

## Dissertations

23 September 2004 at Universiteit Maastricht  
**Chantal Heijnen: 'The interaction of flavonoids within the NO-system'**  
(Co)promoters: Prof. A. Bast, Dr.G.R.M.M. Haenen

8 October 2004 at Wageningen University  
**Detmer Sipkema: 'Cultivation of marine sponges: From sea to cell'**  
(Co)promoters: Prof. J. Tramper, Dr. R.H.Wijffels, Dr. R. Osinga

13 October 2004 at Universiteit Maastricht  
**Els Anten-Kools: 'Promotion and support of breast feeding'**  
(Co)promoters: Prof. H. de Vries, Prof. P.A. van den Brandt, Dr. C.T.M.C.N. Thijs

18 October 2004 at Wageningen University  
**Rosalie Dhonukshe-Rutten: 'Vitamin B12: A novel indicator of bone health in vulnerable groups'**  
(Co)promoters: Prof. W.A. van Staveren, Dr. C.P.G.M. de Groot

22 October 2004 at Wageningen University  
**Jane Durga: 'Folate and age-related disease'**  
(Co)promoters: Prof. F.J. Kok, Prof E.G. Schouten, Dr. P. Verhoef

2 November 2004 at Wageningen University  
**Djin Gie Liem: 'Sweet and sour taste preferences of children'**  
(Co)promoters: Prof. F.J. Kok, Dr. C. de Graaf, Dr. J.A. Mennella

10 November 2004 at Wageningen University  
**Mark Boekschoten: 'Elucidating**

**the mechanism behind the lipid-raising effect of cafestol'**  
(Co)promoters: Prof. M.B. Katan, Dr. G.J.E. Hooiveld

11 November 2004 at Universiteit Maastricht  
**Marja Vermeeren: 'Dietary management in COPD'**  
(Co)promoters: Prof. E.F.M. Wouters, Prof. Dr. A.M.W.J. Schols

19 November 2004 at Universiteit Maastricht  
**Miriam Brink: 'Dietary factors and K-ras oncogene mutations in sporadic colorectal cancer'**  
(Co)promoters: Prof. P.van den Brandt, Dr. M.P. Weijnenberg, Dr. A.F.P.M. de Goeij

19 November 2004 at Wageningen University  
**Sandra ten Bruggencate: 'Dietary non-digestible carbohydrates and the resistance to intestinal infections'**  
(Co)promoters: Prof. M.B. Katan, Dr. R. van der Meer, Dr. I.M.J. Bovee

30 November 2004 at Wageningen University  
**Wouter Wisselink: 'Metabolic engineering of mannitol production in Lactococcus lactis'**  
(Co)promoters: Prof. W.M. de Vos, Dr. J. Hugenholtz

6 December 2004 at Wageningen University  
**Wilbert Heijne: 'Toxicogenomics. Applications of new functional genomics technologies in toxicology'**  
(Co)promoters: Prof. P.J. van Bladeren, Prof. J.P. Groten, Dr. B. van Ommen

7 December 2004 at Wageningen University  
**Nguyen Van Thanh: 'Dormancy, acitvation and viability of Rhizopus oligosporus sporangiospores'**  
(Co)promoters: Prof. F.M. Rombouts, Prof. Tran Phuoc Duong, Dr. M.J.R. Nout

7 December 2004 at Wageningen University  
**Ngo Thi Phuong Dung: 'Defined fungal starter granules for purple glutinous rice wine'**  
(Co)promoters: Prof. F.M. Rombouts, Dr. M.J.R. Nout

15 December 2004 at Universiteit Maastricht  
**Bashir Rezk: 'Antioxidants and their metabolites: some toxicological aspects'**  
(Co)promoters: Prof. A. Bast, Dr. G.R.M.M. Haenen, Prof. W.J.F. van der Vijgh (VUA)

20 December 2004 at Wageningen University  
**Brenda Diergaarde: 'Diet, lifestyle, and molecular alterations that drive colorectal carcinogenesis'**  
(Co)promoters: Prof. F.J. Kok, Dr. E. Kampman, Dr. G.N.P. van Muijen

22 December 2004 at Universiteit Maastricht  
**Simone van Breda: 'Vegetable induced gene expression changes in anticarcinogenic pathways in human and mouse tissues'**  
Promoter: Prof. J.C.S. Kleinjans

