DEPARTMENT CARDIOTHORACIC SURGERY

Head of Department: Prof Francis E Smit

1. PERSONNEL AND ACADEMIC

1. PERSONNEL

a) Medical
   Head of Department : Prof F E Smit
   Principal specialist : Prof W J de Vries
   Senior specialists : Dr M A Long
   Senior specialist (sessions) : Dr A G Linegar
   Registrars : Drs R Schulenburg, J Brink, A Stroebel, T de-Huis
                and I de V Jonker.

b) Non-medical
   Manager Clinical Technology : Mrs M Jansen van Vuuren
   Control Technologist : Mr D Bester
   Chief Technologist : Mr N van den Heever (left Feb 07)
   Senior Technologist : Mrs M Retief (left April 07)
   Senior Technologists (sessions) : Mrs M Fuls and Mr J Fourie
   Student Technologists
      4th year : Me A Human, Me L Liebenberg, Mr Z Musa
      3rd year : Mr JP Cloete.

c) Professional
   Specialist Medical Scientist : Mr J J van den Heever
   Assistant Director Medical Scientist (from CUT) : Dr L Botes
   Medical Scientist : Me C Prins

d) Administrative
   Administrative Manager : Mrs J M Erasmus
   Secretary : Mrs J L van der Merwe
   Senior Administrative Officer : Mrs E Smith
e) **Social and general**

We have an interdisciplinary monthly mortality, morbidity and management meeting, attended by administrative personnel, nursing service managers for the ward, theatre and ICU, perfusionists, registrars, surgeons and specialists from other disciplines as required. Lately the meeting has been attended mainly by the adult cardiologists. We shall get back to our previous format in 2008.

### 2. ACADEMIC ACTIVITIES

a) **Teaching**

(i) **Undergraduate teaching**

We are now involved in the pre-graduate curriculum. As time slots are extremely difficult to arrange, we are still under-exposed and training is certainly still sub-standard. We hope to expand our role in future.

(ii) **Postgraduate teaching**

Our weekly training program (vide infra) is functioning well and participation by all members of the department is encouraged. Training sessions are well attended and despite the frivolous nature of our clinical work, we have managed to cover the majority of subjects quite well this year.

We are continuing to have formal evaluations every six months in the form of a written, clinical and oral examination. This gives us an opportunity to evaluate the progress of each candidate. The candidate also has a debriefing session afterwards in which his performance is discussed as well as getting feedback from the candidate himself.

Richard Schulenburg (senior registrar) has returned from Oxford after a very successful rotation there in 2007. Dr A Stroebel is rotating there in 2008. This rotation has added to the international exposure of our registrars and has also served as an international benchmark against which we can evaluate ourselves.

Prof Francis Smit has become a member of the International Cooperation Committee of the European Society of Cardiothoracic Surgeons. This gives us an opportunity to actively participate in the development of post-graduate training programs in Africa.

Mr J J van den Heever has successfully completed his Masters Degree and the external examiners have recommended that the degree be awarded cum laude.

Further post-graduate studies are listed under the research projects section.
b) Research

Projects:

Post-interventional outcomes in coronary artery disease. Ms C Prins, Ms L Liebenberg, M-Tech Clinical Technology degrees registered, Mrs A Human, Ms H Potgieter.

Effects of warm ischemic times on harvested homografts. M-Tech, Mr D Bester and PhD, Prof F E Smit, registered.

A comparative assessment of the calcification potential and cross-linking stability of three different treatment modalities of bovine pericardium and one commercially available product. Mr JJ vd Heever, M.Sc registered. Project completed.

A model for the development of thoracic surgery in Central South Africa. PhD, Dr A G Linegar, registered

Assessment of the tissue engineered Adapt® treated bovine pericardial patch for cardiac repair procedures (BioMD Limited-Study).

Evaluation of a new mitral ring design in the mitral position of sheep. (Completed for Glycar Pty Ltd) – Project completed.

3. ATTENDANCE OF CONGRESSES/COURSES AND PAPERS PRESENTED

a) Papers


SA Heart Congress. Sun City, North West. Jonker IdeV, Smit FE, Linegar AG, Jordaan C.J. Surgical management of pulmonary aspergilloma.

Faculty of Health Sciences, Faculty Forum. 23 – 24 August 2007. De Vries WJ, Smit FE. The changing pattern of coronary artery bypass surgery.

Faculty of Health Sciences, Faculty Forum. 23-24 August 2007. Jonker IdeV, Smit FE, Linegar AG, Jordaan CJ. Aspergilloma – A clinical approach.


b) Congresses and courses attended

Assuring a Future for Transplantation in South Africa, Kleinmond, SA; 29-31 March 2007; Mr JJ vd Heever

Hannes Meyer Registrars Symposium; Faculty of Health Science, UFS; April 2007; Prof F E Smit, Prof W J de Vries, Drs M A Long, C J Jordaan, R Schulenburg, J Brink, A Stroebel, T de-Huis and I de V Jonker

World Society for Paediatric and Congenital heart surgery, Washington DC, USA; 3-4 May 2007, Prof F E Smit (inaugurated as Founding Member)

87th Annual AATS Meeting, Washington DC, USA, 5-9 May 2007 Prof F E Smit

1st All Africa Cardiology Conference, Nairobi, Kenya; 13-16 May 2007; Dr M A Long.

Faculty Forum; Faculty of Health Science, UFS, 23-24 August 2007; Prof F E Smit, Prof W J de Vries, Drs M A Long, C J Jordaan, R Schulenburg, J Brink, A Stroebel and T de-Huis.

