The Graduate School VLAG

VLAG FLASH

Newsletter of the PhD-students of the Graduate School Vlag (Advanced studies in food technology, agrobiotechnology, nutrition and health sciences) Mei 2004, Volume 4, Number 10

Contents

News from the secretariat of the Graduate School VLAG

'External courses'

PhD students affiliated with VLAG should collect at least 8 credit points by attending discipline specific activities. To assist in this matter, VLAG offers several discipline specific courses, but we cannot cover the whole range of disciplines present within the graduate school and we cannot repeat all courses each year. Therefore VLAG PhD students are encouraged to attend discipline specific courses offered by other organisations. We listed several of these organisations in our restyled website under *'external courses'*. It is of paramount importance that this list keeps growing and that we are also able to provide information on what courses have been attended and what the experiences were. Therefore you are requested to provide us with information about courses you attended and which might be interesting for other PhD students. We would like to have the address of the website where information about the courses can be found and your opinion about the contents of the course summarized in 1 – 2 sentences. Please assist us in updating our web page with information about 'external courses' by sending your suggestions to VLAG@wur.nl

Fré Pepping

VLAG keeps growing

In January 2004 Ms. Vesna Pršić joined the staff of the VLAG Graduate School. She holds the position of Programme Co-ordinator, a function that consists of dealing with issues such as research policy, educational policy, and co-ordination of the VLAG researchers platform, among others.

Ms. Pršić graduated as a Food Technologist at Belgrade University (Yugoslavia) and continued her education as an international student at Wageningen University. She followed an MSc course on Biotechnology. The opportunities that Wageningen offers for professional as well as personal development led to the following step, a PhD research project at the Dairy and Food Physics Group. Her newly discovered love for international education led to the positions of an associate course co-ordinator of the international MSc Biotechnology Course, followed by the positions at the International Education Marketing Group and Innovation Management, all part of Wageningen University. During the last three-and-a-half years she worked within the Knowledge & Information Management Group of the International Agricultural Centre in Wageningen as the co-ordinator of the Netherlands Forum on Agricultural Research for Development. Within this position she was a member of the North-South Centre of Wageningen UR, an expertise centre on development oriented issues.

Once a VLAG PhD student and now a VLAG employee, she is looking forward to contributing to the realisation of the mission and vision of this ambitious Graduate School.

EDITORIAL

Dear readers,

We're happy to welcome Vesna Pršić as a new staff member at the secretariat of the Graduate School VLAG. Vesna introduces herself in this issue of the VLAG-FLASH.

In this number you can read about the PhD trip of Microbiology from April 9th - 26th to Japan. Furthermore, the VLAG-FLASH covers the Netherlands Biotechnology Congress (NBC) held in Ede, the symposium on marine biotechnology organized by Codon, the farewell symposium for Professor Wya van Staveren, and the VLAG PhD week held in Bilthoven.
Marcel Janssen, a former VLAG-PhD student from the Food and Bioprocess Engineering Group, was willing to shed his light on the subject of life after your PhD defense.

We would like to congratulate Mohammed Hejazi on winning the 17th Khwarizimi International Award (KIA), a prestigious Iranian prize.

Furthermore, this number of the VLAG-FLASH contains our regular columns together with other interesting news.

Unfortunately the VLAG PhD party had to be cancelled, but.... a new date has been set: Thursday May 20th (Ascension Day, this is a day off in the Netherlands!)

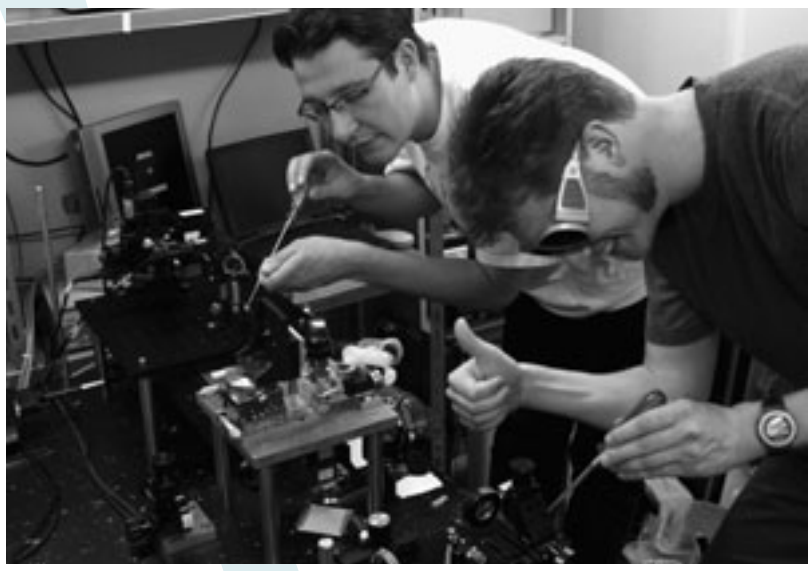
Finally, we wish you many nice days this spring and success with your research. See you in our next issue!

The Editorial Board.

You can reach the editorial board of the VLAG-FLASH by e-mail at
ingeborg.vanleeuwen-bol@wur.nl
eira.carballo@wur.nl
maaike.schutte@wur.nl

PhD-Students Department of Microbiology went to Japan

From April 9th-26th a group of 24 PhD-students and 1 supervisor went to Japan. We visited companies, research institutes and universities in Tokyo, Nagoya, Osaka, and Kyoto. Further we all participated in a symposium in Tsukuba for young investigators on Gut microbiology.



