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## The secretariat of the Graduate School VLAG

### Evaluation of PhD education programmes at Wageningen University

In October 2001 it was decided by the graduate schools with their administrative headquarters at WU to do an internal review of the state of the art of the respective PhD education programmes. The schools prepared the necessary documentation and in spring 2002 the evaluators (Prof. Karssen, former vice-chancellor WU, and Prof. Huisman, former director of the graduate school WIAS) examined the documents and interviewed a delegation of the schools (director, secretary, education co-ordinator and a representative of the PhD council). The evaluators came up with general comments valid for all the graduate schools and with specific recommendations for each graduate school. The most important general recommendation was that the schools had to take more responsibility for the total education programme offered to

their PhD students. This could be implemented by offering more 'general' courses'. A working group composed of representatives of various graduate schools is already busy trying to implement this recommendation. What is the interest of PhD students in attending general courses? How can this be accommodated in the busy schedule of a PhD student? What type of 'general' courses should become available and at what price? It is absolutely necessary that such courses will become available in English. I know from several of the non-Dutch PhD students in VLAG that they are a little bit frustrated by the fact that courses, as 'didactics' are not offered in English. I am also aware of the fact that some other PhD students were not allowed to participate in this course because they did not belong to the target group! A specific recommendation for

VLAG was that we had to set the minimum requirement to obtain the VLAG Education Certificate at 21 credit points, it stands now at 17. In order to implement this recommendation I will visit all the research groups in September 2002 and have a discussion with the PhD students. We will list those activities that are already being done but are not yet or not fully recognised as being part of the education programme. We might have to formalise several ongoing literature review programmes, discussion groups, thematic meetings, etc. and describe how many credit points can be earned by these activities. Overall the graduate schools experienced it as a very useful exercise. It coincides nicely with the discussion at the national level about the future of the PhD education programmes.

**Fré Pepping**

## EDITORIAL

Dear readers,

Welcome back from the summer holidays! Hopefully everyone had the chance to take a break from work and enjoy a few days, or even weeks, of rest and recreation before the start of a new academic year.

In this issue of the VLAG-FLASH we present our regular columns (In & Out, New PhD projects, Dissertations, Overview of the Courses) and a number of interesting contributions from fellow PhD students and VLAG coordinator Fré Pepping.

Sandra van der Graaf (Food and Bioprocess Engineering), Wageningen representative at the National Platform for PhD students (LAIIO), explains how the Bachelor/Master system implemented in Dutch universities will affect PhD students.

Yvonne Dommels gives an update of the new members of the VLAG PhD Council as well as an overview of the issues presently being discussed by the group. If you have any question, comment or request to the council, or if you would like to participate in the meetings, do not hesitate to contact Yvonne (e-mail) or any of us at the editorial board.

You will also find an account of the summer courses "Glycoscience" and "Food Choice" that took place in the months of June and July, respectively, as well as a summary of the evaluation of PhD education programmes at Wageningen University.

We'd like to remind you that the VLAG PhD party is coming up soon... You're still on time to give your input for the organization of this party, if you have fun ideas, we'd like to hear them!!

The Editorial Board

You can reach the editorial board of the VLAG-Flash by e-mail at [Vlag-flash@list.nutepi.wau.nl](mailto:Vlag-flash@list.nutepi.wau.nl)

## Summer Course Glycosciences 2002

From June 23 to 27 this European training course on carbohydrates was held in Wageningen. Utrecht University and Wageningen University organized the course, in cooperation with VLAG. In total 80 participants, mostly PhD-students, from 18 European countries took part in the course.

The program started on Sunday afternoon with two opening lectures. In the first one professor Vliegthart talked about recent developments in glycoscience. Professor Voragen talked in the second lecture about carbohydrate based functional ingredients. After these very interesting lectures we had time to look at all the posters during the informal get together reception and dinner.

