SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER
PURSUANT TO RULE 13a-16 OR 15d-16 OF
THE SECURITIES EXCHANGE ACT OF 1934

For the month of January 2017

_____

BioLineRx Ltd.

(Translation of registrant's name into English)

_____

2 HaMa'ayan Street
Modi'in 7177871, Israel
(Address of Principal Executive Offices)

_____

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F:

Form 20-F ☑ **Form 40-F** ☐

Indicate by check mark whether the registrant by furnishing the information contained in this form is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934:

Yes ☐ **No** ☑

The registrant hereby files as Exhibit 1 to this Report on Form 6-K its new corporate presentation in connection with its upcoming meetings at the J.P. Morgan Healthcare and Biotech Showcase conferences taking place this week in San Francisco.

This Form 6-K, including all exhibits hereto, is hereby incorporated by reference into all effective registration statements filed by the registrant under the Securities Act of 1933.

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

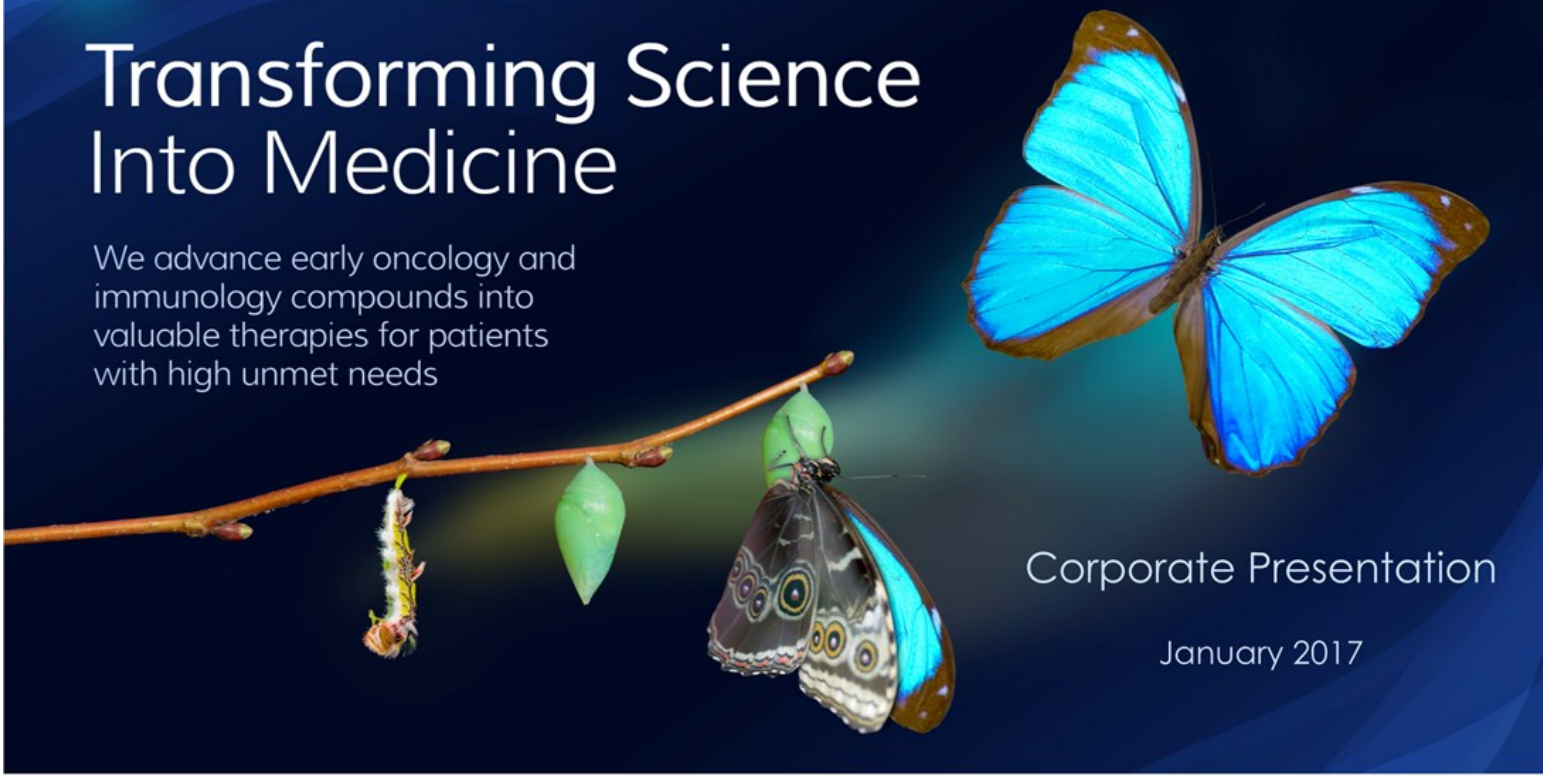
BioLineRx Ltd.

