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| Deakin UniversityWork Safety Assessment: Biological Hazards  | \\dgleadon.homes.deakin.edu.au\my-home\My Documents\My Pictures\1035px-Deakin_University_Logo_2017.svg.png |

Version 4.0

Last Update: Jan 2024

Owners: Manager OHS & Biosafety & Biosecurity Officer

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|  **Instructions** |
| 1. Download a copy of the most recent version of this form from the [OHS web site](https://www.deakin.edu.au/students/health-and-wellbeing/occupational-health-and-safety/health-and-wellbeing/project-safety-plans).2. Complete this form with the assistance of your Supervisor to record identified hazards associated with all teaching and research work involving biological materials, and the control measures implemented to reduce the associated risk. This includes work with animals, plants and invertebrates as well as human tissues, blood and body fluids and biological materials such as soil, foodstuffs, water and effluents, pharmaceuticals etc. For information and requirements for all work with biological materials, please refer to the [Biosafety and Biosecurity](https://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity) website.3. Forward this form and Overview electronically to the Local Officer responsible for Biological Safety for approval and sign-off *(If required, this will be submitted to the* *Biosafety & Biosecurity Officer* *for approval/sign-off)*4. Once approval has been received, forward this form and Overview electronically to your Work Supervisor for overall approval and sign-off. 5. Work can only commence once overall approval has been received. Ensure all participants have access to the completed form. |
| Note: Completion and approval of this form is the key way for Deakin University to be assured that the Researcher/Student is aware, trained and adequately supervised in their specific work’s requirements for hazard identification, risk assessment and the implementation of hazard control measures.*This process is part of the requirement to document what has been done to minimise the liability of Deakin University and the personal liability of the Work Leader, Work Supervisor etc., Area Manager and Participants under the Victorian OH&S Act.* |
| **Work Leader:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Work or Unit Code**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Listed in Section 1: Project Information of the WSA Overview)**Work Unit Title:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Work Start Date:** |  | **Estimated Work End Date:** |  |

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| **Section 1: Summary of biological aspects** |
| Provide a brief summary of the biological aspects of the proposed work, using plain language with non-scientific terms. Also list biological materials to be used and potential biological hazards. This includes but is not limited to humans, animals, plants and invertebrates (and samples collected from them); this also includes soil, foodstuffs, water, effluents, pharmaceuticals, etc. If applicable, include experience with this type of work. |
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| **Room numbers where work is to be carried out** (Include support rooms such as autoclave rooms, cold rooms etc.) **and facility type/level of physical containment (PC#) if known.** |

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| **Section 2: Classification of work**  |
| **2.1 Work with biological materials** |
| 2.1.1 All work with microorganisms or with biological materials that have the potential to contain microorganisms should follow the requirements of the Australian/New Zealand Standard for microbiological safety AS/NZS 2243.3 (current version) Safety in laboratories – Part 3: Microbiological safety and containment. This includes work with animals, plants and invertebrates as well as human tissues, blood and body fluids and biological materials such as soil, foodstuffs, water, effluents, pharmaceuticals etc. Note: Section 3 in the standard describes how to determine the degree of risk posed by microorganisms and how they are classified into levels called Risk Groups. Check where the materials used in your project fit in terms of their risk grouping (3.3.1 should be read as a general guide; 3.4 covers clinical or diagnostic specimens and 3.6 covers cell lines). The Risk Group tables indicate the degree of risk for some example microorganisms but are not exhaustive. Once known, the Risk Group indicates the level of physical containment (PC) required to safely handle your materials. E.g., work involving human tissues and blood, which have the potential to contain blood borne pathogens (such as Hepatitis B virus, a Risk Group 2 microorganism) must be done under PC2 conditions. |
| Does the work fall under the auspices of AS/NZS 2243.3 (current version)🞏 Yes 🞏 No – State why:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_🞏 Don’t know - Contact the [Biosafety Team](https://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for advice  |
| 2.1.2 Has PC1/PC2 Biosafety Induction training been completed? No – go to the [Deakin Research Integrity Training](https://d2l.deakin.edu.au/d2l/home/1371644) website for more information* Yes – complete training details below

Provide name of participant, date of training and results of assessment (quiz), for all persons working on this project

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|  | Name | Date of Course | Quiz completed and passed |
| 1 |  |  | 🞏 Yes 🞏 No |
| 2 |  |  | 🞏 Yes 🞏 No |
| 3 |  |  | 🞏 Yes 🞏 No |
| 4 |  |  | 🞏 Yes 🞏 No |