23 December 2004 at Universiteit Maastricht  
**Elleny Balder: 'Diet and cancer; the explanatory value of dietary**

**patterns'**  
(Co)promoters: Prof. P. van den Brandt, Dr. R.A. Bausch-Goldbohm (TNO)

14 January 2005 at Wageningen University  
**Mireille Weijers: 'Fibrillar protein aggregates and structures studied on ovalbumin'**  
(Co)promoters: Prof. M.A. Cohen Stuart, Dr. R. W. Visschers, Dr. P.A. Barneveld

18 January 2005 at Wageningen University  
**Niels Stoffers: 'Certified reference materials for food packaging specific migration tests: development, validation and modelling'**  
(Co)promoters: Prof. M.A.J.S. van Boekel, Dr. J.P.H. Linssen, Dr. M. Dekker

19 January 2005 at Wageningen University  
**Astrid Bakker-Zierikzee: 'Prebiotics and probiotics in infant nutrition'**  
(Co)promoters: Prof. J.G.Bindels, Prof. F.J. Kok, Dr. J.J.M.Tolboom

20 January 2005 at Universiteit Maastricht  
**Tanja Adam: 'Glucagon-like peptide I stimulation in relation to body weight'**  
(Co)promoters: Prof. K.R. Westerterp, Prof. T.W.A. de Bruin, Dr. M.S. Westerterp-Plantenga

21 January 2005 at Universiteit Maastricht  
**Guy Plasqui: 'Daily physical activity, energy expenditure and physical fitness'**  
Promoter: Prof. K.R. Westerterp

## 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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to point out major factors that make proteins aggregate. The obtained results show the direction to a delicate balance between interacting and counteracting forces to form aggregates. Once the protein molecules overcome the charge barrier and can interact by hydrophobic interactions, it is also possible to form stabilising covalent bonds. The relative importance of the factors in this balance also defines the final structure of the aggregate. Knowledge of these factors at a molecular and mechanical level allows food industry to make an educated choice on effective food ingredients for building food structures.

**Elke Scholten**, a fourth year Ph.D. student in the Food Physics group, received the 'Storm van der Chijs' Award for her research on modulation of physical and chemical interactions for protein aggregation and gelation. To make proteins functional in creating food structure, the individual protein molecules will first have to be processed such that the protein molecule can become activated. This means that some parts of the protein structure, which are normally buried inside the molecule, become exposed. These newly exposed groups can then interact with other protein molecules (aggregation). To increase the viscosity in a food product or for example to make a pudding, the principle of aggregation is often used in food industry. A general approach in food science is to study the mechanism of the process by varying system conditions as pH or temperature. However, a satisfactory answer of why a particular protein forms a particular type of network at a defined system condition has not been given yet. My project focuses on elucidating which characteristics of a protein molecule determine availability for structure building in food products. The approach we use is to chemically engineer the protein molecules and to study aggregation propensity. Using techniques that allow the identification of the architectural aspects of protein structures that can aggregate, it is now possible

interrupted for a percussion session. This energetic session was called "Communication through music". We used percussion instruments and our voices to learn in a really nice way about different aspects of communication. Our first dinner was a real Dutch meal: 3 kinds of mashed food (Stampot). In the evening we all had some drinks and played a lot of round games, especially horse-trading was very popular! The next morning started with a lecture and a discussion about



# VLAG FLASH

Newsletter for the PhD-students of the Graduate School VLAG (Advanced studies in food technology, agrobiotechnology, nutrition and health sciences)

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## News from the secretariat of the Graduate School VLAG

### VLAG Certificate in Maastricht.

As per January 1st 2005 all PhD Students registered within VLAG via NUTRIM, upon completion of the pre requisitions concerning education i.e. having attended the VLAG PhD-week, the Capita Selecta and have obtained at

### One page more!! Update

In the previous edition of the VLAG-FLASH Fré Pepping already informed you about changes in the 'promotie reglement' for Wageningen University i.e. to add a summary of your educational activities in the

least 210 credit points, will receive the VLAG Graduate School Education Certificate from their (co)promotor, after successfully defending the thesis. Attached to this certificate will be an overview of courses and other

### 13th VLAG PhD-week: 1-4 November 2004,

thesis. This will help us to report about the educational activities in a standardized way (we will give guidelines on the terminology to be used), although every graduate school will specify their own format.

educational activities attended. The NUTRIM office will compose the documents.

