



REVIEW 2000 - 2007

MEMORANDUM OF UNDERSTANDING

BETWEEN

FACULTY OF VETERINARY SCIENCE, UNIVERSITY OF PRETORIA
(SOUTH AFRICA)

AND

FACULTY OF VETERINARY MEDICINE, UTRECHT UNIVERSITY
(THE NETHERLANDS)



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Denkleiers • Leading minds • Dikgopolo tša Dihlalefi



Universiteit Utrecht

Preface

The University of Pretoria (UP) and Utrecht University (UU) are both internationally recognised as teaching and research universities. Both are also members of the international community of scholarly institutions.

This particular Memorandum of Understanding (MOU) between the University of Pretoria and Utrecht University is an excellent example of how internationalisation can take place to the mutual benefit of tertiary institutions, in this case the Faculty of Veterinary Science at the Onderstepoort campus of the UP and the Faculty of Veterinary Medicine at the Uithof campus of Utrecht University.

The longstanding relationship between the two institutions has not only given students and staff access to knowledge and expertise but also enabled senior academics to obtain qualifications up to PhD level equivalent to the best in the world.

The outstanding way in which this MOU is managed bodes well for the future and is setting a high standard for the management of relations between tertiary institutions and faculties. The aim was always for excellence in this MOU. It is a symbiotic association of which the cornerstones were laid well. We believe that our future cooperation can only be strengthened and extended to reach even new heights.

We hope this brochure will stimulate the readers to participate in the future collaborations.



A handwritten signature in black ink, appearing to read 'Gerry Swan'.

*Prof Gerry Swan
Dean: Faculty of Veterinary Science
University of Pretoria*



A handwritten signature in black ink, appearing to read 'A. Cornelissen'.

*Prof Albert Cornelissen
Dean: Faculty of Veterinary Medicine
Utrecht University*

Introduction

A Memorandum of Agreement calling for the establishment and promotion of mutually beneficial scientific, educational and other relations was signed in 1998 by Utrecht University and the University of Pretoria. By 2000, contact between the Faculty of Veterinary Science, University of Pretoria (UP) and the Faculty of Veterinary Medicine, Utrecht University (UU) had developed to such an extent that both faculties were ready to further promote this agreement and a 5-year Memorandum of Understanding (MOU) was signed on 14 January 2000 in Pretoria by the Deans of the two faculties. The MOU was renewed and signed for a further 5 year period on 3 February 2005.

Collaboration on aspects of veterinary education, research and clinical services are components of the MOU. Joint research collaboration with institutes in South Africa as well as with institutes in the southern African region (SADC) and the EU countries is stimulated within the MOU.

Each year an evaluation and planning meeting is organised, alternately at the Faculty of Veterinary Science's Onderstepoort campus, or at the Faculty of Veterinary Medicine in Utrecht. During meetings of the deans and coordinators of both faculties with staff and students of the hosting university, the plans and activities of the previous year are evaluated and an operational plan for the following year is prepared.

In the course of the 7 years of the MOU, more and more staff from both faculties have become involved in the collaboration. The results of the various components of the MOU in the first 7 years of cooperation are summarised in this report.

This report not only highlights achievements over the last 7 years of cooperation but also aims to indicate that successful collaboration requires a long-term commitment to fully realize the benefits. Both faculties are committed to continue and possibly expand the collaboration in the coming decade.

Coordinating team:

Faculty of Veterinary Science University of Pretoria

Prof. Nick Kriek, Dean (till 2005)
Prof. Gerry Swan, Dean (from 2006)
Prof. Morkel Terblanche, Deputy Dean
(morkel.terblanche@up.ac.za)

Faculty of Veterinary Medicine Utrecht University

Prof. Albert Cornelissen, Dean
Dr. Robert Paling and Mrs. Drs. Hellen
van der Maazen of the Office for
International Cooperation of FVM/UU
(bic@vet.uu.nl)



Signing of the MOU in 2005: The previous Dean of the Faculty of Veterinary Science at UP, Prof. Nick Kriek (sitting left), Prof. Albert Cornelissen, Dean of the Faculty of Veterinary Medicine from UU, Dr Robert Paling (standing left) and Prof Morkel Terblanche, Deputy Dean at the Faculty of Veterinary Science.

