



Barts and The London

School of Medicine and Dentistry

**Blizard Institute**

4 Newark Street, Whitechapel, London E1 2AT

**Health & Safety Code of  
Practice for  
Office and Lab Staff**

## **Health and Safety Management in the Blizzard Institute**

### **Blizzard Institute Health and Safety Management Policy Statement**

The Blizzard Institute regards the health, safety and welfare of its staff and students as of major importance and recognises the vital role that good health and safety practices have in the workplace. Health, Safety and Welfare is managed using the Queen Mary University of London's (QMUL) Health & Safety Policy as a minimum standard and in accordance with the Health & Safety at Work Act etc. 1974. The Institute will make available resources of time and money as far as reasonably possible, in order to fully implement the QMUL Health and Safety policy. It will encourage and arrange for training and instruction of staff in health and safety matters in order to ensure that safe systems of work are practiced throughout the Institute.

### **Blizzard Institute Arrangements for Health and Safety**

The Institute has two main Safety Coordinators appointed, who will advise and assist with health and safety related issues in the Institute and who will have specific responsibility for oversight of health and safety within office and administrative areas. Laboratories will also appoint a local individual responsible for health and safety (either the Laboratory Manager or a local safety officer), along with Fire Marshals, First Aiders and Radiation Protection Supervisors as appropriate. The local responsible person will assist and ensure suitable and sufficient risk assessments are carried out and reviewed regularly by staff or line managers for all work activities involving hazards. They will also ensure all health and safety related equipment within their area of responsibility is adequately maintained.

Health and Safety issues will be recorded at the Blizzard Health and Safety Committee which will meet three times per year and annual local health and safety inspections will occur for each Institute work area along with regular monitoring checks. Mandatory health and safety inductions will be provided for all new members of staff and appropriate manuals and guidance for health safety at work will be provided through the Blizzard webpage/notebook and the QMUL Health and Safety Directorate website.

Signed:



Professor Tim Warner  
Blizzard Institute Director

Date: 16<sup>th</sup> Aug 2019

## **1. Health & Safety Rules**

Staff, students and visitors to Queen Mary University of London (QMUL) must observe and comply with University and Blizard Institute Health and Safety (H&S) Rules.

Staff are reminded that the Health and Safety at Work Act (1974) states that it shall be the duty of every employee while at work:

- a) To take reasonable care for the health and safety of themselves and other persons who may be affected by their acts or omissions at work;
- b) To co-operate with their employer in implementing the provisions of the Act.

The Management of Health and Safety at Work Regulations (1999) requires that a suitable and sufficient assessment is made of ALL hazards/risks arising from work, for employees and anyone (students, visitors, others) who might be affected by the work.

The 'employer' in this context is Queen Mary University of London (QMUL) and the Council has overall accountability for Health and Safety within the University; the President and Principal of QMUL has the responsibility for effective implementation of the H&S policy and plan. Responsibilities are then delegated to Vice Principals, Director of Institutes, Heads of Schools, and so on.

The QMUL Health and Safety policy, topic policies, arrangements, procedures, forms and topic guidance can be accessed at <http://www.hsd.qmul.ac.uk/>. Specific Code of Practice checklists for all QMUL Managers/Supervisors are found at <http://www.hsd.qmul.ac.uk/a-z/management-of-health-and-safety/> and all managers and supervisor are recommended to use them to 'plan, do, check and act/review' for H&S.

QMUL also abides by the principles of best practice in H&S management as prescribed by the Universities and Colleges Employers Association (UCEA) contained in [Leadership and management of health and safety in higher education institutions](#) and supplementary publications contained at <https://www.ucea.ac.uk/en/empres/hands/publications/index.cfm>

Please email or contact the QMUL Health & Safety Directorate (HSD) and the Blizard Institute H&S Coordinators for assistance with H&S topics and issues. QMUL HSD H&S Manager/Adviser positions covering the School of Medicine & Dentistry, specialist H&S/fire safety topic contacts and the H&S helpdesk contact details are listed here <http://www.hsd.qmul.ac.uk/contact-us/>

## **2. Staff, student and visitor induction**

All new staff, students and visitors intending to work within the Blizard Institute must attend an induction session covering various aspects of how the building works with particular attention being paid to H&S and evacuation procedures.

Students and visitors are admitted only at the discretion of the Blizard Centre Lead and Blizard Laboratory Management. Such visitors are also responsible for the maintenance of a healthy

and safe place of work and this should be made clear to them by advice and example.

When new staff, students or visitors are intending to work in the laboratories, an outline of the standard operating procedures within the building will be provided together with details regarding the H&S documentation that is required prior to the commencement of any laboratory activity. Centre Managers and Administrators within the Institute will organise the induction process. An induction form signed by the Blizard Institute Manager and Laboratory Manager will be required before access to the building can be authorised.

### 3. Mandatory H&S Training

It is mandatory that **all new members of staff, postgraduate students and academic/research visitors** must complete the **Fire Safety Awareness** on-line training course **within the first two weeks of employment/study**.

<http://www.hsd.qmul.ac.uk/training/online-learning/>

Please ensure that you read the guidance available on the above web page before you start the module. Training must be repeated every two years.

It is mandatory that **all new members of staff using computers for work** must complete the Online **Display Screen Assessment (DSE)** on-line training course **within the first six weeks of employment**.

