

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

BioLineRx Ltd.

(Exact name of registrant as specified in its Charter)

State of Israel
(State or other jurisdiction
of incorporation or organization)

Not Applicable
(I.R.S. Employer
Identification Number)

P.O. Box 45158
19 Hartum Street
Jerusalem, Israel
(972) (2) 548-9100
(Address of principal executive offices)

91450
(Zip Code)

**BioLineRx Ltd. 2003 Share Incentive Plan
(full name of plan)**

Vcorp Services LLC
25 Robert Pitt Drive
Suite 204
Monsey, NY 10952
(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a Copy to:

Joseph R. Magnas, Esq.
Morrison & Foerster LLP
1290 Avenue of the Americas
New York, New York 10104
(212) 468-8000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "large accelerated filer" and "accelerated filer" in Rule 12b-2 of the Exchange Act. (check one):

Large accelerated filer Accelerated filer
Non-accelerated filer Smaller reporting company
(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered (2)	Proposed maximum offering price	Proposed maximum aggregate offering price	Amount of registration fee
Ordinary Shares, par value NIS 0.01 per share, deposited as American Depositary Shares represented by American Depositary Receipts (1)	10,000,000	\$.351(3)	\$ 3,510,000	\$ 407.52

(1) American Depositary Shares ("ADSs"), evidenced by American Depositary Receipts ("ADRs"), issuable upon deposit of ordinary shares, par value NIS 0.01 per share ("Ordinary Shares"), of BioLineRx Ltd. (the "Company") are registered on a separate registration statement. Each ADS represents ten

Ordinary Shares.

- (2) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers such indeterminate number of Ordinary Shares as may be offered or issued to prevent dilution resulting from stock splits, stock dividends, or similar transactions pursuant to the terms of the BioLineRx Ltd. 2003 Share Incentive Plan (the "Plan").
 - (3) Estimated pursuant to Rule 457(h) solely for purposes of calculating the aggregate offering price and the amount of the registration fee based upon the average of the high and low prices reported of the ADRs on The Nasdaq Capital Market on August 18, 2011, a date within five business days of the filing date.
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EXPLANATORY NOTE

This Registration Statement contains two parts:

The first part contains a Reoffer Prospectus prepared in accordance with the requirements of Part I of Form S-3. The Prospectus covers reoffers and resales of our ordinary shares, par value NIS 0.01 per share, deposited as ADSs and evidenced by ADRs (for ease of reference, we refer throughout to “ordinary shares”), by certain of our directors and executive officers (as such term is defined under Rule 405 of the Securities Act of 1933, as amended (the “Securities Act”)) with respect to options granted prior to the date hereof (2,471,366 of our ordinary shares) pursuant to the BioLineRx Ltd. 2003 Share Incentive Plan. All such individuals are listed on the selling securityholder table set forth herein.

The second part contains “Information Required in the Registration Statement” prepared in accordance with the requirements of Part II of Form S-8 with respect to the authorized issuance, as of the date hereof and subsequent to the date hereof, of equity awards granted under the BioLineRx Ltd. 2003 Share Incentive Plan that relate to, in the aggregate, 10,000,000 of our ordinary shares, including the 2,471,366 of our ordinary shares being offered under the Reoffer Prospectus. The Reoffer Prospectus does not contain all of the information included in the Registration Statement, certain items of which are contained in exhibits to the Registration Statement as permitted by the rules and regulations of the Securities and Exchange Commission (the “SEC”). Statements contained in the Reoffer Prospectus as to the contents of any agreement, instrument or other document referred to are not necessarily complete. With respect to each such agreement, instrument or other document filed as an exhibit to the Registration Statement, we refer you to the exhibit for a more complete description of the matter involved, and each such statement shall be deemed qualified in its entirety by this reference.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Item 1. Plan Information.

The documents containing the information specified in Part I (plan and registrant information) will be delivered in accordance with Rule 428(b)(1) under the Securities Act. Such documents are not required to be, and are not, filed with the SEC, either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act. These documents, and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Form S-8, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

Item 2. Registrant Information and Employee Plan Annual Information.

Upon written or oral request, any of the documents incorporated by reference in Item 3 of Part II of this Registration Statement, which are also incorporated by reference in the Section 10(a) prospectus, other documents required to be delivered to eligible participants pursuant to Rule 428(b), or additional information about the BioLineRx Ltd. 2003 Share Incentive Plan (the “Plan”), will be available without charge by contacting the Company’s Chief Financial Officer at BioLineRx Ltd., P.O. Box 45158, 19 Hartum Street, Jerusalem, Israel, Telephone: +972 (2) 548-9100.