We arrived at Tokyo's airport in the morning of Saturday April 10th. Since the scientific program started on Monday, we had time to acclimate and to visit some of Tokyo's most famous sights.
On Monday we visited the Yakult Central Institute for Microbiological Research. Their research focuses mainly on the beneficial effects of pro-biotic bacteria on health, which is also intensively studied in the Wageningen institutes. They were very interested in our research.
The second day we were invited by the KAO-company. This company started as a soap manufacturer. Nowadays it produces also cooking oils and drinks. They are interested in the health promoting effect of the Japanese green tea and in the effects of fatty acids on humans. The Wageningen presentations were about the food functionality studies done within the WCFS. From the feedback obtained during the banquet, they were impressed by our research.
The next day we arrived at the Japanese Marine Science and Technology Institute (Jamstec). As Japan is highly dependent on the sea as food and mineral source, this institute is highly sponsored by the government. Their microbiological research focuses on bacteria living under extreme conditions such as high pressure and high temperature. This visit was very interesting for our researchers who work in this area.
On April 15th and 16th, we stayed in Tsukuba. Here the "Ibaraki-Wageningen Young Investigators' Symposium on Gut Microbiology (IWASM)", was organised, which lasted two days. There were sixteen oral presentations from both Wageningen as well as Japanese researchers. The second day we visited the Asahi Beer brewery. At the end there was a banquet for all the participants. The karaoke-machine brought much fun and a lot of contacts between the researchers were made these days.
Back in Tokyo we visited on Monday the Japanese Collection of Micro-organisms (JCM). Although founded only 25 years ago, this institute owns one of the largest culture collections in the world. The JCM is part of RIKEN, Japan's national institute for science.
On Tuesday we went to Nagoya to visit Nagoya University, which is famous for its fungi studies. The fungi-specialists from Wageningen had waited for more than a week before they could present their research topics. The dinner afterwards gave a great possibility to talk about the research programs at WUR and Nagoya University.
The next day we travelled further to Osaka, where we were invited at the Nanotechnoloy department of the university. Prof. Yanagida gave a presentation about his research. He was the first who could detect single molecules using a tunnel laser microscope. Prof. Namba's talk about proton-driven-motors in cells was impressive.
That evening we travelled to Kyoto. The next day was free and almost everyone went out to see Kyoto's temples.
The last Friday we visited the bio-informatics institute in Kyoto, which is famous for its KEGG-database. The talks were good, but the best by far was the lunch. They ordered pizza, French fries, and coke for all of us. After two weeks of fish and rice, this tasted heavenly.
On Sunday we went back to Tokyo and the next day we flew back to Europe
The Japan-tour was great. We got to know Japanese colleagues and their culture. We had lots of fun with them and hope that it will lead to more cooperation in the future. Furthermore, we got to know each other much better. We work on different locations and we do not see each other very often, so this tour was scientifically and socially a great success.

Marc Stevens

The Graduate School *VLAG* (Advanced Studies in Food Technology, Agrobiotechnology, Nutrition and Health Sciences) is a cooperative endeavour of four universities: Wageningen University, Maastricht University, Utrecht University, Catholic University Nijmegen; and five research institutes, Agrotechnology & Food Innovations, RIKILT-Institute of Food Safety, NIZO Food Research, TNO Nutrition and Food Research, and the National Institute of Public Health and the Environment (RIVM), The Netherlands

New PhD Projects

A. Haegens, 1 December 2003
Chronic exposure to LPS.
UM-Pulmonology, supervisors:
Prof. E. Wouters, dr. J. Vernooij.

J. de Jonge, 1 December 2003
The influence of immunomodulating food constituents on food-allergic processes.
UM-GRAT, supervisor:
Prof. H. van Loveren.

Teun van Herpen, 1 January 2004
Weight gluten and coeliac disease.
WU-Food Chemistry, supervisors:
Prof. R. Hamer, Prof. R. Bino,
Dr. H. Bosch, Dr. M. Smulders,
Dr. L. Gilissen

Jeroen Knol, 5 January 2004
Heat generated food toxicants, identification, characterisation and risk minimisation.
WU-PDQ, supervisors:
Prof. M. van Boekel,
Dr. J. Linssen

Cynthia Akkermans, 1 February 2004
Structure formation in concentrated protein solution.
WU-Process Engineerig,
supervisors: Prof. R. Boom,
Dr. A-J. van der Goot,
Dr. P. Venema

M. Lamine, 1 February 2004
In vivo dynamics of the PPAR/RXR nuclear receptor complex visualized by fluorescent imaging.
WU Biochemistry, supervisors:
Prof. S. de Vries, Prof. M. Müller

W. Schickenberg, 1 February 2004
Strategies to promote the consumption of unknown healthy foods.
UM-Health Education,
supervisors: Prof. N.K. de Vries,
Dr. P. van Assema

Z. Zoons, 16 February 2004
Monitoring and control upstream processes for parametric release of vaccins.
WU-Systems and Control Group,
supervisors: Prof. G. van Straten,
Dr. A. van Boxtel

Boon H, 1 April 2004
Activation of AMPK in skeletal muscle: effects on glucose and fat metabolism in patients with type 2 diabetes.
UM-Human Biology, supervisors:
Prof. W. Saris,
dr. A. Wagenmakers,
dr. L. van Loon, dr. E. Blaak.

