

Title of HWBGM Guidance Note: **Risk Assessment Form**

*Cross Ref. to University of Oxford Guidance Note:*

*Unique Assessment No: Cell-Im/RA01*

<b>DEPARTMENT</b>	<b>Cellular Imaging (Microscopy) Core</b> <b>The Wellcome Trust centre for Human Genetics</b>
<b>PERSONS INVOLVED</b> ( <i>Detail everyone who is likely to be at risk of this work – Ensure they are informed of the significant points of this assessment</i> )	This is a multi-user microscopy facility managed by staff members of the Cellular Imaging Core. The facility has access restricted to authorised personnel only, from the WTCHG or visiting collaborators.
<b>DESCRIPTION OF AREA/PROCEDURE/EQUIPMENT UNDER ASSESSMENT</b> ( <i>Provide a general description of the work to be assessed – The greater the scope of the assessment, the greater the detail required</i> )	<b>Microscope room 00/070.</b> The room has two microscopes: Zeiss LMS 510 MetaHead laser confocal microscope, and a Nikon TE2000U fluorescence microscope. This is a multi-user facility managed by staff members of the Cellular Imaging Microscopy Core.

**A. HAZARD IDENTIFICATION & ASSESSMENT-** *From the List below, identify whether the activity/process/equipment will involve any of the hazards indicated. According to the guidance notes, Identify the associated Risk and the Required Control Measures to control that Risk.*

<b>Hazard Categories</b>	<b>Yes / No</b>	<b>If Yes, give Details</b>	<b>Assign Risk (Low/Med/High)</b>	<b>Minimum Actions Necessary</b>	<b>Assess whether the Minimum Actions are sufficient to control the risk. If the answer is NO, then detail the further actions required below.</b>
Biological Hazards ( <i>including Pathogens, Human Tissues &amp; Tissue Culture</i> )	YES Biological containment Level 2 laboratory work	The risk is managed by the Core Glove Policy outlined on the microscope room door and Core website.	Low - mostly fixed material	Complete all relevant COSHH Assessments according to 'HWBGM Guidance on Biological & Chemical Hazards'	Alcohol provided for minor spillages. Gloves for handling culture vessels and a waste bin are provided [ref: Core Glove Policy].
Genetic Modification of Micro-organisms, Plants or Animals	Occasionally YES by other groups	The risk is managed by the Core Glove Policy outlined on the microscope room door and Core website. It is University and Centre policy to have only approved GM projects with completed risk assessments carried out by project supervisors.	Low - mostly fixed material	Complete all relevant GM Assessments as detailed in 'HWBGM Guidance on Biological Hazards' & 'Univ. S1/95'	Alcohol provided for minor spillages. Gloves for handling culture vessels and a waste bin are provided [ref: Core Glove Policy].
Hazardous Chemicals or Dust	NO			Complete all relevant COSHH Assessments according to 'HWBGM Guidance on Chemical Hazards'	
Radioactive Material including X-Rays	NO			Contact Senior Radiation Protection Supervisor	

Animal Work	NO			Contact Biological Safety Officer	
Gases	YES	Carbon Dioxide supply for the Zeiss live cell microscope incubator. There is a 100% compressed CO2 supply in the room that is a might pose a risk of asphyxiation if the valves were left open or physical injury if the valve was removed under pressure.	LOW	For Liquid Nitrogen follow the guidelines 'HWBGM Generic Assessment'. For all other Liquid Gases, contact H&S Officer.	During normal use the pressurised gas supply is fed via a regulator and fixed to 1 bar pressure. At this feed rate the risk for the CO2 is negligible given the high air throughput of the rooms air-conditioning system. A failure of the main CO2 supply pipe is highly unlikely, but the resulting noise would alert users to the risk and the exit door has a quick release mechanism. Lab support deal with checking the integrity of the pressure regulator and its maintenance.
Electrical Hazards	YES	The room also has the typical Office hazards from operating electrical apparatus and trailing leads behind the equipment.	LOW	Follow the guidelines set out 'HWBGM Safe use of Electrophoresis Equipment' and 'Univ. S1/00'	Staff are advised of the risks of covering the cooling vents/fans of the electrical equipment, and the use of 70% alcohol within the microscope room There are no trailing power leads in the user floor area.
Hazardous Machinery	NO			N/A – You must complete the next Section.	
Lasers	YES	The Zeiss 510 MetaHead confocal microscope has three category IIIb [3b] lasers and one category IV [4] laser. All laser sources are well marked and appropriately shielded via proprietary shielding & safety interlocks during use.	LOW	Follow the guidelines set out in 'Univ. S7/93'	Only Zeiss [UK] trained engineers are permitted to open the source box and work on the lasers. The room is closed to WTCHG staff when the lasers are being serviced by Zeiss.
Display Screen Equipment (Greater than 2hrs/Day)	YES	The microscope images are acquired via dedicated PC workstations.		Follow the guidelines set out in 'Univ. S10/01'	
Lifting Heavy Loads	NO	The microscopes are not generally moved		Follow the guidelines set out in 'Univ. S7/99'	
Out of Normal Hours	YES	The microscopes are used out of hours.		Follow the guidelines set out in 'HWBGM Guidance on Lone Working'	Staff receive full training my Core staff before being allowed to use the microscopes, and there is a full safety induction.
Loud Noise	NO			Follow the guidelines set out in 'Univ. S5/02'	

Other Mercury lamp	YES	The microscope mercury lamp is only replaced by the Core facility staff following the recommended procedure detailed in the Microscope instruction manuals.	LOW	N/A	The 100w mercury lamps must be replaced before 320 hours of operation (300 hours maximum recommended) to prevent the risk of explosion. An 'hours' display on the front of the 100W mercury lamp power supplies states the hours of operation - never reset it unless the lamp has just been replaced. Never operate lamp with the lamp housing removed as the mercury lamp has intense uv radiation when on and there is also a real risk of explosion. Should the mercury lamp explode vacate the room while the mercury vapour clears, all lamp glass fragments should be contained within the shielded lamp housing. The mercury lamp COSSH assessment and our health & safety pdf are located on our website.
Immersion oil	YES	The Cargille DF/Zeiss 518F immersion oil should be treated as a minor risk - although one component is classified as an irritant	LOW	Wash hands after use	Avoid contact with the immersion oil and wash hands after use (if it goes into the eyes wash for at least 10 minutes and see an ophthalmologist for a checkup, and afterwards complete an accident form). A hard copy of the microscope operating manual is provided in room 00/070 and *.pdf files of all the system manuals are located on the Core website. Users are advised of this during their safety induction.

### ***B. MANAGEMENT MEASURES***

<b>Are there any other measures required to ensure that all the hazards identified are appropriately controlled?</b> <i>(Detail or enter N/A)</i>	<b>NO</b>	<b>Are there specific Training Requirements – Particularly for Young or Inexperience Workers?</b> <i>(Detail or enter N/A)</i>	<b>YES – all new users are fully trained before being allowed to enter and use the microscopes.</b>
Signature & Position of assessor:	Dr Keith J Morris	Date: 20 <sup>th</sup> May 2014	
Name of supervisor (student work only):	n/a	Date: n/a	
Signature of head of department or nominee:	Dr Sergi Padilla-Parra	Date: 20 <sup>th</sup> May 2014	