

## Vacancy doctoral grant

### Description of the position

The close symbiosis of ruminants with rumen bacteria gives them the unique ability to digest structural carbohydrates such as cellulose. Current production levels, however, require greater proportions of concentrates in the ration, which results in an increased incidence of rumen acidosis which acidifies the rumen environment and puts the fiber digestion under pressure.

We attempt to address these disturbances by supporting the rumen microbial population through administration of a probiotic consisting of a mixed culture of bacteria. Potential probiotic candidates will be enriched from in vitro cultures under stressful conditions. Specifically, conditions will be created which exhibit similar characteristics as are found under acidotic conditions but where bacteria remain capable to break down structural carbohydrates. Dilution-extinction experiments will be a first approach to obtain a selective microbiome with probiotic potential. New concepts will be used to characterise the rumen microbial community and its functionality in combination with next generation methodology.

This intriguing subject is the focus of PhD research at the LANUPRO, Faculty Bio-Science Engineering, UGent, Belgium. The research activities of the 'ruminant nutrition group' within LANUPRO focus on in vitro and in vivo evaluation and optimization of microbial processes in the rumen.

### Profile

- For this project we look for a highly motivated, inquisitive, enthusiastic, and result-driven PhD candidate with an appropriate MSc degree (see below). He or she is familiar with molecular approaches for microbial community analysis. Excellent research skills and analytical abilities are required. The candidate is capable of delivering accurate results, also within specific deadlines. Excellent communication skills and proficiency in English (both oral and written) are prerequisite. The successful candidate is able to work independently as well as in a team.
- Degrees: Master degree from European, Canadian or US university in applied biological sciences, chemistry, veterinary sciences, biological sciences or related fields.

## Apply

For more information contact Prof. Veerle Fievez (Veerle.Fievez@UGent.be, 00 32 9 264 90 02) or dr. Bruno Vlaeminck (Bruno.Vlaeminck@ugent.be, 00 32 9 264 90 00)

Applications should be addressed to Prof. Veerle Fievez (Veerle.Fievez@UGent.be) before 31 December 2012.

Applications must include:

1. A *Curriculum Vitae* (C.V.), detailing academic qualifications and employment history (normally no longer than 3 pages)

2. An application letter, outlining:

i. The reasons and motivation for application;

ii. Evidence of past experience that is relevant to the position applied for;

iii. A character profile of the candidate, highlighting personal competencies that distinguish the candidate.

The length of the application letter should not exceed 2 pages.

3. Names and contact details (preferably email address) of two referees who can and are willing to provide first-hand feedback on the applicant's work