New Postdoc Projects

H. Moonen, 15 October 2003
UM-GRAT
Identification and evaluation of PARP-1 inhibitors in food.

Gerda Pot, 1 April 2004
WU-Human Nutrition

P. Goyens, 1 January 2004
UM-Human Biology
Determinants of essential fatty acid metabolism in man.

J. Harting, 1 January 2004
UM-GVO.
Community projects: the ever lasting promise?

N. Luscombe, 1 March 2004
UM-Human Biology
Sensory perception and metabolic effects.

Report of the 11th edition of the VLAG PhD - week

The VLAG PhD week was held from 30th March until 1st April 2004 at the Hartenark, a congress centre of the Dutch Heart association located in a peaceful location in Bilthoven. Surrounded by a forest and with chambers with easy-going names such as 'the living room' (which was actually a living room including a bar, comfortable seats, a television, mega-chess, a pool table, a piano, a table football, social games and what not (!)) it all offered more of a relaxing ambience than a cool, strict and over-efficient congress centre.

The PhD-week coordination was in the hands of Vesna Prsic, a spicy and playful, open-minded lady, who guided us through the whole process with a luscious flair. The week started with the session on presentation techniques, a training given by Ian Cressie. As a part of this training all 32 participants had to give a seven-minute (which is not a lot of time) presentation about their research project. Furthermore, we were trained on how to handle the media and both subjects were discussed by illustrating the pitfalls and the tricks that could make the difference. The formal part of the first day ended by a presentation session and the informal part of the day began. The dinner followed, and while writing about the food one thing has to be mentioned: each time, whether it was breakfast, lunch or dinner it was a pleasure to serve our hunger. With all the facilities within reach the informal moments were filled with very pleasant time spending. The rooms were quite basic: two beds, no shower in the room (but two for each cluster of five rooms), a phone and a toilet table. It was good anyway. During the evenings and the (quiet) nights the centre was all ours.

Jacqueline Niewerth and Ceciel Osse organised the Tuesday program focused on personal development. It gave room for some more interaction: ball throwing, shredding-pasting-drawing (very therapeutic!) as simulations of the PhD-project, etc. Furthermore, if you can't or don't want to walk the rest of your professional path on a research path, you could also become a creative artist, by using the things you learned during your PhD-project. The evening was reserved for sports, but contrary to the planned aerobics, we did a little basketball to warm up, followed by either volleyball or unisex soccer, badminton or hula-hooping) !!.

On Wednesday we had a brief session of 'English for PhD students' by Susan Parren. The session was useful because we all have to deal with this aspect in one way or another during our project and beyond. That said, some (including myself) wondered if the main goal of the presentation was to illustrate and teach us about writing scientific English, or just trying to make us feel as overwhelmed as possible in a limited time span and to get us into their classes. Nevertheless, organising it in a less hasty manner (one, or several whole days of confronting us with pitfalls in writing an article in English would in our opinion be a good investment) this part could score as one of the topics of highest relevance during this week. We also had a really nice and interesting presentation about ocean farming by René Wijffels. The actual relevance for all of us was however questioned. Then again, we all live in the Netherlands and using our PhD knowledge in the direction of a creative artist we better stash away snorkels, buy stocks in seaweed and make profit on them later!)

We had an excursion to the Department of Public Health and Food Safety of the Faculty of Veterinary Medicine at Utrecht University. The weather was fantastic and we went by bike. The condition of one of the PhD students was tested by the chain of a tandem that kept falling off and she had to bike for two. Most lectures in Utrecht were not relevant to us as participants and were drearily presented. However, some were quite good. For instance 'Intestinal health and innate immunity' by Edwin Veldhuizen was relevant for the food toxicologists among us, while 'Detection of microbial contaminants by surface plasmon resonance biosensors' by Albert Bergwerff was at least cutting edge and well presented. The latter brings up a question: either he was so enthusiastic because he wants to sell the products he presented (very likely), or he is one hell of a 'presenting researcher'. The visit to the Schubärt Gallery was very interesting. We saw and felt some funny and interesting things, such as elephant skeleton, a mega-slice of a cow (showing the massive stomach), and some in plastic impregnated 'animal cross sections' that can not only be seen, but also felt!

Thursday started with a nice presentation about ethics with a lot of interaction with and among the participants. It included a case in which we were members of a scientific committee advising the government on its position in a social debate about the enrichment of bread with folic acid. The last part of this course was really good: 'Creativity and innovation' by Corrinne Goenee showed us how to broaden our minds. How about a toothbrush that identifies his owner via a jaw scan?, or travelling by transferring matter into pure energy and back again, and in this process scanning the energy for faults and thus leading to immortality in the process??!!. And 'Where is America?'. It sunk due to the obesity problem…

All in all it was a really nice week, maybe more therapeutic than utterly educating. At the end some of us were a bit more aware of what being a PhD-student and part of a PhD-project involves. While driving back home I figured that this was the purpose of this week.

Jonatan de Jong (PhD student at Maastricht University)

News from the PhD Councils

The VLAG PhD Council

- The LAIOO (Landelijk AIO/OIO overleg) known in English as the National Platform for PhD student is now called PNN (Promovendi Netwerk Nederland), since due to the introduction of the UFO (University Function Regulation) the names 'AIO' and 'OIO' have been replaced by the word 'promovendi'.
- The website of the PNN has been renovated and can be found at: www.hetpnn.nl
- The PNN is looking for one or more PhD representatives from Wageningen University. Meetings are planned every 2 months.
- The VLAG PhD Council is looking for a new representative of the 'DLO'-institutes to substitute Guus Jansen (RIKILT).
- Information about PhD career counselling can be found at: www.spotlite.nl
- On March 26th several VLAG-PhD students and a postdoc went together with some VLAG staff members to the KNAW (Royal Netherlands Academy of Arts and Sciences) for a meeting regarding the VLAG accreditation. More news to come in the following issue of the VLAG-FLASH.

