

HISTORY DEPARTMENT OF PATHOLOGY

ANATOMICAL PATHOLOGY

The Department of Anatomical Pathology was established in the Karl Bremer Hospital with the appointment of professor HW Weber as professor and head of the Division of Pathology in 1958. Professor Weber was recruited from Frankfurt, Germany and he was one of the founder professors of the Faculty.

The department was one of the first departments to move from Karl Bremer Hospital to Tygerberg Hospital in 1967.

Professor van der Walt succeeded professor Weber in 1985 as head of the Department. Professor DJ Rossouw (1985 – 1994), joined the department as professor in Anatomical Pathology. They extended the research platform and continued to publish extensively in the areas of cardiovascular pathology, malignant mesothelioma, carcinoma of the lung and sarcoidosis.

Following professor van der Walt's retirement in 1993, professor DJ Rossouw succeeded as head of the department. He and dr PAB Wranz actively promoted the concept of morphological sciences that lead in 1993 to the successful incorporation of Cytopathology from the Department of Obstetrics and Gynecology with the Department of Anatomical Pathology.

Following the unexpected death of professor Rossouw in November 1994, professor van Velden served as head of the department until the end of 1995. Prof Wranz succeeded him in 1996 and continued to strengthen cytopathology and to establish closer collaboration with the College of Medicine and the University of Cape Town. He facilitated the award of ad hominem professorships to dr GS Rutherford and R Hewlett from the Neuropathology Unit for their valuable and globally acknowledged contributions to neuropathology and he facilitated the establishment of a Unit for Neuroscience.

Prof JW Schneider succeeded professor Wranz as head in March 2000. In 2001 he was appointed as Head of the School for Basic and Applied Health Sciences with continuation of responsibilities in anatomical pathology. In this position he served as the University of Stellenbosch's representative to interact with the National Health Laboratory Services.

Prof CA Wright was appointed as head in February 2002. She established a very successful fine needle aspiration clinic at Tygerberg Hospital that soon attracted the support from the private sector, peripheral hospitals and the Western Cape Health authorities. As an expert in cytopathology, Prof Wright introduced in 2005 a new MScMedSci (Cytopathology) programme to address a major need in postgraduate training of pathologists.

Dr WD Bates received the AJ Brink trophy for the best clinically relevant presentation at the Academic Year Day (1994). He also received the Faculty's Post-Doctoral Award to spend a year in Oxford (1996) during which time he performed extensive research on the Banff Classification of renal biopsies from transplanted kidneys. The results of this study have been published and acknowledged internationally. Prof Bezuidenhout won the HP Wasserman trophy for the Best Scientific Exhibition in 2002. She received the prestigious Rector's Award for Teaching Excellence, Stellenbosch University in 2002 and obtained a PhD in 2005.

Since the inception of the National Health Laboratory Services (NHLS) in 2001, the department expanded its services, infrastructure and staff complement.

Over the years the Department has produced numerous publications in peer reviewed international journals, contributed to text books, and trained more than Anatomical Pathologists. The Department plays an important role in undergraduate teaching, and is actively involved with postgraduate training of registrars and scientists from various

disciplines. There is close collaboration with the Universities of Cape Town and the Western Cape, as well as the Walter Sisulu University in Umtata.

More recently, the Department introduced an outreach programme that involves all the peripheral NHLS laboratories in the Western Cape and selected laboratories in the Eastern Cape, including the NHLS laboratories at the Nelson Mandela Hospital in Umtata.

CHEMICAL PATHOLOGY

The Department of Chemical Pathology was established at Karl Bremer Hospital in the early nineteen seventies under the management of Dr CP Retief. In July 1973 the Department was relocated to Tygerberg Hospital. Prof BC Shanley was the first head (1974 – 1977) and succeeded by Prof JJF Taljaard (1978 – 2001). Prof RT Erasmus joined the Department as head in 2002.

Since the inception of the National Health Laboratory Services (NHLS) in 2001, the department expanded its services, infrastructure and staff complement. In 2005, Chemical Pathology, Haematology and Immunology combined their routine services into a single upgraded service laboratory that resulted in significant gains in efficiency and cost effectiveness.

