Modification Form for Permit BIO-LHRI-0082

Permit Holder: Christopher Pin

Approved Personnel
(Please stroke out any personnel to be removed)

Elena Fazio

Charis Johnson

Linsay Drysdale

~~Katherine Green~~

Sonia Volante

Additional Personnel
(Please list additional personnel here)

Lucimar Ferriera

Sruthi Alahari

Rashid Mehmood

	Please stroke out any approved Biohazards to be removed below	Write additional Biohazards for approval below. *
Approved Microorganisms	E. coli (Dh 5 alpha)	
Approved Cells	Rodent (primary) pancreas, Human (established), Rodent (established), Panc1, AR425, ARIP	266.6 Acinar cells (mouse cell line) HEK293 cells
Approved Use of Human Source Material		
Approved GMO	SV 40 Large T antigen, Adenovirus (pAD Easy (Qbiogene) and modified recombinants)	
Approved use of Animals		
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.*

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: Jun 9, 2009

Date of Last Modification (if applicable): _____

BioSafety Officer(s): _____ MAR. 12/10

Chair, Biohazards Subcommittee: _____

Schulich
MEDICINE & DENTISTRY

London Health
Sciences Centre

Western

March 15, 2010

Jennifer Stanley
Biosafety Coordinator
Occupational Health and Safety
The University of Western Ontario

Dear Jennifer,

Attached please find a modification for me Biosafety Permit (BIO-LHRI-0082). I am requesting the use of two cell lines. The first is HEK 293 cells which are human embryonic kidney cells and the second is the mouse acinar cell line 266-6 we are obtaining through Cedar Lane. Only the 266-6 cells are being purchased as a number of laboratories are currently using HEK 293 cells.

For both cell lines, we will be introducing DNA plasmids to affect gene expression in a positive or negative fashion. We will be doing transient transfections or adenoviral infection, which we are already approved for through our Biosafety permit. We will be modifying gene expression in these cells to (a) determine localization or specific proteins within a cell and (b) determine the effects of specific gene expression on cell viability, proliferation and apoptosis. We have chosen the 266-6 line because this line most closely resembles the in vivo situation our laboratory works on – pancreatic acinar cells.

If you have any concerns or questions, please do not hesitate in contacting me.

Sincerely,

Chris

Dr. Christopher Pin, Ph.D.
Associate Professor, Dept. Paediatrics
The University of Western Ontario
Phone: 519-685-8500 ext 53073
FAX: 519-685-8186
e-mail: cpin@uwo.ca

ATCC®

MATERIAL SAFETY DATA SHEET

MSDS FOR ANIMAL CELL CULTURES (Biosafety Level 1 or 2)

ATCC cultures are not hazardous as defined by OSHA 1910.1200. However, as live cells they are potential biohazards.

ATCC Emergency Telephone: (703) 365-2710 (24 hours)
Chemtrec: (800) 424-9300
To be used only in the event of an emergency involving a spill, leak, fire, exposure or accident.

Description

Either frozen or growing cells shipped in liquid cell culture medium (a mixture of components that may include, but is not limited to: inorganic salts, vitamins, amino acids, carbohydrates and other nutrients dissolved in water).

SECTION I
Hazardous Ingredients

Frozen cultures may contain 5 to 10% Dimethyl sulfoxide (DMSO)

SECTION II
Physical data

Pink or red aqueous liquid

SECTION III
Health hazards

For Biosafety Level 1 Cell Lines

This cell line is not known to harbor an agent known to cause disease in healthy adult humans. This cell line has **NOT** been screened for Hepatitis B, human immunodeficiency viruses or other adventitious agents. Handle as a potentially biohazardous material under at least Biosafety Level 1 containment.

For Biosafety Level 2 Cell Lines

This cell line is known to contain an agent that requires handling at Biosafety Level 2 containment [U.S. Government Publication **Biosafety in Microbiological and Biomedical Laboratories** (CDC, 1999)]. These agents have been associated with human disease. This cell line has **NOT** been screened for Hepatitis B, human immunodeficiency viruses or other adventitious agents. Cell lines derived from primate lymphoid tissue may fall under the regulations of 29 CFR 1910.1030 Bloodborne Pathogens.

