

## **School of Clinical Sciences**

PhD Project (for self-funded international students only)

Fee band: High cost laboratory based research

Start date: Open till filled

### **Biological features of early primary breast cancer in older women and correlation with clinical outcome**

The majority of breast cancers occur in older women. While surgery is normally the standard primary treatment in those with early primary disease, non-operative treatments (eg primary endocrine therapy) may be very good alternatives due to frailty, co-morbidities limiting their life expectancy, and various psychosocial considerations. A recent Cochrane review of randomised trials shows no significant difference in the overall survival of older women treated by either surgery or primary endocrine therapy. Furthermore, approximately 40% of older women with primary breast cancer in the UK were found to have received primary endocrine therapy in a national audit. A large scale clinical trial aiming to recruit 1,200 patients in the UK to compare these two approaches in a randomised controlled fashion was closed prematurely due to poor recruitment. Despite having an important health problem now and in the foreseeable future, the population concerned is underserved and under-researched.

There is currently a research programme on various (clinical, biological and psychosocial) aspects of early primary breast cancer in older women, led by Mr KL Cheung, Clinical Associate Professor, Division of Breast Surgery, School of Clinical Sciences. The team includes co-investigators from Schools of Molecular Medical Sciences and of Nursing, and from the clinical team.

Specifically it will investigate into the biological features of early primary breast cancer in approximately 2,000 older women (based on laboratory analysis of tumour tissue samples obtained by needle core biopsies) treated in Nottingham over the last 30+ years. This will compliment an ongoing study assessing surgical tumour specimens which are only applicable to patients treated by primary surgery. Given the above mentioned clinical significance of non-operative therapies in the elderly population, this study will provide important data and insight into the effectiveness of such therapeutic strategy. Depending on funding, there is also potential scope to perform some novel laboratory work with one of our international collaborators at the University of Texas MD Anderson Cancer Centre.

The successful applicant will be jointly supervised by Mr Cheung and Professor IO Ellis, Professor of Cancer Pathology, School of Molecular Medical Sciences. Applicants should have, or expect to obtain, a first or 2.1 UK honours degree (or equivalent) in a health care related subject who are able to conduct translational research spending a significant amount of time in the laboratory, and in the process of carrying out the research, who are able to work with clinical team

members as appropriate. Standard vetting procedures, including CRB check, will be required.

For application please send CV with a covering letter and the names, address, telephone and email contact of two academic referees to Lesley Randall, Secretary to Division of Breast Surgery at Professorial Unit of Surgery, Nottingham University Hospitals City Hospital Campus, Hucknall Road, Nottingham NG5 1PB – [Lesley.Randall@nottingham.ac.uk](mailto:Lesley.Randall@nottingham.ac.uk).

For further information or informal enquiries please e-mail with CV to: [kl.cheung@nottingham.ac.uk](mailto:kl.cheung@nottingham.ac.uk).