**Risk assessment made under the**

**Control of Substances Hazardous to Health Regulations**

**WORK WITH DNA / RNA**

This form is to be used to identify the handling precautions to be adopted for work with naked DNA/RNA. If the material is subsequently to be used for genetic modification a separate risk assessment is required under the Genetically Modified Organisms (Contained Use) Regulations. Please refer to University Policy Statement S5/09 for full assistance in completing this form.

If the DNA is derived from an organism from outside the UK or its use is otherwise controlled by DEFRA then advice should be sought and licences should be obtained as appropriate.

If the DNA is to be administered to laboratory animals an Animal Care Workers Risk Assessment must be undertaken (see UPS S5/09). Any persons handling the material who might have compromised resistance to disease for any reason should seek further advice regarding the need for additional precautions from the University Occupational Health Physician.

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| **TITLE OF PROJECT:** |  |
| **PURPOSE OF EXPERIMENT:** |  |

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| **Supervisor (PRINT):** | **Assessed by (if not Supervisor) (PRINT):** |
| **Signature:** | **Signature:** |
| **Date:** | **Date:** |
| **Work approved by**  **(Biological) Safety Committee: YES/NO** | **Permission granted by HoD**  **for work to commence (if required): YES/NO** |
| **Biological Safety Officer:** | **Head of Department:** |
| **Signature:** | **Signature:** |
| **Date:** | **Date:** |
| **Persons involved:** |  |

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| **FULL NAME OF SOURCE MATERIAL:**  **Including species, subspecies, strain and co-pathogens** |  |
| **HAZARD GROUP OF SOURCE ORGANISM OR CO-PATHOGENS:** | 1 2 3 4 |
| **Is source organism pathogenic?** | YES / NO |
| **If yes does DNA/RNA extraction method remove viable pathogens?** | YES / NO |
| **If yes, detail how extraction method inactivates viable pathogens including validation of inactivation.** |  |
| **If no can DNA/RNA from a less hazardous organism be used?** | YES / NO |
| **If yes, why not use it ?** |  |

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| **NATURE OF GENES ENCODED:** |  |
| **Are DNA/RNA sequences full length and unmodified?** | YES / NO |
| **Does DNA/RNA code for potentially hazardous products? (toxins, allergens, growth factors, oncogenic proteins, full length genetic material)** | YES / NO |
| **Does DNA/RNA therefore pose health risk?** | YES / NO |
| **Can DNA/RNA be denatured before use or are other modifications possible to prevent expression?** | YES / NO / N/A |
| **Specify consequences of DNA/RNA gaining access to human cells and being expressed (severity and type or illness caused)**: |  |
| **Are there any other hazards associated with the DNA/RNA preparation?** | YES / NO |
| **If yes identify type:** |  |

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| **CONTROL MEASURES:** If functional oncogenic and other hazardous sequences of DNA are to be used then the conditions for control of exposure set out in UPS S5/09 must be adhered to as a minimum. | |
| **Containment Level:** | 1 2 3 4 |
| **Additional precautions:**  - Gloves  - Avoid use of sharps  - Microbiological safety cabinet | YES / NO  YES / NO  YES / NO |
| - Other (specify) |  |
| **- Good microbiological practice:** | **YES** |

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| **LABORATORY PROCEDURES: (what processes are being done with the genetic material)** |
| **DISINFECTION PROCEDURES:** |
| **WASTE DISPOSAL PROCEDURES:** (Please consult Departmental Policy on Waste Disposal) |
| **STORAGE:** (State where material and its products will be stored if containment levels 2 and 3 apply) |
| **ADDITIONAL INFORMATION:** (Please consult University Policy Statement S5/09 if handling human blood, blood products or tissues) |

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| **HEALTH SURVEILLANCE** All workers must register with the University Occupational Health Service |

Additional controls may be required if the following techniques are being used as part of this project (highlight):

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| **Generation of aerosols:**  Centrifugation  Sonication  Mixing  Vigorous pipetting  Any other action generating splashes or aerosols | Wear appropriate eye protection (spectacles, goggles, visor)  Use microbiological safety cabinet.  Implement any other necessary controls (list): |
| **Dissection**  **Use of syringe needles**  **Use of other sharps or glass** | Use cut and puncture resistant gloves if unable to avoid these procedures.  Implement any other necessary controls (list): |
| **Consider all other potential routes of infection:** | **Implement appropriate controls:** |