

# Modification Form for Permit BIO-RRI-0021

## Permit Holder: Gregory Dekaban

**Approved Personnel**

**(Please stroke out any personnel to be removed)**

Bryan Au  
 Xizhong Zhang  
 Sonali deChickera  
 Christy Willert  
 John Barrett  
 Ryan Buensuceso

**Additional Personnel**

**(Please list additional personnel here)**

|  | Please stroke out any approved Biohazards to be removed below  | Write additional Biohazards for approval below. *  |
|--|--|--|
| <b>Approved Microorganisms</b>               | E. coli (DH5 alpha), E. coli (Top 10)  |  |
| <b>Approved Cells</b>                        | Human (established), Rodent (established), Rodent (primary), HEK 293, HEK 293FT, CP1, CP2  |  |
| <b>Approved Use of Human Source Material</b> | Peripheral Blood Mononuclear cells (adult), Human cord blood cells, bone marrow  |  |
| <b>Approved GMO</b>                          | lentiviral vector backbone (Virapower), adenovirus-backed vectors (Ad 5), rAd5 GFP, proto-oncogene HER2/neu, wild type myxoma virus, recominant myxoma carry mRFP and or HER2/neu, | Tanapox Virus (TPV)*<br>Tanapox Virus gfp (TPVgfp)*<br>Yaba Monkey Tumor Virus (YMTV)*<br>Yaba Monkey Tumor Virus gfp (YMTVgfp)* |
| <b>Approved use of Animals</b>               | rodent C57B1/6, NOD SCID, GFP  |  |
| <b>Approved Toxin(s)</b>                     |  |  |

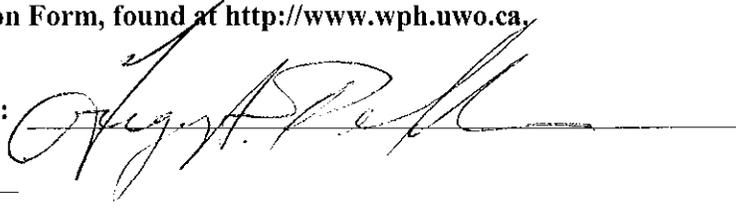
\* There is no MSDS currently available for these viruses from Health Canada, ATCC or CDC. The only available pox virus MSDS is for vaccinia virus which we have attached for your information.

† all four viruses will be used under level II conditions. These viruses will be tested in various mammalian cell lines only to measure replication efficiency.

Thursday, September 17, 2009 Page 1 of 2

\* PLEASE ATTACH A MATERIAL SAFETY DATA SHEET OR EQUIVALENT FOR NEW BIOHAZARDS.  
\*\* PLEASE ATTACH A BRIEF DESCRIPTION OF THE WORK THAT EXPLAINS THE BIOHAZARDS USED AND HOW THEY WILL BE USED.

As the principal investigator, I have ensured that all of the personnel named on the form have been trained. I will ensure that this project will follow the Western Biosafety Guidelines and Procedures Manual for Containment Level 1 2 Laboratories (and the Level 3 Facilities Manual for Level 3 projects). I will ensure that UWO faculty, staff and students working in my laboratory have an up-to-date Hazard Communication Form, found at <http://www.wph.uwo.ca>.

Signature of Permit Holder: 

Classification: 2+

Date of Last Biohazardous Agents Registry Form: May 29, 2007

Date of Last Modification (if applicable): Sep 9, 2009

BioSafety Officer(s): \_\_\_\_\_

Chair, Biohazards Subcommittee: \_\_\_\_\_



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## Vaccinia virus - Material Safety Data Sheets (MSDS)

[Material Safety Data Sheets - Index]

# MATERIAL SAFETY DATA SHEET - INFECTIOUS SUBSTANCES

## SECTION I - INFECTIOUS AGENT

**NAME:** *Vaccinia virus*

**SYNONYM OR CROSS REFERENCE:** Poxvirus, smallpox vaccine

**CHARACTERISTICS:** *Poxviridae*; 230 x 400 nm, complex coat and capsid, dsDNA

## SECTION II - HEALTH HAZARD

**PATHOGENICITY:** Virus disease of skin induced by inoculation for the prevention of smallpox - vesicular or pustular lesion, area of induration or erythema surrounding a scab or ulcer at inoculation site; major complications encephalitis, progressive vaccinia (immunocompromised susceptible), eczema vaccinatum - a localized or systemic dissemination of vaccinia virus, fetal vaccinia; minor complications - generalized vaccinia with multiple lesions; auto-inoculation of mucous membranes or abraded skin, benign rash, secondary infections; complications are serious for those with eczema or who are immunocompromised; death is most often the result of postvaccinial encephalitis or progressive vaccinia