ATTENTION: The new date for the VLAG PhD Party is MAY 20th
(Ascension Day/Hemelvaartsdag)

The NUTRIM PhD council

Nutrim is the Nutrition and Toxicology Research Institute Maastricht. The NUTRIM PhD council is a meeting which represents the PhD students from all four NUTRIM divisions, and which is also attended by the PhD student co-ordinator, and the NUTRIM secretary. Meetings are held every 3 months. Each division has two PhD representatives, with one head representative, to ensure the continuity of the council. At present Matthijs Hesselink, the PhD co-ordinator, is chairman.
The aim of the PhD council is to inform the NUTRIM associated PhD students about issues that are discussed at institute level, and to take care that PhD issues, like supervision and courses, are brought to institute council's attention. This will be accomplished by staying in contact with the NUTRIM institute council ('instituutsraad', IR), the Interfaculty PhD Committee (IPC), the national PhD council ('landelijk AIO-overleg', LAIOO), the general PhD society Provum and of course all the PhD students that are affiliated with NUTRIM. The NUTRIM PhD Council has an advisory role towards the institute council. Besides, the PhD co-ordinator attends the Institute Council Plus (IR+) meetings.
When advice is needed from specific advisors, they can incidentally be invited to attend the meeting. To keep in touch with all the NUTRIM PhD members, they will receive the minutes of every PhD council meeting. The minutes, as well as the aims and names and addresses of the PhD council members can be found on the internet at www.nutrim.unimaas.nl. under the 'courses'-button. Therefore, if you like to comment on issues or suggest new issues for discussion, you are very welcome to approach one of us. Feel free to contact us!
The more you keep in touch, the better we can stand up for your interests.

Members of the NUTRIM PhD council:
Eefje Corpeleijn (division 1, Human Biology)
Myriam Thijssen (division 1, Human Biology)
Erica Rutten (division 2, Respiratory Medicine)
Jeroen Nijhuis (division 2, Surgery)
Boukje van Dijk (division 3, Epidemiology)
Emely de Vet (division 3, Health Education and Promotion)
Matthijs Hesselink (PhD Students Co-ordinator)
Yvonne Sondeijker (Assistent Managing Director NUTRIM)

OVERVIEW OF THE 2004/2005 COURSES

VLAG courses
2004-2005

www.wau.nl/vlag
www.nutrim.unimaas.nl

2004

Courses

10-14 May	An unified approach to mass transfer
11-12 May	Master class Proteomics, Maastricht
28 June-1 July	Glycosciences summer course
10-13 October	Food fermentation course
1-4 November	12th VLAG PhD-week
11-12 November	Workshop Health Education "Van goede voornemens tot daden (in Dutch), Maastricht
4-5 & 18-19 November	Nutrition and sports, Papendal
22-25 November	Genetics and physiology of food-associated microorganisms
22-27 November	Chemistry and Biochemistry of Antioxidants (FEBS)
13-17 December	Reaction kinetics

Conferences

8-10 September	NuGO Conference (European Network of Excellence on NutriGenomics)

Other activities

30 May-14 June	PhD-tour Bioprocess Engineering to Canada
4-19 December	PhD-tour Food Chemistry to Japan

2005

28 February-3 March	Ecophysiology of the Gastro-Intestinal Tract
2-3 June	WEON Conference (working group Epidemiology)
10-13 October	Food Perception

All courses will be held in Wageningen. Exceptions are indicated.

European Nutrigenomics Organisation
linking genomics, nutrition and health research –

First NuGO-week

Wageningen, The Netherlands,

First European Nutrigenomics Conference

8 – 10 September, 2004

and Satellite meetings and workshops organised by the work packages, 6 & 7 September, 2004

NuGO is the acronym for the EU-funded Network of Excellence shaping the new discipline of Nutrigenomics. NuGO started in January 2004 and received funding for six years. At inception the Network comprised of 22 partner organisations; thirteen universities, eight research institutes and one SME.

Wageningen International Conference Centre

PhD programme in Applied BioScience-Bioengineering, Food & Nutrition, Environment

Annual Seminar

Functional Foods (2 credits)

Time:	August 30-September 2, 2004
Location:	Helsinki, Viiki Campus, Infocenter (Room 3)
Organisers:	University of Helsinki (Prof. Marina Heinonen, Assistant Prof. Christel Lamberg-Allardt) University of Turku (Prof. Seppo Salminen) University of Kuopio (Prof. Kaisa Poutananen)

For more information look at http://honeybee.helsinki.fi/abs/index.htm
NOTE: The deadline for grants is June 1st, 2004

To celebrate the 10th anniversary of the graduate school VLAG, there will be a party on

Thursday the 20th of May

(SSR, Generaal Foulkesweg 30, Wageningen)

The party will start with a dinner at 7 pm and the band "Het Pact" will start playing at 10 pm.

If you want to attend the party mail to:
sandra.vandergraaf@wur.nl
elke.scholten@wur.nl

10th Netherlands Biotechnology Congress

Biotechnology: Back to the future?!

The 10th Netherlands Biotechnology Congress was held last March 11th-12th at De Reehorst Congress Center in Ede. This meeting is a biannual event that aims to present and discuss the latest developments and challenges in biotechnology and create a stimulating environment where science, business and the environment can meet.

