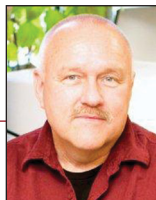


## From the Editor



# COVID-19 and Safety in Microscopy and Microanalysis Laboratories

I hope by the time this editorial is published the most difficult period of the COVID-19 pandemic is over and most microscopists are no longer relegated to working from home. In each issue of *Microscopy Today* we publish NetNotes, a column that addresses current topics posted on microscopy listservers. As might be expected, a recent topic has been COVID-19 and how to prevent the spread of this highly contagious virus in heavily used microscopy laboratories. Many of these posts have made me, as a core facility director, and others reconsider standard operating procedures (SOPs) for cleanliness and disinfection of equipment. While COVID-19 is the current concern, there are many viruses and other infectious agents that can be transmitted through use of common equipment.

Comments on COVID-19 from the Confocal Microscopy Listserver are summarized here. The full thread is available at <https://lists.umn.edu/cgi-bin/wa?A0=confocalmicroscopy>. Many policies that have been implemented to stop the spread of COVID-19, such as no face-to-face training, thorough disinfection of all instrument components between each user, and limited access are not practical in daily operation of a microscopy facility. However, some protocols are certainly applicable to everyday operation of instruments. Having directed and visited core facilities for more than 40 years, I cannot remember encountering SOPs that included daily disinfection of microscope eyepieces and all microscope knobs and keyboards, but these all provide a surface for transmission of infectious diseases. Suggestions for daily disinfection include the use of 70% ethanol (or methanol) or a low concentration of hydrogen peroxide. The use of ethanol was the most common suggestion, but precautions such as the use of anhydrous high-quality ethanol must be taken to avoid contaminants that can affect optics. Histology-grade ethanol common in many laboratories contains impurities that can affect objectives and eyepieces. Even with the use of high-quality ethanol, care must be taken to minimize damage to paints, rubber surfaces, and objectives. It was noted several times that ethanol should be applied to lens tissue for cleaning objectives or Kimwipes for cleaning keyboards and surfaces rather than spraying onto surfaces.

In normal SOPs the use of gloves while operating a microscope should not be allowed. Gloves are used to protect an individual when handling dangerous reagents. Any contaminants on gloves can be transferred to microscope components and the next user. Some labs have relaxed this policy during the COVID-19 outbreak, and fresh gloves are provided for each user.

Microscopy training typically involves proper handling of fixatives and other chemistries but seldom includes proper methods for disinfecting an instrument. With the new awareness associated with COVID-19, SOPs and demonstrations on how to properly clean an instrument should become a training component for all microscopists.

Bob Price  
Editor-in-Chief

**Publication Objective:** to provide information of interest to microscopists.

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