



RCSI

**Co-tutelle (co-supervision) PhD Scholarship  
between RCSI and the University of Nice, France**

Applications are invited for a PhD studentship to work on the role of the tumour-suppressor SLC5A8 in thyroid and colon cancer.

Applicants must have a minimum 2:1H BSc or MSc and have high motivation to undertake a PhD study.

The project is co-supervised by Prof Brian Harvey, Molecular Medicine, RCSI, Beaumont Hospital, Dublin, Ireland and Dr Thierry Pourcher, School of Medicine University of Nice-Sophia Antipolis, France.

The Commencement date of the PhD Scholarship is from 1<sup>st</sup> September 2009 and will run for a period of three years with at least one year period spent in each of the host laboratories.

**Title of Research Project :** The role of the tumour-suppressor SLC5A8 in thyroid and colon cancer

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### **Description of Research Project:**

SLC5A8 is a plasma membrane protein and a putative tumour suppressor. The research team at Nice University first identified SLC5A8 and proposed that this protein is involved in the iodide metabolism of the thyroid. SLC5A8 was also found in normal colon and its expression is silenced in colon cancer. It has been shown that SLC5A8-expression strongly inhibits cell proliferation, and therefore it was proposed that SLC5A8 is a colon tumour suppressor. To date, SLC5A8 silencing was observed in cancers of various tissues (thyroid, stomach, prostate...). *In vitro* experiments mainly using the *Xenopus leavis* oocyte expression system indicated that SLC5A8 could be a Na-coupled monocarboxylate (lactate, pyruvate, butyrate...) transporter. It has been proposed that the anti-tumour activity of SLC5A8-catalysed butyrate uptake is most likely due to its function as an inhibitor of histone deacetylases and that pyruvate uptake is involved in the *in vitro* anti-proliferative effect. The PhD student will study the physiological function of SLC5A8 and its tumour-suppressor effect using imaging and electrophysiological approaches. SPECT *in vivo* imaging experiments will be performed with *slc5a8*-null mice (Nice). SLC5A8 properties will be investigated *in vitro* by cellular imaging (Dublin) and by patch clamp (Dublin and Nice).