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1. ABOUT US

The Allergy & Immunology Research Unit was established 15 years ago by Professor Paul Potter, to provide a “state of the art” clinical and laboratory services for the diagnosis and management of allergic and other immune-based disease, not available in the public or private sectors.

Our strong emphasis on applied research has resulted in the publication of nearly 250 + papers since we opened our research unit.

*Our mission is to transform the lives of patients with allergies and immune-based disease through innovative science and compassionate care.*
1.1. COMPANY COMPONENTS

- Investigator & Industry
- Sponsored Clinical Research
- Postgraduate Training (Sub-Specialist, GPs, Diploma)
- Allergen Immunotherapy Programme
- Indigenous African Allergen Research & Aerobiology
- Multidisciplinary Quaternary Clinics
- Drug Allergy Research
- Local & International Collaboration
- Local & International Publications & Conference
- Undergraduate Immunology & Allergy Teaching
- SA Primary Immunodeficiency Register
- Public & Private Patient Care
- Allergy Diagnostic Laboratory
1.2 AVAILABLE SERVICES

1. **Allergology Clinics**
   To provide a superb, therapeutic and diagnostic clinical service for patients with allergic diseases, supported by a dedicated laboratory service, provided by doctors and technologists with postgraduate training and specialised skills in allergology. Over the past 15 years, over 9743 new patients have been referred to and assessed in our unit.

2. **Diagnostic Laboratory**
   The laboratory provides a specialised allergy diagnostic service for the Lung Institute, the NHLS and the private pathology laboratories, currently investigating 1800 patients/year (approximately 5000 tests per year). The laboratory offers several unique tests not available elsewhere in Southern Africa.

3. **Clinical Trials**
   To date our Unit has participated in 56 International clinical trials in the field of asthma, rhinitis, urticaria, eczema, allergen immunotherapy, antihistamines and hereditary angioedema.

4. **Aerobiology**
   Another unique component of our unit is a 24 hour continuous Burkard Spore trap monitoring of airborne grass pollens and fungal spores for the Western Cape, published online every week. Our Aerobiologist, Mrs Dilys Berman, is currently completing her PhD on 30 years of aerobiological monitoring in the Western Cape.

5. **Immunotherapy Clinics**
   The unit has a dedicated clinic administering mainly Bee venom injection vaccines, as well as providing a long term sublingual immunotherapy programme for patients with inhalant allergies with ± 100 patients per year on the programme.
6. **Indigenous Allergen Research**
Funds generated from the clinical trials fund a basic science laboratory to investigate and characterise new African allergens emerging with Westernization of South Africa. Novel allergens identified by this unit characterised include Mopane worm, Marula nut, African pear, Mogwagwa fruit, African Penguin, Porcupine, Cobra venom (Rinkhals), Impala, Abalone, Locust & African Pollens (Kikuyu, Buffalo & Eragrostis). This programme is also supported by our NRF and MRC grants.

7. **South African Primary Immunodeficiency Register**
This UCT database is managed by Sr. Sheila Baker which has compiled about half the notified cases of primary immunodeficiency identified in South Africa to date, mainly through our special interest in hereditary angioedema (over 40 cases) and complement C5 & C6 deficiencies (over 80 cases). As a result of the availability of post-trial specialised medication, our trial patients with life threatening hereditary angioedema have free access to expensive, highly effective, lifesaving treatment, not yet registered in South Africa. Molecular input into the complement deficiency diagnostic programme is provided through collaboration work with Dr Ann Orren (University of Cardiff, United Kingdom), and Mrs Tricia Owen, our Molecular Biologist at UCT Chemical Pathology.

8. **Post-Graduate Training in Allergy**
The unit has had a continuous flow of post-graduate doctors each year from other parts of the RSA who spend time learning Allergology, for the College of Medicine of South Africa Diploma in Allergy examination, and is also now training 3 Sub-specialists in Allergy. Furthermore Sr. Sheila Baker offers practical training for Nurse Practitioners for the National Asthma Education Programme (NAEP), and Dr Diane Hawarden has established a new Allergy Nurse Training Programme.

9. **Governance**
The unit’s activities are directed by Associate Professor Jonny Peter who executes and oversees the unit’s activities. We operate on a streamlined staffing with only 5 fulltime and 6 part-time staff members.