Funding by the faculties and successful applications for external grants

In order to maintain and stimulate the cooperation between the faculties under the MOU, each Faculty Board has allocated a budget for travel and accommodation of staff. At UU, the annual Faculty budget of € 5.000 was doubled by the University Board. An equivalent level of funding has been apportioned to the MOU by the UP Faculty from its development funds.

A specific fund for support of UP PhD and MSc candidates was established at UU. Fifty per cent of the allocation received by the FVM-UU for the promotion of a UP PhD candidate goes to the fund. MSc and PhD research by candidates from UU and UP can be supported.

Since January 2005, UP has been receiving a fee for the supervision of every undergraduate UU student executing a Student Research Project (SRP) at the Onderstepoort campus.

In order to execute collaborative research projects, UU and UP have jointly applied for research grants, PhD and MSc fellowships, and other funding. Successes were achieved with the acquisition of the following grants and scholarships:



PhD research project on Rift Valley Fever (RVF)
Dr José Manuel Fafetine of the University Eduardo Mondlane (UEM) received a Utrecht Scholarship Programme (USP) fellowship from Utrecht University for research visits to UU in 2000 and 2001. He also received a MacGillavry fellowship with a total value of US\$ 24 000 in 2002. Dr. Fafetine also paid multiple visits to Onderstepoort. Partners in this PhD project are UEM, UU and UP.
Technical Centre for Agricultural and Rural Cooperation (CTA)
Dr Jannie Crafford and Mr Tsepo Matjila of UP received funding from the CTA for travel to and participation in the 2000 Symposium on Tropical Animal Health and Production organised at UU.
The Netherlands "Expertise centre Southern Africa" (EZA)
The EZA funded part of Prof. Koos Coetzer's joint appointment at UU for 5 years in 2001.
Biochip Project
The project was funded through the Netherlands Ministry of Economic Affairs (Senter). The project commenced in June 2001 and covered 4 years of cooperation between OP, UU and Isogen Ltd. A subcontract was awarded to UP to employ Dr Visva Pillay for two years as a post-doc. The project successfully produced a macro-array based molecular diagnostic test kit for simultaneous diagnosis of pathogens and was launched as a commercial product in 2004. The total budget for the Biochip project amounted to € 350.000.
Integrated Consortium on Ticks and Tick-borne Diseases (ICTTD)
ICTTD received a subcontract of € 25 000 for tick taxonomy in 2001, as part of a larger EU project on the development of a database for all living creatures on earth. In 2004, the ICTTD-3 received a further grant from the International Cooperation Programme of the EU (INCO) to continue the work for another 4 years (€ 1.842.000). ICTTD is coordinated by UU (Prof Frans Jongejan) and the Faculty at Onderstepoort is one of its 44 participating members.

Delta Scholarships

MSc (and future PhD) candidate Ms Darshana Morar of UP completed a training period at UU with a Delta scholarship of Nuffic. The research project, which started in 2002, is on the development of a Gamma interferon diagnostic test for tuberculosis in rhinoceros, elephant and lion. In 2002, Drs Toyota Ndudane and Thembile Songabe of UP started their MSc (Animal Pathology) programmes at UU funded through Delta scholarships. PhD candidate Mr. Matjila of UP also received a Delta and a USP scholarship from Utrecht University for his stay of 9 months in the Netherlands during 2002.

TB diagnostic work in wildlife

Early in 2002, UU's Dr Vic Rutten received a personal grant of € 10.000 from Prince Bernard for TB diagnostic work in wildlife. The money has been utilised to support the research project of Ms Darshana Morar on the diagnosis of TB in wildlife.

UK Department of International Development (DFID)

In 2003, the DFID awarded Prof. Frans Jongejan of UU funding for a 2 year project, with an extension of 1 year, for a research programme on bovine cerebral theileriosis. The total available budget for the project was € 147 000. The project was administered by the University of Pretoria and executed in Tanzania by Dr Lieve Lynen who was employed on this project for 3 years. Dr Visva Pillay was responsible for the molecular testing.

International Cooperation Programme of the EU (INCO)

A total of € 186 000 was acquired by Prof Frans Jongejan as funding from a large EU project on molecular vaccines and diagnosis for the control of theileriosis. A subcontract was awarded to the University of Pretoria to employ Dr Marinda Oosthuizen.

