

International Pathology

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A NEWS BULLETIN

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International Congress of the IAP Cape Town, South Africa

We invite you to come to Cape Town, South Africa to attend the International Congress of the IAP, September 30 to October 5, 2012. We have arranged an outstanding academic programme but there are many other reasons for visiting us.

South Africa's scenic wonders are legendary. From Table Mountain to God's Window, our mountains, forests, coasts and deserts will feast your eyes and lift your spirit. Leave the 'ordinary' behind.

We have world class facilities, and our New Convention Centre near the waterfront will impress you with its functionality. The Rainbow Nation celebrates all its African and immigrant cultures.

Discover our nation's struggle for equality of opportunity whilst following the lives of Nelson Mandela and many others. It will touch and inspire you.

In preparation for your visit let us tell you something about the development of Medical education in South Africa, and about some of our Medical Institutions that have developed a world wide reputation. This reputation is being upheld by the current generation of doctors, and by those who were trained in South Africa and who are now practising in many countries around the world.

The first Medical School in South Africa was established by Act of Parliament on April 5th, 1918. Prior to this in 1829 a South African College was established as a centre for higher education and training. From the early 1900s those who wanted to be doctors were given training in the basic sciences in the College before they went to Edinburgh University to study medicine. The first medical graduate from this course was Dr. GF Fisser who graduated in 1909.

The first two medical professors, RB Thompson, Anatomy and William A Jolly, Physiology came from Edinburgh University in 1911. They were appointed to the South African College where they commenced teaching early in 1912. However, their proper laboratories were only opened on Thursday 6th June 1912. This day is considered to be the birthday of the Medical School. Hence, 2012 marks the centenary of the first Medical School in



Above: The Congress organisers William Bates, Zelda Coetzee, Johan Schneider, Martin Hale.

Below: The Convention Centre. It is linked to the waterfront by a canal in which there is a ferry taxi service. (Photo courtesy of South African Tourism).

South Africa. This landmark will be celebrated by Anatomical Pathologists immediately before the IAP Congress in Cape Town on 29th September, 2012 when an international long course on paediatric and perinatal pathology will be conducted.

Up to 1919 there was a move away from Edinburgh, as medical students from South Africa began to choose to complete their training (and to play rugby) at Guy's Hospital and other London hospitals.

The teaching of Pathology, Bacteriology and Pharmacology began in 1919. The first Professor of Pathology was W Blair Martin from Glasgow.

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Stellenbosch, to the East of Cape Town is a major wine producing area. (Photo courtesy of South African Tourism).



Above left: Prof. Dhiren Govender, Roc Kaschula and Helen Wainwright at the bust of Dr. Barnard Fuller who initiated the establishment of the Cape Town Medical School more than a 100 years ago.

Above: Dr. Chris Barnard who performed the first human heart transplant at the Grootte Schuur Hospital on 3rd December 1967. In the museum in the old Grootte Schuur Hospital, those attending the Congress will be able to see real life models of the actual team in the operating theatre where it happened. (Photo courtesy of Roc Kaschula).

Unfortunately he died before he started teaching in October 1918 from the pandemic of Asian influenza that occurred after WW1. Luckily Prof AJ Clark, pharmacologist from Cambridge and St Bartholomew's Hospital, London, and TJ Mackie, Bacteriologist from Glasgow survived the pandemic. Mackie was co author of the very successful textbook of Bacteriology of the time - Mackie and Macartney.

The first clinical departments were also established in 1919 with the appointments of Prof AW Falconer from Scotland, Internal Medicine, Prof CFM Saint from England, Surgery and Prof EC Chrichton from Ireland, Obstetrics & Gynaecology.

The University graduated its first two medical doctors, Louis Mirvish and JB Solomon at the end of 1922. There was a very rapid turnover of staff, and in 1922 the Professor of Anatomy was Maxwell Drennan from Edinburgh; The Professor of Pharmacology was JWC Gunn; and the Professor of Pathology was GB Bartlet. He was replaced by Benjamin Ryrie from Edinburgh 1925. JWC Gunn was the first Dean, and he was followed by Benjamin Ryrie.

The University of Witwatersrand in Johannesburg established a medical faculty and started training doctors in 1917. The Foundation Professor of Anatomy was Raymond Dart from Australia. The other senior staff came from Britain and Ireland. Their first graduates began work as doctors in 1924.



