Wie gelooft er nog in de Sint?

INAUGURELE REDE DOOR PROF. DR. A.J.A.M. VAN DER VEN

Radboud Universiteit Nijmegen

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International health is a field of medicine that relates to health across regional or national boundaries and therefore also addresses poverty-related health problems in low and middle-income countries. Infectious diseases, such as malaria, tuberculosis and HIV/AIDS, account for most poverty-related health problems. Unlike in the industrialized world, university medical centres in low income countries mostly focus on care and education as they lack research capacity. Long-term North-South and East-West Academic partnership can help to develop research capacity, strengthening the position of these centres. These international collaborations can also provide a sound basis for student exchange programmes. Finally, travel medicine is also part of international health. It is increasing in importance as more and more people with underlying medical conditions travel, for whom specialized, accurate tailored medical advice is vital.

Prof Dr Andre van der Ven (Breda 1953) studied medicine in Belgium, where he graduated *met onderscheiding* in 1980. After training as a tropical doctor, he worked in Botswana from 1982 to 1987. He became an internist in 1993 and an infectious diseases specialist at the UMC St-Radboud in 1995. Also in 1995 he defended his PhD *cum laude* at Radboud University Nijmegen. He subsequently worked for a year in the Sophia Hospital in Zwolle and for five years at the academic hospital in Maastricht. In 2002, he was appointed Associate Professor and specialist in infectious diseases at the UMC St-Radboud and became head of the Nijmegen Institute for International Health. Since 2010 he has been head of the infectious diseases section of the department of General Internal Medicine.

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door prof. dr. A.J.A.M. van der Ven

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Meneer de rector magnificus
Dames en heren

Vandaag vertel ik u over internationale gezondheidszorg, een stukje geschiedenis, wat bedoelen we met armoedegerelateerde ziekten, het belang van internationale academische samenwerking en wetenschappelijk onderzoek, onze onderwijs- en patiëntenzorg-activiteiten. Graag zal ik mijn oratie, vanwege onze buitenlandse gasten, tot we aan de Sint toekomen, in het Engels voortzetten.

INTERNATIONAL HEALTH, also known as *global health*, is a field of medicine, usually with a public health emphasis, that deals with health across regional or national boundaries. A particular form of international medicine is travel medicine. International health also deals with global processes that influence human health and as such with poverty-related health problems in low and middle-income countries. It is a rather new discipline, although the relationship between poverty and disease is well known. Jeffry Sachs, Bono, Bill and Melinda Gates and others have put the concept of poverty-related diseases back on the agenda. At first sight, international health seems a perfect subject for a public health expert, while the connection with internal medicine may be less obvious. Traditionally, tropical medicine was part of the expertise of internal medicine. However, many infections that are classified as "tropical diseases" used to be endemic in countries located in temperate or cold areas. I will tell you more about this shortly. Bear in mind you that it was only in 1970 that the who officially declared the Netherlands free of malaria (the last case of endemic malaria was detected in Koog aan de Zaan in 1958).

Improvements in housing, diet, sanitation and hygiene as well as environmental changes contributed to the control of these diseases in our part of the world. For example, the straightening of the Rhine reduced the breeding grounds for the mosquito that transmits malaria. Water management in northwest Europe contributed significantly not only to the control of malaria, but also to that of various other water-borne infectious diseases. As the climate was not the main factor, the discipline tropical medicine was renamed "geographical medicine" or "tropical medicine and international health".

LESSONS FROM THE PAST

In the past, Zeeland was a very swampy area, creating excellent breeding grounds for mosquitoes. Those days, malaria was endemic in Zeeland. The sea, the land and the river Scheldt (which provides access to the port of Antwerp) were always in competition. In July 1809, as described by Howard in the *British Medical Journal*, a large British force of 40.000 soldiers sailed for the island of Walcheren in the Scheldt estuary. I quote Howard: French naval activity at Antwerp had made the Dutch coast "a pistol held at the head of England," and the government was keen to strike a decisive blow at Napoleon's ambititions. The overall commander was Lord Chatham, nicknamed "the

late earl" because of his difficulty in getting up in the morning. This late waking habit of Lord Chatham was however not the only problem for the British troops. The so-called Walcheren expedition turned out to be a disaster as more than 10,000 soldiers developed a febrile illness within the first two months and many died (very few as a result of enemy action).