SECTION IV
Fire and explosion

Not applicable

ATCC® MATERIAL SAFETY DATA SHEET

SECTION V
Reactivity data

Stable. Hazardous polymerization will not occur.

SECTION VI
Method of disposal

Spill: Contain the spill and decontaminate using suitable disinfectants such as chlorine bleach or 70% ethyl or isopropyl alcohol.
Waste disposal: Dispose of cultures and exposed materials by autoclaving at 121°C for 20 minutes. Follow all Federal, State and local regulations.

SECTION VII
Special protection information

For Biosafety Level 1 Cell Lines

Handle as a potentially biohazardous material under at least Biosafety Level 1 containment. Cell lines derived from primate lymphoid tissue may fall under the regulations of 29 CFR 1910.1030 Bloodborne Pathogens.

For Biosafety Level 2 Cell Lines

Handle as a potentially biohazardous material under at least Biosafety Level 2 containment. Cell lines derived from primate lymphoid tissue may fall under the regulations of 29 CFR 1910.1030 Bloodborne Pathogens.

SECTION VIII
Special precautions or comments

ATCC recommends that appropriate safety procedures be used when handling all cell lines, especially those derived from human or other primate material. Detailed discussions of laboratory safety procedures are provided in **Laboratory Safety: Principles and Practice** (Fleming, et al., 1995) the ATCC manual on quality control (Hay, et al., 1992), the Journal of Tissue Culture Methods (Caputo, 1988), and in the U.S. Government Publication, **Biosafety in Microbiological and Biomedical Laboratories** (CDC, 1999). This publication is available in its entirety in the Center for Disease Control Office of Health and Safety's web site at http://www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4toc.htm.

THE ABOVE INFORMATION IS CORRECT TO THE BEST OF OUR KNOWLEDGE. ALL MATERIALS AND MIXTURES MAY PRESENT UNKNOWN HAZARDS AND SHOULD BE USED WITH CAUTION. THE USER SHOULD MAKE INDEPENDENT DECISIONS REGARDING THE COMPLETENESS OF THE INFORMATION BASED ON ALL SOURCES AVAILABLE. ATCC SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR CONTACT WITH THE ABOVE PRODUCT.

February 2002

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The Global Bioresource Center™

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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, Israel, 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.

Print this Page

Cell Biology

ATCC® Number: CRL-1573™ Order this Item
Price: $256.00

Designations: 293 [HEK-293]
Depositors: FL Graham
Biosafety Level: 2 [CELLS CONTAIN ADENOVIRUS]
Shipped: frozen
Medium & Serum: See Propagation
Growth Properties: adherent
Organism: *Homo sapiens* (human)
Morphology: epithelial

Source: **Organ:** embryonic kidney
Cell Type: transformed with adenovirus 5 DNA
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.
Restrictions: These cells are distributed for research purposes only. 293 cells, their products, or their derivatives may not be distributed to third parties.
Applications: efficacy testing [92587]
transfection host (Nucleofection technology from Lonza
Roche FuGENE® Transfection Reagents)
viruscide testing [92579]
Receptors: vitronectin, expressed
Tumorigenic: Yes
DNA Profile (STR): Amelogenin: X
CSF1PO: 11,12
D13S317: 12,14
D16S539: 9,13
D5S818: 8,9
D7S820: 11,12
THO1: 7,9.3
TPOX: 11
vWA: 16,19
Cytogenetic Analysis: This is a hypotriploid human cell line. The modal chromosome number was 64, occurring in 30% of cells. The rate of cells with higher ploidies was 4.2 %. The der(1)t(1;15) (q42;q13), der(19)t(3;19) (q12;q13), der(12)t (8;12) (q22;p13), and four other marker chromosomes were common to most cells. Five other markers occurred in some cells only. The marker der (1) and M8 (or Xq+) were often paired. There were four copies of N17 and N22. Noticeably in addition to three copies of X chromosomes, there were paired Xq+, and a single Xp+ in most cells.
Age: fetus

Related Links
NCBI Entrez Search
Cell Micrograph
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Frequently Asked Questions
Material Transfer Agreement
Technical Support
Related Cell Culture Products

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The Global Bioresource Center™

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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, Israel, 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.

