

Dissertations

The following VLAG-PhD candidates successfully defended their thesis.

09-01-2002 at Wageningen University
J.W. de Kraker: 'Biosynthesis of sesquiterpene lactones in chicory (*Cichorium intybus* L.) roots'.
Supervisors: Prof. A.E. de Groot, Dr. M.C.R. Franssen, Dr. H.J. Bouwmeester

11-01-2002 at Wageningen University
Reetta Satokari: 'Molecular identification and characterisation of bifidobacteria and lactobacilli in the human gastrointestinal tract'.
Supervisors: Prof. W.M. de Vos, Dr. E.E. Vaughan, Dr. M. Saarela, Dr. A.D.L. Akkermans

25-01-2002 at Maastricht University
Mario Berger Ouwens, 'Improving parameter estimates in Generalized Linear Mixed Models'.
Supervisor: Prof. M. Berger, PhD

29-01-2002 at Wageningen University
Maria de Lurdes Nunes Enes-Dapkevicius: 'Biological ensilage of fish - Optimazation of stability, safety and functionality'.
Supervisors: Prof. F.M. Rombouts, Dr. M.J.R. Nout, Dr. J.H. Houben

29-01-2002 at Wageningen University
A. Dapkevicius: 'Isolation, identification and evaluation of natural antioxidants from aromatic herbs cultivated in Lithuania'.
Supervisors: Prof. A.E. de Groot, Dr. T.A. van Beek, Dr. J.P.H. Linssen

07-02-2002 at Maastricht University
Esther Bakker: 'Long-chain polyunsaturated fatty acids and child development'.
Supervisors: Prof. G. Hornstra, Prof. C. Blanco

08-02-2002 at Maastricht University
Ellen Pouw: 'Systemic impairment in chronic obstructive pulmonary disease'.
Supervisors: Prof. E. Wouters, Dr. A. Schols

15-02-2002 at Maastricht University
Ingrid van der Eijk: 'Quality of care & quality of life in Inflammatory Bowel Disease. A European study'.
Supervisors: Prof. R.W. Stockbrugger, Dr. M. Russel

22-02-2002 at Wageningen University
Carline Brands: 'Kinetic modelling of the Maillard reaction between proteins and sugars'.
Supervisors: Prof. W.M.F. Jongen, Prof. M.A.J.S. van Boekel

22-02-2002 at Maastricht University
Miranda Dirx: 'Energy restriction in childhood, physical activity and risk of breast, prostate and colon cancer'.
Supervisors: Prof. P. van den Brandt, Dr. R.A. Bausch-Goldbohm, Dr. L.H. Lumey

25-02-2002 at Wageningen University
P.K. Malakar: 'Modelling microbial interactions and food structure in predictive microbiology'.
Supervisors: Prof. K. van 't Riet, Dr. M.H. Zwietering

15-03-2002 at Wageningen University
E.C. de Bruin: 'Recombinant gelatin and collagen from methylotropic yeasts'.
Supervisors: Prof. N.C.M. Laane, Dr. F.A. de Wolf

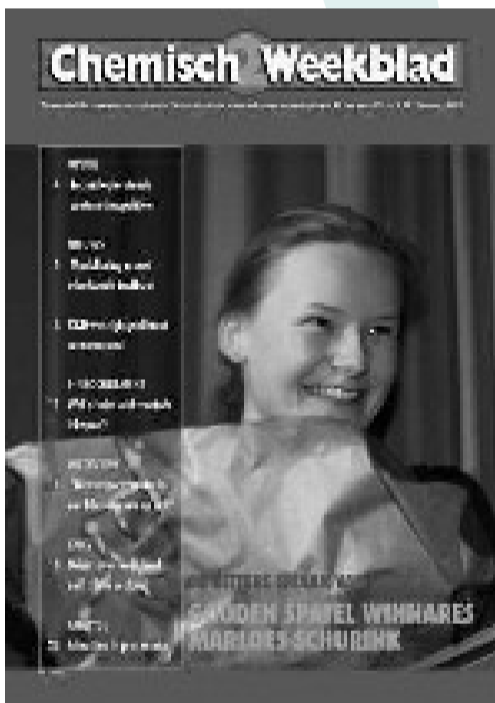
26-03-2002 at Wageningen University
K.A. Karatzas: 'Inactivation and stress response of *Listeria Monocytogenes* in combined processing for preservation'.
Supervisors: Prof. F.M. Rombouts, Dr. M.H.J. Bennik