The two-day program included parallel sessions and featured three workshops, as well as a poster session and an exhibition where several companies could display their products. During the first day the parallel sessions consisted of Bioinformatics & Database Management, Downstream Processing, Biopharmaceuticals & Nutraceuticals, and –Omics. The titles of the workshops were Bio-Starters - Back to Business, Successful Public Communication by Life Scientists, and Imagine: Biotechnology for Developing Countries.

The program of the second day consisted of the parallel sessions on Biocatalysis, Metabolic Engineering & Fermentation, Environmental & Sustainable Biotechnology and Agro/Food Biotechnology. Both days were introduced and concluded by plenary keynote lectures.

The highlight of the event was the Awards Ceremony. The famous *Zilveren Zandloper* or *Silver Hourglass* for Research went to Eelco van Anken (Bioorganic Chemistry, RUU) for his work on protein folding and secretion. The prize for Education went to the team formed by G. Plat, M. Noback and P. Dykstra from De Hanzehogeschool, Groningen, for the development of the first Dutch Bioinformatics Bachelor's program (a 4-year study). A prize was also conferred to the best project proposal for the Imagine contest: Biofuel from microalga, by W. van Winden and B. van Beek (WUR).

Staff from the Food and Bioprocess Engineering group, WUR (in the center Hedy Wessels, congress secretary)

Marine Biotechnology

An Ocean Full of Prospects?

On March 25th a symposium on the promising field of marine biotechnology was held in the Mathematics Building at Wageningen University. The one-day event was organized by the study association of biotechnology, CODON. More than 80 participants, including students, members of the academic world and industry, and general public attended this event.

The day was opened with an introduction by Prof. Aalt A. Dijkhuizen, president of the executive board of Wageningen University and Research Center. Afterwards a total of eight speakers, divided into three themes, presented an interesting and varied program.

The first theme was Energy and Sustainability. A project proposal for the fabrication of "SeaWing", a novel, multifunctional platform for sustainable exploitation of the sea surface was presented by Dr. Ketelaars, Plant Research International, WUR. Next, J.H. Reith from the Energy Research Center of the Netherlands, considered the use of microalgal mass cultures for sustainable co-production of fine chemicals and biofuels and at the same time water purification. P.H.J. Verbeek, from Shell Int. Exploration and Production, talked about the treatment of polluted water from oil fields in order to meet quality requirements for re-use and discharge.

The second theme dealt with Food and Feed. Dr. Johannisbauer from the German company Cognis described the process development for products from microalgae, specifically the pigments astaxanthin and beta-carotene. Dr. Sijtsma subsequently summarized the research conducted at Agrotechnology & Food Innovations b.v. (previously ATO) on the production of long chain n-3 polyunsaturated fatty acids by marine microorganisms. Dr. Hejazi (See Photo: Dr M.A. Hejazi) from the Food and Bioprocess Engineering Group (WUR) talked about the continuous production and extraction of beta-carotene from microalgae. The novelty of this method, which the author refers to as "milking of microalgae", is that the cells remain viable and productive for a long period of time during which extraction of the desired product itself stimulates production.

Finally, the third theme of the program focused on Pharmaceuticals. Dr. Sánchez-Puelles from Biosafety, Spain, presented an overview of the long way that separates drug discovery and commercialization of molecules derived from natural products, and the enormous cost that this implies. The last speaker of the day was Dr. Haemers from TU, Delft. He talked about natural glues derived from marine mussels, which are attractive for application as medical adhesives. An example provided by the author is the repair of veins in the human body.

Is marine biotechnology indeed an ocean full of prospects? To conclude the day the audience was led in the discussion around this question by the Symposium's Chairman, Prof. Sanders (Agrotechnology & Food Innovations). Although the opinions on specific questions were divided, most participants agreed that the sea offers a huge potential at many levels and look forward to the realization of these promises.

Eira Carballo
Bioprocess Engineering Group

Masterclass Geriatric Nutrition

On the occasion of the retirement of professor Wija van Staveren (Photo: Wija and Lisette, the two

course directors) of the Division of Human Nutrition, a Masterclass on Geriatric Nutrition was organised. Participants from Australia, Denmark, Korea, The Netherlands, and the USA gathered in Wageningen to discuss matters on diet, functionality, and disease in the elderly. After the official opening of the masterclass on Monday April 26, Prof Rudi Westendorp gave a very interesting lecture on the biology of aging.
Tuesday morning started with a lecture by Prof Marianne Schroll on nutrition and functionality followed by a lecture by Dr Lisette de Groot on energy balance in the elderly. The rest of the morning was spent with lectures on bone health (Dr Paul Lips), immunity (Prof John Morley) and neuropsychology (Dr Liesbeth Joosten). Tuesday afternoon consisted of group work on screening tools for a poor nutritional status in the elderly, on measuring functional capacity and energy expenditure (Photo, Measuring energy expenditure), and on supplementary feeding. After dinner, Dr Johanna Dwyer gave a lecture on the use and effectiveness of some commonly used supplements in the USA. She strongly pleaded for more research in this area.
Wednesday morning was spent discussing the problem of anorexia of aging (Prof John Morley), problems related to nutrition for the elderly in developing countries (Prof Mark Wahlquist, who also turned out to be a strong fighter for the position of women in science and in society as a whole), and the influence of sensory perception & preference, and of the environment on appetite and food intake (Dr Kees de Graaf). Prof Han Kemper subsequently focused our attention on the role of physical activity (walking, going grocery shopping, stair climbing) for the elderly. The program in Wageningen was brought to an end with a lunch during which Prof Gert-Jan Schaafsma refreshed our memories on functional foods. Several functional foods were available for lunch too.
The final part of the program took place at the Division of Geriatrics at the University Medical Centre St Radboud in Nijmegen, where Prof Marcel Olde Rikkert explained the Nijmegen view on malnutrition in frail elderly. He also discussed a multi-disciplinary assessment and intervention to reduce malnutrition in the elderly. Hanneke Kalf presented the diagnosis and treatment of dysphagia in geriatric patients. Prof Willibrord Hoefnagels explained the possible mechanisms, symptoms, treatments for postprandial hypotension and the session was closed by Prof Marcel Olde Rikkert with a view on issues related to getting consent for nutritional research in geriatrics. The masterclass provided an excellent overview of the many nutrition-related problems that may occur in the elderly. It was promising to hear about the progress that has been made so far and from the poster presentations and the informal discussions it appeared that more research is most certainly underway.