Biennial Congress of the South African Transplantation Society, 8-11 September 2007, Sibaya Conference Centre, Durban, South Africa. Mr J J vd Heever

21th EACTS/ESTS Joint Meeting; Geneva, Switzerland; 15-19 September 2007; Prof F E Smit, Dr C J Jordaan.

Heart 2 Heart Africa Congress 2007, Sun City, South Africa, 22-25 November 2007; Prof F E Smit, Dr C J Jordaan, Dr A G Linegar, Dr J Brink, Dr J A S Stroebel.

Latest Techniques in Cardiac Surgery; Leipzig, Germany 6-7 December 2007; Dr M A Long
4. PERSONNEL ACHIEVEMENTS

a) Committees

Prof F E Smit:

- Society of Cardiothoracic Surgeons SA EXCO
- Medical Association of SA Full Time Practise Representative, UFS
- President SA Heart Association Free State Branch
- Practise Management Committee, UFS
- Member SA Heart Association Databases Project Committee
- International Co-operation Committee of European Association of Cardiothoracic Surgery
- Inaugural Member of The World Society for Paediatric and Congenital heart surgery.

Prof W J de Vries:

- Member of Provincial Administration Branch Universitas Private Hospital

Mr J J v d Heever:

- National representative for Tissue Banks on the South African Transplantation Society Exco

5. OTHER ACHIEVEMENTS

Prof F E Smit:

- Member of the International Co-operation Committee of European Association of Cardiothoracic Surgery.
- Chain of Hope: Member of Board of Higher Education,
- Budget Project completed for Free State Provincial Health Department

Mr J J vd Heever: completed M. Sc recommended with distinction.

Dr R Schulenburg – Oxford Rotation and Fellowship Appointment Edmonton, Canada 2009

Dr C J Jordaan – acting head MICU

Me C Prins – Departmental Website re-development and launch

Dr I de V Jonker – Awarded Best Candidate in Intermediary Examination, College of Surgeons of South Africa

Mrs J M Erasmus: Vice President Federation of Dance sport South Africa.
6. **FUTURE PROSPECTS**

The rotation of registrars through Oxford, overseen by Prof S. Westaby, started in 2007. This will give registrars international experience and exposure to end-stage cardiac disease.

We are developing an end-stage heart disease program within an interdepartmental framework. This project will change the future management of this sub-group of patients.

We are very enthusiastic to develop an interdisciplinary integrated training program aimed at the training of cardiologists, cardiothoracic surgeons and supportive disciplines for African countries.
DEPARTMENT CARDIOTHORACIC SURGERY

HEAD OF DEPARTMENT: PROF E SMIT

II. PUBLICATIONS

A. SCIENTIFIC PUBLICATIONS

1. Full-length articles

  Non-subsidy-bearing publications

  Abstracts


## DEPARTMENT CARDIOTHORACIC SURGERY

**HEAD OF DEPARTMENT:** PROF FRANCIS E SMIT

### III. SERVICE DELIVERY

#### 1. DUTY ROSTER

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2. CLINIC AND LABORATORY STATISTICS

Tissue Laboratory

A total of 78 aortic valves, 30 pulmonary valves and 21 pulmonary bifurcations were dissected out of 78 donor hearts. From these, 46 valves were not fit for use due to HIV/venereal diseases (8), Positive cultures (6) and calcification/atherosclerosis/pathology (32).

During 2007, a total of 38 aortic allografts, 24 pulmonary allografts and 20 pulmonary bifurcations were cryopreserved for clinical use. Seventeen valves were implanted locally and 28 valves (11 aortic, 14 pulmonary, 3 bifurcations) were distributed to six other units within South Africa. There appears to be an increasing demand for these valves to be transplanted into recipients, while the availability of suitable valves remains extremely limited due to various reasons.

Approximately 70 locally prepared bovine pericardial patches were used in our unit in different cardiac procedures during this period, while an estimated 110 patches were delivered to other units. About 65 samples of Gluteraldehyde were also used and distributed for fixation of autologous pericardial tissue during repair procedures.

3. IN- AND OUT-PATIENTS

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Mortality
### 4. OPERATIVE INTERVENTIONS

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5. FUTURE PROSPECTS

We are working steadily at increasing our support personnel compliment. We have increased the number of qualified ICU nurses four fold in the last four years for example. The possibility of a major African Training Program at the UFS can help us to expand our services to our patients in central South Africa.

The completion of the first phase of the Database Project as well as Dr Linergar’s PhD on the development of Thoracic Services in Central SA will assist us in putting development issues on firmer scientific base.
1. **HIGHLIGHTS OF SPECIAL INTEREST**

The development and registration as a long-term project at the UFS of the SAHA National Databases Project is the end-result of years of involvement in this project. Research opportunities for our department as well as the honour of hosting this project at our university are exciting prospects.

Our research projects are coming to fruition after a development phase that included capacity building, protocol and project development, ethical committee applications and sustainability challenges. We can really thank our research staff, Dr L Botes (from the CUT), Mr J vd Heever and Me Carla Prins, for the immense effort they have put into this division to make it work. Laboratory and large animal surgical research is now performed routinely at our institution. This is a great achievement and should be jealously guarded and protected.

Clinical research is also beginning to produce better quality research and we are enthusiastic about a number of studies nearing completion.

2. **ACTIVITIES / RESEARCH / ACTIONS**

The development of an end-stage heart disease team with national and international support from qualified individuals is a milestone achievement for us. Hopefully this project will deliver a different level of care to our patients.

We shall continue to be involved in sustainability and health economic issues in future, as these issues continue to influence the quality and quantity of our services.