28-03-2002 at Maastricht University
J. Hendriks: 'Proton pump inhibitors in childhood cystic fibrosis'.
Supervisors: Prof. R. Donckerwolcke, Prof. E. Wouters, Dr. Ph. Forget

03-04-2002 at Wageningen University
Ester Vierhuis: 'Structural characteristics of polysaccharides form olive fruit cell walls in relation to ripening and processing'.
Supervisors: Prof. A.G.J. Voragen, Dr.H.A. Schols

12-04-2002 at Wageningen University
Edine Tiemersma: 'Meat, smoking, alcohol and colorectal tumors: the role of genetic susceptibility'.
Supervisors: Prof. F.J. Kok, Dr. E. Kampman

Marloes Schurink awarded with the "Gouden Spatel"



At 10 January the KNCV (Royal Netherlands Chemical Society) awarded Marloes Schurink with the Golden Spatel. She received this award for writing the best chemical HBO-thesis. Marloes studied at the Saxion Hogeschool in Enschede. She completed her final project at the Laboratory of Organic Chemistry-WU and at Plant Research International. The main subject of her final project was the investigation of the working of the enzymes in the roots of the *Cichorium intybus* (Chicory). She discovered the forming of "Nutkaton", a taste and smell substance, which is found in soft drinks but also in

perfumes. This discovery is a now a part of a patent application. Since September 2001, Marloes is working as a PhD-student at the ATO/Laboratory of Biochemistry-WU. The title of her PhD-research project is "New generation of antioxidant peptides from protein hydrolyzates: Isolation and characterization of peptides as inhibitors for enzymes causing oxidative deterioration of foods."

Melanie Kuiper honored as the best Sportswoman of Wageningen of 2001



On January 30th, Melanie Kuiper was honored as the best Sportswoman of Wageningen of 2001. Melanie is the Dutch Champion of the 10-km Swimming for Women in Open Water and clubchampion of the Swimming Club of Wageningen. Melanie is now focussing more on water polo instead of swimming long distances. Melanie is working as a Ph.D.-student at the Food Hygiene and Food Microbiology Group-WU since 15 February 2001. The title of her research project is "Multiplication of *Legionella* in biofilms".

OVERVIEW OF THE 2002/2003 COURSES

VLAG courses:
<http://www.wau.nl/vlag/eduvlco.html>

NUTRIM courses:
<http://www-nutrim.unimaas.nl>

- 2002
- 13-14 June: Masterclass Nutrigenomics (Maastricht)
 - 23-27 June: Summer course Glyco-sciences (7th European Training Course on Carbohydrates)
 - 25-27 September: Regulation of Food Intake (Maastricht)
 - 8-11 October: Food enzymology
 - 28-30 October: Non food use of agricultural products
 - 24-30 November: Chemistry & biochemistry of antioxidants (EU)
 - 25-29 November: Management of food safety and microbiological risks

NOTE:

- 14-17 October: VLAG PhD-week
- 4-6, 21-22 November: Uitstroom cursus

Other activities:

- 7 June: Ischemie en reperfusie schade van centrale organen (Maastricht)
- 29 June – 3 July: Food Choice (congress)
- 23 October: VLAG thematic meeting on OMEGA-3 fatty acids

- 2003
- 24-28 March: Ecophysiology of the GI-tract
 - 31 March-2 April, 14-15 April: Uitstroom cursus
 - 13-16 October: Food Perception
 - 23-29 November: Chemistry and Biochemistry of Antioxidants

Courses will be held in Wageningen unless indicated.

PhD course "Digital Guide to Scientific Artwork"
 Date: 26 & 27 June 2002, Wageningen
 Costs: € 150 (incl. CD-ROM)

This two-days course provides basic information on preparing scientific illustrations, charts and photographs for digital reproduction. It helps researchers to prepare their own files for publication in scientific journals, PhD theses and Lab manuals, and solved common problems in producing scientific artwork. A CD-ROM with background information will be available. During the course participants will work with Adobe (especially Photoshop and Acrobat, and with Corel Draw software).