**Yvonne Sondeijker**

For more information and the format please look at <http://www.wau.nl/vlag/phdvlag.htm>

**Fré Pepping**

session thought this workshop was amusing, but most of all really dreamy. And then the last day started. We began with a workshop "Creativity and Innovation". We had to start thinking "out of the box" and solve our problems with some more imagination than usual. The PhD-week ended with the course "The time of your life". What we learned and maybe already knew is that we should try to make our PhD-period the best time of our life! We want to thank Vesna Pršić very much for organising this successful PhD-week!

**Marjolijn Bragt and Renate Winkels**

## EDITORIAL

Dear readers!

This is the first VLAG-FLASH of 2005! We hope you enjoyed Christmas and we wish you a Happy New Year and all the best in your research as well as in your personal life! The VLAG-FLASH consists of the regular columns, news from the secretariat in Wageningen as well as Maastricht, news from both the VLAG PhD council as well as the Wageningen PhD council and also an interview with Jeroen Kiers (former PhD-student).

In this VLAG-FLASH you can also read about the PhD student trip of the Food Chemistry Group to Japan. Furthermore, the 13th VLAG PhD-student week was held in Bilthoven. The VLAG PhD council has a new chairperson. We thank Sandra van der Graaf for all the effort she put in as a chairperson and we welcome Jeroen Knol as the new chairperson. Trix Claassen left the VLAG secretariat because she moved to Groningen; we wish her and her husband all the best in their new neighbourhood. Finally we like to congratulate Elke Scholten and Kerensa Broersen with receiving the Storm van der Chijs Award.

The Editorial Board

## Interview with a former PhD student

<b>Name</b>	Jeroen Kiers
<b>Title thesis</b>	Effects of fermented soya bean on digestion, absorption and diarrhoea
<b>Group</b>	Laboratory of Food Microbiology, Department of Agrotechnology & Food Sciences
<b>(Co)promoters</b>	Prof. F.M. Rombouts, Dr. M.J.R. Nout, Dr. M.J.A. Nabuurs
<b>Date &amp; place of defence</b>	September 25, 2001 in Wageningen
<b>Current address</b>	Friesland Foods Western Europe



**1. What was the topic of your PhD thesis?**  
My thesis describes effects of fermented soya bean on gastrointestinal physiology and addresses *in vitro*, *ex vivo* and *in vivo* characteristics of digestion, absorption and diarrhoea. The obtained results imply the potential of using fermented soya beans in individuals suffering from diarrhoea and malnutrition.

**2. Can you describe the most important experiences during that period?**  
During my PhD I experienced numerous of big moments to remember varying from the first oral presentation at an international conference to the acceptance of the first manuscript and of course the ultimate challenge of finishing and last but not least defending the thesis. Besides these essential elements of doing my PhD, elements that each PhD student will hopefully encounter, I especially enjoyed the additional elements such as the regular meetings at Numico (sponsor), working partly at ID-Lelystad and Nutreco (animal research) and the company visits (e.g. tempe factories, PhD-trip to Denmark and Sweden).

**3. What is your current job like? Is it in the same field as your PhD**

**research?**  
Even before doing my PhD I had the plan to work in an industrial setting. During the final stage of my PhD I looked for and found a position within a food company where applied research was carried out to the benefit of functional food brands (Unilever Health Institute). Only a few months ago I exchanged my job as a senior scientist for that of innovation manager within the same company, Friesland Foods (former Friesland Coberco Dairy Foods). As a senior scientist I was working in the area of amongst others infant nutrition. There were therefore some parallels with the nature of and even with the topic of my PhD work, but that was rather a coincidence. My current job is being an interface between marketing and R&D, and has therefore less in common with my PhD work. It is about translating consumer, technological and scientific trends into future innovation directions suited for our brands (e.g. Friso, Fristi, Appelsientje, Friesche Vlag).