10. **Private Allergy Clinics**
The limited private allergy clinics (Monday - Thursday) assess allergy referrals from all over South Africa and neighbouring countries. Doctors participating in these clinics include Prof Eugene Weinberg, Dr Roshni Mistry, Dr Diane Hawarden, Dr Claudia Gray, Associate Professor Jonny Peter and Dr Jeanette Holtzhausen.
1.3 EQUIPMENT & FACILITIES

EQUIPMENT (LOCATED ON OUR FLOOR)

- 5x Conter Barometers
- 1x Caspiraziore Nebulizer
- Lasec Centrifuge
- 1x Fridge
- 1x -20°C Fridge
- PC-Ecg 1200
- Stadiometer
- Lung Function setup (computer & equipment)
- Lung Function Machine

GENERAL FACILITIES

- We are currently occupying 268.33sqm of the UCT Lung Institute building.
- On-Site Back-Up Generator
- Fully equipped clinical room with 2 private patient rooms
- On-Site lockable filling room
- State of the art Laboratory facilities
- IP Storage Room (with monitored alarm trigger)
- X-Ray Facilities
- The whole building has Internet access, and the UCT network is supported by the information and communication technology services. We also have a Clinical Research Centre, which offers high quality database development and management, as well as increasing bioinformatics support. The UCT Health Sciences Library is the first university medical library in South Africa, and offers access to the full range of international journals and publications. In addition, librarians are available to assist researchers and students.

LABORATORY FACILITIES

Our main laboratory is situated in the University Of Cape Town Department Of Medicine; it has approximately 110m2 of bench and office space.

- Two class II cabinets for cell culture work
- Centrifuges, CO2 incubators, light microscopes
- Adequate 4°C and -20°C freezer space, and an ELISA plate reader.
- We are currently using shared -80°C freezer space.
- In addition, at the UCT Lung institute, I have another 10m2 laboratory with an automated ImmuneCap ELISA machine, centrifuges and freezers; this is used as part of clinical Allergy and Immunology services for the performance of specialized diagnostic assays.
- We have a full-time research assistant and one technologist doing only research, as well as one registered research technologist running the diagnostic lab, a basic science lab-based PhD student and one statistical analysis. We also have administrative support from the Department of Medicine.
• The UCT Lung Infection and Immunity unit, with which we share space, has:
  i) PCR and qPCR machines, including a bioanalyser for assessing RNA quality;
  ii) a BD LSRII 9-colour flow cytometer;
  iii) access to Biorad NGC chromatography machine for protein purification; and
  iv) access to a cell harvester and beta counter for lymphocyte proliferation assays.
• There are cell sorting (BD FACS Aria) facilities available at the Institute of Infectious Disease and
  Molecular Medicine (IDM) to which I am affiliated.
• The recently refurbished pharmacology analytical hub is located one floor above, and houses
  six mass spectrometers supporting over 20 projects; we are currently initiating collaborative
  projects with this facility. In addition, the floor above is home to a state-of-the-art dermatology
  laboratory, and has acquired a FTIR spectroscope as well as electron microscopy facilities; my
  principal local collaborator is a dermatologist, and we are exploring the applications of these
  technologies to our project
1.5 PARTNERS

AFSA (Allergy Foundation South Africa)
http://www.allergyfoundation.co.za/

Red Cross Children’s Hospital (Paediatric Allergology)
http://childrenshospitaltrust.org.za/

Allergy Society of South Africa (Allergy Society)
https://www.allergysa.co.za/

Primary Immunodeficiency Network of South Africa (PINSA)
http://www.pinsa.org.za

Hereditary Angioedema International HAEi
https://haei.org/
National Health Service Laboratory
http://www.nhls.ac.za/?page=laboratories&id=3&pid=9&rows=20&pager=2

Institute of Infectious Disease and Molecular Medicine
http://www.idm.uct.ac.za/

South African Immunology Society
http://saimmunology.org.za/

Immunospec
http://www.immunospec.com/

Pharma dynamics
http://pharmadynamics.co.za/

Thermo Scientific
2. CLINICAL RESEARCH

2.1 CLINICAL RESEARCH DOCTORS

Principal Investigator:

**Associate Professor Jonny G. Peter**
MBChB; FCP (SA); MMed; PhD
MP0534331; Medical Protection Society: SA/29904
(Dispensing Investigator)

Paediatric Investigators:

**Dr. Claudia Gray**
MBChB; MSc (Pharmacology); FRCPCH; DipPaedNutrition; DipAllergy; PhD (Paed)
*MP 0470961; Medical Protection Society: 03/23659*

**Professor Paul Potter**
MBChB; FCP (SA); MMed; PhD
*MP 0174017; Medical Protection Society: SA/18169*

Principal Medical Officer & Sub Investigator:

**Dr. Melissa Le Fevre**
MBChB
*MP 0545724; Medical Protection Society: SA/51546*
(Dispensing Sub Investigator)

Part Time Sub Investigator’s:

**Dr. Roshini Mistry**
MBChB; Licensed General Practitioner; Diploma in Paediatrics; MBA; MBA Exchange Program
*MP 0404055; Medical Protection Society: SA/4556*

**Dr. Tshegofatso Mbalane**
MBA; MMed; FCFP
*MP 0664405; Medical Protection Society: SA/43529*
2.2 CLINICAL RESEARCH STAFF

Full-Time Study Nurses:

Sr. Mapule Mosidi
Nursing Diploma; Certificate in Marketing Management; Diploma in Computerized Project Management
South African Nursing Council No: 13370952

Part-Time Study Nurses:

Sr. Grace Poggenpoel
Ambulance Course; Training as Enrolled Nurse; Diploma in General Nursing; Diploma in HR; BTech; Dispensing for Health Professionals; Diploma in Asthma
South African Nursing Council No: 12293734

Sr. Sheila Baker
BSc Nursing; BSc Medicine; Diploma in Asthma; Dispensing for Health Professionals; Resuscitation Course
South African Nursing Council No: 11266830

Full Time Study Coordinators & Administration:

Mrs. Lyndie Joubert
Diploma: Pharmacy Technician; ABC of Quality Control

Trainee Study Coordinators:

Emma Thambani

Pharmacists:

Colleen Ann Whitelaw
B.Pharm
HPCSA: 0013706; PSSA No: 14677

Regulatory & Ethics Specialist:
Ms. Sandra Hood
Regulatory Specialist

Contracts & Finance:
Cheryl Nel
Contracts

Venecia Abrahams
Finance
2.3.1 CLINICAL RESEARCH TRIALS

AREA OF SPECIALIZATION

- Asthma
- Rhinitis
- Eczema
- Urticaria
- Allergen Immunotherapy
- Antihistamines

WE CAN ALSO ASSIST WITH THE FOLLOWING STUDIES:

- Type 2 Diabetes Mellitus
- Type 1 Diabetes Mellitus
- Vaccines
- Cholesterol
- Hypertension

LIST OF COMPLETED STUDIES

- **Protocol Number:** P06241/P202  
  **Protocol Description:** A 26-Week Randomized, Double-Blinded, Active Controlled Study Comparing the Safety of Mometasone Furoate/Formoterol Fumarate MDI Fixed Dose Combination versus Mometasone Furoate MDI Monotherapy in Adolescents and Adults with Persistent Asthma.  
  Number of Patients Recruited:  
  Study End Date:

- **Protocol Number:** EFC13579  
  **Protocol Description:** A Randomized, Double-Blind, Placebo-Controlled, parallel group study to evaluate the efficacy and safety of Dupilumab in patients with persistent asthma.  
  Number of Patients Recruited:  
  Study End Date:

- **Protocol Number:** TH005  
  **Protocol Description:** A Double-Blind, Randomised, Placebo-Controlled, Multi-Center field study to assess the efficacy and safety of HDM-SPIRE in subjects with a history of House Dust Mite-Induced Rhinoconjunctivitis.  
  Number of Patients Recruited:  
  Study End Date:
Other Completed Studies:

1995 Rhinitis;
1996 Allergic Conjunctivitis/ Asthma; 1997 Bermuda's Grass; 1998 Rhinitis Antihistamine Study; 1999 Asthma;
2000 Seasonal Rhinitis/ Atopic Dermatitis/ Perennial Allergic Rhinitis;
2000/2001 Seasonal Allergic Rhinitis/ Allergic Rhinitis;
2001 Perennial Allergic Rhinitis;
2001/2002 Seasonal Allergic Rhinitis/ Atopic Dermatitis Extension;
2002 Perennial Allergic Rhinitis (Adults)/ Perennial Allergic Rhinitis (Paed);
2002/2003 Seasonal Allergic Rhinitis;
2003/2004 Sublingual Immunotherapy (Adults)/ Atopic Dermatitis (12-24 months)/ Moderate Asthma (>12 yrs.)/ Seasonal Allergic Rhinitis (>12 yrs.)/ Mild Asthma (>15 yrs.);
2004 Mild Asthma (>18 yrs.)/ Perennial Allergic Rhinitis (> 12 yrs.)/ Moderate Asthma (12-17 yrs.)/ Atopic Dermatitis (3-<12 months)/ Atopic Dermatitis (2-12 yrs.)/ Mild Asthma (6-11 yrs.);
2005 Seasonal Allergic Rhinitis (>12 yrs.);
2005/2006 Atopic Dermatitis (2-17 yrs.);
2006 Mild/ Moderate Asthma (2-6 yrs.)/ Seasonal Allergic Rhinitis (>18 yrs.)/ Mild to Moderate Asthma (6-11 yrs.);
2006/2007 Idiopathic Urticaria (>18 yrs.)/ Mild to Moderate Asthma (6-11 yrs.)/ Moderate to Severe Asthma (4-11 yrs.)
2007 Mild Asthma (4-11 yrs.)/ Mild Asthma (2-5 yrs.)/ Seasonal Allergic Rhinitis
2008 Seasonal Allergic Rhinitis/ Chronic Idiopathic Urticaria/ Latex Study (Health Visitors)
2009 Perennial Allergic Rhinitis (6-11 yrs.)
2009/2010 Hereditary Angioedema (>18 yrs.)
2011 Allergic Rhinitis PK Study (2-5 yrs.)/ Chronic Urticaria (2-11 yrs.)
2012 Hereditary Angioedema (> 18 yrs.)
2012-2015 Asthma (4-11 yrs.)
2013-2016 Severe Asthma (12-75 yrs.)
2013/2014 Influenza (18-75 yrs.)
2013-2015 Nasal Polyposis/ Asthma (5-11 yrs.)
2014 Asthma (18-75 yrs.)
2015/2016 Subcutaneous Immunotherapy HDM/ Asthma (12-17)
2016 Persistent Asthma (5-11 yrs.)