For more information: Dr J.H. de Jong and Mr. M.B. van Veen +31 (0)317 482618 / 485815
 E-mail: scientific.artwork@genetics.dpw.wau.nl
 Web: <http://www.mlab.nl>

Summer course Glycoscience

(7th International Training Course on Carbohydrates)

- June 23-27, 2002
- Wageningen, the Netherlands
- Tel.: +31 317 485108
- E-mail: Glycosciences@info.nutepi.wau.nl
- <http://www.wau.nl/vlag/glycosciences>

10th Food Choice Conference

- June 30 - July 3, 2002
- Wageningen, the Netherlands
- Tel. +31 317 485108
- E-mail: fcc-10@info.nutepi.wau.nl
- <http://www.wau.nl/vlag/fcc-10>



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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Young Scientist won 'Young Investigator's Award'

The secretariat of the Graduate School VLAG

Behoud talent!!

'Behoud talent' ('Keep the talented people within your organization') is the title of a report published in February 2002 by the LAIOO (Landelijk AIO en OIO Overleg; the national platform of PhD students). The LAIOO managed to attract considerable attention from the press when they offered end of February the report to our Minister for Education.

The report gives details about the various aspects of the supervision of PhD students and comes with recommendations for all parties involved; i.e. for the professors and the supervisors, for the PhD students, for the deans, for the graduate schools, and for the Executive Boards of the Dutch universities.

The report was criticised by professor van der Waals, until a few years ago he chaired the committee that awarded the accreditation to the graduate schools, who argues that the 21 'cases' as presented in the report are not representing the actual situation. These 21 cases as included in the report are indeed a summary of people who

experienced a lot of misery during their PhD study. Professor van der Waals argues that for various reasons these 21 can never represent the total of 3,000 PhD students now working at the Dutch universities; most cases came from the alpha/gamma sciences and in every situation you find people not happy with their working situation. Van der Waals underlines the importance of two recommendations;

- **Professors; cherish (= koester) your PhD students,**
- **PhD students; take initiatives!**

Within the Graduate School VLAG we discussed the conclusions and recommendations as presented in the report with the members of the VLAG PhD council. One of the recommendations for the graduate schools is that they should monitor more closely the duration of the PhD study. Average figures for the Netherlands indicated that just 7% of the PhD students complete their thesis within 4 years and that after 5 years 22% has completed the thesis. We did some preliminary work on producing this kind of figures in 1997 but never completed that exercise. We will produce new figures at the end of this year or early next year when we have to

prepare ourselves for an external peer review. This external peer review is a necessary step in the process to apply for re-accreditation end of 2003.

Another important recommendation given in the report is that the annual evaluations with your supervisors, and if necessary the personnel manager, are essential. This does not mean; just another five minutes discussion with your supervisors after you completed a discussion about your research. No, it is another appointment and adequate time to review all aspects of your work, your working situation, your education programme, etc.

We will keep you informed about our analysis of the duration of the PhD study within VLAG and about other actions taken on the basis of this report. Its highly recommended for reading!

Fré Pepping

EDITORIAL

Dear readers,

With this issue the VLAG-FLASH celebrates its first year of publication. We are very pleased by the interest expressed for this newsletter and we are looking forward to another year of enthusiastic participation from all of you! And to keep up with the fast-paced, electronically-minded society of ours, the VLAG-FLASH is now available on Internet. We invite you to take a look of our online version of the previous issues at: <http://www.wau.nl/vlag/vlflash.html>.

Besides our regular columns (In & Out, New PhD projects, Dissertations, Overview of the courses), in this number you will find information about the report published by the LAIOO (the national platform of PhD-students). This report gives details about the various aspects of the supervision of PhD students and comes with recommendations for all parties involved. It's highly recommended for reading!