**4. How are you combining your career and your private life?**  
My job easily takes more than 40 hours a week. That combined with 24 hours a day spending in my car makes it sometimes hard

to spent quality time with my wife and kids during weekdays. Combining career and family requires setting clear rules and being boss over your own time. Usually that works, although sometimes concessions are needed at one or the other side.

**5. What are your plans for the future?**  
I hope to grow further into my new position at Friesland Foods Western Europe and that I can fully explore the interesting place between marketing and R&D, contributing to strong and relevant food innovations. In the next 5 to 10 years I hope to become more all-round in this rather new, exciting (and often forgotten or non-existing) area within the food industry.

**6. Do you have an advice for current PhD students?**  
A bit of advice: enjoy your project, the pioneering and the romance of doing a PhD, but take the advantage of your relative freedom as a PhD-student to explore your boundaries outside your project! Try to have a look outside the lab or department for instance in doing practice in another institute, taking business or psychology classes etc. Anything that can and will make you richer and better suited to take up your future job!

## Awards

2 'Storm van der Chijs' Awards for 2 VLAG PhD-students.

**Kerensa Broersen**, a fourth year Ph.D. student in the Food Chemistry group, received the 'Storm van der Chijs' Award for her research on modulation of physical and chemical interactions for protein aggregation and gelation. To make proteins functional in creating food structure, the individual protein molecules will first have to be processed such that the protein molecule can become activated. This means that some parts of the protein structure, which are normally buried inside the molecule, become exposed. These newly exposed groups can then interact with other protein molecules (aggregation). To increase the viscosity in a food product or for example to make a pudding, the principle of aggregation is often used in food industry. A general approach in food science is to study the mechanism of the process by varying system conditions as pH or temperature. However, a satisfactory answer of why a particular protein forms a particular type of network at a defined system condition has not been given yet. My project focuses on elucidating which characteristics of a protein molecule determine availability for structure building in food products. The approach we use is to chemically engineer the protein molecules and to study aggregation propensity. Using techniques that allow the identification of the architectural aspects of protein structures that can aggregate, it is now possible



polysaccharides are often jointly present in food products, such as in creams and low-calorie spreads. When these ingredients are mixed, phase separation can occur, i.e. leading to two phases, separated by an interface. The properties of these interfaces have an effect on the structures that can be obtained during the fabrication process of the food product. So, an understanding of the interfacial properties gives the opportunity to control and design food structures. Therefore, my research focuses on the interfacial properties of these mixtures. Since direct accurate experimental methods are not available at the moment, we have combined classical experimental methods with recent theoretical insights to describe these properties. Our results show that these interfaces are flexible and that they are very leaky with respect to transport of the ingredients through the interface. This knowledge was used to describe the kinetics of the phase separation process, which is important in structure formation of food.

During the first day, all PhD students had the opportunity to give short presentations about their PhD-project. Projects varied from "Stress response in Bacillus Cereus" to "Prevention of metabolic syndrome by dietary interventions". During the afternoon the presentations were

ethical questions concerning food. Thinking of ethical questions took a lot of our energy, so we really needed some new energy! Fortunately, Ms. Brug was present to give us Yoga training. It was nice to see PhD-students struggle with poses like the "warrior" and the "eagle".



Surprisingly, all of us could bring all legs and arms back in normal position. The Yoga session ended with a relaxation exercise. Some of us got so relaxed that this exercise resulted in a deep sleep accompanied by snoring here and there... After lunch the day continued with two interesting lectures: Mr. Wilson talked really enthusiastically about 'Food laws in the US and EU' and Mr. Van Ommen talked about the quickly expanding field of nutrigenomics. The afternoon ended with a workshop on cultural diversity.

## New PhD Projects

**Geert Heidema, 1 September 2004**  
Risk of coronary heart disease in a large population-based cohort: complex associations with genetic variation in multiple genes and dietary factors. Supervisors: Prof. D. Kromhout, Prof. E. Mariman, Dr. E. Feskens, Dr. J. de Boer

**Feng Li, 1 September 2004**  
Proteins interacting with supercoiled and chromosomal DNA. WU-Physical Chemistry & Colloid Sciences, supervisor: Dr. R. de Vries

**Marjolijn van Bragt, 15 September 2004**  
Short-term cellular responses in relation to metabolic stress syndromes. UM-Human Biology, supervisor: Prof. R.P. Mensink