<http://www.hsd.qmul.ac.uk/training/online-learning/>

Please request a passcode by following the links on the above web page in order to gain access to the system. Generally, you must complete a DSE assessment every three years, but you can do it sooner if you are hot-desking, moving desks/office, or your workstation set up changes considerably e.g. pregnancy, change in eyesight or suffer an injury.

**All postgraduate students using computers for work** are recommended to complete the Appendix 1 checklist of [http://www.hsd.qmul.ac.uk/media/hsd/documents/standards-and-guidance/QMUL\\_HS\\_101\\_DSE-Policy-Arrangements-Guidance.docx](http://www.hsd.qmul.ac.uk/media/hsd/documents/standards-and-guidance/QMUL_HS_101_DSE-Policy-Arrangements-Guidance.docx) and discuss any arising issue/remedial actions with their supervisor **within the first six weeks of study**.

**All staff, postgraduate students and longer term academic/research visitors working in laboratories** will need to complete the training matrix found on the [Health & Safety Training Policy \[PDF 950KB\]](#). **You have two weeks in which to book a place on a course that is taking place within the next three months.**

Mandatory taught courses include:

- Working Safely with Biological Hazards (HS020)
  - Refresher- Working Safely with Biohazards and GM Agents (HS030)
- Hazardous Substance Risk Assessment (COSHH) (HS005)
  - Refresher- Hazardous Substance Risk Assessment (COSHH) (HS015)
- Containment Level 3 Principles and Practices (HS019) - for those who are to work at Containment Level 3 or need a refresher.
- GM Risk Assessment and Notification (HS029) – for those intending to conduct GMO

laboratory work.

If a place on the course you require is not available, you cannot find the course you are looking for, do not know what to book or how to book please either visit <http://www.hsd.qmul.ac.uk/training/> or email [hs-helpdesk@qmul.ac.uk](mailto:hs-helpdesk@qmul.ac.uk).

Other H&S topic courses which can assist improvement of H&S of your own work or lab area are also available – details in the above web link.

**Non-attendance on a mandatory H&S training course on which you have been booked will be reported to Blizzard Institute Management. Your access to the lab may be cancelled as a result.**

#### 4. QMUL Occupational Health

Occupational Health is a distinct branch of preventative health care, which works to promote health in the workplace and forms part of the overall health and safety management system, focusing on the management of work related health risks. This can include the prevention of work/study related ill health, facilitating rehabilitation after illness and injury, and promoting physical and mental wellbeing. Occupational Health provides advice to all levels of QMUL

##### **Immunisation of personnel**

New personnel (staff/postgraduate students) should contact the Occupational Health Department <http://hr.qmul.ac.uk/about-us/> as soon as possible after commencing employment/study where screening and immunisation will be carried out as required. Anyone intending to work with human tissue or blood should ensure that they are adequately covered for Hepatitis B and other relevant blood borne agents; also anyone who is to work within a Biological Services Unit (BSU).

<p><b>Opening Hours</b> We are open from 9:00am-4:30pm, Monday to Thursday and 9:00am-4:00pm on Fridays, including lunchtime. We are closed on weekends, Bank Holidays and College Closure Days.</p> <p>Please note that opening hours are subject to change (being closed over lunch) during periods of staff shortage.</p>	<p><b>Address</b> Occupational Health Service Ground floor, Geography Building Queen Mary University of London Mile End London E1 4NS</p>
<p><b>Phone</b> Internal: [13] x8700 / 7207 National: 020 7882 8700 / 7207 International: +44 20 7882 8700 / 7207</p>	<p><b>Fax</b> National: 020 7882 7053 International: +44 20 7882 7053</p>
<p>email: <a href="mailto:occhealth@qmul.ac.uk">occhealth@qmul.ac.uk</a></p>	<p><a href="#">Map to Occupational Health</a> [DOC 174KB]</p>

## **5. General Security**

Personal items of value should be locked in a drawer or locker and not left on benches or desks, especially during meal breaks. Offices should be locked before leaving at night and at any time during the day when they are to be left unattended. Do not hesitate to ask the business of any strangers wandering about the buildings or attempting to gain entry. Particular attention should be paid to the prevention of 'tailgating'.

Floors, particularly in corridors, access ways and stairs must be kept clear of obstructions and not used for storage purposes.

## **6. Nature of work**

Work in the Institute may comprise of research and teaching involving work with micro-organisms (Hazard Groups 2 and 3) and other biological materials, including genetically modified organisms, laboratory animals, chemicals and radioisotopes.

## **7. Administrative and H&S duties associated with the aforementioned scientific activities**

No work shall commence on any laboratory-based project until the senior academic/research group leader with responsibility for the project has carried out a risk/COSHH/Bio-COSHH assessment and this has been agreed and signed by the supervisor and worker(s) in each case. Authorisation to work in the laboratories must not be given to anyone until all H&S documentation has been completed and authorised. Project risk/COSHH/Bio-COSHH assessment forms should be readily available at all times in order that those involved in a project are able to identify hazardous materials/techniques with which they are working, how to use them safely and how to dispose of them. Risk assessments should be placed in the purple loose leaf folders located in each laboratory area. Those responsible for projects must ensure that project risk/COSHH/Bio-COSHH assessments are reviewed at least every three years or whenever changes are made to the project or more information becomes available about chemicals/biological agents which results in new risks being encountered. Any risk assessment with residual risk levels of medium to high must be reviewed annually.

