

APPENDIX 14: Laboratory Risk Assessment

This document is provided as a template that departments might wish to adopt and/or adapt for risk assessment and work plans for individual research groups/areas.

1. DEPARTMENT DETAILS		
Building: JR Hospital, West Wing, Level 5	Rooms or area: Lab (05.66.46), Tissue culture room (05.66.32) Confocal/calcium room (05-66-04C)	Risk assessment Version/Date 20/11/2020 v 2.2.
Head of Department	Prof. Kevin Talbot	
Department:	NDCN	
Academic/Line Manager	Prof David Bennett	
People returning to working on site (status/names)	Staff Postdoctoral scientists, technician Post graduate students	NAME(S) Lucy McDermott, Ning Zhu, Annina Schmid, Xun Yang, John Dawes, Mathilde Pascal, Maddalena Comini, Alex Clark, Andreas Thermistocleous, Georgios Baskozos, Jishi John, Steven Middleton, Ilaria Cervellini, Ruxandra Dafinca, Tina Liting Wei, Galbha Duggal Allison Barry, Teodora Trendafilova, Mandy Tseng, Oliver Sandy-Hindmarch, Liam Carroll Liam Peck, Tom Vale, Malina Graf
<p>Activity Summary (Types of activities expected & authorised to take place – brief description of the experiments and equipment used)</p> <ul style="list-style-type: none"> • DNA/RNA based methods including extraction, PCR, qPCR, gel electrophoresis – booking of qPCR/PCR equipment in place • Microbiology: standard molecular biology techniques including restriction digest, ligation, liquid/solid LB cultures – booking in place for shaking 37C incubator • Protein based methods: SDS-page, immunoblotting, immunoprecipitation, Immunohistology/cytology, in-situ hybridisation; confocal imaging using group owned Zeiss LSM – booking in place for confocal, cryostat • Tissue dissection: spinal cord and DRG for primary culture – dissecting scope timing paired to TC • Tissue culture: primary, immortalised and hiPSC cells; Co2 incubators owned by group – booking in place for class II microbiological safety cabinets • Calcium imaging – booking in place for calcium imaging microscope • Electrophysiology – dedicated separate room, 2 ppl maximum occupancy (no booking system required; occupancy is limited by the number of electrophysiological rigs) • Glass washroom to deposit and collect materials for autoclave • LN2 access for cell line retrieval and storage <p>>> external work to be cleared with relevant departments</p> <p>Biomedical Services (John Radcliffe site animal facility): Access will be authorised by Dr Jordan Tanner and organised with the booking system on the BMS intranet.</p>		

WIMM (FACS facility): access will be authorized by the WIMM, and facility team (Paul Sopp, Kevin Clark, Sally-Ann Clark). Booking system available through Agendo.

WIMM (imaging facility): access will be authorized by the WIMM, and facility team (Christoffer Lagerholm, Jana Koth). Booking system available through Agendo.

Neuropathology (NDCN West Wing, proposed alternative FACS access): as needed, access will be authorized by neuropathology. *Contacts:* Eseoghene Ifie and Connor Scott.

Shared use?

Is the space shared with individuals from other departments? If yes, please list the departments concerned
YES

LL3 (05.66.46)– Bennett – Rinaldi – MacLaren – Halford – Nemeth
Special lab (05-66-04C) Confocal – Bennett-Rinaldi
Special lab (05-66-06) Electrophysiology – Bennett – occasionally Rinaldi
TC 5 – (05.66.32) – Bennett – Rinaldi
Special lab (05-66-28) Dark room – Bennett – Rinaldi - CVM

>> Booking system

Google calendar booking system for TC 5, confocal, calcium rig, qPCR/PCR machines, cryostat
Paper based booking system for 37C bacterial shaking incubator

Extent of on-site activity (Indicate all that apply)	Yes or No?
Continually with a single individual occupying the space	No
Continually with different individuals occupying the space one at a time	Yes
Continually with different individuals occupying the space simultaneously with appropriate physical distancing measures	Yes
Occasionally (e.g., a few short visits per day or week to check equipment)	Yes

2. REDUCING THE SPREAD OF COVID-19

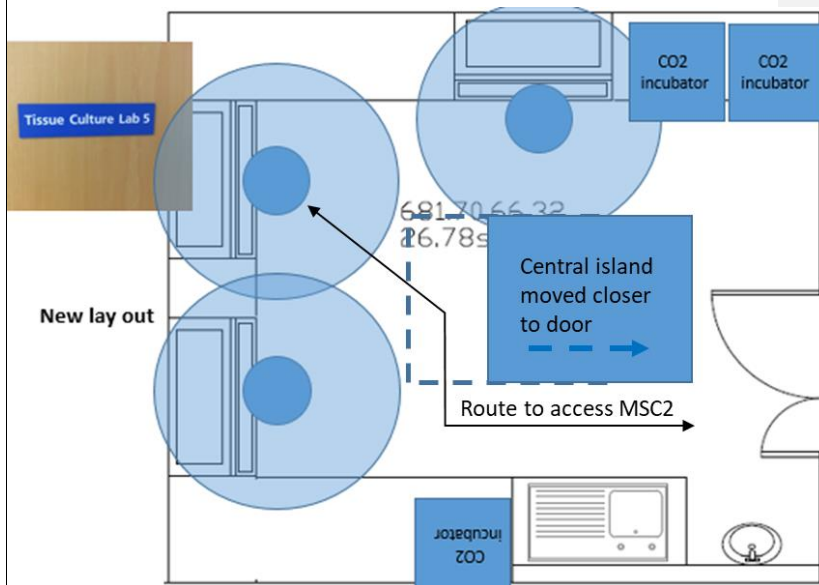
Travelling To/From Work:

