UNITED STATES
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 June 2018

Commission File Number: 001-37643

KITOV PHARMA LTD.
(Translation of registrant's name into English)

One Azrieli Center, Round Tower,
132 Menachem Begin Road, Tel Aviv 6701101, Israel
(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): ____

Kitov Pharma Ltd. (the "Company" or the "Registrant"), today announced results in a pre-clinical study testing NT219, conducted by Kitov's majority-owned subsidiary, TyrNovo Ltd. ("TyrNovo"), a privately-held developer of novel small molecules in the oncology therapeutic field. The study evaluated NT219 in combination with gemcitabine in a patient-derived xenograft (PDX) model of pancreatic cancer, and was conducted in accordance with guidance from the U.S. Food and Drug Administration (FDA). The Company believes that the results support the planned submission of the Investigational New Drug (IND) Application for NT219. NT219 was tested at three dose levels in combination with gemcitabine vs. gemcitabine alone. A clear dose response effect was observed among treatment arms with statistically significant differences among groups (p-value <= 0.0166). In addition, the study confirmed previous findings that demonstrated the beneficial effect of the combination of NT219 with gemcitabine vs. gemcitabine alone (p-value <0.0001).

The Company also today announced the acquisition of an additional approximately 3.1% stake in TyrNovo, , from Taoz – Company for Management and Holdings of Companies Ltd. ("Taoz"), the final remaining unaffiliated minority shareholder of TyrNovo, and with whom the Company entered into a shareholders' agreement in February 2017. Pursuant to this new share exchange agreement with Taoz, in exchange for Taoz's entire holding in TyrNovo and the termination of the existing shareholder and investment agreements amongst the Company, TyrNovo and Taoz, the Company will issue to Taoz 2,816,900 newly issued ordinary shares (equivalent to 140,845 American Depositary Shares or ADSs) of the Company (the "Taoz Shares"), which will represent approximately 0.9% of the Company's issued and outstanding share capital following the closing of the share exchange transaction. For more information on the shareholder and investment agreements amongst the Company, TyrNovo, and Taoz which will be terminated at the closing of the share exchange transaction, see Item 7.B – Related Party Transactions – TyrNovo Ltd. in our Annual Report on Form 20-F for the year ended December 31, 2017

After the closing of this new share exchange transaction, which is pending completion of customary closing conditions, including receipt of the listing consent of the Tel Aviv Stock Exchange, the Company will hold approximately 97.1% of TyrNovo's issued and outstanding ordinary shares. Approximately 2.9% of TyrNovo's issued and outstanding ordinary shares are owned by Dr. Hadas Reuveni Ph.D., the founder and Chief Technology Officer of TyrNovo.

Pursuant to the share exchange agreement, following the closing of the transaction if at any time during the seven trading days following such date on which there is either (i) an effective registration statement registering, or prospectus available for, the resale of Taoz Shares or ADSs representing the Taoz Shares, or (ii) an available exemption permitting the resale of the Taoz Shares without having to satisfy the registration or prospectus requirements under applicable law in any trading market; and, the lowest VWAP of the Company's ADSs for any day during such seven day period (the "Consideration Adjustment VWAP") is below $2.84 per ADS, then the consideration to be paid by the Company for Taoz's entire holding in TyrNovo shall be adjusted such that the Company shall pay, as additional consideration for the TyrNovo shares sold by Taoz, an amount in cash such that the value of the 140,845 ADSs based on the Consideration Adjustment VWAP plus such additional cash consideration is equal to $400,000.

In connection with the share exchange transaction, at closing of the transaction the Company will enter into a Registration Rights Agreement with Taoz (the "Registration Rights Agreement") providing for the filing of a registration statement (the "Registration Statement") with the Securities and Exchange Commission registering the Taoz Shares represented by ADSs. Pursuant to the Registration Rights Agreement, in the event that the Taoz Shares would not be able to be sold or otherwise transferred, without volume or manner-of-sale restrictions, pursuant to either (i) SEC Rule 144 in the absence of any registration, or (ii) any other applicable rule permitting the Taoz Shares to be sold, or otherwise transferred, in any applicable trading market, without volume or manner-of-sale restrictions, the Company is then obligated to cause the Registration Statement to be declared effective no later than 60 days after the date of closing of the share exchange transaction.

