# Cancer Research UK Dose First Patient in Phase I/IIa Trial of Lung Cancer Immunotherapy Vaccine

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OXFORD, United Kingdom, Jan. 18, 2022 (GLOBE NEWSWIRE) -- Cancer Research UK, Vaccitech plc (Nasdaq: VACC) and the Ludwig Institute for Cancer Research (Ludwig), today announce the first patient dosed in the MAGE trial, which is testing a novel immunotherapeutic, VTP-600, in patients with the most common type of lung cancer.

The phase I/IIa trial is expected to enroll approximately 86 people who have been newly diagnosed with non-small cell lung cancer (NSCLC) and will be testing the safety and initial efficacy of VTP-600 in these patients. VTP-600 will be given in combination with the current first line treatment for NSCLC.

If further clinical trials are successful, VTP-600 could prove to be a powerful new treatment for a group of patients in need of better options.

Depending on its effectiveness in NSCLC, VTP-600 could be evaluated in other types of cancer in the future, including breast, bowel, bladder and melanoma.

Cancer Research UK's Centre for Drug Development (CDD) is managing and providing significant funding for the phase I/IIa trial. Vaccitech Oncology Limited (VOLT), a strategic collaboration between Vaccitech and Ludwig, are supplying VTP-600 for the trial.

The Chief Investigator for the trial is Professor Fiona Blackhall, Professor of Thoracic Oncology and Honorary Consultant in Medical Oncology, at The Christie NHS Foundation Trust.

VOLT holds an option to license the results of the trial to aid future clinical development and commercialisation of the immunotherapy. If VOLT elects not to exercise its option, Cancer Research UK will have the right to take the programme forward in all cancer indications.

Unlike preventative vaccines, such as the influenza vaccine, which is given to healthy people to protect them against future disease, VTP-600 is given to people who already have lung cancer.

VTP-600 is an immunotherapy, designed to stimulate the body's immune system to attack cancer cells.

It does this by delivering cancer-associated proteins — known as MAGE-A3 and NY-ESO-1 antigens — to antigen presenting cells (dendritic cells), causing the immune system to produce cytotoxic T cells which are able to target and kill cancer cells expressing these antigens.

It cannot target healthy tissues because MAGE-A3 and NY-ESO-1 are not found on non-cancerous cells.

VTP-600 is a 'prime-boost' immunotherapy, meaning an initial 'prime' dose is administered, and then a second 'booster' dose is given 21 days later. This 'prime-boost' approach is expected to improve the size and length of the anti-cancer immune response.

Even though two doses are administered, the immunotherapy comprises three parts. ChAdOx1-MAGE-A3-NY-ESO-1 is the prime immunotherapy administered to all patients, MVA MAGE-A3 with or without MVA NY-ESO-1 is given as the second booster immunotherapy, depending on the type of antigens expressed on the patient's tumour.

In the prime dose, 'ChAdOx1' refers to the viral vector used in the vaccine to deliver the antigens. It is a virus which causes a common cold in chimpanzees, but it has been modified so that it can no longer cause disease. ChAdOx1 is the same viral vector used in the Oxford/AstraZeneca Covid-19 vaccine (which was co-invented by Vaccitech) and is being used in phase II trials for other diseases.

In the boost doses, 'MVA' is a second viral vector containing the MAGE-A3 or NY-ESO-1 antigens, and is a Modified Vaccinia Ankara virus, which is a type of poxvirus which has been severely weakened so that it can no longer cause disease.

The trial is expected to run over 2-3 years. More information on the clinical trial can be found at NCT04908111.

Dr Nigel Blackburn, Director of Cancer Research UK's Centre for Drug Development, said: "We are excited to see that the first patient has been treated with the VTP-600 immunotherapeutic vaccine. NSCLC is the most common type of lung cancer but remains very hard to treat. If successful, this cutting-edge immunotherapy could provide an effective, much-needed new treatment to help more people survive their lung cancer.

"Partnering with Vaccitech and the Ludwig Institute was vital for making this trial a reality, and we are looking forward to seeing how the trial progresses."

Chief investigator for the MAGE clinical trial, Professor Fiona Blackhall, who is consultant medical oncologist and director of research and innovation at The Christie NHS Foundation Trust, said: "There is an urgent need to find better treatments for patients with NSCLC. The VTP-600 immunotherapeutic vaccine is a cutting-edge technology to target a patient's immune system to tackle the cancer cells. The trial is planned to open at 10 specialist hospitals across the UK to ensure that as many patients as possible can be given opportunity to participate."

Vaccitech's CEO, Bill Enright, said: "We are delighted with the start of this trial, arising from our clinical development partnership with two of the world's most prestigious cancer research institutions. We've seen how our viral vector has transformed the world's approach to sars-cov2 and has shown promising early results in chronic hepatitis B virus infection. We see this partnership as another important validation of our prime boost platform's utility

in oncology as well as infectious disease."

"We are pleased that the research arising from the Ludwig Oxford Branch and their colleagues at Oxford University is being tested in this clinical trial to evaluate the benefit it may bring to patients with NSCLC and potentially other cancer patients as well," added Jonathan Skipper, Executive Vice President for Technology Development, Ludwig Institute for Cancer Research.