**EPIDEMIOLOGY:** Routine vaccination is no longer carried out as smallpox has now been eradicated; only used in armed forces and laboratories

**HOST RANGE:** Humans

**INFECTIOUS DOSE:** Vaccines have potency of  $10^8$  pock-forming units/mL; infectious dose unknown

**MODE OF TRANSMISSION:** Virus may be transmitted to contacts of individuals who have been vaccinated recently

**INCUBATION PERIOD:** 1 week after vaccination (lesion at point of inoculation); generalized vaccinia 5-10 days

**COMMUNICABILITY:** Communicable to unvaccinated contacts

### SECTION III - DISSEMINATION

**RESERVOIR:** Humans; held in restricted stocks

**ZOONOSIS:** None

**VECTORS:** None

### SECTION IV - VIABILITY

**DRUG SUSCEPTIBILITY:** N/A

**SUSCEPTIBILITY TO DISINFECTANTS:** Susceptible to 1% sodium hypochlorite, 2% glutaraldehyde, formaldehyde

**PHYSICAL INACTIVATION:** Heat-labile antigen destroyed at 60° C, heat-stable antigen withstands 100° C (both may be present in infected tissue)

**SURVIVAL OUTSIDE HOST:** Lyophilized vaccinia virus maintains potency for 18 months at 4-6° C, may be stable when dried onto inanimate surfaces

### SECTION V - MEDICAL

**SURVEILLANCE:** Monitor for symptoms; confirmation by identification of vaccinia pocks, isolation of virus, serology

**FIRST AID/TREATMENT:** Vaccinia immune globulin and methisazone may be of value in treating complications

**IMMUNIZATION:** Smallpox vaccine is indicated for laboratory workers directly involved with vaccinia and vaccinia virus recombinants

**PROPHYLAXIS:** See Treatment

### SECTION VI - LABORATORY HAZARDS

**LABORATORY-ACQUIRED INFECTIONS:** 18 reported variola laboratory infections and 2 reported infections of laboratory workers with recombinant vaccinia virus

**SOURCES/SPECIMENS:** Lesion fluids or crusts, respiratory secretions or tissues of infected hosts

**PRIMARY HAZARDS:** Ingestion, parenteral inoculation, droplet or aerosol exposure of mucous membranes or broken skin with infectious fluids or tissues

**SPECIAL HAZARDS:** Some poxviruses are stable when dried

### SECTION VII - RECOMMENDED PRECAUTIONS

**CONTAINMENT REQUIREMENTS:** Biosafety level 2 practices, containment equipment and facilities for all activities involving the manipulation of this virus (with vaccination); primary containment devices and biological safety cabinets are recommended

**PROTECTIVE CLOTHING:** Laboratory coat; gloves and gown when working with agent

**OTHER PRECAUTIONS:** Immunization of staff working directly with vaccinia

## SECTION VIII - HANDLING INFORMATION

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**SPILLS:** Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towel and apply 1% sodium hypochlorite, starting at perimeter and working towards the centre; allow sufficient contact time before clean up (30 min)

**DISPOSAL:** Decontaminate before disposal; steam sterilization, incineration, chemical disinfection

**STORAGE:** In sealed containers that are appropriately labelled

## SECTION IX - MISCELLANEOUS INFORMATION

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**Date prepared:** May, 2001

**Prepared by:** Office of Laboratory Security, PHAC

Although the information, opinions and recommendations contained in this Material Safety Data Sheet are compiled from sources believed to be reliable, we accept no responsibility for the accuracy, sufficiency, or reliability or for any loss or injury resulting from the use of the information. Newly discovered hazards are frequent and this information may not be completely up to date.

