Western Centre for Functional and Metabolic Mapping

3T/7T MRI FACILITY

SOP Number:	**210.02**
Title	**New Protocols and Ethics**

Revision Chronology		
Version Number	**Date**	**Changes**
210.01	**01 March 2010**	**Pilot Time information added**
210.02	**31 January 2013**	**Updated New Study Request Form links**

Facility Manager Signature: _____

Date: _____

ROBARTS RESEARCH INSTITUTE

CENTRE FOR FUNCTIONAL AND METABOLIC MAPPING: 3T/7T MRI FACILITY

Standard Operating Procedure #210.02

New Protocols and Ethics

1. Introduction

1.1. The 3T/7T MRI Facility is used primarily for *in-vivo* studies of human and animal structure and function. These studies include assessment of metabolism and physiology, cognitive function and vascular dynamics, not only in normal and research patient populations, but also in *in-vitro* and animal models using a variety of advanced nuclear magnetic resonance imaging and spectroscopy techniques. The 3T/7T Facility represents a unique national resource for state-of-the-art evaluation of structure and functional activity using a variety of MRI and MRS techniques in a research setting. The facility resources are available to peer-reviewed grant funded scientific collaborators and contract-based studies with appropriate Review Ethics Board (REB) protocols in place as explained below. All studies with humans or animals wishing to use the 3T/7T MRI Facility require ethics approval before commencing with data collection.

2. New Protocols

2.1. An investigator wishing to begin a new study at the 3T/7T MRI Facility must submit a brief summary (less than 2 pages long) of the proposed research to the Facility Manager, including details of the experimental protocol. The report will be kept on file with the Facility Manager.

2.1.1. The report can be submitted online by completing the 3T/7T New Study Request form available at: http://cfmm.robarts.ca/resources/forms/3t7t-new-study-request-form

2.2. Peer-reviewed grant funded scientific collaborators may request Pilot Time on the 3T/7T New Study Request form. Pilot Time is the booking of resources that would otherwise be billable, for the purpose of protocol development and establishing preliminary study parameters.

2.2.1. Activities that can be claimed as Pilot Time:

2.2.1.1. Testing of new or modified peripheral devices in the MR environment.

2.2.1.2. Testing the compatibility of the facility's peripheral devices with the investigator's hardware and software setup.

2.2.1.3. Establishing the physical compatibility of study equipment within the MR environment.

2.2.1.4. Optimization of non-standard imaging protocols.

2.2.1.5. Up to one hour of data collection with the complete MR and peripheral hardware setup (i.e. a "dry run" for testing of triggers and timing).

2.2.2. Restrictions on Pilot Time:

2.2.2.1. A maximum of 6 hours of pilot time may be granted at the discretion of the Facility Manager and MRI Technologist, with a maximum of one hour of actual data collection. Time in excess of this will be billed at the standard billing rate.

2.3. Upon approval of the study, it is advised that the investigator meet with the Facility Manager, Facility Director, and/or MRI Technologists to discuss appropriate experimental details. If pilot time has been requested, the Facility Manager and MRI Technologist will meet to discuss the study and determine a suitable amount and nature of pilot time. The investigator will be notified as to the amount of pilot time granted. After using this initial time, if the investigator requires additional pilot time, it may be granted at the discretion of the Facility Manager / MRI Technologist, up to a maximum of 6 hours in total.

2.4. Approval of the study must be obtained through the University of Western Ontario's Review Ethics Board (UWO-REB) before the study may commence, as explained in Section 3 below. Once approval has been granted, the investigator must provide the facility with an electronic copy of the ethics protocol and letter of approval.

3. Required Ethics

3.1. The UWO-sanctioned review board must approve all research involving humans or animals. For further details pertaining to specific REB guidelines please refer to http://www.uwo.ca/research/ethics.

3.2. Specific 3T/7T MRI hardware and software development involving human subjects requires UWO institutional ethics approval. The 3T/7T MRI Facility has obtained such approval, see "3T/7T MRI RF Hardware and Software Development" and the Facility Manager or MRI Technologist for details. Exposure of these subjects must be monitored and accurately logged within the appropriate data sheets in order to file annual surveillance reports to the UWO-REB.