TRAINING IN EARNEST

Title:
Methods for the investigation of energy and substrate metabolism in pigs and mice

Organisation:
Dr. Cornelia C. Metges (FBN); metges@fbn-dummerstorf.de
Phone: +49 (0)38208-68650 or -68651; Fax +49 (0)38208-68693

Participants: max. of 6

Location: Research Institute for the Biology of Farm Animals
Research Unit Nutritional Physiology (Animal facilities and mass spectrometry laboratory)
Wilhelm-Stahl-Allee 2
18196 Dummerstorf
Germany

Dummerstorf is close (15 km) to the city of Rostock (http://www.rostock.de) at the Baltic Sea (Northeast of Germany) (http://www.viamichelin.co.uk). It's a 2 h drive from Germany's capital city Berlin.

Main points:
Total energy expenditure (TEE) and substrate oxidation by indirect calorimetry
TEE by doubly labelled water method
Glucose production and oxidation using ^{13}C glucose

Dates:
January 30 - February 3, 2006

Fees:
150 € (for consumables, secretarial work, transfer Rostock-Dummerstorf-Rostock, get together dinner)
Travel and accommodation have to be covered by the participants.

Registration:
In order to secure lodging and arrange for transfers the deadline for registration is **December 9, 2005**. After this date registration can only be accepted pending availability. Please register on the attached registration form. It is most important that you include information about arrival and departure to secure a sufficient number of hotel nights. We ask you to do your own hotel booking (hotel details below).

Travel:
We have a full program and therefore expect you to travel the days before and after the 5 days training course. To take advantage of cheaper flights you might want to arrive already on Saturday or leave Sunday after the training course. If you are interested to visit Berlin on the weekend we can make reservations for the hotel and/or a 3 h guided tour (extra costs on request depending on the hotel you pick; please ask us).

If you need travel instructions in advance to secure tickets etc. please contact us (metges@fbn-dummerstorf.de or diaz@fbn-dummerstorf.de).

How to get there:
By plane: Airports Hamburg or Berlin-Tegel.
Transfer Airport to Rostock:
from Hamburg 2.5 h by train, one-way ticket 35 €.
from Berlin-Tegel 3.5 h by train one-way ticket 37 €.
A car service can be organized to pick you up at the airport (costs: 40-130 € depending on the number of people; duration: approx. 2 h).

We offer to arrange for a car service pick up in Berlin on Sunday afternoon that several people can share the costs for the transfer. **Note: The driver must be payed directly in cash.**

There is also a daily direct flight from Munich to Rostock once a day except Saturday.
http://www.cirrus-world.de/opencms/opencms/Cirrus-Group/Cirrus-Airlines/index.html?lang=Eng

Hotel accommodation (please make your own booking):
a) Hotel an der Stadthalle
per night:
Single room: 45,50 € incl. breakfast
Address:
Platz der Freundschaft 1
18059 Rostock
Phone: +49 (0) 381-444 5 666
Fax: +49 (0) 381-496 88 50
E-Mail: Kontakt@Hotel-an-der-Stadthalle-Rostock.de
URL: www.Hotel-an-der-Stadthalle-Rostock.de

b) Intercity Hotel
per night:
Single room: 60 € / single room Comfort class: 65 € incl. breakfast (Dec./Jan.)
Single room: 75 € / single room Comfort class: 80 € (up to Feb.1)
Address:
Herweghstraße 51
D-18055 Rostock
Phone: +49 (0) 381-4 95 00
Fax: +49 (0) 381-4 95 09 99
E-Mail: rostock@intercityhotel.de
http://www.intercityhotel.de/-S:PtVORd:dEj2n9NNYCQoENNNNPEM/intercityhotel/view/hotelinformationen/rostock.shtml

Banking details of FBN:
Bank account number: 14001518
Bank routing code: 140 000 00
Bank: BBK Schwerin
Receiver: Landeszentralkasse Schwerin
SWIFT Code (BIC): MA RK DEF 11 40
IBAN: DE 98 14 00 00 00 00 14 00 15 18
Please note that the following must be mentioned on the transfer form:
'EARNEST 0100101003831'

Programme:

Day 1, 11.00h	Arrival in Dummerstorf - Welcome and introduction of the participants
12.00h -13.00h	Lunch
13.00h -18.00h	Introduction to indirect calorimetry and generation of experimental protocol
Day 2, 7.30h - 12.00h	Indirect calorimetry experiment (pig); measurement of TEE and substrate oxidation, data generation and documentation
12.00h - 13.00h	Lunch
13.00h - 18.00h	Introduction to stable isotope labelled tracers and mass spectrometry
Day 3, 7.00h - 9.00h	Demonstration indirect calorimetry in mice, data generation and documentation
09.00h - 12.00h	Experiment ^{13}C glucose oxidation (mice)
12.00h - 13.00h	Lunch
13.00h - 18.00h	Sample preparation and derivatization to analyse ^{13}C glucose in plasma (laboratory work)
Day 4, 8.00h - 12.00h	Data evaluation indirect calorimetry and ^{13}C glucose oxidation and tracer concentration in plasma
12.00h - 13.00h	Lunch
13.00h - 18.00h	Introduction to doubly labelled water (DLW) method
19.00h	Get together dinner in Rostock
Day 5, 8.00h - 12.00h	Demonstration DLW experiment in mice, mass spectrometric tracer analysis
12.00h - 13.00h	Lunch
13.00h - 15.00h	DLW data evaluation
15.00h - 17.00h	General discussion and closure of the course

Literature:

Speakman JR. The history and theory of the doubly labeled water technique. Am J Clin Nutr. 1998 Oct;68(4):932S-938S.

Junghans P, Derno M et al. Calorimetric validation of 13C bicarbonate and doubly labeled water method for determining the energy expenditure in goats. Z Ernahrungswiss. 1997 Dec;36(4):268-72

Schoeller DA. Uses of stable isotopes in the assessment of nutrient status and metabolism. Food Nutr Bull. 2002 Sep;23(3 Suppl):17-20.

Spadano JL, Bandini LG, Must A, Dallal GE, Dietz WH. Longitudinal changes in energy expenditure in girls from late childhood through midadolescence. Am J Clin Nutr. 2005 May;81(5):1102-9.