REOFFER PROSPECTUS

2,471,366



Ordinary Shares represented by
American Depositary Shares

**Issued or issuable under certain awards granted under the
BioLineRx Ltd. 2003 Share Incentive Plan**

This Reoffer Prospectus relates to the public resale, from time to time, of an aggregate of up to 2,471,366 American Depositary Shares, or ADSs, of BioLineRx Ltd., evidenced by American Depositary Receipts, or ADRs, each ADR representing 10 ADSs, by certain securityholders identified in the section entitled "Selling Securityholders." Ordinary shares represented by such ADSs have been or may be acquired in connection with awards granted under the BioLineRx Ltd. 2003 Share Incentive Plan, or the Plan. You should read this prospectus carefully before you invest in our ADSs.

We will not receive any proceeds from the sale by the selling securityholders of the ADSs covered by this Reoffer Prospectus other than the exercise price of options or other equity-based awards granted under the Plan.

We have not entered into any underwriting arrangements in connection with the sale of the ADSs covered by this Reoffer Prospectus. The selling securityholders identified in this Reoffer Prospectus, or their pledgees, donees, transferees or other successors-in-interest, may offer the ADSs covered by this Reoffer Prospectus from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices.

Our ordinary shares are traded on the Tel Aviv Stock Exchange, and our ADRs are traded on the Nasdaq Capital Market, under the symbol "BLRX." On August 19, 2011, the last reported sales price for our ADRs on the Nasdaq Capital Market was \$3.51 per ADR.

Investing in our ADSs involves a high degree of risk. You should read and consider carefully the risk factors beginning on page 2 of this prospectus.

Neither the Securities and Exchange Commission, the Israeli Securities Authority nor any state securities commission has approved or disapproved of these securities, or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this Prospectus is August 22, 2011.

DISCLOSURE REGARDING FORWARD-LOOKING STATEMENTS

The statements set forth and incorporated by reference in this prospectus, which are not historical, constitute “forward looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding our expectations, beliefs, intentions or strategies for the future. When used in this prospectus, the terms “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plans,” “potential,” “predict,” “project,” “should,” “will,” “would” and words or phrases of similar import, as they relate to us, our subsidiary or our management, are intended to identify forward-looking statements. We intend that all forward-looking statements be subject to the safe-harbor provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are only predictions and reflect our views as of the date they are made with respect to future events and financial performance and you should not put undue reliance on any forward-looking statement. Forward-looking statements are subject to many risks and uncertainties that could cause our actual results to differ materially from any future results expressed or implied by the forward-looking statements.

Factors that could cause our actual results to differ materially from those expressed or implied in such forward-looking statements include, but are not limited to:

- the initiation, timing, progress and results of our preclinical studies, clinical trials, and other therapeutic candidate development efforts;
- our ability to advance our therapeutic candidates into clinical trials or to complete our preclinical studies or clinical trials successfully;
- our receipt of regulatory approvals for our therapeutic candidates, and the timing of other regulatory filings and approvals;
- the clinical development, commercialization, and market acceptance of our therapeutic candidates;
- our ability to establish and maintain corporate collaborations;
- the interpretation of the properties and characteristics of our therapeutic candidates and of the results obtained with our therapeutic candidates in preclinical studies or clinical trials;
- obtaining on a timely basis sufficient patient enrollment in our clinical trials;
- the implementation of our business model, strategic plans for our business and therapeutic candidates;
- the scope of protection we are able to establish and maintain for intellectual property rights covering our therapeutic candidates and our ability to operate our business without infringing the intellectual property rights of others;
- estimates of our expenses, future revenues, capital requirements and our needs for additional financing;
- competitive companies, technologies and our industry;
- our ability to develop a successful sales and marketing organization in a timely manner, if at all;
- potential product liability risks and risks of securing adequate levels of product liability and clinical trial insurance coverage; and
- statements as to the impact of the political and security situation in Israel on our business.

In addition, companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials, even after obtaining promising earlier trial results. These and other risks and uncertainties are detailed under the heading “Risk Factors” herein and in our filings with the SEC incorporated by reference in this prospectus. We undertake no obligation to update, and we do not have a policy of updating or revising, these forward-looking statements, except as may be required under applicable law.

The SEC allows us to “incorporate by reference” certain information that we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will update automatically, supplement and/or supersede the information disclosed in this prospectus. Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other document that also is or is deemed to be incorporated by reference in this prospectus modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. You should read the following summary together with the more detailed information regarding our company, our ADSs and our financial statements and notes to those statements appearing elsewhere in this prospectus or incorporated herein by reference.

