MEDICAL SURVEILLANCE PROTOCOL:

EXPERIMENTAL ANIMALS AND OTHER BIOLOGICAL HAZARDS

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Table of Contents

1 Objective .................................................................................................................................................. 3

2 Scope ........................................................................................................................................................ 3

3 Protocol Review ..................................................................................................................................... 3

4 Abbreviations and Acronyms .................................................................................................................. 4

5 Legislation .............................................................................................................................................. 4

6 Medical Surveillance, by exposure type ................................................................................................. 5
   6.1 Working with animals .......................................................................................................................... 5
   6.2 Research involving biohazards .......................................................................................................... 5
   6.3 Non-users in biohazardous research facilities ................................................................................. 5
   6.4 Emergency responders to an ill/injured person .............................................................................. 5
   6.5 Exposure to sewage ........................................................................................................................... 6

7 Mid-assignment and post-assignment medical surveillance ................................................................. 6

8 Pregnant worker and immunocompromised individuals ......................................................................... 6

Table 1 Summary of Medical Surveillance Requirements ........................................................................ 7

9 Roles and Responsibilities ....................................................................................................................... 7
   9.1 Advisory Committee on Biological Safety ....................................................................................... 7
   9.2 Animal Care Committee/Vivaria Supervisor ................................................................................. 7
   9.3 Biosafety Officer .............................................................................................................................. 8
   9.4 Employees/students conducting research ...................................................................................... 8
   9.5 Supervisors (including faculty/principal investigators) ................................................................. 8

10 Medical Surveillance Procedure ............................................................................................................ 8

11 Medical Surveillance for Field Work (teaching and research) ............................................................ 9

12 Medical Surveillance for Travel Outside of Canada .......................................................................... 9

13 Exposure/Injury ..................................................................................................................................... 10
   13.1 WSIB Reporting Requirements for Workers .................................................................................. 11

14 Confidentiality ..................................................................................................................................... 11
1 Objective

Occupational health and medical surveillance is used to prevent and control occupational hazards and their associated disease and/or injuries. This is achieved by the evaluation and support of an individual’s health status as it relates to potentially significant occupational exposures to specific hazardous agents, for example, animal allergens or blood borne pathogens. Specific safety-sensitive work tasks may also require a certain degree of health and fitness to ensure the health and safety of the employee and/or the greater community. Pre-exposure intervention can be critical, and therefore medical surveillance requirements must be met before work begins, or as soon as possible after an exposure event occurs.

The purpose of this protocol is to formally establish standards and procedures to assist York employees and students conducting research, by providing occupational health and medical surveillance for the prevention and control of exposure to biological agents and/or experimental animals. The protocol was developed to follow best practices and contribute to a healthy and safe work environment. This will also ensure compliance to related legislation and guidelines.

The Medical Surveillance Protocol: Experimental Animals and Biohazards is administered by the Department of Occupational Health and Safety (DOHS) in consultation with a physician with expertise in occupational health and medical surveillance.

2 Scope

The Medical Surveillance Protocol will apply to employees whose work activities might expose them to a significant biohazard. Students conducting research involving experimental animals or biohazards are also included when medical surveillance is a benefit to them and/or the greater community.

Medical surveillance at York includes, but is not limited to, any of the following:

- Health questionnaires and assessments
- Serum sampling
- Titre testing
- Immunization
- Respiratory fit-testing
- Post-exposure prophylaxis
- Post-exposure blood or other type of testing

This protocol does not include medical surveillance for workers exposed to chemical or physical hazards (e.g. designated substances, radiation, and noise). Such hazards are addressed as part of the relevant DOHS program.

3 Protocol Review

The Medical Surveillance Protocol: Experimental Animals and Biohazards will be reviewed every 2 years.
4 Abbreviations and Acronyms

ACOBS  Advisory Committee on Biological Safety
ACC    Animal Care Committee
BSO    Biosafety Officer
CCAC   Canadian Council on Animal Care
CFIA   Canadian Food Inspection Agency
DOHS   Department of Occupational Health and Safety
PHAC   Public Health Agency of Canada
SOP    Standard Operating Procedures
TB     Tuberculosis
WSIB   Workplace Safety Insurance Board

5 Legislation

The Occupational Health and Safety Act requires the employer to:

- “establish an occupational health service for workers as prescribed;” S. 26(1)(a)
- “where an occupational health service is established as prescribed, maintain the same according to the standards prescribed;” S. 26(1)(b)
- “establish a medical surveillance program for the benefit of workers as prescribed;” S. 26(1)(h)
- “provide for safety-related medical examinations and tests for workers as prescribed;” S. 26(1)(i)
- “where so prescribed, only permit a worker to work or be in a workplace who has undergone such medical examinations, tests or x-rays as prescribed and who is found to be physically fit to do the work in the workplace;” S. 26(1)(j)

