San Francisco, CA. 27th January 2020

NuCana Announces First Patients Dosed in Both US and Europe in Phase III Study of Acelarin (NUC-1031) for the First-Line Treatment of Patients with Biliary Tract Cancer

Global NuTide:121 Study Is Enrolling up to 828 Patients and Comparing Acelarin plus Cisplatin to Gemcitabine plus Cisplatin

NuTide:121 Trials-in-Progress Poster Presented at ASCO-GI

San Francisco, CA, January 27, 2020 (GLOBE NEWSWIRE) – NuCana plc (NASDAQ: NCNA) announced that the first patients have been dosed in its Phase III study of Acelarin (NUC-1031) plus cisplatin for the first-line treatment of patients with biliary tract cancer and that the study design is being presented at the ASCO-GI Conference in San Francisco. The enrollment of patients in NuTide:121 follows U.S. Food and Drug Administration (FDA) clearance of the company's investigational new drug application (IND) for Acelarin.

"We are pleased to have commenced dosing the first patients in our Phase III NuTide:121 study," said Hugh Griffith, NuCana's Chief Executive Officer. "Acelarin in combination with cisplatin has been shown in early clinical studies to achieve higher response rates compared to the current standard of care in patients with advanced biliary tract cancer, a devastating disease for which there is a significant need for more effective medicines."

NuTide:121 is a global, multi-center, randomized Phase III study that is enrolling up to 828 patients in approximately 120 sites across North America, Europe, Asia and Australia. Patients are being randomized 1:1 and treated with either a combination of Acelarin (725 mg/m^2) plus cisplatin (25 mg/m^2) or the current standard of care regimen, gemcitabine (1,000 mg/m^2) plus cisplatin (25 mg/m^2).

NuCana also announced the presentation of a poster "NUC-1031 in combination with cisplatin for first-line treatment of patients with advanced biliary tract cancer (NuTide:121)" at the ASCO-GI Conference being held in San Francisco, CA. The poster details the study design of NuTide:121 and reviews the encouraging results previously reported in the Phase Ib ABC-08 Study. The poster may be found ***here***.

The primary objectives of NuTide:121 are Overall Survival (OS) and Objective Response Rate (ORR). Three interim analyses, including two designed to support accelerated approval, are planned as part of the Phase III study protocol, in addition to the final analysis. Based on discussions with the FDA and subject to any further regulatory guidance, the Company believes that a statistically significant improvement in ORR at either of the first two interim analyses, supported by positive trends in other endpoints, could potentially allow for an accelerated approval of a new drug application (NDA) for Acelarin. Accelerated approval requires a confirmatory clinical study to verify the drug's clinical benefit. If accelerated approval were to occur, NuTide:121 would continue and the Company anticipates that data from subsequent analyses could provide the confirmatory data to support full (regular) approval.

More information about this study may be found ***here***.

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About Biliary Tract Cancer

Biliary tract cancer, including cholangiocarcinoma, gallbladder and ampullary carcinoma, is cancer originating in the bile duct, a vessel that transports bile from the liver to the gallbladder and small intestine. Approximately 178,000 new cases of biliary tract cancer are diagnosed each year worldwide, with more than 18,000 of those diagnoses in the United States. There are currently no agents approved for the treatment of biliary tract cancer; however, the worldwide standard of care in biliary tract cancer patients with locally advanced or metastatic disease is the combination of gemcitabine and cisplatin. Patients receiving this regimen have a median overall survival of 11.7 months.

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 four clinical studies, including a Phase III study for patients with biliary tract cancer, a Phase Ib study for patients with biliary tract cancer, a Phase II study for patients with platinum-resistant 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 previously treated metastatic colorectal cancer. Our third ProTide, NUC-7738, is a transformation of a novel nucleoside analog (3'-deoxyadenosine) 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:121 clinical study; the protocol, statistical analysis plan and expected interim and final analyses from the NuTide:121 study; the Company's expectations and plans with respect to the potential regulatory pathway for Acelarin, including any potential for accelerated approval; 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

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initiation, enrollment, timing, progress, release of data from and results of those planned and ongoing clinical studies; and the utility of prior non-clinical and clinical data in determining 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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