LIST OF CURRENT STUDIES

- Protocol Number: CQVM149B2301
- Protocol Description: A Multi-Center, Randomized, 2 week treatment, Double-Blind, Triple-Dummy, Parallel-Group study to assess the efficacy and safety of QMF149 compared with mometasone furoate in patients with Asthma.
- Number of Patients Recruited: 8
- Study End Date: 2018
- **Protocol Number:** CQVM149B2302  
  **Protocol Description:** A Multi-Center, Randomized, 52 Week, Double-Blind, Parallel-Group, Active Controlled study to compare the efficacy and safety of QVM149 with QMF149 in patients with Asthma.  
  **Number of Patients Recruited:** Recruitment in process  
  **Study End Date:** 2018

- **Protocol Number:** CQMF149G2202  
  **Protocol Description:** Paediatric Asthma  
  **Number of Patients Recruited:** Recruitment in process  
  **Study End Date:** 2018

- **Protocol Number:** CQAW039A2314  
  **Protocol Description:** 2 52-Week, Multi-Center, Randomized, Double-Blind, Placebo-Controlled study to assess the efficacy and safety of QAW039 when added to existing asthma therapy in patients with uncontrolled severe Asthma.  
  **Number of Patients Recruited:** 2  
  **Study End Date:** 2018

- **Protocol Number:** MK-0887A-087-00  
  **Protocol Description:** A Phase III, Randomised, Active-Controlled, Parallel-Group clinical trial to study the efficacy and long term safety of mometasone furoate/ formoterol fumarate, compared with mometasone furoate in children with persistent asthma.  
  **Number of Patients Recruited:** 12  
  **Study End Date:** 2018

- **Protocol Number:** HZA114971  
  **Protocol Description:** A Multi-Centre, Randomised, Double-Blind, Placebo-Controlled, Parallel-Group study to evaluate the effects of a one year regimen of orally inhaled fluticasone furoate 50 mcg once daily on Growth Velocity in Prepubertal. Paediatric subjects with asthma.  
  **Number of Patients Recruited:** Recruitment in Process  
  **Study End Date:** 2018

- **Protocol Number:** DS107E-06  
  **Protocol Description:** Mild to Moderate Atopic Dermatitis  
  **Number of Patients Recruited:** Recruitment in Process  
  **Study End Date:** 2018

- **Protocol Number:** DS107GG-03  
  **Protocol Description:** Moderate to Severe Atopic Dermatitis  
  **Number of Patients Recruited:** Recruitment in Process
Study End Date: 2018

- **Protocol Number:** LTS12551  
  **Protocol Description:** Open-Label extension study to evaluate the long-term safety and tolerability of dupilumab in patients with asthma who participated in a previous dupilumab asthma clinical study.  
  **Number of Patients Recruited:** 2  
  **Study End Date:** 2017

- **Protocol Number:** D5290C00003  
  **Description:** A Phase 2b Randomized, Double-Blind, Placebo-Controlled study to evaluate the safety and efficacy of MEDI8897, a monoclonal antibody with extended half-life against respiratory syncytial virus, in healthy preterm infants.  
  **Number of Patients Recruited:** 7  
  **Study End Date:** 2018

### 2.3.2 Investigator Led Research

*Our approach is to define research questions relevant to local patients, and then take these back to the bench. To this end the unit is focusing increasingly on a growing burden of urticarial disease and immune-mediated adverse drug reactions.*

**Current investigator-led projects**

*Programme of clinical and mechanistic research on immune-mediated drug hypersensitivity reaction in persons living with HIV* [Collaboration centred in South Africa’s 1st multi-disciplinary drug hypersensitivity clinic; key collaborators – Dr Ranks Lehloeny, A/Prof Sipho Dlamini (co-PIs) and other UCT collaborators; Key international collaborators: Professors Elizabeth Phillips (Vanderbilt university)].

