UNIVERSITEIT GENT

FACULTY OF BIOSCIENCE ENGINEERING

DEPARTMENT OF ANIMAL PODUCTION

Laboratory for Animal Nutrition and Animal Product Quality

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. However, microbial action also degrades (essential) compounds which are then no longer available for absorption by the ruminant. Examples of such compounds are poly-unsaturated fatty acids, essential amino acids, vitamins,…

Hence, technological processes are applied to prevent these compounds of degradation. However, current technologies are either not effective or unwanted by the consumer (e.g. formaldehyde treatment). The approach taken in this research is based on a natural 'protection process' occurring in red clover, through the formation of a protein-phenol complex as induced by the activity of an enzyme polyphenol oxidase. To 'translate' this process into a technological process with potentially industrial applications, encapsulated emulsions are formed. However, variation in physic-chemical characteristics of the emulsions and type of phenol leads to differences in protection efficacy. Within this PhD, you'll aim at elucidating factors determining the degree of protection as well as search for food/feed-grade sources of phenols and polyphenol oxidase which are available at reasonable costs for potential industrial application.

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 has background in 'applied chemistry', biological engineering processes and/or emulsion technology. 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).

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