There is sufficient evidence to implicate malaria as a major component of Walcheren fever, but careful review of all sources suggests that it was a lethal combination of diseases - malaria, typhus, typhoid and dysentery - acting together on a group of men living under pitiable circumstances. The reduced mortality in officers compared with the troops (only 3% compared with over 10%) was probably as much due to their better general health as to the higher-quality care they undoubtedly received.

In London, authorities questioned: How is this possible? It was concluded that many factors contributed to the catastrophe but one of the most significant was the lack of communication between the physician-general and the surgeon-general. These positions were abolished and replaced by a single director-general. Over time, Zeeland changed. Dykes were built, swamps were drained and malaria was eliminated.

What can we learn from this?

1. Poor conditions increase susceptibility to multiple (infectious) diseases.
2. Some tropical diseases were previously endemic in our part of the world.
3. A central authority should perform disease control, especially where there are epidemics
4. Water management is a useful tool for disease control.

WHAT DO WE MEAN TODAY BY THE TERM "POVERTY-RELATED DISEASES"?

Infectious diseases, health problems around birth and malnutrition account for 70% of all deaths in Africa, 40-50% in parts of Asia and for less than 20% of the deaths in the other parts of the world. Infectious diseases account for most of these deaths, especially malaria, tuberculosis and HIV/AIDS. Malaria is a major cause of death in African children under five years old. Tuberculosis - a public health threat in many parts of the world - is one of the leading causes of mortality and morbidity worldwide. It is estimated that about 10% of the world population is infected with TB. In Africa, the incidence of tuberculosis has increased, mainly as a result of the burden of HIV infection.

Since the beginning of the epidemic, more than 70 million people have become infected with HIV. In many African countries, HIV/AIDS is the main cause of death, and it is the fourth cause worldwide. In many sub-Saharan countries life expectancy is 47 years (this figure would be 62 years without AIDS). In Asia, the HIV/AIDS epidemic is growing faster than in any other region.

Malaria, tuberculosis and HIV/AIDS are called poverty-related diseases, because more than 95% of new cases occur in low-income countries. These infections cause

tremendous health problems, which both accompany and exacerbate poverty because of their relationship with poor housing, food, hygiene and access to health care. A vicious circle arises, with illness and death leading to higher costs for medical care, loss of income, and as a result, more poverty.

FROM ABSTRACT NUMBERS TO A PERSONAL EXPERIENCE

In the eighties, when I worked in Botswana, the Dutch government had a bilateral technical support program with Botswana and Dutch doctors were seconded via the ministry of health in Gaborone to work in the various district hospitals in the country. At that time, Botswana was almost completely dependent on foreign doctors, as only two doctors were Botswana citizens (these were refugees from South Africa) and there was no medical faculty in the country. Scandinavia and the Netherlands provided technical support free of charge. In those days Botswana was just doing a bit better economically speaking, having originally been one of the ten poorest countries in the world. High-quality diamonds, a growing tourist industry and beef exports have secured economic growth over the last 30 years. Health-wise, the picture changed dramatically in a very short time: in 1990 life expectancy at birth was around 64, while in 2004 life expectancy at birth fell to 35 – the lowest figure in the world (World Bank statistics). A single factor caused this dramatic change in life expectancy: HIV/AIDS!

A critical audience may feel a bit puzzled now: Botswana became one of the richest countries in Africa, but at the same time one of the most severely affected countries health-wise. So is it correct to call HIV/AIDS a poverty-related disease? There are various possible views, but allow me to look at this issue as an academic medical professional. The spread of a deadly infectious disease at a scale and speed as occurred in Botswana in the nineties demanded immediate action and a multidisciplinary group of experts tackling the problem in a comprehensive way. For this particular problem, biomedical experts are needed, covering for example infectious diseases, virology and laboratory medicine in addition to behavioral scientists such as psychologists and anthropologists and health economists.