Print this Page

Cell Biology

ATCC® Number: CRL-2151™ Order this Item
Price: $438.00

Designations: 266-6
Depositors: GH Swift
Biosafety Level: 2 [CELLS CONTAIN PAPOVAVIRUS]
Shipped: frozen
Medium & Serum: See Propagation
Growth Properties: adherent
Organism: *Mus musculus* (mouse)
Morphology: epithelial
Source: **Organ:** pancreas
Disease: pancreatic acinar cell tumor
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.
Isolation: **Isolation date:** 1985
Receptors: acetylcholine, muscarinic
Age: adult
Comments: 266-6 is an acinar pancreatic cell line derived in 1985 by Robert E. Hammer from a young adult mouse.
The tumor was induced with an elastase I/SV-40 T antigen fusion gene.
These cells retain a partially differentiated phenotype, and express detectable levels of a number of digestive enzyme mRNAs.
The cells respond to carbachol and cholecystokinin but not to substance P, secretin, or vasoactive intestinal peptide (VIP).
They bear an elastase I/neomycin transgene.
The 266-6 cell line is useful for transfection studies.
Propagation: **ATCC complete growth medium:** The base medium for this cell line is ATCC-formulated Dulbecco's Modified Eagle's Medium, Catalog No. 30-2002. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%.
Subculturing: **Protocol:** Remove spent medium, add fresh 0.25% trypsin, 0.03% EDTA solution, and let the culture sit 37C for 3 minutes or until the cells detach. Add fresh medium, centrifuge at 1000 rpm for 8 minutes, resuspend the pellet in fresh medium and dispense into new gelatin coated flasks .Culture vessels must be coated prior to use with 0.1% pig skin gelatin in distilled water for 15 to 60 minutes. Suction off excess gelatin prior to use. The cells may be grown on untreated flasks, but growth will be clumpy. Growth on gelatin coated plates leads to better spreading of the cells.
Subcultivation Ratio: A subcultivation ratio of 1:3 to 1:4 is recommended
Medium Renewal: Twice per week
Preservation: **Freeze medium:** Complete growth medium, 95%; DMSO, 5%
Storage temperature: liquid nitrogen vapor phase

Related Links
NCBI Entrez Search
Make a Deposit
Frequently Asked Questions
Material Transfer Agreement
Technical Support
Related Cell Culture Products

Modification Form for Permit BIO-LHRI-0033

Permit Holder: Christopher Pin

Approved Personnel
(Please stroke out any personnel to be removed)

~~Wendy Leadbeater~~ *

Chris Johnson

~~Agnes Kowalik~~ –

Additional Personnel
(Please list additional personnel here)

Elena Fazio

Sonia Volante

Lindsay Drysdale

Katharine Green

	Please stroke out any approved Biohazards to be removed below	Write additional Biohazards for approval below. *
Approved Microorganisms	E. coli (Dh 5 alpha)	
Approved Cells	Rodent (primary) pancreas, Human (established), Rodent (established), Panc1, AR42B, ARIP	B1 Mouse ES cells G4 Mouse ES cells
Approved Use of Human Source Material		
Approved GMO	SV 40 Large T antigen, Adenovirus (pAD Easy (Qbiogene) and modified recombinants)	Lentivirus: partial fragment of HIVLTR (see details)
Approved use of Animals		

* *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. Sep 10, 2007

Signature of Permit Holder:

BioSafety Officer(s): David Ryder

Chair, Biohazards Subcommittee: 9 June '09

June 5/09

Modification Form for Permit BIO-LHRI-0033

Permit Holder: Christopher Pin

Approved Taxa(s)

New Individuals on grant:
Elena Fazio and Sonia Volante are graduate students in my laboratory that will be working with lentiviral constructs and primary acinar cells, respectively.
Linsay Drysdale and Katharine Green work in the London Regional Transgenic and Gene Targeting Facility and will be handling the R1 and G4 Mouse Embryonic cell lines

New Cell lines:
The R1 and G4 mouse ES cell lines are used for gene targeting. they will be electroporated with DNA vectors to target specific genes. They have been used extensively to generate novel mouse models. Targeted clones of the cells will be injected into mouse blastocysts and implanted back into pseudopregnant females to generate chimeric animals.