**Julia Volman, 15 September 2004**  
Intestine oriented immune-modulating effects of dietary B-glucans. UM-Human Biology, supervisors: Prof. W.A. Buurman, Prof. R.P. Mensink, Dr. J. Plat

**Sander Wijers, 1 September 2004**  
Adaptive thermogenesis, cold induced thermogenesis and diet induced thermogenesis compared: implications for obesity. UM-Human Biology, supervisors: Prof. W.H.M. Saris, Prof. E. Mariman, Dr. W.D. van Marken Lichtenbelt

**Mark Levisson, 1 October 2004**  
Biocatalysis. WU-Microbiology, supervisors: Prof. W.M. de Vos, Dr. S.W.M. Kengen

**Ans Punt, 1 October 2004**  
New PBPK concepts for low-dose cancer risk extrapolation. WU-Toxicology, supervisors: Prof. I.M.C.M. Rietjens

**Alexander Remels, 1 October 2004**  
Investigation of muscular genes and proteins involved in substrate oxidation in COPD and the response to therapeutic intervention. UM-Pulmonology, supervisors: Prof. Dr. A.M.W.J. Schols, Dr. P. Schrauwen

**Michel Rosso, 1 October 2004**  
Modified silicon nitride surfaces for food applications. WU-Organic Chemistry, supervisor: Dr. H. Zuilhof

**Bart van Rossum, 1 October 2004**  
Microbe-mediated gut metabolism: Metabolite and flux analysis. UM-General Surgery, supervisors: Prof. R.-J. Brummer, Dr. N.E.P. Deutz, Dr. A.A. de Graaf

**Henrike Hamer, 18 October 2004**  
Biological assays related to intestinal health. UM-Internal Medicine/WCFS

**Marieke Bos, 4 October 2004**  
Impact of mono unsaturated fatty acids and a Mediterranean diet on hyperinsulinemia and the metabolic syndrome. WU-Human Nutrition, supervisors: Prof. F.J. Kok, Dr. J.H.M. de Vries, Dr. E.J.M. Feskens

**Mark Bouwens, 4 October 2004**  
Human health and fatty acid dependent gene regulation: Employing blood cell gene expression as a marker for whole body health status. WU-Human Nutrition, supervisors: Prof. M. Müller, Dr. L. Afman

**Nicole Souren, 1 November 2004**  
Influences of candidate genes and perinatal-environment on lipid and carbohydrate metabolism. UM-Genetics, supervisors: Prof. R.F.M. Vlietinck, Dr. A. Paulussen

**Maaik Appeldoorn, 8 November 2004**  
Improved understanding and utilization of the biofunctional potential of proanthocyanidins. WU-Food Chemistry, supervisors: Dr. J.P. Vincken, Dr. P.C.H. Hollman

**Ruud Cuypers, 15 November 2004**  
Solvent impregnated resins (SIRs) for the recovery of low concentration polar organics (ethers & phenols) from water. WU-Organic Chemistry, supervisor: Dr. H. Zuilhof

**Marja Molag, 15 November 2004**  
Development of a computer-based matrix with questions on dietary intake to generate food frequency questionnaires for valid assessment of dietary intake in the Netherlands. WU-Human Nutrition, supervisors: Prof. W.A. van Staveren, Prof. P. van den Brandt, Dr. J.H.M. de Vries

**Karen Mathijs, 15 November 2004**  
Transcriptome profiling to predict the carcinogenic properties of chemicals. UM-Health Risk Analysis and Toxicology, supervisors: Prof. J. Kleinjans, Dr. J. van Delft

**Odette Perez-Gutierrez, 29 November 2004**  
Feed for pig health. WU-Microbiology, supervisors: Prof. W.M. de Vos, Dr. H. Schmidt

**Jacco de Haan, 1 December 2004**  
Lipid rich nutrition as cure for intestinal inflammation. UM-General Surgery, supervisors: Prof. W.A. Buurman, Dr. J.W. Greve

**Anneke van Hees, 1 December 2004**  
LIPGENE: interaction of nutrients and genotype in the metabolic syndrome. UM-Human Biology, supervisors: Prof. W.H.M. Saris, Dr. E. van Blaak

