**Project title**

Identification of novel regulators of ADAM17 in skin homeostasis and disease

**About the project**

ADAM17 is one of the major sheddases (a class of membrane-bound, signalling-related proteases), involved in a variety of physiological and pathophysiological processes. We have recently shown (Arcidiacono et al, 2018, Nat Comm) that ADAM17 regulates p63, a member of the p53 family, in a cell context dependent manner. The aim of the project is to investigate novel regulators of ADAM17 signalling in normal keratinocytes and squamous cell carcinoma and to investigate whether this pathway could be a potential therapeutic target. To develop this project, the student will utilise a number of genetic, molecular and cell biological techniques.

**Skills development**

The student will use a number of genetic, molecular and cell biological methods:

* Cell culture of patient-derived cells, primary and established cell lines
* Transfection with siRNA, shRNA and Crispr/Cas9 and overexpression of plasmids; treatments of cells with small molecules
* DNA cloning, RNA preparation and qRT-PCR techniques
* ChiP-assays
* Protein preparation for western blotting, immunoprecipitation, subcellular fractionation, Proximity Ligation Assay
* ELISA
* Immunocytochemistry, Immunohistochemistry, Confocal analysis
* 3D culture models
* Scratch assays for cell movement
* FACS analysis

**Funding notes**

Students will receive a stipend and will have three years of fees paid for them. This fully funded PhD studentship is open to Home/EU and overseas students.

**Entry requirements**

You will have a minimum of a 2:1 UK Honours degree or overseas equivalent in your first degree, in a relevant subject. A Master’s qualification (Merit or Distinction) in an appropriate discipline will be a distinct advantage.

You will have excellent written and verbal communication skills in English. Applicants whose first language is not English are expected to meet the [**minimum** University](https://www.sgul.ac.uk/study/life-at-st-georges/international-student-support/english-language-requirements) requirements for postgraduate studies. SGUL accepts a minimum score of 6.5 overall (with no section less than 6.0), with higher scores being a distinct advantage.

**How to apply**

Please complete the application form and ask your referees to complete the reference form All forms should then be returned to [researchdegress@sgul.ac.uk](mailto:researchdegress@sgul.ac.uk) by 5 pm on 11 October 2020. We are expecting to interview in the week commencing 9 November 2020.

**Contact for information**

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