Photo 1



We started the Monday morning with basic information on nomenclature of carbohydrates, bacterial and plant polysaccharides, and glycoprotein and glycolipid biochemistry. After lunch the program went going more into depth with carbohydrate synthesis and exopolysaccharides from lactic acid bacteria. To talk about something else than science we went to Burgers Zoo in Arnhem for the course dinner. We walked through the jungle and ocean with a guide and had our diner on three different locations in the jungle (see photo 1) and the dessert in the desert. Armed with jungle hats and magnet fishes we left again for Wageningen.

Tuesday started with molecular modeling of carbohydrates, cellulose structures in plants and



Photo 2

rheology of plant polysaccharides. After lunch we went on in parallel sessions about structures and function of animal and plant lectins, starch and starch applications and applications of carbohydrates in food technology and nutrition. At the end of the day we had some time to look to the posters. Lars Bode from the Institute of Nutritional Sciences, Giessen, Germany was the lucky person this day. He won the award for the best poster presentation (see photo 2). This was a nice end of a day full of science. Only the dinner remained.

Wednesday was again a day full of interesting lectures, like structure analysis of carbohydrates, NMR spectroscopy, mass spectroscopy, molecular modeling, rheology, etc. At the end of the day 12 PhD-students gave a presentation about their research, which was also really interesting. We had a nice Spanish buffet at night with some nice background music: Fré made us sing songs from every country participating in the course (see photo 3). Especially the Swedish song was very successful!

Thursday was only a short day. We started with one parallel session, about carbohydrate-based vaccines or enzymatic carbohydrate synthesis. After the coffee break we went on in plenary sessions. We discussed about proteoglycans, carbohydrate hydrolases and biosynthesis of carbohydrates in plants. The only things that remained then were the closing remarks of Professor Voragen, the distribution of the certificates and a farewell lunch.



Photo 3

Looking back we can conclude that the course was very educational. We learned some basic and specialized information about carbohydrates, which will be useful in our research. Also we met a lot of other PhD-students working in the same research field. I think everybody had a good time in Wageningen. Every night we found a lot of participants in the pubs in town, especially 'De Vlaam' was visited actively. Even a lot of lecturers visited the pubs at night.

**Sandra Hinz**  
Food Chemistry, WU

## New PhD Projects

– **Elena Martens, 01-04-2002**  
Disclosing the carbohydrate modifying network of *Aspergillus niger* by functional genomics. (AIO-project, WU-Microbiology/MGIM. Supervisors: Dr. J. Benen)

– **Joris Zandleven, 01-04-2002**  
Disclosing the carbohydrate modifying network of *Aspergillus niger* by functional genomics (Carbnet). (AIO-project, WU-Food Chemistry. Supervisors: Prof. A.G.J. Voragen, Dr. G. Beldman)

– **Karen Koning, 15-04-2002**  
The effect of probiotics on the intestinal flora and immune parameters after treatment with antibiotics. (Research assistant, UM-Internal Medicine. Supervisors: Prof. R. Stockbrügger, Dr. D. Jonkers)

– **Mirjam Adriaens, 01-05-2002**  
Determinants of energy expenditure and potential interventions. (AIO-project, UM Human Biology. Supervisors: prof. K. Westerterp)

– **Gert-Jan de Bruijn, 01-06-2002**  
Cognitive, social and environmental determinants of behaviour regarding weight gain prevention. (AIO-project, UM-Health Education. Supervisors: Prof. J. Brug, dr. S. Kremers)

– **Sara Burt, 01-06-2002**  
Antimicrobial activity of essential oil constituents. (AIO-project, UU-VVDO. Supervisors: Prof. F. van Knapen, Prof. H.P. Haagsman)

– **Stefan Mandard, 01-06-2002**  
Probing the role of fasting induced adipose factor FIAF in the adaptive response to fasting by oligonucleotide microarrays. (OIO-project, WU-Human Nutrition and Epidemiology. Supervisors: Prof. M. Müller, Dr. S. Kersten)

