

DEPARTMENT OF MEDICINE

Research Report 2005

(Including the UCT Bioethics Centre, MRC/UCT Ischaemic Heart Research Unit, MRC/UCT Liver Research Centre, MRC/UCT/UWC Research Unit for Traditional Medicines and the World Health Organisation Collaborating Centre for Drug Policy, Albertina and Walter Sisulu Institute for Aging in Africa and Desmond Tutu HIV Research Centre)

Head of Department: Professor R.E. Kirsch

Departmental Profile

The Department incorporates 6 research Units: the UCT Bioethics Centre, the MRC/UCT Liver Research Centre, MRC/UCT/UWC Research Unit for Traditional Medicines and the MRC/UCT Ischaemic Heart Disease Research Unit; The Albertina and Walter Sisulu Institute for Aging in Africa and the Desmond Tutu HIV Research Centre, 18 divisions or clinics: Cardiology, Clinical Haematology, Critical Care, Dermatology, Endocrinology and Diabetology, Emergency Medicine, Gastroenterology, Geriatrics, the Hypertension Clinic, Infectious Diseases, Immunology, Lipidology, Pharmacology, Nephrology, Neurology, Pulmonology, and Rheumatology; and the Departments of Internal Medicine – at Groote Schuur, Jooste, Somerset, and Victoria Hospitals.

Departmental Statistics

Permanent and Long-term Contract Staff

Professors	12
Associate Professors	20
Senior Lecturers/lecturers Full-time	27
Administrative and clerical staff	28
Total	87

Honorary Staff

Honorary Professors	2
Emeritus Professors	3
Honorary Associate Professors	1
Honorary Senior Lecturers	19
Honorary Research Associates	4
Total	29

Students

Doctoral	35
Masters	134
Undergraduates	1014
Total	1183

Research Fields and Staff

See Units and Divisions within the Department

Departmental Contact Details

Postal Address: Department of Medicine, University of Cape Town Medical School,
Observatory, 7925, Cape Town
Telephone: SA (21) 406 6200
Fax: SA (21) 448 6815
E-mail: faiza@uctqsh1.uct.ac.za

DEPARTMENT OF MEDICINE UCT BIOETHICS CENTRE

Director: Professor S.R. Benatar

Centre Profile

Diploma in International Research Ethics

We have now completed three years of our Fogarty International Center funded IRENSA programme (\$185,315.00 granted for 2005). We are most gratified with the enthusiasm of all our students in all years who have clearly appreciated the course – evaluating the all modules as ‘Very Good’ to ‘Excellent.’ It is evident from feedback that the research ethics committees on which the participants serve are being stimulated by the feedback that is being injected into their institutional activities. Ten of our first year students have successfully completed their practicums, and have graduated from the University of Cape Town with Diplomas in International Research Ethics. The remaining 3 students from the 1st year will we hope submit their practicums for examination soon. Eight students in the 2nd year of the programme have graduated, one will graduate in December 2005 and the remaining three are well advanced in work on their practicums. We received 37 applications for the 4th year of our program (2006) and we have selected an excellent spectrum of 12 participants, 8 from South Africa, one from each of Tanzania, Malawi, Uganda and Zimbabwe to begin training in February 2006. While it is still too early to provide a long term evaluation of the programme’s achievements we are confident from responses to date from participants with high profiles in their institutions that we shall fully achieve our goals in this 4-year programme.

We presented our Third Annual IRENSA Research Ethics Seminar on 19 and 20 September 2005 with a Faculty drawn from throughout the country. This was very well received with 121 registrants and 100 people in attendance.

On 21 September we held our Bioethics Day in celebration of 20 years of bioethics’ activities at UCT and Groote Schuur Hospital. Professor Carl Elliott (University of Minnesota USA) gave the first Max and Rose Leiserowiz lecture in which he discussed bioethical challenges for medicine in relation to the Pharmaceutical industry. Other topics included, directions in bioethics education, a philosopher’s perspective on the HIV/AIDS pandemic, public health ethics and foundations for health policy in SA.

Other activities

Our undergraduate and general postgraduate activities, clinical consultation service and research work (see publications) continue on a satisfactory trajectory. Prof Benatar was the Paul B Beeson Visiting Professor at the Yale University School of Medicine. He was elected a Fellow of Imperial College London.

Centre Statistics

Permanent and Long-term Contract Staff

Professor	1
Admin/secretarial	1
Total	2

Honorary Staff

Honorary staff	22
Total	22

Research Fields and Staff

Professor Solly Benatar
Research ethics (including International Research Ethics); global bioethics

Professor David Benatar
Moral philosophy; applied ethics

Dr Lesley Henley
End of life decisions – with special reference to a children’s hospital

Dr Paul Roux
The impact of informed consent with regard to HIV/AIDS in a children’s hospital

Dr Terry Fleischer
Resource allocation / priority setting within the context of shrinking resources

Dr Steve Andrews
Informed consent in a multicultural setting

Centre Contact Details

Postal Address: UCT Bioethics Centre, J Floor, OMB, Groote Schuur Hospital, Observatory, 7925

Telephone: SA (21) 406 6115

Fax: SA (21) 448 6815

E-mail: sbenatar@uctgsh1.uct.ac.za or cdekoker@uctgsh1.uct.ac.za

**DEPARTMENT OF MEDICINE
DIVISION OF CARDIOLOGY
(Cardiac Clinic)**

Head of Division: Professor P.J. Commerford

Divisional Profile

The Cardiac Clinic provides an in- and outpatient clinical service in cardiology and training for registrars in the subspecialty. Research activities are predominantly clinical including evaluation of new pharmaceutical agents and adaptations of practice to suit local conditions. Professor Bongani Mayosi's group, in co-operation with the Division of Human Genetics and Directorate of Primary Health Care, is actively investigating aspects of the genetics and epidemiology of heart disease.

Divisional Statistics

Permanent and Long-term Contract Staff

Professor	1
Associate Professor	2
Senior Lecturers	3
Part-time Senior Lecturer	2
Registrars-in-training	3
Secretarial Staff and Research staff	6
Technologists	2
ECG Technicians	8
Honorary staff	1
Nursing staff	17
Radiographers	4
GSH Administrative	5
Total	54

Students

Learner Technologists	5
Research Fellow in Epidemiology	1
Clinical Research Fellows	2
PhD	2
Masters	2
Honours	1
Total	13

Research Fields and Staff

Professor P.J. Commerford
heart failure; acute coronary syndromes; epidemiology; treatment

Professor R.N. Scott Millar

arrhythmias; pacemakers; electrophysiology

Dr A.M. Okreglicki
arrhythmias; pacemakers; electrophysiology

Professor B.M. Mayosi
genetics and epidemiology of heart disease

Dr M. Ntsekhe
pericarditis and infectious diseases

Dr R. Gopal

Divisional Contact Details

Postal Address: The Cardiac Clinic, E25 Groote Schuur Hospital, Observatory, 7925

Telephone: SA (21) 404 6084

Fax: SA (21) 448 7062

E-mail: pjcomfrd@uctgsh1.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF CLINICAL IMMUNOLOGY

Head of Division: Associate Professor S.R. Ress

Divisional Profile

Division of Clinical immunology continues to provide specialised diagnostic service to Groote Schuur and related teaching hospitals, including investigations for the evaluation of immune function in patients with suspected immune deficiency. Research activities are focussed on the evaluation of cellular immunity in tuberculosis. TB basic research evaluates protective immunity of cytotoxic T-cell activity. We are commencing year 4 of a NIH subcontract study evaluating the efficacy of aerosolised rIFN- γ 1b versus subcutaneous route, in a RCT in moderate pulmonary tuberculosis (TB) patients, together with collaborators in New York and UCT lung institute. These data could provide novel targets and form the basis for additional clinical interventions. Other TB research involves the comparison of immune response in cord blood stimulated by conventional monocytes or dendritic cells.