**Marieke Pastink, 1 December 2004**  
Comparative metabolomics of lactic acid bacteria. WU-Microbiology, supervisors: Prof. W.M. de Vos, Dr. J. Hugenholtz

**Petra Roubos-van den Hil, 1 January 2005**  
Structure and biofunctionality of high-molecular-weight soybean fractions produced by fungal fermentation in soybean tempeh: effects on some pathogenicity factors of diarrhoea-associated bacteria. WU-Food Microbiology, supervisors: Prof. M.H. Zwietering, Dr. M.J.R. Nout, Dr. H. Gruppen

**Linda Kjellberg, 1 January 2005**  
IC-Nutrigenomics. WU-Human Nutrition, supervisors: Prof. M. Müller, Dr. S. Kersten

**Odine van de Rest, 15 January 2005**  
Cognitive decline and early signs of depression in elderly people: the efficacy of n-3 fatty acid supplementation. WU-Human Nutrition, supervisors: Dr. C.P.G.M. de Groot, Dr. J.M. Geleijnse

## New Postdoc Projects

**Kristof Vanschoonbeek, 1 October 2004**  
UM-Human Biology

## In & Out



**Name**  
Sanne Nabuurs  
**Place & date of birth**  
Venray (The Netherlands), 24/04/1979  
**Research title**  
Characterisation of the structure of the unfolded state of apoflavodoxin of *A. Vinelandii* by NMR and optical spectroscopy

**Group/Department**  
Laboratory of biochemistry, Wageningen University  
**(Co)promoters**  
Prof. S. de Vries, Dr. C. van Mierlo  
**Start of PhD**  
March 2004

It is almost a year ago that I took the train to Wageningen for my first day of work. I had just finished my undergraduate at the Utrecht University, and was very proud of my new Drs. title. In Utrecht I studied chemistry with a specialisation in biomolecular NMR spectroscopy and it was my supervisor that pointed out this PhD position in Wageningen. I wanted to do a PhD which needed some expertise in NMR spectroscopy, since I had put so much effort in learning the technique in my specialisation, and this project was ideal since it also involved some fundamental questions.

I am studying the folding of *Azotobacter vinelandii* flavodoxin. This protein is involved in electron transport by making use of a FMN cofactor. Folding of proteins occurs in every living cell, and knowledge about it is critical for studying diseases and industrial applications. When this protein is unfolded by use of denaturants, it is shown that an intermediate structure, a molten globule, is formed and finally the protein unfolds. To study the folding of this protein I want to know more about the unfolded protein. This can be done by NMR

spectroscopy since structural details at residual and even atomic levels can be seen with this technique. After looking at the unfolded protein also the intermediate protein that is formed in unfolding can be studied with this technique.

Besides my work as a researcher I am a member of the OR Agrotechnology and Food (Employee counsel). The OR gives me the opportunity to get insight in the complex organisation of Wageningen UR; we talk about both the research institutes and the departments of

the university. To make it able for PhD's to attend the OR meetings, a few months extra time is granted after our four years.

After almost one year I met a lot of new people, and I learned much about the university. In the next years I hope to get an idea of the choices I can make after my PhD and I want to have a great time in Wageningen.



**Name**  
Rouke Bosma  
**Place & date of birth**  
Sneek (The Netherlands), 27/08/73  
**Title thesis**  
Engineering aspects in growth of *Monodus* in photobioreactors

**Group/Department**  
Food & Bioprocess Engineering group, Wageningen University  
**(Co)promoters**  
Prof. J. Tramper, Dr. R.H. Wijffels  
**Start of PhD**  
April 2002



**Name**  
Kristof Vanschoonbeek  
**Place & date of birth**  
Wageningen, 1 October 2004  
**Title thesis**  
UM-Human Biology