Specific projects already underway include:

- **Structural and functional basis of severe hypersensitivity associated with Nevirapine** [funded through Vanderbilt collaboration]
- **Genomics study of anti-tuberculosis drug-induced hypersensitivity reactions** [MRC grant 2015 awarded]
- **Characterisation of efavirenz-associated adverse drug reactions** [collaborator: Dr Thuraya Isaacs and Dr Ranks Lehloeny]
- **Hepatitis with severe cutaneous drug reactions** [MMed candidate: Niita Haitembu; Collaborators: Dr Ranks Lehloeny, Prof Wendy Spearmen]
- **The epidemiology of penicillin hypersensitivity in the Western Cape**
**Hereditary angioedema (HAE) in the western cape and the use of fresh frozen plasma to treat acute attacks of angioedema** [MMed student: Dr Khalid Coovadia; Collaborator: Professor Paul Potter, Professor Yazied Clothia]

Professor Potter and the allergy unit has cared for a cohort of more than sixty patients with hereditary angioedema. This uncommon, but life-threatening genetic condition requires specialised care and ongoing advocacy. In South Africa, and other developing country settings, the majority of HAE patients cannot access international standard of care treatment. Despite this outcomes have been good with the use of older, more affordable medications, such as the use of Fresh Frozen Plasma for acute attacks. This project aims to audit our cohort experiences to share with other clinicians facing similar problems in low and middle income countries.

**AAA study - Anaphylaxis in anaesthesia South Africa study** [collaborators: Dr Di Hawarden, start-up funding through ALLSA award]

Peri-operative anaphylaxis is a life-threatening complication of both elective and emergency surgery. Correct diagnosis of anaphylaxis can be challenging given the physiological changes associated with both anesthesia and surgery. Furthermore, identifying the offending drug can be difficult given the many agents administered simultaneously. Specialist allergy work-up is thus required, and can mean the difference between safe repeat surgeries, abandoned surgical intervention or even repeat anaphylaxis. The incidence of peri-operative anaphylaxis varies across populations and amongst studies, and is dependent on reporting patterns and study designs; patterns of causative drugs also differ which is dependent predominantly on prescribing patterns. A well-designed prospective study of peri-operative anaphylaxis has not been conducted anywhere in South Africa.

The aim of this project is to determine the incidence of peri-operative anaphylaxis, the pattern of causative agents, and the outcomes of repeat surgery in four hospitals in the greater Cape Town area. This study will both generate novel data as well as serve as a pilot study for the evaluation of both online and paper-based reporting tools to simplify and encourage the diagnosis and reporting of peri-operative anaphylaxis. We hope that these tools and this study will lead to scale-up and progress to develop and evaluate a national registry/database of peri-operative anaphylaxis. In addition, we will use this project to optimize and standardized drug allergy testing protocols for peri-operative anaphylaxis and, funding dependent, evaluate and compare the utility, alone and in combination, of available in vitro and in vivo diagnostics for different offending drugs e.g. CAST ELISA, FLOW CAST, and skin prick testing.

**Immunological characterization of HIV-negative patients with invasive fungal disease at Groote Schuur Hospital** [MMed candidate: Dr Vonwicks Onyango, collaborators: Dr Sipho Dlamini (Infectious diseases), Dr Wendy Burgers lab (IDM), Dr Claire Hoving (IDM), Dr Anna Puel (France)]

Whereas fungi are ubiquitous, only a small number cause infections in humans. Innate and adaptive immune responses are usually effective in preventing disease or restricting to non-invasive infections. Invasive and severe fungal disease is usually restricted to an immunocompromised host. Secondary immunodeficiencies, especially HIV/AIDS; account for the majority of patients presenting with invasive and/or severe fungal disease, but there is a small
group of patients with no evidence of a secondary cause; yet with an increased susceptibility to disease. A working hypothesis is that these patients may either possess an already described yet undiagnosed primary immunodeficiency; or carry novel genetic mutations resulting in an increased susceptibility to disease.