Professor Ress attended the inauguration of the ICSU regional office for Africa on 2nd September 05, followed by a Science workshop on 3rd September 05. Marcia Watkins (PhD student) received a scholarship to attend the TB molecular biology & immunology Keystone meeting in the USA, on the basis of promising results of her research. Clint Brauns presented a poster on his research looking at mycobacterial growth within macrophages at an Embo workshop on innate immunity and the lung, 28 November 05 –2 December 05.

Divisional Statistics

Permanent and Long-term Contract Staff

Associate Professors	1
Research Staff	2
Laboratory Technologists	2
Technical Support Staff	1
Total	6

Students

PhD student	1
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Research Fields and Staff

Professor Stanley Ress
immunology of tuberculosis; BCG vaccination; lipid disorders

Dr M.M. Keraan
immunology of lipid disorders and tuberculosis

M. Watkins
immunology of TB; BCG vaccination

P.L. Semple
immunology of TB

Divisional Contact Details

Postal Address: Clinical Immunology Laboratory, H47 Old Main Building, Groote Schuur
Hospital, Observatory, 7925
Telephone: SA (21) 406 6201
Fax: SA (21) 448 6815
E-mail: sress@uctgsh1.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF CRITICAL CARE

Clinical Director and Head: Professor Eric Bateman

Divisional Profile

During the past year, the administrative, clinical and academic activities of the united department have achieved further levels of integration. The department has received approval from the Health Professions Council of South Africa for offering post-graduate subspecialty training in critical care. The teaching programmes for subspecialty training for pulmonologists, and specialty training in critical care for registrars in anaesthesia, internal medicine, surgery, cardiothoracic surgery, emergency medicine are well established. Other teaching responsibilities are post-basic training for nurses in critical care nursing, undergraduate training of student clinical technology students specializing in critical care technology, post-graduate training for critical technologists taking a Bachelor of Technology degree and practical training of paramedics.

Research meetings have commenced and capacity is being developed.

Divisional Statistics

Permanent and Long-term Contract Staff

Consultant Staff	13
Clinical Technologists	4
Research Assistant	1
Total	18

Research Fields and Staff

Associate Professor W.L. Michell
national audit of critical care services in South Africa in collaboration with the Critical Care Society of Southern Africa

Dr R.I. Raine
Voriconazole in candidaemia
surfactant replacement in the severe pneumonia
novel agents for the management of severe sepsis

Dr I. Joubert
crystalloid resuscitation and replacement fluids and their impact on acid-base balance and strong-ion difference

Richard van Zyl Smit
ICU Audit at JF Jooste Hospital

R. Gillespie
nutrition in the ICU (In association with Ms L. Hill)

Ms L. Hill
Corticotropin-releasing factor in acute traumatic injury

Divisional Contact Details

Postal Address: Division of Critical Care, Ward C27, Groote Schuur Hospital, Observatory,
7925
Telephone: SA (21) 406 6901

DEPARTMENT OF MEDICINE DIVISION OF DERMATOLOGY

Head of Division: Professor Gail Todd

Divisional Profile

Education remains high on the division's academic priority list. The Division's training programme includes undergraduate teaching of 2nd to 6th year MBChB students, nurses and students in professions allied to medicine. Postgraduate students include 4 registrars and 2 part-time (5/8) posts, designated for the training of women doctors. Dr Sue Jessop continues to convene the Research Modules of the 2nd year of study (semesters 3 and 4) and our division supervised 21 students in 8 research projects in 2005. Dr Sue Jessop also convenes the 5th year (semesters 9 and 10) undergraduate programme, to be run for the first time in 2006. The core undergraduate dermatology module will be introduced in the 5th year as part of an innovative integrated mixed adult, surgical and medical speciality block convened by Professor Gail Todd. Dermatology will provide small group, problem orientated, patient-based, facilitated self-directed learning and tutorials. The block has its own course code and students will need to pass 5 of the 7 specialities in order to pass the year thus emphasising the importance of these specialities to medical practice. With 3 consultants on the committee of the College of Dermatology, our division is active in facilitating a unified national dermatology examination platform.

Divisional research has received increased attention this year and much of our work could have significant impact on future South African health policy.

The Division is emerging as the research centre for African skin and hair. Dr Ngwanya continues to represent the Division as the Africa representative in the North American Hair Society Group study on scarring alopecias. Dr Khumalo, a graduate of our division, joined the staff as a doctoral research fellow reading for her PhD thesis on aspects of African hair, hair loss and scalp disorders and has several publications in this field. She was invited to present aspects of her work on African hair at the Ethnic Hair and Skin Symposium in Chicago. A specialised clinic for problems of the hair and scalp, offered by these doctors is now a regular service in its second year.

Professor Roy Colven of the University of Washington School of Medicine, Seattle, USA, a Fulbright Fellow, spent 12 months in researching the viability of a teledermatology service and distance-based teaching platform <http://faculty.washington.edu/rcolven/teledermatology.shtml>. CPN Magdalena Klem, working in Hermanus, was able to present their work to an international audience at the Skin and Wound Care through the Ages conference held in Malta in November 2005. The acceptability of the program to provider and patient forms the basis of a research project for Dr Samantha Eisman. A national initiative involving the MRC, DOH and Universities of Cape Town, Western Cape, Stellenbosch and KwaZulu Natal has been established to explore the expansion of telemedicine in southern Africa.

Dr Cecile Keyzer, a part-time consultant in the division, organizes annual beach clinics to research and publicise the cancer risk of sun exposure in collaboration with the Cancer Association of South Africa. There has been a steady increase in the numbers of beachgoers that have visited the clinic, from 138 in 1998 to 638 in 2004. Of the 638 beachgoers seen in 2004, 100 were referred for further management of a whole range of skin conditions, including 115 suspected cutaneous malignancies.

In a Wellcome-sponsored, collaborative study with Nottingham University, we have shown in a prospective study, that the United Kingdom working criteria for atopic eczema were not applicable in a randomly selected population of 3 to 11 year old Xhosa children. This is probably best explained by the fact that these children represent a low endemic population with numerous other causes for itchy skin and that many of the terms used in the original questionnaire have no direct translation into Xhosa. The study of more than 1000 children from each of the rural, peri-urban and urban areas studied confirmed an increasing prevalence of atopic eczema in urban populations. The health burden of skin disease in these children, the cost burden of skin disease and the evaluation of possible etiologic factors that could account for the urban association are to be reported.

A CANSA sponsored epidemiological study of melanoma incidence in Cape Town, in collaboration with the School of Public Health and the University of Stellenbosch, has been completed and has shown a worrying increase in this highly malignant tumour.

Dr Sandra Pather has shown in a prospective randomised double-blind study that pulsed, high dose griseofulvin is as effective as the standard 6 weeks of continuous therapy for treating childhood tinea capitis.

Ongoing clinical research includes the following: A randomised double blind trial of chloroquine compared to topical steroid for chronic discoid lupus erythematosus treatment in collaboration with the University of Stellenbosch and the University of Nottingham now in its third year of recruitment. A study on contact hypersensitivity reactions in atopic eczema children and a comparative study of allergic reactions in atopic compared to normal people. Dr Omar will follow a group of first year trainer hairdressers prospectively to document the development of skin disease of the hands and factors associated with these reactions in this vulnerable population during 2006.

The molecular basis of vitiligo, the role of khellin in repigmentation, and the low incidence of cancers in vitiligo patients remain an important focus of our collaborative research work together with Professor Sue Kidson and Dr Lester Davids of the Department of Human Biology.

Ms Debra Chalmers was awarded a MPH in Public Health for her analysis of the data of our comparative study on atopic eczema in rural, peri-urban and urban Xhosa children in South Africa. Publications are in preparation as are those on the epidemiology and prevalence of skin diseases in the seafood processing industry. The follow up study of melanoma prevalence in Cape Town has been submitted for publication.

