Walking 286 miles in 15 days raising funds for Lung Disease research.

**What is THE BIG WALK and why are we doing it?**

The University has **21 alumni, staff and friends** taking part in a special fundraising walk covering **286 miles in 15 days**. The event will start on **3 September and will cover the full Pennine Way**. This national trail is celebrating its 50th anniversary year and is described as the one of the most spectacular and well-loved routes in the UK. We are doing this to **raise funds for Lung Disease research** at the University of Sheffield, specifically our leading research in pulmonary arterial hypertension.

**What is Pulmonary arterial hypertension?**

Pulmonary arterial hypertension (PAH) is a rare but devastating condition. Sadly, most of the 500 or so patients diagnosed annually in the UK die from progressive heart failure within 5 years. This is a worse prognosis than most cancers, and although medical therapies can alleviate symptoms and, at best, slow progression there is currently no cure for PAH.

PAH begins when tiny arteries in the lungs become narrowed or blocked. This puts an enormous strain on the heart as it works harder to pump blood through the lungs. PAH is a very serious condition that becomes progressively worse, causing the heart muscle to weaken and eventually fail. It is this strain on the heart and decrease in the blood through the lungs that causes the majority of symptoms such as breathlessness, fainting, racing pulse and weakness which can significantly affect quality of life. As the disease worsens it becomes difficult for individuals to carry out even normal activities. Ultimately, the disease is fatal without a lung transplant.

**How is research at the University of Sheffield making a difference?**

Sheffield is a major international centre for the diagnosis, treatment and research of this condition. The clinical service based at the Royal Hallamshire led by Dr Kiely is now one of the largest of its kind in Europe. Working in collaboration with our NHS colleagues, Dr Allan Lawrie (BHF Senior Fellow) leads the Pulmonary Vascular Research Group (PVRG) that drives pre-clinical research. PVRG has internationally recognised expertise in pre-clinical models, associated phenotyping and is working hard to translate drug targets in novel disease pathways. We are already making exciting discoveries that we hope will result in better treatments and ultimately defeat this condition.

**What developments are giving us hope for treatment advances in the future?**

World-leading lung imaging research is being pioneered here in Sheffield by Professor Jim Wild. His research is leading the development of technology for clinical lung imaging with hyperpolarised gases and proton MRI which provide very detailed images of patient’s lungs that is not currently available with conventional methods. We are already working with clinicians in Sheffield and across the UK to use these innovative techniques to identify early signs of lung disease in patients.

PAH is a rare and complex disease. This is why the Pulmonary Hypertension Research Biobank at Sheffield is pivotal to our research. The biobank is a growing store of blood products which can be analysed by scientists to better understand the fundamental biological workings underlying the development of pulmonary hypertension. It gathers samples from patients from before their diagnosis and over the longer-term as they undergo therapies and can make a significant difference to enhancing our understanding of the disease.
What impact will the Big Walk have in the fight against Pulmonary Arterial Hypertension?

The money raised from the Big Walk will play a vital role, enabling us to build on our success and provide the opportunity to pursue truly innovative research. We will invest in supporting the newly formed Donald Health Fellowship Programme in Pulmonary Hypertension. This new programme incorporates both clinical and basic scientists and has translational research at its core. This will help us to accelerate our progress, develop and test new treatments and make them available to patients as quickly as possible.

Research Technician - £27,000

A Research Technician would be an important member of the team providing technical laboratory support for all aspects of our research projects, including our biobank. This resource is invaluable for maintaining the high level of skills training that new clinical and basic scientists require and through supporting our biobank helps to answer significant questions about why it occurs, how it develops, and who is at risk.

A three year PhD Studentship - £54,000

PhD students are the lifeblood of research programmes at the world’s leading universities. As early-career researchers they have established their credentials at undergraduate and MSc level and are typically in the first phase of a distinguished research career. Preparing tomorrow’s leading scientists in PAH research is one of our most important roles. It is from these ranks that the world-leading minds of the future are drawn. With £54,000 we can support an exceptional individual to embark on a three year novel research project which could define their career and help make significant inroads into PAH research.

Non-clinical Lecturer - £156,000

Support at this level could help to fund an outstanding academic for three years to generate new knowledge and scientific understanding in PAH. We would require an academic with the ability to make a major contribution to our research programme, to support and supervise PhD students and develop scientific collaborations both in the UK and internationally. They would already be conducting a programme of high quality research in this field with a track record of publications, evidence of obtaining grants and possess the knowledge and expertise to have an immediate impact.

How can I help?

Please support PAH research at Sheffield and our walkers by making a donation towards the Big Walk:

www.justgiving.com/thebigwalk2015

For more information please contact Dave Meadows on 0114 222 1073 or d.meadows@sheffield.ac.uk

http://www.sheffield.ac.uk/alumni/donate/specialfunds/the_big_walk