By: /s/ Philip Serlin
Philip Serlin
Chief Executive Officer

Dated: January 9, 2017

Transforming Science Into Medicine

We advance early oncology and immunology compounds into valuable therapies for patients with high unmet needs



Corporate Presentation

January 2017

BIOLINERX

Forward-Looking Statements

This presentation contains "forward-looking statements." These statements include words like "may," "expects," "believes," "plans," "scheduled," and "intends," and describe opinions about future events. These forward-looking statements involve known and unknown risks and uncertainties that may cause the actual results, performance or achievements of BioLineRx to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements.

BioLineRx Snapshot

- Drug development company focused on oncology & immunology in three main areas:
  - Immuno-oncology for multiple solid and liquid tumors
  - Acute myeloid leukemia (AML)
  - Stem-cell mobilization for bone-marrow transplantation
- Transforming science into medicine
  - We leverage selected early-stage programs through advanced clinical trials and registration
- Lead program is BL-8040 oncology platform for multiple oncology indications
- Significant collaborations with leading pharma companies
  - Strategic collaboration with **Novartis** for joint development of Israeli-sourced assets
  - Immunotherapy collaboration with **Genentech** in multiple oncology indications (BL-8040 & Atezolizumab)
  - Immunotherapy collaboration with **Merck** in pancreatic cancer (BL-8040 & Keytruda)
- NASDAQ/TASE traded (symbol BLRX); strong balance sheet

Main Pipeline Assets

Transforming Science Into Medicine

BL-8040

Best-in-class CXCR4 antagonist for treatment of multiple oncology indications

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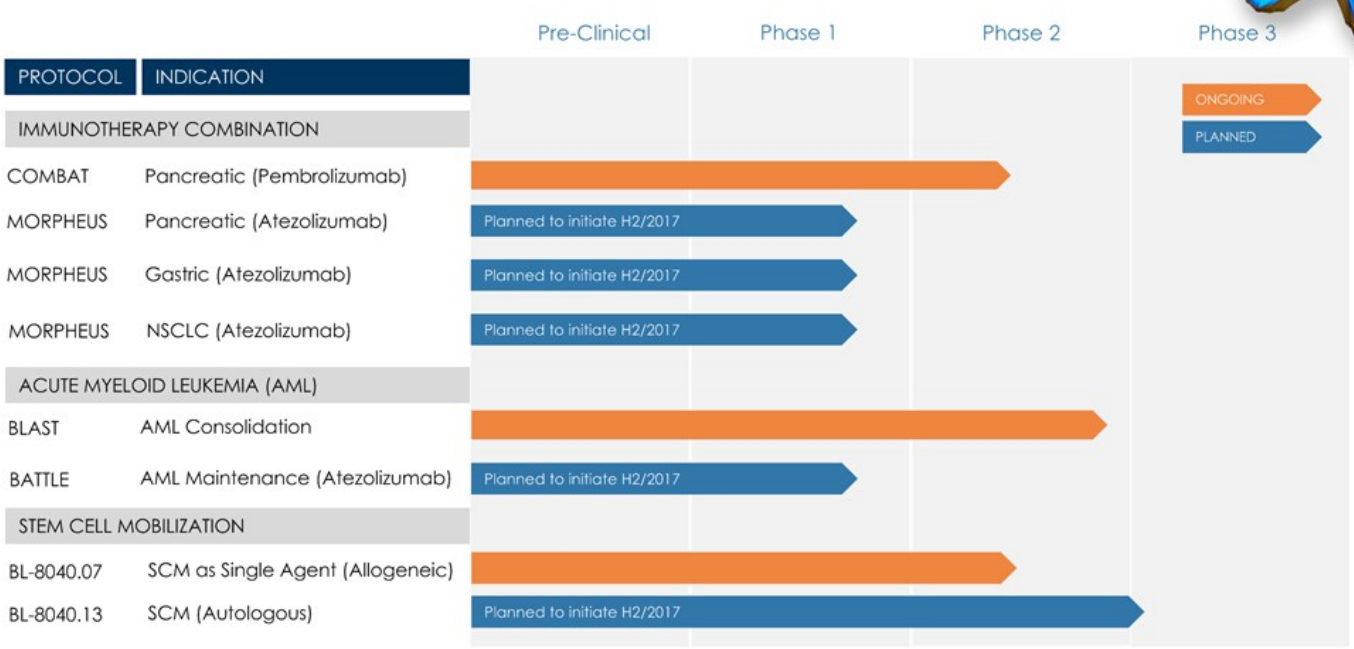
BL-8040 Highlights