European Molecular Biology Organisation (EMBO)

In 2003, EMBO and ICTTD awarded € 25.000 for a practical course on molecular diagnosis of tick-borne pathogens that was held at the Onderstepoort campus of the Faculty of Veterinary Science.

Biopad funding

Biopad funding (ZAR 2.500.000) through the South African Programme for support of Biotechnology was acquired in 2003 for the further development and commercialisation of the molecular tests on tick-borne diseases.

Wellcome Trust

The Wellcome Trust (Animal Health in the developing world) awarded a grant to Prof Frans Jongejan for the adaptation of recombinant anti-tick vaccines for livestock in Africa in 2005. The duration of the project will be for 5 years and will be conducted by 7 partners, including UU and UP. The grant consists of a total of € 1.646.202.

Wellcome Trust fellowship

In 2006, UU's Dr Ildiko van Rijn was awarded a Wellcome Trust fellowship to work on CD1 restricted lipid antigens in bovine tuberculosis in cattle and wildlife in South Africa and in bovine para-tuberculosis in the Netherlands. The fellowship has been awarded for a period of 3 years (€ 400 000 in total), starting in 2007.

MOU contributions to workshops, courses and symposia

The Office for International Cooperation of Utrecht University initiated an annual Symposium on Tropical Animal Health and Production (TAHP) in 1990. Under the MOU, staff of the University of Pretoria (Faculty of Veterinary Science)(UP) and the Onderstepoort Veterinary Institute (OVI) have made regular contributions to the Symposium, either in the capacity of a chairperson, or as presenter of a paper since 2000. The various contributions are shown in the following table:

Year	Title of Symposium	Contributors	Attendees	Other
2000	Diagnosis and control of transboundary infectious diseases in Southern Africa	From UP - Proff Nick Kriek, Moritz van Vuuren, Tammy Krecek, Alan Guthrie, Koos Coetzer and Dr Jackie Picard. From OVI – Drs Wilna Vosloo, Swanepoel, Mary-Louise Penrith and Anita Michel	From UP – Dr Jannie Crafford and Mr Tsepo Matjila	Publication ISBN 90-6159-032-9
2001	Dairy development in the tropics	From UP- Prof Koos Coetzer		Publication ISBN 90-6159-033-7
2002	Risks of infections in wildlife	From UP – Prof Koos Coetzer. From OVI – Dr Anita Michel		Publication ISBN 90-6159-034-5
2003	Environmental contaminants and natural toxins in the food chain	From UP – Prof Theuns Naude		Publication ISBN 90-6159-
2004	Management of elephant reproduction	From UP – Prof Henk Bertschinger		Publication ISBN 90-393-3887-6
2005	Tuberculosis at the livestock/wildlife/human interface	From UP – Proff Koos Coetzer, Jacques Godfroid and Ms Darshana Morar. From OVI – Dr Anita Michel		Publication ISBN 90-393-4117-6
2006	Pandemic of influenza in birds and its control	From UP – Dr Shahn Bisschop		Publication ISBN 90-393-4409-5

In addition to the above, a number of other workshops, courses and/or meetings have been arranged under the banner of the MOU as shown in the following table:

Year	Title	Contributors	Venue/Sponsors	Other
2000	UP/UU/OVI/ICCTD workshop Ticks and tick-borne diseases	From UP – Dr Hein Stoltz. From UU – Prof Frans Jongejan	Onderstepoort	
2000	ICTTD/CTTC workshop The molecular diagnosis of tick-borne pathogens based on PCR and reverse line blotting (RLB)	From UP – Dr Gubbels and Mr Vos. From UU – Prof Frans Jongejan	Onderstepoort	
2001	Workshop on the regional MSc in Veterinary Public Health and Food Safety		Maputo	
2003	Diagnosis of tick-borne pathogens	From UU – Prof Frans Jongejan	European Molecular Biology Organisation Onderstepoort	
2003	Expert consultation meeting on control of African wild elephant populations	From UU – Proff Hans Heesterbeek, Ben Colenbrander and Dr Tom Stout. From UP – Prof Henk Bertschinger	Prince Bernard Nature Fund	Publication ISBN 90-393-3666-0