In addition, as the British learned in 1809, excellent communication and a central authority are needed. As stated before, Botswana had two medical doctors, no medical faculty and no medical research institution and therefore lacked the capacity to deal with this complex emerging problem. Botswana became even more dependent on foreign experts with good intentions. If a similar situation arises in the Netherlands, a task force of experts from Dutch universities or research institutions is formed and evidence-based interventions are quickly implemented.

The main point I would like to make here is that the fight against poverty related diseases does not only require money but local scientific institutions that have the capacity to deal with the (emerging) health problems as well. In addition, I would like to show

that North-South or East-West academic partnership is a useful tool for building such capacity and may thus contribute to better global health.

ACADEMIC PARTNERSHIP

Universities and university medical centres in the industrialized world play an important role in accumulating knowledge that contributes to improve human health. Evidence-based medicine has contributed significantly to the large health gains that have been achieved in many parts of the world.

The clustering of care, education and research within academic centers in industrialized countries represents one of the main incubators for "Western" medicine. In the meantime, the development of health care in developing countries has not kept pace. This is not only due to financial constraints, but also because of the weak position of local university medical centers. These institutions often lack research capacity and the activities of the medical professionals are therefore often limited to healthcare and education. This is not the ideal environment for inquisitive potentially "frontier" health professionals. At the same time, Non-Governmental Organizations (NGOs) implement large-scale health programs with significant financial support from abroad. Because there is often little or no contact between the NGOs and local academic centers, opportunities to build local capacity to develop evidence-based medicine and evidence-based interventions are not seized. Local academic centers thus remain powerless, not only because they lack financial capacity, but also because they have not built up research expertise and because, as a result, ambitious but frustrated professionals have gone elsewhere.

Some of these universities set up partnerships with universities overseas. Radboud University Nijmegen, because of its original Catholic signature, has unique long-term collaborations with institutions overseas. Its capacity-building efforts are well recognized in these countries but are known only by few in the Netherlands. A good example is the nearly 50 years of collaboration with the Tanzanian health care system, in which the University Medical Centre St Radboud played a crucial role and many Radboud workers contributed, such as van Amersfoort, Meeuwissen, Tolboom and Dolmans. At the time of independence, nearly 50 years ago in 1964, Tanzania had around 100 citizens with a university degree, ten of whom graduated as medical doctor. This is much better than in Congo in 1960, which had not more than 16 university graduates (by the way, no medical doctors and no lawyers). In 1970, the University of Dar es Salaam in Tanzania was established with its own medical faculty. At first, 35 medical doctors graduated each year in Dar es Salaam, serving a population of about 23 million inhabitants. The UMC St Radboud has trained many Tanzanian professionals – at first for the university hospital in the capital, later for KCMC, the university referral hospital for the North. The medical curriculum for KCMC was set up and developed through close collaboration with Nijmegen and the medical curriculum in Moshi is still optimized in collaboration with our university.

Today, Tanzania has five medical faculties from which 350 doctors graduate annually (100 from KCMC and 200 from Dar es Salaam). Nonetheless, Tanzania still has only about one medical doctor for every 25,000 inhabitants.

This was about educational cooperation. But what about research collaboration? In 2003, the long-term collaborations of the UMC St Radboud with Tanzania and Indonesia were boosted by a grant from the Dutch Organization for Scientific Research (NWO). Our main objective with this grant was to establish a network of institutes with the aim of building research capacity for studying infectious diseases in Tanzania and Indonesia. This network was called PRIOR, which stands for Poverty-Related Infection Oriented Research. Participating institutes were: in Indonesia Padjadjaran University Bandung and Eijkman Institute Jakarta and in Tanzania: KCMC and Dutch universities (Nijmegen, Leiden, Maastricht, Wageningen) and the RIVM. Many enthusiastic professionals from different disciplines from the three countries contributed to this program, supervising PhD students (14 have defended their thesis and three more will finish soon). Subsequently, follow-up programs were developed: APRIORI laid the foundations for the Kilimanjaro Clinical Research Institute (as it is now officially recognized by the Tumaini University) and IMPACT has greatly reinforced the medical research unit of the Padjadjaran University in Bandung.