Marleen Manders, Kristel Nijs, Rosalie Dhonukshe-Rutten & Marieke Verheijden

In & Out

Name Evelien van Boxtel
Place & date of birth Arcen en Velden (The Netherlands), 19/9/1980
Research title Effects of aggregation on food protein allergenicity
Group/Department Laboratory of Food Chemistry (Wageningen University), TNO Nutrition and Food Research
Promotor Prof. Dr. A.G.J. Voragen
Start of PhD project October 2003

In...

In September 2003 I graduated from Wageningen University with a major on food science and technology. During my study, and especially when working on my theses and my internship, I found out that I was really interested in doing research. Especially health aspects of foods interest me and the topics of both my theses and my internship at the Unilever research department in Vlaardingen were related to this subject.

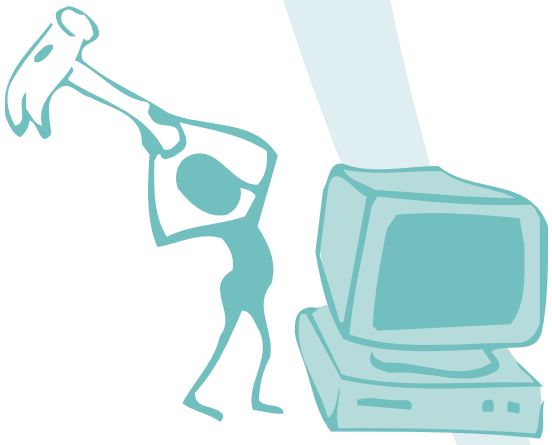
In the final year of my study I decided that I wanted to do a PhD project after graduation. I preferably wanted to do this PhD project in Wageningen as I wished to do a research project that was related to food. Therefore I started to enquire about possible projects in Wageningen. It was then when I heard about the project I am currently working on. The project immediately caught my attention because there is a clear relationship between food and consumer's health. In my opinion, another positive aspect of this project is that it is a collaboration between Wageningen University and TNO Food Research in Zeist and according to the planning I will work at both places during the next four years.
Because of these reasons and also because I could start this project immediately after my graduation the project really appealed to me and after some conversations in Wageningen and in Zeist I started in October 2003.

During the next four years I will investigate the effects of aggregation on food protein allergenicity. Aggregates will be made with different (allergenic) proteins. The aggregates will be analysed for their binding to immunoglobulins and also for their digestibility. In this way we hope to gain more insight in the complicated subject of food allergy.

My personal expectations for the next four years are that I will definitely learn a lot about different subjects. Furthermore I also hope to have a really nice time both in Wageningen and in Zeist. The past six months have certainly been very nice and informative and I hope that this will apply to the coming years.

Name Judith Straver
Place & date of birth Willeskop (the Netherlands) 24/05/1978
Research title "Characterization of variability and uncertainty in Process Risk Modeling of food chains"
Group/Department Product Design and Quality Management (WU), Laboratory of Food Microbiology (WU)
(Co)Promotors Prof. M.A.J.S. van Boekel, Prof. M.H. Zwietering, Dr. R.R. Beumer, Dr. A.R. Linnemann
Start of PhD project November 2002

&...



My afternoon started surprisingly, when I received a mail to write the "&" piece. Wow, time flies; it feels like I have just started yet!

The aim of my project is to develop a methodology to model the transmission of pathogenic bacteria in the food chain from farm to fork. Pathogenic bacteria can cause illness or death if people consume a contaminated meal. Using (process risk) models, you can estimate how "risky" a certain food is, how risk can be reduced, how new processing technologies or new product formulations affect the risk, etc. By modeling the whole chain, the effect of risk-reducing measures can be compared, e.g. farm measures might be more effective than measures during food processing.

The last year and a half, I have collected lots of data and models on my case study "Salmonella in the poultry meat chain", which I am incorporating in the review article that I am writing now. Furthermore, I made a lot of mistakes (e.g. it is advisable to contact more people early in your project, even though you might not be totally confident about your knowledge or your exact plans) and worked on too many subjects (four years time is short!). I met other researchers, who were absolutely not willing to share any of their research (arghh), but also met researchers with whom I had very inspiring e-mail discussions. I also had the opportunity to go abroad for courses and do things I have never done before (tutoring students). This combination of experiences makes you learn a lot and I think that is the advantage of being a Ph.D. student. A disadvantage might be that you are somewhat far away from the "real world" in university, but that is something you can control yourself by going outside more.
Now, I want to finish the review, an article about different modeling approaches and probably another article about feasibility of measures (with the WU Management group) and I hope I can realize many ideas in the time left and that you will be able to do that also. Good luck with your work!