Please note, QMUL is transitioning to using a central risk assessment module with a number of topic templates in MySafety during 2019/20 – see <http://www.hsd.qmul.ac.uk/a-z/-mysafety---online-health-and-safety-management-system/>.

All persons must be aware of the hazards presented by the chemical and biological agent(s) and other physical/environmental hazards that they are working with and the level(s) of containment/protection required. They must also be aware of the nature of the hazards presented by other work being conducted in shared laboratories that may potentially affect them. Please see topic based guidance at <http://www.hsd.qmul.ac.uk/a-z/>

## 8. Genetically Modified Organisms

All work involving construction or use of genetically modified micro-organisms (GMMs) are subject to the Genetically Modified Organisms (Contained Use) Regulations 2(014), and must be approved by the QMUL Biological & Genetic Modification Safety Committee (BGMSC). Please follow the procedure for QMUL at <http://www.hsd.qmul.ac.uk/a-z/health-and-safety-advisory-group/health-and-safety-advisory-group/bgmsc/> and topic guidance at <http://www.hsd.qmul.ac.uk/a-z/genetically-modified-organisms/>

## 9. Pathogens and higher risk/infectious biological material

Please see procedure at <http://www.hsd.qmul.ac.uk/a-z/health-and-safety-advisory-group/health-and-safety-advisory-group/bgmsc/> and topic guidance at <http://www.hsd.qmul.ac.uk/a-z/biological/>

The project summary and Bio-COSHH risk assessment/s for work with the following biological agents or materials should be submitted to the BGMSC in advance of work commencing:

- i. ACDP Hazard Group 2 or 3 wild type (non-genetically modified) biological agents - listed in <http://www.hse.gov.uk/pubns/misc208.pdf>
- ii. Biological agents without an approved list classification, but fulfilling the classification for ACDP Hazard Group 2 and 3 on page 7 of <http://www.hse.gov.uk/pubns/misc208.pdf>
- iii. Specified Animal Pathogens Order (SAPO) Group 2 or 3
- iv. Biological agents or materials needing Department of the Environment, Food and Rural Affairs (DEFRA) permit/s for work due to biological risk or import criteria
- v. Biological materials (cells, tissue, body fluids either from human or animal/other wildlife sources) known or strongly suspected of biological agents noted in i.–iv. (e.g. work with sputum samples known or strongly suspected to contain *Mycobacterium tuberculosis*, blood samples known or strongly suspected to contain Human Immunodeficiency Virus and/or Hepatitis B or C viruses).

Note - Biological agents that are listed or fall under the criteria for ACDP Hazard Group 4 or SAPO Group 4 are not permitted onto QMUL Premises, and therefore will not be considered.

All new staff/students working with Hazard Group 2 pathogens/Class 2 GMOs/GMMs (CL2) are expected to undergo approximately four weeks specialised training before being allowed to work unsupervised in the laboratory. When the supervisor is satisfied that the person is sufficiently competent to work without supervision, a training record signed by both trainer and worker should be completed and made available for inspection if required. Undergraduate and postgraduate students undertaking short-term research projects must be supervised at all times.

The laboratories, with the exception of the Containment Level 3 (CL3) suites, are not recognised for the use of Hazard Group 3 pathogens. Work with Hazard Group 3 pathogens/Class 3 GMOs/GMMs have specific training and competency assessment procedures and written records that need to be completed before lone working with pathogens or higher risk biological materials

is permitted. Please contact the Principal Investigator for the CL3 laboratory, senior lab researcher or the QMUL Biological Safety Adviser.

### **10. Lone working**

As far as is reasonably possible, no student or member of staff should work alone in the laboratories at any time. If it is considered essential that anyone should work outside normal hours (08.00-20.00 weekdays), then details of how this work will be carried out safely must be submitted on a Lone Worker Risk Assessment form for that project and authorised by their Supervisor or Centre Lead. The application must be supported by the provision of the COSHH and/or Bio-COSHH risk assessment forms, and any other relevant H&S documents or SOPs relating to the project. Lone working will not be permitted for work experience and undergraduate students.

### **11. Accidents and incidents**

All accidents, incidents, dangerous occurrences and near misses must be referred to a Blizzard Institute Safety Coordinator/Blizzard Laboratory Management in the first instance before being reported via the online MySafety system

[https://qmul.oshens.com/AIR2/Incbook/incbook\\_tab\\_begin.aspx?First=1](https://qmul.oshens.com/AIR2/Incbook/incbook_tab_begin.aspx?First=1)

Information required is:

1. Type of incident- accident/incident; ill health; service disruption; near miss.
2. If someone was injured- their name, contact number and where they work.
3. Information about what happened and where it happened.
4. If immediate action was taken, what was it (e.g. first aid administered).

Notification of the event is automatically sent to Director of the Blizzard Institute and Blizzard Institute Safety Coordinators, along with QMUL Health & Safety Directorate.

The Safety Coordinator and Line Manager will apply immediate remedial actions. QMUL Health & Safety Directorate normally will investigate events of significant risk and provide recommended actions to ensure events do not re-occur.

### **13. First Aid Call out Guidance**

To call a first aider in an emergency, telephone extension 3333 and the call will go through to security. This is the fastest and most efficient way of summoning assistance. The Security staff will ask the location of the casualty, name of casualty, name of caller and condition of casualty. Please answer as many questions as possible to assist with the management of the casualty's condition.