Research flourished in the late seventies and eighties and the Unit for Research in Neurochemistry enjoyed international acknowledgement. Discontinuation of MRC support resulted in the Unit being phased out in 1996. Under Prof Erasmus' leadership, the department diversified its research activities and established several research teams in oesophageal carcinoma, obesity and diabetes mellitus in children, and laboratory auditing and management, while maintaining its established research activities in neuropsychiatry, Alzheimer's disease and multiple sclerosis.

Over the years the Department has produced more than 200 publications in peer reviewed international journals, 21 PhD graduates, several MSc students and 23 Chemical and Clinical Pathologists. The Department plays an increasingly important role in undergraduate teaching, and is actively involved with postgraduate training of pathology registrars and scientists, including Hons, MSc and PhD students. There is close collaboration with the Universities of Cape Town and the Western Cape, as well as the Cape Peninsula University of Technology.

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FORENSIC MEDICINE

The Department of Forensic Medicine was established in 1959 at Karl Bremer Hospital. Prof TG Schwär was the first head of Forensic Medicine (1969-87). The Department moved to Tygerberg Hospital during the early seventies. Initially, 600 – 1000 autopsies were performed annually, but the growing demand for forensic autopsies led to the opening of a new Forensic Mortuary at the Tygerberg Academic Complex in September 1992. During the last few years the number of autopsies per year varied between 2600 and 3000.

Prof Schwär, in collaboration with Professors JD Loubser (Pretoria) and JA Olivier (Bloemfontein) published in 1984 the first Afrikaans text book in Forensic Medicine, titled *Die ABC van Geregtelike Geneeskunde*. The book also saw an English edition, *The ABC of Forensic Medicine*, and became an important reference source to law practitioners in addition to its importance to medical students.

Following the retirement of Prof Schwär in 1987, the late Prof JP Nel succeeded him as the head of Forensic Medicine. Prof Nel aggressively promoted teaching and training in Forensic Medicine. He appointed and trained Dr I Loftus, the first registrar in Forensic Medicine at Stellenbosch University, in 1988. Since that time the Department has trained a further 9 forensic pathologists and established Forensic Medicine as an important role player in the training of MBChB students. Prof Nel with Prof S A Wadee and others spearheaded the transfer of Forensic Pathology/Medicine services from the South African Police Services to the Department of Health, Western Cape – an important development that was finally realised in April 2006, 10 years after the demise of Prof Nel.

Prof Shabbir Ahmed Wadee succeeded Prof Nel in 1997. Prof Wadee plays an important role in the management of Forensic Pathology/Medicine services in South Africa and is a member of the National Forensic Pathology Service Committee (NFPSC) and the associated Academic Subcommittee. He was a member of the team of South African forensic pathologists who assisted with the identification of human remains in the Maldives during February 2005, following the Tsunami of December 2004. The Division is also involved in the PASS Research Network, a Harvard-based study project investigating the consumption of alcohol by pregnant mothers and its possible links to Stillbirths and Sudden Infant Death Syndrome.

In January 2006 the Department joined the newly established Department of Pathology as the Division of Forensic Medicine. The Division's persistent efforts to obtain acknowledgement of Forensic Medicine's status as a role player in South African pathology led in 2005 to the inclusion of forensic pathologists as members of the International Academy of Pathology (IAP) (SA Division) and an independent forensic medicine programme at the annual congress of the Federation of South African Pathology Societies. Dr Johan Dempers became the first co-opted councillor of the IAP (SA) in 2006.

HEMATOLOGY

During the first years of the Faculty of Medicine, Haematology formed part of the Division of Pathology with Dr Steve Grové as head. Clinicians frequently performed tests in the wards. Prof FP Retief became head of the haematology laboratory in 1960 and haematology merged with the Department of Internal Medicine as the Haematology Unit. At that stage, a few medical technologists under supervision of Mr L van den Plas provided a routine service using a Coulter- and platelet counter.

Prof JG Steytler succeeded prof Retief in 1970 when the Haematology Unit relocated from Karl Bremer Hospital to Tygerberg Hospital. Trepine biopsies of bone marrow and coagulation studies were introduced in 1975.