Divisional Statistics

Permanent and Long-term Contract Staff

Associate Professors	1
Senior Lecturers (full-time)	2
Senior Lecturers (part-time, 5/8)	1
(part-time, sessional)	2 ½
Research Staff	7
Administrative and clerical staff	3
Honorary Lecturers	5
Total	21 ½

Students

Doctoral	1
Masters	7
Undergraduate	1600
Total	1608

Research Fields and Staff

Associate Professor Gail Todd

prevalence and cost of childhood atopic eczema in rural, urban and peri-urban settlements around Cape Town, South Africa, collaborative project with the University of Nottingham; Patch testing and atopic eczema, collaborative study Dermatology Departments in UK, Tanzania and South Africa; . Occupational skin disease; All aspects of vitiligo especially national epidemiology and cancer risk; Community dermatology

Dr Susan Jessop

treatments for discoid lupus erythematosus in collaboration with the Departments of Dermatology and Rheumatic Diseases Unit, University of Stellenbosch; Melanoma epidemiology in collaboration with the Division of Oncology and CANSA; Evidenced-based dermatology in collaboration with the Cochrane Skin Group as a lead editor, Nottingham UK

Dr Laduma Ngwanya

dermatopathology; diseases of the hair and nails; North American Hair Research Society African representative

Dr Gavin Gottschalk

paediatric dermatology; Molecular basis of vitiligo

Honorary Staff

Honorary Lecturers: Emeritus Associate Professor Norma Saxe (dermatopathology, epidemiology of melanoma), Dr Ian. Webster (laser therapy), CPN Nora Christians (convenor of the UCT Dermatology Nurse Course), Mr Ockie Kruger, African Director, Leprosy Mission (leprosy module convenor and lecturer for the UCT Dermatology Nurse Course); PN Harry Basdeo, Smith and Nephew, Health-care Division (leg ulcer module convenor and lecturer for the UCT Dermatology Nurse Course)

Registrars

Dr Hanif Omar

incidence of skin disease amongst trainee hairdressers

Dr Rannokoe Lehloenya

drug reactions and hypersensitivity testing. Immune reconstitution syndrome in HIV

Dr Sean Christians

epidemiology of itchy skin diseases in informal settlements in the Western Cape

Dr Samantha Eisman (5/8 supernumerary women's training post)

teledermatology. Papular pruritic eruption of HIV

Dr Sandra Pather (5/8 supernumerary women's training post)
cost effective treatment of tinea capitis

Dr Didi Motsepe (supernumerary registrar)
papular pruritic eruption of HIV

Dr Ulrike Raabe (supernumerary registrar)
allergic responses in atopic eczema

Researchers

Professor Roy Colven, University of Washington School of Medicine, Seattle, USA (Fulbright fellow)
teledermatology service in South Africa

Dr Nonhlanhla Khumalo (PhD student)
african hair and hair disorders; blistering dermatoses; evidenced-based dermatology

PN Elizabeth du Toit (part-time)
comparative study of phototherapy responses in the Northern and Southern hemispheres, collaborative project with the University of Dundee, Scotland, UK; qualitative research in dermatology; the psychosocial aspects of living with skin disease

PN Patricia Kelly (part-time)
follow-up study on post-graduate dermatology nurses

PN Judy Wallace (Sister - Ward G23)
nursing care of severe drug reactions; management of leg ulcers

PN Nora Christians
course convener and lecturer for the UCT Dermatology Nurse Course; applied research

EN L Volkwyn (Paediatric nurse educator – Oasis day-care centre, Red Cross Hospital)
allergic response in atopic eczema

S. Woods (IT consultant – part-time)
development and maintenance of dermatology databases and teaching slides

Visitors

Professor Roy Colven of the University of Washington School of Medicine, Seattle, USA; Dr A Whiting, Dallas, Texas; Dr Jörg Lang, Munich, Germany; Mr Ockie Kruger, African Director, Leprosy Mission; Mr Harry Basdeo, Smith and Nephew, Health-care Division

Dermatology Nurse Graduates 2005

PN Sarah Sebenzile Maluka, Themba Hospital, Kabokweni; PN Cicelia Miller, Retreat Day Hospital; PN Yvette Sutton, private practice Somerset West; PN Batsile Audrey Lekoke, Montshiwa Town Clinic, Mafikeng District, PN Vukwele Emeline Nkvoxa, Giyani Eastern

Cape; PN Mlandili Michael Tuta, Khayelitshe Day Hospital; PN Selokela Sarah Matjebane, Raditshaba, Pietersburg

Elective Students

Nicole Barlo, The Netherlands; Mieke Alendhoven, The Netherlands; Sonia Mc McCarthy, UK

Divisional Contact Details

Postal Address: Division of Dermatology, Ward G23 Groote Schuur Hospital, Observatory, 7925

Telephone: SA (21) 404 3376

Fax: SA (21) 447 8232

E-mail: gtodd@uctgsh1.uct.ac.za

**DEPARTMENT OF MEDICINE
DESMOND TUTU HIV CENTRE / INSTITUTE FOR INFECTIOUS
DISEASES AND MOLECULAR MEDICINE**

Head of Institute: Professor Robin Wood

Institute Profile

Community

The DTHC provides antiretroviral therapy (ART) to public sector patients in both Nyanga and Masiphumelele as well as at the trials unit in the Institute of Infectious Diseases and Molecular Medicine. In partnership with the Western Cape Provincial AIDS directorate, the Desmond Tutu HIV Centre has run the first fully government integrated pilot project in Nyanga, Cape Town, where 1100 patients have been treated. The clinic is located in the Hannan-Crusaid Treatment Centre, which was opened in March 2005 in Guguletu. The Treatment Centre accommodates the Usapho Lwethu Project and ART training. The ARV clinic at Guguletu has screened more than 1600 patients and currently has an on treatment viral suppression rate of 87% for those patients on treatment for 3 years. The DTHC team are evaluating this project, which is called 'Usapho Lwethu' (Our Family Clinic). A community-based project, in Guguletu called 'Sizophila' (We will Survive), trains a group of HIV-infected individuals to educate and support patients commencing treatment as part of Usapho Lwethu.

Masiphumelele

A second site has been developed at Masiphumelele where 300 patients have been commenced on ART since June 2004. An operational study is underway comparing doctor versus nurse case management of patients on ART as part of an NIH funded study. A purpose-built research centre was completed during 2004 and has been fully commissioned. Weekly HIV training/teaching ward rounds were commenced during the year at False Bay Hospital and Masiphumelele clinic. The Masiphumelele site also investigates the impact of treatment of ARV on the community tuberculosis rates.

DTHC

The Centre has been actively involved in other preventive strategies and has developed a modular school life skills program based on Ntsomi or Xhosa storytelling and forum theatre. The program emphasizes self-awareness and life choices aiming to reduce sexual risk behaviour and delay onset of sexual debut. This project is called 'Kethuphila' (Choose Life!) completed at Masiphumelele schools and Philippi High-school in Nyanga.

The Centre is actively engaged in the training and equipping of health care professionals and lay counselors and educators to meet the challenges of HIV care and prevention. Seven 3-day ART training courses have been completed for the Northern Cape Department of Health. Monthly continuing medical education meetings have been held at the IIDMM.

Research Core

The Centre has also developed a health economics unit with an economist (Guy Harling) investigating costs and cost effectiveness of these programs.

Trials Unit

The trials unit has 4 active studies of new antiretrovirals and 2 studies investigating antiretroviral mutations. The DTHC is responsible for one of the four national HIV-vaccine sites within the South African AIDS Vaccine Initiative (SAVI) involved in preparing

communities for HIV vaccine clinical trials. The centre is also part of the international HIV Vaccine Network (HIVNET) of the National Institutes of Health, USA. Evaluation of community understanding of HIV has been investigated with a series of cross sectional surveys. Innovative drama based education modalities using youth in these 2 communities are being extended to community HIV and vaccine awareness and education and has already been applied with good effect in Masiphumelele.