'Why don't you start a PhD?' René asked me when I started a permanent job as technician in his Marine Biotechnology group, about five years ago. And so I started, dividing my time between research, education and general things like safety, webpage and support. In my job, sometimes dividing time between different facets of my job is difficult, but in most cases exactly the alternation and interaction between these aspects makes it interesting and very pleasant to do. In these five years, a research paper about optimization of harvesting microalgae with ultrasound and an educational paper about a practical, which I developed, was published. So, what, in my

opinion, is the best thing in being a PhD? In my opinion: freedom; to do your own research, to write your own papers, to present your own results and to develop yourself in the direction you choose. This freedom gives you the opportunity to reach your own border/limits and also to try extending these borders. I was very lucky to be able to do a PhD at Process Engineering, which is a very stimulating group due to its non-hierarchical structure and also because it is a very social group, which in my opinion, is very important. The possibility of walking in at your professor's, supervisors and other group leaders office and talking about research gives you the opportunity to refine your

research and interaction with colleagues during social events are useful to put your problems, research and decisions in the right perspective. At this moment (December-February), education is taking most of my time. After that, I like to start finishing my second research paper, which describes an experimental design on lab scale from which output data is used to model productivity of microalgae in an outside photobioreactor. At the same time I like to do some final experiments regarding a third paper which I hope to finish this year. In 2006, I like to finish a fourth paper, probably a review, and start writing my thesis and finally promote.

## Food Chemistry Japan 2004

Last December we made a study trip through Japan with 24 PhD-fellows and 3 (associate) professors of the Laboratory of Food Chemistry. In two weeks we visited several universities



(photo: Osaka City University), institutes, and companies. The first week was in and around Tokyo, and for the second week we took the fast Shinkansen train to the area of Kyoto and Osaka. More than expected, we found a very warm welcome everywhere. The attendance and the interest in our presentations were high and this resulted in nice discussions about the different subjects. This opened the way for closer cooperation. The research facilities were often state of the art, and so was the level of research. Especially the tour about nanotechnology in the Institute of Microchemical Technology gave us a glance in the near future.

In Japan much effort is taken to please the guests, and we enjoyed the lunches, dinners and bus transportation that was offered. One company even provided snacks and beer in the bus. Our contact from Tokyo

University had two students wait in the queue for hours to arrange tickets for the famous Kabuki theatre. It will not be easy to return the favour if Japanese researchers decide to visit our university.

We experienced that functional foods are a hot topic in Japan and a lot of time and money is used to improve products. Consumers in Japan regard "good for health" very important. Green tea is served with every meal and added in concentrated form to products such as Kitkat and crème brûlée. You can find drinks with concentrated vegetable juice or with specific amino acids added. Also pets are not forgotten, because special dog food is available for your Shitzu, Dachshund, or Chihuahua. We also learned that Japanese love different textures and use more than a thousand names to describe it. Some examples are saki saki (crispy), beta beta (sticky), and puru puru (wobbly). Taste seems, however, to be less important as they put soy sauce on almost everything. This made the first encounters with Japanese food an exciting adventure (photo: Japanese food).



In the weekends there was time to see several tourist attractions. We visited the Nikko shrine, which consists of a large temple complex, and we caught some great views of mount Fuji, the highest mountain of Japan. In Tokyo we were lucky to enter the enormous vegetable and fish market in the early morning, and we visited several parks and temples. Also, the billboards and crowded nightlife in the popular districts Shibuya (Tokyo) and Umeda (Osaka) were overwhelming.

At first sight the Japanese culture seemed very different. You have to take off your shoes everywhere (even in the lab and in a bar), they seem to find 27 °C a pleasant indoor temperature, there are strange buttons on the toilet, and people are sleeping any place they can. The subway is popular for sleeping, but during presentations is also quite common. On the other hand, Japan is clearly changing rapidly. Bread and dairy products are incorporated in the diet, the English is improving, and shaking hands is not uncommon. Often it took only a few beers to overcome the cultural differences.

The exchange on both scientific and cultural level made this trip a great success.

For more information check [www.foodchemistry.wur.nl](http://www.foodchemistry.wur.nl).

**Wil van Loon**

## News from the PhD Councils

**The VLAG PhD Council**  
There have been some changes in the VLAG PhD Council. Sandra van der Graaf (WU-Food and Bioprocess Engineering) has resigned as chair of the VLAG PhD Council and has left the council with Elke Scholten (WU-Food Physics) and Anne-Marie Boerboom (WU-Toxicology). Maaik Schutte and Jeroen Knol are the new representatives for WU-Toxicology and WU-Product Design and Quality Management, respectively. Jeroen Knol is the successor of Sandra van der Graaf as chair of the PhD Council.