Major outputs of the collaboration

Apart from other outputs previously referred to, major outputs of the collaboration between UU and UP are listed in the following table:

Year	Output	Contributors
2000	Virtual Centre for tick and tick-borne diseases (CTTC) established	From UP – Dr Hein Stoltsz From UU – Prof Frans Jongejan
2001	Tick museum established at Onderstepoort	From UP – Prof Ivan Horak
2003	Publication of the book “Ticks of domestic animals in Africa – a guide to identification of species”	University of Edinburgh From UP – Prof Ivan Horak
2004	Molecular diagnostic test kit (Biochip project)	
2004	Second edition of the book “Infectious diseases of livestock”	From UP – Proff Koos Coetzer and Roy Tustin (editors) From UU – Prof van Jan Oirschot and Dr Jaco van der Lugt
2005	Web-based MSc programme on Veterinary Tropical Diseases established	UP, UU and Institute of Tropical Medicine, Antwerp

In addition to the above, a total of 5 PhD theses of UP staff were successfully defended at UU and 4 MSc theses were finalised. Two candidates graduated at UP and two candidates at UU. A total of 19 scientific articles were furthermore jointly published in international journals and 1 in the Onderstepoort Journal of Veterinary Research.



The Sir Arnold Theiler building of the Faculty of Veterinary Science at the Onderstepoort campus of the University of Pretoria



The Androclus building of the Faculty of Veterinary Medicine at the Uithof campus of the University of Utrecht

Mutual staff appointments

In order to strengthen research and educational cooperation between the two faculties, joint appointments within the MOU were made as follows:

- On 1 January 2000, Prof Frans Jongejan of the University of Utrecht (UU) was appointed for a 3-year period as extraordinary professor in the Department of Veterinary Tropical Diseases at UP's Faculty of Veterinary Science. A third three-year period commenced on 1 January 2006.
- By special arrangement, Prof Koos Coetzer of the Department of Veterinary Tropical Diseases was appointed as professor in the UU's Department of Infectious Diseases and Immunology on 1 January 2001, for a 5 year period. A second appointment period of 5 years commenced on 1 January 2006.
- UU's Dr Victor Rutten was appointed as an extraordinary professor for 3 years in the Department of Veterinary Tropical Diseases at Onderstepoort on 1 August 2006.

In 2000, UU's Prof Bert van der Weyden visited the Faculty at UP as external examiner of a reproduction specialist.

Dr Robert Paling of UU was appointed as General Secretary of the Association of Institutions for Tropical Veterinary Medicine (AITVM) in 2000. The Faculty at Onderstepoort and UU are active members of the AITVM. Prof Koos Coetzer (UP/UU) and Dr Paling (UU) are members of the Standing Committee. Prof Coetzer was elected as President of AITVM in August 2007.

Prof Koos Coetzer has also been appointed as member of the editorial board of the veterinary review journal "Vetscite". In January 2001 the first issue of "Veterinary Science Tomorrow" was launched at <http://www.vetscite.org>

In 2001, Prof Cheryl McCrindle of the Onderstepoort Faculty acted as external examiner for Dr Pamela Woods (UZ, Harare), a PhD candidate. She was a member of the board of opponents for Dr Woods' public thesis defence at UU.

From March 2002 until December 2004, Dr Visva Pillay was seconded to Onderstepoort as molecular biology instructor. The appointment received technical backup from UU and was funded through the Biochip Project (Senter, Ministry of Economic Affairs, The Netherlands). Dr Pillay worked on the Theileria and the Roan antelope projects.

Dr Marinda Oosthuizen was appointed in January 2003 as a post-doc at UP for one year on a UU subcontract from a European Union (EU) project on molecular vaccines and diagnosis of theileriosis.

In 2006, Dr Christene Maritz-Olivier was appointed in a post-doctoral position in the Department of Biochemistry at UP through the Wellcome trust project on the development of anti-tick vaccines.

UU's Prof Tom Stout was appointed as an extraordinary Professor for 3 years in the Reproduction section of the Department of Production Animal Studies at Onderstepoort and has also been working with the Equine Research Centre (ERC) since June 2007.



