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Edinburgh, U.K. 13th Sept 2017

NuCana Announces Interim Data from First-In-Human Study of Transformative Anti-Cancer Agent, NUC-3373

Received Best Poster Presentation Award at ESMO 2017

Edinburgh, United Kingdom, September 13, 2017 (GLOBE NEWSWIRE) – NuCana plc announced the presentation of interim first-in-human data from a Phase 1 clinical study of NUC-3373, its ProTide transformation of the active anti-cancer metabolite of 5-fluorouracil (5-FU), at the European Society for Medical Oncology (ESMO) 2017 Congress held earlier this week in Madrid, Spain.

Interim pharmacokinetic (PK) and pharmacodynamic (PD) data were presented at ESMO 2017, and the presentation was awarded "Best Poster" status by the organizing committee. Key findings from the study included PK and PD data from 21 patients with 10 different advanced solid tumor cancer types and indicated that NUC-3373 has the potential to have greater activity and an improved safety profile as compared to 5-FU. The results indicated a linear and reproducible dose-response across all dose ranges as well as a well-tolerated safety profile. After a short administration, plasma half-life of NUC-3733 was 9.7 hours, as compared to the 8 to 14 minute half-life associated with 5-FU. Evidence of rapid and efficient intracellular activity were noted, with high levels of FUDR-MP, the active anti-cancer metabolite of 5-FU detectable in cells 5 minutes after infusion and still detectable after 48 hours. NUC-3373 bound to and inhibited the target enzyme, thymidylate synthase, and depleted the pool of dTMP, a nucleotide necessary for DNA replication, 2 to 4 hours after administration. Additionally, NUC-3373 did not generate the key toxic metabolites of 5-FU (F-BAL or dhFU) intracellularly or in the patient's plasma.

"NUC-3373 appears to have considerable advantages over 5-FU, with much higher levels of the active, anti-cancer metabolite, that may overcome key cancer resistance pathways and allow for a more favourable safety profile and a more convenient dosing regimen," said Dr. Sarah Blagden, Associate Professor of Experimental Cancer Medicine at the University of Oxford and Chief Investigator of the study. *"5-FU remains one of the most important and widely used anti-cancer drugs in the world. This interim analysis of NUC-3373's Phase 1 data strongly supports its continued development."*

Hugh Griffith, NuCana's Chief Executive Officer, said: *"NUC-3373 is our second product candidate that uses our proprietary ProTide technology with the goal of improving the efficacy and safety of important anti-cancer agents. We are excited to see these interim data and especially gratified that it was chosen for a Best Poster award at ESMO 2017. These data support that NUC-3373 may have a key role to play in the treatment of cancer and we look forward to continuing its rapid development, along with the development of other product candidates in our pipeline."*

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

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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 four clinical studies across several solid tumour indications, including ovarian cancer, biliary cancer and pancreatic cancer. NUC-3373 is currently in a Phase 1 study for the potential treatment of a wide range of advanced solid tumour cancers. For more information, please visit: www.nucana.com.

Forward-Looking Statements

This press release may contain "forward-looking" statements 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 trials 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. 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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