Institute Statistics

Permanent and Long-term Contract Staff

Professor	1
Clinical Staff	10
Nursing staff	14
Biostatistician	1
Economist	1
Total	27

Research Fields and Staff

Professor R. Wood
HIV therapy

Dr L.-G. Bekker
immunology of tuberculosis; HIV

Institute Contact Details

Postal Address: Desmond Tutu HIV Centre, Institute of Infectious Diseases and Molecular Medicine, Wernher and Beit Building North, Faculty of Health Sciences, Anzio Road, Observatory, 7925
Telephone: SA (21) 650 6966
Fax: SA (21) 650 6963
E-mail: robin.wood@hiv-research.org.za

DEPARTMENT OF MEDICINE DIVISION OF ENDOCRINOLOGY AND DIABETIC MEDICINE

Head of Division: Associate Professor N.S. Levitt

Divisional Profile

The Division provides an inpatient and outpatient clinical service and sub-speciality training in adult endocrinology and diabetes. Two recipients of International Diabetes Training Fellowships for sub-Saharan Africa have undergone training in Endocrinology and Diabetes during the past year.

Research

The Division is involved in a wide range of research activities and interacts with a number of international and local collaborators. The primary areas are:

Health Systems Research: Major projects include: i) an investigation of staff knowledge, practices and perceived barriers to the provision of lifestyle education for chronic diseases of lifestyle at the primary care level in the Western Cape and ii) development of indicators of care for diabetes at the primary care level

Obesity A number of studies are in progress examining the mechanisms underlying the aetiology of obesity and the metabolic sequelae thereof in black and white African women.

Early Antecedents of Adult Onset Chronic Diseases: We are engaged in examining whether low birth weight is associated with programming of the neuro-hormonal axes in particular responses to exercise and psychological stimuli as well as microvascular responsiveness in two cohorts in Cape Town. We are also involved in the Birth to Ten and related Bone Health Study in Johannesburg and Soweto. This study provides an opportunity to evaluate the interrelationship between birth weight and subsequent growth on the development of the various components of the metabolic syndrome in up to 2000 black African subjects.

Hypoglycaemia: We have embarked on a series of studies which examine whether antecedent hypoglycaemia alters exercise performance and the perception of fatigue, change in cognitive function and counterregulatory hormone responsiveness in association with exercise.

Burden of disease: The contribution of diabetes to the overall burden of disease pattern in the South African context is being studied in collaboration with Dr Debbie Bradshaw, BOD Group, MRC.

Addison's Disease: The pathogenesis of Addison's disease in South Africa is being investigated.

Diabetes in Pregnancy: an audit has been conducted examining maternal and foetal outcomes in women with pregestational and gestational diabetes during pregnancy.

Divisional Statistics

Permanent and Long-term Contract Staff

Professor	1
Senior Lecturer (Hon)	1
Lecturer	1
Senior Registrar in Training	1
Medical Officer (sessional)	1
Diabetes Specialist Nurse	1

Administrative and Clerical Staff	1
Total	7

Research Fields and Staff

Associate Professor N.S. Levitt

diabetes and hypertension health systems research; the foetal origins of chronic diseases; the glycaemic index of foods; mechanisms underlying the metabolic sequelae of obesity and antecedent hypoglycaemia

Dr I.L. Ross

audits of the management and outcome of thyroid cancer; development of a National registry for Study of Addison's Disease and polyglandular autoimmune syndrome and Genetics of Diabetes

Dr J. Dave

prevalence of undiagnosed hyperglycaemia in strokes of patients presenting with acute strokes; incidence of osteoporosis and vertebral fractures in patients with inflammatory bowel disease; metabolic consequences of antiretroviral therapy

Dr C. Ekpebegh

audit of maternal and foetal outcome for pregestational and gestational diabetes

Divisional Contact Details

Postal Address: Divisions of Endocrinology and Diabetic Medicine, Department of Medicine, Faculty of Health Sciences, Observatory, 7925

Telephone: SA (21) 406 6140

Fax: SA (21) 448 6815

E-mail: suebotha@uctgsh1.uct.ac.za

**DEPARTMENT OF MEDICINE
DIVISION OF GASTROENTEROLOGY
(Gastrointestinal Clinic)**

Acting Head of GI Clinic: Professor P.C. Bornman

Divisional Profile

The Gastrointestinal Clinic is a multi-disciplinary clinical unit consisting of Medical and Surgical components. This report primarily reflects the Medical component. The Clinic carries a large clinical load and offers a number of specialised services, with clinical and applied research interests in: Hepatobiliary disease; Colorectal disease; Oesophageal disease; Inflammatory bowel disease; *H.pylori* related disease; and Nutrition. The Clinic is involved in a number of collaborative research projects.

Divisional Statistics

Permanent and Long-term Contract Staff

Lecturers	1
Research Staff	2
Administrative and Clerical Staff	1
Total	4

Students

Masters	3
Total	3

Research Fields and Staff

Mrs T. Marks

Research Assistant: inflammatory bowel disease and nutrition; genetic studies in IBD (collaborative work with Oxford University, Christian Albrechts University in Kiel, Germany, and the Division of Digestive Diseases and Nutrition, University of Kentucky, USA)

Dr G.A. Watermeyer

Specialist: probiotic in the maintenance of ulcerative colitis (AstraZeneca research fellowship); risk of malignancy in inflammatory bowel disease treated with Azathioprine or 6-Mercaptopurine; the pathobiology of Barrett's oesophagus (with C. van Rensburg [TBH]); TB versus Crohn's disease; genetics of gastric cancer; drug trials - various

Divisional Contact Details

Postal Address: GI Clinic, E23, New Main Building, Groote Schuur Hospital, Observatory, 7925

Telephone: SA (21) 404 3042/3040

Fax: SA (21) 447 0582

E-mail: bornman@curie.uct.ac.za

**DEPARTMENT OF MEDICINE
THE ALBERTINA AND WALTER SISULU INSTITUTE OF
AGEING IN AFRICA/ DIVISION OF GERIATRIC MEDICINE**

Head of Institute of Ageing in Africa: Professor Monica Ferreira

Acting Head of Division of Geriatric Medicine: Dr S.Z. Kalula

Institute Profile

The Albertina and Walter Sisulu Institute of Ageing in Africa (IAA) is a Cross-Disciplinary Group which incorporates the divisions of Geriatric Medicine, Psychogeriatrics and Gerontology. The vision of the IAA is to be an academic, clinical and research centre of excellence and relevance in Africa. It's mission is to facilitate the delivery of the highest standard of inter-disciplinary, in-context training for health and allied professionals, and evidence-based clinical and social care for older persons, whilst undertaking appropriate research and audit upon which policy and planning for older persons may be based. The mission is achieved through inter-disciplinary partnerships and teamwork; human resource development; and continuous risk assessment within current legal, ethical and financial constraints. The IAA is a leader in the area of research on ageing in sub-Saharan Africa, and enjoys international recognition and acclaim. Research projects comprise a substantial element of training as well as a high degree of implementability, and draw in visiting researchers, graduate students, policy makers, planners and community agencies alike.

Institute Statistics

Permanent and Long-term Contract Staff

Director	1
Senior Consultant	3
Consultant	1
Registrar	2
Medical Officer	1
Technical Assistant	1
Administrative and Clerical Staff	1
Total	10

Honorary Staff

Visiting Professor	2
Visiting Researcher	1
Senior Lecturer	1
Lecturer	1
Total	5

Students

Doctoral	1
Total	1

Research Fields and Staff

Professor Monica Ferreira

Director; social gerontology; population ageing; health sociology; economics of ageing; social impact of HIV/AIDS; physical and cognitive functioning; ageing in Africa

Dr Sebastiana Kalula

Senior Specialist; Acting Head, Division of Geriatric Medicine; epidemiology of dementia; falls

Dr Jane Saunders

Senior Specialist, Department of Psychiatry and Mental Health; Head, Division of Psychogeriatrics; dementia; HIV-related mental illness; psychiatric/medical ethics; psychopharmacological guidelines

Dr Linda de Villiers

Specialist, Division of Geriatric Medicine; stroke risk factors and rehabilitation; post-discharge stroke community care

Institute Contact Details

Postal Address: The Albertina and Walter Sisulu, Institute of Ageing in Africa, Faculty of Health Sciences, University of Cape Town, Observatory, 7925