You will find information about the 1st Thematic Meeting of the Center for Human Nutrigenomics that took place on March 27 at the WICC and about the congress on Food Colloids, Biopolymers and Materials of April 14-17. You will also find some nice pictures of the VLAG PhD week and news regarding two VLAG PhD students: Marloes Schurink (Biochemistry, ATO) won the "Golden Spatula Award" (KNCV Gouden Spatel) for the best HBO thesis report in 2001 and Melanie Kuiper (Food Microbiology and Hygiene) became the Sportswoman of Wageningen of the year in 2001.

Finally, stay alert for the announcement of this years VLAG PhD party! We're planning this party now! We'll keep you informed!

The Editorial Board

You can reach the editorial board of the VLAG-FLASH by e-mail at Vlag-flash@list.nutepi.wau.nl

Food Colloids 2002: Biopolymers and materials

From April 14 to 17, this biennial conference about structure and physical chemistry of foods was held in Wageningen. The conference was organised by people from the Wageningen Centre For Food Sciences (WCFS), in co-operation with VLAG. It was a great pleasure to see so many people crowding together on Sunday evening. Still this was only half of the roughly 230 participants from the industrial and scientific worlds.

After an informal evening, the tight scientific programme started off Monday morning. "Food goes nano" was the clear message by Martin Leser from Nestlé on the importance of looking to foodstuffs on small length scales (0.1-10 nm). He was followed by a set of lectures about structures formed



Tuesday April 16th: Conference dinner in the "Bush" in Burger Zoo, Arnhem

by biopolymers and colloids, how they can be theoretically described, how these can be looked at and how these behave, when they are deformed. If this wasn't yet enough science there were plenty of posters to look at during dinner.

On Tuesday the behaviour of interfaces was discussed, which is

related to formation and stability of emulsions and foams. For a refreshment of the mind a trip was planned to Burgers Zoo in Arnhem. We walked from jungle to through the ocean, along the sharks, the desert and finally back to the jungle. Meanwhile we were fed with delicious tropical foods and drinks and the sound of live Mexican music.

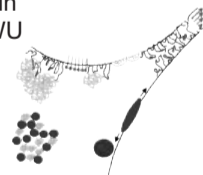
Then there was science again on Wednesday. Now it was time for the more complex mixtures of biopolymers, including an exclusive presentation of the group of Ian Norton from Unilever.

After the posters the congress centre was slowly running empty, but when we came in the pub in town we found a lot of the people

back, reflecting on the meeting and some making nice plans for the future.

Looking back it can be concluded that the science, presented on the conference was useful for the industry on one hand. On the other hand, the scope on food colloids which was presented by the industry was inspiring for the scientists in order to find the most important gaps of knowledge. So, a big "thank you" to the organising committee and hopefully next meeting in Leeds will be a success again.

Theo Blijdenstein
Food Physics-WU

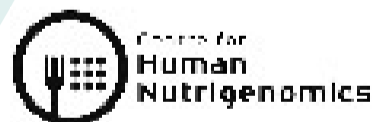


1st thematic meeting of the Centre of Human Nutrigenomics

The first thematic meeting of the Centre for Human Nutrigenomics (March 27, WICC) is a fact, and appeared to be very successful. The meeting was arranged around the various aspects of lipids and fatty acids. Two international speakers (Prof Paul Trayhurn, Neuroendocrine & Obesity Biology unit, University of Liverpool, U.K. and Dr Helen Roche, Department of Clinical Medicine, Trinity Health Sciences Centre, Ireland) as well as several PhD students and post-doctoral fellows from the Netherlands gave some interesting lectures.

It appeared that fatty acids and other lipid molecules are powerful compounds that affect various processes in the human body. This concerns numerous processes involved in the pathology of obesity, (colon) cancer, and coronary heart disease. Besides interesting new data on these fields there was some information about methodology (molecular biological techniques) as well. Some highlights on the field of obesity research were the discovery of ADINP, a new protein possibly involved in the differentiation of pre-adipocytes into adipocytes, and the characterization of FIAF another protein involved in the same process. With respect to colon cancer n-3 fatty acids were found to be protective as compared to n-6 fatty acids, a process in which COX2 may play an important role. With respect to coronary heart disease Dr Helen Roche presented promising data about effect of CLA (conjugated linoleic acid) on VLDL and TAG metabolism. Other topics related to coronary heart disease were the effects of plant stanol esters on cholesterol metabolism, and the existence of gene-environment interactions in relation to lipids and coronary heart disease. In his closing remarks, Prof Trayhurn explicitly mentioned that the initiation of the Centre for Human Nutrigenomics has been a very important step in nutritional research, however it is only the beginning and in the (near) future we have to stay focused to keep up with new possibilities.

