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 May 2017

BioLineRx Ltd.

(Translation of registrant's name into English)

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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 ☑

On May 22, 2017, the registrant will issue the press release which is filed as Exhibit 1 to this Report on Form 6-K.

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: May 22, 2017

Exhibit 1

For immediate release

BioLineRx Announces Regulatory Submission for Phase 1b Trial of BL-8040 in Combination with Atezolizumab in AML

- Phase 1b trial under cancer immunotherapy collaboration with Genentech -

Tel Aviv**,** Israel, May 22, 2017 - BioLineRx Ltd. (NASDAQ/TASE:BLRX), a clinical-stage biopharmaceutical company focused on oncology and immunology, announced today the filing of regulatory submissions required to commence a Phase 1b trial for BL-8040 in combination with atezolizumab (Tecentriq®), Genentech, a member of the Roche Group's anti-PDL1 cancer immunotherapy, for the maintenance treatment of patients with acute myeloid leukemia (AML) who have achieved complete response following induction therapy. The trial, named BATTLE, is expected to commence in the second half of 2017, following receipt of regulatory approval.

This clinical study is part of BioLineRx's cancer immunotherapy collaboration with Genentech to conduct several Phase 1b studies investigating BL-8040 in combination with atezolizumab in multiple cancer indications, announced in September 2016. The Phase 1b study will evaluate the clinical response, safety and tolerability of the combination of these therapies, as well as multiple pharmacodynamic parameters.

BL-8040, BioLineRx's lead oncology platform, is a CXCR4 antagonist that has been shown, in a successful Phase 2a study in relapsed and refractory AML patients, to be a robust mobilizer of immune and tumor cells and to be effective in inducing direct tumor cell death. These two effects, when combined with atezolizumab-induced blockade of the interaction between PD-L1 with PD-1 and B7.1, are hypothesized to have a beneficial effect on the minimal residual disease (MRD) status of AML patients. Specifically, this combined approach could potentially reduce an AML patient's MRD status from positive to negative, and possibly have a favorable effect on disease outcome. This study's regimen aims at further prolonging the period of remission, exploring a novel maintenance approach to these patients.

Philip Serlin, Chief Executive Officer of BioLineRx, stated, "Our collaboration with Genentech in multiple cancer indications is on target and advancing as planned. Our robust partnership with a world leader in cancer immunotherapy is very exciting, and we are looking forward to initiating this combination study, which will hopefully demonstrate the potential to expand the benefit of immunotherapy to cancer patient populations that currently do not benefit from cancer immunotherapy treatments."

About BL-8040
BL-8040 is a short peptide for the treatment of acute myeloid leukemia, solid tumors, and stem cell mobilization. It functions as a high-affinity antagonist for CXCR4, a chemokine receptor that is directly involved in tumor progression, angiogenesis, metastasis and cell survival. CXCR4 is over-expressed in more than 70% of human cancers and its expression often correlates with disease severity. In a number of clinical and pre-clinical studies, BL-8040 has shown robust mobilization of cancer cells from the bone marrow, thereby sensitizing these cells to chemo- and bio-based anti-cancer therapy, as well as a direct anti-cancer effect by inducing cell death (apoptosis). In addition, BL-8040 has also demonstrated robust stem-cell mobilization, including the mobilization of colony-forming cells, T, B and NK cells. BL-8040 was licensed by BioLineRx from Biokine Therapeutics and was previously developed under the name BKT-140.

About Acute Myeloid Leukemia (AML)
Acute myeloid leukemia (AML) is a cancer of the blood and bone marrow and is the most common type of acute leukemia in adults. According to the American Cancer Society, approximately 20,000 new cases of AML were diagnosed in the United States in 2016, and the median age of AML patients was 67 years old. The first treatment line for patients with AML includes a combination of chemotherapy drugs and is called induction treatment. The median survival for AML patients receiving induction chemotherapy is less than two years, with shorter survival for patients over the age of 60 or for those with certain gene or chromosome aberrations. Due to relapsed or refractory disease (where the disease is not responsive to standard treatments), the overall five-year survival rate for AML is between 10 and 40 percent.

About BioLineRx
BioLineRx is a clinical-stage biopharmaceutical company focused on oncology and immunology. The Company in-licenses novel compounds, develops them through pre-clinical and/or clinical stages, and then partners with pharmaceutical companies for advanced clinical development and/or commercialization.

BioLineRx's leading therapeutic candidates are: BL-8040, a cancer therapy platform, which has successfully completed a Phase 2a study for relapsed/refractory acute myeloid leukemia (AML) and is in the midst of a Phase 2b study as an AML consolidation treatment and is expected to initiate a Phase 3 study in stem cell mobilization for autologous transplantation; and AGI-134, an immunotherapy treatment in development for multiple solid tumors, which is expected to initiate a first-in-man study in the first half of 2018. In addition, BioLineRx has a strategic collaboration with Novartis Pharma AG for the co-development of selected Israeli-sourced novel drug candidates; a collaboration agreement with MSD (known as Merck in the US and Canada), on the basis of which the Company has initiated a Phase 2a study in pancreatic cancer using the combination of BL-8040 and Merck's KEYTRUDA®; and a collaboration agreement with Genentech Inc., a member of the Roche Group, to investigate the combination of BL-8040 and Genentech's atezolizumab in several Phase 1b studies for multiple solid tumor indications and AML.

For additional information on BioLineRx, please visit the Company's website at www.biolinerx.com, where you can review the Company's SEC filings, press releases, announcements and events. BioLineRx industry updates are also regularly updated on Facebook, Twitter, and LinkedIn.

Tecentriq® is a registered trademark of Genentech, a member of the Roche Group.

Various statements in this release concerning BioLineRx's future expectations constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements include words such as "may," "expects," "anticipates," "believes," 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. Some of these risks are: changes in relationships with collaborators; the impact of competitive products and technological changes; risks relating to the development of new products; and the ability to implement technological improvements. These and other factors are more fully discussed in the "Risk Factors" section of BioLineRx's most recent annual report on Form 20-F filed with the Securities and Exchange Commission on March 23, 2017. In addition, any forward-looking statements represent BioLineRx's views only as of the date of this release and should not be relied upon as representing its views as of any subsequent date. BioLineRx does not assume any obligation to update any forward-looking statements unless required by law.

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