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Method for creating a tissue microarray-capable, slide-scanning acquisition device from any motorized microscope

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We use this protocol and it's working

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Abstract

High-throughput, multiplex slide-scanning technologies have become widely-used. Advantages include the ability to archive digital copies of slides, review slides as teams using virtual microscope software, and standardize analytical approaches. One barrier to implementation is the cost of dedicated slide-scanning devices. We describe a simple method that allows any microscope to be used for slide-scanning. The only requirements are that the microscope be equipped with a motorized filter turret (for multichannel fluorescence) and a motorized *xyz* stage. This example uses Metamorph, the most commonly used hardware-agnostic microscope control software. The approach can, however, be readily translated to open source applications as well as to dedicated control software provided by microscope manufacturers. The scripts, or journals, developed allow users to define multiple regions of interest and specific parameters, including ranges and channels used for focusing. Following acquisition, captured images can be stitched and displayed using open source virtual microscope software.

Attachments

PDF

Nilsen et al.pdf

19.4MB

Troubleshooting