

**Modification Form for Permit BIO-LHRI-0082**

**Permit Holder: Christopher Pin**

**Approved Personnel**

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

- Rashid Mehmood
- Sruthi Alahari
- Luclmar Ferreira
- Elena Fazio
- Charis Johnson
- Linsay Drysdale
- Katherine Green
- Sonia Volante

**Additional Personnel**

**(Please list additional personnel here)**

**Please stroke out any approved Biohazards to be removed below**

**Write additional Biohazards for approval below. Give the full name - do not abbreviate.**

**Approved Microorganisms**

E. coli (Dh 5 alpha)

**Approved Primary and Established Cells**

Rodent (primary) pancreas, Human (established), Rodent (established), Panc1, AR425, ARIP, 266.6 Adnar cells (mouse cell line), HEK 293 cell

**Approved Use of Human Source Material**

**Approved Genetic Modifications (Plasmids/Vectors)**

SV 40 Large T antigen, Adenovirus (pAD Easy (Qblogene) and modified recombinants)

pVSV-G-Bmi1  
pcmvdb.9-Bmi1  
pUbgC-Bmi-1

**Approved Use of Animals**

**Approved Biological 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 STORED, USED AND DISPOSED OF..

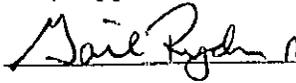
As the principal investigator, I have ensured that all of the personnel named on the form have been trained. I will ensure that this project will follow the Western Biosafety Guidelines and Procedures Manual for Containment Level 1 2 Laboratories (and the Level 3 Facilities Manual for Level 3 projects). 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: 

Current Classification: 2+ Containment Level for Added Biohazards: \_\_\_\_\_

Date of Last Biohazardous Agents Registry Form: Jun 9, 2009

Date of Last Modification (if applicable): Apr 9, 2010

BioSafety Officer(s):  MAY 6, 2010

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

On 4/15/2010 9:04 AM, Christopher Pin wrote:

Hi Jennifer and Nancy,

>

> The DNA plasmids and shRNA increase or repress the expression of Bmi1. This is a protein involved in epigenetic modifications of DNA. The DNA plasmids will express either Bmi1 or an shRNA against Bmi1 from the CMV promoter (cytomegalovirus promoter). This is a common promoter in DNA plasmids and we use a number of plasmids with this promoter already.

>

> If you need any more information, please call me. I thought this would be pretty straight forward since we already have approval for doing experiments with very similar DNA constructs.

>

> Chris Pin

>

>

**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  
 Lindsay Drysdale  
~~Katherine Green~~  
 Sonia Volante  
 EJP

**Additional Personnel**  
(Please list additional personnel here)

Lucimar Ferriera  
 Sruthi Alahavi  
 Rashid Mehmood

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

- 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-c

Date of Last Biohazardous Agents Registry Form: Jun 9, 2009

Date of Last Modification (if applicable): \_\_\_\_\_

BioSafety Officer(s): Neil Ryan MAR. 12/10 Stanley April 9/10

Chair, Biohazards Subcommittee: O.M. Kelder



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,

A handwritten signature in black ink, appearing to be 'Chris Pin'.

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

Department of Paediatrics • Schulich School of Medicine & Dentistry  
The University of Western Ontario • London Health Sciences Centre  
800 Commissioners Road East, Rm E6-103 • London, Ontario, Canada N6A 5W9

Tel: (519) 685-8129 • Fax: (519) 685-8156

**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

American Type Culture Collection  
P.O. Box 1549  
Manassas, VA 20108

Emergency Telephone: (703) 365-2710 (24 hours)  
Information Telephone: (703) 365-2704  
Chemtrec (800) 424-9300

**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/bmb14/bmb14toc.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.**

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February 2002

American Type Culture Collection  
P.O. Box 1549  
Manassas, VA 20108

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Emergency Telephone: (703) 365-2710 (24 hours)  
Information Telephone: (703) 365-2704  
Chemtrec (800) 424-9300



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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.

