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 2018

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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)

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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 January 23, 2018, 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: January 23, 2018

Exhibit 1

For Immediate Release

BioLineRx Presents Preclinical Data at ASCO-SITC Showing BL-8040 Prolongs Survival by Mediating Tumor Infiltration of Antigen-Specific T-cells

Tel Aviv , Israel, January 23, 2018 - BioLineRx Ltd. (NASDAQ/TASE: BLRX), a clinical-stage biopharmaceutical company focused on oncology and immunology, announced today the publication of data showing that BL-8040, its lead oncology platform, augments the ability of the immune system to fight cancer by increasing the infiltration of anti-tumor-specific T cells into the tumor microenvironment (TME), resulting in decreased tumor growth and prolonged survival in a murine model of cancer. Results of the study will be presented as a poster titled "CXCR4 Antagonist (BL-8040) Enhances Antitumor Effects by Increasing Tumor Infiltration of Antigen-specific Effector T-cells" (Abstract 73) on January 25, 2018 at the ASCO-SITC Clinical Immuno-Oncology Symposium, being held January 25-27, 2018, in San Francisco, CA.

In the preclinical study, a murine model of cancer was used to assess the effects of BL-8040 in combination with a cancer vaccine that primes the immune system against the tumor. The results of the study show that combining BL-8040 with the cancer vaccine leads to a significantly enhanced anti-tumor immune response, which attenuates tumor growth and prolongs mouse survival better than either agent administered alone. The results go on to demonstrate that BL-8040 significantly increases the abundance of tumor-specific T cells in the TME, suggesting an explanation for the enhanced efficacy of the combination over either agent when administered alone.

"I am highly encouraged by the data generated in this pre-clinical study, which further demonstrates the therapeutic potential of BL-8040," commented Dr. Samir Khleif, Professor of Oncology and Director of the Loop Immunology-Oncology Laboratory at Georgetown Lombardi Comprehensive Cancer Center. "The results provide further evidence that BL-8040 promotes the infiltration of cytotoxic T cells into tumors, which is seen as a key objective to improve responsiveness to checkpoint therapy. I look forward to seeing the results from the clinical studies in which BL-8040 is being combined with checkpoint blockade."

“We have shown in numerous preclinical and clinical studies that BL-8040 has various anti-tumor effects, including direct and indirect effects, influencing T cell location and activity as well as tumor cell survival,” commented Philip Serlin, Chief Executive Officer of BioLineRx. “The results of the current study suggest that BL-8040 enhances anti-tumor immune response by increasing the number of anti-tumor T cells in the TME. These results also suggest that BL-8040, a CXCR4 antagonist, is a promising immune-modulatory agent with potent anti-tumor effects, and we remain on track with our eight ongoing clinical trials for this product in various indications, both in blood cancers as well as in solid tumors.”

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 and immune-cells from the bone marrow, thereby sensitizing cancer cells to chemo- and bio-based anti-cancer therapy, as well as a direct anti-cancer effect by inducing cell death (apoptosis) and mobilizing immune-cells. 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 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 AML, is in the midst of a Phase 2b study as an AML consolidation treatment and has recently initiated 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 for the co-development of selected Israeli-sourced novel drug candidates; a collaboration agreement with MSD (tradename of Merck & Co., Inc.), on the basis of which the Company has initiated a Phase 2a study in pancreatic cancer using the combination of BL-8040 and MSD’s KEYTRUDA; and a collaboration agreement with Genentech, a member of the Roche Group, to investigate the combination of BL-8040 and Genentech’s atezolizumab in several Phase 1b/2 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.

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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