New reagent:
We have obtained and are generating lentiviral DNA constructs that will be used to infect AR42J and primary acinar cells. While we generate the DNA constructs, the actual lentivirus is generated in Toronto by Dr. Jeff Medin's laboratory. We will be using a Tissue culture hood that is currently certified through Dr. Mallinga Mann to be safe for Lentiviral work. All items that come in contact with the lentivirus will be thoroughly bleached before disposal in biohazard waste.

level 2 + required 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.*

Classification: 2

Date of last Biohazardous Agents Registry Form: Sep 10 2007

Signature of Permit Holder:

BioSafety Officer(s): Mark Ryder J Hunley June 5/09

Chair, Biohazards Subcommittee: E. Kardish 9 June '09

Subject: Re: Modification: Pin
From: Gail Ryder <Gail.Ryder@LawsonResearch.Com>
Date: Thu, 04 Jun 2009 10:11:52 -0400
To: Christopher Pin <cpin@uwo.ca>, Jennifer Stanley <jstanle2@uwo.ca>
CC: "Gerald M. Kidder" <avpres@uwo.ca>

Hi,

I am now back from vacation.

Yes I am fine with this as Dr. Pin explained.

Gail

Gail Ryder, CRSP
Research Safety Officer

Lawson Health Research Institute
South Street Hospital
375 South Street, Room A210, NR
London, Ontario, Canada N6A 4G5
Tel: (519) 685-8500 x75109
Fax: (519) 432-7367
Pager: x18059
E-mail: Gail.Ryder@LawsonResearch.com
Website: www.lhrionhealth.ca

Subject: Re: Modification: Pin
From: Jennifer Stanley <jstanle2@uwo.ca>
Date: Tue, 26 May 2009 14:46:13 -0400
To: Christopher Pin <cpin@uwo.ca>
CC: Gail Ryder <Gail.Ryder@lhsc.on.ca>, "Gerald M. Kidder" <avpres@uwo.ca>

Dr. Pin
So you will doing all of this work in Dr. Mann's Level 2 plus facility? I am fine with this, if Gail is. It was signed off as Level 2 only
so I just need to make sure Gail is fine with this.
Jennifer

Christopher Pin wrote:

> Hi Jennifer,
>
> Thanks for the e-mail. Since I will be using a room/hood that is approved for this work, should this not suffice? Gail Ryder would not sign unless this was already in place and I received permission from Dr. Mellissa Mann to use the Facility.
>
> Let me know,
>
> Chris
>
> On 5/26/09 2:38 PM, "Jennifer Stanley" <jstanle2@uwo.ca> wrote:
>
> > Hello Dr. Pin:
> >
> > The Biohazards Subcommittee recently reviewed your modified project (attached). Based on the Committee's risk assessment, this project is considered Level 2 plus Level 3 precautions.
> >
> > For more information on this, please see Section 6.2 of the Biosafety Manual:
> > http://www.uwo.ca/humanresources/docandform/docs/healthandsafety/biosafety/biosafety_manual.pdf
> >
> > To approve this project, we will need to you and your on-site safety officer (Gail Ryder) to let us know that Level 2 plus Level 3 precautions precautions are in place.
> >
> > Regards,
> > Jennifer

Christopher Pin, Ph.D.
Associate Professor
Depts. Of Paediatrics and Physiology &
Pharmacology
Schulich School of Medicine and Dentistry
University of Western Ontario
Scientist, Children's Health Research Institute

B10-LHRI-0033

THE UNIVERSITY OF WESTERN ONTARIO
BIOHAZARDOUS AGENTS REGISTRY FORM
Revised Biohazards Subcommittee: January, 2007

This form must be completed by each Principal Investigator holding a grant administered by the University of Western Ontario where the use of biohazardous infectious agents are described in the experimental work proposed. The form must also be completed if animal work is proposed involving the use of biohazardous agents or animal carrying zoonotic agents infectious to humans. Containment Levels will be required in accordance with Laboratory Biosafety Guidelines, 3rd edition, 2004, Health Canada (HC) or Containment Standards for Veterinary Facilities, 1st edition 1996, Canadian Food Inspection Agency (CFIA).

