

Reference no. **Bio……………………….**

**To be filled by Health and Safety Services**

Risk assessment of an activity involving deliberate work with biological agents or work with potentially infectious or harmful biological substances

This risk assessment template should be used to assess the hazards and risks from an activity involving deliberate work with an infectious or harmful biological agent or work with primary human or animal tissue, blood, excreta or other body fluids. The aim of the assessment is to identify those at risk from infection or other harm and the measures required to eliminate or control the risks to human health and safety and the environment to an acceptable level.

|  |  |
| --- | --- |
| Section 1: Project information | |
| **1.1 Principal Investigator** | |
| **Name** | **School** |
|  |  |
| **1.2 Person undertaking this risk assessment (if different from above)** | |
| **Name** | **School** |
|  |  |
| **1.3 Project title** | |
|  | |
| **1.4 Brief overview of the project** (*include aims and objectives in simple terms)* | |
|  | |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Section 2: Identification of biological hazards | | | | | | | | | |
| **2.1 List any microorganisms deliberately used** | | | | | | | | | |
| Micro-organism *(include sub-species or attenuation if relevant)* | Hazard group1 | | Environ-mental hazard2 | | Schedule 53 | | | Normal routes of transmission | Consequence of exposure |
|  |  | |  | |  | | |  |  |
|  |  | |  | |  | | |  |  |
|  |  | |  | |  | | |  |  |
|  |  | |  | |  | | |  |  |
| *1 ACDP Approved List of (Human) Pathogens*  *2 SAPO pathogens*  *3 Schedule 5 Pathogens on the Anti-terrorism & Security Order* | | | | | | | | | |
| Do any of the microorganisms represent an additional risk e.g. hyper virulence, multiple antibiotic resistance | | | | | | | | | |
|  | | | | | | | | | |
| **2.2 List any tissues or cells to be used:** | | | | | | | | | |
| Species | | Material | | | | | Source | | |
|  | |  | | | | |  | | |
|  | |  | | | | |  | | |
|  | |  | | | | |  | | |
| If human primary cells, are they to be cultured/enriched (>72 hrs) , if yes please provide details | | | | | | | | | |
|  | | | | | | | | | |
| **2.3 List any blood, saliva, excreta or other body fluids to be used:** | | | | | | | | | |
| Species | | Material | | | | | Source | | |
|  | |  | | | | |  | | |
|  | |  | | | | |  | | |
|  | |  | | | | |  | | |
| Are these to be cultured/enriched for the presence of microorganisms, if yes please provide details | | | | | | | | | |
|  | | | | | | | | | |
| **2.4 Will any primary material have been screened for infectious agents and/or will clinical information be made available?** | | | | | | | | | |
| YES  NO  NOT APPLICABLE | | | | | | | | | |
| If yes, summarise the screening undertaken, the clinical information included and any rejection policy: | | | | | | | | | |
|  | | | | | | | | | |
| If yes, what arrangements are in place for provision and dissemination of clinical information received after the project has started ? | | | | | | | | | |
|  | | | | | | | | | |
| **2.5 Give details of any other materials that may contain infectious or harmful substances**  e.g. contaminated soil, farm slurry etc | | | | | | | | | |
|  | | | | | | | | | |
| **2.6 Are any of the materials to be imported from outside the UK? If yes please provide details** | | | | | | | | | |
|  | | | | | | | | | |
| **2.7 Classify the micro-organisms that may be present in the materials used (Q 2.2-2.5).** *Provide any information available on the likely incidence and numbers of the micro-organisms in this material - referencing previous answers where relevant.* | | | | | | | | | |
| *Micro-organism* | | | | *Hazard Group\** | | *Explain likelihood of presence* | | | |
|  | | | |  | |  | | | |
|  | | | |  | |  | | | |
|  | | | |  | |  | | | |
|  | | | |  | |  | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Section 3: Experimental procedures | | | | | | | |
| **3.1 Description of experimental procedures:**  *(Brief details, also indicate any non-standard laboratory operations and any procedures that might require specific control measures e.g. use of sharps, generation of aerosols, in vivo work)* | | | | | | | |
|  | | | | | | | |