Telephone: SA (21) 406 6211

Fax: SA (21) 406 6846

E-mail: instituteofageing@uctqsh1.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF HAEMATOLOGY

Head of Division: Professor N. Novitzky

Divisional Profile

The Division of Haematology at Groote Schuur Hospital is a complex unit with multidisciplinary activities that include outpatient clinics, admission beds as well as diagnostic and research laboratories. The clinical services are organised under the umbrella of the Department of Internal Medicine, while the diagnostic sections are under the broader organisation of the Department of Laboratory Medicine and NHLS. Patients with elaborate diagnostic problems, bone marrow failure or requiring stem cell transplantation are referred from all provinces; particularly the Northern and Eastern Cape and occasionally we receive referrals from foreign institutions in Sub-Saharan Africa. The service laboratories have been under considerable strain due to staff shortages. In the academic section, this year again, no equipment budget was available to replace critical diagnostic instruments. A scientist has now been appointed to head molecular research in the research laboratory. The task of this scientist will be to pursue with diligence further research into the area of haematopoietic stem cell biology both at the basic sciences level in the area of stem cell transplantation and into the various forms of application to improve the understanding and treatment for haematological malignancies. Patients with multiple myeloma and other lymphoproliferative disorders are treated in combined clinics together with the Department of Radiation Oncology. Among the other multiple clinical activities, a busy Haemophilia Centre provides total care to patients with congenital bleeding disorders. The apheresis section provides a service to the hospital and is central to the haematopoietic stem cell transplantation programme. Plasmapheresis continues to be provided for the emergency treatment of patients with myasthenia gravis and the Guillain-Barré syndrome. In the hyperlipidaemias; these procedures efficiently remove cholesterol and improve survival. Limitations in the availability of pharmaceuticals are also eroding our ability to provide state of the art therapies. An ongoing Professional Development programme has been established and run to improve the training of medical staff. A “streamed” program for the training of the recently established sub-speciality of Clinical Haematology has become popular with steady applications. Senior members of staff lecture at the Cape Technicon and are often invited to teach at the Universities of the Western Cape. Faculty members from the division also regularly contribute to the teaching programmes of the basic sciences as well as Departments of Internal and Laboratory Medicine and registrars from these disciplines rotate for periods of 3 -12 months.

Divisional Statistics

Permanent and Long-term Contract Staff

Professors	1
Specialist	3
Senior Specialists	1
Specialist part-time	1
Medical Natural Scientist	2
Chief Professional Nurse	2
Control Technologist	1
Chief Medical Technologists	10
Senior Medical Technologists	4

Medical Technicians	3
Pathology Registrars	6
Clinical Registrars	3
Senior House Officers	2
Social Worker	1
Dietician	1
Administrative and clerical staff (E5 clinic)	3
Administrative and clerical staff (C17 laboratory)	4
Administrative staff (medical school)	1
Laboratory assistants (C17)	2
Laboratory assistants (S18 lab)	2
Total	53

Research Fields and Staff

Professor N. Novitzky

haematopoietic stem cell biology; clonogenic assays; haematopoietic stem cell transplantation; immune reconstitution; haematological malignancies

Dr Maureen Stein

haematopoietic stem cell biology

Dr Cecile du Toit

haematopoietic stem cell transplantation; haematological malignancies; haemophilia

Dr Jessica Opie

molecular biology of neoplasia: chronic myelogenous leukaemia; coagulation abnormalities

Ms Rygana Mohamed

cellular biology of neoplasia; clonogenic assays

Dr Andrew McDonald

haemophilia; thrombophilia; stem cell transplantation

Divisional Contact Details

Postal Address: 6th Floor, Chris Barnard Building, Medical School, Anzio Road, Observatory, 7925

Telephone: SA (21) 406 6154/ 404 3073

Fax: SA (21) 448 8607

E-mail: haemsec@cormack.uct.ac.za

DEPARTMENT OF MEDICINE HATTER INSTITUTE FOR CARDIOLOGY RESEARCH

Director: Emeritus Professor Lionel H. Opie

Financial and Administrative Director: Dr M. Faadiel Essop

Institute Profile

The Hatter Institute exists to study ways of protecting the heart against insults such as lack of blood flow (ischaemia) or lack of oxygen (hypoxia). Over the years, we have had many important publications, varying from those in *Nature* to those in local cardiovascular journals. This year has been a particularly productive one for publications with five articles in press in the highly cited American journal, *Circulation*, and another five in the *Lancet*.

To achieve research excellence, we aim at producing work that achieves publication in the best internationally recognised journals and work that is of relevance to the society in which we live.

We also have an important teaching role, not only within the Medical School, but particularly by virtue of conferences and courses organised with our sister Hatter Institute at University College London, directed by Professor Derek Yellon. For example, our annual Cardiology at the Limits meeting was opened by our Vice-Chancellor, Professor Njabulo Ndebele, and the Provost of University College London, Professor Malcolm Grant. This meeting promotes high level postgraduate education. It brings together cardiologists from the United Kingdom and all over South Africa to listen to an intense updating on crucial cardiological issues “at the limits” of modern knowledge. Our courses for the cardiology registrars from South Africa and from the United Kingdom continue as the Hatter Institute Cardiac Horizons Series.

Highlight this year has been the award of the Fullbright Fellowship to Dr Faadiel Essop. He is working on the regulation of glucose and fatty acid metabolism, which is adversely influenced by diseases such as diabetes and obesity. As both these diseases have large health impacts in South Africa, this work is of growing importance and will be carried further by prolonged collaboration with Professor Heinrich Taegtmeyer of the University of Texas Health Science Centre, Houston, Texas, USA.

Additional Research Collaborative initiatives:

Department of Medical Physiology at the University of Tromsø, Norway (Professor Terje Larsen, Professor Ole Mjos). This collaboration is supported by a conjoint grant from the National Research Foundations in Norway and South Africa; Department of Medical Physiology at the University of Stellenbosch (Professor Amanda Lochner); Department of Physiology at the University of Stellenbosch (Professor Kathy Myburgh); Washington University Medical School, St. Louis, MO, USA (Dr Daniel P. Kelly - Center for Cardiovascular Research); University of Texas Health Science Center, Houston TX, USA (Dr Martin Young – Institute of Molecular Medicine); University of Texas Health Science Center, Houston TX, USA (Dr Heinrich Taegtmeyer, Division of Cardiology); University of California, San Diego, San Diego, CA, USA. (Dr Ken Chien); University of Louisville, Louisville, Kentucky, USA. (Dr Peipei Ping); Department of Medical Physiology, Oxford (Professor Kieran Clarke); National Institute of Health, USA (Professor Michael Sack); University of Alberta, Edmonton, Canada (Professor Gary Lopaschuk); University of Osaka, Japan (Professor S. Akiro); Case Western Reserve University, USA (Professor William C. Stanley); School of Biomedical Sciences, University of Queensland (Professor Lindsay Brown).

