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## **Ario Pharma Commences Phase IIa Trial of TRPV1 Inhibitor for Cough associated with Chronic Obstructive Pulmonary Disease**

- **Recruitment commenced in first study of TRPV1 Inhibitor in COPD Cough**
- **Randomised, double-blind, placebo-controlled, cross-over Phase IIa trial**
- **Short duration study, expected to complete Q3, 2014**
- **Professor Maria Belvisi appointed Chief Scientific Officer**

**Cambridge, UK, 11 February 2014:** Ario Pharma Ltd, the Cambridge biopharmaceutical company developing innovative new approaches to treat respiratory disease, announced today that it has commenced a Phase IIa study of its TRPV1 antagonist, XEN-0501, for the treatment and prevention of cough in patients with chronic obstructive pulmonary disease (COPD). Persistent cough in COPD and other respiratory conditions present as a huge unmet medical need, with novel therapies urgently needed to improve the quality of life of patients.

The study is led by Dr Jacky Smith, Reader and Honorary Consultant in Respiratory Medicine (Principal Investigator) and Professor Dave Singh, Professor of Clinical Pharmacology and Respiratory Medicine (Co-investigator), both based at the University of Manchester. The study is being conducted at the Medicines Evaluation Unit Ltd, University Hospital Manchester NHS Foundation Trust, Manchester. Patients with COPD associated with a history of persistent coughing will be assigned to receive XEN-D0501 or a placebo in a randomised, double-blinded, cross-over study.

XEN-D0501, a potent and selective small molecule inhibitor of TRPV1, has successfully completed multiple Phase I studies and been shown to be safe and well tolerated. The frequency of coughing will be assessed in treatment and placebo groups throughout the study using validated ambulatory cough monitoring technology developed by Dr Jacky Smith. Approximately 22 patients are anticipated to be enrolled into the study and initial results are expected to be analysed and available for release during Q3 2014.

Ario Pharma also announces Professor Maria Belvisi from the National Heart and Lung Institute, Imperial College London, has been appointed as Chief Scientific Officer in addition to her appointment at Imperial College. Professor Belvisi is an internationally recognised expert in the respiratory field with both pharmaceutical industry and academic research experience. She has received numerous honours and awards for her research into the cellular and molecular mechanisms of asthma, COPD and cough.

Dr John Ford, CEO of Ario Pharma, commented: *"Heightened sensitivity of pulmonary TRPV1 channels in COPD is well known, but this is the first time an oral TRPV1 inhibitor has been tested for efficacy in preventing cough in COPD patients. We are very pleased to begin evaluation of XEN-D0501 in patients. We are also delighted to welcome Maria Belvisi as Chief Scientific Officer. Maria is already a member of Ario Pharma's Scientific Advisory Board, and in her new role will become more deeply involved with the company."*

**ENDS**

Photo of Maria Belvisi.



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**Notes to Editors:**

**Cough and COPD**

Chronic Obstructive Pulmonary Disease (COPD) is a common, debilitating and often progressive lung condition involving chronic bronchitis, emphysema or both. Approximately 3 million people in the UK (NICE 2011) and 15 million people in the USA (CDC MMWR 2012) are estimated to suffer from COPD. It is the primary contributor to mortality caused by chronic lower respiratory diseases, which became the third leading cause of death in the United States in 2008 (Kochanek et al. 2009).

COPD is a complex disease but its hallmarks are airway and alveolar inflammation, excess mucus production, coughing and difficulty in breathing. The condition is more common in older adults and is often, although not always, associated with heavy smoking. Persistent coughing over a period of months with production of sputum is often the first symptom of the disease. Coughing in COPD is also associated with exacerbations of the disease and more rapid decline in lung function over time and, together with shortness of breath, it is a major cause of disability and poor quality of life (Calverley 2013). Medicines capable of reducing the underlying propensity to cough in COPD may therefore have a significant effect on quality of life and clinical outcomes.

**About XEN-D0501**

XEN-D0501 is a Phase 2 ready drug that inhibits TRPV1, an ion channel known to play a pivotal role in controlling airway vagal sensory nerve activation and the cough reflex. In preclinical studies, XEN-D0501 suppressed ex vivo vagal nerve firing in response to tussive agents and cough counts in animal models. There is substantial published clinical evidence for the role of TRPV1 in the pathogenesis of cough, which suggests that TRPV1 antagonists could inhibit chronic cough in both idiopathic cough and COPD cough (Khalid et al. 2011). XEN-D0501 has demonstrated good oral bioavailability and appropriate pharmacokinetics and been remarkably well tolerated in both healthy volunteers (Round et al. 2011) and patients.

**References:**

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#### **About Ario Pharma**

Ario Pharma Ltd focusses on the development of drugs for the treatment of respiratory indications. Ario is about to evaluate the anti-tussive properties of XEN-D0501, a potential best-in-class TRPV1 inhibitor, in two Phase 2 clinical trials that will read out in 2014. The company is managed by a highly experienced development team and supported by world-renowned KOLs in respiratory disease. For more information see [www.ariopharma.com](http://www.ariopharma.com)