Jogchum Plat,
UM-Human Biology



New PhD projects

Gijsbert H. Goossens, 01-01-2002
Angiotensin II, perfusion and metabolism. (AIO-project, UM-Human Biology. Supervisors: Prof. W.H.M. Saris, Dr. M. van Baak)

Julian Ramakers, 01-01-2002
Nutritional modulation of inflammatory processes in the pathology of atherosclerosis and inflammatory bowel disease. (AIO-project, UM-Human Biology. Supervisors: Prof. R.P. Mensink, Dr. J. Plat)

Mirjana Rajilic, 15-01-2002
(AIO-project, WU-Microbiology. Supervisors: Prof. W.M. de Vos, Dr. E. Vaughan)

Martijn Bours, 16-01-2002
Effect of adenosine 5'-triphosphate (ATP) on disease activity in Inflammatory Bowel Disease and Rheumatoid Arthritis. (AIO-project, UM-Epidemiology. Supervisors: Prof. P.A. van den Brandt, Dr. P.C. Dagnelie)

Danitsja van Leeuwen, 16-01-2002
Toxicogenomics: Biomarkers for effect research. (AIO-project, UM-GRAT. Supervisors: Prof. J. Kleinjans, Dr. J. van Delft)

Muriel Derrien, 21-01-2002
(AIO-project, WU-Microbiology. Supervisors: Prof. W.M. de Vos, Dr. E. Vaughan)

Brian Buysse, 01-02-2002
Antioxidants, oxidative stress and cardiovascular disease. (AIO-project, WU-Human Nutrition & Epidemiology/RIVM. Supervisors: Prof. D. Kromhout, Prof. F.J. Kok, Dr. E.J.M. Feskens)

Rene Koopman, 01-02-2002
The use of protein/free amino acid/carbohydrate supplements following strength training exercise as a means to increase gains in muscle mass and strength. (AIO-project, UM-Human Biology. Supervisors: Prof. W.H.M. Saris, Dr. A. Wagenmakers)

Neeltje Vogels, 01-02-2002
Subject specific treatment and prevention of obesity. (AIO-project, UM-Human Biology. Supervisor: Dr. M. Westerterp-Plantenga)

Meike Bungler, 04-02-2002
An integrated genomics approach towards gut health. (AIO-project, WU-Human Nutrition & Epidemiology. Supervisors: Prof. M. Müller, Dr. G. Hooiveld)

Elaine Klaassens, 04-02-2002
(AIO-project, WU-Microbiology. Supervisors: Prof. W.H. de Vos, Dr. E. Vaughan)

Berber Roorda, 01-03-2002
The role of UCP 2 and UCP3 on type 2 diabetes mellitus and atherosclerosis (AIO-project, UM-Human Biology, supervisors: Prof. W.H.M. Saris, Dr. P. Schrauwen)

Aswin Ajay Dihal, 01-04-2002
Benefit-risk evaluation of flavonoids in foods and their use as functional food ingredients (AIO-project, TNO-WUR Center for Food Toxicology/WU-Toxicology. supervisors: Prof. I.M.C.M. Rietjens, Dr. R. Stierum, Dr. G. Alink)

Kaatje Lenaerts, 01-04-2002
An integrated genomics approach towards gut health (AIO-project: UM-Human Biology, supervisors Prof. E. Mariman, Dr. J. Renes)

Andrea Werkman, 01-04-2002
An individual-based intervention program to decrease food intake and increase physical activity, in order to prevent weight gain in elderly, aged 55 years and older. (AIO-project, WU-Human Nutrition & Epidemiology. Supervisors: Prof. F.J. Kok, Prof. E.J. Schouten, Prof. D. Kromhout, Dr. J. Schuit)