WHAT ABOUT BOTSWANA?

The school of medicine was only established in 2009, when 36 students were included in the Bachelor's program.

In conclusion:

1. Low and middle-income countries often lack the capacity to develop or optimize interventions to improve local health problems.
2. Long-term North-South or East-West academic partnerships can reinforce the position of the university medical centers, especially if the partnership is accompanied by funds that enable the admission of extra students and the retention of brilliant professionals in the low-income institutes.
3. International academic partnership offers unique opportunities for win-win situations as one partner gets access to more advanced technical knowledge while the other gets access to large numbers of patients.
4. The position of university medical centers in low and middle-income countries may be weakened by foreign initiatives with considerable funds operating in the same area.
5. International academic partnership sets high standards for professional behavior for both parties and professionalizes the societal involvement of the institutes. It adds to the content of the educational program and helps prepare students who

wish to address global issues. It thus contributes to the prestige, profile and appeal of both institutes.

6. Globalization causes the rapid spread of diseases and professionals from the North and South can learn from each other on how to deal with these – for them – emerging illnesses.

Let me give two examples

INJECTING DRUG USE AND THE SPREAD OF HIV/AIDS

It is very well known that HIV/AIDS is a sexual transmitted disease. The importance of injecting drug use (IDU) as a route for HIV transmission has received less attention although outside sub-Saharan Africa, IDU is the route for transmission of HIV in 30% of cases. The importance of supplying clean needles and methadone maintenance treatment to prevent HIV transmission was well recognized early in the HIV epidemic in the Netherlands. The exception was the South-East of the Netherlands, where HIV seroprevalence rates rose to around 20-25%, compared to less than 5% elsewhere in the country. The reason for this is that clean needles and a shooting-up area were implemented late in Heerlen. Very few HIV-infected IDUs found their way to the HIV treatment centre in Maastricht. Access to care is a global issue for these people, as health-care workers tend to see drug users as incurable, manipulating, lacking in motivation and not worthy of care, while others think that addiction leads to personality disorders, a sense of shame and loss of self-respect. Internists at the Academic Hospital in Maastricht joined forces with the Psychology Faculty at the same university (Prof. Hospers) to prevent, control and treat HIV among drug users in Limburg. I learned a lot working in an HIV policlinic at the centre for alcohol and drugs in Heerlen for five years, for example that IDUs indeed have very limited access to care, they need "one-stop care", a lot can go wrong in prisons, adherence to treatment is not necessarily problematic but psychiatric co-morbidity is. Prostitution turned out to be common, which carries the substantial risk of spreading HIV in the general population. The collaboration with psychologists turned out to be crucial, effective and very pleasant and we received the Pearl Award for prevention from ZonMw.

In the *British Medical Journal* in 2003, about the time that I moved from Maastricht to Nijmegen, it was shown that 80% of all new HIV cases in Indonesia could be attributed to injecting drug use. Indonesia had undergone recent political change from a repressive to a democratic political environment. Together with these changes, Indonesia was facing an enormous increase in injecting drug users and consequent HIV transmission. Estimates of the seroprevalence of HIV among IDUs vary in Indonesia, but can reach more than 50 percent. In Bandung, doctors also became increasingly worried as they were – for the first time – confronted with AIDS patients and drug users. We were strongly encouraged to share our knowledge on HIV and injecting drug use by the team of infectious diseases specialists in Bandung. Nijmegen and Bandung were in fact already