Institute Statistics

Permanent and Long-term Contract Staff

Emeritus Professors	1
Clinical Staff	1
Research Assistants	3
Postdoctoral Research Fellows	3
Laboratory Technicians	2
Total	10

Honorary Staff

Honorary Lecturers	3
Honorary Professor	1
Total	4

Students

Doctoral	4
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Research Fields and Staff

Professor Lionel Opie
delineation of cellular and molecular mechanisms promoting cardiac protection

Professor Derek Yellon
delineation of cellular and molecular mechanisms promoting cardiac protection

Dr Faadiel Essop
molecular regulation of cardiac energy metabolism and its contribution to heart disease

Dr Sandrine Lecour
delineation of cellular and molecular mechanisms promoting cardiac protection

Dr Graeme Deuchar
delineation of cellular and molecular mechanisms promoting cardiac protection

Dr Deon Pretorius
delineation of cellular and molecular mechanisms promoting cardiac protection

Mr Naushaad Suleman
delineation of cellular and molecular mechanisms promoting cardiac protection

Ms Lydia Lacerda
delineation of cellular and molecular mechanisms promoting cardiac protection

Ms Joy McCarthy
molecular regulation of cardiac energy metabolism and its contribution to heart disease

Dr Rebecca Felix

molecular regulation of cardiac energy metabolism and its contribution to heart disease

Mr Siyanda Makaula

molecular regulation of cardiac energy metabolism and its contribution to heart disease

Mr Sarin Somers

molecular regulation of cardiac energy metabolism and its contribution to heart disease

Ms Tasneem Adam

molecular regulation of cardiac energy metabolism and its contribution to heart disease

Ms Anna Chan

molecular regulation of cardiac energy metabolism and its contribution to heart disease

Institute Contact Details

Postal Address: Chris Barnard Building, University of Cape Town, Medical School,
Observatory, 7925

Telephone: SA (21) 406 6358

Fax: SA (21) 447 8789

E-mail: mfessop@capeheart.uct.ac.za

**DEPARTMENT OF MEDICINE
MRC/UCT LIVER RESEARCH CENTRE
(incorporating DIVISION OF HEPATOLOGY)**

Directors: Professor D. Kahn and Professor P.N. Meissner

Divisional Profile

The Centre is multidisciplinary and its members consist of physicians, surgeons, biochemists, immunologists and pathologists. Apart from its laboratories in the Departments of Medicine, Surgery, Biochemistry, Virology and Anatomical Pathology, the Centre runs the only multidisciplinary, comprehensive, liver and porphyria clinics, including a liver transplantation program, in Africa. Major areas of research include: porphyria, viral hepatitis, chronic hepatitis, immune abnormalities in liver disease, immunosuppressive factors in the venom of *bitis arietans*, the role of hepatic stem cells in experimental cirrhosis, liver transplantation, the pathogenesis of cardiovascular changes in portal hypertension, the role of portal systemic shunting in abnormal energy metabolism of liver disease, laparoscopic cholecystectomy, the treatment of bile duct calculi, the management of portal hypertension, and new methods of liver resection.

We convened and hosted an International meeting on Porphyrins and Porphyrins in Cape Town, February 27th to March 4th 2005. This was hugely successful and has helped our Centre to be further recognised as a world-leading centre for the treatment, diagnosis and research of porphyria. Impact of this years work has allowed the Centre to maintain it's position as one of the world's leading players as far as Porphyria research, diagnosis and patient care. Finally, it is of local interest that South Africa has a small "founder gene effect" as far as erythropoietic protoporphyria goes which will impact positively on the molecular diagnosis of this condition.

Divisional Statistics

Permanent and Long-term Contract Staff

Professors	5
Associate Professors	6
Senior Lecturers	9
Senior Research Officers	10
Technical Support Staff	10
Total	40

Honorary Staff

Honorary staff	3
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Students

PhD students	6
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Research Fields and Staff

P.C. Bornman

management of portal hypertension; new methods of liver resection laparoscopic cholecystectomy; treatment of bile duct calculi

H.N. Hairwadzi

Autoimmune liver disease

D. Kahn

liver transplantation; liver regeneration

J.E.J. Krige

management of portal hypertension; new methods of liver resection laparoscopic cholecystectomy; treatment of bile duct calculi

A.J.W. Miller

liver transplantation

E.G. Shephard

immunology of liver disease

R.J. Hift

porphyria; iron overload

C.W.N. Spearman

liver transplantation

A.V. Corrigall

porphyria

A. Mall

the role of mucus in the pathogenesis of gallstones

P.N. Meissner

porphyria

E. Sturrock

angiotensin converting enzyme

Divisional Contact Details

Postal Address: MRC/UCT Liver Research Centre, Departments of Medicine and Surgery, University of Cape Town, Medical School, Observatory, 7925

Telephone: SA (21) 406 6200

Fax: SA (21) 447 9670

E-mail: pete@uctgsh1.uct.ac.za / dkahn@uctgsh1.uct.ac.za

DEPARTMENT OF MEDICINE HYPERTENSION CLINIC

Head of Division: Associate Professor Brian Rayner

Divisional Profile

The Hypertension Clinic is a consultant clinic, which provides a specialist, in and outpatient service for patients with severe and/or secondary hypertension. It also provides specialist health care service to various Community Health Care Centres, an outreach programme providing support to the community health centres, and a 24-hour Ambulatory Blood Pressure service to the entire community and is an essential service staffed by Sister H. O. Barrett. The hypertension clinic has been very active in the last year. New research projects have been initiated and a community outreach programme has continued to operate.

khayelitsha Community Health Care Centre: (Site B)

This clinic takes place every 4th Tuesday from 09:00 – 13:00. Sr H O Barrett and Dr B Buchanan-Lee from the cardiac clinic staff it. A sister from Khayelitsha is available for translation during the course of the clinic. All the patients attending this clinic have moderate to severe hypertension, and are receiving 3 or more types of medication for blood pressure control. These patients would have previously been referred to Groote Schuur Hospital for treatment. Approximately 12 – 15 patients are seen at each clinic, each of whom blood pressure is electronically monitored. The total number of patients seen was 126.

Divisional Statistics

Permanent and Long-term Contract Staff

Emeritus Professor	1
Professor	1
Consultant	1
Registrar	1
Medical Officers	4
Chief Prof. Nurse	1
Research staff	2
Total	11

Research Fields and Staff

Professor Brian Rayner
clinical research; genetics of hypertension; ENaC mutations; hypertensive retinopathy;
contract research

Professor Lionel Opie
clinical research; genetics of hypertension

Dr Yvonne Trinder
clinical research; contract research

Sister Ivy Nteyi
genetics of hypertension; ACE genotype study

Sister Donette Baines
contract research co-ordinator

Divisional Contact Details

Postal Address: E13, New Groote Schuur Hospital, Observatory, 7925, Cape Town
Telephone: SA (21) 404 3495
Fax: SA (21) 448 2349
E-mail: rayner@curie.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF LIPIDOLOGY

Head of Division: Associate Professor A.D. Marais

Divisional Profile

Lipidology is a division of the Department of Medicine that performs the following functions: expert clinical consultation, special diagnostic laboratory, clinical research including drug development studies with the pharmaceutical industry, and laboratory research with students and on contract with industry. It is funded chiefly by contract research but does receive support from the Medical Research Council. The clinical research describes the severe dyslipidaemias occurring in public health sector of the province but is also available to other centres in the country. The laboratory research involves the application of gradient gel electrophoresis to dyslipidaemia and lipid peroxidation. The pharmaceutical studies have involved the development of newer statins and established statins, including their effects on the carotid artery, and cholesterol absorption inhibitors as well as drugs that modify high density lipoproteins.

Divisional Statistics

Permanent and Long-term Contract Staff

Professor	1
Consultants	1
Medical Officers	3
Nursing sisters	3
Contract Dietitian	1
Postdoctoral scientist	1
Technical Support Staff	5
Administrative Staff	2
Total	17

Students

Doctoral	3
Masters	1
Total	4

Research Fields and Staff

A.D. Marais, S. Jones, P. Byrnes, B.D. Ratanjee
Familial hypercholesterolaemia; Dysbetalipoproteinaemia; Phytosterolaemia; Carotid intima-media thickness, dyslipidaemia, and drug intervention; Proteinuria with statins; Fatty liver.

D.J. Blom, S. Jones, P. Byrnes
Dysbetalipoproteinaemia; Carotid intima-media thickness; dyslipidaemia; drug intervention; lipodystrophy.

J.C. Firth, S. Jones, R.J. Jooste, S.J. Delpport, C.A. Fuller
Familial hypercholesterolaemia; Carotid intima-media thickness; dyslipidaemia; drug intervention

K.H. Wolmarans, R.J. Jooste, S.J. Delpport, C.A. Fuller
Carotid intima-media thickness; dyslipidaemia; drug intervention

D.M.Tanyanyiwa, Jones S.
Dysbetalipoproteinaemia

F.H. O'Neill
Phytosterolaemia; Fatty acid profiles and changes during peroxidation

D.M.Blackhurst
Anti-oxidant effects of wine.