The Taoz Shares were offered, and will be issued, to Taoz in Israel on a private placement basis pursuant to applicable exemptions from the prospectus requirements under applicable Israeli securities laws and exempt from the registration requirements of the United States Securities Act of 1933, as amended, (the "Act") and/or Regulation S, promulgated pursuant to the Act. Taoz is not a U.S. person, no sales efforts were conducted in the U.S., and the Taoz Shares will contain upon issuance, a legend restricting the sale of such securities in accordance with applicable exemptions from the registration requirements of the Act. The Taoz Shares subject to statutory resale restrictions in under applicable Israeli securities laws and regulations, and to statutory resale restrictions in the U.S. under the Act.

The securities offered have not been, and will not necessarily be, registered under the U.S. Securities Act or any U.S. state or Israeli securities laws, and may not be offered or sold in the United States or in Israel, or to, or for the account or benefit of, United States persons or persons in Israel absent registration or any applicable exemption from the registration and/or prospectus requirements of the Act and applicable U.S. state and/or Israeli securities laws. This release does not constitute an offer to sell or the solicitation of an offer to buy securities in the United States or in the State of Israel, nor in any other jurisdiction.

On June 15, 2018, the Company issued a press release in connection with the transaction with Taoz and a TyrNovo business update, "**Kitov Announces Positive Pre-Clinical Data from NT219 Demonstrating its Dose-Dependent Anti-Tumor Efficacy**", which is attached hereto as Exhibit 99.1

Attached hereto are the following exhibits:

Exhibit 99.1 Press Release

Forward-Looking Statements and Registrant's Safe Harbor Statement

Certain statements in this Form 6-K are forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other applicable securities laws. Forward-looking statements can be identified by the use of forward-looking words such as "believe", "expect", "intend", "plan", "may", "should", "could", "might", "seek", "target", "will", "project", "forecast", "continue" or "anticipate" or their negatives or variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical matters. You should not place undue reliance on these forward-looking statements, which are not guarantees of future performance. Forward-looking statements reflect our current views, expectations, beliefs or intentions with respect to future events, and are subject to a number of assumptions, involve known and unknown risks, many of which are beyond our control, as well as uncertainties and other factors that may cause our actual results, performance or achievements to be significantly different from any future results, performance or achievements expressed or implied by the forward-looking statements. Important factors that could cause or contribute to such differences include, among others, risks relating to: the fact that drug development and commercialization involves a lengthy and expensive process with uncertain outcomes; our ability to successfully develop and commercialize our pharmaceutical products; the expense, length, progress and results of any clinical trials; the lack of sufficient funding to finance the clinical trials; the impact of any changes in regulation and legislation that could affect the pharmaceutical industry; the difficulty in receiving the regulatory approvals necessary in order to commercialize our products; the difficulty of predicting actions of the U.S. Food and Drug Administration or any other applicable regulator of pharmaceutical products; the regulatory environment and changes in the health policies and regimes in the countries in which we operate; the uncertainty surrounding the actual market reception to our pharmaceutical products once cleared for marketing in a particular market; the introduction of competing products; patents attained by competitors; dependence on the effectiveness of our patents and other protections for innovative products; our ability to obtain, maintain and defend issued patents with protective claims; the commencement of any patent interference or infringement action; our ability to prevail, obtain a favorable decision or recover damages in any such action; and the exposure to litigation, including patent litigation, and/or regulatory actions; the uncertainty surrounding an investigation by the Israel Securities Authority into our historical public disclosures and the potential impact of such investigation on the trading of our securities or on our clinical, commercial and other business relationships, or on receiving the regulatory approvals necessary in order to commercialize our products, and other factors that are discussed in our in our Annual Report on Form 20-F for the year ended December 31, 2017 and in our other filings with the SEC, including our cautionary discussion of risks and uncertainties under 'Risk Factors' in our Registration Statements and Annual Reports. These are factors that we believe could cause our actual results to differ materially from expected results. Other factors besides those we have listed could also adversely affect us. Any forward-looking statement in this press release speaks only as of the date which it is made. We disclaim any intention or obligation to publicly update or revise any forward-looking statement, or other information contained herein, whether as a result of new information, future events or otherwise, except as required by applicable law. You are advised, however, to consult any additional disclosures we make in our reports to the SEC, which are available on the SEC's website, http://www.sec.gov

This Form 6-K, excluding Exhibit 99.1, is incorporated by reference into each of the Registrant's Registration Statements on Form F-3 filed with the Securities and Exchange Commission on December 12, 2016 (Registration file numbers 333-207117, 333-211477 and 333-215037), the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on May 20, 2016 (Registration file number 333-211478), and the Registrant's Registration Statement on Form S-8 filed with the Securities and Exchange Commission on June 6, 2017 (Registration file number 333-218538).

