

## About Us

SANBS is a non-profit organisation; therefore, ownership of its assets does not vest in its members. In the event that SANBS should stop operating, its assets would have to be transferred to an organisation with similar goals and objectives.

SANBS provides an essential service within South Africa and is rated amongst the best in the world in the provision of blood and blood products, as well as in relation to the research and training provided.

SANBS operates across all of South Africa, with the exclusion of the Western Cape. SANBS is further regarded as a major role player in the provision of support to countries in the SADC region.

Our key purpose is to save patients' lives.

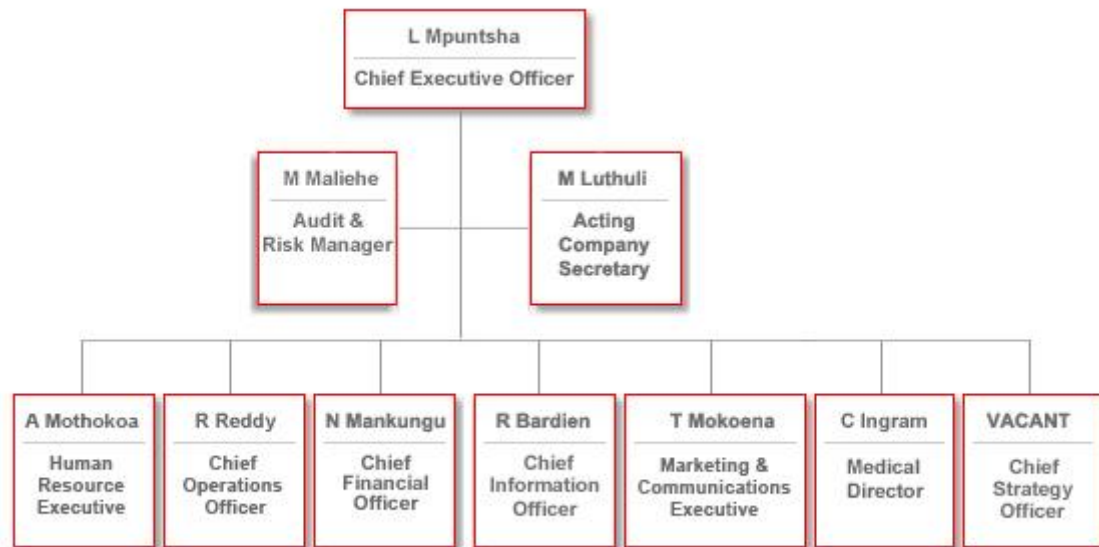
### **Vision**

The vision of SANBS is to be acknowledged nationally and internationally as a centre of excellence in the discipline of blood transfusion.

### **Mission**

The mission of SANBS, an organisation of voluntary, non-remunerated blood donors, is to provide all patients with sufficient, safe, quality blood products and medical services related to blood transfusion, in an equitable, cost effective manner.

## **SANBS Management Organogram**



## Corporate Partners

### *Related Links to Partners*

- [National Bio-products Institute](#)
- [American Association of Blood Banks](#)
- [Arrivealive](#)
- [Cancer Association of South Africa](#)
- [loveLife](#)
- [South African Department of Health](#)
- [The Sunflower Fund](#)
- [XXIXth International Congress of the Society of Blood Transfusion](#)

## Donor Safety

It is quite safe to donate blood with South African National Blood Service. Our personnel take the necessary safety measures to ensure that you don't get a transmissible disease by donating blood.

We use new, sterile and disposable equipment (blood bags, tubes and finger prick needle and other needles) for each donation.

These are used only once for your blood donation, discarded in a specialised waste container and incinerated.

Further assessments include a finger prick test in order to ascertain if your haemoglobin level is within a safe range for donation purposes. In addition, your pulse rate and blood pressure will be checked.

You must also weigh at least 50kg or more, be between 16 and 65 of age and in good health.

Potential donors will be permitted to donate only if these measurements are within the defined, acceptable range.

The criterion for 65 years applies to first time and lapsed donors only.. Repeat donors may continue to donate for as long as possible provided they bring a doctor's letter every 2 years.

## Services

- [Specialised Laboratory Services Department](#)
- [Paternity Testing](#)
- [Cyropreservation Facility](#)
- [Other SANBS Service Information](#)

### Specialised Laboratory Services Department

- **Product and Services Information**

### Tissue Immunology Section

#### Human Leucocyte Antigen (HLA) Typing

##### (i) HLA Serology typing

The Tissue Immunology and Paternity Laboratory have a close partnership with the Sunflower Fund, and the South African Bone Marrow Registry (SABMR).

The Sunflower Fund is responsible for creating awareness and education in the community. Funds raised assist with the cost incurred for laboratory testing. Blood samples are collected from donors and subjected to HLA Class I typing (Locus A + B). The test results are then released to the SABMR who capture and include the typings on the register.

