



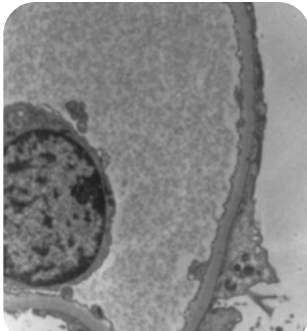
FAST FACTS: ELECTRON MICROSCOPY AND RENAL HISTOPATHOLOGY

Electron microscopy (EM) is an essential component of diagnostic renal histopathology where it is used in conjunction with light microscopy and immunofluorescence studies.

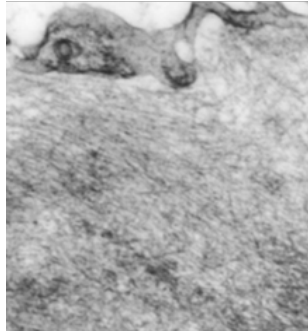
The application of EM is crucial in the diagnosis of a number of renal disorders involving the glomeruli, vasculature and tubulointerstitial compartments.

Our full renal biopsy service includes in-house ultra-high resolution transmission electron microscopy (TEM).

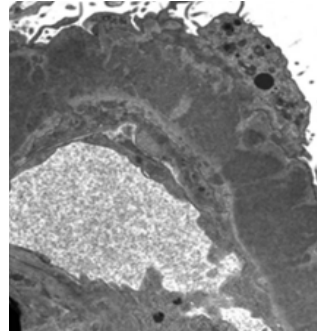
Examples of digital images obtained by ultra-high resolution TEM



Minimal change disease with extensive podocyte foot process effacement



Renal amyloidosis with randomly arranged fine non-branching fibrils



Large sub-epithelial and intramembranous electron dense deposits in class V lupus nephritis

Examples where EM is invaluable include:

- Hereditary diseases affecting the glomerular basement membrane, including thin membrane nephropathy and Alport's syndrome;
- Confirmation and classification of immune complex mediated glomerulonephritis including lupus nephritis, membranous glomerulonephritis and post-infectious glomerulonephritis;
- Podocytopathies including minimal change disease;
- Conditions with structural deposits such as amyloidosis, fibrillary and immunotactoid glomerulopathies and cryoglobulinemia;
- Detection of early chronic antibody mediated allograft rejection.

For advice pertaining to tissue requirements or other enquiries, contact your local histopathologist or our Electron Microscopy Unit, based in Lynnwood, Pretoria, on 087 087 0200.

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