SIGNATURES

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.

KITOV PHARMA LTD.

June 15, 2018

By: /s/ Simcha Rock
Simcha Rock
CFO & Director

Exhibit 99.1

Kitov Announces Positive Pre-Clinical Data from NT219 Demonstrating its Dose-Dependent Anti-Tumor Efficacy

Results in PDX model of pancreatic cancer supports planned IND for NT219

Completes acquisition of substantially all minority shares of TyrNovo, June 15, 2018

TEL AVIV, Israel, June 15, 2018 (GLOBE NEWSWIRE) -- Kitov Pharma Ltd. (NASDAQ: KTOV) (TASE: KTOV), an innovative biopharmaceutical company, today announced positive results in a pre-clinical study testing NT219, a first-in-class small molecule targeting IRS1/2 and STAT3, two signal proteins that are part of an anti-cancer drug resistance mechanism. The study, conducted by Kitov's majority-owned subsidiary, TyrNovo Ltd., evaluated NT219 in combination with gemcitabine in a patient-derived xenograft (PDX) model of pancreatic cancer and was conducted in accordance with guidance from the U.S. Food and Drug Administration (FDA). The results support the planned submission of the Investigational New Drug (IND) Application for NT219.

NT219 was tested at three dose levels in combination with gemcitabine vs. gemcitabine alone. A clear dose response effect was observed among treatment arms with statistically significant differences among groups (p-value <= 0.0166). In addition, the study confirmed previous findings that demonstrated the beneficial effect of the combination of NT219 with gemcitabine vs. gemcitabine alone (p-value <0.0001).

Kitov also announced that it has agreed to acquire all of the shares of TyrNovo held by the last remaining unaffiliated shareholder, representing approximately 3.1% of TyrNovo's issued and outstanding shares, based on an agreed upon TyrNovo company valuation of $10 million. In exchange for the TyrNovo shares and termination of all shareholder and investment agreements with this shareholder, Kitov will issue 2,816,900 new ordinary shares (equivalent to 140,845 American Depositary Shares (ADS)) of Kitov. Following the closing of this transaction, Kitov will hold approximately 97.1% of TyrNovo's issued and outstanding ordinary shares. The remaining 2.9% of TyrNovo's shares are held by Dr. Hadas Reuveni, TyrNovo's founder and chief technology officer.

"These compelling NT219 pre-clinical results represent an important milestone towards the submission of an IND and the initiation of a clinical trial, which we expect will occur in 2019," said Isaac Israel, Kitov's CEO. "Based on the results generated to date and its profile, we believe NT219 has the potential to be a new treatment option for pancreatic cancer patients. This compelling product candidate previously demonstrated impressive efficacy results in converting non-responding tumors to responders, as well as blocking tumor progression in combination with various oncology drugs, and in a wide range of tumor types. These positive data also further our confidence in the potential of TyrNovo to create significant value for Kitov's shareholders. As such, we are pleased to have completed the acquisition of substantially all of the remaining minority shares of TyrNovo, and look forward to the continued development of NT219 in oncology."

About TyrNovo

TyrNovo Ltd., a Kitov Pharma (NASDAQ/TASE: KTOV) company, is a developer of novel small molecules in the oncology therapeutic field. TyrNovo is developing NT219, an oncology product designed to be used in combination with other oncology drugs. NT219 is a small molecule dual inhibitor of Insulin Receptor Substrate (IRS1/2) and of Signal Transducer and Activator of Transcription (STAT3), two signal pathways that are involved in the development of cancer drug resistance. In combination with various approved oncology drugs, NT219 has demonstrated potent anti-tumor effects and increased survival in various cancer models, including sarcoma, melanoma, pancreatic, lung, ovarian, head & neck, prostate and colon cancers. Its mechanism of action is through the prevention of acquired resistance in tumors and by regression of resistant tumors. For more information on TyrNovo please visit http://www.tyrnovopharma.com.