| **3.2 Quantities used and frequency of use:**  *This information will enable you to determine the likelihood of exposure and therefore the risks from this particular activity. Please indicate maximum culture volumes at any time shown as multiples of flask volumes to give an idea of scale.* | | | | | | | |
| *Max. volume per culture/sample* | |  | | *Max. volume per experiment:* | | |  |
| *Frequency of experiments* | | | |  | | | |
| **3.3 Identify potential route(s) of infection in the laboratory:** | | | | | | | |
| *Percutaneous* | *Inhalation* | | *Ingestion* | | *Splash in eyes or mouth* | *Animal bite or scratch* | |
| YES  NO | YES  NO | | YES  NO | | YES  NO | YES  NO | |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Section 4: Measures to prevent or control exposure | | | | | | | | | | |
| Preventing exposure | | | | | | | | | | |
| **4.1 Could a less hazardous substance (or form of the substance) be used instead?**  *(If it can, then it should be used or justification be given here why it is not being used. COSHH requires substitution with less hazardous materials wherever possible, but there may be good reasons for not using them.)* | | | | | | | | | | |
|  | | | | | | | | | | |
| Controlling exposure | | | | | | | | | |
| **4.2 Containment Level - what containment level is required for this work with regard to COSHH Schedule 3?** | | | | | | | | | |
| 1 | | | 2 | | | | | | 3 |
| CL3 only – application for derogation from the following controls (list if relevant and justify) | | | | | | | | | |
|  | | | | | | | | | |
| **Premises where this work will be carried out** | | | | | | | | | |
| *Building* | | | | | | *Laboratories* | | | |
|  | | | | | |  | | | |
| Will the work be segregated from others not involved in the work and if not, how will they be informed of the hazards? : | | | | | | | | | |
|  | | | | | | | | | |
| ***4.3 Engineering Controls (Containment & Ventilation)*** | | | | | | | | | | |
| *a) Is a microbial safety cabinet (or isolator for in vivo work) required? These must be used for activities generating potentially infectious aerosols or splashes.* | | | | | | | | | | |
| *YES  NO* | | | | | Class:  I  II  III | | | | | |
| *If required, what processes require its use .* | | | | |  | | | | | |
| *Specify other local ventilation control measures considered appropriate (e.g. downdraft table, isolator):* | | | | | | | | | | |
|  | | | | | | | | | | |
| b) Will centrifugation be used? | | | | | | | | | | |
| YES  NO | | | | | | | | | | |
| *If yes, will buckets and rotors be sealed?* | | | | YES  NO | | | | | | |
| *If yes, where will buckets or rotors be opened?* | | | |  | | | | | | |
| *If yes, how will spillages in the centrifuge be dealt with?* | | | |  | | | | | | |
| c) Will incubators be used? | | | | | | | | | | |
| YES  NO | | | | | | | | | | |
| *If yes, what type (e.g. shaking)?* | | | |  | | | | | | |
| *If yes, how will spillages in the incubator be dealt with?* | | | |  | | | | | | |
| d) Will sharps be used: | | | | | | | | | | |
| YES  NO | | | | | | | | | | |
| *If yes, list and justify their use:* | | | |  | | | | | | |
| *Control measures* | | | |  | | | | | | |
| e) Will animals be deliberately infected with these biological agents? | | | | | | | | | | |
| YES  NO | | | | | | | | | | |
| *If yes, describe the procedure, control measures and whether shedding of infectious agents by animals is expected?* | | | |  | | | | | | |
| **4.4 Personal Protective Equipment (PPE):** | | | | | | | | | | |
| *Lab coat* | *Gloves* | *Eye or face (specify if yes)* | | | | | *Other (specify)* | | | |
| YES | YES  NO | YES  NO | | | | |  | | | |
| *Details:* | *Details*: | *Details:* | | | | |
|  |  |  | | | | |
| **4.5 Transportation** | | | | | | | | | | |
| a) How will viable material be transported within the laboratory ? | | | | | | | | | | |
|  | | | | | | | | | | |
| b) How will viable material be transported locally outside the laboratory ? | | | | | | | | | | |
|  | | | | | | | | | | |
| c) Will viable material be shipped anywhere (off campus)? | | | | | | | | YES  NO | | |
| If yes, what will be shipped? | | | |  | | | | | | |
| If yes, how will this be shipped (e.g. Category A, Category B, Exempt, Non-hazardous)? | | | |  | | | | | | |