**About Cancer Research UK's Centre for Drug Development**
Cancer Research UK has an impressive record of developing novel treatments for cancer. The Cancer Research UK Centre for Drug Development has been pioneering the development of new cancer treatments for 25 years, taking over 140 potential new anti-cancer agents into clinical trials in patients. It currently has a portfolio of 21 new anti-cancer agents in preclinical development, Phase I or early Phase II clinical trials. Six of these new agents have made it to market including temozolomide for brain cancer, abiraterone for prostate cancer and rucaparib for ovarian cancer. Two other drugs are in late development Phase III trials.

**About Cancer Research UK**

- Cancer Research UK is the world's leading cancer charity dedicated to saving lives through research
- Cancer Research UK's pioneering work into the prevention, diagnosis and treatment of cancer has helped save millions of lives.
- Cancer Research UK receives no government funding for its life-saving research. Every step it makes towards beating cancer relies on every donation made.
- Cancer Research UK has been at the heart of the progress that has already seen survival in the UK double in the last 40 years.
- Today, 2 in 4 people survive their cancer for at least 10 years. Cancer Research UK's ambition is to accelerate progress so that by 2034, 3 in 4 people will survive their cancer for at least 10 years.
- Cancer Research UK supports research into all aspects of cancer through the work of over 4,000 scientists, doctors and nurses.
- Together with its partners and supporters, Cancer Research UK's vision is to bring forward the day when all cancers are cured.

*For further information about Cancer Research UK's work or to find out how to support the charity, please call 0300 123 1022 or visit www.cancerresearchuk.org. Follow us on Twitter and Facebook.*

**About Ludwig Cancer Research**
Ludwig Cancer Research is an international collaborative network of acclaimed scientists that has pioneered cancer research and landmark discovery for 50 years. Ludwig combines basic science with the ability to translate its discoveries and conduct clinical trials to accelerate the development of new cancer diagnostics and therapies. Since 1971, Ludwig has invested nearly $3 billion in life-changing science through the not-for-profit Ludwig Institute for Cancer Research and the six U.S.-based Ludwig Centers. To learn more, visit www.ludwigcancerresearch.org.

**About Vaccitech**
Vaccitech is a clinical-stage biopharmaceutical company engaged in the discovery and development of novel immunotherapeutic and vaccines for the treatment and prevention of infectious diseases, cancer & autoimmune diseases. The company's proprietary platforms comprise proprietary modified simian adenoviral vectors, known as ChAdOx1 and ChAdOx2, the well-validated Modified Vaccinia Ankara, or MVA, boost vector, both with demonstrable tolerability profiles and without the ability to replicate in humans, and the SNAPvax™ and Syntholytic™ polymer-based platforms. The combination of a ChAdOx prime treatment with subsequent MVA boost has consistently generated significantly higher magnitudes of CD8+ T cells compared with other technologies and approaches. The company has a broad pipeline of both clinical and preclinical stage therapeutic programs in solid tumors and viral infections and prophylactic viral vaccine programs. Vaccitech co-invented a COVID-19 vaccine with the University of Oxford, now approved for use in many territories and exclusively licensed worldwide to AstraZeneca through Oxford University Innovation, or OUI. Vaccitech is entitled to receive a share of the milestones and royalty income received by OUI from AstraZeneca.

**About Vaccitech Oncology Ltd.**
Vaccitech Oncology Limited (VOLT) is the oncology focused strategic collaboration of Vaccitech and the Ludwig Institute for Cancer Research, an international non-profit organization that conducts innovative cancer research to prevent, detect and control cancer. VOLT continues to pioneer immunological research in oncology and is looking to enable the clinical development of cutting-edge new treatments that induce and harness CD8+ T cells of the immune system to fight cancer.

**Forward Looking Statement**
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, express or implied statements regarding: the clinical trials of VTP-600, the continued development of VTP-600 and the potential therapeutic effects and expected patient population of VTP-600. The words "may," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "estimate," "predict," "project," "potential," "continue" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to numerous risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation: the success, cost and timing of the Company's product development activities and planned and ongoing clinical trials, the Company's ability to execute on its strategy, regulatory developments, the Company's ability to fund its operations and the impact that the current COVID-19 pandemic will have on the Company's clinical trials and preclinical studies and other risks identified in the Company's filings with the

Securities and Exchange Commission (the “SEC”), including its Quarterly Report on Form 10-Q for the first quarter of 2021 and subsequent filings with the SEC. The Company cautions you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. The Company expressly disclaims any obligation to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Cancer Research UK press office

Ellie Bennett, 020 3469 5370 or, out of hours, on 020 3469 8301

Vaccitech press office:

Katja Stout, Scius Communications (EU), Direct: +44 (0) 7789435990, Email: katja@sciuscommunications.com

Robert Flamm, Ph.D., Burns McClellan, Inc., 212-213-0006 ext. 364, Email: rflamm@burnsmc.com

Karim Saleh, Vaccitech, Email: karim.saleh@vaccitech.co.uk

Ludwig Institute for Cancer Research press office:

Rachel Reinhardt, Ludwig Institute for Cancer Research, Email: rreinhardt@lcr.org