No African studies have conducted detailed immunological or genetic analysis of HIV-negative patients presenting with invasive fungal disease. This study will be a cross-sectional study to describe the clinical and immunological characteristics of a series of such patients, seen at Groote Schuur Hospital in Cape Town; South Africa. Future studies will then examine the genetics of susceptibility in this cohort, looking for novel mutations.

**Primary immunodeficiency registry of SA** [Principal investigator: Professor Monika Esser – University of Stellenbosch, Sub-investigators: A/Prof J Peter, Prof Stan Ress and Professor Paul Potter]

Patients with primary immunodeficiency diseases (PID) are easily missed and the “typical” phenotype obscured by the African tsunamis of infectious diseases. Novel gene mutations and PID clinical manifestations are exposed with increased exposure to infections. Registries are useful tools to create awareness and establish prevalence and spectrum of PID for different population groups. However, accuracy of diagnosis influences treatment decisions, prognosis and counselling. In South Africa, molecular investigation for genetic susceptibility to Tuberculosis (TB) has facilitated access to molecular diagnoses for a range of other PID. In 2008 a PID registry was established at Tygerberg Hospital, Stellenbosch University, ethics approved supported by other university hospitals and private practitioners. Clinical diagnoses with relevant laboratory data of consented patients were coded by IUIS criteria. Age, sex, ethnicity, family history, origin, referral site and main presenting features were entered on password protected datasheets in Excel format on secured server. For very few genetic mutation was obtained with assistance of overseas laboratories. At present, the registry consists of 320 patients, the majority antibody deficiencies. With establishment in 2013 of a molecular PID working group (PIDDGEN) supported by the TB research laboratory facility at Tygerberg Medical School, novel diagnoses have been established for TB susceptibility as well as other PID. This is achieved more cost effectively and targeted with locally available exome sequencing and data analysis capacity, definitive diagnoses of South African patients with dedicated genetic counselling. It is envisaged that molecular diagnosis will become a diagnostic tool for PID diagnoses in South Africa and beyond.
2.4 RECRUITMENT

UCT Lung Institute: Allergy & Immunology Unit

Recruitment Network

Allergy & Immunology Unit Private Practice

Allergy: 1,050
Urticaria: 400
Asthma: 600
Rhinitis: 620
Eczema: 250
Immunodeficiency: 100
Diabetes: 125
Hypertension: 50

Please take note: This is the average number of patients per therapeutic area per year. Recruitment numbers for a specific protocol or study should be discussed with us.

Groote Schuur Hospital

1st Line of Recruitment

Allergy: 450
Urticaria: 300
Asthma: 900
Rhinitis: 800
Eczema: 350
Immunodeficiency: 100
Diabetes: 400
Hypertension: 200

Government Clinics

2nd Line of Recruitment

Allergy: 900
Urticaria: 400
Asthma: 1,000
Rhinitis: 1,000
Eczema: 500
Immunodeficiency: 200
Diabetes: 500
Hypertension: 300

Red Cross (in agreement with Prof. Mike Levin’s)

3rd Line of Recruitment

Allergy: 450
Urticaria: 300
Asthma: 450
Rhinitis: 600
Eczema: 159
Immunodeficiency: 125
Diabetes: 500

4th Line of Recruitment: Community Advertisements
3. CLINICAL PRACTISE

3.1 OUR DOCTORS

Head of Unit:

Associate Professor Jonny G. Peter
MBChB; FCP (SA); MMed; PhD
Practice Number: 0573027

Professor Weinberg
MBChB; FCP (SA); PAED (SA)
Practice Number: 03200000 46736

Dr. Diane Hawarden
MBChB
Practice Number: 1568655

Dr. Trikamjee
MBChB
Practice Number: 0672645

Dr. Claudia Gray
MBChB; FRCPCH; MSc; Dip Allergy; DipPaedNutrition; PhD
Practice Number: 0354929

Dr. Jeanette
MBChB
Practice Number: 014 000 0486485
3.2 SERVICES

3.2.1 Laboratory Testing

Our available laboratory testing:

1. **Total IgE.**
   Measurement of the total IgE in human serum or plasma provides an aid in the clinical diagnosis of IgE mediated allergic disorder.

2. **Specific IgE testing for various allergens.**
   Specific IgE measures IgE antibodies to specific allergens in human serum or plasma and allows quantitative measurements of a wide range of individual allergen and allergen components.

3. **Specific IgE mixed allergens.**
   This test is used when there is not a clear history of allergic disease. It can eliminate a number of allergens in one test. E.g. Moulds, grass, weeds, trees and various food mixes.
   A negative test result reduces the probability of IgE mediated allergic disease.