The Security staff will then contact a Building Based First Aider via their extension and/or mobile phone. The location of the emergency and first aider should be taken into consideration as the campus stretches across 6/7 buildings, attempting contact with first aider(s) closest to the casualty. The Security staff will advise the first aider of the details of the location and condition of the casualty. The first aider(s) will make their way to the casualty and administer first aid treatment. Out of normal working hours, Security Officers carry out the first aid duty and can be contacted using the same number, 3333. See link below for further information.

<http://www.hsd.qmul.ac.uk/a-z/first-aid/first-aid-treatment/>

Note that the designated Accident & Emergency Hospital for QMUL is the Royal London Hospital – Accident & Emergency  
Whitechapel Rd, Whitechapel, London E1 1BB  
**Phone:** 020 7377 7000

**First aid boxes** are located in both open plan and enclosed laboratory areas, and at strategic points throughout the office/write up areas. If items are removed from these boxes, please inform one of those staff responsible for first aid, so that the boxes can be replenished.

**Eye wash stations** are to be found next to the hand wash sinks in the red bays of the open plan area and at the ends of the laboratory benches by alternate hand wash basins in the enclosed laboratories.

#### **14. Personal Protective Equipment (PPE)**

Advice and guidance on PPE can be obtained from QMUL H&S Directorate  
[http://www.hsd.qmul.ac.uk/a-z/personal-protective-equipment-ppe-\\_-rpe-/](http://www.hsd.qmul.ac.uk/a-z/personal-protective-equipment-ppe-_-rpe-/)

#### **Howie style laboratory coats/gowns must be worn at all times when working in the laboratories.**

They must always be fastened. Lab coats should be changed regularly and dirty coats should be taken to the designated area on the laboratory floor by the lift lobby and exchanged for clean one. If a laboratory coat has become contaminated, immediately inform your supervisor and the H&S Coordinator or a member of the Laboratory Management team. When not in use, coats should be left on the hooks provided in the open plan lab or enclosed areas. Laboratory coats must be removed prior to leaving the laboratory areas and must not be worn in the office areas or lifts (with the exception of the goods lift on the West side of the Blizzard Building). **Items of personal clothing and bags must not be taken into laboratory areas.**

A colour-coded system is used for laboratory coats throughout the Blizzard and Abernethy buildings in order to identify areas of activity:

**Light blue:** Containment Level 2 areas at the north end of the building where infectious material is handled including the enclosed laboratories occupied by the Centre for Immunobiology, the associated tissue culture, and other laboratories and cold rooms off the north corridor. Blue coats must not be worn in the open plan laboratory areas. Coats must be changed when moving from one

area into another, however, when material (e.g. a gel) is being prepared for immediate transfer to the dark room on the east side of the laboratory floor, a white coat may be worn for a short period within the enclosed area for this procedure. White coats must not be stored in blue coat areas.

**Green:** GM Class 2 laboratory (LG09)

**Navy blue:** Radiochemistry bay (LG119)

**Green/blue gowns:** Containment Level 3 suites

**Grey coat:** Low copy PCR Preparation laboratory (LG75)

**Burgundy coat:** Visitors lab coat

**Brown coat:** Maintenance lab coat

**White coat:** All other laboratory areas

Clean laboratory coats can be found in the lobby next to the goods lift. If there are no lab coats available, contact the Washroom on ext. 2301 or email [blizard-autoclave@qmul.ac.uk](mailto:blizard-autoclave@qmul.ac.uk)

**Safety eyewear** is supplied to all new staff by Laboratory Management following induction. QMUL policy states that eye and face protection appropriate to protect the person during the task and hazardous area is worn (BS EN 166 standard). Supervisors must inform users via relevant risk assessments and induction as to which eye/face protection is required for which areas/tasks. Please note that the use of specified safety face and eyewear is compulsory in certain areas, such as the liquid nitrogen facility, see <http://www.hsd.qmul.ac.uk/a-z/cryogenicliquids/>

For the QMUL DSE eye care and Prescription safety eyewear procedures, see [http://www.hsd.qmul.ac.uk/a-z/dse\\_eye-care/](http://www.hsd.qmul.ac.uk/a-z/dse_eye-care/)

**Gloves must be worn when working in any laboratory area.** Only nitrile gloves (BS EN 374 standard), which carry a low risk of triggering allergic reactions, should be used. It is essential that all staff and students ensure that the gloves they are using provide adequate protection against the chemicals or other materials they are using e.g. when handling corrosive chemicals, red chemical gloves should be worn. Those performing procedures that require the use of specific types of gloves for protection should consult their supervisor, H&S Coordinator or a member of the Blizard Laboratory Management team. Advice and guidance can be obtained from QMUL H&S Directorate <http://www.hsd.qmul.ac.uk/a-z/personal-protective-equipment-ppe--rpe/>

## **15. Personal hygiene and precautions**

- Always **wash your hands** after removing your lab coat and before leaving the laboratory. Wash your hands immediately after dealing with any spillage or after procedures that may result in contamination.
- **Gloves must be removed before leaving the laboratory** to avoid contaminating doors and door handles. Gloves must be removed before leaving any CL2 area and must never be introduced into CL1 areas upon exit. Gloves must be removed before answering the land line telephones or using the computers in the Mushroom.
- All cuts and grazes on hands or exposed areas must be covered with adhesive dressings prior

to commencing any work in the laboratories.