OUR BUSINESS

We are a clinical stage biopharmaceutical development company dedicated to identifying, in-licensing and developing therapeutic candidates that have advantages over currently available therapies or that address unmet medical needs. Our current development pipeline consists of five clinical stage therapeutic candidates and we have nine therapeutic candidates in the preclinical stages of development. We generate our pipeline by systematically identifying, rigorously validating and in-licensing therapeutic candidates that we believe exhibit a relatively high probability of therapeutic and commercial success. None of our therapeutic candidates have been approved for marketing and, to date, there have been no commercial sales of any of our therapeutic candidates. Our strategy includes commercializing our therapeutic candidates through out-licensing arrangements with biotechnology and pharmaceutical companies. We also evaluate, on a case by case basis, co-development and similar arrangements and the commercialization of our therapeutic candidates independently.

Our most advanced therapeutic candidate, BL-1020, is in development for schizophrenia, a chronic, severe and disabling brain disorder that affects approximately 1.0% of the U.S. adult population as reported by the National Institute of Mental Health.

Our second lead therapeutic candidate, BL-1040, is a novel resorbable polymer solution for use in the prevention of cardiac remodeling in patients who suffered an AMI. Preventing cardiac remodeling following an AMI may prevent transition to congestive heart failure and/or improve patient survival over the long term.

Our third lead therapeutic candidate, BL 5010, is a novel formulation composed of two acids being developed for the removal of skin lesions in a nonsurgical manner. These two acids have already been approved for use in cosmetics.

Our fourth lead therapeutic candidate, BL-1021, is a new chemical entity in development for the treatment of neuropathic pain, or pain that results from damage to nerve fibers.

Our fifth lead therapeutic candidate, BL-7040, is a novel polymer being developed for the treatment of inflammatory bowel disease (IBD).

We actively source, rigorously evaluate and in-license selected therapeutic candidates. We establish and maintain close relationships with research institutes, academic institutions and biotechnology companies in Israel and, more recently, in other countries to identify and in-license therapeutic candidates. Before in-licensing, each therapeutic candidate must pass through our thorough screening process that includes our proprietary MedMatrx scoring tool. Our Scientific Advisory Board and disease-specific third-party advisors are active in evaluating each therapeutic candidate. Our approach is consistent with our objective of proceeding only with therapeutic candidates that we believe exhibit a relatively high probability of therapeutic and commercial success. To date, we have screened over 1,300 compounds, presented more than 60 candidates to our Scientific Advisory Board for consideration, initiated development of 36 therapeutic candidates and terminated 22 feasibility programs.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the specific risks sets forth under the caption “Risk Factors” in any of our filings with the SEC, including our Registration Statement on Form 20-F filed with the SEC on July 15, 2011 before making an investment decision. For additional information, please see the sources described under the caption “Where You Can Find More Information.”

USE OF PROCEEDS

We will not receive any proceeds from the sale of shares covered by this prospectus other than the exercise of certain awards, price of options or other equity-based granted under the Plan. We currently have no plans for the application of any such proceeds other than for general corporate purposes. We cannot assure you that any of such options will be exercised.

SELLING SECURITYHOLDERS

We are registering for resale the ADSs covered by this prospectus to permit the selling securityholders identified below and their pledgees, donees, transferees and other successors-in-interest that receive their ADSs from a securityholder as a gift, partnership distribution or other non-sale related transfer after the date of this prospectus to resell the ADSs when and as they deem appropriate. The selling securityholders acquired, or may acquire, the ordinary shares underlying the ADSs from us pursuant to the Plan. The ADSs may not be sold or otherwise transferred by the selling securityholders unless and until the applicable awards vest and are exercised, as applicable, in accordance with the terms and conditions of such plan. The ADSs are evidenced by ADRs; each ADR consists of 10 ADSs.

The following table sets forth:

- the name of each selling securityholder;
- The position(s), office or other material relationship with our company and its predecessors or affiliates, over the last three years of each selling securityholder;
- the number and percentage of ordinary shares that each selling securityholder beneficially owned as of July 31, 2011, including all ordinary shares underlying both vested and unvested awards, prior to the offering for resale of the ADSs under this prospectus;
- the number of ordinary shares and ADRs that may be offered for resale for the account of each selling securityholder under this prospectus; and
- the number and percentage of ADRs to be beneficially owned by each selling securityholder after the offering of the resale ADRs (assuming all of the offered resale ADSs are sold by such selling securityholder).