Outline any foreseeable and significant risks	Outline risk reduction measures to be taken
Personnel with symptoms	<p>No one is to travel to the site if they are experiencing symptoms consistent with COVID-19.</p> <p>Anyone with symptoms must self-isolate and inform their PI immediately, who will then inform the NDCN safety committee.</p> <p>Personnel must not attend the site if anyone in their household is experiencing any symptoms of COVID-19 or self-isolating.</p>

<p>Personnel who may be classed as vulnerable</p> <p>Exposure during travel to/from work</p>	<p>If classed as a vulnerable person, the person should not come to work but instead contact the line manager and HR for advice.</p> <p>Members of the laboratory will travel to work avoiding public transport whenever possible – by bicycle, car or walk.</p> <p>If public transport has to be used and the travel arrangements to site challenge safe distancing, members should not travel to work / enter the building but instead contact their PI for advice.</p> <p>Individuals must either use hand sanitiser or stringently wash their hands for 20 seconds upon arrival, and then regularly whilst on site. Laboratory and toilet sinks are available for hand washing and posters will be displayed for guidance. Use paper towels to dry hands</p>
<p>Safe Distancing in the Building</p>	
<p>Outline any foreseeable and significant risks</p>	<p>Outline risk reduction measures to be taken</p>
<p>Frequent passing of individuals, use of communal space</p>	<p>OUP social distancing policy will be followed up at any time and staff should consult to OUP COVID FAQ pages before accessing site: https://www.oup.nhs.uk/working-for-us/staff/covid-staff-faqs-masks.aspx</p> <p>Once in University area, NDCN RTOSW must be followed up at all times.</p> <p>Maximum occupancy signs will be posted outside laboratories, Special Labs, and tissue cultures.</p> <p>Induction will be given to all staff returning to on site working covering arrangement in place prior to their start date.</p> <p>No visitors are allowed on site, unless it is for the maintenance of an essential equipment or service.</p>
<p>Safe Distancing in the Lab</p>	
<p>Outline any foreseeable and significant risks</p>	<p>Outline risk reduction measures to be taken</p>
<p>Social distancing in laboratory and tissue culture</p>	<p>Stop and wait approach will be followed in corridors and shared areas to maintain social distancing and maximum occupancy at all time.</p> <p>Consideration of others is key to successful implementation of these plans. Colleagues encouraged to alert each other if guidelines are not being adhered to, and ask that anyone reminded of social distancing guidelines or the need for good etiquette should take such reminders in good grace.</p>

Shared equipment and space	<p>Open space lab (LL3): Lab work should be planned in advance to predict the time required in the lab and this information will be disseminated to the group sharing the space. A shift system will be implemented with 'early start' and 'late start' teams, this will be coordinated through a Bennett group communication channel.</p> <p>A booking system will be in place for any lab equipment known to be subject to heavy use and where one would be appropriate to establish safe working, specific details of equipment are listed within the document.</p> <p>Workstations within the main lab will be designated such that individuals are never directly facing each other or sharing equipment such as pipettes. This, in turn, limits the maximum number of people working in a single aisle - allowing for freedom of movement and access to the equipment whilst maintaining the 2m distance. The restriction will be 1 person per bay in the first instance.</p> <p>Specific rules for working in TC5 lab:</p> <p>Maximum occupancy has been identified as: 3 people</p> <ul style="list-style-type: none">• A booking system for the Class II MSC (on Google Calendar/Calpendo) will allow pre-planning of experiments and avoid overlap.• We suggest to relocate the safety cabinet to that there is sufficient space between the three CLII MSC, all 3 will be allowed in use simultaneously. Safety cabinet will be re-validated after relocation to ensure user safety.• A maximum total room occupancy of 3 people in the tissue culture room at any one time will remain. <p>The orientation of the cabinets can be seen below. The cell-type use is fixed and as indicated: TC1: iPSC culture TC2: Primary culture TC3: iPSC culture</p>
-----------------------------------	--

We suggest to relocate the safety cabinet to that there is sufficient space between the three CLII MSC, all 3 will be allowed in use simultaneously. Safety cabinet will be re-validated after relocation to ensure user safety.



Movement of individuals within the tissue culture room:

When three individuals occupy the room, each will be asked to adopt a clockwise or anticlockwise path to reach required equipment, such that individuals will not cross paths. The centre island/table within the tissue culture room provides a convenient barrier for individuals to keep their distance when moving around the room.