Copyright ©  
Health Canada, 2001

Date Modified: 2001-09-25

# Modification Form for Permit BIO-RR1-0021

Permit Holder: Gregory Dekaban

## Approved Personnel

(Please stroke out any personnel to be removed)

Bryan Au  
Xizhong Zhang  
Sonali deChickera  
Christy Willert  
John Barrett  
Ryan Buensuceso

## Additional Personnel

(Please list additional personnel here)

|                                       | Please stroke out any approved Biohazards to be removed below   | Write additional Biohazards for approval below. *   |
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| Approved Cells                        | Human (established), Rodent (established), Rodent (primary), HEK 293, HEK 293FT, CP1, CP2   |   |
| Approved Use of Human Source Material | Peripheral Blood Mononuclear cells (adult), Human cord blood cells, bone marrow   |   |
| Approved GMO                          | lentiviral vector backbone (Virapower), adenovirus-backed vectors (Ad 5), rAd5 GFP, prolo-oncogene HER2/neu, wild type myxoma virus, recominant myxoma carry mRFP and or HER2/neu | wildtype raccoonpox virus, recombinant raccoonpox virus, vMyxgfp, vMyx135KO<br><i>Ad My D88' CD40</i> |

\* PLEASE ATTACH A MATERIAL SAFETY DATA SHEET OR EQUIVALENT FOR NEW BIOHAZARDS.

\*\* PLEASE ATTACH A BRIEF DESCRIPTION OF THE WORK THAT EXPLAINS THE BIOHAZARDS USED AND HOW THEY WILL BE USED.

Classification: 2+

Date of last Biohazardous Agents Registry Form: May 29, 2007

Signature of Permit Holder: *Gregory Dekaban*

BioSafety Officer(s): *J. Tanley Sept 9/09*

Chair, Biohazards Subcommittee: *G.M. Kilder*

*Modification Form for Permit BIO-RR1-0021*

*Permit Holder: Gregory Dekaban*

Approved use of  
Animals

rodent C57B1/6, NOD SCID, GFP

Approved Toxin(s)

\* PLEASE ATTACH A MATERIAL SAFETY DATA SHEET OR EQUIVALENT FOR NEW BIOHAZARDS.

\*\* PLEASE ATTACH A BRIEF DESCRIPTION OF THE WORK THAT EXPLAINS THE BIOHAZARDS USED AND HOW THEY WILL BE USED.

Classification: 2+

Date of last Biohazardous Agents Registry Form: May 29, 2007

Signature of Permit Holder: See page 1

BioSafety Officer(s): J. Stanley Sept 9/09

Chair, Biohazards Subcommittee: G.H. Kilder

Raccoonpox virus is considered to be raccoon-specific. It is not harmful or pathogenic to humans. We are planning to use this virus in various mammalian cell lines to study host range and immune evasion strategies. As well, we are planning to sequence the genome. Towards this goal we will be growing the virus to high titres ( $10^8$ - $10^9$  pfu/ml) and also producing recombinant versions in which we will add fluorescent tags (EGFP and RFP) so that we can monitor infection. We know that this virus will grow in common monkey cells including Vero and BGMK cells and in rabbit kidney cells (RK13).

Dekaban

>> -----Original Message-----  
>> From: Permit-Permis [mailto:permitpermis@phac-aspc.gc.ca]  
>> Sent: August 14, 2009 1:31 PM  
>> To: dekaban  
>> Subject: Raccoonpox virus  
>>  
>> Dear Dr. Gregory A. Dekaban  
>>  
>> We do not regulate Raccoonpox virus as we consider this as a RG1,  
>> please contact your Canadian distributor and they will send you this  
>> pathogens without any documentation required form us.  
>>  
>> Regards  
>>  
>> Josee Davies  
>> A/Regulatory Technologist/ technologiste en réglementation  
>> Office of Laboratory Security/Bureau de la sécurité des laboratoires  
>> Public Health Agency of Canada/ Agence de santé publique du Canada  
>> 100 ch. Colonnade Rd. AL: 6201A Ottawa, Ontario, Canada K1A 0K9  
>> Tel: (613) 957-1779  
>> Fax: (613)941-0596  
>>  
>> \*\*\*\*\*Register Now\*\*\*\*\*  
>>  
>> A new law passed by Parliament requires all persons responsible for  
>> human  
>> pathogens of risk group 2, 3 or 4 or toxins on Schedule 1 of the Act  
>> to  
>> register their laboratory or facility before midnight of September  
>> 21,  
>> 2009. You must register, even if you already hold an Import Permit  
>> or  
>> Compliance or Certification Letter. The registration website can be  
>> found  
>> at: <http://www.phac-aspc.gc.ca/ols-bsl/pathogen/register-eng.php>.  
>> Please  
>> submit both Form 1 and 2.  
>>  
>> \*\*\*\*\*Enregistrez-vous dès maintenant\*\*\*\*\*  
>>  
>> Une nouvelle loi adoptée par le Parlement exige que toutes les  
>> personnes  
>> qui sont responsables d'agents pathogènes humains de groupe de  
>> risque  
>> 2, 3  
>> ou 4 ou des toxines dans l'annexe 1 inscrivent leur laboratoire ou  
>> leur  
>> établissement avant minuit le 21 septembre 2009. Vous devez vous  
>> enregistrer, même si vous détenez un permis d'importation, une  
>> lettre de  
>> conformité ou de certification. L'information concernant  
>> l'inscription se  
>> retrouve à l'adresse suivante :  
>> <http://www.phac-aspc.gc.ca/ols-bsl/pathogen/register-fra.php>. S'il  
>> vous  
>> plaît, assurez-vous de soumettre le Formulaire 1 et le Formulaire 2.  
>>