4. **Phadiatop.**
   Phadiatop is a qualitative screening test for identifying patients with a high likelihood of allergic disease. Phadiatop utilizes balanced mixtures of relevant allergens implicated in causing allergic diseases.

5. **Mast cell Tryptase.**
   Transient raised mast cell tryptase levels, as measured in the blood, is a marker confirming a severe allergic reaction.
   Elevated levels serve as a marker, in certain sensitized patients, for having a anaphylactic (severe allergic) reaction. E.g. after a bee sting in a bee sting sensitive patient.
   Continuous significantly raised mast cell tryptase levels indicate increased mast cell release in several haematological disorders. E.g. Mastocytosis.

6. **Allergen components:**
   Allergen components measure specific IgE antibodies to individual molecular allergens in serum or plasma. Different component groups often elicit different types of reactions, so testing them can
indicate if a patient’s prior symptoms or positive test results were caused by allergy to a given substance or by a cross-reaction with another allergen. Component testing also helps the clinician weigh a patient’s risk of a systemic reaction versus a more mild or localized response.

7. **Specific IgG testing for bird and mould allergens.**
Specific IgG measures antigen-specific IgG antibodies in human serum or plasma. This test is used in diagnosis of lung diseases due to an increase in IgG antibodies to birds or moulds.

8. **Nasal smear for Eosinophils.**
Large numbers of Eosinophils in a nasal smear is an indication of an allergic reaction. Large numbers of pus cells and bacteria would indicate an infection.

9. **CAST test.**
The CAST® assays can be used for the confirmation of any IgE mediated allergy with controversial results from classical testing or where no other tests are available. See request form for details of available allergens and allergens which can be ordered. Allergens not immediately available will take 2 to 3 weeks to arrive and blood for analysis can only be taken once the allergen has been received in the laboratory.

10. **Test for the presence of HDM in dust.**
Dust samples can be tested for the presence of House Dust Mite.
3.2.2 Immunotherapy Information

1. Bee Injection Information

Firstly, check your calendars as you need to come weekly for roughly 16 weeks for the build-up. No sport or exercise on the day of the injection.

You need to take an antihistamine on the day of the injection a MINIMUM of half an hour before. If you are coming around 12 you can still take it in the morning before school, or work.

When you arrive, your vital signs will be checked where after the injection will be given. You will need to sit for a half an hour, then all the vitals are repeated.

Please plan for around 45min – 1 hour per visit.

2. Venox

Immunotherapy for insect sting allergies is a series of allergy shots given to reduce your sensitivity to allergens that cause an allergic reaction. Small doses of allergens are injected under the skin. Over time, allergy shots can reduce the severity of your reaction to allergens. To treat allergies to insect stings, very small amounts of the venom of the insect or insects are used. The treatment also is sometimes called venom immunotherapy (VIT).

Immunotherapy is available to treat allergies to stings from: Honeybees; Yellow jackets; Hornets; Paper wasps; Fire ants.

A solution of dilute saline containing a very small amount of the insect venom is injected under the skin. At first, you get one or more shots about once a week. The amount of allergen injected is slightly increased each time, unless you have a reaction to the shot.

After about 4 to 6 months of weekly shots, you are usually getting an optimal amount of allergen in the shot—this is called the maintenance dose. After you reach maintenance level, you get the same dose in shots every 4 weeks for another 4 to 6 months. After the first year of shots, you will have maintenance shots every 6 to 8 weeks over the next 3 to 5 years.

Important Note

Please take note that you need to be either referred by your GP/ Specialist/ Pediatrician before starting the immunotherapy. Alternatively, you can see one of our doctors for a consultation.
3.2.3 Skin Prick Testing (SPT)

**Skin Prick Testing Information:**

Skin Prick Testing (SPT) is indicated if a type I (immediate type) allergy is suspected, based on the medical history and clinical symptoms; they can identify sensitivity to inhalant, food, drug or occupational allergens. SPTs thus provide objective confirmation of sensitivity, whereas the relevance of such sensitivity to allergens should always be carefully interpreted in the light of the clinical history so that appropriate advice concerning avoidance measures can be given and, as necessary, the correct allergen(s) prescribed for specific immunotherapy (SIT).

SPT results correlate with those of nasal challenge which may also be used as a surrogate to test clinically relevant sensitization.

SPT is used to test adults and children from birth onwards. Repeated testing may be necessary to detect new sensitizations, especially in children, when symptoms change, or if new environmental allergens are suspected.

