



Dear reader,

In your hands (or on your screen) you hold the inaugural issue of CRCG Insight, the newsletter of the Cancer Research Center Groningen (CRCG). The goal of this newsletter is to provide you with inside information on researchers, on interesting research issues as well as other topics that may be of interest for researchers within the CRCG. With this letter, we hope to illustrate the diversity that exists within our institute and highlight how by working together in the CRCG we are making progress in the fight against cancer.

We hope this newsletter provides you with interesting reading material now that the warm and sunny summer days are coming to an end. The CRCG Insight newsletter will return later this year with new topics. We all wish you a great read.

Edwin Bremer

In this issue, you will find an interview with [Dr. Schelto Kruijf](#), a surgeon actively involved in outcome research. He is also well-known for his public outreach activities, e.g. by writing a column in the NRC, one of the leading national newspapers in the Netherlands.

Further, you will find an overview of PhD theses that were defended and grants that have been awarded in the past 6 months. We highlight one of those grants, a consortium grant awarded to [Marcel van Vugt](#) and collaborators in a Q&A session with Marcel. Herein, he details the road taken towards composing the consortium and writing of the grant.

Finally, a summary of the recently held first [ERIBA career day](#) is provided. This day was organized within ERIBA for PhD students that want to cast their net wider than research and was designed to illustrate the many opportunities that can be found outside of academia.

We believe this is an event worthwhile to highlight for CRCG PhD students, particularly as those roads less traveled can be hard to identify.

Researcher in the spot light: Schelto Kruijff, MD, PhD, Surgical oncologist (TS reeve clinical and research fellowship)



My name is Schelto Kruijff and I work in the UMCG as a surgical oncologist with a specific interest in the treatment of endocrine diseases.

I grew up in Leiden and was medically and surgically trained in Groningen and Enschede. During my surgical residencies I obtained my PhD on biomarkers in melanoma (12-Dec-2011). To further develop my endocrine, surgical and scientific skills, I was a surgical fellow at the Endocrine Surgery Unit at Royal North Shore Hospital in Sydney, Australia in 2012.

The latter was a period of time that formed me greatly, both professionally and on a personal level. In 2006, I married my lovely and beautiful wife Annelies, who is the best kindergarten teacher in town. My wife, my four children (the 4th was born in Sydney) and myself had an unforgettable time living in this superb city.

What do you want to achieve within cancer research?

My main focus of cancer research is to improve quality of life after cancer surgery. Philosophically, length of life is irrelevant when there is little quality. I want to improve quality of life by developing improved tailored surgery (e.g. with targeted fluorescence guided surgery) and by reducing surgical complications. Furthermore, as surgeons, we have the responsibility to carefully select patients likely to benefit from our invasive surgical treatments (Bezint eer ge begint).

Your role has changed from performing research yourself to a more supervising role. How did this influence your way of performing research?

The transition to becoming a supervisor has been a very natural and enjoyable one. Being a supervisor makes me work very closely and intensively with several PhD students. On a daily basis we have brainstorm sessions, create research protocols and solve problems together.

For me, the art of supervising lies in finding a good equilibrium between keeping in control and at the same time having the courage to share responsibilities and give researchers the opportunity to grow as a professional and independent researcher. My supervising role forced me to evolve and think more deeply about team dynamics aiming to create an as joyful, creative and efficient process as I possibly can.

CONTINUATION OF RESEARCHER IN THE SPOT LIGHT: SCHELTO KRUIJFF*What is the best part about supervising young investigators?*

Supervising research students and PhD students forms the main drive and motivation of my daily work. In hospitals these days there still seems to be a strict distinction between three domains: healthcare, science and education. I do not believe in this model. I believe that working with and supervising PhDs is actually also a form of continuous education. Of course we all hope to create new significant knowledge and insights, but maybe even more importantly, we raise young professionals to become successful (clinical) researchers. It is a great honour to play such a significant role in their career.

By writing, I create the opportunity to raise awareness about critical themes and issues in a positive way.

What was your most joyful moment in research?