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### Cell Biology

|                                |   |   |                 |
|--------------------------------|---|---|-----------------|
| <b>ATCC® Number:</b>           | <b>CRL-1573™</b> <input type="button" value="Order this Item"/>   | <b>Price:</b>                                 | <b>\$256.00</b> |
| <b>Designations:</b>           | 293 [HEK-293]   | <b>Related Links ▶</b>                        |                 |
| <b>Depositors:</b>             | FL Graham   | <a href="#">NCBI Entrez Search</a>            |                 |
| <b><u>Biosafety Level:</u></b> | 2 [CELLS CONTAIN ADENOVIRUS ]   | <a href="#">Cell Micrograph</a>               |                 |
| <b>Shipped:</b>                | frozen  | <a href="#">Make a Deposit</a>                |                 |
| <b>Medium &amp; Serum:</b>     | <a href="#">See Propagation</a>   | <a href="#">Frequently Asked Questions</a>    |                 |
| <b>Growth Properties:</b>      | adherent  | <a href="#">Material Transfer Agreement</a>   |                 |
| <b>Organism:</b>               | <i>Homo sapiens</i> (human)   | <a href="#">Technical Support</a>             |                 |
| <b>Morphology:</b>             | epithelial  | <a href="#">Related Cell Culture Products</a> |                 |
| <b>Source:</b>                 | <br><b>Organ:</b> embryonic kidney   |   |                 |
| <b>Permits/Forms:</b>          | <b>Cell Type:</b> transformed with adenovirus 5 DNA<br>In addition to the <a href="#">MTA</a> mentioned above, other <a href="#">ATCC and/or regulatory permits</a> may be required for the transfer of this ATCC material. Anyone purchasing ATCC material is ultimately responsible for obtaining the permits. Please <a href="#">click here</a> for information regarding the specific requirements for shipment to your location.   |   |                 |
| <b>Restrictions:</b>           | These cells are distributed for research purposes only. 293 cells, their products, or their derivatives may not be distributed to third parties.  |   |                 |
| <b>Applications:</b>           | efficacy testing [ <a href="#">9258Z</a> ]<br>transfection host ( <a href="#">Nucleofection technology from Lonza</a><br><a href="#">Roche FuGENE® Transfection Reagents</a> )<br>virucide testing [ <a href="#">92579</a> ]  |   |                 |
| <b>Receptors:</b>              | vitronectin, expressed  |   |                 |
| <b>Tumorigenic:</b>            | Yes   |   |                 |
| <b>DNA Profile (STR):</b>      | Amelogenin: X<br>CSF1PO: 11,12<br>D13S317: 12,14<br>D16S539: 9,13<br>D5S818: 8,9<br>D7S820: 11,12<br>TH01: 7,9,3<br>TPOX: 11<br>vWA: 16,19  |   |                 |
| <b>Cytogenetic Analysis:</b>   | 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. |   |                 |
| <b>Age:</b>                    | fetus   |   |                 |



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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.

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### Cell Biology

**ATCC® Number:** CRL-2151™ [Order this Item](#)

**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

**Price:** \$438.00

### Related Links ▶

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**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

**Modification Form for Permit BIO-LHRI-0033**

**Permit Holder: Christopher Pin**

Approved Personnel

(Please stroke out any personnel to be removed)

~~Wanda Goodwater~~

Chris Johnson

~~Agnos Kowalik~~

Additional Personnel

(Please list additional personnel here)

Elena Facio

Sonia Volante

Lindsay Drysdale

Katherine Green

|                                       | Please stroke out any approved Biohazards to be removed below                            | Write additional Biohazards for approval below.      |
|---------------------------------------|--|--|
| Approved Microorganisms               | <del>E. coli (DH 3 clone)</del>  |  |
| Approved Cells                        | Rodent (primary) pancreas, Human (established), Rodent (established), Panc1, AR428, ARIP | B1 Mouse ES cells<br>G4 Mouse ES cells               |
| Approved Use of Human Source Material |  |  |
| Approved GMO                          | SV 40 Large T antigen, Adenovirus (pAO Easy (Qbiogene) and modified recombinants)        | Lentivirus; partial fragment of HIV1TR (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: *[Signature]*