– **David Patsouris, 01-06-2002**  
Probing the role of fatty acids and the peroxisome proliferator activated receptor alpha in the regulation of hepatic glucose metabolism. (AIO-project, WU-Human Nutrition and Epidemiology. Supervisors: Prof. M. Müller, Dr. S. Kersten)

– **Marcel v.d. Poll, 01-06-2002**  
Mechanisms involved in liver failure following hepatectomy: implications for treatment. (Research assistant, UM-Surgery. Supervisors: Dr. C. Dejong)

– **C. Bouwman, 01-07-2002**  
Bioefficacy of beta-carotene in healthy individuals and those with bowel disease. (AIO-project, UMC-Nijmegen/WU-Human Nutrition & Epidemiology, Supervisor: Prof. C. West, Dr. A.H.J. Naber)

– **Harry Kools, 01-07-2002**  
Disclosing the carbohydrate modifying network of *Aspergillus niger* by functional genomics.

(AIO-project, WU-Microbiology/MGIM. Supervisors: Dr. P. Schaap)

– **Cora Busstra, 01-08-2002**  
Design of shareable digital learning material within "Human Nutrition and Epidemiology". (AIO-project, WU-Human Nutrition and Epidemiology. Supervisors: Prof. M. Müller, Prof. P. van 't Veer, Dr. J.M.A. van Raaij, Drs. R. Hartog)

– **Jeroen Nijhuis, 01-08-2002**,  
Surgical treatment of morbid obesity (AIO-project, UM-Surgery. Supervisors: Prof. W. Buurman, Prof. P. Soeters, Dr. W.J. Greve)

– **Lydia Kwak, 15-08-2002**  
A worksite-based health promotion intervention programme to decrease food consumption and increase physical activity in order to prevent weight gain in young adults, aged 25-35 years. (AIO-project, UM-Human Biology. Supervisors: Prof. J. Bruk, Dr. M. van Baak)

## New Postdocs

– **Nguyen van Thai, 01-04-2002**  
Gastritis and vitamin serum levels. KUN/UMC St. Radboud-Internal Medicine VLAG-Fellow

– **Ad Knaapen, 01-06-2002**  
The identification of common genetic polymorphisms that influence the susceptibility to cancer associated with exposure to environmental carcinogens. UM-GRAT

## News from the PhD Councils

### News from the VLAG PhD council

The VLAG PhD council currently consists of 8 members (see list). Our main goal is to serve as a permanent, bilateral communication link between the PhD fellows and the board of the VLAG Graduate School.

By means of the VLAG FLASH we will keep you informed of the latest developments and advices which we have given to the board of VLAG.

During the last meetings we have discussed topics like:

- evaluation of PhD education: are there enough interesting VLAG courses and do we want more general courses as for example ethics, philosophy, management?  
In our opinion VLAG should try to organise an equal amount of VLAG courses for the different research themes and we are not really interested in general courses like ethics and philosophy because we already had such kind of courses during undergraduate studies. More useful will be courses in communication, policy making, management, writing project proposals, politics etc.
- Do we need a monitoring system like the Mansholt Graduate School:  
a stringent evaluation of work to adjust planning and perform the research in the fixed four-year period  
This topic will be discussed in more detail in a later meeting.
- Financial support for PhD students:
  - Back-pack ('rugzak') money is only to pay fees NOT to pay travel costs
  - Compulsory courses (i.e. radioactivity course, animal handling course) should be paid by the department and NOT from your backpack.