Left: The South African College Anatomy and Physiology laboratories were opened on Thursday 6th June 1912. This day is considered to be the birthday of the Medical School. Hence, 2012 marks the centenary of the first Medical School in South Africa. (Photo courtesy of Roc Kaschula).

Left below: The old Grootte Schuur Hospital was built in 1938. This photograph taken in 1963 shows how it looked in 1967 when the first heart transplant was done.

Below: A new Grootte Schuur Hospital was opened in 2010. The former hospital (which contains the museum) is in the background. (Photos courtesy of Roc Kaschula).



Table mountain from Blouberg Beach. (Photo courtesy of South African Tourism).

A second centre for higher education and training in the Afrikaans language was established at Stellenbosch, a city just East of Cape Town. This began as the Victoria College in 1866 and became the foremost centre for higher education and training in the Afrikaans language. It became a University at the same time as the University of Cape Town. Its Medical School opened in 1957. Their first Professor of Pathology was Horst Weber and first Professor of Microbiology was Hans Brede who were both recruited from Germany. All the other senior appointees were South African trained, mostly from the University of Cape Town.

Groote Schuur Hospital in Cape Town

This was opened in 1938. It became headline news in the International media after Dr. Chris Barnard did the first heart transplant there on December 3rd 1967. Those who attend the congress will be able to see real life models of the actual team in the operating theatre where it happened as it is now part of a museum in the old Groote Schuur Hospital.

(It is of interest that Roc's wife, Sheila was one of the very first babies to have a Ramstead procedure done for pyloric stenosis at the hospital in January 1939. Editor).

Elsewhere In The Republic Of South Africa

Pretoria

In 1944 a Medical School was established at the University of Pretoria. Previously it was called Transvaal Universiteit Kollege for Afrikaans speakers.

Bloemfontein

The Free State established a Medical School for Afrikaans speakers in 1959.

Medunsa

The University of Medunsa North of Pretoria was established in 1982 for black students but it is now amalgamated into the University of Limpopo.

Umtata

In 1996 a medical school was established in Umtata, the capital of the former Homeland State of Transkei. It was first called the University of Transkei, but it is now named the Walter Sisulu University.

Political refugees from Poland were the early professors at Medunsa and at the University of Transkei. However, the Professors of Pathology at Medunsa were South African graduates. Leonora Dreyer was the first Professor of Pathology. Six years later she moved to Pretoria and she was replaced by Lou Lemmer.

Durban

In 1947 the University of Natal established a medical school for indigenous Africans, Coloureds and Indians. It soon became predominantly for Indian students. (It is now the University of Kwa Zulu, Natal.) The founding Professor of Pathology was Okkie Gordon who was trained at the University of Cape Town.

Okkie specialised in Forensic Pathology. So, in 1950 John Wainwright from Sheffield, England was appointed Professor of Anatomical Pathology. He was followed by Mini Kalichurum in 1981. John's daughter, Helen is now an associate professor in perinatal and pulmonary pathology at the University of Cape Town. She is scheduled to be installed as president of the International Paediatric Pathology Association at the IAP Congress.

Specialist training

After the undergraduate degree, specialist training was initially undertaken in Britain, Netherlands and Germany. During World War 2 and shortly thereafter, Master Degree courses were offered by the South African Universities with Medical Schools. This was before the establishment of a National College of Medicine in the early sixties that now includes the various medical disciplines in affiliated colleges.

During the late 1950s the need for a National Professional body was recognized and Professor Basil (Bunny) Becker, then head of Anatomical Pathology at Witwatersrand University arranged a meeting in Bloemfontein on 6th August 1960. Thirty four (34) delegates representing all pathology disciplines attended. Ten scientific papers were presented.

From this meeting the South African Society of Pathology was born. Annual congresses have been held ever since. However the lack of opportunity for advanced scientific endeavour, and internal political differences within South Africa resulted in many of our most gifted medical practitioners emigrating to more affluent countries.

In July 1966 the then Secretary of the IAP, Kash

Right top: Howard College. The oldest building of Durban University. The Medical School was opened in 1947.

Right: Medunsa Medical School and Hospital opened in 1982.

Below: University of Pretoria Clinical Sciences building. The Medical School was opened in 1944.

Below right: Durban. A beach in front of a row of tourist hotels.