The number of ordinary shares in the column “Number of Ordinary Shares Being Offered” and the number of ADRs in the column “Number of ADRs Being Offered” represent all of the ADRs that each selling securityholder may offer under this prospectus. We do not know how long the selling securityholders will hold the ordinary shares or ADSs before selling them or how many ordinary shares or ADSs they will sell, and we currently have no agreements, arrangements or understandings with any of the securityholders regarding the sale of any of the resale ADSs. The ADSs offered by this prospectus may be offered from time to time by the securityholders listed below. We cannot assure you that any of the selling securityholders will offer for sale or sell any or all of the ADSs offered by them by this prospectus.

Securityholders	Number of Ordinary Shares Beneficially Owned Prior to Offering (1)		Number of Ordinary Shares Being Offered	Number of ADRs Being Offered(2)	Number of ADRs Beneficially Owned After Offering (3)	
	Number	Percent			Number	Percent
Kinneret Savitsky, Ph.D. (4)	1,672,202	1.3%	756,170	75,617	91,603	*
Moshe Phillip, M.D. (5)	1,154,474	*	579,511	57,951	57,496	*
Philip Serlin (6)	554,200	*	554,200	55,420	-	-
Leah Klapper, Ph.D. (7)	472,759	*	281,485	28,149	19,126	*
Raphael Hofstein, Ph.D. (8)	200,000	*	200,000	20,000	-	-
Avraham Molcho, M.D. (9)	50,000	*	50,000	5,000	-	-
Nurit Benjamini (10)	50,000	*	50,000	5,000	-	-

*less than 1%

(1) Applicable percentage ownership is based on 123,592,794 ordinary shares outstanding as of July 31, 2011, plus any common stock equivalents or convertible securities held and shares beneficially owned by each such holder as set forth herein. Each ADR represents 10 ADSs.

(2) Represents the number of ADRs issuable upon exchange of the ordinary shares issuable upon the exercise of outstanding awards under the Plan.

(3) Assumes that all ADRs to be offered, as set forth above, are sold pursuant to this offering and that no other ADRs, ADSs or ordinary shares are acquired or disposed of by the selling securityholders prior to the termination of this offering. Because the selling securityholders may sell all, some or none of their ADRs, or may acquire or dispose of other ADRs, ADSs or ordinary shares, no reliable estimate can be made of the aggregate number of ADRs that will be sold pursuant to this offering or the number or percentage of ADRs or ordinary shares that each selling securityholder will own upon completion of this offering. Also assumes that all ordinary shares are exchanged for ADRs.

(4) Dr. Savitsky is a member of the Company's Board of Directors and serves as the Company's Chief Executive Officer. Consists of 756,170 ordinary shares issuable upon the exercise of vested and unvested options.

(5) Dr. Phillip serves as the Company's Vice President of Medical Affairs. Consists of 579,511 ordinary shares issuable upon the exercise of vested and unvested options.

(6) Mr. Serlin serves as the Company's Chief Financial and Operating Officer. Consists of 554,200 ordinary shares issuable upon the exercise of vested and unvested options.

(7) Dr. Klapper serves as the General Manager of BioLine Innovations Jerusalem, the Company's subsidiary. Consists of 281,485 ordinary shares issuable upon the exercise of vested and unvested options.

(8) Dr. Hofstein serves as a member of the Company's Board of Directors and on the Board's Audit Committee. Consists of 200,000 ordinary shares issuable upon the exercise of vested and unvested options.

(9) Dr. Molcho serves as an external director on the Company's Board of Directors and on the Board's Audit Committee. Consists of 50,000 ordinary shares issuable upon the exercise of vested and unvested options.

(10) Ms. Benjamini serves as an external director on the Company's Board of Directors and as the chairman of the Board's Audit Committee. Consists of 50,000 ordinary shares issuable upon the exercise of vested and unvested options.

PLAN OF DISTRIBUTION

The selling securityholders and any of their respective pledgees, donees, assignees and other successors-in-interest may, from time to time, sell any or all of their ADRs on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling securityholders may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales after this registration statement becomes effective;
- broker-dealers may agree with the selling securityholders to sell a specified number of such ADSs at a stipulated price per share;
- through the writing of options on the ADRs;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling securityholders may also sell ADRs under Rule 144 under the Securities Act of 1933, as amended, if available, rather than under this prospectus. The selling securityholders will have the sole and absolute discretion not to accept any purchase offer or make any sale of ADSs if they deem the purchase price to be unsatisfactory at any particular time.

The selling securityholders may also engage in short sales against the box after this registration statement becomes effective, puts and calls and other transactions in our securities or derivatives of our securities and may sell or deliver shares in connection with these trades.