To have a broad discussion during our meetings we try to represent all groups and institutions involved in VLAG. If you feel that your group is under-represented and you are interested in joining the VLAG PhD council, please contact me at: yvonne.dommels@algemeen.tox.wau.nl

#### Our members are:

Nathalie Creusot (Food Chemistry)  
Yvonne Dommels (Toxicology /TNO)  
Guus Jansen (Rikilt / Human Nutrition and Epidemiology)  
Sergey Konstantinov (Microbiology)  
Willem van Schaik (WCFS / Food Microbiology)  
Sandra van der Graaf (Process Engineering)  
Cecile Veerman (Food Physics)  
Ynte de Vries (WCFS / ATO)

#### Yvonne Dommels Chair of the VLAG PhD council

### Ba/Ma/PhD

The LAIOO (Landelijk AiO- en Oio-overleg; Dutch National Union for Graduate Students) is concerned about the introduction of the Ba/Ma/Ph.D.-system. What are the consequences for the Ph.D.? At the moment a lot of things are still unclear, but the LAIOO foresees some problems:

- What will be the juridical status of young researchers, employees or students? At the moment an AiO is an employee and receives a salary. If the AiO changes into Ph.D.-student, the status of employee is no longer guaranteed.
- The flexibility to choose a university for a Ph.D. may decrease, due to differences in the Master on different universities. Some universities plan to move certain aspects of the Ph.D., for example writing a project proposal, to the second year of the Master. Therefore it will be more difficult to start a Ph.D. on another university.
- The financial situation: who pays the second year of the Master? If the second year of the Master will contain certain aspects of the Ph.D. it will even be more complicated. However, for studies on technical universities and Wageningen University there won't be a problem, because these studies already used to be 5 years.
- Some universities want to decrease the Ph.D. from 4 to 3 years, especially for studies that used to be 4 years. But is this realistic? Nowadays, only 7% of all AiO's and Oio's manage to finish their thesis in 4 years.

The LAIOO regrets that there is very little concern about the Ph.D.-problems in the discussions that are going on about the introduction of the Ba/Ma/Ph.D. The LAIOO thinks it is important to start a discussion about these problems very soon, therefore a discussion afternoon is planned with all *key players*, which will take place on 1 November. The outcome of this discussion will be written up in a report.

#### Sandra van der Graaf LAIOO

## Xth Food Choice Conference

The 10th Food Choice Conference was held from Sunday June 30th until Wednesday July 3rd in Wageningen. Two hundred thirty eight participants from academic and health care settings, as well as from food industries and government agencies around the world gathered in Wageningen to attend this conference about different aspects of food choice.

After the opening on Sunday afternoon by Cees de Graaf, the chair of the organizing committee and Hans Brug of Maastricht University, David Booth (UK) and Paul Rozin (USA), two well-known scientists in the field of food choice, started with an informal speech. Especially during the talk of the latter about the differences between people of the USA and Europe concerning food choices and health concerns, smiles were often observed. Afterwards the poster session was opened (see photo 1).



Photo 1

On Monday, the first plenary sessions ('Effective strategies in nutrition communication' and 'Dynamics of liking') and workshops were held. The

workshops covered a broad range of topics like 'Does liking really predict choice?' and 'Environmental influences on food choice'. The first full day of the conferences ended with the



Photo 2

conference dinner (see photo 2) held at Castle Hoekelum, after which some attendants gathered on the dance floor (see photo 3). The effect of food choice on the physiological control of weight management was discussed early Tuesday morning. This was followed by two workshops about consumer-led product development and the food choice of elderly. The afternoon was used to show the foreign and the Dutch attendants the beautiful region of the Veluwe before visiting the Kröller-Müller museum. Back at the conference site, the scientific program continued with a discussion about sensible policies for nutrition and life style interventions. The day ended with a dinner during which Paul Rozin continued his story of the first day, which this time turned to be hilarious!

The last day of the conference started with a session entitled

'Food related risk perception' followed by workshops concerning food choice in children and cross-cultural dimensions in food choice. Before lunch, Mrs Renee Bergkamp, director general of the ministry of agriculture, nature management and fisheries gave an address about the effects of consumers food choices on health, but also on agriculture and nature development. Determinants of food choice as well as consumer responses to novel and functional foods were



Photo 3

the topics of the last two scientific workshops of the Xth Food Choice Conference. Reflecting this tenth Food Choice Conference, it can be concluded that the scientific program was of high quality without affecting the informal character of the conference.

