Breathable treatment to help prevent asthma attacks

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Details of a treatment that could help asthmatics fight infections that trigger 80% of asthma attacks, developed by University of Southampton spin-out company Synairgen, will be presented to European respiratory experts on Sunday 2 September.

The study provides the first evidence that boosting asthmatics' immune systems can help reduce the number of asthma attacks due to the common cold and other viral infections for the 5.4 million asthmatics in the UK.

Professor Ratko Djukanovic, a respiratory specialist at the University of Southampton and Southampton General Hospital, led the study and will present findings to the European Respiratory Society's annual congress in Vienna.

He says: "We have demonstrated the potential of a treatment, simply breathed in by the patient, which significantly reduces worsening of asthma symptoms and the patient's need to use their asthma inhaler in response to common cold infection. By presenting an immune system protein molecule, interferon beta, to the patient's lungs we can prime their body to challenge infections more effectively."

Professor Djukanovic directs the National Institute for Health Research (NIHR) Southampton Respiratory Biomedical Research Unit, one of 20 sites involved in the trial and a partnership between the University of Southampton and University Hospital Southampton NHS Foundation

Trust, funded by NIHR.

He continues: "Southampton researchers, working alongside asthma patients, made the original discovery that weakened immunity amongst asthmatics was key to viral impacts; now study participants are helping us to confirm that discovery and translate it into treatments for their, and other asthmatic patients', benefit through the work of the unit."

Professor Stephen Holgate CBE, leading international asthma specialist at the University of Southampton and founder of Synairgen, says: "This is a really promising breakthrough for the future treatment of asthma and one of the most exciting developments that I have seen in years. These impressive findings across different endpoints, together with the accumulating body of evidence we have generated for other respiratory viruses such as influenza (Swine and Bird flu) and respiratory syncytial virus (RSV), strongly suggest that inhaled interferon beta has the potential to be used as a powerful broad spectrum antiviral respiratory drug in lung diseases such as COPD and pandemic flu."

Richard Marsden, Chief Executive of Synairgen, adds: "This is a great result for the development of our programme. To put this treatment's potential into context, it is estimated that in the US alone there are some 2 to 4 million difficult to treat (Step 4 and 5) adult asthma sufferers who could benefit from this therapy. We continue to analyse the wealth of data generated by this important trial and to plan the next phase of its development, ideally alongside an industry partner."

Provided by University of Southampton