- The wearing of **personal headphones/earphones** is strictly forbidden in all CL2 laboratories and other high risk areas. One earphone in/one earphone out is permitted in the CL1 open plan laboratory areas.
- Never eat, drink or smoke in the lab. Smoking is prohibited on QMUL campuses unless designated areas are provided- see <http://www.hsd.qmul.ac.uk/a-z/smoking-policy/>.
- Do not touch your mouth, eyes, face etc. with your gloved hand or any object while in the laboratory.
- Keep long hair tied back so that there is no risk of it falling into naked flames or contaminated material.
- Appropriate clothing and shoes must be worn in laboratory areas. Open-toed shoes must not be worn since they provide no protection in the event of a spillage.

## **16. Laboratory procedures (general)**

- The laboratory areas are mostly divided into open plan (Containment Level 1, "CL1"), enclosed (Containment Level 2, "CL2") and secondary areas including tissue culture rooms (CL2), heavy equipment rooms and a media room. There are also three CL3 suites in the Institute. The enclosed CL2 areas south of the central corridor may be used for the handling of blood and tissue samples but must not be used for handling of any material known to contain human pathogens.
- Keep the workspace as clear as possible. Benches should be left clear and clean before leaving the laboratory at the end of the day. When used for microbiological work they must be disinfected with a disinfectant freshly prepared at the appropriate concentration.
- Bunsen burners must be turned off completely when not in use, and must never be left unattended. Keep these well away from bench lights, overhanging cupboards and flammable materials.
- Observe the correct disposal procedures for disinfection and waste disposal (see section 17).
- Keep paperwork free from contamination. If it is essential to use paper/books in the laboratory, a clearly marked, contamination-free area, should be designated.
- Wherever possible, the goods lift should be used for the transfer of laboratory materials between floors. All hazardous materials, (i.e. chemicals, clinical waste, bottles containing molten media or heavy items) must be transferred using the lift. Use appropriate secondary containment.

## **17. Disinfectants (General Rules)**

- Solutions of disinfectants must be freshly prepared at the recommended concentration and have proven activity against the relevant biological agent(s).
- Where work with material that may contain infectious agents is carried out, a freshly prepared solution of disinfectant must always be available for neutralising spillages.
- Disposable gloves must be worn when swabbing the bench with any disinfectants.

- Be familiar with the correct use and hazards of the disinfectants used in the laboratory.
- Disinfectants should not be sprayed but squirted onto paper towels and wiped to avoid inhalation of aerosols or creating flammable atmospheres (i.e. with 70% ethanol).

Further topic guidance and information / disinfectant procedure template are available at <http://www.hsd.qmul.ac.uk/a-z/decontamination/>

## **18. Laboratory waste disposal and recycling**

Follow procedure and guidance at <http://www.hsd.qmul.ac.uk/a-z/hazardous-waste/>

**Clinical/biological waste:** Only biological waste should be put into clinical waste bags and sharps bins. Only soft biological waste should be put into clinical waste bags. On occasion it may be necessary to double-bag the clinical waste to reduce the risk of puncture and/or leakage. All sharps and hard plastic items including pipette tips which may puncture the walls of the bags must be placed in yellow sharps bins or ecoloc bins.

Once clinical waste bags, sharps boxes and ecoloc bins are full they should be correctly shut, not exceeding the weight limit. They must be secured with the appropriate plastic zip tie attached (see below) before being placed in the yellow crate in the corridor.

**WHITE:** Neuroscience and Trauma

**ORANGE:** Genomics and Child Health

**BLACK:** Cell Biology and Cutaneous Research

**RED:** Immunobiology

**BLUE:** Dentistry

**BROWN:** Core Facilities

**Ecoloc bins:** Ecoloc bins are for the disposal of semi-solid anatomical waste, as well as sharps, cardboard and towels which have been contaminated.

When the ecoloc bin is full, close the square lid firmly making sure the lugs fully engage (clicks heard) and then lock with the circular lid on top until the handle is parallel to the long edge with arrows lined up. Do not exceed the 5kg weight limit. Do not write on ecoloc bins and no autoclave tape is necessary. Attach the plastic zip tie via the handle of the circular lid only.



Supplies of clinical waste bags, sharps boxes and plastic zip ties can be found in the lobby next to the goods lift. If there are none available, contact the Washroom on ext. 2301 or email [blizard-autoclave@qmul.ac.uk](mailto:blizard-autoclave@qmul.ac.uk)

**Ionising Radiation waste:** Currently only one laboratory bay in the Blizard Institute is designated for ionising radiation work. Comply with local rules stipulated by the Radiation Protection Supervisor (RPS) and QMUL Radiation Protection Adviser (RPA)/Radiation Protection Officer (RPO). Topic policy, risk assessment templates, approval process, arrangements, permits and guidance is at <http://www.hsd.qmul.ac.uk/a-z/ionising-radiation/>

**Ethidium bromide (EtBr) waste:** EtBr is a mutagen, carcinogen, and is highly toxic; its use should be avoided and substituted with safer alternatives wherever possible. Where EtBr is used, it must be extracted from buffers and other solutions before they can be discarded into the drain by using a commercial ethidium bromide extractor such as a 'Green Bag', carefully following the manufacturer's instructions. A protocol outlining the process must be given in the appropriate section of the COSHH form. Stock or higher concentration waste solution can be collected and removed via the Chemical waste route.