M. Le Riche, B.D. Ratanjee
Lipoprotein X

J. Sutherland, B.D. Ratanjee
Rodent models of non-alcoholic steatohepatitis.

Divisional Contact Details

Postal Address: Lipid Laboratory, Cape Heart Centre, University of Cape Town, Anzio Road, Observatory, 7925
Telephone: SA (21) 406 6166
Fax: SA (21) 406 6396
E-mail: dmarais@capeheart.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF NEPHROLOGY

Head of Division: Dr M.D. Pascoe

Divisional Profile

The Division remains actively involved in contract research in the fields of transplantation immunosuppression and renal osteodystrophy and the anaemia of chronic kidney disease. Further studies in the field of immunosuppression have been initiated in the area of transplantation, and further studies are scheduled to commence in the area of iron metabolism in chronic renal disease. A major community project has been initiated investigating genetic and other factors in hypertensive patients attending community hospitals.

Divisional Statistics

Permanent and Long-term Contract Staff

Associate Professors	2
Senior Lecturers	1
Total	3

Students

Medical Registrars (1 senior)	3
PhD student	1

Research Fields and Staff

Associate Professor B.L. Rayner
research activities are based in the hypertension clinic; Nil renal

Dr M.D. Pascoe
fine needle aspiration biopsy of renal allografts; renal pathology with HIV disease; factors influencing long-term renal graft survival; cost effective drug strategies in transplantation; new immunosuppression protocols for renal transplantation

Associate Professor C.R. Swanepoel
renal osteodystrophy and lanthanum carbonate; new immunosuppressive drugs in systemic lupus erythematosus; renal anaemia

Divisional Contact Details

Postal Address: Renal Unit, E13 Groote Schuur Hospital, Observatory, 7925
Telephone: SA (21) 404 3318
Fax: SA (21) 448 2349
E-mail: pascoe@curie.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF NEUROLOGY

Head of Division: Associate Professor R.W. Eastman

Divisional Profile

The division runs a general neurological clinic service, with in addition specialised clinics for stroke, myasthenia gravis, epilepsy and neuro-genetics. Areas of research interest include:-

Stroke: The division has a 6-bed acute stroke unit, and maintains a database on all stroke patients in Groote Schuur Hospital. Rehabilitation outcomes are being studied in tertiary and secondary hospitals in the region in collaboration with the Swedish International Development Agency.

Myasthenia gravis: There is a large cohort of patients being studied prospectively to determine the value of aggressive immunotherapy. Patients are also genotyped to establish their suitability for various drug treatments, and therefore to reduce the risk of adverse drug effects.

Neuro-genetics: A dedicated clinic which sees a wide variety of clinical disorders, especially spino-cerebellar ataxia and Huntington's disease.

Inflammation in the nervous system: The various components of the inflammatory response, especially in relation to Alzheimer's disease and HIV encephalopathy, are being studied prospectively to assess their relevance to the disorders.

Epilepsy Surgery: A longterm video-EEG monitoring unit is used to select patients with intractable epilepsy for surgical treatment.

Multi-media teaching: The use of this modality in the local context is being explored.

Drug trials: The division is active in phase 3 drug trials, especially in Parkinson's disease and epilepsy.

Divisional Statistics

Permanent and Long-term Contract Staff

Associate Professors	3
Senior Lecturers (Full-time)	1
Junior Lecturers (Full-time)	2
Lecturers (Part-time)	4
Total	10

Students

MMed students	3
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Research Fields and Staff

Associate Professor R.W. Eastman
epilepsy; epilepsy surgery; EMG

Associate Professor B. Kies
Parkinson's disease; epilepsy; neurotherapeutics; primary care management of common neurological conditions

Associate Professor A. Bryer
stroke; neuro-genetics; spinocerebellar ataxias

Dr E. Lee Pan
health systems information technology; computer-based medical education

Dr J. Heckmann
Myasthenia gravis; neuro-immunology; neuro-genetics; HIV-related neurological disorders

Divisional Contact Details

Postal Address: E8, New Grootte Schuur Hospital, Observatory, 7925

Telephone: SA (21) 404 3197/8

Fax: SA (21) 406 6251

E-mail: reastman@uctgsh1.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF PHARMACOLOGY

(Including the MRC/UCT/UWC Research Unit for Traditional Medicines and the World Health Organisation Collaborating Centre for Drug Policy Research)

Head of Division: Professor Gary Maartens

Divisional Profile

The major research thrusts of the division are in malaria, tuberculosis and HIV. The research in these fields is very broad, encompassing basic science, pharmacokinetics, clinical trials and pharmaco-economic evaluation. The malaria cell biology programme is lead by the senior Wellcome Trust fellow, Heinrich Hoppe. A large multicentre clinical research group has secured substantial funding from the Global Fund – this programme is at the forefront of malaria treatment research and policy in Africa. The MRC South African Traditional Medicines Research Group (joint UCT and UWC) was extended for a further 5 years in 2004. Compounds with antimalarial, antibacterial (including *Mycobacterium tuberculosis*) and antifungal activity are identified from plants used in traditional medicine. Assays have been developed for several new pharmacokinetic studies on antiretroviral drugs. An informal collaboration on population pharmacokinetics with Uppsala University was cemented with the awarding of an NRF grant. An NIH-funded study of an intervention to improve antiretroviral adherence has commenced. Pharmaco-economics is an emerging interest, with several studies on antimalarial and antiretroviral drugs. An MRC and Wellcome Trust funded study has commenced to evaluate the role of corticosteroids in paradoxical reactions in tuberculosis patients induced by antiretroviral therapy.

Divisional Statistics

Permanent and Long Term Contract Staff

Professor	1
Associate professors	2
Senior Lecturers	2
Lecturers	1
Senior Medical Officers	2
Registrars	4
Senior Wellcome Fellow	1
Consultant	1
Research Staff	11
Technical Support Staff	7
Administrative and Clerical Staff	5
Laboratory Assistants	2
TOTAL	42

Honorary Staff

Honorary Lecturers	2
TOTAL	2

Students

Post Doctoral	3
Doctoral	14
Masters	3
Honours	4
Undergraduate Medical Students	495
TOTAL	519

Research Fields and Staff

K.I. Barnes

malaria, combination antimalarial therapy – operational and policy research

M. Blockman

rational and cost-effective prescribing of medicines; drug utilisation review; adverse drug reaction monitoring; drug policy and regulation

W.E. Campbell

Phytochemical studies on indigenous Amaryllidaceae species; structural studies on active compounds isolated from traditional medicinal plants

A. Evans

drug assay development

G. Gabriels

Analytical Chemistry, Pharmacokinetics, Traditional Medicines, Drug Discovery and Development, Drugs and Sport Performance

H.C. Hoppe

Malaria parasite cell biology

G. Maartens

adherence to antiretroviral therapy, immunopathology & diagnosis of HIV-associated tuberculosis, pharmacokinetics of antiretrovirals in tuberculosis; pharmaco-economic evaluation of antiretroviral therapy

H. McIlleron

pharmacokinetics of anti-tuberculosis drugs, population pharmacokinetics, drug interactions between antiretrovirals and rifampicin.

U. Mehta

Adverse drug reaction monitoring; pharmacovigilance; vaccines safety, drug regulation

A.H. Robins

psychopharmacology: neuroleptic malignant syndrome; catatonia; antidepressants

P.J. Smith

Mechanisms of antimalarial drug resistance; pharmacokinetics of anti-tuberculosis drugs; isolation of novel drugs from traditional medicines; development of new drug assays

Divisional Contact Details

Postal Address: Division of Pharmacology, University of Cape Town, K45, Old Main Building,
Groote Schuur Hospital, Observatory, 7925

Telephone: SA (21) 406 6286

Fax: SA (21) 448 1989

E-mail: gary@curie.uct.ac.za

DEPARTMENT OF MEDICINE DIVISION OF RESPIRATORY MEDICINE

(Including the Lung Clinical Research Unit in the UCT Lung Institute)

Acting Head of Division: Associate Professor G.M. Ainslie

Divisional Profile

The Division provides an inpatient and outpatient clinical service and sub-speciality training in pulmonology. In addition, it runs specialised clinics in interstitial lung disease, cystic fibrosis, work health (together with the Dept of Occupational Medicine) and lung cancer (together with the Dept of Radiotherapy & Oncology). Prof Ainslie is the current President of the South African Thoracic Society (SATS). She is a long-standing council member and past-chairperson of the National Asthma Educational Programme (NAEP), and developed and runs the NAEP SA Diploma in Asthma Care. She is the SA representative for the Alpha-1 Anti-Trypsin Deficiency International Registry.

