

# DIATOME

## Swiss Diamond Knives ultra semi

### Serial sectioning for Array Tomography

Dittmayer et al., modern field emission scanning electron microscopy provides new perspectives for imaging kidney ultrastructure.  
Kidney International, 94 (2018), 625-631.

Ask us for more information  
Your Diatome Team



Figs.

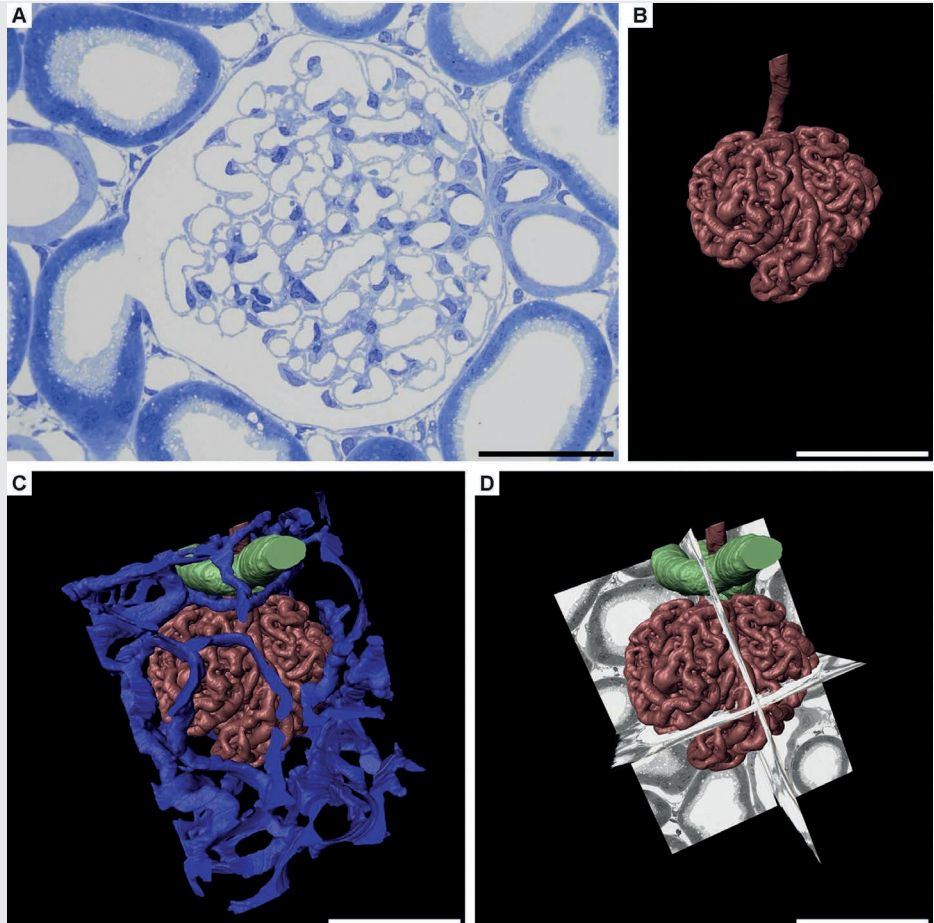
A:  
Array tomography based on semithin sections. About 350 semithin sections were cut and imaged using a light microscope.

B:  
After alignment of the image stack, structures were segmented manually using Amira 5; glomerular capillaries (brown).

C:  
distal tubule (green)  
interstitial capillaries (blue)

D:  
Original xy image plane plus reconstructed planes.

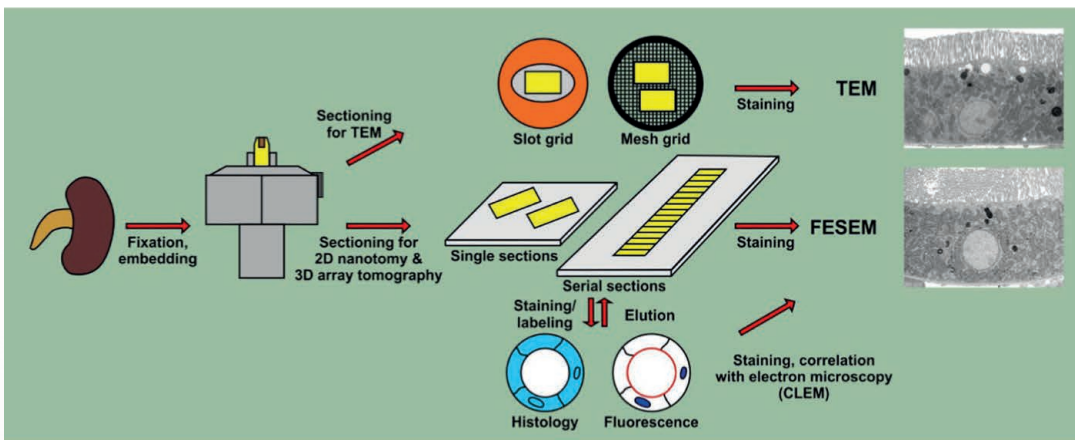
Scale bars:  
A: 50  $\mu\text{m}$   
B–D: 100  $\mu\text{m}$



More details on the reverse side.

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Comparative illustration of TEM and FESEM workflows. A kidney sample is sectioned for TEM and FESEM, with similar image results. The stable adherence of the thin sections on silicon substrate offer advantages for single and serial sections using array tomography.