The Dean of the Faculty of Veterinary Science at Onderstepoort, Prof Gerry Swan (left) and Prof Koos Coetzer, Head of the Department of Veterinary Tropical Diseases at the Onderstepoort Faculty during a working session at the Faculty of Veterinary Medicine of Utrecht University

Joint supervision of PhD candidates

In the first 7 years of the MOU, 5 PhD theses were completed under the MOU and were successfully defended at Utrecht University. The PhD candidates were supervised by UU and/or UP staff.

Dr Jaco van der Lugt (UP but more recently UU) defended his thesis on "The clinicopathology and pathology of selective toxicoses and storage diseases of the nervous system of ruminants in Southern Africa" on 13 June 2002 (ISBN 90-393-3033-6). Prof Erik Gruys of UU and Prof Coetzer of UP/UU acted as promoters.

Prof Bruce Gummow of UP defended his thesis entitled "Vanadium Mining and Cattle Health: Sentinel studies, epidemiological and veterinary public health issues" on 10 November 2005 (ISBN 0-620-35227-2), with Prof Hans Heesterbeek and Prof Jos Noordhuizen, both from UU, as promoters.

On 25 April 2006 Dr. Johan Nöthling of UP defended his thesis "Improving the utility of frozen dog sperm" (ISBN 90-393-4207-5). Prof Ben Colenbrander of UU acted as his promotor.

Dr. Erich Zwegarth from the Onderstepoort Veterinary Institute (OVI) defended his PhD thesis on "In vitro cultivation of *Ehrlichia ruminantium* and development of an attenuated culture-derived vaccine" on 29 May 2006. The promoters were Prof van Jos Putten (UU), Prof Frans Jongejan (UU/UP) and Prof Basil Allsopp (UP). Dr Peter Thompson of the Faculty at UP defended his PhD thesis on "Congenital myasthenic syndrome of Brahman cattle" on 12

October 2006 (ISBN 0-620-37081-5). Prof Hans Heesterbeek (UU) and Prof Johan van Arendonk (WUR/UU) acted as promoters.

Currently a number of UP staff (Ms Darshana Morar, Mr Tshepo Matjila, Dr Brighton Dzikiti, Prof Tony Shakespeare, Dr Inge-Marie Petzer, Dr Shahn Bisschop, Dr Henry Annandale, Dr Marianne de Vries, Dr David Gerber, Ms Sibeko, Ms Raksha Boohra, Prof Pete Irons, Prof Henk Bertschinger) and Dr Ard Nijhof from UU are working on their PhD research projects under supervision of staff from UU and/or UP. Most of them are already registered as PhD candidates at either UP or UU. There is an increasing interest from both faculties to do a PhD under the MOU.

There are also several PhD students registered at either UU or UP originating from other institutes. These include: the Onderstepoort Veterinary Institute, Pretoria (Dr Anita Michel), the Kruger National Park (Dr Louis van Schalkwyk, Dr Audrey Delsink), the Eduardo Mondlane University, Maputo, Mozambique (Dr José Manuel Fafetine), the Veterinary Investigation Centre, Arusha, Tanzania (Dr Lieve Lynen), the International Trypanotolerance Centre, Banjul, Gambia (Dr Faburay) and the Centre for Disease Control and Prevention, Atlanta, USA (Dr Loftis).



Postgraduate students in one of the laboratories in the Department of Veterinary Tropical Diseases at the Onderstepoort campus

MSc training under the MOU

The Faculty of Veterinary Science's Department of Veterinary Tropical Diseases at UP set up a web-based MSc degree programme on Veterinary Tropical Diseases in cooperation with the institute of Tropical Medicine, Antwerp, Belgium and the Faculty of Veterinary Medicine, Utrecht University in 2004.

The two-year postgraduate UU Master of Science course in Animal Pathology has been successfully completed by Onderstepoort's Dr Toyota Ndudane and Dr Thembile Songabe. They both participated in the 2001 – 2003 MSc course and completed parts of the research experiments at the Onderstepoort campus.

Prof. Ben Colenbrander was a co-supervisor of the MSc student Florian Herold, who graduated at the UP Faculty in 2003.