### Recycling

- **Returnable cardboard boxes, polystyrene boxes, paper and other packaging materials:** If possible, empty cardboard boxes and polystyrene containers should be returned to the supplier for recycling. Some companies now supply materials in boxes which have return address labels attached. Dry ice and ice packs must be removed from polystyrene boxes unless otherwise specified by the supplier. Ice packs should be placed in the designated trolley for them under the Mushroom.

- **Non-returnable cardboard/polystyrene boxes, packaging materials and general domestic waste:** Place in the roll-container (cage on wheels) on the laboratory floor under the Mushroom. Please flatten all cardboard boxes.
- **Glass waste:** This includes all clean glass, such as empty chemical bottles which have been thoroughly rinsed with water and all traces of hazard signs removed or obliterated can be placed in the green waste glass bins located below the Mushroom for recycling.
- **Pipette tip boxes:** A recycling bin for used pipette tip boxes and reload decks is located below Mushroom. Autoclave tape must be removed before placing items in the crate.
- **Cell culture media bottles:** Media bottles that have been rinsed thoroughly and drained may be put into the bin below Mushroom for recycling.
- **High density polythene bottles:** Bottles which have been thoroughly rinsed with water and all traces of hazard signs removed or obliterated can be placed into the bin below the Mushroom for recycling.
- **Chemical/solvent waste:** Please contact Laboratory Management with the type and quantity of waste and arrangements will be made for collection and disposal (see Blizzard Notebook for more details) or contact Laboratory Management for guidance. Follow procedure and guidance at <http://www.hsd.qmul.ac.uk/a-z/hazardous-waste/>

**Waste management crates:** Crates are located at one end of every CL2 lab and in certain locations in CL1 areas.

**Red crate: Infected/GM waste requiring autoclaving prior to disposal.** Infected/GM waste must be placed in clear autoclave bags and must be no more than 50% full. They should be secured with a rubber band wrapped around the bag once only. Autoclave bags must be placed upright in the red box and not stacked on top of each other. Red crates must not be overfilled; ask for more if required. Contaminated bottles and other containers must be capped and placed in a rack or basket in the crate in order to prevent them falling over and leaking their contents.

**Blue crate: Dirty (uninfected) glassware.** Glassware must be thoroughly rinsed and emptied first. These crates will be collected and taken to the central autoclave/glass wash facility for cleaning. Please try to separate delicate glassware from others such as Duran bottles to minimize the risk of breakage. Do not overfill these crates as they can become very heavy for staff to lift.

**Green crate: Clean items for autoclave/dry heat sterilization (e.g. tips, tubes, instruments, solutions and buffers).** Please leave materials together with a note providing details of your requirements and your name and lab number. Ensure items have the indicator correct tape on them.

#### **Breakages and spillages**

- Do not attempt to pick up any broken glass with fingers; always use tongs.
- The H&S Coordinator and Institute Laboratory Managers must be informed of any major breakage or spillage. Biological, chemical, phenol and mercury spillage kits are available under the mushroom.
- Spilled cultures must be covered with paper towel soaked with appropriate disinfectant/

bactericide/virucide (Distel) for at least 30 minutes before attempting to clear the area. Distel has recently been reclassified as being hazardous to health and as a result an alternative is being investigated; Spor-ex may become the disinfectant of choice.

- See procedures at [http://www.hsd.qmul.ac.uk/media/hsd/documents/standards-and-guidance/QMUL\\_HS\\_133-Laboratory-Chemical-Solvent-Biological-Spill\\_Emergency-Protocol\\_October-2017.docx](http://www.hsd.qmul.ac.uk/media/hsd/documents/standards-and-guidance/QMUL_HS_133-Laboratory-Chemical-Solvent-Biological-Spill_Emergency-Protocol_October-2017.docx)

## **19. Equipment-General Rules**

Always operate equipment according to the manufacturer's instructions and SOP and seek advice from a senior member of staff if in doubt. Ensure you gain approval from the appropriate member of staff if you need to use equipment which does not belong to you.

Faulty or defective pieces of apparatus must be reported at once to the H&S Coordinator or the Institute Laboratory Management.

It is the responsibility of each person in the laboratory to ensure that equipment is switched off where appropriate, before leaving the laboratory. Some items of equipment must be left on overnight. If in doubt, ask a senior member of staff.

**Microwaves:** Caps must be completely removed from bottles containing agar/media prior to them being heated in a microwave oven and you should check during heating that the solution does not boil over.

### **Centrifuges:**

- Instruction manuals must be read before attempting to use any centrifuge.
- All tubes or bottles to be centrifuged must be balanced as specified and positioned symmetrically in the rotor. The care required to achieve accurate balance depends on the machine to be used. Never place liquid in the bottom of buckets in order to achieve balance.
- Tubes should contain no more than the permitted maximum (and no less than the required minimum in some cases) in accordance with the instruction booklet.
- Sealed centrifuge buckets are fitted for safety and must be used whenever infected material is being centrifuged. Use them at all times. Screw-capped buckets are designed to be spun with samples in place.
- If a breakage occurs or is suspected during operation, switch off the centrifuge. Leave it closed for at least 30 minutes to allow for the dispersion of any aerosols generated and contact a member of Laboratory Management team. Any manipulation after a breakage must be carried out using thick rubber gloves, making use of forceps where necessary. Where human /biological material is involved, the rotor and broken glassware must be removed and placed in disinfectant and left for the appropriate time before handling. Gloves and masks must be worn.
- If excessive vibration occurs once the centrifuge is on, switch it off immediately. Do not attempt to slow the rotor manually. Check if buckets are properly balanced before switching on again.

