


Application Ref: HS06/	<b>HENRY SHELFORD SARCOIDOSIS RESEARCH AWARD Application</b>  <b>2006 Research Round</b>	 <b>BRITISH LUNG FOUNDATION</b>
Final Ref: HS06/		
Reviewer:		

Applicants should refer to the accompanying guidelines before completing this form. **ONE SIGNED ORIGINAL AND 15 COPIES** of the completed application form with enclosures, each secured in the top left hand corner, must be received by the Research Manager at the British Lung Foundation, 73-75 Goswell Road, London EC1V 7ER **before 5pm on 25 August 2006**. Please do not use any font size smaller than 10.

1a. DETAILS OF PRINCIPAL APPLICANT		
Title: Dr	Surname: Ho	Forename: Ling-Pei
Present position:	MRC-DH National Clinician Scientist and Honorary Consultant in Respiratory Medicine	
Mailing address: MRC Human Immunology Unit, Weatherall Institute of Molecular Medicine, The John Radcliffe, Oxford OX3 9DS.		

<b>2a. SCIENTIFIC TITLE OF PROJECT</b>	<i>Identifying a gene expression signature for progressive pulmonary sarcoidosis</i>
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<b>2b. LAY TITLE OF PROJECT.</b>	<b>Identifying a unique genetic expression pattern in lung samples of sarcoid patients with progressive lung disease.</b>
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8. ABSTRACT OF RESEARCH
<p>One of the main questions in the clinical management of sarcoidosis is which subset of patients will progress to chronic disease and whether treatment alters the natural history of progressive disease. In recent years, DNA microarray technology has provided means of distinguishing between subsets of patients within the same disease. In lung disease, it has been shown recently that a sub-group of pulmonary fibrosis patients with a good outcome (non-specific interstitial pneumonitis, NSIP) have a significantly different gene expression pattern in their lungs compared to patients with poor outcome (idiopathic pulmonary fibrosis) (Selman M, AJRCCM 2006). We question if patients with progressive pulmonary sarcoidosis that proceed to fibrosis possess a different genetic expression profile in the lungs compared to patients with self-limiting disease; and if so whether this could be used as a method of identifying those who may require more aggressive treatment.</p>

9. LAY SUMMARY	
<p><i>Please provide a detailed summary of this project in language and style that will be understandable to the lay members of the British Lung Foundation Scientific Committee. Considerable attention should be given to this section. The summary should clearly set out the rationale for the study, the methods to be used, and the anticipated benefits of the research to people with lung disease. It is recommended that you show your summary to local carers and people with lung disease for their comments. This may be placed on the Foundation website as well as used for fundraising and PR purposes should be application be successful.</i></p>	
<b>a) Lay title of proposed research project</b>	<b>Identifying a unique genetic expression pattern in lung samples of sarcoid patients with progressive lung disease.</b>

<p>b). Please describe why this area is being studied, the rationale for your study and the methods you will use to meet your objectives. (not exceeding 200 words)</p>	<p>Sarcoidosis is a condition of unknown cause, predominantly affecting the lungs. About two thirds of patients get better without treatment but up to 20% develop a chronic progressive disease. Currently there is no way of predicting which patients will follow these divergent paths. We propose to look at the expression of about 50,000 genes in the lungs of patients presenting with lung sarcoidosis and determine if there is any relationship between certain pattern of gene expression with the development of progressive diseases. Having a way of predicting progressive disease can potentially allow clinicians to target this group for more aggressive treatment.</p>
<p>c). In practical terms, how does the proposed research aim to contribute to the prevention, diagnosis, alleviation, treatment and/ or outcome of lung disease (not exceeding 200 words)</p>	<p>If we are able to identify patients with progressive lung disease in sarcoidosis, we will be able to target treatment to this group and refine the management of this group of patients. It will represent a significant step forward for treatment of sarcoidosis.</p>