### 4. NEW INITIATIVES

#### Multidisciplinary drug allergy clinic

This is a collaborative initiative between our unit and Dermatology, Infectious diseases, Hepatology, Pharmacology and Nephrology. The clinic is focussed on immune-mediated adverse drug reactions (IM-ADRs). The first clinic was held on the 15th September 2015. The aim of the clinic is to improve the diagnosis and management of patients suffering with IM-ADRs; to advocate for this patient group; and hopefully to break new territory in the understanding and prevention of these disastrous consequences of the medicines doctors prescribe.

#### Combined allergy, immunodeficiency, rheumatology and infectious diseases transition clinic for adolescents

Adolescence is a developmental period with specific needs. Patients with complex diseases entering adolescence are particularly vulnerable. This clinic aims to bring physicians and paediatric sub-specialists in Allergology, Clinical Immunology, Infectious diseases and Rheumatology together to optimise and bridge the care of children with severe immune-mediated disease into adulthood.
Diagnostic laboratory – adjunct to clinical service

The Allergology Unit has a niche diagnostic as well as a research laboratory. The labs are situated on the H-floor of the Old Main Building, Groote Schuur Hospital. Staff includes three technicians, two with HPCSA-registered and master’s degrees, Ms Bartha Fenemore and Ms Lauren Cruywagen. The diagnostic service offers allergy tests for uncommon or unusual allergens both for the NHLS and private sector laboratories. These include cellular antigen stimulation tests, mast cell tryptase, and microarrays, Western blot specific IgE tests and allergen extract preparation for skin prick or oral challenges.
5. TRAINING

THE ALLERGY DOCTORS IN OUR UNIT CONTRIBUTE TO THE FOLLOWING STUDENT TRAINING:

UNDERGRADUATE

ASSOCIATE PROFESSOR JONATHAN PETER AND PROFESSOR CLIVE GRAY, CO-CHAIR THE UCT IMMUNOLOGY CURRICULUM DEVELOPMENT GROUP TASKED WITH UNIFYING THE TEACHING OF IMMUNOLOGY ACROSS THE 6-YEAR MBCHB CURRICULUM. ALLERGISTS IN OUR UNIT CONTRIBUTE FORMAL LECTURES TO 2ND, 3RD AND 5TH YEAR MEDICAL STUDENTS.

IN ADDITION, EACH YEAR WE OFFER SSM (SPECIALISED STUDENT MODULE) PROGRAMS FOR 3RD YEAR MEDICAL STUDENTS – SOME OF WHICH HAVE LED TO STUDENT PUBLICATIONS AND PRESENTATIONS AT LOCAL CONFERENCES.

GRADUATE TRAINING

THE UNIT IS A KEY ASPECT OF THE TRAINING THAT IS OFFERED BY THE DIVISION OF ALLERGOLOGY AND CLINICAL IMMUNOLOGY AT GROOTE SCHUUR HOSPITAL, UNIVERSITY OF CAPE TOWN. FOR INANCES, THE UNIT PROVIDES THE OPPORTUNITY FOR TRAINEE FELLOWS TO LEARN ABOUT ALLERGEN IMMUNOTHERAPY, AEROBIOLOGY AND LABORATORY TESTING THAT IS NOT AVAILABLE THROUGH THE PUBLIC SECTOR. THIS ENSURES THAT OUR FELLOWS RECEIVE THE COMPREHENSIVE ALLERGY TRAINING THAT ALLOWS THEM TO BE INTERNATIONALLY COMPETITIVE.

ASSOCIATE PROF PETER IS ALSO CURRENTLY THE PRIMARY SUPERVISOR OF FOUR MASTERS’ CANDIDATES, AND CO-SUPERVISOR OF THREE MASTERS AND ONE PHD CANDIDATE.

THE UNIT ALSO CONTRIBUTES TO:

- THE CONTINUING MEDICAL EDUCATION OF GENERAL PRACTITIONERS AND THE TRAINING OF NURSING STAFF.
- CME COURSE’S ARE PROVIDED BY THE UCT LUNG INSTITUTE TO GENERALISTS AND SPECIALISTS REGULARLY INCLUDE LECTURES FROM OUR UNIT DOCTORS
- DRS DI HAWARDEN AND SHAUNAGH EMMANUEL ARE RESPONSIBLE FOR BIANNUAL NURSING EDUCATION ON ALLERGY TOPICS AND TECHNIQUES SUCH AS THE MANAGEMENT OF ANAPHYLAXIS AND SKIN PRICK TESTING. THEY HAVE DEVELOPED AN ACCESSIBLE AND HIGHLY ACCLAIMED SET OF ALLERGY ABC TOPICS, WHICH UNDERPINS THEIR TEACHING.
6. CONTACT DETAILS

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