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 December 2014

Commission File Number: 001-36581

Vascular Biogenics Ltd.

(Translation of registrant's name into English)

6 Jonathan Netanyahu St.
Or Yehuda
Israel 60376
(Address of principal executive offices)

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

Form 20-F ☒ Form 40-F ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(1): ☐

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101(b)(7): ☐

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

Yes ☐ No ☒

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): 82-

Other Events

On December 22, 2014, Vascular Biogenics Ltd. issued a press release: "VBL Therapeutics Announces Positive Phase 2a Data for VB-111 in Recurrent Thyroid Cancer." A copy of this press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference.

Exhibits

99.1 Vascular Biogenics Ltd. Press Release.

SIGNATURE

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.

VASCULAR BIOGENICS LTD.

Date: December 22, 2014

By: /s/ Dror Harats
Name: Dror Harats
Title: Chief Executive Officer

EXHIBIT INDEX

99.1 Vascular Biogenics Ltd. Press Release.

Exhibit 99.1

VBL Therapeutics Announces Positive Phase 2a Data for VB-111 in Recurrent Thyroid Cancer

- The study demonstrated disease stabilization and safety -

TEL AVIV, ISRAEL, Dec. 22, 2014 — VBL Therapeutics (NASDAQ: VBLT), a clinical-stage biotechnology company committed to the discovery, development and commercialization of first-in-class treatments for cancer and immune-inflammatory disease, today announced positive results from its exploratory Phase 2a study of VB-111 in patients with recurrent, iodine-resistant differentiated thyroid cancer. VB-111 demonstrated disease stabilization and safety in the study, which was designed to assess the compound's safety and signal of efficacy.

"We are pleased by the results of this study, which suggest that VB-111 is active in patients with advanced thyroid cancer and provide further proof-of-concept support to the unique mechanism of VB-111 and its potency in recurrent cancer indications," said Dror Harats, MD, Chief Executive Officer of VBL Therapeutics. "We are excited to see that VB-111 provided disease stabilization for patients who previously progressed after receiving several lines of treatment, and are encouraged by the compound's continuously favorable safety profile. Going forward, we plan to focus our efforts and resources on our pivotal Phase 3 study of VB-111 in recurrent glioblastoma (rGBM), which we plan to initiate in the first half of 2015."

Thirty patients enrolled in the open label, dose-escalating study, most of whom had failed on several therapeutic lines, including tyrosine kinase inhibitors, prior to enrollment. Thirteen patients received a sub-therapeutic single dose of VB-111 at 3X10e12 VPs and seventeen received VB-111 at 10e13 VPs every two months until disease progression. Six patients (35%) in the therapeutic dose cohort (n=17) met the primary endpoint of 6-month progression-free survival using Response Evaluation Criteria in Solid Tumors (RECIST), compared to three patients (23%) in the low dose cohort (n=13). VB-111 was well-tolerated in both stages of this study, with no signs of clinically significant safety issues.

About Thyroid Cancer:

Thyroid cancer occurs in the thyroid gland, a hormone-producing organ at the base of the neck that regulates heart rate, blood pressure, body temperature and weight. According to the National Cancer Institute, there are an estimated 535,000 people currently living with thyroid cancer in the United States, with an estimated 60,000 new cases each year and an estimated 1,850 annual deaths as a result of the disease. The type of treatment depends on the cancer cell type, tumor size and severity of the disease. First-line treatment is surgical removal of the thyroid gland, and is recommended for most patients. Treatment with radioactive iodine after surgery to destroy any remaining thyroid tissue may be recommended for more advanced disease. If radioactive iodine is ineffective, other treatments are prescribed, such tyrosine kinase inhibitors and systemic chemotherapy. However, if such treatments are unsuccessful, the therapeutic options for patients are currently very limited.

About VB-111:

VB-111 is a novel, intravenously-administered, anti-angiogenic agent that utilizes VBL's proprietary Vascular Targeting System (VTS™) to target endothelial cells in the tumor vasculature for cancer therapy. VB-111 contains a non-replicating adenovector, a proprietary modified murine pre-proendothelin promoter (PPE-1-3x) and a Fas-Chimera transgene to angiogenic tumor blood vessels, leading to their apoptosis. VB-111 is the first agent based on transcriptional targeting of tumor endothelium to be assessed in a clinical trial.

VB-111 completed a Phase 1/2 "all comers" clinical trial, which demonstrated multiple cases of objective tumor response and disease control and excellent safety and tolerability. VB-111 has Fast Track Designation for recurrent glioblastoma in the US, and orphan drug status for glioblastoma in both the US and EU. VB-111 has also been advanced into tumor specific, repeat-dose trials in thyroid and ovarian cancer.

About VBL:

Vascular Biogenics Ltd., operating as VBL Therapeutics, is a clinical-stage biopharmaceutical company committed to the discovery, development and commercialization of first-in-class treatments for cancer and immune-inflammatory diseases. VBL Therapeutics' clinical pipeline is based on two distinct, proprietary platform technologies—an oncology program and an anti-inflammatory program—that leverage the body's natural physiologic and genetic regulatory elements. The Company's lead oncology product candidate, VB-111, is a gene-based biologic that is initially being developed for recurrent glioblastoma, or rGBM, an aggressive form of brain cancer. VB-111 has received orphan drug designation in both the United States and Europe and was granted Fast Track designation by the FDA for prolongation of survival in patients with glioblastoma that has recurred following treatment with standard chemotherapy and radiation. VBL Therapeutics expects to begin the pivotal Phase 3 trial for VB-111 in rGBM in the first half of 2015, under a special protocol assessment agreement granted by the FDA. VBL Therapeutics' lead product candidate from its anti-inflammatory program, VB-201, is an oral small molecule currently being evaluated in Phase 2 clinical trials for psoriasis and for ulcerative colitis, with top-line results expected in the first quarter of 2015.

Forward Looking Statements:

This press release contains forward-looking statements. These forward-looking statements are not promises or guarantees and involve substantial risks and uncertainties. Among the factors that could cause actual results to differ materially from those described or projected herein include uncertainties associated generally with research and development, clinical trials and related regulatory reviews and approvals, and the risk that historical clinical trial results may not be predictive of future trial results. A further list and description of these risks, uncertainties and other risks can be found in the Company's regulatory filings with the U.S. Securities and Exchange Commission. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. VBL Therapeutics undertakes no obligation to update or revise the information contained in this press release, whether as a result of new information, future events or circumstances or otherwise.

Contact:

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