#### Marleen Kamphuis UM-Human Biology



**Name** Dipl.oec.troph. Meike Büniger  
**Place & date of birth** Georgsmarienhütte (Germany), 31/12/1975  
**Research title** Use of genomics techniques to define the fatty acid dependant transcriptome of small intestinal epithelial cells.  
**Department/University** Nutrition, Metabolism & Genomics Group, Human Nutrition and Epidemiology, WU  
 IOP-project: "an integrated genomics approach towards gut health"  
**Promotors** Prof. Michael Müller, Dr. Guido Hooiveld  
**Start of PhD project** 4th February 2002

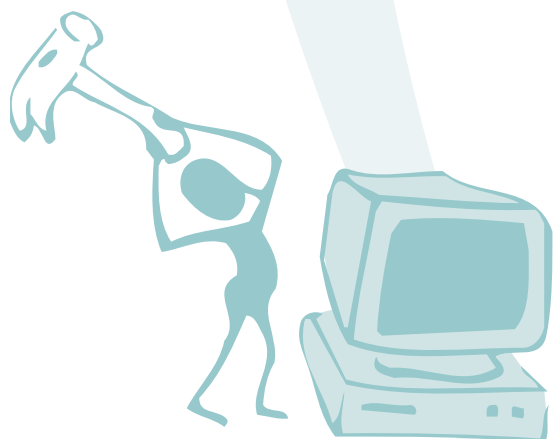


I studied *Human Nutrition and Home Economics* at the nice and cozy Christian-Albrechts-University of Kiel and finished my study at the End of November 2001. Working at the University of Kiel and participating in an internship at the "Bundesanstalt für Milchforschung (BAfM)" I made contact with research. My motivation to start a PhD at the Nutrition, Metabolism and

Genomics Group was to contribute in nutritional research in the more biomedical direction. For me the PhD means a challenge to gather more experience and expert knowledge to better understand specific diseases and to impart knowledge to other people. With that I follow my heart and my basic interests. The principal objective of my PhD topic will be to gather insight in the role of

different fatty acids on gut health and the possibilities of intervention with these nutrients under pathological conditions such as colitis or colon cancer. This implicitly means that information will be needed about how human/animal epithelial cells do react when exposed to specific fatty acids and how this information can be transferred to the human gut physiology. I expect to work in a stimulating

team ambience as well as to fulfill my research tasks. At least I hope not to forget to communicate in a language that everybody will understand.



**Name** Daniëlle M.J. Curfs  
**Place & Date of Birth** Voerendaal (The Netherlands), 17/12/1976  
**Research title** The role of mutagens in atherosclerosis  
**Department/University** Department of Health Risk Analysis & Toxicology and the Department of Pathology, University of Maastricht  
**Promotors** Prof. F.J. van Schooten  
 Prof. M.J.A.P. Daemen  
**Start of PhD-project** January 2000

The aim of my project is to elucidate the role of mutagens in the initiation and progression of atherosclerosis and to investigate whether there are mechanistic similarities between the processes of carcinogenesis and atherogenesis. The first results show that the mutagen and carcinogen benzo[a]pyrene (B[a]P) is capable of inducing levels of B[a]P-DNA adducts in the aorta of atherogenic mice which were even higher than in lung which is seen as the target organ for B[a]P induced carcinogenicity. The results of a chronic B[a]P exposure study in the atherosclerotic apoE-KO mouse show larger and

phenotypically different plaques after B[a]P exposure.

After two and a half years I'm still very excited about my PhD-project. I like the freedom in setting up new experiments and planning my days. Also the collaboration with people from different departments and different institutes is one of the advantages I appreciate very much. So far, I've had few major drawbacks and we have generated quite some results. The only problem with these chronic animal exposure studies is that it is a lot of work and it takes some time before you can actually start analyzing your data. Four years is

a rather short period of time and you can only get the answers to a few of the many questions that arise during this period. I think for me the main difficulty is that I want to do too much, without thinking at the feasibility. Currently I'm writing two papers and I feel like it takes me too long before they are actually finished. My last animal study is almost finished and then I have to start the analyses of three major studies, generate data and write the papers. (Why does this always sounds easier than it actually is?).