Below: Tygerberg Hospital, the Hospital and Medical School (on the right in the photo) for Stellenbosch University. This is just East from the Cape Town CBD. The Medical School was opened in 1957. Roc Kaschula was pathologist at the Red Cross Children's Hospital in this complex. During the middle seventies through to the late eighties, the Hospital received many patients with congenital heart ailments from the interior of Africa who came to the hospital to seek the operative skills of the brothers, Chris and Marius Barnard. In addition the Paediatric Oncology Service attracted children from all over Africa. Since 2000, however, foreigners are charged very high fees; so much so that very few such cases now come for treatment. (Photo courtesy of Roc Kaschula).





Stellenbosch is a city to the East of Cape Town. It was the original Dutch settlement. In recent years some of the old buildings have been renovated. This is the oldest of the restored 'colonial buildings.' It was built in 1709.



Stellenbosch - Restored house in 'Cape Architecture' style from 1800.



Above: Medunsa Pathology Museum. Hand with a large melanoma arising from the palm. This is not an uncommon site for this tumour in African patients. Sole of the foot is also a common site.

Below: Stellenbosch - Uncle Sammie's Store from 1904.



Mostofi attended the annual meeting of the South African Society of Pathology and influenced them to become the South African Division of the IAP. The then President of this body, James Murray became an International Vice President of the International Council of IAP. This office has successively been held by Cornelius Uys, Ronald Kaschula and Martin Hale.

During 1986 and 1987 the Society made significant constitutional changes when it became a Federation of four component independent groups representing Clinical Biochemistry, Haematology, Medical Microbiology and Anatomical Pathology. The latter is the South African Division of the International Academy of Pathology in its current format.

The South African Institute for Medical Research in Johannesburg.

The Institute was established in 1915. Its first project was to investigate an outbreak of Chromoblastomycosis on the skin of miners working in the gold mines. They acquired it from the timber posts being used to support the walls of the mine shafts. Asbestosis was another early subject of investigation.

Dr. William Gorgas, the famous 'Sanitation' doctor was a member of the US Army Walter Reed Hospital group that showed that yellow fever was transmitted by mosquitoes and could be eradicated by controlling their breeding. He then went on to control both yellow fever and malaria amongst the workers on the Panama Canal.

Fresh from these successes he was invited to advise on the formation of the Institute and he was offered the position of the First Director. He declined the offer and nominated one of his staff members, Dr Orenstein who was subsequently appointed. There is now an annual Orenstein Oration in his honour. Gorgas was the first to sign the Visitors' book held by the Institute.

Baragwanath Hospital

This hospital is a teaching Hospital for the University of Witwatersrand in Johannesburg. It services mainly the city of Soweto. It delivered 60,000 babies and treated 3,000 gunshot wounds in 1990. It is famous especially for its Infectious Diseases Unit which deals with a particularly large number of parasitic diseases.

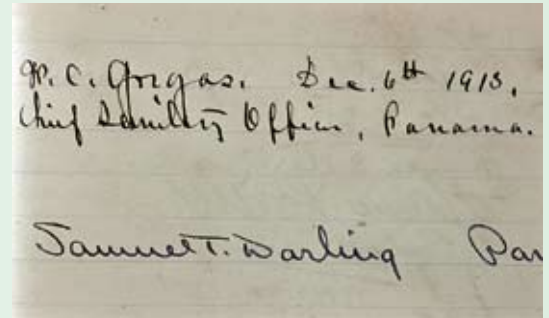
It is named after John Baragwanath who ran a hostel in the late 1800s to service the gold miners who came to seek their fortunes on the rich Witwatersrand gold mine. During WW2 his property became an air

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Above: Johannesburg. South African Institute for Medical Research which opened in 1915.

Below: William Gorgas is the first signature in the Visitors' book for the SAIMR.



Below: Johannesburg. Baragwanath Hospital in 1991 with some of the original pavilion wards and a newer high rise building. It was opened in 1942. The city of Soweto is in the background.

Bottom: Vendors, including traditional healers, on the bridge between Baragwanath Hospital and Soweto.





Cape Town waterfront. (Photo courtesy of South African Tourism).

field and a military hospital for casualties from the campaigns waged in North Africa. The hospital was designed to have single level pavilion type accommodation. It was opened on 23 September 1942. After the war it was further developed and modernised with the addition of multistorey buildings. Progressively it has become one of the largest hospitals in the Southern Hemisphere.