collaborating on TB research, with Dr Bachti Alisjahbana and Dr van Crevel as pioneers. We formed a multidisciplinary team of experts from Bandung, Maastricht (Hospers), Antwerp (Meheus), Nijmegen (Dr Baltussen, de Jonge en van Crevel) and Cordaid and a large EU grant was obtained. We were very happy to get this grant since investments in health care for drug users and commercial sex workers are not always appreciated by the general public or by all politicians and professionals who control budgets. However, they can be the main engine driving the HIV epidemic and it was visionary of the doctors in Bandung to recognize it in the early phase and for all stakeholders to work on it! For West Java, we designed a comprehensive program for prevention, control and treatment of HIV among drug users, addressing all possible levels. After five years of hard work, with support from all important stakeholders such as the university, hospital, prison, provincial health authorities – and with input from European partners – a multidisciplinary team of experts was formed in Bandung to address the problem of HIV in West Java and offer advice, where needed, to the national AIDS committee. A Master's program in addiction and HIV care is meanwhile being organized in Indonesia, with support from Prof. Cor de Jong at our university, ensuring dissemination of expertise for the whole of Indonesia. Drug use starts at the age of 12 and a special school program has therefore been developed by Prof. Hospers at UM. This program may be introduced in the whole of West Java (at 33,000 schools) and will hopefully form the basis for real prevention.

Meanwhile, a cohort of 1500 HIV patients was established in Bandung, offering the internists excellent opportunities for translational research. More fundamental questions can also be addressed. For instance, we are studying what an opioid mu receptor is doing on cells that play an important role in host defense. In the laboratory in Nijmegen, the immunomodulating effects of opioids are explored with support from Profs Netea and Joosten. Meanwhile, we found in our cohort that the natural course of HIV differs in IDU versus non-IDU patients. In addition to that, they appear more likely to develop tuberculosis and we have evidence that biological factors play a more important role than exposure.

Our research confirmed that opioids have immune-modulating effects, something that was repeatedly suggested by my drug-using patients in Limburg. I find this a typical example of how contact with patients, e.g. working as an internist, can add to basic knowledge in medicine and be of public health interest.

A careful clinical observation also led to our studies on the role of platelets in malaria, carried out in collaboration with Utrecht University. Low platelet counts are common in malaria, and as internists, we hypothesized that platelets bind to the blood vessels and that malaria resembles a rare blood disease called TTP where this also happens and like malaria causes fever, haemolysis and brain dysfunction and low platelet counts. A recent editorial in *Blood* indeed indicated that malaria is now recognized as a microvascular disease. Evidence came, among others, from studies by Quirijn de Mast, who studied this in the experimental malaria model set up by Prof. Sauerwein in Nijmegen,

but also included field studies in Tanzania and Indonesia. We are currently focusing on the role of platelets in dengue virus infections, together with colleagues in Indonesia and the Netherlands.

MEDICAL EDUCATION

For more than 40 years, Nijmegen students have done clinical internships in the final years of their training in Tanzania, Ghana, Nicaragua, El Salvador, Surinam and recently Indonesia. This student exchange is unique in the Netherlands as 1) we only work with designated institutes, 2) clinical and public health activities are always combined, and 3) students are well prepared before they go. This elective is highly appreciated by the students and every year around 70 to 90 - soon maybe 120 - travel abroad. Monique Keuter and Henri van Asten are the main driving forces behind this program that has the objective to broaden medical, social and cultural horizons. The mandatory preparatory courses are continuously improved by Monique and Henri, in consultation with Tropico, a committee of students. There are initiatives for professionalizing the collaborating doctors and teachers abroad, as was done with Nijmegen doctors and teachers (this is good for our students and for the Tanzanian students). Dear students: internships in a developing country are very important for our department and we intend to give it maximum support in the future.

Our department also took the initiative to create a sequential series of electives focused on infectious diseases in which biomedical and public health courses run in parallel. This opened the door to create an "infectious diseases" track within the study Biomedical Sciences. We hope that this track will not only be attractive for Dutch students but for students from abroad as well. There is considerable global variation in the pattern of infectious diseases, and the creation of an "international classroom" would have clear added value. I hope our institute is willing to invest in such an international classroom.

Finally, our department contributes in different ways to medical education overseas. Cor Postma en Petra van Gurp are further developing the medical curriculum at KCM College in Tanzania, extending the pioneering work done by Prof. Dolmans. We established a Master's program in clinical research in Tanzania using NWO funds and will support the Master's program in addiction care in Indonesia.