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## Product Description

Before submitting an order you will be asked to read and accept the terms and conditions of ATCC's [Material Transfer Agreement](#) or, in certain cases, an MTA specified by the depositing institution.

Customers in Europe, Australia, Canada, China, Hong Kong, India, Japan, Korea, Macau, Mexico, New Zealand, Singapore, and Taiwan, R.O.C. must contact a [local distributor](#) for pricing information and to place an order for ATCC cultures and products.

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### Animal Viruses and Antisera

ATCC® Number: **VR-838™**  Price: **\$325.00**

Classification: Poxviridae, Orthopoxvirus

Agent: Raccoonpox virus deposited as Raccoonpox virus, Orthopoxvirus

Strain: Herman

Original Source: Isolated by Y.F. Herman from respiratory tract of raccoon with no clinical symptoms, Maryland, USA, 1964

Depositors: JH Nakano

**Biosafety Level:** 2

**Shipped:** frozen

**Permits/Forms:** In addition to the [MTA](#) mentioned above, other [ATCC and/or regulatory permits](#) may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please [click here](#) for information regarding the specific requirements for shipment to your location.

[Related Products](#)

**Host Organism :** LLC-MK2 cells (ATCC [CCL-7](#)); Vero (ATCC [CCL-81](#))  
Vero cells (ATCC [CCL-81](#)); LLC-MK2 cells (ATCC [CCL-7](#)); CAM; suckling mouse

**Incubation :** **Temperature:** 35.5°C  
Duration: 3-4 days

**Effect :** Yes, in vitro effects: Cytopathic effects (large plaques and giant cell syncytia) in Vero cells  
Yes, in vivo effects: paralysis in suckling mouse  
Yes, in vivo effects: pinpoint pocks on chorioallantoic membranes

**Comments :** The virus does not grow well on chorioallantoic membranes after 2 to 3 passages.  
The virus cross-reacts serologically with the Connaught strain of vaccinia virus.  
Raccoons inoculated with RPV show no apparent clinical symptoms; however, their sera demonstrate strong HAI reactions.

Does not grow well on CAM after 2-3 passages. Cross-reacts with Connaught strain on vaccinia virus. Raccoons inoculated with RPV show no apparent clinical symptoms; however, their sera demonstrate strong HAI reactions.  
**References :** 33948: Thomas EK, et al. Further characterization of Raccoonpox virus. Arch. Virol. 49: 217-222, 1975. PubMed: [813616](#)  
33949: Herman YF. Bact. Proc. 64th Annual Meeting, ASM : 117, 1964.

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### Notices and Disclaimers

ATCC products are intended for laboratory research purposes only, unless noted otherwise. They are not intended for use in humans.

While ATCC uses reasonable efforts to include accurate and up-to-date information on this site, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate.

All prices are listed in U.S. dollars and are subject to change without notice. A discount off the current list price will be applied to most cultures for nonprofit institutions in the United States. Cultures that are ordered as test tubes or flasks will carry an additional laboratory fee. Fees for permits, shipping, and handling may apply.