BioSafety Officer(s): *[Signature]*

Chair, Biohazards Subcommittee: *[Signature]* 9 June '09

**Modification Form for Permit BIO-LHRI-0033**

**Permit Holder: Christopher Pin**

Approved Toxin(s)

**New Individuals on grant:**

Eileen Fazio and Sonia Volante are graduate students in my laboratory that will be working with lentiviral constructs and primary acinar cells, respectively  
Lindsay Drysdale and Katherine 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 AA42J and primary acinar cells. While we generate the DNA constructs, the actual lentivirus is generated in Toronto by Dr. Jeff Medina's laboratory. We will be using a tissue culture hood that is currently certified through Dr. Melissa 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

- \* 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: [Signature]

BioSafety Officer(s): Sarah [Signature] Hunter June 5/09

Chair, Biohazards Subcommittee: [Signature] 9 June '09

Friday, May 01, 2009

Page 1 of 1

Re: Modification: Pin

**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](mailto:Gail.Ryder@LawsonResearch.com)  
Website: [www.lhrionhealth.ca](http://www.lhrionhealth.ca)

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This information is directed in confidence solely to the person named above and may contain confidential and/or privileged material. This information may not otherwise be distributed, copied or disclosed. If you have received this e-mail in error, please notify the sender immediately via a return e-mail and destroy original message. Thank you for your cooperation.



Re: Modification: Pin

**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 be 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. Melissa 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](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 are in place.

Regards,  
Jennifer

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

BIO-LIHR-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 1<sup>st</sup> 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 P. in  
SIGNATURE *(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) 5<sup>th</sup> 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 Mest1 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 Everett
  - iii) Elena Fazio
  - iv) Jackie Weston
  - v) Todi Peat
  - vi) Victoria Gosside

\* 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?<br>YES/NO                 | Is it known to be an animal pathogen?<br>YES/NO               | Is it known to be a zoonotic agent?<br>YES/NO                 | Maximum quantity to be cultured at one time? |
|-----------------------------|---|---|---|--|
| <i>E. coli (DH5a)</i>       | <input type="radio"/> Yes <input checked="" type="radio"/> No | <input type="radio"/> Yes <input checked="" type="radio"/> No | <input type="radio"/> Yes <input checked="" type="radio"/> No | 50 ml inoculated culture                     |
|                             | <input type="radio"/> Yes <input type="radio"/> No            | <input type="radio"/> Yes <input type="radio"/> No            | <input type="radio"/> Yes <input type="radio"/> No            |  |
|                             | <input type="radio"/> Yes <input type="radio"/> No            | <input type="radio"/> Yes <input type="radio"/> No            | <input type="radio"/> Yes <input type="radio"/> No            |  |
|                             | <input type="radio"/> Yes <input type="radio"/> No            | <input type="radio"/> Yes <input type="radio"/> No            | <input type="radio"/> Yes <input type="radio"/> 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 microorganism(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             | <input type="radio"/> Yes <input checked="" type="radio"/> No |                                       |
| Rodent            | <input checked="" type="radio"/> Yes <input type="radio"/> No | Pancreas                              |
| Non-human primate | <input type="radio"/> Yes <input checked="" type="radio"/> 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             | <input checked="" type="radio"/> Yes <input type="radio"/> No | Panc1                 | ATCC (already in lab) |
| Rodent            | <input checked="" type="radio"/> Yes <input type="radio"/> No | AR42J, AR10           | ATCC (already in lab) |
| Non-human primate | <input type="radio"/> Yes <input checked="" type="radio"/> No |                       |                       |
| Other (specify)   | <input type="radio"/> Yes <input checked="" type="radio"/> No |                       |                       |

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

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<sub>50</sub> (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 *[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?  YES  NO

11.3 If yes, please give the date and permit number: As per Dave Griffith 02/08/17

12.0 Approvals

UWO Biohazard Subcommittee

Signature *[Signature]* Date 10 Sept '07

Safety Officer for Institution where experiments will take place

Signature *[Signature]* Date 09/10/07

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

Signature *[Signature]* Date Sept 10/07

labwork only  
see attached re animal work e Level 2