Published work from NTNU on NFR project New Marine Feed Resources (17264/S40)

## Master thesis related to the project

Bell, Norun Reppe 2008. Rauåtemel som fôrråstoff til laks, med spesielt fokus på fett- og fettsyresammensetning. MSc-thesis in the Masterprogram "Marine Resources and Aquaculture", Dept. of Biology, Norwegian University of Science and Technology, Trondheim. 53 pp.

Halvorsen, Hilde 2008. Rauåtemel som förråstoff til laks, med spesielt fokus på protein- og aminosyresammensetning. MSc-thesis in the Masterprogram "Marine Resources and Aquaculture", Dept. of Biology, Norwegian University of Science and Technology, Trondheim. 40 pp.

## **Presentations at conferences**

Bell, N., Halvorsen, H., Hillestad, M., Galloway, T.G., Rustad, T., Overrein, I. and Kjørsvik, E. (2008). Replacement of fish meal with Calanus meal in diets for Atlantic salmon (*Salmo salar*), effects on growth and utilisation of proteins, lipids and astaxanthin. Oral presentation at the conference Aquaculture Europe 2008, European Aquaculture Society. Krakow, 16-18 September 2008.

**Bantle, M., Bergvik, M. and Rustad, T. (2009).** Freezing time and its influence on enzymatic activities and lipid composition in *Calanus finmarchicus*. Oral presentation at the 3rd Joint Trans-Atlantic Fisheries Technology Conference; 2009-09-15 - 2009-09-28, NTNU.

**Bantle, M., Eikevik, T.M. and Rustad, T.** Atmospheric Freeze-Drying of Calanus *finmarchicus* and its effects on proteolytic and lipolytic activities. Oral presentation at the Nordic Drying Conference 2009: June 17<sup>th</sup> to 19<sup>th</sup> 2009, Reykjavik, Iceland.

**Rustad, Turid; Bergvik, Maria.** Lipid class changes and lipid oxidation in Calanus finmarchicus during Vacuum, Atmospheric and Nitrogen freeze drying. International Drying Symposium; 2010-10-03 - 2010-10-06, NTNU.

**Overrein, I., Bergvik, M., Evjemo, J.O., Kjørsvik, E., Rustad, T. (2009)**. *Calanus finmarchicus* – a source of unique marine oils. Poster presentation at the 6th EuroFed Lipid Congress; Athen, Greece.

**Bantle, M., Bergvik, M., Rustad T. (2009).** Freezing time and its influence on enzymatic activity and lipid composition in *Calanus finmarchicus*. Oral presentation at the 3<sup>rd</sup> Transatlantic Fisheries Technology Conference (TAFT), September 15<sup>th</sup> to 18<sup>th</sup> 2009, Copenhagen, Denmark.

**Bantle, M.** Processing of *Calanus finmarchicus* – state of the art (oral presentation). Book of Abstracts 37<sup>th</sup> West European Fisheries and Technology Association (WEFTA) meeting, October 24<sup>th</sup> to 26<sup>th</sup> 2007, Lisbon, Portugal.

**Bantle, M.** *Calanus finmarchicus* as basis for development of formulated feedstock for Aquaculture - processing and drying. NTNU/SINTEF: The Dewatering Laboratory. October 8<sup>th</sup> 2007, Trondheim, Norway.

## Publications

Kjørsvik, E., Bell, N., Halvorsen, H., Rustad, T., Overrein, I., Galloway, T.G., and Hillestad, M. (2008). Replacement of fish meal with Calanus meal in diets for Atlantic salmon (Salmo salar), effects on growth and utilisation of proteins, lipids and astaxanthin. Manuskript.

**Bantle, M., Eikevik, T.M., Rustad, T. (2009).** Atmospheric Freeze-Drying of *Calanus finmarchicus* and its effects on proteolytic and lipolytic activities. Proceedings of the 4th Nordic Drying Conference NDC 2009: June 17<sup>th</sup> to 19<sup>th</sup> 2009, Reykjavik, Iceland. ISBN 978-82-594-3406-7.

**Bantle, M., Bergvik, M., Rustad, T. (2010).** Lipid class changes and lipid oxidation in Calanus finmarchicus during Vacuum, Atmospheric and Nitrogen freeze drying. I: *Drying 2010 - Proceedings of International Drying Symposium (IDS2010).* Magdeburg, Germandy: docupoint GmbH, Barleben-Magdeburg, Germany 2010 ISBN 978-3-86912-036-2. s.1907-1914.

**Bantle, M., Eikevik, T.M., Brennvall, J.E.** A novel method for simultaneous and continuous determination of thermal properties during phase transition applied to *Calanus finmarchicus*. Submitted to Journal of Food Science.

**Bantle, M., Eikevik, T.M. (2010).** Ultrasonic assisted Atmospheric Freeze Drying. Proceedings of the International Drying Symposium 2010, October 3<sup>rd</sup> to 6<sup>th</sup> 2010, Magdeburg, Germany. (In prepp).

**Bantle, M., Bergvik M.** Lipid Oxidation in Freeze Drying under Nitrogen atmosphere. Proceedings of the International Drying Symposium 2010, October 3<sup>rd</sup> to 6<sup>th</sup> 2010, Magdeburg, Germany. (In prepp).

## **Planned publications**

Rustad, T., et. al. Enzymatic activity in Calanus (possibly two publications) Bergvik, M., et al., Phospholipase activity in *Calanus finmarchicus* Bergvik, M., et al., Freezing time and the influence on lipid composition in *Calanus finmarchicus* Bergvik, M., et al., Stability of stored *Calanus finmarchicus* Bergvik, M., et al., Lipid class analysis – a methodological comparison Bantle, M. A general model for Atmospheric Freeze Drying. Drying Technology 2011

**Dr. Thesis;** will be submitted from Maria Bergvik og Michael Bantle in 2011