The selling securityholders or their respective pledges, donees, transferees or other successors in interest, may also sell the ADRs directly to market makers acting as principals and/or broker-dealers acting as agents for themselves or their customers. Such broker-dealers may receive compensation in the form of discounts, concessions or commissions from the selling securityholders and/or the purchasers of shares for whom such broker-dealers may act as agents or to whom they sell as principal or both, which compensation as to a particular broker-dealer might be in excess of customary commissions. Market makers and block purchasers purchasing the ADRs in block transactions to market makers or other purchasers at a price per ADR which may be below the then market price. The selling securityholders cannot assure that all or any of the ADRs offered in this prospectus will be issued to, or sold by, the selling securityholders. The selling securityholders and any brokers, dealers or agents, upon effecting the sale of any of the ADRs offered in this prospectus, may be deemed to be “underwriters” as that term is defined under the Securities Act or the Securities Exchange Act of 1934, as amended, or the Exchange Act, or the rules and regulations under such acts. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the ADRs purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

Discounts, concessions, commissions and similar selling expenses, if any, attributable to the sale of ADRs will be borne by the selling securityholders. The selling securityholders may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the ADRs if liabilities are imposed on that person under the Securities Act.

The selling securityholders may from time to time pledge or grant a security interest in some or all of the ADRs owned by them and, if they default in the performance of their secured obligations, the pledge or secured parties may offer and sell the ADRs from time to time under this prospectus after we have filed an amendment to this prospectus under Rule 424(b)(3) or any other applicable provision of the Securities Act amending the list of selling securityholders to include the pledge, transferee or other successors in interest as selling securityholders under this prospectus.

The selling securityholders also may transfer the ADRs in other circumstances, in which case the transferees, pledges or other successors in interest will be the selling beneficial owners for purposes of this prospectus and may sell the ADRs from time to time under this prospectus after we have filed an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of selling securityholders to include the pledge, transferee or other successors in interest as selling securityholders under this prospectus.

Each of the selling securityholders acquired the securities offered hereby in the ordinary course of business and have advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their ADRs, nor is there an underwriter or coordinating broker acting in connection with a proposed sale of ADRs by any selling securityholder. If we are notified by any selling securityholder that any material arrangement has been entered into with a broker-dealer for the sale of ADRs, if required, we will file a supplement to this prospectus. If the selling securityholders use this prospectus for any sale of the ADRs, they will be subject to the prospectus delivery requirements of the Securities Act.

The anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of our ADRs and activities of the selling securityholders.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-8 that we filed with the SEC under the Securities Act. You should rely only on the information contained in this prospectus or incorporated by reference in this prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or any sale of securities.

We file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read, without charge, and copy the documents we file at the SEC's public reference rooms at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. Our SEC filings are also available to the public at no cost from the SEC's website at www.sec.gov. In addition, since we are also listed on the Tel Aviv Stock Exchange, we submit copies of all our filings with the SEC to the Israeli Securities Authority and the Tel Aviv Stock Exchange. Such copies can be retrieved electronically through the Tel Aviv Stock Exchange's internet messaging system (www.maya.tase.co.il) and through the MAGNA distribution site of the Israeli Securities Authority (www.magna.isa.gov.il).

We maintain an Internet site at www.BioLineRx.com. Additional materials regarding our company may be available on our website from time to time. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

This prospectus does not contain all of the information included in the registration statement. We have omitted certain parts of the registration statement in accordance with the rules and regulations of the SEC. For further information, we refer you to the registration statement, including its exhibits and schedules, which may be found at the SEC's website at <http://www.sec.gov>. Statements contained in this prospectus about the provisions or contents of any contract, agreement or any other document referred to are not necessarily complete. Please refer to the actual exhibit for a more complete description of the matters involved.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

We incorporate by reference the filed documents listed below, except as superseded, supplemented or modified by this prospectus, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, other than information that is furnished in such documents but deemed by the rules of the SEC not to have been filed:

- our Registration Statement on Form 20-F filed with the SEC on July 15, 2011; and
- our Reports of Foreign Issuer on Form 6-K filed on August 4, 2011; and August 8, 2011.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus shall be deemed to be incorporated by reference in the registration statement and to be a part hereof from the date of filing of such documents (other than information that is furnished in such documents but deemed by the rules of the SEC not to have been filed). Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. You may request and obtain a copy of these filings, at no cost, by writing or telephoning us at the following address or phone number:

P.O. Box 45158
19 Hartum Street
Jerusalem, Israel 91450
+972-2-548-9100
Attn: Chief Financial Officer

LEGAL MATTERS

The validity of the issuance of the ordinary shares deposited as ADSs and evidenced as ADRs offered by this prospectus will be passed upon for us by Yigal Arnon & Co., Jerusalem, Israel, and Morrison & Foerster LLP, New York, New York.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference to our Registration Statement on Form 20-F have been so incorporated in reliance on the reports of Kesselman & Kesselman, Certified Public Accountant (Isr.), a member of PricewaterhouseCoopers International Limited, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling the registrant, the registrant has been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

We incorporate by reference the filed documents listed below, except as superseded, supplemented or modified by this prospectus, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, other than information that is furnished in such documents but deemed by the rules of the SEC not to have been filed:

- our Registration Statement on Form 20-F filed with the SEC on July 15, 2011; and
- our reports of Foreign Issuer on Form 6-K filed on August 4, 2011; and August 8, 2011.