Name Gideon Oudgenoeg
Place & date of Birth Amsterdam (The Netherlands) 15/05/1973
Title thesis Peroxidase catalyzed conjugation of peptides, proteins and polysaccharides via endogenous and exogenous phenols.and lactoferrin
Group Food Chemistry and Biochemistry, Wageningen University
(Co)Promotors Prof. C. Laane, Prof. A. Voragen, Dr. W. van Berkel, Dr. H. Gruppen
Date of defence 14/04/2004 at Wageningen University

Out...

To be skilled in one thing, to cope with many...

As I once read in an interview, to be successful in your career, it doesn't matter what exactly you have been good at, as long as you have been the best in something. A PhD project offers an excellent opportunity, albeit often due to lack of any possible competitors in your own particular field, to be the best in that field. My PhD period in Wageningen offered me the opportunity to get a good grip on one specific molecule.
Before the start of my project I was sent some references about the project and I had to look up in the library in my hometown Amsterdam, what was this Ferulic acid (FA) molecule that was mentioned so often in all articles concerning the research. At the end of the project I read many articles about this FA molecule, referring to my work on FA. I can surely recommend publishing as soon as possible, it makes you realize that despite all those experiments you're doing in some basement or whatever odd place never shown on the MTV, you still matter.
Furthermore I was lucky that I could publish in one of the nicest journals in biochemistry, with results that appeared to be hot; it completes your test of qualification. I can recommend as well to always look for opportunities to make your findings more significant than they are within the scope of your project, and not to limit yourself to literature that is mainstream in the field. Most projects in Wageningen are applied but with all the equipment present you might very well make serious contributions to fundamental science without harming the goal of the project. In my case also a patent –which is a highly entertaining field on its own- resulted from the first findings and I could subsequently work temporarily at an institute that bought the patent.
Therefore during my PhD period I got to know the whole process, from the first discoveries and publishing in scientific journals, to the commercialization inside 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), and we will get back to you on that.

Dissertations

22 January 2004 at Universiteit Maastricht
M. Muurling: 'Aspects of lipid metabolism in modulation obesity-related insulin resistance in mice'.
(Co)promotor: Prof. L. Havekes, Prof. R. Mensink

27 January 2004 at Wageningen University
Rene van den Einde: 'Molecular modification of starch during thermomechanical treatment'.
(Co)promotor: Prof. R. Boom, Dr. A.-J. van der Goot

20 February 2004 at Wageningen University
Theo Blijdenstein: 'Microstructure, rheology an demixing in emulsions flocculated by polysaccharides'.
(Co)promotor: Prof. E. van der Linden, Dr. T. van Vliet, Dr. G. van Aken

3 March 2004 at Universiteit Maastricht
S. Rothkrantz-Kos: 'Biochemical parameters in monitoring severity of sarcoidosis'.
(Co)promotor: Prof. M. van Dieijen-Visser, Dr. M. Drent

19 March 2004 at Wageningen University
Cécile Veerman:'Properties of fibrillar protein assemblies and their percolating networks'.
(Co)promotor: Prof. E. van der Linden, Dr. L. Sagis

22 March 2004 at Wageningen University
Lieke Hasper: 'Function and mode of regulation of the transcriptional activator NlnR from Aspergillus Niger'.
(Co)promotor: Prof. A. van Ooyen, Dr. L. de Graaff

24 March 2004 at Universiteit Maastricht
P. Klosse: 'The concept of flavour styles to classify flavors'.
(Co)promotor: Prof. W. Saris, Prof H. Hemker

31 March 2004 at Wageningen University
Derk Somsen: 'Production yield analysis in food processing. Applications in the French-fries and the poultry-processing industries'.
(Co)promotor: Prof. A. Capelle, Prof. J. Tramper

6 April 2004 at Wageningen University
Francesca O'Kane: 'Molecular characterization and heat-induced gelation of pea vicillin and legumin'.
(Co)promotor: Prof. M. van Boekel, Dr. H. Gruppen

7 April 2004 at Wageningen University
Maarten Engel: 'etailed characterization of adsorption-induced protein unfolding'.
(Co)promotor: Prof. S. de Vries, Prof. A. Visser, Dr. C. van Mierlo

14 April 2004 at Wageningen University
Gideon Oudgenoeg: 'Peroxidase catalyzed conjugation of peptides, proteins and polysaccharides via endogenous and exogenous phenols'.
(Co)promotor: Prof. A. Voragen, Prof. C. Laane, Dr. W. van Berkel, Dr. H. Gruppen

23 April 2004 at Wageningen University
Bart Smit: 'Formation of amino acid derived cheese flavour compounds'.
(Co)promotor: Prof. J. Wouters, Prof. G. Smit, Dr. W. Engels

26 April 2004 at Wageningen University
Stefan van der Burgh: 'Complex coacervate core micelles in solution and at interfaces'.
(Co)promotor: Prof. M Cohen Stuart, Dr. A. de Keizer

Awards

Mohammad Amin Hejazi is the winner of the 17th Khwarizmi International Award (KIA). On Sunday February 8th he received the award during the awarding ceremony honored by the President of the Islamic Republic of Iran, in Teheran. The Iranian research organization for science and technology organzes the annual KIA. The aim is to acknowledge the efforts by researches, innovators and inventors, both in Iran as well as all over the world. And to appreciate their invaluable achievements and contributions various fields of science and technology. Dr Hejazi is awarded for his work on his PhD thesis

Milking of Micoalgae: production of selective extraction of?-carotene in two-phase bioreactors" wich was done at the Wageningen University, subdepartment Process Engineering.