That is hard to say. Being a researcher is a concatenation of moments of ups and downs. My strength in supervising is to help researchers to cope with this and be flexible. Recently, I heard the following inspiring quote at an Endocrine Surgery Meeting: “A researchers success is not measured by how high he or she climbs, but how high he or she bounces when they fall on the ground”.

Research is troubleshooting. This can be challenging. What is the best thing to do when facing a break down?

The best thing to do:

1. Perform physical activity and create happy hormones and empty your mind: after this large problems have become little,
2. Have beers with your peers,
3. Never hesitate to discuss with your supervisor and try to think of a structural solution together (since that is also what we're there for).

Schelto is increasingly involved in the media. Frequently he writes articles for the NRC as well as a monthly blog for Medisch Contact. Currently, he is featuring in a TV commercial promoting the deregulation of the health care system.

How did you get involved in writing for newspapers?

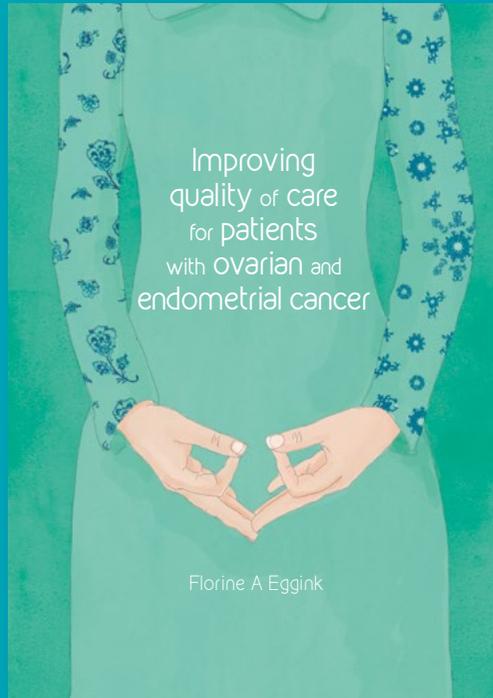
In the summer of 2016, I responded to an article written by one of NRC's editors and journalists Frederiek Weeda. She wrote about her husband who died of metastasized colorectal carcinoma. She felt that doctors still treat death as a taboo and find it hard to address the unfortunate near future of the patient. I pointed out that doctors do want to be as honest as possible, but that the course of life and death is very unpredictable and therefore difficult to discuss. After this, a lot of media attention was given. Subsequently, I wrote a critical article on “Fighting against cancer”. Since then I have been increasingly involved in writing projects.

What is the influence of the publicity on your day-to-day work?

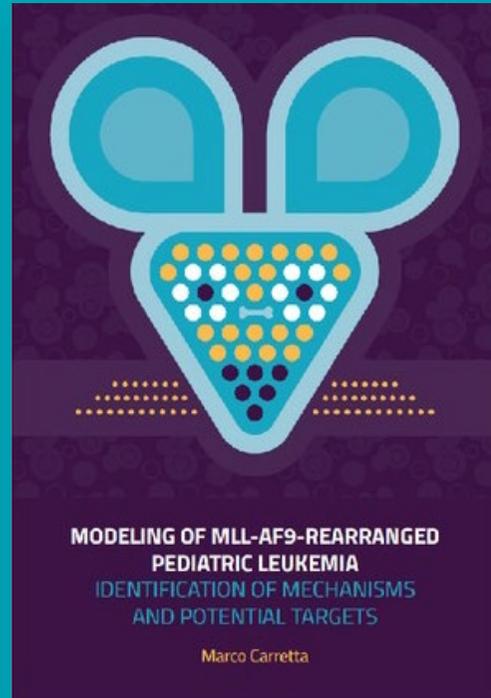
When I was little, I always heard my parents, aunts and uncles, who were all doctors and specialists, expressing their frustrations about management and decision-making in health care. I decided I would never just let things go as they go without being involved, once I would be a doctor. By writing, I create the opportunity to raise awareness about critical themes and issues in a positive way.

