



Lung Clinical Research Unit

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Biomass smoke and tuberculosis: Laboratory based/basic science PhD Fellowship

Purpose:

The Lung Clinical Research Unit, University of Cape Town Lung Institute, in collaboration with Queen Mary's Hospital London has an opening for one student to take part in an innovative and multidisciplinary PhD project studying the effects of smoke (Biomass, Tobacco, cigarette and electronic cigarette) on human immunity to pulmonary infection.

The project involves the *in vitro* exposure of multiple human cells (monocytes, macrophages and alveolar macrophages) to 'whole smoke' and the individual various sub-components (particulate matter, nicotine etc. produced by various combustible compounds (tobacco, wood, crop residue, animal dung etc.) The projects seeks to evaluate the effects of a variety of indoor air pollutants known to negatively affect health. Specific infectious agents such as *mycobacterium tuberculosis* and *pneumococcus* may be evaluated. Travel may be required to the UK and Malawi to learn specific techniques and to acquire samples. The student will form part of a bigger UK based team evaluating the effects of clean cook stoves on respiratory health. Understanding the effects of indoor air pollution on respiratory health is a major global priority.

Eligibility and Academic Criteria:

- BSc Honours /MSC
- BSL-3 experience is advantageous but not mandatory
- Strong cell culture and microbiological background with understanding of culture and molecular techniques.
- Experience in TB or other infectious diseases and molecular biology would be advantageous
- Ability to work under pressure and with a degree of independence
- Ability to communicate clearly

Conditions:

The successful incumbent will be required to:

- Register for a PhD in the Department of Medicine at the University of Cape Town.
- Comply with the University's approved policies, procedures and practises for the postgraduate sector.

The awardee will be assisted in applying for additional funding, which may supplement this fellowship.

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The fellowships are tenable for one year in the first instance with the view to extending to the full 3years provided good progress is made.

Application procedure:

To apply please forward:

- a motivational letter describing one's suitability for the position
- a brief (2-3 page) CV
- and contact details of two referees richard.vanzyl-smit@uct.ac.za

Interested candidates may also contact Associate Professor van Zyl-Smit directly on the above email for more information.

The UCT Lung Institute reserves the right to not fill the position.

The closing date for applications is 7 March 2015