Modification Form for Permit BIO-UWO-0008

Permit Holder: Lina Dagnino

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

Lylia Nini
David Judah
Ernest Ho
Timothy Irvine
Kerry-Ann Nakrieko

Additional Personnel
(Please list additional personnel here)

Randeep Singh
Amanda MacGillivary

	Please stroke out any approved Biohazards to be removed below	Write additional Biohazards for approval below. *
Approved Microorganisms	E. Coli DH5 alpha	
Approved Cells	Human (primary), rodent (primary), human (established) HeLa, HEK 293, Rodent (established) NIH-3T3 fibroblasts	HEK 293T cells MEL-5 melanoma cells
Approved Use of Human Source Material		
Approved GMO	Adenovirus	
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 24, 2007

Signature of Permit Holder: Lina Dagnino

BioSafety Officer(s): _____

Chair,Biohazards Subcommittee: _____

Modification Form for Permit BIO-UWO 0008

Permit Holder: Lina Dagnino

Approved Toxin(s)

Cholera toxin	

Other reagents requested for approval:
The following plasmids:

pMD2.G
psPAX2

* *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

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BioSafety Officer(s): _____

Chair,Biohazards Subcommittee: _____

HEK 293T: They are used to produce adenovirus, and also to conduct experiments in the laboratory that allow overexpression of proteins.

The MEL-5 cell line will be used to study mechanisms of transfer of melanin-containing granules into epidermal keratinocytes.
The plasmids will be used to produce vectors encoding shRNAs to knockdown protein expression in target cells.

Summary of Approvals for Permit BIO-UWO-0008

Permit Holder: Lina Dagnino

Approved Personnel (Please stroke out any personnel to be removed

Ernest Ho

Timothy Irvine

Kerry-Ann Nakrieko

~~Agnieszka Pajak~~

~~Iordauka Ivanova~~

~~Wing Chang~~

Additional Personnel

David Judah

Lylia Nini

	Please stroke out any approved Biohazards* to be removed below	**Write additional Biohazards for approval below.**
Approved Microorganisms*	E. Coli DH5 alpha	
Approved Cells*	Human (primary), rodent (primary), human (established) HeLa, HEK 293, Rodent (established) NIH-3T3 fibroblasts	
Approved Use of Human Source Material*		
Approved GMO*	Adenovirus	
Approved use of Animals*		
Approved Toxin(s)*		Cholera Toxin

Date of last Biohazardous Agents Registry Form Sep 24, 2007

Signature of Permit Holder: Lina Dagnino

BioSafety Officer(s): JHanley / June 27/08

Chair, Biohazards Subcommittee: G.M, ICRS / 2 July '08

Summary of Approvals for Permit BIO-UWO-0008

Permit Holder: Lina Dagnino

Used as additive in culture medium for mouse primary keratinocytes

Date of last Biohazardous Agents Registry Form Sep 24, 2007

Signature of Permit Holder: Lina Dagnino

BioSafety Officer(s): [signature]

Chair, Biohazards Subcommittee: G M Kidder 2 July '08

BIO - UWO-0008

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 DR. LINA DAGNINO
SIGNATURE Lina Dagnino
DEPARTMENT PhysPharm
ADDRESS 220 SDR1
PHONE NUMBER 84264
EMAIL ldagnino@uwo.ca

Location of experimental work to be carried out: Building(s) SDR1 Room(s) 220, 230, 231
*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):
Molecular Mechanisms of epidermal formation and regeneration

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. (Please see last page)

FUNDING AGENCY/AGENCIES CIHR

Names of all personnel working under Principal Investigators supervision in this location:
i) K. A. Nakrieko
ii) T. Irvine
iii) E. Ho
iv)
v)

* 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?
DH5α E. coli	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	2 L
	☐ 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)? Originally purchased

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	[redacted]
Rodent	☑ Yes ☐ No	Epidermis
Non-human primate	☐ Yes ☒ No	
Other (specify)	None	

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	Hela, HEK293	ATCC.
Rodent	☑ Yes ☐ No	NIH-3T3 fibroblasts	Dr. Tini's 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? ف 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 ف YES ف NO If YES, Specify _____
- Human blood (fraction) or other bodily fluids ف YES ف NO If YES, Specify _____
- Human organs (unpreserved) ف YES ف NO If YES, Specify_____
- Human tissues (unpreserved) ف YES ف NO If YES, Specify_____

3.3 Is human source known to be infected with and infectious agent ف YES ف 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) ف NO
If no, please proceed to Section 5.0

4.2 Will genetic sequences from the following be involved:

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

4.3 Will intact genetic sequences be used from

- SV 40 Large T antigen ف YES (NO) If YES specify_____
- Known oncogenes ف YES (NO) If YES specify_____

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

4.5 List specific vector(s) to be used: Adenovirus

4.6 Will virus be replication defective (YES) ف NO

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

4.8 Will this be expected to increase the Containment Level required ف 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 Lisa Dagi

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: BIO-UWO-00008
20 June 2006
re-inspected 2007 ok

12.0 Approvals

UWO Biohazard Subcommittee

Signature G.M. Kidder Date 24 Sept. 07

Safety Officer for Institution where experiments will take place

Signature Jennifer Stanley Date Sept. 20/07

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

Signature_____ Date_____

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