**Name** Esther den Aantrekker  
**Place & Date of birth** Vlaardingen (the Netherlands), 04/10/1971  
**Research title** Recontamination of food products-quantitative modelling for risk assessment  
**Department/University** Agrotechnology and Food Sciences, Laboratory of Food Microbiology/Process Engineering Group, Wageningen University  
**Promotors** Prof. dr. M. van Schothorst, Prof.dr.ir. R.M. Boom  
**Date of defence** 02/10/2002



A food production process usually contains an inactivation step to kill pathogenic bacteria. When pathogens re-enter the product after such an inactivation step, this may lead to foodborne illnesses. In my research, I developed two mathematical models that can be used to determine the significance and influence of such recontamination.

This all sounds very simple, but it did take a while before useful models were developed and could be validated with laboratory experiments. My research indeed had a very long lag phase, before things were accelerating. This was partly caused by the freedom to

investigate those subjects, which I thought were interesting and of relevance. That is the advantage of working at a university, where commercial interests do not (yet?) play an important role.

In my research, I worked at two different groups, which was very worthwhile. The different point of views towards my research gave me a lot of ideas on what was lacking and in which direction I should proceed.

Doing a PhD means you need some perseverance to reach the finish line. Especially, when you are the only one working on the subject and things are not going the way you would like them to go. This does teach you to work independently and at the same time try to find people who can

help you out with your problems. Another thing I learned is that planning is very important if you want to finish your PhD on time. It might have been better to have planned the research subjects and set a time path already in the first year, so that things may have gone a little faster than they eventually did. When you start your PhD, you think that 4 years is a sea of time and you just 'hobby around'. However, 4 years pass sooner than you think. In October is my big day, after which this valuable experience is over and I can start thinking about new challenges!



### What PhD's always wanted to know ...

Dear PhD student,

Have you ever had a question that you did not dare to ask?

Do you think that you know something deep inside that everybody should know?

**This is your opportunity!**

Send us your questions, remarks and opinions (VLAGEFLASH@list.nutepi.wau.nl), and we will get back to you on that.

## OVERVIEW OF THE 2002/2003 COURSES

### VLAG/NUTRIM courses 2002/2003

#### 2002

25-27 September: Regulation of Food Intake (Maastricht)  
 14-17 October: VLAG PhD-week  
 4-6, 21-22 November: VLAG uitstroom cursus  
 24-30 November: EU-course Chemistry & biochemistry of antioxidants  
 25-29 November: Management of food safety and microbiological risks

#### Other activities:

18 September: VLAG/CHN thematic meeting "Intestinal Function"  
 24 October: VLAG thematic meeting on OMEGA-3 fatty acids  
 13 November: VLAG/CHN thematic meeting "Food Safety"  
 21 November: VLAG thematic meeting on PROFETAS

#### 2003

January/February: SAFE (EU), Brussels, Belgium  
 17-18 February: VLAG/SZVG Masterclass "Calcium & Body Weight"  
 24-28 February: Ecophysiology of the GI-tract  
 February/March: Masterclass Nutrigenomics  
 31 March-2 April: VLAG uitstroomcursus  
 /14-15 April  
 May/June? Food Enzymology  
 16-21 June: Nutritional and lifestyle epidemiology  
 13-16 October: Food perception and food preference  
 October: VLAG PhD week  
 3-7 November: Industrial Proteins  
 23-29 November: EU-course Chemistry and biochemistry of antioxidants

#### Other activities:

15-16 May: 4th International Symposium on Industrial Proteins "Industrial Proteins in Perspective"; Ede  
 See: [www.wau.nl/vlag/ip-4](http://www.wau.nl/vlag/ip-4)  
 8-9 November: 2nd International Nutrigenomics Conference (TNO)

Courses will be held in Wageningen unless indicated.