Go to section 2.2 |

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| **2.2** **Work involving genetic modification** |
| 2.2.1 Does the work involve the use of genetically modified organisms or any genes or materials that have been genetically modified? 🞏 No - Go to section 2.3 🞏 Yes - Go to 2.2.2 |
| 2.2.2 All work with genetically modified organisms or genes or materials that have been genetically modified is regulated by the Office of the Gene Technology Regulator (OGTR). |
| Refer to the [Deakin Biosafety](https://www.deakin.edu.au/students/research-support/during-your-studies/research-integrity/biosafety-and-biosecurity-information-for-students/gene-technology) or [OGTR](https://www.ogtr.gov.au/about-approval-process/types-gmo-dealings) websites to determine the type of dealing and tick the appropriate box below:  Exempt 🞏 NLRD 🞏 DNIR 🞏 DIR 🞏 As applicable, complete the Exempt Dealing, NLRD or DNIR/DIR application through [ResearchPoint](https://researchpoint.deakin.edu.au/OmniBase#home). Application Number as provided by the LBC or ResearchPoint (*e.g., LBC03/2021 or 2023/BB000514*): If unsure about the type of dealing contact the [Biosafety Team](http://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for advice.  |
| 2.2.3a The category of the dealing will determine the containment level of OGTR certified facility required. Indicate below the type and level to be used (contact the [Biosafety Team](https://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for assistance):Type of facility: laboratory 🞏 animal 🞏 plant 🞏 invertebrate 🞏 aquatic 🞏 |
| Level of facility: Exempt Dealings: NLRD Dealings: DNIR Dealings:  |  AS/NZS 2243.3 PC1 🞏 OGTR PC1 🞏 or OGTR PC2 🞏 or | or PC2 🞏 PC2 🞏 PC3 🞏 |
|  2.2.3b OGTR certification number:  The relevant [OGTR Facility Guidelines](https://www.ogtr.gov.au/resources?f%5B0%5D=h_publication_type%3A60) must be followed for work with GMOs covered by NLRD and DNIR. The [Guidance Notes for the Containment of Exempt Dealings](https://www.ogtr.gov.au/resources?search_api_fulltext_listing=exempt&f%5B0%5D=h_publication_type%3A60) must be followed for work with Exempt GMOs. |
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| **2.3 Biosecurity**  |
| 2.3.1 Does the work involve the use of materials imported into Australia?  Refer to Department of Agriculture, Fisheries and Forestry (DAFF) website [(Biosecurity Import Conditions System (BICON)](https://bicon.agriculture.gov.au/BiconWeb4.0/ImportConditions/Search/) for assistance or contact the [Biosafety Team](http://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for advice.🞏 No - Go to section 2.4🞏 Yes - Go to 2.3.2If unsure contact the [Biosafety Team](http://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for advice |
| 2.3.2 Is there an existing DAFF Import Permit to cover this work? 🞏 No - contact the [Biosafety Team](http://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for advice. Go to 2.3.3.🞏 Yes - *Please provide the Import Permit Number*…………………………………………………Go to 2.3.3 |
| 2.3.3 Work with imported biological materials may need to be carried out in a DAFF Approved Arrangement - AA site. Is there a requirement for the work to be carried out in a DAFF AA? (refer to AA information or your DAFF Import Permit) 🞏 No - Go to section 2.4🞏 Yes - Give type, level and number of AA where the work will be carried out:Type of facility: laboratory 🞏 animal 🞏 plant 🞏 invertebrate 🞏 aquatic 🞏Level of facility: BC1 🞏 BC2 🞏  *Approved arrangement site:* ……………………………. Relevant [DAFF AA requirements](https://www.agriculture.gov.au/import/arrival/arrangements/requirements) must be followed for this work. Contact the [Biosafety Team](http://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for advice.Go to 2.3.4 |
| 2.3.4 Have all participants successfully completed training to become an AA Accredited Person?🞏 No - contact the [Biosafety Team](http://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) to organise Biosecurity training and complete the training details below. 🞏 Yes –provide details Training details- Give name of participant and date of training:1. 2. 3. 4. Go to section 2.4 |

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| **2.4 Security Sensitive Biological Agents** |
| 2.4.1 Work with specific microorganisms and toxins (called Security Sensitive Biological Agents, [SSBAs]) is regulated by the Department of Health (DoH). Does the work involve the use of microorganisms or toxins listed as Tier 1 or 2 agents in the [Department of Health legislation](https://www.health.gov.au/our-work/ssba-regulatory-scheme)?🞏 No - Go to section 3🞏 Yes - Contact the [Biosafety Team](https://www.deakin.edu.au/students/research/research-support-and-scholarships/integrity-secure/biosafety-and-biosecurity/contact-us) for advice:  Go to Section 3 |