- Platform Molecule: Multiple cancer indications
  - Focus on immunotherapy, AML and stem-cell mobilization (SCM)
  - Received Orphan Designation from FDA for AML & SCM
- Mode of Action: Inhibits CXCR4 (a cell surface protein)
  - CXCR4 overexpressed in >70% of tumors; correlates with severity; well validated
  - Increases sensitivity to anti-cancer agents by affecting tumor microenvironment
  - Significant clinical superiority in stem-cell mobilization
  - Strong evidence of robust immune cell mobilization
  - Potential synergy with multiple immuno-oncology platforms
  - Induces cancer cell death (apoptosis)
- Multiple clinical studies ongoing or in final planning stages
  - Multiple studies under immunotherapy collaborations with Genentech and Merck
  - Large phase 2b study in AML consolidation treatment line running at full steam
  - Initiation of phase 2/3 registrational study in autologous SCM planned for H2 2017

BL-8040 Clinical Development Program



Transforming Science Into Medicine

BL-8040 in Immuno-Oncology

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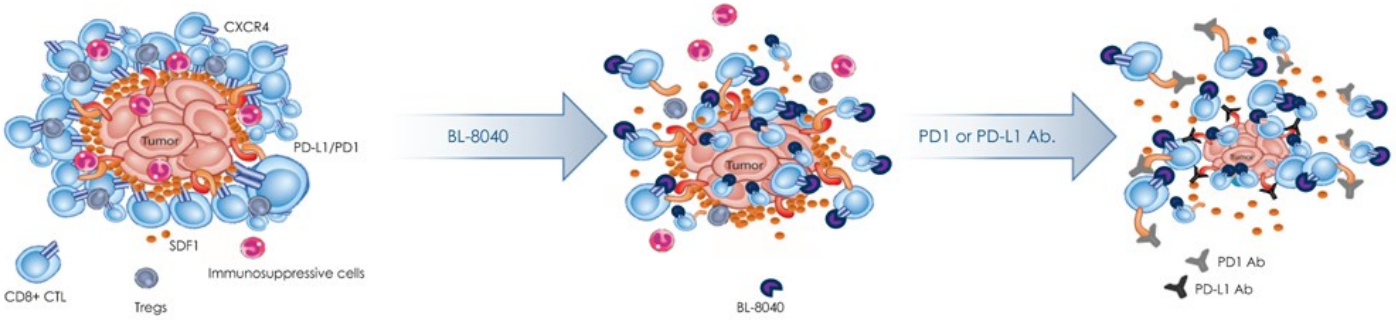
BL-8040's MoA in Cancer Immunotherapy

