New Method to Increase Contrast of Electromicrograph of Rat Tissues Sections

Authors : Lise Paule Labéjof, Raíza Sales Pereira Bizerra, Galileu Barbosa Costa, Thaísa Barros dos Santos

Abstract : Since the beginning of the microscopy, improving the image quality has always been a concern of its users. Especially for transmission electron microscopy (TEM), the problem is even more important due to the complexity of the sample preparation technique and the many variables that can affect the conservation of structures, proper operation of the equipment used and then the quality of the images obtained. Animal tissues being transparent it is necessary to apply a contrast agent in order to identify the elements of their ultrastructural morphology. Several methods of contrastation of tissues for TEM imaging have already been developed. The most used are the “in block” contrastation and “in situ” contrastation. This report presents an alternative technique of application of contrast agent in vivo, i.e. before sampling. By this new method the electromicrographies of the tissue sections have better contrast compared to that in situ and present no artefact of precipitation of contrast agent. Another advantage is that a small amount of contrast is needed to get a good result given that most of them are expensive and extremely toxic.

Keywords : image quality, microscopy research, staining technique, ultra thin section
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