Prof Bateman is Executive Director of the UCT Lung Institute. He is currently chair of the Science Committee of the Global Initiative Against Asthma (GINA), and serves on the steering committee of the Global Alliance Against Respiratory Diseases (GARD) soon to be launched by the World Health Organisation. Prof Willcox is a member of the Scientific Committee of the Cystic Fibrosis Society. Dr Raine is a member of the Executive Council of Critical Care Society of Southern Africa. Dr Dawson supervises a tertiary referral general respiratory clinic, consults at Brewelskloof TB Hospital in Worcester twice a month and is doing research in the immunology of pulmonary TB and HIV, with an emphasis on bronchoalveolar lavage.

Major areas of research at the UCT Lung Institute are epidemiology, research into new drugs and treatments for airways diseases and population-based disease management strategies relevant to the needs of Africa. Fruitful collaboration between several institutions centred at the Institute has resulted in the development of PALSAs and PALSAs Plus (Practical Approach to Lung Health in South Africa), integrated evidence-based programmes for the diagnosis and management of priority respiratory diseases including HIV/AIDS by nurse practitioners in the primary care setting. A growing demand for programmes of this nature has led to the formation of a Knowledge Translation Unit (KTU) within the Lung Clinical Research Unit, under the directorship of Dr Lara Fairall, assisted by Professor Eric Bateman, and Professor Merrick Zwarenstein from the University of Toronto Faculty of Medicine's Department of Health Policy, Management and Evaluation. The KTU is supervising and evaluating the implementation of PALSAs Plus in all primary care clinics in the Free State Province and Western Cape, and has submitted a proposal for implementing it in other provinces in South Africa.

Research projects currently in progress include the following:

- Epidemiology of Lung Disease in South Africa
- The Burden of Obstructive Lung Disease study
- Practical Approach to Lung Health in South Africa (PALSA).
- PALSAs PLUS Project in partnership with the Centre for Health Systems Research and Development of the University of the Free State (Professor van Rensburg), CIET International (Professor Neil Anderson) and the Free State Department of Health. Components of this research are client/patient, facility and community surveys,

evaluation of all aspects of the rollout, including training, effectiveness and impact of the rollout upon delivery of healthcare for other diseases. The latter is being evaluated in a randomized controlled trial in the Free State Province.

- Monitoring and evaluation of the Free State Comprehensive Management and Treatment of HIV and AIDS Patients Program.
- Disease Management Strategies in Asthma and COPD
- Host Immunity in Tuberculosis.
- Clinical trials on new treatments in asthma
- Clinical trials in Chronic Obstructive Pulmonary Disease
- A study of novel endpoints for examining the clinical course of patients with COPD. Endpoints include biomarkers of inflammation and structural remodelling in blood, induced sputum and exhaled breath condensate, a range of lung physiological endpoints including impulse oscillometry, low dose, high resolution computerized tomography, and pharmacogenetic markers.

Visitors

Professor David Price, University of Aberdeen, Scotland; Professor Peter J Barnes, Imperial College, London, England; Professor Paul O'Byrne, McMaster University, Hamilton, Ontario, Canada; Professor Soren Pedersen, University of Southern Denmark, Denmark; Dr Susan Hurd, Global Initiative for Asthma, Maryland, USA; Professor Henk Hoogsteden, Erasmus University, Rotterdam, Netherlands; Dr Dina Fisher, University of Calgary, Calgary, Canada.

Divisional Statistics

Permanent and Long-term Contract Staff

Professors	2
Associate Professors	2
Senior Lecturer	1
Research Staff	
Medical Officers	7
Nursing study co-ordinators	4
Scientists	2
Clinical Technologists in Pulmonology	6
Administrative and clerical staff	4
Total	28

Students

PhD	4
MPhil	3
Master of Technology	1
Bachelor in Technology	2
Total	10

Research Fields and Staff

Professor Eric Bateman

epidemiology of lung disease; asthma management; chronic obstructive airways disease; tuberculosis immunology and host defences, and management; respiratory disease management and knowledge translation

Associate Professor Gillian Ainslie

high resolution CT scanning in idiopathic pulmonary fibrosis; asthma education; epidemiology

Dr Richard Raine

epidemiology of sleep-disordered breathing; neurocognitive function in obstructive sleep apnoea and COPD; novel therapies for treatment of severe sepsis

Associate Professor Paul Willcox

multi-drug-resistant tuberculosis; lung cancer; cystic fibrosis; community-acquired pneumonia

Dr Mary Bateman

smoking cessation; pharmacology of asthma and COPD

Dr Rodney Dawson

immunology of tuberculosis; new drugs in tuberculosis

Dr Rene English

guideline development and integrated management in primary health care; asthma and COPD management

Dr Lara Fairall

guideline development and integrated management in primary health care; asthma, COPD tuberculosis and HIV treatment, knowledge translation

Dr Anamika Jithoo

epidemiology of lung disease

Divisional Contact Details

Postal Address: UCT Lung Institute, PO Box 34560, Groote Schuur, 7937

Telephone: SA (21) 406 6901

Fax: SA (21) 406 6902

E-mail: ebateman@uctgsh1.uct.ac.za

Webpage: <http://www.uct.ac.za/depts/respiratory>

DEPARTMENT OF MEDICINE DIVISION OF RHEUMATOLOGY

Head of Division: Professor Asgar Ali Kalla

Divisional Profile

The Division of Rheumatology has several research interests relating to different aspects of the rheumatic diseases. Osteoporosis is an area of interest for many years and there is ongoing collection of longitudinal bone mineral density data in patients with rheumatoid arthritis (RA) and systemic lupus erythematosus (SLE). Age-related bone loss at different skeletal sites is being prospectively studied in collaboration with the Department of Nuclear Medicine and the Endocrine Unit. Clinical drug trials are in progress to study the safety and efficacy of the newer non steroidal anti inflammatory drugs (NSAIDS), in collaboration with the GIT Unit. These newer COXIBS are being evaluated in patients with RA and osteoarthritis (OA). All of these include collaborative participation with the GIT Unit, where gastropathy is an outcome variable, measured by gastroscopy. We have also looked at psoriatic arthropathy in collaboration with Leeds University in the UK. The unit provides in- and outpatient rheumatology services for the entire Western Cape region. Sessions are carried out at the Heideveld and Khayelitsha Community Health Centres 6 times a year. Training is provided on a continuous basis for medical students, allied health professionals, a senior house officer, and two registrars. Research is largely clinically orientated, but a laboratory-based approach is being used to study the genetics of SLE and the pathogenesis of reactive arthritis. In addition, there is very significant involvement in clinical drug trials in both rheumatoid arthritis and osteoarthritis. Collaborative research is being carried out with the liver unit to study bone density.

Divisional Statistics

Permanent and Long-term Contract Staff

Professor	1
Lecturer	2
Research Staff	2
Nurse practitioner	1
Administrative and Clerical staff	1
Total	7

Honorary Staff

Honorary Lecturers	3
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Students

Rotating Medical Registrar	1
Medical Officers (SHO)	1
Total	2

Divisional Contact Details

Postal Address: J47 Old Main Building, Groote Schuur Hospital, Observatory, 7925

Telephone: SA (21) 404 5422/2131/ 406 6514

Fax: SA (21) 448 3253

E-mail: mburger@uctgsh1.uct.ac.za

MEDICINE

Research Output

Articles in peer-reviewed journals

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