Interview with a former PhD student

Name	Marcel Janssen
Title thesis	Cultivation of microalgae: effect of light/dark cycles on biomass yield.
Date & place thesis defence	25 March 2002, Wageningen University
(Co)Promotors	Prof. J. Tramper, Dr. R. Wijffels, Dr. L. Mur
Current working institute	Ecole Polytechnique Federal de Lausanne (EPFL), Lausanne, Switzerland

What was the topic of your PhD research?
I studied the phototrophic cultivation of microalgae at the Food and Bioprocess Engineering Group. Microalgae producing interesting compounds were cultivated with light as the sole energy source supporting biomass growth. We posed the question whether it would be beneficial to create orderly light/dark cycles using air-lift bioreactors in order to enhance the productivity of phototrophic processes. Although the outcome was negative it became clear that the light regime was the factor limiting the productivity of phototrophic bioprocesses and as a result of this study we were able to focus future research of other PhD students on better ways to improve the light regime and the productivity. This work has led to the development and application of lab-scale panel type photobioreactors built by the mechanical workshop of Wageningen University.

Can you describe the most important experiences you had during that period?
In general I discovered that a PhD period is a splendid period from a social point of view. Although I was very busy sometimes, I had the possibility to plan my life as I wanted and to enjoy life very much. This is even easier since you are surrounded with young people in the same position. Also I discovered it is a great luxury to be able to decide yourself what you will work on and when.
From a scientific point of view I decided that research carried out by the majority of the academics is technology driven and that it is very important to have technical support, analytics, electronics, mechanics and informatics to be able to perform a successful research project. During my PhD research I was very hesitant to plead for certain investments in time and money. Nowadays I realize that you really have to make use of, and adapt, technical developments to be successful. But of course, research should start with new theoretical concepts and questions.

What were your career plans when you finished your PhD?
During my PhD I already decided I wanted to specialize myself within the field of microalgal cultivation. I am in bit in love with the idea of using sunlight and inorganic nutrients (waste compounds) to produce useful products. For this reason I stayed at the Bioprocess Engineering Group to work on a challenging post-doctoral project on biological hydrogen production from organic waste and sunlight using phototrophic bacteria. In the long run, as many other young scientists, I was hoping to find a permanent position in this research field.

What is your current job like? Is it in the same field as your PhD research?
Currently I am doing a second post-doc in Switzerland at the 'Ecole Polytechnique Federal de Lausanne' (EPFL). I work on an ongoing project titled on 'on-line' bioprocess monitoring with spectroscopy and biocalorimetry funded by the 'Fonds National Suisse' (FNS), the Swiss equivalent of the NWO. The reason for me to come here was the possibility to continue working on the further development of microalgal cultivation processes using these new techniques. Since this is only a small area of research it is difficult to find opportunities to work on this in a way I would like to and therefore I had to go abroad.
The aim of the project is to use biocalorimetry to monitor microalgal cultivations on-line. The light energy used by the microalgae is measured as a heat signal and in this way we are able to monitor the productivity directly and during every second: 'on-line'. Although the technical support here is less than I hoped for I am very happy that I have the liberty to continue within this project just as I like it… rebuilding the biocalorimeter into a panel type bioreactor much more suited for high-density microalgal cultivations. In addition, this technique will be extended with the utilization of mid-infrared spectroscopy to monitor the consumption of organic substrates, 'on-line' of course. This last technique can be very useful to optimize the so-called mixotrophic cultivation of microalgae. My only problem is that the current grant period only runs until September 2004, but I just finished writing the project proposal for the following 2005-2006 period.

How are you combining your career and your private life?
Not so good at the moment… My wife is still in the Netherlands and we see each other only once a month, but then for a long weekend. Life in Switzerland is good, but it would be much better to enjoy it together, in fact I think that together I would profit much more from all outdoor possibilities, the night life and also the big variety of cultural activities. We still do not know how we will arrange our lives in the future. She has a nice and permanent position with the Dutch ministry of agriculture and I only have a temporary job until September. This summer I will know whether the project prolongation will be granted or not by the FNS. We will wait for this evaluation and then we will solve the puzzle… Luckily I found a nice apartment for us and I am hoping for an additional two years in Switzerland together with my wife.

What are your plans for the future? How do you see yourself 5 or 10 years from now?
I am aiming to find a permanent position within the academic research. In case I am successful the next years I hope I can return to the Netherlands and find such a position there. On the long run I hope to have many good ideas to commercialize the application of microalgae and start something on my own, or together with a small group of people. I guess in my mid-forties this will be a welcome change of scenery.

Do you have an advice for current PhD students?
Finish your PhD first before you start a new position or job. To finish writing during a new job is not easy and it will take more time in the end. Only start looking for a new job when you have a clear foresight on your actual defense.
And in general, for motivated scientists only, consider going into politics at some stage in your career and open your mouth! I think we need more leaders in our society who engage all kinds of allocation problems from a logical (scientific) perspective and who can clearly present this to the general public. Writing nice columns in newspapers and journals is not enough to really change things.

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.

Editors:
Eira Carballo/
Maaike Schutte/
Ingeborg van Leeuwen-Bol

Office:
P.O. Box 8129
6700 EV Wageningen
The Netherlands
Phone: +31 (0)317 485108
Fax: +31 (0)317 483342

E-mail:
ingeborg.vanleeuwen-bol@wur.nl

Internet:
http://www.wau.nl/vlag

Publisher & Printing:
Drukkerij Roos en Roos
De Overmaat 45
6831 AE Arnhem