STANDARD OPERATING PROCEDURE FOR HEALTH AND SAFETY IN THE HYPERPOLARIZED GAS LABORATORY

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	Printed Name	Signature	Date (dd/mmm/yyyy)
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1. INTRODUCTION & PURPOSE

This standard operating procedure (SOP) describes the procedure for maintaining health and safety in the hyperpolarized gas laboratory (HGL) and ensuring compliance with all applicable guidelines and regulations.

2. SCOPE

This SOP applies to the hyperpolarized gas laboratory and all the equipment therein.

3. APPLICABLE REGULATIONS AND GUIDELINES

Health Canada:

- Laboratory Biosafety Guidelines: 2004
- National WHMIS Compliance Policy: 3 January 2002

University of Western Ontario:

- Health Sciences Research Ethics Board for Research Involving Human Subjects Guidelines: July 2001
- Health and Safety Policy: 15 February 2007

College of Physicians and Surgeons of Ontario

- Clinical Practice Parameters and Facility Standards

4. REFERENCES TO OTHER APPLICABLE SOPs

This SOP is applicable to all HGL SOPs
All SOPs on Good Clinical Practices are applicable to this SOP

5. ATTACHMENTS

A. UWO Accident/Incident Reporting Form & Investigation Report

6. RESPONSIBILITY

It is the responsibility of the principal investigator at this investigative site to approve all SOPs. The principal investigator assumes ultimate accountability for all SOPs. It is the responsibility of all personnel involved in supervising, managing or conducting testing in the hyperpolarized gas laboratory to follow this SOP.

7. DEFINITIONS

The following definitions apply to this SOP:

Universal Body Substance Precautions (BSP): A system that consistently interrupts the transmission of infections thus ensuring increased protection for both patients and health care providers.

8. PROCESS OVERVIEW

A. General Principles
B. Compressed Gas Cylinders
C. Infection Control
D. Safety Training

9. PROCEDURES

A. General Principles

All concerns regarding safety in the HGL will be reported to the HGL manager and/or the principal investigator. It is the responsibility of the HGL manager and principal investigator to ensure that steps are taken to remedy any concerns brought to their attention.
Any incidents or accidents occurring in the HGL must be reported to the HGL manager, the principal investigator, and the University of Western Ontario

- Incidents must be reported to UWO using the form found at: http://www.uwo.ca/humanresources/docandform/forms/ohs/aiir.pdf

B. Compressed Gas Cylinders

Compressed gas cylinders in the lab are a potential source of damage and injury if not handled properly.
Unless specified by the manufacturer, all gas tanks should be turned off when not in use.
Flow regulators must be removed and the tank capped any time a tank is being transported, regardless of distance.
Tanks must either be chained to the wall or secured in an appropriately sized tank stand, unless they are integrated into hyperpolarizing equipment. Tanks obtained from the manufacturer of hyperpolarized gas equipment that are specifically designed to be safely secured to the equipment itself may be stored according to the manufacturer's directions, without the use of chains or stands.
For additional safety, full sized tanks should be chained to the wall regardless of whether a tank stand is being used.

C. Infection Control

Nosocomial infections are a potential risk during hyperpolarized gas testing. Body substance precautions (BSP) apply to all areas of the hyperpolarized gas laboratory.

- Gloves must be used for handling reusable equipment and equipment that has been in contact with any bodily fluid
- Hands must be washed immediately and thoroughly before and after subject testing and after removing gloves

All waste that has come into contact with bodily fluids (e.g. disposable gas sample bags) must be disposed off in biohazard waste bags, NOT in the household garbage.

D. Safety Training

All personnel working in the HGL must undergo the following training:

- WHMIS
- Biosafety training
- Laser Safety
- Helispin Certification

It is the responsibility of the employer to ensure this training is provided to all personnel. All training is documented and the Clinical Research Coordinator maintains records in the Personnel Binder.