- If you require the use of the high-speed or ultra-centrifuge please contact Laboratory Management who will carry out the necessary training.

**Local Exhaust Ventilation (LEV)** is equipment that removes airborne contaminants including fume hoods and safety cabinets. Always take advice from your supervisor as to whether your project requires any manipulations to be carried out in LEV equipment, and if so, which type of equipment is appropriate. Details of the types and locations of safety cabinets/fume hoods used should be included in the COSHH/Bio-COSHH/GMO or Radiation Risk Assessment.

If you notice anything wrong (e.g. no airflow, audible or visual alarm sounding, power failure) when using any of the equipment, make safe and stop using the equipment, evacuate the area, cordon off, and contact Laboratory Management as soon as possible.

LEV equipment is tested every 12 months (6 months for cabinets in CL3 laboratories). The fumigation of safety cabinets (with formaldehyde or peroxide) may be necessary, prior to preventative maintenance, when the units have been used for microbiological work, especially when HEPA filters require changing, or when the cabinet has been contaminated following a spillage. Any fumigation of the MSCs in the tissue culture labs will be carried out either by Laboratory Management or by a company contracted for MSC servicing. A Risk/COSHH assessment must be in place before an MSC is fumigated.

**Fume cabinets/cupboards/hoods:** Do not use these for the storage of chemicals; where there is a high volume of chemicals held in the fume hoods, the relevant group will have to remove them. Ensure you received training how to use a fume cupboards correctly; topic information and guidance is available <http://www.hsd.qmul.ac.uk/a-z/local-exhaust-ventilation/>

**Microbiological Safety Cabinets:** Class II Microbiological Safety Cabinets (MSCs) are available in the tissue culture (TC) laboratories. Each of the Class II MSCs within these laboratories will be either designated to a specific range of operations/infectious agents, or used only for sterile cell culture work. Only specific TC laboratories should be used for work with infectious material. Discuss with your supervisor and the Laboratory Management before using these facilities. Class I MSCs are available only within the CL3 laboratories; access to these laboratories is strictly controlled.

General rules regarding the safe use of MSCs:

- Work in Class I and Class II MSCs must not commence until sufficient time has been allowed for the establishment of safe airflow.
- MSCs must be wiped down after use with a suitable disinfectant. Squirt disinfectant onto paper towels and wipe. Some disinfectants are corrosive and must be rinsed off with water after use to avoid damaging the stainless steel interior.
- Pathogens/micro-organisms in Hazard Groups 1 and 2 must be handled in accordance with the ACDP guidelines and QMUL Policy <http://www.hsd.qmul.ac.uk/a-z/biological/>. All ampoules containing freeze-dried biological agents must be opened in a MSC.

**Horizontal laminar flow cabinet:** Situated in the Media Room (LG107), it is intended to prevent contamination of media during preparation and dispensing, but provides absolutely **no**



protection to the operator. This type of cabinet must not be used for any pathological materials or hazardous/toxic chemicals.

## **20. Hazardous chemicals and solvents**

- Personnel carrying out work in the laboratories must have available at all times a copy of the COSHH risk assessment forms relevant to their project. These should be consulted for information regarding the hazardous nature of the chemicals that are in use and appropriate procedures for their handling, storage and disposal. Safety Data Sheets (SDS) issued by the supplier should be accessible – these are sent in hardcopy form with the chemical or are available from the official website. If not received, please contact the supplier for a copy. This information should be held in the purple loose leaf folder available from the Laboratory Management and kept in a prominent place in the laboratory. Alternative electronic storage and easy access via a laboratory computer can be agreed with the Institute Safety Coordinator.
- All flammable solvents should be stored in a flammable cabinet with minimum 30 minute fire rating according to QMUL procedure [http://www.hsd.qmul.ac.uk/media/hsd/documents/fire/QMUL\\_HS\\_060\\_August-2012\\_Fire-Resisting-Cabinets-Technical-Standard.docx](http://www.hsd.qmul.ac.uk/media/hsd/documents/fire/QMUL_HS_060_August-2012_Fire-Resisting-Cabinets-Technical-Standard.docx) . Acids should not be kept in the same cabinet.
- Returnable bottles which have contained organic solvents etc. must be thoroughly purged with water down a designated lab sink before returning. Empty containers must be rinsed thoroughly and hazard labels removed/covered over before disposal.
- Details of chemicals for disposal (chemical name and original volume of container) should be sent to the Laboratory Management who will arrange for collection.
- Users must label solutions or chemicals they decant into other bottles appropriately. The name of the chemical should be clearly marked on the bottle and any relevant GHS hazard sticker labels should be affixed to the bottle. GHS hazard stickers and labels are available outside LG170 (open Plan Lab area). See procedure and guidance at <http://www.hsd.qmul.ac.uk/a-z/hazardous-waste/>

## **21. Safe use of materials containing radioactive isotopes**

If your work requires the use of radioactive material, please consult the QMUL Radiation Protection Office (RPO) <http://www.hsd.qmul.ac.uk/contact-us/> and the local Radiation Protection Supervisor (RPS) in the first instance, and contact Institute Laboratory Management.

