and Exchange Commission, press releases or oral statements made by or with the approval of one of Can-Fite's authorized executive officers. Forward-looking statements relate to anticipated or expected events, activities, trends or results as of the date they are made. Because forward-looking statements relate to matters that have not yet occurred, these statements are inherently subject to risks and uncertainties that could cause Can-Fite's actual results to differ materially from any future results expressed or implied by the forward-looking statements. Many factors could cause Can-Fite's actual activities or results to differ materially from the activities and results anticipated in such forward-looking statements, including, but not limited to, the factors summarized in Can-Fite's filings with the SEC and in its periodic filings with the TASE. In addition, Can-Fite operates in an industry sector where securities values are highly volatile and may be influenced by economic and other factors beyond its control. Can-Fite does not undertake any obligation to publicly update these forward-looking statements, whether as a result of new information, future events or otherwise.

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