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|  **Section 3: Identification of hazards** |
| Identify the hazards or potential hazards associated with this work and provide information. Write N/A if not applicable. |

| **Hazards** | **Information** |
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| **3.1 Biological materials** |
| List microorganisms used (full strain name), including Risk Group (refer to AS/NZS 2243.3) |  |
| List all biological hazards - Animals, plants, invertebrates and human (and samples derived from them e.g. tissues, blood and body fluids), soil, foodstuffs, water, effluents, pharmaceuticals used Include the Risk Group (refer to AS/NZS 2243.3) where known. |  |
| List any Terrestrial and Aquatic Organisms, Invertebrate and Plants used |  |
| **3.2 Procedural hazards** |
| List procedures that have the potential to result in exposure to infectious material? e.g. accidental contact/splash, inoculation, inhalation and/or ingestion of infectious material.Also consider procedures that could result in accidental exposure, such as those generating infectious aerosols (shaking, vigorous pipetting, grinding/blending, vortexing, sonication, freeze-drying, centrifugation etc.). Attach SWP/SOP |  |
| Incorrect use of sharps is a frequent cause of incidents in biological labs. List procedures where sharps are used and attach Sharps SWP/SOP |  |
| **3.3 Other hazards** |
| List and provide information on any other identified biological hazards associated with this work |  |

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|  **Section 4: Control measures**  |
| Identify and provide details of controls that are or will be put in place to reduce the overall risk level |

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| **4.1 Elimination**  | **Further information** |
| Has elimination of any of the identified hazards been considered?  | 🞏 Yes 🞏 No |
| **4.2 Substitution** | **Further information** |
| Has substitution of the hazard for a less hazardous material or technique been considered e.g. attenuated strain instead of normal strain, substitution of microorganism with one not infectious to humans? | 🞏 Yes 🞏 No |

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| **4.3 Engineering controls** |  |
| List all equipment used to contain infectious material (e.g., BSCII to contain aerosols, packaging of samples during transport) |  |
| Describe type and location of storage of biological materials and security measures. State if these are located within containment facilities or external to them (e.g., locked fridge in ka2.101, external to containment facility) |  |
| Other engineering controls |  |

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| **4.4 Administrative controls** |  |
| List procedures used for the collection, treatment, storage, transport and disposal of infectious waste (i.e., disinfection / sterilisation procedures, including types of disinfectants). Attach SWP/SOPs |  |
| List relevant Laboratory Safety Manuals, Australian Standards and/or other SWP/SOPs referenced for work with biological materials |  |
| List emergency SWP/SOPs to be followed in the event of a microbiological spill and attach a copy |  |
| List training additional to that detailed above in Section 2 (e.g., microbiological spill training). Include location and date of training |  |
| *Is training required before work commences?* | 🞏 Yes | 🞏 No, previously completed |
| List immunisations, if any, recommended to undertake this work*The* [*Australian Immunisation Handbook*](https://immunisationhandbook.health.gov.au/vaccination-for-special-risk-groups/vaccination-for-people-at-occupational-risk) *and* [*Victorian Department of Health and Human Services*](https://www2.health.vic.gov.au/public-health/immunisation/adults) *should be referred for current recommendations. Work with animals, providing healthcare or handling blood, tissues, and body fluids pose an elevated risk of exposure to pathogenic microorganisms.* |  |
| List controls (entry restrictions, warning signs etc.) in Lab/Storage/ Work areas  |  |

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| **4.5 Personal Protective Equipment** |  |
| List any PPE outside of normal lab requirements (which are gloves, safety glasses, lab coat, protective footwear) |  |

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|  **Section 5: Safety Officer Approval** |
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| **Local Officer responsible for Biological safety**  |
| Comments and Conditions |
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| I believe so far as is practicable that the biological hazards described for this work have been fully identified, and that the controls implemented are adequate to minimise risk as much as possible.  |
| **Name:**  | **Position Title:** |
| **Signature:** | **Date:** |

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| **Deakin University Biosafety and Biosecurity Officer Approval**(Mandatory for all work with Regulated Biological Materials or materials likely to contain these) |
| Comments and Conditions |
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| I believe so far as is practicable that the biological hazards described for this work have been fully identified, and that the controls implemented are adequate to reduce risk to an acceptable level.  |
| **Name:**  | **Signature:** | **Date:** |

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| **Biological Safety Contacts** |
| **University Contact** | **Faculty / School / Division** | **Phone/Email** |
| Deakin Biosafety & Biosecurity Officer | Deakin Research | biosafety@deakin.edu.au |
| **Area Contacts** |
| LES Technical Staff | LES | [www.deakin.edu.au/techrequest](http://www.deakin.edu.au/techrequest) |
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