## **22. Duty Free Ethanol**

The Institute has a duty free licence issued by HMRC. Orders are placed through the Quartzly booking website. All users must maintain a usage book at all times. The full terms and conditions of usage can be obtained through Laboratory Management.

### 23. Fire Safety and Evacuation Procedures

The QMUL Fire Safety and Evacuation Procedure must be followed by staff, students and other persons within the premises in the event of a fire. New staff will receive training as part of the induction process. All staff must complete the e-learning Fire Safety module <http://www.hsd.qmul.ac.uk/training/online-learning/>, which has to be refreshed every two years.

For QMUL Fire Safety policy, arrangements, procedures and guidance, follow this link:

<http://www.hsd.qmul.ac.uk/a-z/fire-safety/>

#### General fire safety rules for the Blizzard Institute

- Observe obvious precautions in the use of electrical equipment. Report any fault in equipment that may present a fire risk immediately to a Blizzard H&S Coordinator or Laboratory Management.  
All electrical equipment should be regularly checked for safety and have a Portable Appliance Test (PAT) label affixed to it. Validity dates are noted on the label.
- Wall and unit-mounted sockets and switches should be protected from moisture, properly secured and free from cracks.  
Plugs should not be used if the grip screws are not fulfilling their purposes or if exposed wires are visible.
- Learn the locations of fire alarms, extinguishers, fire blankets and escape routes, and the instructions for action in the event of a fire.
- **Alarm buttons** are located on each floor.
- Certain doors are defined as **fire doors**. Their prime function is to restrict the spread of smoke from the site of a fire to other parts of the building. These doors should be kept closed at all times and not hooked or wedged open unless fitted with alarm-activated door closers. Please check that they are closed in the event of a fire, or when the fire alarm sounds, either continuous or intermittent ringing.

#### Actions in the event of fire

**Do not take any personal risks!** Detailed instructions are posted near the staircase on each floor and should be read by all staff. In brief, dial 3333 and break the nearest glass alarm. If the fire is not easily controllable, close as many doors as possible and evacuate the building. Do not stop to collect personal belongings. Go to the designated assembly point, Floyer House Square for personnel in the Blizzard building, and the Blizzard Mews for personnel in the Abernethy building (please see [http://www.hsd.qmul.ac.uk/media/hsd/documents/fire/QMUL\\_HS\\_046\\_October-2013\\_Whitechapel-Assembly-Points-Guidance-Note.docx](http://www.hsd.qmul.ac.uk/media/hsd/documents/fire/QMUL_HS_046_October-2013_Whitechapel-Assembly-Points-Guidance-Note.docx)). The fire marshals will, as far as it is safe for them to do so, check that all staff have left the building and inform the Fire Brigade on its arrival if anyone is unaccounted for.

Staff/students and fire marshals should not attempt to tackle a fire unless it can be extinguished without any personal risk, or when the fire is blocking the evacuation route.

There are two types of extinguisher available:

1. Foam spray – fires include paper/wood (do not use on electrical fires!)
2. Carbon dioxide – flammable liquids and electrical fires

#### **24. IT Hardware Disposal**

Please visit <http://qm-web.its.qmul.ac.uk/general/pcdisposal.shtml> for latest information or contact the IT Services Help Desk on ext. 8888 or email [its-helpdesk@qmul.ac.uk](mailto:its-helpdesk@qmul.ac.uk).

**Key Contacts and Telephone Numbers (correct as of August 2019)*****Blizard Institute*****Institute Manager**

Dr Natalie McCloskey 2298

**Deputy Institute Manager**

Kat Kemp (Blizard H&amp;S Coordinator - office and communal areas) 2299

**Reception**

Mary Wakefield 2483

**Institute Laboratory Managers**

Debbie Hampson (Head of Laboratory Management, on maternity leave) 2289

O'Neal Copeland (Blizard H&amp;S Coordinator- laboratory areas) 2324

Ivana Vojnovic (Procurement and security access) 2363

***Emergency telephone numbers*****QMUL Emergency Number** 3333Whitechapel Security lodge <http://www.security.qmul.ac.uk/> 2599Occupational Health <http://hr.qmul.ac.uk/about-us/> 8700/7207**Fire, cardiac arrests and other medical emergencies** 999

(Then call ext. 3333 to brief duty QMUL Security on the issue).

Building Based First Aider 3333

*N.B. first aiders located at the Whitechapel site are centrally deployed***Health and Safety Directorate** <http://www.hsd.qmul.ac.uk/contact-us/>**SMD Faculty H&S Manager/Biological Safety Adviser/Radiation Protection Officer**Dr Mark Ariyanayagam [m.r.ariyanayagam@qmul.ac.uk](mailto:m.r.ariyanayagam@qmul.ac.uk) 8378**SMD H&S Advisor/Clinical Waste Lead**Suzanne Mason [s.t.mason@qmul.ac.uk](mailto:s.t.mason@qmul.ac.uk) 6948**Health & Safety Helpdesk** - [hs-helpdesk@qmul.ac.uk](mailto:hs-helpdesk@qmul.ac.uk)**Estates Help Desk** <http://www.estates.qmul.ac.uk/helpdesk/> 2580Building/facility repairs, cleaning, portering [estates-helpdesk@qmul.ac.uk](mailto:estates-helpdesk@qmul.ac.uk)