All documents filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the filing of a post-effective amendment that indicates that all securities have been offered and sold or that deregisters all securities remaining unsold shall be deemed to be incorporated by reference in the registration statement and to be a part hereof from the date of filing of such documents (other than information that is furnished in such documents but deemed by the rules of the SEC not to have been filed). Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Under the Israeli Companies Law, 5754-1999, or the Israeli Companies Law, a company may not exculpate an office holder from liability for a breach of the duty of loyalty. An Israeli company may exculpate an office holder in advance from liability to the company, in whole or in part, for damages caused to the company as a result of a breach of duty of care but only if a provision authorizing such exculpation is inserted in its articles of association. Our articles of association include such a provision. An Israeli company may not exculpate a director from liability arising out of a prohibited dividend or distribution to shareholders.

An Israeli company may indemnify an office holder in respect of the following liabilities and expenses incurred for acts performed as an office holder, either in advance of an event or following an event, provided a provision authorizing such indemnification is contained in its articles of association:

- financial liability imposed on him or her in favor of another person pursuant to a judgment, settlement or arbitrator's award approved by a court. However, if an undertaking to indemnify an office holder with respect to such liability is provided in advance, then such an undertaking must be limited to events which, in the opinion of the board of directors, can be foreseen based on the company's activities when the undertaking to indemnify is given, and to an amount or according to criteria determined by the board of directors as reasonable under the circumstances, and such undertaking shall detail the abovementioned events and amount or criteria;
- reasonable litigation expenses, including attorneys' fees, incurred by the office holder as a result of an investigation or proceeding instituted against him or her by an authority authorized to conduct such investigation or proceeding, provided that (1) no indictment was filed against such office holder as a result of such investigation or proceeding; and (2) no financial liability, such as a criminal penalty, was imposed upon him or her as a substitute for the criminal proceeding as a result of such investigation or proceeding or, if such financial liability was imposed, it was imposed with respect to an offense that does not require proof of criminal intent; and
- reasonable litigation expenses, including attorneys' fees, incurred by the office holder or imposed by a court in proceedings instituted against him or her by the company, on its behalf or by a third party or in connection with criminal proceedings in which the office holder was acquitted or as a result of a conviction for an offense that does not require proof of criminal intent.

An Israeli company may insure an office holder against the following liabilities incurred for acts performed as an office holder if and to the extent provided in the company's articles of association:

- a breach of duty of loyalty to the company, to the extent that the office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;
- a breach of duty of care to the company or to a third party, including a breach arising out of the negligent conduct of the office holder; and
- a financial liability imposed on the office holder in favor of a third party.

An Israeli company may not indemnify or insure an office holder against any of the following:

- a breach of duty of loyalty, except to the extent that the office holder acted in good faith and had a reasonable basis to believe that the act would not prejudice the company;

- a breach of duty of care committed intentionally or recklessly, excluding a breach arising out of the negligent conduct of the office holder;
- an act or omission committed with intent to derive illegal personal benefit; or
- a fine or forfeit levied against the office holder.

Under the Israeli Companies Law, exculpation, indemnification and insurance of office holders must be approved by the audit committee and the board of directors and, with respect to directors, by shareholders.

Our articles of association allow us to indemnify and insure our office holders for any liability imposed on them as a consequence of an act (including any omission) which was performed by virtue of being an office holder.

Item 7. Exemption from Registration Claims.

Not applicable.

Item 8. Exhibits.