> **Valerie A. van der Ploeg**

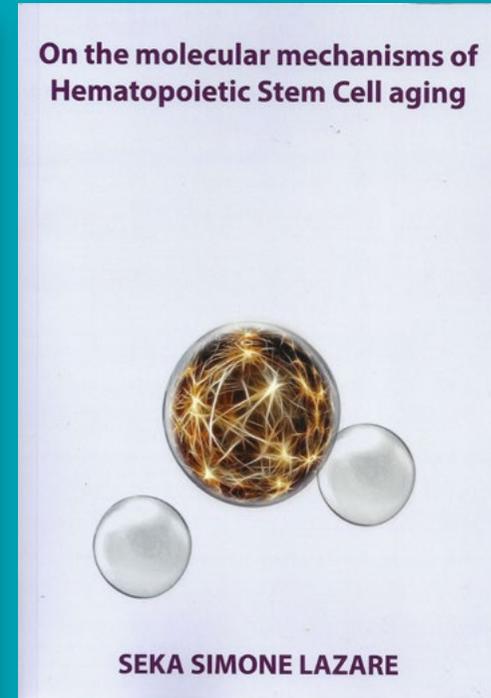
CRCG PhD thesis defences 2018



Improving quality of care for patients with ovarian and endometrial cancer
Ms. F.A. (Florine) Eggink
 January 31, 2018



Modeling of MLL-AF9-rearranged pediatric leukemia
Mr. M. (Marco) Carretta
 February 05, 2018

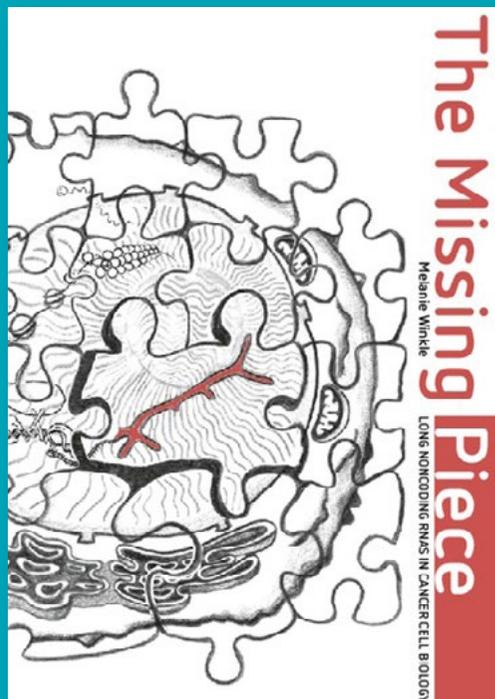


On the molecular mechanisms of hematopoietic stem cell aging
Ms. S.S. (Seka) Lazare
 February 12, 2018

