**Title:** Inhibition of Malignant Mesothelioma Growth using Novel Strategies.

**Scholarship available:** YES- up to 2000

**Supervisor/s:** A/Prof Sonja Klebe

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**General research area:** Cancer biology, biochemistry, cell culture, gene therapy.

**Project summary:**

Malignant mesothelioma (MM) is an aggressive tumour of the serosal membranes, caused by inhalation of asbestos. There is currently no effective treatment.

Inhibition of aquaporin 1 (AQP1) decreases proliferation of MM cells *in vitro* and inhibits neovascularisation. To date, no study has applied AQP1 blockers to MM *in vivo*. Xenograft tumours using cells derived from human tumours will be established in nude mice and the response to AQP1 blockade will be assessed by observation and measurment of tumour growth as well as histological studies on excised tumour. In addition, some MM cells used to establish tumours will express a single chain antibody fragment (scFv) directed against VEGFA, expressed by a lentiviral vector, which has been shown to decrease neovascularisation. The effect of combined with blockade of AQP1 and VEGFA will be assessed.