Also in 2003, Ms Darshana Morar obtained an MSc degree under the supervision of Dr Anita Michel (OVI), Prof Estelle Venter (UP) and Drs Vic Rutten and Edwin Tijhaar, both from UU.

Joost van Segeren and Michiel Silfhout, both undergraduate students from UU, have registered for MSc degrees at UP and will graduate in 2007.



Dr Thembile Songabe was one of the candidates from the Onderstepoort Faculty who successfully completed the two-year postgraduate UU MSc course in Animal Pathology.



Ms Christa Bodaan, one of the students from the UU who spent 8 weeks at the equine clinic of the Faculty at Onderstepoort as part of her 10 week clinical rotations. This photograph was taken during a night-shift at the Equine Clinic. Ms Bodaan has already finished her degree.

Undergraduate student exchange

UU undergraduate veterinary students have various periods in their programme during which they can do an externship at other veterinary institutions and so receive part of their educational training. The possibilities include the Student's Research Project, The Excellent Track and Clinical Rotations.

For UU students, a 3 month Student's Research Project (SRP) in the 5th year is a compulsory part of their 6-year veterinary curriculum. The students can execute such a research project within the FVM-UU, or at another (bio-) medical or veterinary related research institute in The Netherlands or abroad. One of the requirements is that the student is supervised by UU staff as well as by staff from the hosting institute.

Students are very interested to complete their SRP at the Onderstepoort Faculty. During the first 7 years of cooperation, 28 UU students completed their SRP in South Africa, under supervision of UP and UU staff.

Top-performing UU students are offered the opportunity to do a one-year honours programme, between the 4th and 5th year of their veterinary curriculum, the so-called Excellent Track (ET). In this programme they can do a more comprehensive research project. Three students have to date done an ET under supervision of UU and UP staff and have executed part of the research in South Africa. One student completed an Excellent Track research project at the Cerebral Theileriosis project in Tanzania (not included in the table below), which was also done under supervision of UP and UU staff.

In the final year of study, UU students have the opportunity to do part of their clinical rotations (CR) at a veterinary institute in The Netherlands, or abroad. So far, 16 students have participated in the clinical rotations at Onderstepoort for periods of between 5 en 17 weeks. In an exceptional case, one UU student opted to spend a full year in the OP clinical rotations.

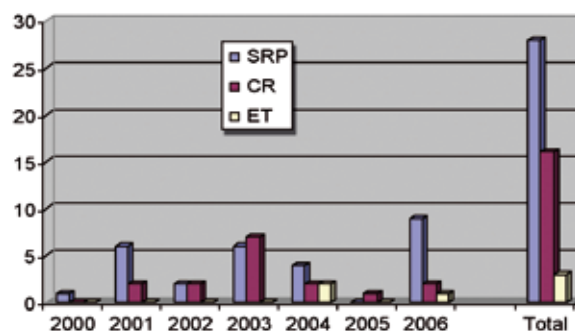


Table 1 Type of externship

Number of UU students per type of externship at UP per year.

SRP = Student Research Project; CR = Clinical Rotations;

ET = Excellent Track

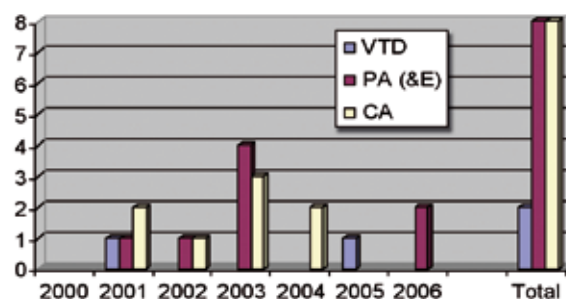


Table 2 Clinical Rotations

Number of UU students per UP department per year.

VTD = Dept. of Veterinary Tropical Diseases;

PA (&E) = Production Animals (& Equines); CA = Companion Animals (the student who visited OP for one year attended clinical rotations at all departments and is therefore counted 3 times in this table).

Some educational materials have been exchanged between the UU department of Pathobiology and the UP Department of Anatomy and Physiology, the UP Department of Veterinary Tropical Diseases and UU department of Infectious Diseases and Immunology.

Since 2000, UP/UU's Prof Koos Coetzer has made a substantial contribution to the 2 week UU elective course "Introduction to Tropical Animal Health" for 30 4th year students which takes place annually.