## Dissertations

The following VLAG PhD-candidates successfully defended their thesis

– 13 May 2002 at Wageningen University

**Ir. Christine Bunthof: 'Flow cytometry, fluorescent probes and flashing bacteria'**

*Supervisors: Prof. F.M. Rombouts, Dr. T. Abee, Dr. P. Breeuwer*

– 17 May 2002 at Wageningen University

**Ing. Ruud Verkerk: 'Evaluation of glucosinolate levels throughout the production chain of Brassica vegetables'**

*Supervisors: Prof. W.M.F. Jongen, Dr. M. Dekker*

– 21 May 2002 at Wageningen University

**Ir. Suzanne Luppens: 'Suspensions or biofilms and other factors that affect disinfectant testing on pathogens'**

*Supervisors: Prof. F.M. Rombouts, Dr. T. Abee*

– 24 May 2002 at Maastricht University

**Drs. Ingrid Steenhuis: 'Feasibility and effectiveness of environmental interventions in worksite cafeterias and supermarkets'**

*Supervisors: Prof. G. Kok, Prof. K. Glanz*

– 31 May 2002 at Wageningen University

**Ir. Remco van Willige: 'Effects of flavour absorption on foods and their packaging materials'**

*Supervisors: Prof. A.G.J. Voragen, Dr. J.P.H. Linssen*

– 31 May 2002 at Wageningen University

**Drs. Wendy Broekmans: 'Carotenoid status in man: Effects on biomarkers of eye, skin and cardiovascular health'**

*Supervisors: Prof. F.J. Kok, Dr. G. van Poppel, Dr. A.F.M. Kardinaal*

– 7 June 2002 at Wageningen University

**Ir. E.H. Vis: 'Influence of dietary protein sources on putative in-vitro and in-vivo colon cancer biomarkers'**

*Supervisors: Prof. J.H. Koeman, Prof. M.A.J.S. van Boekel*

– 28 June 2002 at Maastricht University

**Drs. Gerard Rietjens: 'Preparing for the Olympic Games: Training adaptation in endurance sports'**

*Supervisors: Prof. W. Saris, Prof. H. Kuipers, Dr. H. Keizer*

– 4 July 2002 at Wageningen University

**Ir. C. van der Ven: 'Biochemical and functional characterisation of casein and whey protein hydrolysates. A study on the correlations between biochemical and functional properties using multivariate data analysis'**

*Supervisors: Prof. A.G.J. Voragen, Dr. H. Gruppen, Dr. D.B.A de Bont*

## Colophon

VLAG-FLASH is the newsletter of the PhD-students of the Graduate School Vlag

(Advanced Studies in Food

Technology, Agrobiotechnology, Nutrition and Health Sciences).

VLAG-FLASH is published three times a year. In every newsletter attention will be paid to ongoing research, general information concerning training- and research activities of Vlag, the agenda of relevant courses, congresses etc.

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**INDUSTRIAL proteins**

Industrial proteins in perspective

Second and final announcement and call for abstracts

May 15 and 16, 2003  
 Hotel-, Cultural- and Conference Centre The Beehorst  
 Ede, The Netherlands

## RULES OF THE LAB

1. When you don't know what you're doing, do it neatly.
2. Experiments must be reproducible, they should fail the same way each time.
3. First draw your curves, then plot your data.
4. Experience is directly proportional to equipment ruined.
5. A record of data is essential, it shows you were working
6. If you can't get the answer in the usual manner, start at the answer and derive the question.
7. If that doesn't work, start at both ends and try to find a common middle.
8. In case of doubt, make it sound convincing.
9. Do not believe in miracles---rely on them.
10. Teamwork is essential. It allows you to blame someone else.