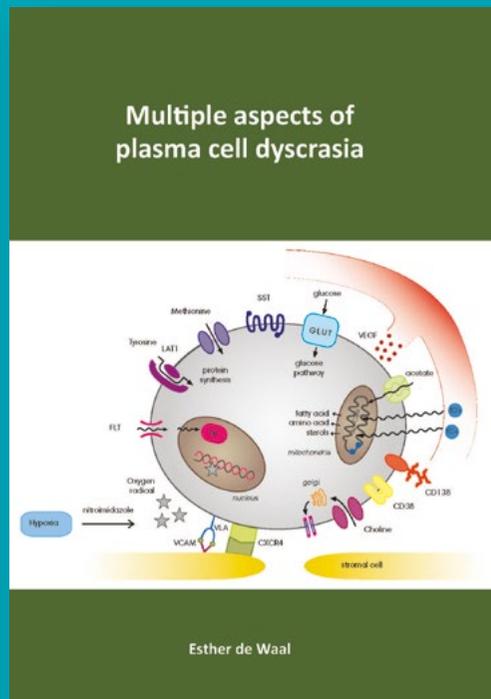


Cell fate after DNA damage
Ms. A.M. (Anne Margriet) Heijink
 March 28, 2018

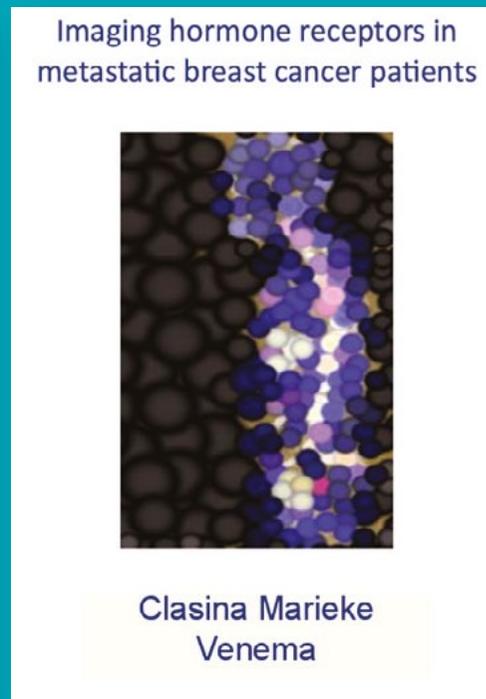
CONTINUATION OF CRCG PHD THESIS DEFENCES 2018



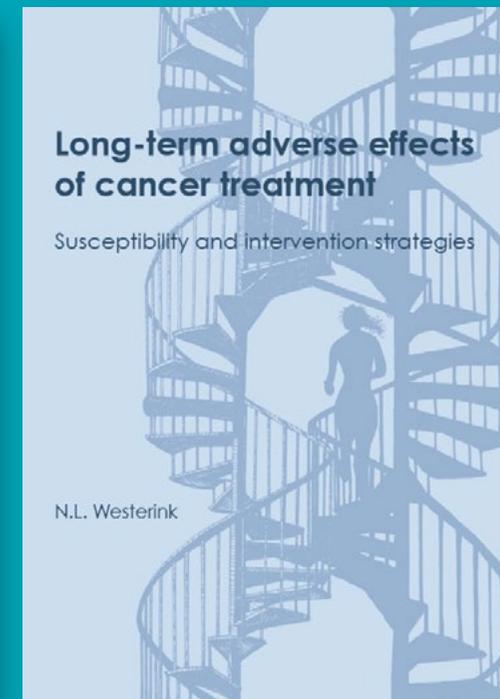
The missing piece
Ms. M. (Melanie) Winkle
April 23, 2018



Multiple aspects of plasma cell dyscrasia
Ms. E.G.M. (Esther) de Waal
April 25, 2018



Imaging hormone receptors in metastatic breast cancer patients
Ms. C.M. (Clarieke) Venema
May 09, 2018



Long-term adverse effects of cancer treatment
Mr. N.D.L. (Niek) Westerink
June 13, 2018

Grants & Prizes

Several of the CRCG researchers have successfully obtained funding. Congratulations and we look forward to great science!

Dutch Cancer Society Research Projects

TITLE Hemodynamic changes in the cardiopulmonary circulation after thoracic radiotherapy.

PROJECT LEADER dr. Peter van Luijk
€ 660.482

TITLE Preventing Head and Neck Cancer Patients from developing permanent Radiation induced Xerostomia: The X-PREVENT Project.

PROJECT LEADER dr. Roel Steenbakkers
€ 468.922

TITLE How heterogeneity within a tumor leads to growth and therapy resistance

PROJECT LEADER dr. ir. Floris Foijer
€ 691.088

TITLE Gerichte verandering van het micromilieu van tumoren; een nieuwe strategie om de effectiviteit van immunotherapie bij kanker te vergroten.