- Immunostimulant - BL-8040 is a powerful mobilizer of immune cells from the bone marrow and lymph nodes (T-cells, B-cells, immature Dendritic-cells and NK-cells)
- Potentiator - BL-8040 increases infiltration of immune cells into tumors (exhibiting a synergistic effect with anti PD1/PD-L1 immune checkpoint inhibitors)
- Microenvironment modifier - BL-8040 affects the tumor microenvironment by decreasing CXCR4-mediated migration of immune suppressor cells (i.e. MDSCs, Tregs)



Immunotherapy Collaboration with Genentech

- Several phase 1b studies to investigate combination of BL-8040 with Genentech's Tecentriq™, (anti-PDL1 immune checkpoint inhibitor) in multiple cancer indications
  - Genentech to sponsor and conduct several phase 1b studies in multiple solid cancer indications (gastric, NSCLC, pancreatic)
  - BioLineRx to sponsor and conduct phase 1b study in (maintenance) AML
  - Open-label, multicenter, repeated administration studies in up to 60 patients each
- Study endpoints
  - Clinical response, safety and tolerability
  - Multiple pharmacodynamic parameters
- Studies are expected to commence in 2017; partial results in 2018

Immunotherapy Collaboration with Merck

- Phase 2a study to examine combination of BL-8040 with Merck's Keytruda® (anti-PD1 immune checkpoint inhibitor) in pancreatic cancer
  - Up to 30 patients with metastatic pancreatic adenocarcinoma
  - Open-label, multicenter, single-arm trial
  - Sites in the US, Israel and South Korea
- Study endpoints
  - Clinical response, safety and tolerability
  - Multiple pharmacodynamic parameters, including ability to improve infiltration of T cells into tumor and their reactivity
- Study commenced at end Q3 2016
  - Partial results expected H2 2017
  - Top-line results expected H2 2018

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BL-8040 in AML

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AML – Background and Direction

- Company conducted successful proof-of-concept phase 2a study in relapsed/refractory AML
  - 38% composite remission rate versus 20% historical benchmark
  - Showed longer than expected durability of remissions
  - Excellent safety and tolerability
  - Showed direct triple anti-leukemic activity: robust mobilization, induction of apoptosis and terminal differentiation of AML cells
- Results support accelerated development in AML space
  - BL-8040's high response rate indicates selective effect on chemotherapy resistant cells
  - BL-8040's direct anti-leukemic activity and robust bone marrow clearance suggest potential elimination of minimal residual disease
  - Results encourage accelerated development in two specific AML treatment lines: (i) consolidation and (ii) maintenance

AML – Clinical Development Status

- Consolidation AML phase 2b study ongoing
  - 194 patients, double-blind, placebo controlled at ~25 sites in Germany
  - Enrollment ongoing
  - Potential interim results in 2018
- Maintenance AML phase 1b study (under Genentech collaboration) in late planning stages
  - Combination study with Atezolizumab as maintenance therapy for high-risk elderly AML patients following induction treatment
  - Up to 60 patients, open label study at multiple leading sites in the US
  - In late planning stages, expected to commence in H2 2017

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BL-8040 in SC Mobilization

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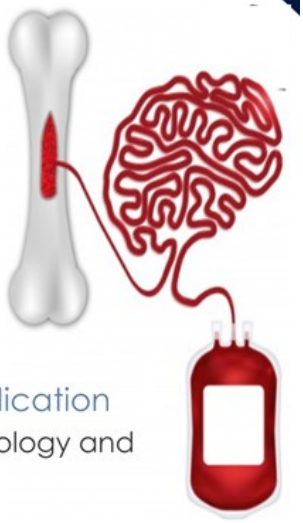
Stem Cell Mobilization for Autologous Transplantation

- G-CSF is current standard for autologous stem cell mobilization
  - 4-6 daily injections of G-CSF, plus 1-4 apheresis sessions required
  - 50-70% of patients are considered poor mobilizers
  - For poor mobilizers, 1-4 daily injections of Mozobil on top of G-CSF are required
- Robust clinical results support BL-8040 as best-in-class mobilization agent
- Fastest route to registration in autologous SCM
  - Prior understandings with regulatory authorities in multiple myeloma and NHL
  - Confirmatory meeting with FDA planned for Q2 2017
  - Phase 2/3 registrational study planned to commence in H2 2017
- Phase 2 allogeneic transplantation study ongoing as complementary indication
  - Collaboration with Washington University School of Medicine, Division of Hematology and Oncology
  - Partial results by Q1 2017; topline results by end of 2017