PATIENT CARE IN THE NETHERLANDS

Patient care, research, education and service are core tasks of a university medical centre in the Netherlands. So the remaining issue to be addressed is how international health is translated into patient care in Nijmegen. The answer is twofold.

First travel medicine: travel-related health hazards can be prevented trough immunizations and prophylactic medication. There is a proliferation of travel clinics providing these services, but I question whether they always provide a quality service. At

the same time, more and more people are travelling with underlying medical conditions for whom specialized, accurate, tailored medical advice is vital. The Radboud know-how on tropical or exotic illnesses is extensive and available 24 hours a day. Specialized knowledge on diagnosis and treatment can be supplemented by expertise on immune deficiencies (who may be at increased risk?) or local factors (various specialists have worked for years in the tropics). Together with the Department of Occupational Health we will establish the Radboud Travel Clinic, a centre of expertise for travel-related health issues. Tropical or exotic illnesses are not commonly diagnosed in the Netherlands and, in my opinion, care for these patients should be concentrated in a few specialized centers.

Finally, the Dutch travel abroad frequently, but foreigners also come and live in the Netherlands. We have started collaborating with general practitioners in order to improve the care of non-Western immigrants in our country.

The title of my oration is: "Wie gelooft er nog in de Sint". I refer here to different meanings of the Dutch word Sint, which is not easy to translate into English. I hope you will excuse me if I now will continue in Dutch.

WIE GELOOFT ER NOG IN DE SINT?

Een wat mysterieuze titel. Welke Sint wordt hier bedoeld: Sinterklaas, het symbool voor vrijgevigheid of de Sint als heilige, dus iemand zonder zonden. Internationale gezondheidszorg heeft niets te maken met heiligheid maar is door de signatuur van de katholieke universiteit Nijmegen en het academisch ziekenhuis Sint Radboud - ik gebruik nu de oorspronkelijke namen - altijd wel een typisch Nijmeegse activiteit geweest. De wenselijkheid van nauwe contacten met derdewereldlanden (zo noemde men dat toen) is jaren vastgelegd geweest in de strategische plannen van de universiteit, maar is er helaas uit verdwenen.

Sinterklaas staat voor vrijgevigheid maar er zijn recent terecht veel vraagtekens gerezen of het geld voor ontwikkelingssamenwerking allemaal wel goed is besteed. Sint Radboud, hij leefde van 850 tot 917 - quote communicatie van het servicebedrijf - bezoekt zieken, voedt armen en geeft zijn vermogen weg. Anno 2011 is het vermogen van het Radboud kennis en ik pleit er vurig voor om onze kennis en middelen beschikbaar te blijven stellen om een bijdrage te leveren aan mondiale problemen. Bovendien: in onze globaliserende wereld zijn er veel studenten die verder willen en moeten kijken dan de ommuurde achtertuin.

De ambities van de infectieziekten/ internationale gezondheidzorg van de algemeen interne geneeskunde voor de komende jaren zijn daarom het volgende

1. Onderzoek: Onze eigen specifieke expertise wordt verder uitgebouwd door meer fundamenteel onderzoek in Nederland te combineren met translationeel onderzoek overzee met focus op HIV/TB en Dengue/malaria.

2. Onderwijs: Het coschap ontwikkelingslanden willen we maximaal blijven ondersteunen en verder professionaliseren waar mogelijk. Voor studenten overzee zullen we proberen infectieziektenonderwijs te creëren of te optimaliseren zowel lokaal als in Nijmegen.
3. Patiëntenzorg: Wij willen onze expertise op het gebied van reizigersgeneeskunde krachtiger neerzetten en meer aandacht geven aan de internistische zorg voor niet-westerse patiënten.
4. Dienstverlening: Wij blijven een duidelijke rol blijven spelen in de langdurige institutionele samenwerking met Tanzania en Indonesië.

DANKWOORD

Met genoegen sluit ik me aan bij de traditie van onze universiteit om deze rede af te sluiten met een dankwoord. Per slot van rekening, het soort werk dat ik doe is alleen mogelijk door de inbreng van heel veel mensen

Meneer de rector magnificus, leden van het college van bestuur van de Radboud Universiteit, leden van de raad van bestuur van het UMC Sint Radboud, dank voor het in mij gestelde vertrouwen en in het belang dat u hecht aan internationale gezondheidszorg.