Guide to the Care and Use of Experimental Animals, Volume 1, 2nd Edition 1993, Canadian Council on Animal Care, Section VIII. Occupational Health and Safety

Containment Standards for Veterinary Facilities, Canadian Food Inspection Agency

- “Only persons meeting specific entry requirements (e.g. immunization, serum screening) may enter containment laboratories unless the facility has been appropriately decontaminated.” (Section 6.1)
- “A health and medical surveillance program must be provided as recommended by Health Canada.” (Section 6.1)
- “Protection from allergens must be provided through engineering controls, ventilation, use of isolators and cages with filter tops and appropriate use of respiratory protection.” (Section 6.3)
- “HEPA-filtered respirators are required for handling animals in AP (animal pathogen) containment level 2 and 3 SA (small animal) facilities where infectious aerosols of zoonic agents may be generated and cannot be contained within a primary containment device.” (Section 6.3)


- “A health and medical surveillance program (including pre-employment and then periodic testing) needs to be appropriate to the agents in use…” (Section 2.4)
- “The details for the health and medical surveillance program would be determined and defined by a risk assessment process…” (Section 2.4)
- “This program may include but is not limited to the following: a medical examination, serum screening, testing and/or storage; immunizations; and possibly other tests as determined by the risk assessment process.” (Section 2.4).
“Only people meeting these identified medical entry requirements (e.g. immunizations) may enter the laboratory unless the facility has been appropriately decontaminated. Or, other specific protocols can be developed and implemented to achieve the same level of protection for other individuals entering a facility.” (Section 2.4)

6 Medical Surveillance, by exposure type

6.1 Working with animals

Individuals working with experimental animals in research, field work and teaching programs at York University may be required to participate in medical surveillance. The type of animal and potential exposure routes (i.e. based on work activities) will determine what is specifically required. Individuals that require a pre-assignment assessment are baseline participants. Individuals requiring on-going medical surveillance are annual participants.

This component of the program is administered by the Department of Occupational Health and Safety (DOHS) in collaboration with the Animal Care Committee (ACC). Medical surveillance for research involving animals must be compliant with the guidelines provided by the Canadian Council on Animal Care and Canadian Food Inspection Agency (refer to Section V: Legislation and Guidelines).

6.2 Research involving biohazards

All York employees and students working with biohazardous materials/agents must be made aware of the Medical Surveillance Protocol and may be required to participate depending on which biological materials or agents will be used. This component of the program is administered by the Department of Occupational Health and Safety (DOHS) in collaboration with the Advisory Committee on Biological Safety (ACOBS), and in accordance with the Public Health Agency of Canada and Canadian Food Inspection Agency guidelines (refer to Section V: Legislation and Guidelines).

6.3 Non-users in biohazardous research facilities

York employees such as maintenance, health and safety representatives or custodial staff may enter areas where research involving experimental animals or biohazards occurs, but will not directly handle the animals/biohazardous agents present. Labs must strictly follow their safety practices and procedures to limit exposure to others. It is recommended that labs monitor non-users that enter their area. Where deemed necessary, a log of visitors may be mandatory including a signed declaration and confidentiality agreement to ensure the medical entry and any other entry requirements are met. In all cases, medical surveillance requirements or an equivalent level of protection must be provided.

6.4 Emergency responders to an ill/injured person

York University maintains a number of certified, designated first aiders who are employed across campus. All Security Officers are required, as part of their job requirements, to be certified First Aiders. All electricians are also certified in first aid. In addition, the Workplace Safety Insurance Board (WSIB)
requires first aid stations be attended by a certified, designated first aider. Any certified, designated first aider should therefore participate in medical surveillance.

6.5 Exposure to sewage

Plumbers who may be exposed to sewage, whether for regular maintenance (ie. of sewer lines) or who may be exposed in the case of an emergency repair work should participate in medical surveillance.

7 Mid-assignment and post-assignment medical surveillance

Situations may arise where medical surveillance is recommended that was not required or identified pre-assignment. Mid-assignment or post-assignment medical surveillance will be conducted under the guidance of DOHS’ medical consultant and facilitated by the appropriate DOHS representative.

8 Pregnant worker and immunocompromised individuals.

Supervisors must inform workers of any potential for exposure to teratogens (pregnant worker only), Leptospira, Listeria or Toxoplasma and other pathogens that are more likely to have an adverse affect pregnant and other immunocompromised individuals.