Exhibit Number	Exhibit Description	Method of Filing
3.1	Articles of Association of the Registrant.	Incorporated by reference to the Registrant's Registration Statement on Form 20-F (No. 001-35223) filed on July 1, 2011.
3.2	Form of Deposit Agreement dated as of _____, 2011 among BioLineRx, Ltd., The Bank of New York Mellon, as Depository, and all Owners and Holders from time to time of American Depositary Shares issued thereunder.	Incorporated by reference to Exhibit 1 of the Registration Statement on Form F-6 (No. 333-175360) filed by the Bank of New York Mellon with respect to the Registrant's American Depositary Receipts.
3.3	Form of American Depositary Receipt; the Form is Exhibit A of the Form of Depositary Agreement.	Incorporated by reference to Exhibit 1 of the Registration Statement on Form F-6 (No. 333-175360) filed by the Bank of New York Mellon with respect to the Registrant's American Depositary Receipts.
4.1	BioLineRx Ltd. 2003 Share Incentive Plan	Incorporated by reference to the Registrant's Registration Statement on Form 20-F (No. 001-35223) filed on July 1, 2011.
5.1	Opinion of Yigal Arnon & Co., Jerusalem, Israel, as to the legality of the securities being registered	Filed herewith.
5.2	Opinion of Morrison & Foerster LLP, New York, New York, as to the legality of the securities being registered	Filed herewith.
23.1	Consent of Yigal Arnon & Co., Jerusalem, Israel (included in Exhibit 5.1)	Filed herewith.
23.2	Consent of Morrison & Foerster LLP, New York, New York (included in Exhibit 5.2)	Filed herewith.
23.3	Consent of Kesselman & Kesselman, Certified Public Accountant (Isr.), a member of PricewaterhouseCoopers International Limited, independent registered public accounting firm for the Registrant	Filed herewith.
24.1	Power of Attorney (included on signature page)	Filed herewith.

Item 9. Undertakings.

The undersigned registrant hereby undertakes:

- (1) to file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement;
- (i) to include any prospectus required by Section 10(a)(3) of the Securities Act;
- (ii) to reflect in the prospectus any facts or events arising after the effective date of the Registration statement (or most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the change in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement; and
- (iii) to include any material information with respect to the plan of distribution not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement.

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement;

- (2) that, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Jerusalem, State of Israel, on August 22, 2011.

BIOLINERX LTD.

By: /s/ Kinneret Savitsky
Kinneret Savitsky, Ph.D.
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTED, that each director and officer of BIOLINERX, LTD. whose signature appears below hereby constitutes and appoints Kinneret Savitsky, Ph.D. and Philip Serlin, and each of them severally, acting alone and without the other, his/her true and lawful attorney-in-fact with full power of substitution or re-substitution, for such person and in such person's name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments, including post-effective amendments to this Registration Statement, and to sign any and all additional registration statement relating to the same offering of securities of the Registration Statement that are filed pursuant to Rule 462(b) of the Securities Act of 1933 and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated:

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Kinneret Savitsky</u> Kinneret Savitsky, Ph.D.	Chief Executive Officer, Director (principal executive officer)	August 22, 2011
<u>/s/ Philip Serlin</u> Philip Serlin	Chief Financial Officer and Chief Operating Officer (principal financial officer and principal accounting officer)	August 22, 2011
<u>/s/ Aharon Schwartz</u> Aharon Schwartz, Ph.D.	Chairman of the Board	August 22, 2011
<u>/s/ Raphael Hofstein</u> Raphael Hofstein, Ph.D.	Director	August 22, 2011
<u>/s/ Yakov Friedman</u> Yakov Friedman	Director	August 22, 2011

<u>/s/ Avraham Molcho</u> Avraham Molcho, M.D.	Director	August 22, 2011
<u>/s/ Nurit Benjamini</u> Nurit Benjamini	Director	August 22, 2011
<u>/s/ Michael J. Anghel</u> Michael J. Anghel, Ph.D.	Director	August 22, 2011
<u>/s/ George Boychuk</u> George Boychuk Managing Director Depository Management Center	Authorized United States Representative	August 22, 2011

YIGAL ARNON & CO.
Advocates and Notary

Jerusalem, August 22, 2011

BioLineRx Ltd.
P.O. Box 45158
19 Hartum Street
Jerusalem 91450, Israel

Ladies and Gentlemen:

We have acted as Israeli counsel to BioLineRx Ltd. (the "Company"), a corporation organized under the laws of the State of Israel, in connection with the preparation of the Registration Statement on Form S-8 (the "Registration Statement"), to be filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Act"), in connection with the registration under the Act of 10,000,000 ordinary shares, par value NIS 0.01 per share (the "Shares"), issuable under the BioLineRx Ltd. 2003 Share Incentive Plan (the "Plan"). The Shares may be represented by the Company's American Depositary Shares ("ADSs") under the Deposit Agreement dated as of July 21, 2011 (the "Deposit Agreement"), among the Company, The Bank of New York, as depositary, and the holders from time to time of the Company's ADSs.

