

Synairgen plc
('Synairgen' or the 'Company')

Biomarker analysis shows anti-inflammatory as well as anti-viral activity of SNG001 in asthmatic lungs

Southampton, UK 18 July 2013: Synairgen plc (LSE: SNG), is pleased to provide an update on anti-inflammatory and anti-viral biomarker data from its Phase II trial.

In April 2012, Synairgen announced positive clinical data from the Phase II proof of concept trial of inhaled interferon beta (SNG001). In June 2012, we announced that we would undertake biomarker analysis of samples from the Phase II trial. Analysis of these samples now reveals that SNG001 significantly reduced markers of inflammation (IL-8/ CXCL8 and CCL4) as well as increasing anti-viral activity (Mx1, OAS1 and IP-10/CXCL10) in the asthmatic lung during common cold infections. Inflammation causes narrowing of the bronchial tubes, resulting in a smaller passageway for air to flow through, thereby making it difficult to breathe.

These data will be presented at the European Respiratory Society Annual Congress in September 2013.

Professor Stephen Holgate CBE, leading international asthma specialist and founder of Synairgen, commenting on the results said: "Respiratory virus infections, such as the common cold and flu, cause the majority of asthma exacerbations. These viruses spread from the nose to the lung, causing inflammation. The aim of treatment with inhaled SNG001 is to boost asthma-associated weakened anti-viral defences in the lung to prevent the spread of virus infections from the upper respiratory tract. These biomarker data support the proposed mechanism of action, showing that anti-viral activity was boosted by SNG001 in parallel with reduced indices of lung inflammation."

Richard Marsden, Chief Executive of Synairgen, said, "The findings represent further substantial scientific support for our development programme and the licensing discussions, which are on-going with a number of parties. The data underpin our clinical studies, suggesting that, by boosting the lung's anti-viral defences during cold and flu infections, we can reduce inflammation and prevent worsening asthma symptoms."

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Notes to Editors

1) Synairgen

Synairgen is a respiratory drug discovery and development company with a focus on viral defence of the lungs. It is developing inhaled interferon beta (SNG001) in two programmes:

- a. to prevent asthma and COPD patients suffering severe exacerbations as a result of cold or flu infections
- b. to treat other patients who have been hospitalised with severe viral lung infections

For more information please visit www.synairgen.com

2) Phase II trial in asthma (SG005)

In SG005, 147 patients with a wide range of asthma severity were treated with either SNG001 or placebo at early signs of a cold infection. Of the 147, 134 went on to develop a full cold (the other 13 patients either did not provide data to be able to confirm a cold, or the cold symptoms did not materialise). The primary endpoint was a measure of change in asthma symptoms during the first week of treatment using the shortened Asthma Control Questionnaire (sACQ).

The British Thoracic Society (BTS) Step classification system of asthma ranges from Step 1 (least intensively treated) to Step 5 (most intensively treated). Step 4 patients are recognised as “difficult to treat” and receive close to maximal routine inhaled therapies.

The trial findings were:

- a. the patient group which suffers most due to cold viruses is the Step 4 and Step 5 group, which is estimated to represent between 10% and 20% of the asthma population
- b. in the Step 4 and Step 5 patients, treatment with SNG001 was beneficial in terms of the number of patients requiring oral therapies, improvement of asthma control and acceleration of recovery in lung function
- c. SNG001 appeared to be well tolerated and there was no evidence of systemic absorption.