The Department of Hematopathology was established in 1984 and at the same time, it became part of the Division of Pathology. Prof Peter Jacobs from the Department of Haematology at the University of Cape Town played an important role over the years to develop haematology at Stellenbosch. Dr Dawie de Beer and Marieta du Plessis, the current head of the bone marrow division in the laboratory, established an excellent standard in the processing and diagnostic interpretation of bone marrow trephine biopsies. The laboratory still provides training to medical technologists from elsewhere in South Africa and from African countries. Prof Erna Mansvelt succeeded Prof Steytler in 1996.

In 1990, the Departments of Hematopathology at Tygerberg and Groote Schuur and the Chemical Pathology at Tygerberg were the first state/academic laboratories to implement an internal computer network (Disalab from Systec). In collaboration with Systec, the system was developed into a model that received national and international acclaim. Drr Ilse Louw and Bettie Oberholster developed in collaboration with Systec programmers a computer programme that replaced the inefficient card system for oral warfarin subscriptions. This system is still being used by the National Health Laboratory Services (NHLS).

Following a six-month visit in 1996/1997 to the Hemostasis Research Unit at Hammersmith Hospital in London, Prof Mansvelt introduced various new tests, technologies and research projects in the field of coagulation. The subsequent acquisition of computerised platelet aggregation equipment with Winetech research funds enabled the department to establish functional platelet investigations as the only service of its kind for patients in the Western Cape. Currently patients are referred from across South Africa and Namibia to the Tygerberg laboratory for platelet investigations.

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Over the years the Department has produced numerous publications in peer reviewed international journals, and presentations at national and international congresses. It provided training for more than 30 specialists in hematopathology, clinical pathology and clinical haematology and for more than 80 medical technologists.

MEDICAL MICROBIOLOGY

Former heads of Medical Microbiology included Prof HD Brede 1962 – 1973, Prof HC de Klerk 1974 – 1986, Prof JJ Joubert 1987 – 1999, Prof LD Liebowitz 2000 – 2004.

During the last few years Microbiology became part of the NHLS (together with the other pathology departments) and with the restructuring of the Faculty of Health Sciences, the six pathology divisions united into one Dept of Pathology. At the end of 2005 Microbiology moved from 11th to the 9th Floor in Tygerberg Hospital. During the last 2 years we moved location, changed our name and restructured our postgraduate programmes and our management structures.

MEDICAL VIROLOGY

The Department of Medical Virology at Tygerberg Hospital was founded as a separate entity in 1975, previously forming part of the Department of Microbiology. Its first Head was Prof Walter Becker, followed by Prof Estrelita Janse van Rensburg from 1993 to 2004. Prof Wolfgang Preiser commenced duties as HoD on 1 August 2005.

The Division of Medical Virology is part of NHLS Tygerberg and performs a large number of virological laboratory tests as part of the routine diagnostic service for Tygerberg Hospital and its referral area. It is SANAS-accredited (since July 2002, as the first discipline at NHLS Tygerberg) and offers a large repertoire of tests including virus isolation, serology and state-of-the-art nucleic acid detection.

The Division is actively engaged in under- and postgraduate teaching programmes within FHS and beyond. It is responsible for the Infections and Immunology module of the MBChB programme and participates in several other modules.

In order to substantially expand its postgraduate teaching activities the Division is attracting increasing numbers of postgraduate students registering in Medical Virology. It has also applied for an additional Registrar training post to likewise expand its MMed student training. In addition, the diagnostic section is training a record number of student intern medical technologists.

Research activities focus on HIV. Research areas are the genomic diversity and molecular epidemiology of HIV as well as immunological aspects of HIV infection relevant to vaccine development. Despite temporary difficulties, both activities continue to attract substantial funding, also from international sources.

A new, additional research area focusses on antiretroviral drug resistance. An in-house genotyping assay has been developed and shown to work well when compared to a commercially available one. A very significant grant was received from the national Department of Health for a major study titled "Factors affecting the evolution of HIV-1 antiretroviral resistance mutations in patients treated at the Infectious Diseases Family Clinic at Tygerberg Academic Hospital" into the clinical significance of antiretroviral drug resistance which is about to commence.