In 2004, an outline for a primarily online (web-based) elective course of six weeks for 6th year veterinary medicine students at Utrecht University was developed, submitted and approved. It is now being implemented in the current curriculum by a dedicated consortium of lecturers from Utrecht, Pretoria and Antwerp.

Staff visits for the MOU activities

The collaboration of staff and postgraduate students within the MOU was made possible by communication through e-mail, telephone and video-conferences. Apart from that, a large number of visits were made to the partner institute.

A substantial number of visits were related to the various collaborative research projects including the planning and fund acquisition of new projects as well as research on existing projects.

Visits by candidates and/or their supervisors / promotor took place for thesis preparation, defence and graduation ceremonies of MSc and PhD students. Courses and training in certain (laboratory) techniques also required mutual visits.

Staff and students also travelled to participate in and/or contribute to workshops, symposia and courses, as well as for the annual evaluation and planning of the Memorandum.

In the seven years described in this report, over 140 visits were made by staff and postgraduate students from UU, UP, OVI and UEM. The duration of the visits varied from 3 days to 11 months.

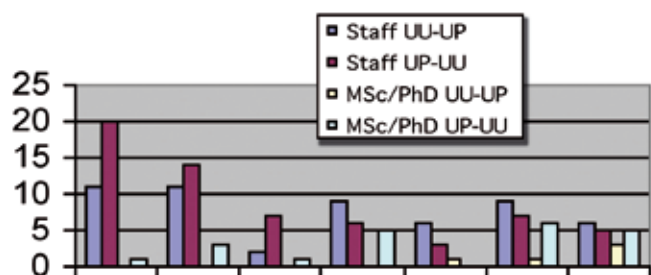


Table 3 MOU visits between UP and UU

The number of staff and postgraduate MSc and PhD students from the first mentioned faculty to the last mentioned faculty per year.



There was also time to relax. Prof Albert Cornelissen (left), Dean of the Faculty of Veterinary Medicine at Utrecht University and Prof Koos Coetzer, Head of the Department of Veterinary Tropical Diseases at the UP Faculty share a humorous moment away from all the work



Dr Robert W Paling (right), Head of the Utrecht Faculty's Office for International Cooperation, and Mr Jean de Gooijer (liaisons officer) at the entrance to the Utrecht Faculty



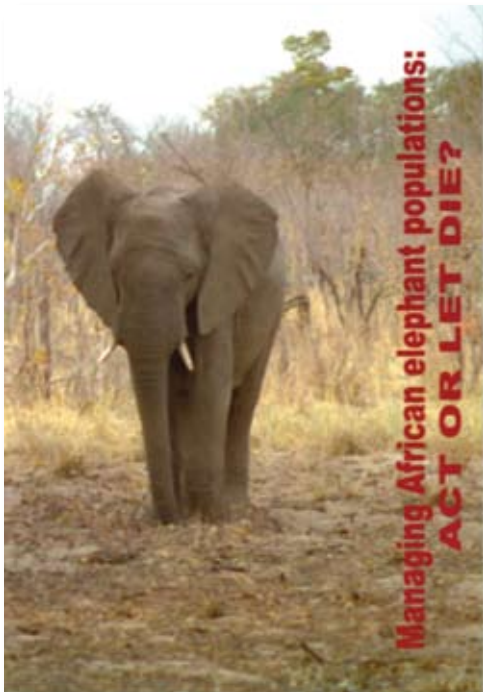
One of the laboratories at the Faculty of Veterinary Medicine of the Utrecht University. Looking at the facilities are from left to right Dr Leo van Leengoed from UU, Prof Morkel Terblanche, Deputy Dean of the Faculty of Veterinary Science at UP and Drs Hellen van der Maazen of the Office for International Cooperation at the Utrecht Faculty of Veterinary Medicine

Academic publications

The joint research has resulted in the publication of 20 articles in scientific journals.