Vivianne Visschers, 15-04-2002
Communication on risk analysis. (AIO-project, UM-GVO. Supervisors: Prof. W. Passchier, Prof. N. de Vries, Dr. R. Meertens)

POSTDOCS

Michael Huang, 01-12-2001 till 01-12-2004
The unfolded protein response in the yeast *Saccharomyces Cerevisiae*. (WU-MGIM)

Alexandra Meynier, 01-03-2002
Effects of stanol esters on postprandial lipoprotein metabolism, and on plasma fat-soluble antioxidant and vitamin concentrations in diabetic subjects. (UM-Human Biology, Marie-Curie Fellowship)

B.M. Ryan, 01-03-2002
The mechanisms of action and potential anti-cancer effects of 5-aminosalicylic acid (5ASA) (UM/AZM-Internal Medicine)

Egbert Smit, 16-03-2002
Gene-fed interactions in the framework of complex affections like obesity, diabetes and heart and vascular diseases (UM-Human Biology)



the obligatory group photograph

**VLAG PhD-week,
19-22 March**

some of the participants working on one of the exercises



Fokko Zandbergen and Stephanie Guillotin enjoying dinner in Utrecht



Lord of the Rings as an allegory for the Ph.D??

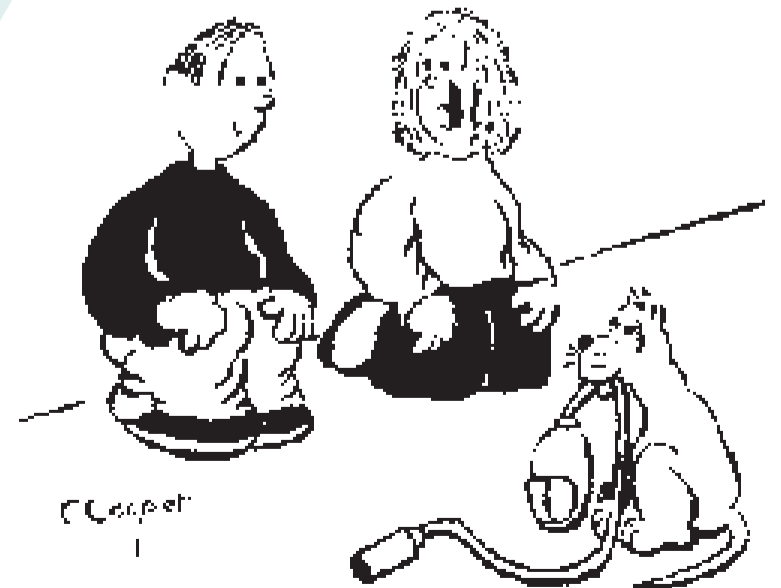
The story starts with Frodo: a young hobbit, quite bright, a bit dissatisfied with what he's learnt so far and with his mates back home who just seem to want to get jobs and settle down and drink beer. He's also very much in awe of his tutor and mentor, the very senior professor Gandalf, so when Gandalf suggests he take on a short project for him (carrying the Ring to Rivendell), he agrees. Frodo very quickly encounters the shadowy forces of fear and despair which will haunt the rest of his journey and leave permanent scars on his psyche, but he also makes some useful friends. In particular, he spends an evening down at the pub with Aragorn, who has been wandering the world for many years as Gandalf's postdoc and becomes his adviser when Gandalf isn't around.

After Frodo has completed his first project, Gandalf (along with head of department Elrond) proposes that the work should be extended. He assembles a large research group, including visiting students Gimli and Legolas, the foreign postdoc Boromir, and several of Frodo's own friends from his undergraduate days. Frodo agrees to tackle this larger project, though he has mixed feelings about it. ("I will take the Ring", he said, "although I do not know why.")