BL-8040 Summary

- BL-8040 is a robust platform for multiple oncology indications
  - Immunotherapy
  - AML
  - Stem-cell mobilization/transplantation
- BL-8040 has demonstrated robust efficacy in a number of clinical studies
- CXCR4 is a validated target
- BL-8040 has a clinically validated MoA
- Significant collaborations with leading global pharma companies provide meaningful validation of program potential
- Phase 2/3 registrational study in autologous SCM expected to start in H2 2017

Transforming Science Into Medicine

Corporate Slides

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Strategic Collaboration with Novartis

- Novartis selected BioLineRx as its leading partner for identification and early development of Israeli-sourced drug candidates
  - Exclusive first look at all Israeli-based projects scouted by BioLineRx
  - Co-develop selected projects through clinical proof-of-concept (POC)
- Unique collaboration provides lasting shareholder value and key insights
  - Builds pipeline in conjunction with global leader, gaining Big Pharma perspective
- Financial highlights:
  - Upfront $10 million equity investment in BLRX
  - Upon selection of clinical project (or when a project reaches IND), BioLineRx receives:
    - $5 million option fee (non-dilutive)
    - 50% of remaining R&D expenses up to POC (in equity at a premium to market)
  - Novartis receives right of first negotiation for full out-license upon clinical POC

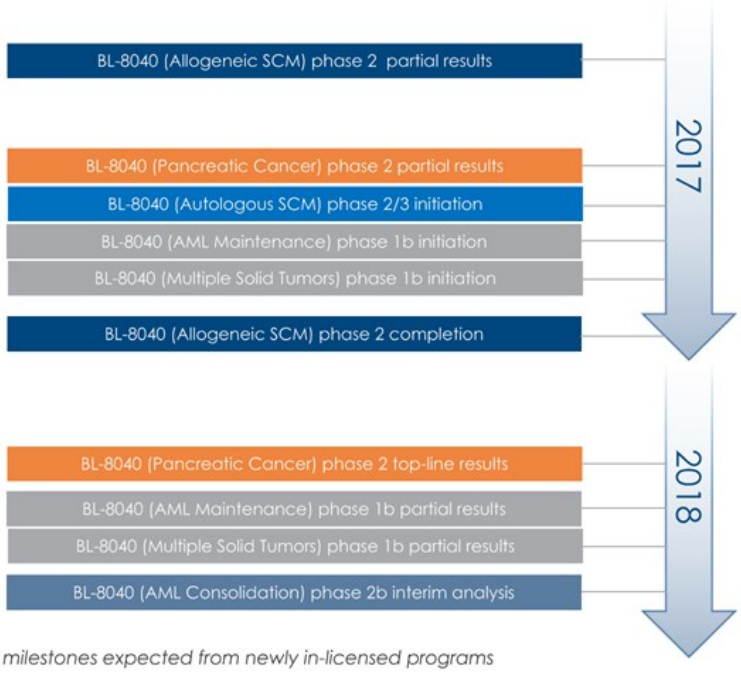
Well Funded

- Cash position
  - ~$39 million as of September 30, 2016
  - Funds operational capital through beginning of 2019

- Capital structure
  - Traded on NASDAQ and TASE (Symbol: BLRX)
  - 56 million shares outstanding; 65 million fully diluted
  - US shareholders represent ~70% of investor base, including key life-sciences investors
    - Novartis is largest shareholder; holds ~9% of Company

- Other
  - ~50 employees, approximately 2/3 with advanced degrees
  - Analyst coverage: JMP Securities, Roth Capital, Maxim Group

Principal Expected Development Milestones in 2017/2018



Does not include milestones expected from newly in-licensed programs

Thank You

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