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 November, 2017

Commission File Number: 001-38215

NUCANA PLC
(Translation of registrant's name into English)

3 Lochside Way
Edinburgh EH12 9DT
United Kingdom
(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 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): ☐

Other Events

On November 15, 2017, NuCana plc (the "Company") issued a press release announcing the enrollment of the first patients in both the United States and the United Kingdom in its PRO-105 study evaluating single-agent Acelarin® (NUC-1031) in patients with platinum-resistant ovarian cancer. The press release is attached as Exhibit 99.1 hereto and is incorporated by reference herein.

The information in the attached Exhibit 99.1 is being furnished and shall not be deemed "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that Section, nor shall it be deemed incorporated by reference in any filing made by the Company under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

Exhibits

99.1	Press release dated November 15, 2017

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.

NuCana plc

By: /s/ Donald Munoz
Name: Donald Munoz
Title: Chief Financial Officer

Date: November 15, 2017

Exhibit 99.1

NuCana Announces First Patients Enrolled in Phase 2 Study of Acelarin in Platinum-Resistant Ovarian Cancer

PRO-105 Study Will Evaluate up to 64 Patients

Edinburgh, United Kingdom, November 15, 2017 (GLOBE NEWSWIRE) – NuCana plc (NASDAQ: NCNA) announced the enrollment of the first patients in both the United States and the United Kingdom in its PRO-105 study evaluating single-agent Acelarin (NUC-1031) in patients with platinum-resistant ovarian cancer.

Hugh Griffith, NuCana's Chief Executive Officer, stated: "The initiation of this Phase 2 study of Acelarin in both the US and the UK is a major step in the expansion of the NuCana product pipeline and advances our strategy of rapidly developing our ProTides to benefit cancer patients globally. We are grateful to the patients and clinicians who are making this study possible."

The PRO-105 study will enroll up to 64 patients with platinum-resistant ovarian cancer who have relapsed following three or more prior lines of chemotherapy. Patients will receive Acelarin on day 1, 8 and 15 of a 28-day cycle and will be treated to progression. The primary endpoint of the study will be Objective Response Rate, and secondary endpoints include Duration of Response, Progression-Free Survival, Overall Survival and safety parameters. Part one of the study will enroll up to 20 patients in each of two dose cohorts: 500mg/m^2 and 750mg/m^2. In part two of the study, NuCana will select one of these doses and enroll at least an additional 24 patients at the selected dose. NuCana expects to announce interim data from this study in 2018. More information about this study may be found at https://clinicaltrials.gov/ct2/show/NCT03146663.

Professor Bradley J. Monk of Arizona Oncology and co-Chief Investigator of PRO-105 stated: "Platinum-resistant ovarian cancer remains an area of significant unmet medical need and we are excited to participate in this study and advance Acelarin as a potential treatment for women with ovarian cancer. Acelarin's ability to overcome key cancer cell resistance mechanisms resulting in significantly greater levels of the active anti-cancer metabolite differentiates it from other treatment approaches."

Professor Charlie Gourley, of the University of Edinburgh and co-Chief Investigator of PRO-105, added: "Acelarin has shown meaningful clinical activity in advanced recurrent ovarian cancer and has been well-tolerated in clinical studies to date. We are pleased to be a part of this important clinical study."

Acelarin is a potential first-in-class ProTide that has been evaluated in over 140 patients. In the first-in-human Phase 1 dose-ranging PRO-001 study in 49 evaluable patients with advanced metastatic solid tumors, Acelarin was well tolerated and achieved a 78% disease control rate. Acelarin achieved a disease control rate of 93% in a subset of 14 evaluable patients with advanced gynecological cancers in the PRO-001 study. This was followed by the Phase 1b dose-ranging PRO-002 study where Acelarin in combination with carboplatin achieved a 96% disease control rate and 39% response rate in 23 evaluable patients with recurrent ovarian cancer.

About NuCana

NuCana® is a clinical-stage biopharmaceutical company focused on significantly improving treatment outcomes for cancer patients by applying our ProTide™ technology to transform some of the most widely prescribed chemotherapy agents, nucleoside analogs, into more effective and safer medicines. While these conventional agents remain part of the standard of care for the treatment of many solid tumours, their efficacy is limited by cancer cell resistance mechanisms and they are often poorly tolerated. Utilising our proprietary technology, we are developing new medicines, ProTides, designed to overcome key cancer resistance mechanisms and generate much higher concentrations of anti-cancer metabolites in cancer cells.

Our most advanced ProTide candidates, Acelarin® and NUC-3373, are new chemical entities derived from the nucleoside analogs gemcitabine and 5-fluorouracil, respectively, two widely used chemotherapy agents. Acelarin is currently being evaluated in three clinical studies for patients with ovarian cancer, biliary cancer or pancreatic cancer. NUC-3373 is currently in a Phase I study for the potential treatment of a wide range of advanced solid tumours. For more information, please visit: www.nucana.com.

Forward-Looking Statements

This press release may contain “forward-looking” statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are based on the beliefs and assumptions and on information currently available to management of NuCana plc (the “Company”). All statements other than statements of historical fact contained in this press release are forward-looking statements, including statements concerning the initiation, timing, progress and results of clinical studies of the Company’s product candidates. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of these terms or other comparable terminology. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These risks and uncertainties include, but are not limited to, the risks and uncertainties set forth in the “Risk Factors” section of our prospectus filed pursuant to Rule 424(b)(4) under the U.S. Securities Act of 1933, as amended, on September 29, 2017, and subsequent reports that we file with the U.S. Securities and Exchange Commission. Forward-looking statements represent the Company’s beliefs and assumptions only as of the date of this press release. Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, the Company assumes no obligation to publicly update any forward-looking statements for any reason after the date of this press release to conform any of the forward-looking statements to actual results or to changes in its expectations.

For more information, please contact:

Hugh S. Griffith
Chief Executive Officer
NuCana
Tel: +44 131 357 1111
info@nucana.com

Westwicke Partners
Chris Brinzey
+1 339-970-2843 Chris.brinzey@westwicke.com