Most of the information for this report was kindly provided by Ronald (Roc) Kaschula. Other people who kindly looked after me during my visit in June 1991 and who provided me with information about their country and helped me to take the photos were Martin Hale, Andrew Tiltman, Pauline Close, Johan Schneider, William Bates, Vincent Falck, Michael Forder, Richard Hewlett, Vivien Chrystal, Mini Kalichurum, Reena Ramsaroop, Steven Purcell, Bruce Middlecote, Lou Lemmer, Charles Isaacson, Leonora Dreyer, Ian Simson, Ashwin Brandev, Zelda Coetzee, Deidre Cloete.

Robin Cooke, Editor

Below: A young woman dressed as a "Traditional healer" in a hut specially designed for tourists. Traditional healers may be male or female. They deal in herbal medicine, and clinicians must be aware of some of the complications of this therapy. For example the following 3 conditions:

Herbal medicine that contains a substance called sinecia can cause veno-occlusive disease of the liver.

Impila the ox eye daisy can cause central hepatic necrosis in children.

Potassium dichromate mixed with substances used as an enema can cause rectal bleeding because of necrosis of the colonic mucosa.



Below: Cape of Good Hope. Usually it is very windy as shown in this picture, and one can see a line where the cold water of the Atlantic Ocean on the left meets the warm Mozambique current from the East Coast of South Africa. The Portuguese Navigator, Vasco da Gama in 1497 called it the 'Cape of Storms.' (Photo courtesy of South African Tourism).



The Oswestry Anatomy Department and Pathology Museum

An example of a small, recently established, privately funded, specialist Orthopaedic museum in a regional town in the United Kingdom.

The Oswestry Anatomy Department and Pathology Museum is situated near the market town of Oswestry in Shropshire close to the border with Wales. It is a privately funded unit, a part of the Institute of Orthopaedics, and is based in the Leopold Muller Arthritis Research Centre. Although it sits on land owned by the Robert Jones & Agnes Hunt Orthopaedic Hospital and has close ties to it, the department is a separate body. The hospital was founded by Sir Robert Jones and Dame Agnes Hunt in 1900 and it was granted NHS Foundation Trust status on 1st August, 2011.

The primary role of the Institute of Orthopaedics is to help with the postgraduate training of Specialist Orthopaedic surgeons. It also runs courses for Allied Health staff including nurses, radiographers and physiotherapists. It currently receives 200-250 visitors per year. It depends for most of its income on course fees and donations.

When the department was founded in 1996 it was decided that it would be necessary to have museum specimens to be used as teaching aids in the postgraduate education of orthopaedic surgeons. Initially, specimens were received from the hospital theatres and mortuary as well as from other collections under the auspices of the Anatomy Act, 1832/71. The implementation of the Human Tissue Act, 2004 meant that theatre and mortuary specimens would be much harder to obtain. It was fortunate that, in 1996, the Institute of Anatomical Sciences had established a Museum Specimen Reclamation Scheme which currently has 10,000 specimens on its data base. The aim of this initiative was to 'rescue' the old specimens from museums that were being closed nationally and to renovate/restore the specimens to a usable condition.

The Oswestry Museum now has two hundred and twelve museum specimens on display and probably as many again waiting to be prepared. A few of the rarer specimens are illustrated. Some of the specimens have come from our hospital, but many have come from other establishments that closed their museums.

This Institution has taken the initiative of gathering specimens from others who would otherwise have had to dispose of them. The result of this is that there is now a bigger range of cases that can be used for teaching by all the collaborating hospitals.

Information and photographs for this article were kindly provided by David Adams, Museum Curator.



Top: Pelvis showing the deformities of rickets which used to be common throughout Europe

Above: Whole skeleton showing Paget's disease of right ulna, left femur and right tibia.

Wellcome Museum of Anatomy & Pathology

The Royal College of Surgeons of England maintains two important surgical museums. The oldest, the Hunterian Museum, was opened in 1813 with the purchase of a collection of specimens assembled by John Hunter, surgeon and anatomist during the late 1700s. He used his specimens to help to explain the mechanisms of disease, and to teach students who paid to have teaching in Anatomy. Today the museum displays some of John Hunter's important specimens and covers the history of surgery to the modern day.

Over the last century other museum collections were established by the college, including a pathology collection and more recently an anatomy collection, both of which are now displayed in the Wellcome Museum of Anatomy and Pathology at The Royal College of Surgeons of England. Recently all the collections and archives held by the college have come under one administration and they are being used to educate the public as well as medical students and post graduate trainees in surgery.

