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MCR (Movable Computer Ruler): A new method for measuring the dimensions of parasite, particles and other objects using optical microscope and the digital images

Parasite measurements could have been done with different programs, most of these programs applied while using optical microscope. They take more effort specially eyes attentiveness and that could consume more time and energy. A new method for measuring the size and different body dimensions of parasites, particles and other objects using optical microscope is available. It was developed using a specifically designed movable computer ruler (MCR) derived from digital images of a stage micrometer. Subsequently, MCR can be superimposed on images of parasites to measure their dimensions in microns. MCR derived from the stage micrometer under a particular objective lens can be used to measure the bodies' dimension of an object acquired by the same lens/microscope/camera system and the widely known Microsoft PowerPoint and MS Picture Manager programs. The user will be able to design his own MCR on his PC for each objective lens, e.g. MCRx4 to MCRx100, using each on the corresponding digital image taken by the same objective lens. The conditions are fixed for every superimposed image including width, height, pixel number and density. The MCR was tested using selected parasites, and shown to be as accurate as the ocular micrometer disc, screw micrometer eyepiece and image analysis software. Scale bar also will be easily created and attached to the image. The lower technical complexity and the precise measurements with MCR method makes it applicable even in laboratories with limited resources.

Biography

Yehia Otify has completed his Bachelor of Veterinary Medical Science from Cairo University and his PhD from Alexandria University, Egypt. He did his Postdoctoral short visit at Ontario Veterinary College. He has been the Faculty of Veterinary Medicine in both Edinburgh and Glasgow Universities. He is the former Dean of the Faculty of Veterinary Medicine, Alexandria University and Group Leader of an international collaborated project (VMERGE). He has published 34 papers and is the author of Veterinary Parasitology (Arabic language text, 2011).

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