Very rapidly, things go wrong. First, Gandalf disappears and has no more interaction with Frodo until everything is over. (Frodo assumes his supervisor is dead: in fact, he's simply found a more interesting topic and is working on that instead.) At his first international conference in Lorien, Frodo is cross-examined terrifyingly by Galadriel, and betrayed by Boromir, who is anxious to get the credit for the work himself. Frodo cuts himself off from the rest of his team: from now on, he will only discuss his work with Sam, an old friend who doesn't really understand what it's all about, but in any case is prepared to give Frodo credit for being rather cleverer than he is. Then he sets out towards Mordor.

The last and darkest period of Frodo's journey clearly represents the writing-up stage, as he struggles towards Mount Doom (submission), finding his burden growing heavier and heavier yet more and more a part of himself; more and more terrified of failure; plagued by the figure of Gollum, the student who carried the Ring before him but never wrote up and still hangs around as a burnt-out, jealous shadow; talking less and less even to Sam. When he submits the Ring to the fire, it is in desperate confusion rather than with confidence, and for a while the world seems empty.

Eventually it is over: the Ring is gone, everyone congratulates him, and for a few days he can convince himself that his troubles are over. But there is one more obstacle to overcome: months later, back in the Shire, he must confront the external examiner Saruman, an old enemy of Gandalf, who seeks to humiliate and destroy his rival's protege. With the help of his friends and colleagues, Frodo passes through this ordeal, but discovers at the end that victory has no value left for him. While his friends return to settling down and finding jobs and starting families, Frodo remains in limbo; finally, along with Gandalf, Elrond and many others, he joins the brain drain across the Western ocean to the new land beyond.



"Look! Mandy caught a mouse!"



Name Anne-Marie J. F. Boerboom
Place & date of birth Oss, 01/07/1968
Research title Biochemoprevention of colorectal neoplasm: interactions between plant foods and polymorphism in coding as well as regulatory DNA sequences.
Department/University Toxicology, WU
Promotor Prof. P. J. van Bladeren
Start of PhD project 15/04/2001

Anne-Marie
 Biology and human health have been my topic of interest as long as I can remember. Later on the question, "can you influence your health by adjusting your diet", came in to focus, especially in relation to the development of cancer. In 1988 I started as a Biology student in Nijmegen. Seven years later I graduated with a specialisation in medical biology. After finishing biology I still had unanswered questions. I knew more about the process of carcinogenesis but not much about prevention and the mechanisms behind it. My quest

started, and brought me to Germany where I worked with two colleges to unravel the mechanism by which dioxin increases the expression of the enzyme prostaglandin-H-synthase-2. On the 15th of April 2001 I started in the above-mentioned project as a PhD student at the department of Toxicology. My role is to investigate the molecular parts of the project and the search for unknown polymorphisms in the genomic DNA.

Mariken
 After an internal dispute between my interest in language (which was

going to result in a study of Latin and Greek) and my interest in (vegetarian) nutrition and human biology, I decided in favour of the latter. In 1995 I started Health Sciences in Maastricht. Whenever I had a choice in courses or topic for a paper, I made sure it had something to do with nutrition. While doing my MSc fieldwork and thesis on diet and homocysteine in patients with heart failure (at the departments of Epidemiology and Toxicology), I wasn't satisfied with my knowledge of research methodology. So I decided to extend my studies to specialise in

epidemiology. The biochemoprevention project attracted me because of the opportunity to explore different fields and have a closer look at mechanisms underlying observations in epidemiology. The aspect of diversity, however, can also be quite overwhelming at times.

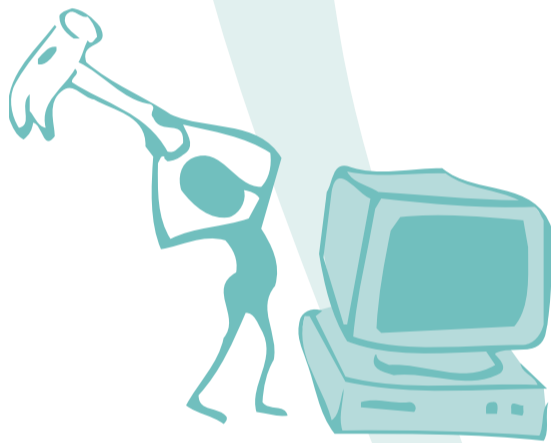
Together:
 The project takes into account environmental/dietary factors, biomarkers and the genome. We like the idea of an interplay between plant foods en our detoxification system on a gene level. The

In...



special aspect about this project is the close co-operation between our departments. This co-operation broadens our vision, keeps us tiptoe and forces us to communicate in a way everybody can understand. The language we take for granted can be a mystery for some one else.

