Form 2 – Risk Management Plan

Section 1 : Who, What

Student/Researcher: Izzy Nikkenoff_____. **Supervisor/s:** I.P.Daley & Robin Banks

Project: Structural and Functional Characterisation of Rhodopsin in Autosomal Dominant Retinitis Pigmentosa in the Western Australian Population: Analytical Contributions from Bioinformatics and Structural Biology

Post Graduate Degree or research: Masters_____. **Full time/Part time:** Full time__.

Brief Description: DNA extraction and analysis from human blood products and epithelial tissues. The project involves the transport of blood and tissues from Pathwest to the ECU laboratory. Genetic material will be amplified using PCR, tested using electrophoresis, purified and then sent internationally for sequencing. Genetic material will also require transformation into bacterial cells which will be grown and again purified and sequenced.

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Section 2: Risks Identified

Medical considerations:

1. Scheurmans Disease, L5 Prolapse. Both are structural injuries to spine and prohibit heavy lifting.

Fieldwork:

2. Transportation of unscreened blood products, biomedical specimens. Risk = low Consequence = high

Laboratory

3. Experimentation with unscreened blood products Risk = likely Consequences low to high
4. Storage and disposal of unscreened blood products Risk = likely Consequences low to high
5. Hot agar Risk = moderate Consequence low to moderate
6. *E.coli* bacteria Risk = moderate Consequence low to high
7. Electrical equipment for electrophoresis.Risk= low Consequence = low to high
8. Potentially hazardous chemicals. Risk = Moderate Consequence = moderate to high
9. Methodology.

Section 3: Risk Management Proposed

1. Both conditions are manageable and no heavy lifting will be undertaken.
2. Transportation of unscreened blood products and biomedical specimens will be done with a Rodeo 4WD university vehicle where the materials will be stored in a separate compartment of the vehicle, apart from the passenger cab. Blood and biomedical products will be labelled with individual sample volumes and total volumes. Within the vehicle, samples will be stored within an esky and this in turn stored inside a sturdy storage container and surrounded with absorbent padding in accordance with Faculty of Computing, Health and Science: Transport and Handling of Pathology Specimens.
3. Blood products will have their own dedicated research equipment to minimise the risk of contamination. Experimentation with blood will be undertaken with the appropriate safety equipment: Latex surgical gloves,

disposable aprons and eye protection. Other users of the laboratory will be notified of the use of blood products should they have an issue with working in the vicinity and a timetable established if necessary.

4. The storage of blood will be in a refrigerator dedicated for the storage of hazardous biological waste in accordance with Faculty of Computing, Health and Science: Handling Infectious Materials and Infection Control Manual. All blood products will be prominently labelled to notify other laboratory users of the potential hazard. Blood products and disposable equipment used for the experimentation with blood products will be disposed of into biological hazard bags and labelled. These will then be incinerated.
5. Hot agar will only be handled with safety gloves, laboratory coat and eye protection. Hot agar will not be left unsupervised.
6. Bacteria will be handled with sterile technique in accordance with Faculty of Computing, Health and Science: Handling Biohazardous/ Infectious Materials. I have previously undergone instruction on correct sterile technique and have taught this technique to other students. All equipment coming into contact with or in close vicinity of bacteria will be sterilised with 70% ethanol (MSDS Regulatory Information: R11, S16, S7, S5).
7. Electrophoresis equipment will only be run on a stable and clean surface.
8. Potentially hazardous chemicals are:
   70% Ethanol. Not hazardous but flammable. Carbon Dioxide fire extinguisher is in vicinity.
   Polyacrylamide gel. Risk Phrases: R45, R46. Protective clothing and gloves will be worn and contact avoided.
9. All proposed methods pose no significant risk.

Section 4: Sign off

Date Assessment submitted: _____ .

Risk Assessed by : _____. Date _____.

Supervisor:_____. Student/Researcher:_____.

Head of School

Please discuss this plan with your supervisor and return to Brad with any comments/modifications. Once the student, supervisor and Brad agree, Brad will forward to HOS for comment and sign off. Any unresolved matters