Should you require further information on how to become a bone marrow donor, please contact the **SUNFLOWER FUND** on **0800 121082**.

A link between some HLA types and certain disease has been researched and documented e.g. locus B27 is associated with Ankylosing Spondylitis. Class I typing by serology can then be performed to determine whether the patient possesses this antigen and therefore is at risk for the disease.

#### (ii) HLA Molecular Class I and II Typing

Molecular typing is used as a powerful tool to further tissue type patients requiring solid organ and bone marrow transplantation.

Potential donors who have HLA matched a patient at a serological level, are then further typed to confirm HLA compatibility.

Requests are received from the SABMR to contact bone marrow donors who have potentially matched a patient at a serological level. The laboratory then performs molecular typing to ascertain the HLA Class II type i.e. Locus DRB.

#### (iii) HLA antibody screening and identification

Renal patients are tested on a regular basis for the presence of HLA antibodies. These antibodies are produced as a result of sensitizing factors, such as transfusions and pregnancies.

The antibodies are detected by an ELISA-based method and identified by a lymphocytotoxicity method.

There are two types of donors for these patients; the first is the related living donor (RLD). The second type of donor is the cadaver donor, who is a person who has been declared brain-dead and permission has been obtained from family for the use of his/her organs.

A crossmatch between the patient's serum and donor's T and B lymphocytes is performed by a complement-dependant cytotoxicity method. A positive T cell x-match is a contraindication for transplantation with the donor. A positive B cell x-match, when the patient has antibodies, also carries a high risk of antibody-mediated damage and possible organ rejection.

Patients awaiting solid organ transplantation regularly submit samples to the laboratory to monitor their antibody status and for inclusion onto the transplant list. All patients awaiting transplantation are crossmatched against cadaver lymphocytes, and those patients who are negative for T and B cell crossmatches and are then considered for transplantation. The decision on whom to transplant rests with the nephrologist and surgeon.

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#### **Contact details**

Area 1 (Johannesburg)  
Tissue Immunology + Paternity Laboratory  
011 761 9227

Area 2 (Durban)  
Tissue Immunology + Paternity Laboratory  
031 719 6619

## **Blood Glossary**

### **A – N of Blood**

**Alveoli** - Air sac of the lungs, formed by the terminal dilation of tiny air passageways.

**Antibody** - A protein that is made by certain white blood cells (lymphocytes), in the body, in response to the invasion of a foreign substance.

**Antigen** - A substance that when introduced into the body stimulates an immune response.

**Aorta** - The main trunk of the arterial system, carrying blood from the left ventricle of the heart to all of the body except the lungs.

**Arteries** - Blood vessels that carry blood from the heart to any part of the body. The exception to this rule is the Pulmonary artery.

**Bacteria** - One-celled organisms, spherical, spiral, or rod-shaped and appearing singly, in chains, or in clusters.

**Blood** - The fluid that circulates in the principal vascular system of human being and other vertebrates: in humans consisting of plasma in which the red blood cells, white blood cells, and platelets are suspended.

**Bronchi** - The main branches of the trachea.

**Capillaries** - The tiny blood vessels between the terminations of the arteries and the beginnings of the veins.

**Chemotaxis** - Movement of a cell toward or away from a chemical stimulus.

**Cytoplasm** - A jellylike material that surrounds the nucleus of a cell and contains most of the cell's organelles.

**Differentiation** - (of cells or tissues) to change from relatively generalized to specialized kinds, during development.

**Erythrocyte** - A red blood cell.

**Fibrin** - The insoluble protein end product of blood coagulation.

**Germ**s - Any micro-organisms that cause disease.

**Granulocyte** - A circulating white blood cell having prominent granules in the cytoplasm and a nucleus of two or more lobes.

**Hemoglobin** - The oxygen-carrying protein of red blood cells that gives them their red color and serves to carry oxygen to the tissues.

**Immunity** - The condition that permits either natural or acquired resistance to disease.

**Leukocyte** - A white blood cell.

**Lymphocyte** - A type of white blood cell having a spherical nucleus surrounded by a thin layer of nongranular cytoplasm.

**B Lymphocyte** - A lymphocyte that is involved in the production of antibodies.

**T Lymphocyte** - A lymphocyte that helps in the priming of B lymphocytes to make antibody or is directly involved in attacking foreign cells, such as tumor cells.

**Marrow** - A soft, fatty, vascular tissue in the interior cavities of bones that is a major site of blood cell production.

**Megakaryocyte** - A large bone marrow cell having a lobulated nucleus (one with lobes); the source of blood platelets.

**Mitosis** - The usual method of cell division.

**Monocyte** - A large, circulating white blood cell, formed in bone marrow and in the spleen. When in the tissue a monocyte becomes a macrophage.

**Macrophage** – Is the same as a monocyte except it remains in the tissue. It ingests large foreign particles and debris.

**Nucleus** - The part of the cell that holds genetic information such as DNA.

**Nutrients** - Substances that give sustenance to an organism.

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