Laser Confocal Microscopy Unit Hazard Checklist

PI/User: ___________________________________________________
Date: ______________________________________________________

This check list is provided as a summary of key points related to the evaluation of a laser microscopy work station. This form need only be completed once, unless there are changes to the system. You may want to keep this document on file.

- The laser light may be visible (400 to 700 nm) or invisible (180 nm to 399 nm or 701 nm and longer wavelength). One can see “outside” what is regarded as visible. An 800 nm laser will be visible and appear very dim; creating the impression it is not a risk of eye injury. The retinal hazard zone is 400 to 1400 nm. **Know the wavelengths and power levels you are potentially exposed to!** ( )

- Is the laser pathway entirely fiber optic? Yes ( ) No ( ) If yes, go to step D. If no, complete the entire form.

- **What to look for:**
  A. Be sure you understand the beam path. Where is the potential for human exposure? ( )
  B. What can the beam interact with on its way to the intended target? ( )
     **Note:** How well an item can scatter light can be deceptive. It has little to do with how an item may appear to you. It is related to surface structure of the material and wavelength of the incident light. **All unnecessary items need to be kept out of the beam path.** ( )
  C. Are there any upwardly directed beams? ( ) Are there any computer monitors potentially in line with the beam (a source of reflection with potential human exposure)? ( ) Is the beam at eye level with respect to the operator’s position at any time? ( ) Are there any objects/items in the path of the beam that may cause scatter? ( ) Look for scatter off mirrors and items that are a necessary part of the optics table. It may be necessary to put beam stops in place to minimize potential exposure.
  D. Are there filters or a beam stop present to prevent a user from viewing laser light through the eyepieces? ( ) If not, what methods will be used to prevent such an exposure? ( )
     **Note:** How well an item can scatter light can be deceptive. It has little to do with how an item may appear to you. It is related to surface structure of the material and wavelength of the incident light. **All unnecessary items need to be kept out of the beam path.** ( )
  E. Is protective eyewear needed and is it available? ( ) Is it in good condition? ( )
  F. Is there a user’s log? ( ) Have all users taken the online training? ( )
  G. Have all users had function specific training? ( ) Is such training documented? ( ) (Training provided by PI or experienced user)
H. Is the laser used with lights on, off or dimmed? ( ) Low light conditions result in a larger pupil opening. This could increase exposure and is important to know.

I. Who performs maintenance on the lasers?

_______________________________________________________________

_______________________________________________________________

_______________________________________________________________

J. If infectious agents or materials are used, is a HEPA filtered system in use?
   Yes ( ) No ( )

K. If yes, provide the following info:

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<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Serial Number</th>
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L. Who performs maintenance on the HEPA filtered system?

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