PROJECT LEADER prof. dr. Wijnand Helfrich
€ 592.150

TITLE INCONTROL - Klinische Controle Infrastructuur voor Protonentherapie behandeling

PROJECT LEADER dr. Antje Knopf
€ 528.856

Dutch Cancer Society consortium grant

TITLE Identification and validation of genetic factors that determine sensitivity to Wee1 inhibition in high-grade ovarian cancer and related cancers

PROJECT LEADER prof.dr. Marcel van Vugt
€ 1.422.266

Funding highlight: Dutch Cancer Society Consortium Grant prof. dr. Marcel van Vugt



There are multiple types of funding researchers can apply for. The Dutch Cancer Society (also known as KWF) is one of the major funders when it comes to cancer research. KWF offers funding options for all research phases and offers various types of funding. A relatively new addition is the consortium grant, a type of funding for complex research projects involving multiple collaborating centers. In this issue we will interview Prof. Dr. Marcel van Vugt who recently received a consortium grant together with three other institutes. The UMCG has the leading role in this project.

CONTINUATION OF FUNDING HIGHLIGHT: DUTCH CANCER SOCIETY CONSORTIUM GRANT PROF. DR. MARCEL VAN VUGT

Professor Dr. Marcel van Vugt obtained his PhD in the lab of Prof. Dr. René Medema, where he studied the role of Polo-like kinase-1 during the cell cycle. Following his graduation in 2005, he was awarded an EMBO long-term fellowship to study the regulation of DNA damage checkpoints by cell cycle kinases at the Massachusetts Institute of Technology in Cambridge. He relocated as group leader to the department of Medical Oncology at the UMCG. His current research is focused at finding regulatory pathways that control the cellular responses to DNA damage.

Van Vugt received a KWF consortium grant to identify and validate genetic factors that determine sensitivity to Wee1 inhibition. During the interview, we asked Marcel to give some insight into the realization of this project proposal.

I am convinced that with this group of people and this consortium grant we can achieve our goals much faster

How the consortium grant was created

“It all started about 5 years ago during a collaboration with prof. dr. Thijn Brummelkamp. At that time, the Brummelkamp lab was still located at the Whitehead Institute in Cambridge, US, but in the meantime has moved to the NKI in Amsterdam. We worked together on a project involving Wee1 inhibitors. In brief, Wee1 is a crucial component of the G2-M cell cycle checkpoint that regulates cell cycle progression. Therefore, treatment of cancer cells with Wee1 inhibitors induces mitotic catastrophe and eventually cell death, especially when combined with DNA damaging agents. To uncover why some tumor cells do not respond to Wee1 inhibitor therapy we used genetic screens to identify gene mutations that determine Wee1 inhibitor sensitivity. Validation studies and live cell imaging showed that depletion of a few genes rescued drug sensitivity, but surprisingly did not rescue genome instability induced by Wee1 inhibition. “This was a first clue that it is possible and important to select patients who are eligible for Wee1-inhibitor treatment”. Anne Margriet Heijink, a PhD student sponsored by a MPDI fellowship published these results in PNAS in 2015.

“In parallel, medical oncologist Jan Schellens (NKI, Amsterdam) had started a clinical trial with Wee1 inhibition in ovarian cancer patients. He discovered in this phase 2 study that a large group of patients that

did not respond to standard therapy did respond to therapy when combined with Wee1 inhibitors. However, this response was occurring only in about 60% of the patients. These findings underscore the importance of selecting the right patients for this combination strategy. Together with the findings of Anne Margriet, this formed the basis for a collaboration and this consortium grant”.

Within this consortium grant, we are able to combine the expertise of Thijn Brummelkamp on genetic screens, our preclinical expertise on Wee1 inhibition and the clinical expertise of Jan Schellens on Wee1 inhibition. Yet, there are more people involved to make this project a success. “Prof. dr. Steven de Jong (UMCG) established a large panel of ovarian cancer PDX models and dr. Wigard Kloosterman (UMCU) has a biobank with more than 60 different ovarian cancer organoids. So, in this project, we have mouse models, organoids, patient samples and genetic screening methodology to find out if Wee1 inhibition is effective, and to uncover how Wee1 is regulated. I am convinced that with this group of people and this consortium grant we can achieve our goals much faster”.

> **Iris Koopmans**

> **Photo by Valerie R. Wiersma**

In Retrospect... ERIBA Career day

On March 14th the very first Eriba Career day was held, an event intended to familiarize PhD students and postdocs with atypical scientific career tracks. Quite often, such options are harder to identify than a more traditional academic circuit.