| **4.6 Waste disposal procedures:**  *(Disinfectants, concentrations, exposure times, autoclaving procedures, incinerator procedures, include any animal related wastes.)* | | |
| --- | --- | --- |
| Waste | Decontamination method | Disposal route  e.g. drain/incineration/landfill |
| Liquid waste |  |  |
| Solid waste |  |  |
| Sharp waste | Autoclave | Incineration |

|  |
| --- |
| **4.7 Emergency procedures**  *(spillages – if not covered by local rules/standard operating procedure)* |
| Inside primary containment (if relevant e.g. MSC, isolator) |
|  |
| Outside primary containment but within the laboratory (secondary containment) |
|  |
| Outside secondary containment (if relevant): |
|  |
| Other procedures (e.g. following any kind of accidental exposure): |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| **4.8 Information, instruction and training**  *Describe the training that will be given to all those affected (directly or indirectly) by the work activity.* | | | |
|  | | | |
| **4.9 Associated Risk assessments and documents**  Confirm the following documents are in place for tasks and areas used in this study: | | |
|  | Laboratory risk assessment | Ref |
|  | Local rules / Standard operating procedure | Ref |
| Task specific risk assessments/standard operating procedures | | |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |
|  |  | Ref |

|  |  |
| --- | --- |
| Section 5: Personnel and health issues | |
| **5.1 Vaccination**  Is an effective vaccination available for any of the pathogens associated with this work?  *Advice can be obtained from the Occupational Health Adviser if required or see vaccination policy* | |
|  | |
| **5.2 Is health surveillance required?** | |
| Staff and postgraduate research students | YES  NO |
| Taught students (undergrad and MSc) | YES  NO*(initial Health clearance only)* |
| **5.3 Identify any particular groups of workers who may be at increased risk from this material :** *(for example pregnant workers, young persons under 18, disabled workers, those with pre-existing disease that increases susceptibility.)* | |
|  | |
| **Anyone who might have compromised resistance to disease for any reason should seek advice from the University Occupational Health Service regarding the need for additional precautions.** | |

|  |  |  |
| --- | --- | --- |
| Section 6: Declarations | | |
| **Principal Investigator:** | | |
| I the undersigned:   * Confirm that all information contained in this assessment is correct and up to date * Will ensure that suitable and sufficient instruction, information and supervision is provided to all individuals working on the activity * Will ensure that no work will be carried out until this assessment has been completed and approved and that all necessary control measures are in place * Will ensure that all information contained in this assessment will remain correct and up to date and re-submit for approval if any significant changes occur | | |
| Name | Signature | Date |
|  |  |  |
| Supporting declaration (School Health and Safety Coordinator) | | |
| Name | Signature | Date |
|  |  |  |
| Supporting Declaration (Head of School)  *(The person supporting this proposal must not be involved in the project being proposed.)* | | |
| Name | Signature | Date |
|  |  |  |

|  |
| --- |
| Section 7: Approval |

* For work at containment level 1 – please consult your Area H&S Coordinator
* For work at containment level 2 and above – approval will be required from the Sub-Committee for Biological Safety.

|  |
| --- |
| Projects requiring Sub-committee for Biological Safety approval should be submitted to [safety@reading.ac.uk](mailto:safety@reading.ac.uk) – see Safety Code of Practice 14 part 1 for further details of the approval process. |