[Back to my Search](#)

# Modification Form for Permit BIO-RRI-0021

## Permit Holder: Gregory Dekaban

**Approved Personnel**

(Please stroke out any personnel to be removed)

~~Phillippe Alexander Gilbert~~  
~~Carmen Simedrea~~

**Additional Personnel**

(Please list additional personnel here)

Christy Willett  
 Sonali deChickera  
 Xi Zhang, Zhang  
 John Barrett  
 Bryan Au, Jun Jimenez

|                                       | Please stroke out any approved Biohazards to be removed below   | Write additional Biohazards for approval below. *                         |
|---------------------------------------|---|---|
| Approved Microorganisms               | E. coli (DHS alpha), E. coli (Top 10)   |   |
| Approved Cells                        | Human (established), Rodent (established), Rodent (primary), HEK 293, HEK 293FT, CP1, CP2                   |   |
| Approved Use of Human Source Material | Peripheral Blood Mononuclear cells (adult), Human cord blood cells, bone marrow                             |   |
| Approved GMO                          | lentiviral vector backbone (ViraPower), adenovirus-backed vectors (Ad 5), rAd5 GFP, proto-oncogene HER2/neu | wild type myxoma virus & recombinant myxoma carry an RFP and/or HER2/neu. |
| Approved use of Animals               | rodent C57Bl/6, NOD SCID, GFP   |   |

- \* PLEASE ATTACH A MATERIAL SAFETY DATA SHEET OR EQUIVALENT FOR NEW BIOHAZARDS.
- \*\* PLEASE ATTACH A BRIEF DESCRIPTION OF THE WORK THAT EXPLAINS THE BIOHAZARDS USED AND HOW THEY WILL BE USED.

Date of last Biohazardous Agents Registry Form May 29, 2007

Signature of Permit Holder:

BioSafety Officer(s):

Chair, Biohazards Subcommittee:

*Gregory Dekaban*  
*Conrad Norwood*  
*Edwards*  
*Altman*  
*G.M. Kildner*



RECEIVED  
R061314/07  
RW

BIO-RR-2021 (2+)  
BIO-4400-0031 (3)

BIOHAZARDOUS AGENTS REGISTRY FORM

Reviewed by Biosafety Subcommittee: February 2006

This form must be completed by each Principal Investigator when completing a grant application or grant renewal to be administered by the Robarts Research Institute, if the use of biohazardous and/or infectious agents is proposed. For any proposed animal work involving the use of biohazardous agents or animals carrying zoonotic agents infectious to humans, this form must also be completed.

COMPLETED FORMS ARE TO BE RETURNED TO BIOSAFETY SUBCOMMITTEE CHAIR, ROOM 3-34.1.

If there are any changes to the information on these forms (excluding grant title and funding agencies) a new form must be completed and sent to the Biosafety Subcommittee Chair BEFORE implementation of these changes can occur.

If multi-team grants are being applied for, each individual investigator of the team must submit a Biohazardous Agents Registry Form to the Biosafety Subcommittee Chair.

Containment Levels will be required in accordance with Health Canada (HC), Laboratory Biosafety Guidelines, 3<sup>rd</sup> edition 2004, or Canadian Food Inspection Agency (CFIA), Containment Standards for Veterinary Facilities, 1<sup>st</sup> edition 1996.

For questions regarding this form, please contact Biosafety Subcommittee Chair at ext. 34125.

1.0 Contact Information

PRINCIPAL INVESTIGATOR: [Redacted]  
SIGNATURE: [Signature]  
DATE: March 19, 2007  
DEPARTMENT: BTRG  
ADDRESS: Rm 2-12 Robarts  
TELEPHONE: x 34241  
EMAIL: detalan@robarts.ca

Location of experimental work to be carried out

Building(s): Robarts  
Room(s): Rm 2-12, external barrier, BTRG facilities  
Rm 2-22

\*For work being performed at institutions affiliated with the Robarts Research Institute, the Safety Officer for the Institution where experiments will take place must sign the form prior to it being sent to Robarts Research Institute, Biosafety Subcommittee Chair. See Section 13.0, Approvals

GRANT TITLE(S)

ATTACH A BRIEF DESCRIPTION OF YOUR WORK, SUCH AS THE RESEARCH GRANT SUMMARY(S) EXPLAINING THE BIOHAZARD(S) USED.