In the case of a occupancy at MSC3, any user wishing to access MSC2 will pass to clockwise around the central island, avoiding close proximity to the user at MSC1 as they do so.

If individuals require access to equipment near the station of a worker (e.g. centrifuge, microscope, incubator, fridge or freezer) they will either stop-and-wait until the other user is able to temporarily stand aside, or make the encroachment to 1 m distance as brief as possible, keeping back to back, or side to side.

Enhanced cleaning of shared equipment will be applied. 70% ethanol and microsol spray is available to wipe down equipment before and after use. Users will avoid touching and handles, equipment or eye pieces with bare skin.

Bennett lab confocal microscope and calcium imaging microscope, room 05-66-04C:

Booking calendars are in place for each microscope. There is less than 2m between each microscope and there may at times be overlap in usage, however concurrent activity is likely to be minimal due to infrequent occupancy of the calcium microscope. A heavy curtain currently divides the two spaces completely obscuring users and when in use, individuals are stationary and facing away from each other.

	<p>Specific rules to accessing Cryobank:</p> <p>When accessing the cryobank up to two people are required to work together for safety, in this instance, people may be less than 2m away from each other. Shared PPE such as face shield must be cleaned before and after use with the provided cleaning material. Clean nitrile gloves must be worn under the cryogloves.</p> <p>PPE must be disposed of as general waste once the activity is terminated – See removal of PPE poster displayed by LN2 cryobank.</p>
Cleaning Regimes	
Outline any foreseeable and significant risks	Outline risk reduction measures to be taken e.g. availability of hand washing facilities and hand sanitizers
Shared equipment	<p>Wiping all benches and equipment with appropriate disinfectant before and after use.</p> <p>This include fridges, freezers door handles as well as equipment used for experimental procedures.</p> <p>All safety cabinets front as well as inside should be wiped down with disinfectant then 70% alcohol before and after use.</p> <p>Hand washing facilities are available on either side of the door in TC and in all laboratories, people will be reminded to wash their hand thoroughly before work, during work and after work.</p>
Personal Protective Equipment	
Outline any foreseeable and significant risks	<p>Outline risk reduction measures to be taken:</p> <p><i>This is Covid-19 specific PPE beyond that needed for usual lab work</i></p>
OUH embedded space requires PPE	<p>Wearing gloves as required in the activity risk assessment, individuals must be reminded of good gloving practice, change their gloves frequently and avoid touching their face whilst wearing gloves.</p> <p>All staff and student accessing sites must have consulted OUH COVID related pages prior to accessing site:</p> <p>https://www.ouh.nhs.uk/working-for-us/staff/covid-staff-fags-masks.aspx</p> <p>Note that all individuals accessing sites are required to wear a face mask.</p>
Lone Working Additional Precautions	
Outline any foreseeable and significant risks	Outline risk reduction measures to be taken



Commented [GR1]: Same comments from RA 07


No additional risks anticipated with respect to COVID	
Communication with the team	
Outline any foreseeable and significant risks	Outline risk reduction measures to be taken
No additional risks anticipated with respect to COVID	All lab and group meetings have been scheduled to take place online until further notice since the beginning of the lockdown. WhatsApp and Teams groups are set up to coordinate the work and lab time.
Equipment checks	
Outline any foreseeable and significant risks	Outline risk reduction measures to be taken
External contractor accessing the laboratory	<p>Only essential service visits can be scheduled and the company will be informed about the requirements for social distancing and compulsory protective measures.</p> <p>Facilities Team must be kept informed of such contractors visit on site.</p> <p>PPE will be provided, and the area will not be in use by any staff members for the duration of service. Equipment will be thoroughly cleaned with disinfectant and 70% IDA before and after service.</p>
First Aid Cover	
Are staff aware of how to summon first aid and from where?	Outline risk reduction measures to be taken
Yes	Clear email communication prior to lab members entering the lab, with regards location of all first aid boxes and hospital switchboard extension being zero

3. MANAGING EXISTING RISKS

Have existing risk assessment been reviewed:	Yes / No
Are additional control measures required?	Yes / No
Outline any additional control measures below:	

--

4. INTERNAL DEPARTMENTAL REVIEW			
Role	Name	Signature	Date
Manager (proposing risk assessment/work plan)	David Bennett		11/12/2020
Buildings Manager & DSO (reviewing buildings related elements)	Tiphaine Bouriez-Jones		11/12/2020

5. HEAD OF DEPARTMENT APPROVAL			
Head of Department:	Name	Signature	Date
(approving risk assessment/work plan)	Prof Kevin Talbot		15 th December 2020
Approval Comments			

6. FURTHER REVIEW STAGE

Review Date | **November 2020**

Modifications: Addition of collaborative staff within NDCN department who require access to equipment on level 5.

Review Date | **November 20th 2020**

Modifications:
Update to TC5 occupancy and rules of moving around room at full capacity.