The next meeting of the PhD Council will be held at January 12, 2005 at 16:00 at Unitas, Wageningen. If you think that your research group is under-represented and you are interested in joining the PhD council you can contact the VLAG office or Jeroen Knol ([jeroen.knol@wur.nl](mailto:jeroen.knol@wur.nl))

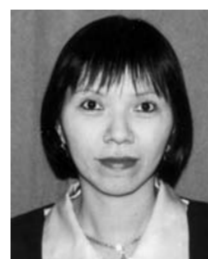
**The Wageningen PhD Council (WPC)**  
A central issue that is being addressed at the moment by the WPC is the issue of the (apparent) absence of formal and uniform regulations regarding grounds for contract extension for "AIO's" at Wageningen UR. This means that in practice there are no arrangements or different arrangements at the different departments and chair groups concerning prolongation of AIO-employments due to maternity leave, parenthood leave or long-term illness. The WPC argues for formal and uniform regulations regarding (minimal) grounds for contract extension. Further information about the progress on this issue is expected early 2005.

We are still very interested to hear the stories of people who have run into problems with the extension of their contract due to maternity leave, parenthood leave or long-term illness. You can e-mail your experience to [jeroen.knol@wur.nl](mailto:jeroen.knol@wur.nl). All e-mails will be handled with confidentiality.

Externally funded PhD-students ("3e geldstroom") registered at the Agrotechnology & Food Sciences Group are also entitled to an education budget ("rugzakje") funded by the department.

Graduate schools will compensate 'PhD representation work' by giving credit points or a financial compensation. This is to be agreed upon between PhD-student and concerned Graduate School involved.

All people involved in a PhD study at Wageningen UR can register themselves at the Central Student Administration (Costerweg 50, Wageningen) as a PhD Student to obtain a PhD Student Card. With this card you can get student discounts in the Netherlands and by applying for an ISIC Card ([www.isiccard.com](http://www.isiccard.com)) you can also get discounts internationally on for instance international flights.



**Name**  
Ngo Thi Phuong DUNG  
**Place & date of birth**  
Can Tho City (Vietnam), 27/10/1959  
**Title thesis**  
Definded fungal starter granules for purple glutinous rice wine

**Group/Department**  
Laboratory of Food Microbiology, Wageningen University  
**(Co)promoters**  
Prof. F.M. Rombouts, Dr. M.J.R. Nout  
**Date & place of defence**  
07/12/2004 at Wageningen University

Wine from purple glutinous rice (Ruou Nep Than) is particularly known in the Mekong Delta region of Vietnam because of its sherry-like taste and flavour and its attractive brown-red colour. Presently it is manufactured at home-scale using solid-state starters in tablet form, the wine is prepared under ambient conditions. So this practice produces low yields of wine with poor quality. It is recognized that the choice of starter tablets strongly influences the yield and quality of wine. The aim of the present research is to increase the understanding of rice wine fermentations and to study a new and improved way for dry starter preparation, by appropriate development of the traditional starter manufacturing method. The powerful glucose producer *Amylomyces rouxii* and the

superior fermentative strain *Saccharomyces cerevisiae* were selected and shown to be compatible in mixed cultures, which is of importance for the development of starters with good quality. The development of a laboratory-scale process to formulate defined mixed-culture starter granules was established. This PhD research is part of the institutional programme in which to contribute to the development of local industry and improve livelihood of the population of the region. It is also effectively applied in academic teaching and research activities. The problem of poor and variable quality of traditional starter tablets is necessary and interesting to be addressed indeed. My research also falls within the scope of the on-going activities in food (bio)technology.

Therefore if I could go back in time and start again PhD project, I definitely would do the same study. For the near future besides of permanent responsibilities in teaching and research, I will involve in a project for transfer of biotechnology. So the know-how of preparing and application of starter granules can be exchanged and transferred to the entrepreneurs. The home-scale production units are accessible for further trials to test new products. Future marketing of new (starter) products will be of benefit to rice wine producers and my Institute alike. Finally is my deep respectful gratitude to organizations and people involving, since without their support I could not have reached my goal successfully.

## 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?

**This is your opportunity!**

Send us your questions, remarks and opinions

([ingeborg.vanleeuwen-bol@wur.nl](mailto:ingeborg.vanleeuwen-bol@wur.nl)), and we will get back to you on that.