&...



Name Lina Engelen
Place & date of birth Stockholm (Sweden), 19/05/1974
Research title Physiological aspects of sensory attributes
Institute/ department Head and Neck Department, University Medical Center, Utrecht / Wageningen Centre for Food Sciences
Promotor Prof. Frits Bosman
Start of PhD project September 2000

Imagine yourself eating a smooth, creamy dessert. The flavor is good, the colour inviting, the texture sensational, and the result is probably that you want to take another bite. We know that all these perceptions arise quickly and reproducibly. The taste is perceived by the taste buds in the mouth and the odor receptors in the nose, the eyes see the color with all its millions of color sensitive cones. But how do we perceive texture? How do we know that one chocolate mousse is smoother than the other and that one sauce is thicker than the other? The answer to these questions is not yet known.

In the project I'm working, three disciplines are collaborating to try to gain as much insight possible in

what texture is, how it is perceived and how it relates to the physical/chemical characteristics of food, and to the physiological processes in the mouth while eating. I find the most difficult part of being a PhD-student, and especially in a multidisciplinary team, is to try to combine the interests of the other team members with my own goals and time limits. The largest challenge is to perform good science and still find your own way and follow your heart, and the advantage is that you are free enough to do that as a PhD-student.

I am studying the oral physiology and its relation with texture sensations, focussing on several items These are: the perception

of size in the mouth, the role of saliva in texture perception; does the amount or composition of saliva influence how a product is perceived. And lastly the perception of temperature, and how temperature of the mouth and of the product influence the texture attributes.

During the last year and a half I have learnt a lot and the wide path seems to be narrowing down. I have encountered quite some surprising and interesting results.



Name Marcella Hallemeesch
Place and date of birth The Hague, 23/02/1971
Topic of research Role of arginine in endotoxemia. Studies in mice with reduced arginine availability.
Institute Department of Surgery, Maastricht University
Promotors Prof. P.B. Soeters (Surgery, Maastricht), Prof. W.H. Lamers (Anatomy and Embryology, AMC)
Date of defense 20/12/2001 Aula of Maastricht University

The aim of my thesis was to study the effect of reduced arginine availability on nitric oxide production *in vivo*. Nitric oxide is a radical produced from the amino acid arginine. It has functions in cardiovascular, neural and inflammatory systems.

The work was performed in Maastricht. I did my biology study at Leiden University, with practical trainings in Indonesia and Belgium. Although Maastricht is in The Netherlands it is quite different from Leiden. It took a while to get adapted! The research proposal initially consisted of experiments in rats. However, after a few experiments the results were not very promising, and doubts appeared. Ph.D.-student crisis! We decided to proceed the studies with a different experimental model: mice. The obvious advantage of using mice is that

a lot of transgenic and knockout mice are available. The disadvantage is of course the limited size of mice. I performed metabolic experiments in these mice, and the surgical procedures we used in rats needed to be optimised for experiments in mice. My fingers looked very large compared to these mice, especially under a microscope. Ph.D.-student crisis! It was already the third year and there is not a lot of time left. Ph.D.-student crisis! Then, suddenly things started to change. The experiments were going much better and results appeared. Time to start writing. After 4 years not everything was written down and not all samples were measured. I decided to leave Maastricht. I lived in Capelle for a while, together with my boyfriend, and wrote parts of the thesis. Then an advertisement for a post-doc position in Amsterdam

appeared in the newspaper. I applied and got the job. I then of course needed to finish the thesis and at the same time start with a new subject. Although this was difficult and very busy at some points, I think it was a good decision. Then, suddenly the thesis was finished. It looked fantastic! The day of the defense was very special. One of my paranymphs was my friend and colleague who also came from Leiden and started her Ph.D. studies in Maastricht at the same day 6 years earlier. It was also the day of her thesis defense!

Out...



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?

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