Mijn academische carrière ben ik begonnen in België, en ik denk met dank terug aan de gedegen opleiding die ik er mocht genieten en de warmte van de mensen die ik er heb ontmoet. Ik raad u dringend een bezoek aan, mogelijk bestaat België binnenkort niet meer. Ook in Botswana ontmoette ik veel gastvrijheid, evenals later in Tanzania en Indonesië. Als dank deel ik deze ervaringen met u, deze gastvrije ervaringen in het buitenland staan in schril contrast met de huidige populistische xenofobie in Nederland.

Mijn opleider interne geneeskunde is professor Jos van der Meer, tevens mijn promotor. Beste Jos, Je hebt een opvallende liefde voor de wetenschap en met je bezielende en motiverende houding heb je heel wat mensen warm gemaakt voor ons vak, waaronder mijn persoon. Prof Paul Mier en Dr Tom Vree hebben me verder in de wetenschap geïntroduceerd, twee inspirerende en vrolijke wetenschappers. Professor Kullberg is mijn opleider infectieziekten en het is door hem dat ik mij in hart en nieren een internist-infectioloog voel. Reinout van Crevel, dank ik dat hij me in Indonesië heeft geïntroduceerd en voor zijn enorme inzet voor IMPACT, ik verheug me op verdere samenwerking.

Na mijn promotie heb ik een jaar in Zwolle gewerkt waar ik bijzonder onder de indruk was van de kwaliteit van de geneeskunde. Beste Ton Tjabbes en Frits Nelis, aan jullie denk ik nog steeds terug als een voorbeeld van een ideale collega.

Het onderzoek bleef trekken en daarom zijn we naar Maastricht verhuisd. Het cardiovasculaire onderzoek in Maastricht is uitstekend. Ik heb me dan ook aangesloten bij prof. Catrien Bruggeman en prof. Harrie Steinbusch, die bestudeerden of micro-organismen bijdragen aan vaat- of hersenschade; zij hebben daarmee de basis gelegd

voor ons huidige malaria/Dengue werk In Maastricht heb ik ook de hoogleraren psychologie Gerjo Kok, Herman Schaalma en Harm Hospers ontmoet. Dames en heren, wat een geweldige collega's om onderzoek mee te doen. Beste Harm, dank voor je inhoudelijke maar ook persoonlijke bijdrage. Illustratie: aan het eind van een lange dag werken overzee en na het voeren van vele gesprekken bekruipt je soms het gevoel doen we dit wel goed? Dat is steevast het moment waarop Harm spontaan komt met de mededeling "Wat zijn we toch goed, he Andre" en dan spreekt vriend en collega en psycholoog.

Er zijn heel veel andere mensen die door hun inzet de buitenlandse activiteiten tot een succes gemaakt hebben, ik kan ze niet allemaal noemen. Ik noem graag de niet-Nijmeegse kartrekkers zoals Ottenhoff uit Leiden, Savelkoul Wageningen, Van Soolingen (Bilthoven) en Meheus Antwerpen. I would also like to thank our collaborators from abroad: I cannot mention them all, as for many years we had over 150 people on the payroll, including 30 PhDs. One of our first PhD students was Gibson Kibiki, who is now Professor Kibiki and head of the Kilimanjaro Clinical Research Institute! Gibson: what a achievement! I really hope we can continue working together! In Indonesia I want to mention our co-workers from the Eijkman Institute but especially our collaborators in Bandung. Prof Tri from the Padjadjaran University and Dr Wahyudi from Hasan Sadikin Hospital, Dr Lucy from the Provintial Health Office and, of course, Dr Hadi, Dr Primal, Drs Lucas Pinxten and Dr Nina: thank you for your kindness and friendship. According to the old Chinese saying "the true master is invisible", but today I would like to put the spotlight on Dr Bachti Alishibana: you make things happen as only a true master can.