Completed forms are to be returned to Occupational Health and Safety (Stevenson-Lawson Building, Room 60) for forward to the Biohazard Subcommittee. For questions regarding this form, please contact the Biosafety Coordinator at extension 81135. If there are changes to the information on this form (excluding grant title and funding agencies) modifications must be completed and sent to Occupational Health and Safety. See website: www.uwo.ca/humanresources

PRINCIPAL INVESTIGATOR Christopher Pin
SIGNATURE
DEPARTMENT Paediatrics
ADDRESS A5-134, Victoria Research Laboratories
PHONE NUMBER x53073
EMAIL cpin@uwo.ca

Location of experimental work to be carried out: Building(s) VRL Room(s) 5th floor
*For work being performed at Institutions affiliated with the University of Western Ontario, the Safety Officer for the Institution where experiments will take place must sign the form prior to it being sent to Occupational Health and Safety (See Section 12.0, Approvals). For research being done at Lawson Health Research Institute, London Regional Cancer Centre, Child and Parent Research Institute or Robarts Research Institute, University Biosafety Committee members can also sign as the Safety Officer.

TITLE OF GRANT(S):
The role of Mist1 in regulating pancreatic function and susceptibility to pancreatitis (CIHR)
The molecular factors regulating acinar cell trans-differentiation to islet cells (CDA)

PLEASE ATTACH A BRIEF DESCRIPTION OF YOUR WORK, SUCH A THE RESEARCH GRANT SUMMARY(S) THAT EXPLAINS THE BIOHAZARDS USED. PROJECTS SUBMITTED WITHOUT A SUMMARY WILL NOT BE REVIEWED.

FUNDING AGENCY/AGENCIES CIHR - Canadian Institutes of Health Research
CDA - Canadian Diabetes Association

Names of all personnel working under Principal Investigators supervision in this location:
i) Charis Johnson
ii) Michelle Everest
iii) Elena Fazio
iv) Jackie Weston
v) Jodi Pear
vi) Victoria Garside

* DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED*

1.0 Microorganisms

1.1 Does your work involve the use of microorganisms or biological agents of plant or animal origin (including but not limited to viruses, prions, parasites, bacteria)? (YES) NO
If no, please proceed to Section 2.0

1.2 Please complete the table below:

Name of Biological agent(s)	Is it known to be a human pathogen? YES/NO	Is it known to be an animal pathogen? YES/NO	Is it known to be a zoonotic agent? YES/NO	Maximum quantity to be cultured at one time?
E.coli (DH5α)	Yes (No)	Yes (No)	Yes (No)	50 ml inoculated culture
	Yes No	Yes No	Yes No	
	Yes No	Yes No	Yes No	
	Yes No	Yes No	Yes No	

1.3 For above named organism(s) or biological agent(s) circle HC or CFIA Containment Level required. 1 (2) 3

1.4 Source of microrganism(s) or biological agent(s)? Continuing culture

2.0 Cell Culture

2.1 Does your work involve the use of cell cultures? (YES) NO
If no, please proceed to Section 3.0

2.2 Please indicate the type of primary cells (ie. derived from fresh tissue) that will be grown in culture in the table below

Cell Type	Is this cell type used in your work?	Source of Primary Cell Culture Tissue
Human	Yes (No)	
Rodent	(Yes) No	Pancreas.
Non-human primate	Yes (No)	
Other (specify)		

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

Cell Type	Is this cell type used in your work?	Specific cell line(s)	Supplier / Source
Human	(Yes) No	Panc1	ATCC (already in lab)
Rodent	(Yes) No	AR42J, ARIP	ATCC (already in lab)
Non-human primate	Yes (No)		
Other (specify)	Yes (No)		

