Title: **Carnivore Physiology Module: Liver (Patho)physiology**

Instructor:	Dr. K. Rouvinen-Watt
Timing:	November 2009, weekly contact time to be arranged with instructor
Lectures:	2 hr/wk
Student presentations:	1 hr/wk

Description:
This module will focus on liver (patho)physiology in (carnivore) mammals with emphasis on the fatty liver syndrome (hepatic lipidosis). Topics covered will include an overview of the regulation of energy homeostasis, link between obesity and the cardiometabolic syndrome (fatty liver disease, diabetes, cardiovascular disease), cross-talk between the adipose tissue and the immune system, and the role of oxidative stress in fatty liver disease. Implications of the fatty liver syndrome on blood sugar and body fat metabolism will be examined.

Format:
The module consists of a series of four lectures and guided discussions (one 2-hr session per week). For each of the major topic areas, students are required to orally critique key research papers with a focus on research hypotheses and methodology used in the experiments. There will be one 1-hr paper critique session per week with one student Oral Presentation per session. Each student is also required to write a Special Topics Paper. One hands-on Laboratory will focus on liver anatomy and morphology.
Oral Presentation: PowerPoint slide show, 20 min paper critique + 10 min for discussion.
Lab Report: MS Word format, title page, max 3 pages of text, references, font size 12, line spacing 2, due 1 week after lab.
Special Topics Paper: MS Word format, title page, max 6 pages of text, references, font size 12, line spacing 2, due at the end of module.

Method of evaluation:
1) Oral Presentation to class (30% based on instructor and peer review)
2) Lab Report (20%)
3) Special Topics Paper (50%)

Pre-requisites:
Participation in this module requires solid undergraduate background in animal physiology, biochemistry, and nutrition.