About Kitov Pharmaceuticals

Kitov Pharma (Kitov Pharma Ltd.; NASDAQ/TASE: KTOV) is an innovative biopharmaceutical drug development group of companies. Leveraging deep regulatory and clinical-trial expertise, Kitov's veteran team of healthcare and business professionals maintains a proven track record in streamlined end-to-end drug development and approval. Kitov's flagship combination drug, Consensi™ achieved the primary efficacy endpoints for its Phase III and Phase III/IV clinical trials, and was approved by the FDA for patients suffering from osteoarthritis pain and hypertension. NT219, which is developed by its majority-owned subsidiary, TyrNovo Ltd., is a novel patented small molecule designed to overcome cancer drug resistance that is currently in pre-clinical development. By lowering development risk and cost through fast-track regulatory approval of novel late-stage therapeutics, Kitov plans to deliver rapid ROI and long-term potential to investors, while making a meaningful impact on people's lives.

Forward-Looking Statements and Kitov's Safe Harbor Statement

Certain statements in this press release that are forward-looking and not statements of historical fact are forward-looking statements within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, but are not limited to, statements concerning the amount of proceeds the Company expects to receive from the sale of the American Depository Shares in the registered direct offering, the closing of the transaction described in this press release, which is subject to customary conditions, and other statements that are not statements of historical fact, and may be identified by words such as "believe", "expect", "intend", "plan", "may", "should", "could", "might", "seek", "target", "will", "project", "forecast", "continue" or "anticipate" or their negatives or variations of these words or other comparable words or by the fact that these statements do not relate strictly to historical matters. You should not place undue reliance on these forward-looking statements, which are not guarantees of future performance. Forward-looking statements reflect our current views, expectations, beliefs or intentions with respect to future events, and are subject to a number of assumptions, involve known and unknown risks, many of which are beyond our control, as well as uncertainties and other factors that may cause our actual results, performance or achievements to be significantly different from any future results, performance or achievements expressed or implied by the forward-looking statements. Important factors that could cause or contribute to such differences include, among others, risks relating to: the fact that drug development and commercialization involves a lengthy and expensive process with uncertain outcomes; our ability to successfully develop and commercialize our pharmaceutical products; the expense, length, progress and results of any clinical trials; the lack of sufficient funding to finance the clinical trials; the impact of any changes in regulation and legislation that could affect the pharmaceutical industry; the difficulty in receiving the regulatory approvals necessary in order to commercialize our products; the difficulty of predicting actions of the U.S. Food and Drug Administration or any other applicable regulator of pharmaceutical products; the regulatory environment and changes in the health policies and regimes in the countries in which we operate; the uncertainty surrounding the actual market reception to our pharmaceutical products once cleared for marketing in a particular market; the introduction of competing products; patents attained by competitors; dependence on the effectiveness of our patents and other protections for innovative products; our ability to obtain, maintain and defend issued patents with protective claims; the commencement of any patent interference or infringement action; our ability to prevail, obtain a favorable decision or recover damages in any such action; and the exposure to litigation, including patent litigation, and/or regulatory actions; the uncertainty surrounding an investigation by the Israel Securities Authority into our historical public disclosures and the potential impact of such investigation on the trading of our securities or on our clinical, commercial and other business relationships, or on receiving the regulatory approvals necessary in order to commercialize our products, and other factors that are discussed in our in our Annual Report on Form 20-F for the year ended December 31, 2017 and in our other filings with the SEC, including our cautionary discussion of risks and uncertainties under 'Risk Factors' in our Registration Statements and Annual Reports. These are factors that we believe could cause our actual results to differ materially from expected results. Other factors besides those we have listed could also adversely affect us. Any forward-looking statement in this press release speaks only as of the date which it is made. We disclaim any intention or obligation to publicly update or revise any forward-looking statement, or other information contained herein, whether as a result of new information, future events or otherwise, except as required by applicable law. You are advised, however, to consult any additional disclosures we make in our reports to the SEC, which are available on the SEC's website, http://www.sec.gov

Contact:

Simcha Rock Chief Financial Officer of Kitov and Director of TyrNovo
+972-3-9333121 ext. #105
simcha@kitovpharma.com

Bob Yedid Managing Director LifeSci Advisors, LLC
+1-646-597-6989
bob@lifesciadvisors.com