Edinburgh, U.K. 29th October 2019

NuCana Presents Data at AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics

NUC-3373: Favorable Pharmacokinetic Profile Demonstrated

NUC-7738: Multiple Anti-Cancer Mechanisms of Action Identified, including Inhibition of the mTOR Pathway

Boston, MA, October 29, 2019 (GLOBE NEWSWIRE) – NuCana plc (NASDAQ: NCNA) announced results from two of its clinical stage ProTides, NUC-3373 and NUC-7738, at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics in Boston, Massachusetts.

NuCana presented interim data from the Phase Ib NuTide:302 study in patients with advanced colorectal cancer confirming the previously reported favorable pharmacokinetic profile of NUC-3373. The anti-cancer mechanism of action of NUC-3373 has been previously observed in non-clinical studies, which NuCana believes further supports the biological advantages of NUC-3373 over 5-FU. NUC-3373 is a ProTide transformation of 5-fluorouracil (5-FU), one of the most widely prescribed anti-cancer agents, and is currently being investigated in two clinical studies (NuTide:301 and NuTide:302).

Hugh S. Griffith, NuCana's Chief Executive Officer, said: "Our aim is to replace 5-FU as the backbone of treatment for patients with colorectal cancer, so we are excited about these data. The next stage of NUC-3373's development will investigate NUC-3373 in patients with advanced colorectal cancer in combination with oxaliplatin and irinotecan."

NUC-7738, NuCana's third ProTide to enter the clinic, is a transformation of 3'-deoxyadenosine (3'-dA). Six patients have received NUC-7738 to date in the Phase I NuTide:701 study. In non-clinical studies of NUC-7738, NuCana has observed additional anti-cancer mechanisms of action to those previously reported for 3'dA. Significantly higher levels of anti-cancer metabolites are generated inside cancer cells than with 3'-dA, causing increased cell injury. Furthermore, the non-clinical data demonstrated that NUC-7738 activates AMPK, which may inhibit the mTOR pathway, resulting in further cancer cell death.

Mr. Griffith added: "Our early clinical experience with NUC-7738 has been encouraging and we look forward to sharing further data as the study progresses."

Details of NuCana's poster presentations at AACR-NCI-EORTC are as follows:

Abstract Title:	Inhibition of thymidylate synthase by the ProTide NUC-3373 (Abstract #CO59, Poster #59)
Session Title:	Poster Session C: Therapeutic Agents- Other
Session Date and TIme:	Tuesday, October 29, 2019, 12:30 p.m. – 04:00 p.m. EDT
Location:	Level 2, Hall D

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Abstract Title:	NUC-7738, a novel ProTide transformation of 3'-deoxyadenosine, activates AMPK and kills renal cancer cells (Abstract #C122, Poster #122)
Session Title:	Poster Session C: Tumor Suppressors
Session Date and TIme:	Tuesday, October 29, 2019, 12:30 p.m. - 04:00 p.m. EDT
Location:	Level 2, Hall D

Additional details can be found on the AACR website

About NuCana plc

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 and hematological tumors, their efficacy is limited by cancer cell resistance mechanisms and they are often poorly tolerated. Utilizing 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, including a Phase Ib study for patients with biliary tract cancer, a Phase II study for patients with ovarian cancer and a Phase III study for patients with metastatic pancreatic cancer for which enrollment has been suspended. NUC-3373 is currently in a Phase I study for the potential treatment of a wide range of advanced solid tumors and a Phase Ib study for patients with advanced colorectal cancer. Our third ProTide, NUC-7738, is a transformation of a novel nucleoside analog (3'-deoxyadenosine or cordycepin) and is in a Phase I study for patients with advanced solid tumors.

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 NuTide:301, NuTide:302 and NuTide:701 clinical studies; the Company's planned and ongoing clinical studies for the Company's product candidates and the potential advantages of those product candidates, including Acelarin, NUC-3373 and NUC-7738; the initiation, enrolment, timing, progress, release of data from and results of those planned and ongoing clinical studies; the Company's goals with respect to the development and potential use, if approved, of each of its product candidates; and the utility of prior non-clinical and clinical data in determining

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future clinical results. 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 the Company's Annual Report on Form 20-F for the year ended December 31, 2018 filed with the Securities and Exchange Commission ("SEC") on March 7, 2019, and subsequent reports that the Company files with the SEC. 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.

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