Workers are to notify their supervisor if they are aware they have a condition creating a compromised immune system or when a worker becomes pregnant and where the hazardous agents described above are present. In consultation with DOHS, measures must then be taken to offer adequate protection or to accommodate the individual.
Table 1  Summary of Medical Surveillance Requirements

<table>
<thead>
<tr>
<th>Type of Exposure</th>
<th>Medical Surveillance Participants</th>
<th>Compliance Monitoring</th>
<th>Relevant Forms to be completed</th>
<th>Possible additional testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working with Animals</td>
<td>Faculty, staff, and students whose research/work involves working with experimental animals.</td>
<td>Supervisor Vivaria, Supervisor, Biosafety Officer, ACC</td>
<td>-Health Assessment Questionnaire</td>
<td>Respiratory fit-test</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Form 1</td>
<td>Baseline serum testing</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>-Form 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-TB Screening Questionnaire</td>
<td></td>
</tr>
<tr>
<td>Research involving Biohazards</td>
<td>Faculty, staff, and students whose research/work involves working with biohazards.</td>
<td>Supervisor, Biosafety Officer, ACOBS</td>
<td>-Health Assessment Questionnaire</td>
<td>Respiratory fit-test</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Form 1</td>
<td></td>
</tr>
<tr>
<td>Emergency responder to ill/injured person</td>
<td>Designated First Aiders, Security staff, Electricians</td>
<td>Supervisor Biosafety Officer</td>
<td>-Form 1</td>
<td></td>
</tr>
<tr>
<td>Exposure to sewage</td>
<td>Plumbers working on sewer lines, or exposure due to emergency repair.</td>
<td>Supervisor Biosafety Officer</td>
<td>-Form 1</td>
<td></td>
</tr>
</tbody>
</table>

9 Roles and Responsibilities

9.1 Advisory Committee on Biological Safety

- Provide appropriate health and safety education.
- Ensure supervisors inform all persons under their supervision and working with biohazards are informed of medical surveillance requirements.
- Ensure that all persons have participated in medical surveillance and submitted a completed medical certificate of clearance prior to commencing work.

9.2 Animal Care Committee/Vivaria Supervisor

- Provide appropriate health and safety education.
- Advise the biosafety officer of all persons working with experimental animals and where medical surveillance is required.
- Ensure that all persons have enrolled into the medical surveillance program and submitted a completed medical certificate prior to commencing work.
- Assist in promptly responding to biological exposure incidents related to working with experimental animals.
9.3 **Biosafety Officer**

- Manages and coordinates The Medical Surveillance Protocol, under the direction of the DOHS Director and in consultation with the DOHS Medical Consultant.
- Discusses medical surveillance requirements with each participant in an enrollment meeting.
- Maintains and **keeps confidential**, records of completed forms/medical certificates of approval.
- Informs the Vivaria Supervisor when certificates of approvals of participants are complete for persons working with experimental animals as part of the ACC protocol approval process, and for non-users entering the Vivaria.
- Informs ACOBS the completion of certificates of approvals of participants working with biohazards as part of the biosafety certification process.
- Assist in promptly responding to incidents, and in the case of experimental animals if the Vivaria Supervisor, or designate is not available.
- In the case of an exposure, provides prompt emergency response which may include assisting individuals in obtaining medical advice by contacting the medical consultant immediately, and/or by arranging an in-person meeting, if necessary.
- Monitors for compliance.

9.4 **Employees/students conducting research**

- Participates in medical surveillance when required to do so.
- Follow up with all related testing and to provide a medical certificate of clearance and questionnaire(s) to the biosafety officer upon completion.
- To discuss with their supervisor and inform DOHS any conflicts or concerns regarding health hazards in the workplace and/or medical surveillance requirements.
- Promptly report any exposures to their supervisor.
- Report any change in their status that compromises their health status as described in Section 8, to their supervisor.

9.5 **Supervisors (including faculty/principal investigators)**

- Ensure any person that they supervise undertakes the appropriate safety measures and training in order to control exposure to biological agents/experimental animals, including participation in medical surveillance.
- Participates in medical surveillance as required.
- Ensure the appropriate committee, where relevant, is notified of all persons working under their supervision and who should participate in medical surveillance.
- Assists in the prompt response to exposure incidents.
- Reports exposure incidents as required.

10 **Medical Surveillance Procedure**

1. Any person (faculty, staff, student) working with biohazards (including experimental animals) and requiring medical surveillance must contact DOHS. This is the
responsibility of the Supervisor.

2. Participants will arrange to meet with the biosafety officer who will enroll each person, explain the procedures and provide the necessary forms and supplemental information. Any special considerations can also be addressed. Group meetings may also be scheduled, however only general information will be provided.

3. The participant will complete the required questionnaires and visit a medical doctor who will review all the information provided (including relevant immunization records) and complete the medical certificate of approval form provided. Depending on the individual assessment, blood draws for serum sampling or titre testing, TB testing, or immunizations may be required. It is the responsibility of the person participating in the program to follow-up with all test results and immunizations.

4. The participant will return the medical certificate of clearance and questionnaires to the biosafety officer when it is complete.