In connection with this opinion, we have examined copies of the Articles of Association of the Company, as amended, and such corporate records, instruments, and other documents relating to the Company and such matters of Israeli law as we have considered necessary or appropriate for the purposes of rendering this opinion. In such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to authentic originals of all documents submitted to us as copies.

Based upon and subject to the foregoing, we are of the opinion that:

1. the Shares being registered pursuant to the Registration Statement have been duly authorized by the Company, and when issued in conformance with the terms and conditions of the Plan, will be validly issued, fully paid and non-assessable; and
2. the Deposit Agreement has been duly authorized, executed and delivered by the Company.

We are members of the Israeli bar, and the opinions expressed herein are limited to questions arising under the laws of the State of Israel. We express no opinion as to any matter relating to the laws of any jurisdiction other than the laws of Israel. This opinion is effective only as of its date, and we disclaim any obligation to advise of any subsequent change of law or fact.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and the reference to this firm in the Registration Statement in the section entitled "Legal Matters."

Very truly yours,

/s/ Yigal Arnon & Co.

[LETTERHEAD OF MORRISON & FOERSTER LLP]

August 22, 2011

BioLineRx Ltd.
P.O. Box 45158
19 Hartum Street
Jerusalem 91450, Israel

Re: BioLineRx Ltd. — Offering of 10,000,000 ADSs

Ladies and Gentlemen:

We have acted as counsel to BioLineRx Ltd. (the “Company”), a corporation organized under the laws of the State of Israel, in connection with the preparation of the Registration Statement on Form S-8 (the “Registration Statement”), to be filed with the Securities and Exchange Commission (“SEC”) under the Securities Act of 1933, as amended (the “Act”), in connection with the registration under the Act of 10,000,000 ordinary shares, par value NIS 0.01 per share (the “Shares”), issuable under the BioLineRx Ltd. 2003 Share Incentive Plan (the “Plan”). The Shares may be represented by the Company’s American Depositary Shares (“ADSs”) under the Deposit Agreement dated as of July 21, 2011 (the “Deposit Agreement”), among the Company, The Bank of New York, as depositary, and the holders from time to time of the Company’s ADSs.

We have reviewed the Deposit Agreement and the American Depositary Receipts (“ADRs”) evidencing the ADSs and have considered such aspects of New York law as we have deemed relevant for purposes of the opinion set forth below. In connection with this opinion, we have examined such corporate records, documents, instruments, certificates of public officials and of the Company and such questions of law as we have deemed necessary for the purpose of rendering the opinions set forth herein.

In such examination, we have assumed the genuineness of all signatures and the authenticity of all items submitted to us as originals and the conformity with originals of all items submitted to us as copies.

Based on the foregoing, and subject to the further assumptions and qualifications set forth below, it is our opinion that:

1. Upon issuance by the Depositary of the ADRs evidencing ADSs, against the deposit of the duly and validly issued Shares in accordance with the provisions of the Deposit Agreement, the ADRs will be duly and validly issued and the persons in whose names such ADRs are registered will be entitled to the rights specified therein and in the Deposit Agreement.
2. The ADSs, when sold or delivered to the award holders in accordance with the Plans and the options or other awards granted thereunder, will entitle the holders of such ADSs to the rights specified in the Deposit Agreement.

Please note that we are opining only as to the matters expressly set forth herein, that no opinion should be inferred as to any other matter. We are opining herein as to the New York Business Corporation Law as in effect on the date hereof, and we express no opinion with respect to any other laws, rules or regulations. This opinion is based upon currently existing laws, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein. This opinion is being rendered solely in connection with the registration of the offering and sale of the Shares, as represented by ADSs, pursuant to the registration requirements of the Act.

We hereby consent to the use of this opinion as Exhibit 5.2 to the Registration Statement and to the reference to us under the caption “Legal Matters” in the prospectus included in the Registration Statement. In giving such consent, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Act or the rules or regulations of the SEC thereunder.

Very truly yours,

/s/ Morrison & Foerster LLP



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 of BioLineRx Ltd. (the "Company") for the registration of 10,000,000 of its ordinary shares under its BioLineRx Ltd. 2003 Share Incentive Plan of our report dated March 27, 2011, relating to the financial statements of BioLineRx Ltd., is included in its Registration Statement on Form 20-F filed with the Securities and Exchange Commission. The ordinary shares may be represented by the Company's American Depositary Shares ("ADSs") under the Deposit Agreement dated as of July 21, 2011, among the Company, The Bank of New York, as depositary, and the holders from time to time of the Company's ADSs.

/s/ Kesselman & Kesselman

Kesselman & Kesselman
Certified Public Accountants (Isr.)
A member firm of PricewaterhouseCoopers International Limited
Tel Aviv, Israel
August 22, 2011

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