1. Butler CM, Houwers DJ, Jongejan F, van der Kolk JH 2005 *Borrelia burgdorferi* infections with special reference to horses. A review. *Vet Quarterly* 27: 146-56
2. Collins NE, Liebenberg J, de Villiers EP, Brayton KA, Louw E, Pretorius A, Faber FE, van Heerden H, Josemans A, van Kleef M, Steyn HC, van Strijp MF, Zweygarth E, Jongejan F, Maillard JC, Berthier D, Botha M, Joubert F, Corton CH, Thomson NR, Allsopp MT, Allsopp BA 2005 The genome of the heartwater agent *Ehrlichia ruminantium* contains multiple tandem repeats of actively variable copy number. *Proc Natl Acad Sci USA* 102: 838-43
3. Estrada-Pena A, Bouattour A, Camicas JL, Guglielmone A, Horak I, Jongejan F, Latif A, Pegram R, Walker AR 2006 The known distribution and ecological preferences of the tick subgenus *Boophilus* (Acari: Ixodidae) in Africa and Latin America. *Exp Appl Acarol* 38: 219-35
4. Fafetine JM, Tijhaar E, Paweska JT, Neves LC, Hendriks J, Swanepoel R, Coetzer JA, Egberink HF, Rutten 2007 VP Cloning and expression of Rift Valley fever virus nucleocapsid (N) protein and evaluation of a N-protein based indirect ELISA for the detection of specific IgG and IgM antibodies in domestic ruminants. *Vet Microbiol* 121: 29-38
5. Gummow B, Botha CJ, Noordhuizen JP, Heesterbeek JA 2005 The public health implications of farming cattle in areas with high background concentrations of vanadium. *Prev Vet Med* 72: 281-90
6. Gummow B, van den Broek J, Kirsten WF, Botha CJ, Noordhuizen JP, Heesterbeek JA 2006 The assessment of biomarkers in sentinel cattle for monitoring vanadium exposure. *J Environ Monit* 8: 445-55
7. Gummow B, Kirsten WF, Gummow RJ, Heesterbeek JA 2006 A stochastic exposure assessment model to estimate vanadium intake by beef cattle used as sentinels for the South African vanadium mining industry. *Prev Vet Med* 76: 167-84
8. Herold FC, de Haas K, Colenbrander B, Gerber D 2006 Comparison of equilibration times when freezing epididymal sperm from African buffalo (*Syncerus caffer*) using Triladyl or AndroMed. *Theriogenology* 66: 1123-30
9. Herold FC, De Haas K, Cooper D, Colenbrander B, Nothling JO, Theunissen W, Spillings B, Gerber D 2004 Comparison of three different media for freezing of epididymal sperm from the African buffalo (*Syncerus caffer*) and influence of equilibration time on the post-thaw sperm quality. *Onderstepoort J Vet Res* 71: 203-10
10. Matjila TP, Nijhof AM, Taoufik A, Houwers D, Teske E, Penzhorn BL, de Lange T, Jongejan F 2005 Autochthonous canine *babesiosis* in The Netherlands. *Vet Parasitol* 131: 23-9
11. Matjila PT, Penzhorn BL, Bekker CP, Nijhof AM, Jongejan F 2004 Confirmation of occurrence of *Babesia canis vogeli* in domestic dogs in South Africa. *Vet Parasitol* 22: 119-25
12. Molad T, Mazuz ML, Fleiderovitz L, Fish L, Savitsky I, Krigel Y, Leibovitz B, Molloy J, Jongejan F, Shkap V 2006 Molecular and serological detection of *A. centrale*- and *A. marginale*-infected cattle grazing within an endemic area. *Vet Microbiol* 113: 55-62
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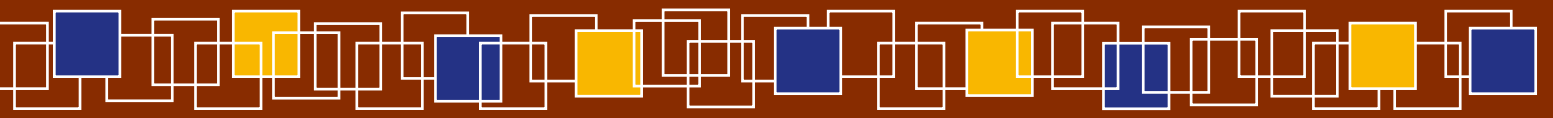
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Cover of the abstract book published after the expert consultation meeting on the "Control of African Wild Elephant Populations" in The Netherlands.

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