5. The biosafety officer will maintain records of the completed forms and inform the supervisor or relevant committee when pre-assignment/baseline medical surveillance for an individual is complete. Where required, the medical consultant may become involved (e.g. change in an individual’s health status).

6. Annual participants will be required to submit a TB Screening Questionnaire and medical certificate of approval (form 2) every year. It is the responsibility of the Supervisor to ensure forms medical surveillance requirements are completed annually. Compliance will be monitored by the Vivaria supervisor with the assistance of the biosafety officer.

11 Medical Surveillance for Field Work (teaching and research)

Exposure to animals or other biohazards that occur outside of the lab environment should also undergo a risk assessment before work commences which would include medical surveillance considerations. Teaching or research activities related to work with animals in the field will be reviewed by the ACC. The advice of the medical consultant will be sought for any field trips that involve exposures to animals (e.g. bats, poisonous animals), biohazards or other health hazards not adequately addressed by existing ACC protocols and/or before any work commences.

12 Medical Surveillance for Travel Outside of Canada

Whether for work or study, when traveling outside of Canada it is recommended to do the following:

1. Obtain adequate health insurance to cover health care, medical evacuation, and up-front payment for hospital bills should you become sick or injured. Carry the details of the insurance with you and leave a copy with a friend or relative at home.

3. Visit a travel doctor at least 6-8 weeks before your trip. A list of travel medicine clinics is available at: www.phac-aspc.gc.ca/tmp-pmv/travel/clinic-eng.php


5. Review the information regarding:
   - Medical Supplies- www.voyage.gc.ca/drugs_drogues/medication_medicaments-eng.asp

6. Contact DOHS if you will be conducting field work and may/will have contact with wild animals. A meeting may be arranged to see the DOHS medical consultant.

7. If you become sick or feel unwell after returning from your trip, see a doctor. Provide the doctor with your travel history and any treatment that was received. Report this to your Supervisor.

13 Exposure/Injury

Refer to the appropriate emergency response protocol which may include but is not limited to:

- Accident Response and Investigation Procedures (Section 9, Accident Investigation Program Manual: www.yorku.ca/dohs/documents/Accident_Investigation_Program.pdf)
- Vivaria SOPs (list available?)
- Departmental SOPs
- Lab-specific SOPs

Exposures/injuries must be reported to the supervisor immediately after the initial emergency response.

Any incident where an exposure occurred may be referred for medical attention to a nearby clinic or hospital, or a family physician. All work involving high risk animals must follow Vivaria SOP #21. Provide as much relevant information to the healthcare provider as possible, including the type of exposure, circumstances related to the incident and route of exposure.

Alternatively or in addition, the biosafety officer can be contacted who will seek the immediate advice of the medical consultant.

For incidents involving workers, complete a Supervisor’s Accident Investigation Report (SAIR):
www.yorku.ca/hr/documents/ewb/Supervisors_Accident_Investigation_Report.pdf

For incident involving students during non-work-related activities, complete an Incident
13.1 WSIB Reporting Requirements for Workers

Needlestick injuries or other exposures to infectious disease must be reported to the Workplace Safety Insurance Board (WSIB) unless a surveillance protocol is in place. This requires a formal procedure followed by a health care practitioner who tests and monitors the person to determine if the disease develops. Even with a surveillance protocol in place, any incident where the worker tests positive or requires treatment must be reported. In cases where the DOHS medical consultant is used, a surveillance protocol will be implemented.

14 Confidentiality

The collection, use and disclosure of personal or medical information for the purposes of occupational health and medical surveillance will be handled in accordance with York University’s Policy on Access to Information and Protection of Privacy. Any information learned about individual employees through medical tests, examinations, interviews or reports from other professionals will be kept confidential and will be stored securely with DOHS. This information will not be included in an employee’s Human Resources file.

Any DOHS staff member who is aware of a breach of medical confidentiality will report the incident immediately to the DOHS Director who in turn will report the breach to the Director of the Information and Privacy Office.

Retention

Medical information and records are retained in DOHS in accordance with York University’s Common Records Schedule.

Use and Disclosure of Medical Information

Medical information may be reviewed by the medical consultant for purposes of providing adequate occupational health and medical surveillance services to the York community.

Regular summaries will be provided to the Vivaria supervisor regarding completion of medical certificates of approvals for participants working with animals or workers entering into the Vivaria.

Medical information shall be disclosed in accordance with the Freedom of Information and Protection of Privacy Act. Medical information may be disclosed to third parties with an employee’s written consent or when required by law (e.g., when properly subpoenaed, or in accordance with the Workplace Safety and Insurance Act, or Occupational Health and Safety Act).

Where any occupational health and medical surveillance is established for an occupational hazard, individual test results may be disclosed to the individual worker.