**The use of Microdialysis catheters to assay the interstitial fluid in kidney allografts immediately after transplantation. Proof of Principle.**

Kidney transplantation is the preferred treatment for renal failure in patients who are fit to undergo the procedure. Currently monitoring of the transplant function is carried out with peripheral blood tests. While this provides the required information to manage a patient, we postulate that more critical and important information may be available from the kidney itself.

Microdialysis (MDx) is a technique based on the principle of passive diffusion according to a concentration gradient across a semipermeable membrane. This diffusion occurs from one compartment to another across a concentration gradient. We aim to use this technique to sample fluid from inside the kidney transplant to see if there are differences in drug levels and other levels of function and rejection when compared to peripheral blood levels.

We plan to study Tacrolimus drug concentrations at tissue level which will be compared to the blood levels. We will also measure the immune activation markers in the kidney which may help to modulate the immunosuppression after transplantation. This has not previously been done in Manchester.