The historical Hunterian Museum has been open to the public for a few years now. The number of visitors has steadily increased, and in 2010 there were 50,000 visitors. Like a majority of museums in London it is free to the public. It is staffed by a small number of paid experts and they are supplemented by volunteers. Visitors are encouraged to make a donation to the upkeep of the museum.

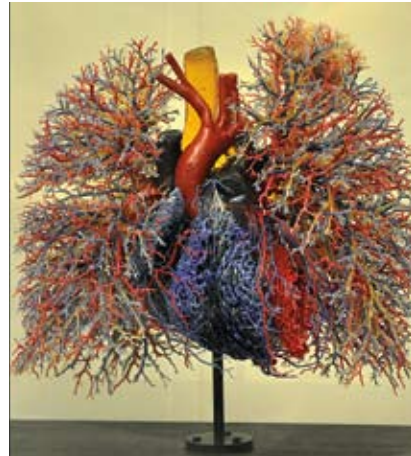
The Wellcome Museum of Anatomy and Pathology supports 6,000 surgical trainees and various other groups of medical trainees and professionals each year. Progressively the display area is being converted into bays, each of which houses specimens that relate to one region of the body. Anatomy specimens are displayed on one side of the bay and pathology specimens on the other. To complement the displays, videos demonstrating one or more surgical operations related to the respective body region are available for study. The example chosen for illustration is the Thorax.

During the past few years, many medical schools in the UK have closed their anatomy and pathology museums. Some have destroyed their specimens. Others have donated them to other museums that have the capacity to store them according to the new regulations under the Human Tissue legislation. As a result, the larger museums, including this one have received a lot of extra specimens that require maintenance and storage. While this places a burden on the remaining museums, it also means that they are getting a supply of extra specimens that can be usefully used for teaching.

The Wellcome Museum and its anatomy and pathology specimens are used in numerous courses run by the College for trainees in surgery. In 2009 the anatomy collection became a vital resource in teaching the new series of Core Surgical Anatomy lectures run by the College and the London Deanery for surgical trainees. Thanks to extra funding, over the last two years the museum has seen an increase of 3,500 visitors including medical students. It has been used to run classes in anatomy and pathology for students from medical schools that no longer have museums. A group of medical students from Birmingham recently attended such lectures on a Saturday morning. They paid for the



Above: The Thorax bay. Anatomy on the left and pathology on the right. Above right: A full skeleton displaying multiple bone exostoses. The soft tissue has been digested away and the final pieces of tissue were removed by hand. The skeleton is housed in a Perspex container for protection. It can be swivelled around through 180° so that it can be examined very easily and without touching it. Beside it is an X ray of the skeleton.



Above: A demonstration of the lobar anatomy of the lungs. From left to right a model of the left lung with the lobes marked in different colours; A corrosion cast demonstrating the vascular supply of the lungs; A specimen of lobar pneumonia donated in 1932. This is so called because the inflammation involves particular lobes of the lung. Before the introduction of penicillin, lobar pneumonia was a common cause of death.

lectures and for the transport to London.

The Royal College of Surgeons received its Royal Charter in the time of King Henry VIII. This Royal patronage has continued, and in February 2011 His Royal Highness, Prince Andrew, Duke of York visited the Museum in his capacity of UK Trade Representative to see some of the intellectual property he is trying to sell. He had seen the operative technique area and wanted to see the medical education side of the RCS. Mr Richard Bruton was lecturing a group of students at the time, so Prince Andrew joined in the discussion.

In the 1990's it was identified that a tin box which was part of the College's collections had been specially made by Robert Koch of Berlin to transport cultures of *M. tuberculosis* to demonstrate in his lectures on the microbiology of tuberculosis. A sub culture of the colonies was made and it was sterile. Koch had treated the tube cultures with formalin for safety in transport. This is now on display in the Hunterian Museum.

Information for this article was kindly provided by Dr. Sam Alberti, Director of Museums and Archives, Mr. Martyn Cooke, Head of Conservation and Ms. Carina Phillips, Curator, Royal College of Surgeons, England. Images were taken with permission of 'The Wellcome Museum of Anatomy and Pathology at the Royal College of Surgeons.'



Martyn Cooke and his colleagues Carina Phillips and Christine King. Christine is removing the final tiny pieces of tissue from a skeleton like the one above. Numerous individual bones and full skeletons have been donated to the museum since the closure of smaller museum collections. HRH, Prince Andrew, Duke of York, visited the museum when Mr Richard Bruton was lecturing a group of students so he joined in the discussion.