The organizing committee, composed of the PhD students **Alejandra Hernández Segura**, **Britt Sterken**, **Nina Kool**, **Helena Rico** and junior group leader Judith Paridaen brought together speakers of various professional backgrounds in the Eriba avenue with many of our PhD students/postdocs attending.

Alejandra Hernández Segura, PhD student at ERIBA and organizing committee on the motivations driving the organization of the career day: “I am at the end of my PhD and know I do not enjoy working in academia. On the one hand there is the fight for grants and publishing, the working hours, and the pressure. On the other hand, I feel that I have skills that I am not exploiting fully in academia. Personally, I have read a lot about other types of jobs and there are quite some interesting opportunities, but I think in most cases people are not well informed and are ‘stuck’ in academia. We are primed to think that becoming a P.I. is the only “successful” path. By organizing this



event, with examples of others successfully achieving a career shift, we hoped to help and inspire students to make the same steps and to illustrate that it is possible to make the jump from the bench to another interesting type of job.”

Perhaps the highlight of the day was the comeback of **Dr. Marianna Bevova**. Marianna is a former research fellow at the ERIBA and is now the director of the Graduate School of Liège (Belgium).

Marianna’s professional track is a great example of how one’s career can take many turns with dips and plateaus and still lead to a complete professional and personal fulfilment.

After obtaining her PhD in molecular biology (University of Rostock, Germany) she first experienced the industry in both small and large corporations before orienting her career towards academic research. She followed a postdoctoral track in Utrecht,

CONTINUATION OF RETROSPECT... ERIBA CAREER DAY

Amsterdam and finally came to Groningen at the ERIBA institute. Whilst here, she developed a particular interest for education and felt there was both space and a need for new initiatives. Therefore, she set up a massive online open course (MOOC) “Why do we age? Molecular mechanisms of ageing” a self-study video-based course meant to help students and teachers use their contact hours in a more efficient and personalized way. This work also enabled her to expand her network and resulted in a job offer as a graduate school director in Liège, Belgium.

The decision to make a career switch never comes without doubts and questioning, Marianna says. Yet, as we all know, “Man cannot discover new oceans unless he has the courage to lose sight of the shore”. We can only encourage scientists to seize control over their career inspirations with conviction and courage and take “the leap of faith” to find the roads to a fulfilling career...

What other jobs are there for scientists outside of academia?

While most of the PhDs not further pursuing an academic career are attracted towards a career in industry, others aspire to keep a closeness to science yet away from research.

The industry offers a plethora of job opportunities, from project management/ development to business developer, consultancy, science policy, medical affairs. However, other non-industrial career choices deserve as much interest. For instance, attractive alternate job opportunities can be found in publishing groups, (inter) national policy groups, funding organizations, or for more audacious personalities, in independent freelance journalism.

If you are looking for more information, this blog from Naturejobs gives an overview of many more possible careers, advices and personal testimonies. <http://blogs.nature.com/naturejobs/2013/05/21/careers-for-scientists-away-from-the-bench/>

The ERIBA career day shed light on the multitude of possibilities for PhD graduates and on how to open up new career horizons. We believe it is a worthwhile event for all scientists interested in exploring alternate career paths and are looking forward to another exciting and informative edition next year!

> Irena Bockaj

Colofon

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Cancer Research Center Groningen
CRCG, UMCG (FA30), Postbox 196, 9700 AD Groningen

Editorial Staff / Staff Writers

E. Bremer, Editor-in-chief, e.bremer@umcg.nl
I. Bockaj, i.bockaj@umcg.nl
M. Gerritsen, m.gerritsen@umcg.nl
M. Hooiveld, m.h.w.hooiveld@umcg.nl
I. Koopmans, i.koopmans@umcg.nl
E. Kuiper-Drenth, e.t.kuiper-drenth@umcg.nl
Valerie R. Wiersma, v.wiersma@umcg.nl
E. Vellenga, e.vellenga@umcg.nl

Lay-out

Dorèl Extra Bold, eddy@dorelextrabold.nl