Course content NUTRITION PHYSIOLOGY (BIOR50), Autumn 2016

Literature:

- A. Appleton & O. Vanbergen, Metabolism and Nutrition, 4th ed. Crash course, Mosby, 2013, (recommended)
- Distributed hand-outs and reprints

Lectures:

1. Overview of the digestive system (BW)
2. Overview of the nutrients and their metabolism (CEA)
3. Digestion and absorption of proteins (BW)
4. Digestion, absorption and metabolism of fat (SGP)
5. Digestion and absorption of carbohydrates & fibres (BW, FF)
6. The enteric nervous system (UV)
7. Hormonal regulation of the gut and pancreas (SGP)
8. Gut motility (SGP, JW)
9. The gut microbial system (FF)
10. The endocrine pancreas (HM)
11. Appetite regulation and energy balance (CEA)
12. Ontogeny of the gut function (BW)
13. The gut immune system (BW)
14. Experimental animal science 1 (BS) (obligatory)
15. Experimental animal science 2 (BS) (obligatory)
16. Lab instructions and safety (EAS) (obligatory)

Practicals (obligatory):

Lab 1; Nutrient in vitro absorption, 1 day (LL)
Lab 2; Pancreatic regulation in a rat model, 1 day (SGP, AC)
Lab 3; Nutrient (glucose) absorption in vivo, 1 day (LL)
Lab 4; Probiotic exposure in man, 2 x 1/2 day (MN)
Lab 5; Development of gut function, 1 day (BW, AC)
Lab 6; Microscopy of the GI tract, 1/2 day (MN)

Seminars (obligatory):

1. Review and summary of the labs (BW, SGP, MN, LL)
2. Literature seminars 1-4 (BW, SGP, KG)
3. Presentation of the literature tasks (group works by 3-4 students):
   a. Presentation of essays, Group A-C (BW, SGP, KG)
   b. Presentation of essays, Group D-F (BW, SGP, KG)