

**Press release**

**Synairgen plc**  
(‘Synairgen’ or the ‘Company’)

**Investor Conference**

Southampton, UK – 26 October 2009: Synairgen plc (LSE: SNG), the respiratory drug discovery and development company with a particular focus on viral defence in asthma and chronic obstructive pulmonary disease (‘COPD’), announces that it will be holding an investor conference on Thursday 12 November 2009. The conference will be hosted by Professor Stephen Holgate who will be discussing emerging therapies in asthma and COPD amongst other matters. The Company will also be announcing the safety and biomarker results of its Phase I study of inhaled interferon beta in asthmatic subjects (SG004).

The conference will take place at 10 am. If you are interested in attending, please contact Threadneedle Communications for details.

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Notes to editors

### **About Synairgen**

Synairgen is a drug discovery and development company founded by Professors Stephen Holgate, Donna Davies and Ratko Djukanovic, focused on identifying and out-licensing new pharmaceutical products which address the underlying causes of asthma and COPD. Synairgen is listed on AIM (LSE: SNG).

Synairgen's researchers use advanced cell models incorporating human tissue and cells drawn from its biobank of clinical samples, which are obtained from well-characterised healthy control, asthma or COPD volunteers.

For more information about Synairgen please see [www.synairgen.com](http://www.synairgen.com).

### **Synairgen's interferon beta ('IFN-beta') programme**

Synairgen is developing inhaled IFN-beta as a therapy to combat viral-induced asthma and COPD exacerbations.

Using *in vitro* human models, it was discovered that epithelial cells (cells which line the airways) from both subjects with asthma<sup>1</sup> and COPD have significantly weaker anti-viral responses to the common cold virus than healthy control subjects. The addition of low levels of IFN-beta into the models restored anti-viral responses (simulating aerosolised IFN-beta therapy). This suggests that local delivery of IFN-beta to the lungs could limit the spread of virus to lungs in subjects with respiratory disease and the consequent worsening of their symptoms.

Synairgen has entered into a supply and licence agreement for a patent-protected formulation of IFN-beta from the Rentschler Group in Germany.

### **SG004**

SG004, a placebo-controlled Phase I study in controlled asthmatics taking inhaled corticosteroids, used the Company's exclusively in-licensed Rentschler formulation of inhaled IFN-beta and was designed to establish its safety at four different dose levels over a 14 day period. In addition biomarker activity (see below) is being measured as an indicator of antiviral activity. The SG004 study has been conducted by Synairgen in Southampton and the Medicines Evaluation Unit in Manchester, both sites with renowned expertise in advanced respiratory trials. The first volunteer was entered into the study in July 2008 and the trial was completed in September 2009.

### **Biomarkers**

Neopterin is a recognised IFN-beta biomarker and has been measured in blood during IFN-beta studies in multiple sclerosis. Synairgen has developed a technique for measuring neopterin in sputum, which reflects antiviral activity locally in the lung. Biomarker levels have been monitored in SG004 to confirm the biological activity of IFN-beta delivered to the lungs. Successful biomarker data will further support the original dosing rationale and help the Company set the dose for Phase II.

In June 2009, Synairgen raised £6 million to finance two Phase II proof of concept studies of inhaled IFN-beta in asthma and COPD.

In August 2009, the patent for inhaled IFN-beta to treat rhinovirus infections in asthma and COPD was granted in the USA. The patent forms part of a patent portfolio owned by the University of Southampton, which is exclusively licensed to Synairgen.

### **Asthma statistics**

- There are approximately 23 million asthmatics in the USA<sup>2</sup>
- The economic cost to the USA of asthma is \$19.7 billion per year<sup>2</sup>
- Asthma accounts for 1.7 million emergency department visits per year in the USA<sup>2</sup>
- The cost of emergency department visits and in-patient care in relation to asthma in the USA is \$4.7 billion<sup>2</sup>
- The average duration of a hospitalisation for an asthma exacerbation in the USA is 2.7 days at a cost of \$9,078<sup>3</sup>
- 50% of the total cost of the asthma is apportioned to 10% of the asthmatic population with the severest disease<sup>4</sup>

### **COPD statistics**

- COPD includes chronic bronchitis and emphysema
- COPD is forecast to be the third leading cause of death worldwide (after heart attack and stroke) by 2030<sup>5</sup>
- 12 million adults in the USA have reported a physician diagnosis of COPD and it is estimated that another 12 million may have COPD but do not realise it<sup>6</sup>
- The economic cost to the USA of COPD is \$42.6 billion per year<sup>7</sup>
- Hospital care cost \$11.3 billion<sup>2</sup> and in 2006 there were 672,000 hospitalizations for COPD in the USA<sup>8</sup>

### **Rhinovirus (common cold virus) and exacerbations (worsening of symptoms) of asthma and COPD**

- Adults get an average of two to four colds per year, mostly between September and May. Young children suffer from an average of six to eight colds per year<sup>9</sup>
- Rhinovirus infections are the major cause of asthma exacerbations, accounting for 50% to 80% of all such attacks in both children and adults<sup>10</sup>
- 80-85% of COPD exacerbations are associated with viral or bacterial respiratory tract infections with rhinovirus and Haemophilus influenzae thought to be the major contributors<sup>11</sup>

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