FUNDING AGENCY/AGENCIES: Ontario Cancer Research Network

Anticipated Grant End Date March 2000

Names of all personnel working under Principal Investigator's supervision in this location:

Greg DeKalos Student to be named

Peta O'Connell

Paula Porter

Carmen Simedrea

Tina Su

Martilda Leon Porto

Josanta Saur

Note : A list of human pathogens categorized according to Risk Group can be obtained by calling the Office of Laboratory Security directly at (613) 957-1779 or accessing their Web site : <http://www.phac-aspc.gc.ca/ols-bs/index.html>

2.0 Microorganisms

2.1 Does your work involve the use of microorganisms? YES  NO   
If NO, please proceed to Section 3.0

2.2 Please complete the table below.

| Name of Microorganism                                | Is microorganism a known human pathogen?<br>YES/NO | Is microorganism a known animal pathogen?<br>YES/NO | Is microorganism a known zoonotic agent?<br>YES/NO | Maximum quantity to be cultured at one time? | Health Canada or CFIA Containment Level (select one)   |
|--|--|---|--|--|--|
| <u>E. coli DH5<math>\alpha</math> Tsup10 stable?</u> | <u>No</u>  | <u>No</u>   | <u>No</u>  | <u>1-2L</u>                                  | <u>10</u> <input type="radio"/> <u>20</u> <input type="radio"/><br><u>30</u> <input type="radio"/> |
|  |  |   |  |  | <u>10</u> <input type="radio"/> <u>20</u> <input type="radio"/><br><u>30</u> <input type="radio"/> |
|  |  |   |  |  | <u>10</u> <input type="radio"/> <u>20</u> <input type="radio"/><br><u>30</u> <input type="radio"/> |

3.0 Cell Culture

3.1 Does your work involve the use of cell cultures? YES  NO   
If NO, please proceed to Section 4.0

3.2 Please indicate in the table below the type of cells that will be grown in culture.

| Cell Type         | Is this cell type used in your work?<br>YES / NO | Established or Primary * | Supplier of Primary Cell Culture Tissue |
|-------------------|--|--------------------------|---|
| Human             | Yes  | Both                     | Dr. Jacques Galipeau                    |
| Rodent            | Yes (mouse)                                      | Both                     |   |
| Non-human primate |  |                          |   |
| Other (specify)   |  |                          |   |

\* i.e. derived from fresh tissue

3.3 Complete the following table.

| Specific Cell Line | Source / Supplier          | HC or CFIA Containment Level (select one) |                                    |                         |
|--------------------|----------------------------|---|------------------------------------|-------------------------|
| HEK 293, HEK293FT  | Invitrogen or have already | 1 <input type="radio"/>                   | 2 <input checked="" type="radio"/> | 3 <input type="radio"/> |
| CP1 or CP2*        | Dr. Brad Nelson, U.B.C.    | 1 <input type="radio"/>                   | 2 <input checked="" type="radio"/> | 3 <input type="radio"/> |
|                    |                            | 1 <input type="radio"/>                   | 2 <input type="radio"/>            | 3 <input type="radio"/> |

\* Express proto-oncogenes *Her2/neu* and a dominant negative form of *p53*

4.0 Use of Human Source Materials

4.1 Does your work involve the use of human source materials? YES  NO   
If NO, please proceed to Section 5.0

4.2 Indicate in the table below the Human Source Material to be used.

| Human Source Material                      | Specify Source, or Not Applicable (NA)      | Is Human Source Material known to be infected with an infectious agent?<br>YES/NO | Name of Infectious Agent | HC or CFIA Containment Level (select one)  |
|--|---|---|--------------------------|--|
| Human Blood (whole) or other Body Fluid    |   |   |                          | 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/>            |
| Human Blood (fraction) or other Body Fluid | PBMC (adult) cord blood cells bone marrow * | NO  |                          | 1 <input type="radio"/> 2 <input checked="" type="radio"/> 3 <input type="radio"/> |
| Human Organs (unpreserved)                 |   |   |                          | 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/>            |
| Human Tissues (unpreserved)                |   |   |                          | 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/>            |

\* To be supplied by Dr. Jacques Galipeau (Montreal) or via David Hess as part of a collaboration.