2.4 For above named cell types(s) circle HC or CFIA containment level required (1) 2 3

* DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED*

3.0 Use of Human Source Materials

3.1 Does your work involve the use of human source materials? YES (NO)
If no, please proceed to Section 4.0

3.2 Indicate if the following will be used in the laboratory

- Human blood (whole) or other bodily fluids YES NO If YES, Specify _____
- Human blood (fraction) or other bodily fluids YES NO If YES, Specify _____
- Human organs (unpreserved) YES NO If YES, Specify _____
- Human tissues (unpreserved) YES NO If YES, Specify _____

3.3 Is human source known to be infected with and infectious agent YES NO
If YES , please name infectious agent _____

3.4 For above named materials circle HC or CFIA containment level required. 1 2 3

4.0 Genetically Modified Organisms and Cell lines

4.1 Will genetic modifications be made to the microorganisms, biological agents or cells described in Sections 1.0 and 2.0 ? (YES) NO
If no, please proceed to Section 5.0

4.2 Will genetic sequences from the following be involved:

- HIV YES (NO)
if YES specify _____
- HTLV 1 or 2 or genes from any CDC class 1 pathogens YES (NO)
if YES specify _____
- Other human or animal pathogen and or their toxins YES (NO)
if YES specify _____

4.3 Will intact genetic sequences be used from

- SV 40 Large T antigen (YES) NO If YES specify in AR42J cells
- Known oncogenes YES (NO) If YES specify _____

4.4 Will a live vector(s) (viral or bacterial) be used for gene transduction (YES) NO
If YES name virus Adenovirus

4.5 List specific vector(s) to be used: pAD Easy (QBiogene) & modified recombinants

4.6 Will virus be replication defective (YES) NO

4.7 Will virus be infectious to humans or animals (YES) NO

4.8 Will this be expected to increase the Containment Level required YES (NO)

* DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED*

5.0 Human Gene Therapy Trials

5.1 Will human clinical trials using the viral vector in 4.0 be conducted? ☐ YES ☐ NO
If no, please proceed to Section 6.0
If YES attach a full description of the make-up of the virus.

5.2 Will virus be able to replicate in the host? ☐ YES ☐ NO

5.3 How will the virus be administered? _____

5.4 Please give the Health Care Facility where the clinical trial will be conducted:_____

5.5 Has human ethics approval been obtained? ☐ YES ☐ NO

6.0 Animal Experiments

6.1 Will any of the agents listed be used in live animals? ☐ YES ☐ NO
If no, please proceed to section 7.0

6.2 Name of animal species to be used_____

6.3 AUS protocol # _____

6.4 If using murine cell lines, have they been tested for murine pathogens? ☐ YES ☐ NO

7.0 Use of Animal species with Zoonotic Hazards

7.1 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 _____
  colony # _____

8.0 Biological Toxins

8.1 Will toxins of biological origin be used? ☐ YES ☐ NO
If no, please proceed to Section 9.0

8.2 If YES, please name the toxin_____

8.3 What is the LD_{50} (specify species) of the toxin_____

*** DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED***

9.0 Import Requirements

9.1 Will the agent be imported? ☐ YES ☐ NO
If no, please proceed to Section 10.0
If yes, country of origin_____

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

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

9.4 Has the import permit been sent to OHS? ☐ YES ☐ NO
If yes, Permit # _____

10.0 Training Requirements for Personnel named on Form

All personnel named on the above form who will be using any of the above named agents are required to attend the following training courses given by OHS

- 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 1.0 to 9.0 have been trained.

SIGNATURE _____

11.0 Containment Levels

11.1 For the work described in sections 1.0 to 9.0, please circle the highest HC or CFIA Containment Level required. 1 (2) 3

11.2 Has the facility been certified by OHS for this level of containment? (1) YES (2) NO

11.3 If yes, please give the date and permit number: As per Dave Griffith, 07/08/17

12.0 Approvals

UWO Biohazard Subcommittee

Signature _____ Date 10 Sept '07

Safety Officer for Institution where experiments will take place

Signature _____ Date August 17, 2007

Safety Officer for University of Western Ontario (if different than above)

Signature _____ Date Sept 10/07

(labwork only
see attached re: animal work e Level 2

* DESCRIPTION MUST BE ATTACHED TO THIS FORM OR PROJECT WILL NOT BE REVIEWED*