Tenslotte wil ik heel graag prof de Groot en dr Fijnheer uit Utrecht danken voor de plezierige en effectieve samenwerking met betrekking tot het plaatjesonderzoek. Met de verankering van Quirijn de Mast hoop ik dat we dit verder gaan uitbouwen.

De internationale gezondheidszorg is onderdeel van de sectie infectieziekten en dat valt weer binnen de algemeen interne geneeskunde. Terecht: als infectiologen zijn en blijven wij namelijk algemeen internisten en het is een plezier binnen een afdeling te werken met zo'n brede expertise. Professor Tack, Lenders en Stalenhoef en alle andere algemeen internisten dank voor jullie collegialiteit!

De internationale gezondheidszorg. Carla Ysenbrand, Mieke Daalderop, Henri van Asten, Reinout van Crevel, Quirijn de Mast, Monique Keuter en alle promovendi. We hebben de afgelopen jaren bijzondere dingen gedaan en dat was alleen maar mogelijk dank zij een ieders inzet. Onze verschillende persoonlijkheden hebben zich gevoegd tot een fijn team.

Aan alle medewerkers van de sectie infectieziekten: werken als infectioloog binnen het Radboud is net als zeilen op zee. Een schip is net zo zeewaardig als zijn bemanning en tot nu toe hebben we over alle wereldzeeën gevaren, de elementen trotserend. Ik vind het een voorrecht om op ons geweldig schip voor in de wedstrijd te mogen varen.

Familie: eerst wat men noemt de koude kant echter niets is minder waar: bij de Zeeuwse familie voel ik me zeer thuis en Arie Roeland, je huis aan de Karel Doormanlaan is een heel warm nest. Dank voor je gastvrijheid en zorgzaamheid. Mijn moeder wordt oud, ze is er daarom vandaag niet, ik ben blij en dankbaar dat mijn zussen goed voor haar zorgen.

Menno, Viktor en Oscar: De afgelopen jaren zijn er veel mensen uit het buitenland bij ons op bezoek geweest en jullie hebben deze bezoekers altijd bijzonder open en hartelijk mee ontvangen. Ik weet dat dit door veel buitenlandse gasten erg op prijs wordt gesteld. Ik ben trots op jullie. Realiseer je dat als er wordt geapplaudisseerd, dat dit ook voor jullie is.

Marjolein: Vandaag zei je tegen me: "als je me toespreekt krijg ik een boei" en iets later "ik ga dan brullen". De associatie brulboei was snel gemaakt... Ik maak nu een grapje, niet toevallig want humor neemt een vaste plaats in onze verhouding. Toch is dit een heel serieus moment! Want vergeet nooit: iedereen die ooit in de mist heeft gevaren weet hoe belangrijk brulboeien zijn!

Ik heb gezegd.

LITERATUUR

- Howard MR. *Walcheren 1809: a medical catastrophe.* BMJ. 1999 Dec 18-25;319(7225):1642-5.
- López JA. *Malignant malaria and microangiopathies: merging mechanisms.* Blood. 2010 Feb 18;115(7):1317-8.
- Pisani E, Garnett GP, Grassly NC, Brown T, Stover J, Hankins C, Walker N, Ghys
- PD. *Back to basics in HIV prevention: focus on exposure.* BMJ. 2003 Jun 21;326(7403):1384-7.
- Sachs J. *The End of Poverty, economic possibilities for our time.* 2005 Pinguin Press ISBN 1-59420-045-9
- van der Ven AJ, Vermeulen CM, Schippers JA, Bruggeman CA, Satijn TK, Hospers
- HJ. *Transmural care for HIV-seropositive drug users: experiences from Southeast Limburg, the Netherlands.* Ned Tijdschr Geneeskd. 2003 Apr 5;147(14):662-5.
- van der Ven AJ, Rameckers EM, Hospers H, Vermeulen C. *HIV prevalence among injecting drug users in South Limburg, 1994-1998/1999: increasing trend in Heerlen, not in Maastricht.* Ned Tijdschr Geneeskd. 2002 Jun 29;146(26):1253;