5.0 Genetically Modified Organisms and Cell Lines

5.1 Will genetic modifications be made to the organism, virus or cell line? YES  NO   
If NO, please proceed to Section 6.0

5.2 Will genetic sequences from any of the following be involved?

- HIV YES  NO

If YES, specify: lentiviral vector backbone

- HTLV 1 or 2 YES  NO

If YES, specify: \_\_\_\_\_

- Other human or animal pathogen and/or their toxins YES  NO

If YES, specify: \_\_\_\_\_

5.2 Will intact genetic sequences be used from:

- SV 40 Large T antigen YES  NO

- Adeno E1A YES  NO

- Known or suspected oncogenes YES  NO

If YES, specify: oncogenic dominant negative form of p53

5.4 Will a live vector(s) (viral or bacterial) be used for gene transduction? YES  NO

If YES, name vector: Adeno virus - based vectors; lentiviral vector

5.5 List specific vector(s) to be used: Delta power lentivirus vector, Ad 5

5.6 Will vector be replication defective? YES  NO

5.7 Will vector be infectious to humans or animals? YES  NO

5.8 Will this be expected to increase the Containment Level required? YES  NO   
2 + 3

6.0 Human Gene Therapy Trials

6.1 Will human clinical trials using the vector(s) in 5.5 be conducted? YES  NO   
If NO, please proceed to Section 7.0  
If YES, attach a full description of the make-up of the virus.

6.2 Will vector be able to replicate in the host? YES  NO

6.3 How will the vector be administered? \_\_\_\_\_

6.4 Please give the Health Care Facility where the clinical trial will be conducted:  
\_\_\_\_\_

6.5 Has human ethics approval been obtained? YES  NO

Approval # \_\_\_\_\_

**7.0 Animal Experiments**

7.1 Will any of the agents listed be used in live animals?  
If NO, please proceed to section 8.0

YES

NO  under

7.2 Name of animal species to be used:

C57Bl/6 ; NOD SCID

*Peto  
O'Connell.*

7.3 AUS protocol #

pending and 2006-118-10 for rept's

7.4 If using murine cell lines, have they been tested for murine pathogens?

YES

NO

*not involving virus vectors and NOD SCID mice.*

**8.0 Use of Animal species with Zoonotic Hazards**

8.1 Will any of the following animals or their organs, tissues, lavages or other bodily fluids including blood be used?

- Pound source dogs      YES       NO
- Pound source cats      YES       NO
- Sheep or goats      YES       NO
- Non- Human Primates      YES       NO

If YES specify species \_\_\_\_\_

- Wild caught animals      YES       NO

If YES specify species \_\_\_\_\_

**9.0 Biological Toxins**

9.1 Will toxins of biological origin be used?  
If NO, please proceed to Section 10.0  
If YES, please name the toxin \_\_\_\_\_

YES

NO

9.2 What is the LD<sub>50</sub> (specify species) of the toxin? \_\_\_\_\_

**10.0 Import Requirements**

10.1 Will the agent be imported?  
If NO, please proceed to Section 11.0  
If YES, country of origin \_\_\_\_\_

YES

NO

10.2 Has an Import Permit been obtained from HC for human pathogens?      YES       NO

10.3 Has an import permit been obtained from CFIA for animal pathogens?      YES       NO

10.4 Has the import permit been sent to Biosafety Subcommittee Chair?      YES       NO

If YES, Permit # \_\_\_\_\_

**11.0 Training Requirements for Personnel Named on Form**

All personnel named in section 1.0 of this form who will be using any of the above named agents are required to attend the following training courses given by OH&S.

- Biosafety
- Laboratory and Environmental/Waste Management Safety
- WHMIS

As the Principal Investigator, I have ensured that all of the personnel named on the form who will be using any of the biohazardous agents in Sections 2.0 to 10.0 have been trained as required.

SIGNATURE

*[Handwritten Signature]*

**12.0 Containment Levels**

12.1 For the work described in sections 2.0 to 10.0, select the highest HC or CFIA Containment Level required.      1       2  +      3

12.2 Has the facility been certified by Biosafety Subcommittee Chair for this level of containment?  
YES       NO

If YES, give date: June 26, 2006 and permit number: 2006-06 (2-12.2)

**13.0 Approvals**

~~Robarts Research Institute~~ UWO Biohazards Subcommittee

Signature G. H. Koster Date 29 May '07

Biosafety Officer for the Institution where experiments will take place

Signature [Handwritten Signature] Date May 28/07

Biosafety Officer of Robarts Research Institute (if different than above)

Signature \_\_\_\_\_ Date \_\_\_\_\_

Note: This permit will be in effect from \_\_\_\_\_ to \_\_\_\_\_  
subject to annual facility re-certification.