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IAP WEBSITE

<http://www.iaphomepage.org>

PRESIDENT

Kristin Henry

Imperial College London at

Charing Cross Hospital

Fulham Palace Road,

London W6 8RF

UK

Email: k.henry@imperial.ac.uk

SECRETARY

David F. Hardwick

University of British Columbia

Faculty of Medicine

E-mail: iap.secretary@ubc.ca

TREASURER

Jack P. Strong

Boyd Professor

Louisiana State University Medical Center

New Orleans, USA

E-mail: jstron@lsu.edu

EDITOR

Robin A. Cooke

Mayne Medical School, University of Queensland

and Pathology Queensland

Brisbane, Australia

E-mail: cooker@ozemail.com.au

DESIGN

Luke Perkins Graphics

Brisbane, Australia

Email: l.perkins@bigpond.com



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A NEWS BULLETIN

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Report on Pathology in Mexico

Brief history of Mexico from 1541

The Spaniards encountered what is now Mexico City in 1541. They found a flourishing civilization with a large city on an island in the middle of a lake. The city contained several palaces and a magnificent temple. They captured and imprisoned the Aztec King, Chauhquemolc and finally executed him. They destroyed many of the buildings, and used the stones from the magnificent temple to build a cathedral in its place. Over the succeeding years the lake has been filled in and the modern city 'sits on a base that is like jelly.'

The area is prone to earthquakes. The land on which the city is built is the soft bottom of the lake and the buildings are very slowly sinking. It lies at an altitude of 2,400 metres and is surrounded by mountains with the peaks of two volcanoes towards the East. It has a population of 20+ million and the climate is mild.

Mexico was under the rule of Spain from 1521 – 1810. The year 2010 was celebrated as the 200th year since independence from Spain. Independence Day is celebrated on September 16 with great festivity. Sept 16, 1810 was the first day of Independence and the beginning of a revolutionary movement. It took another 10 years to bring it to fruition. Since Independence Mexico has had

a number of different forms of government from emperors and dictators to republics.

In 1978 during excavations near the cathedral for the construction of a new Metro, the entire remains of the temple called el Templo Mayor were uncovered. Archaeological examinations dated the building at about 1000 BC. The excavations revealed considerable insight into the culture and way of life of the Aztecs of that time. More detailed information about the early Indian populations is preserved in a number of museums in Mexico City, in particular in the Museo del Templo Mayor and the Anthropological Museum.

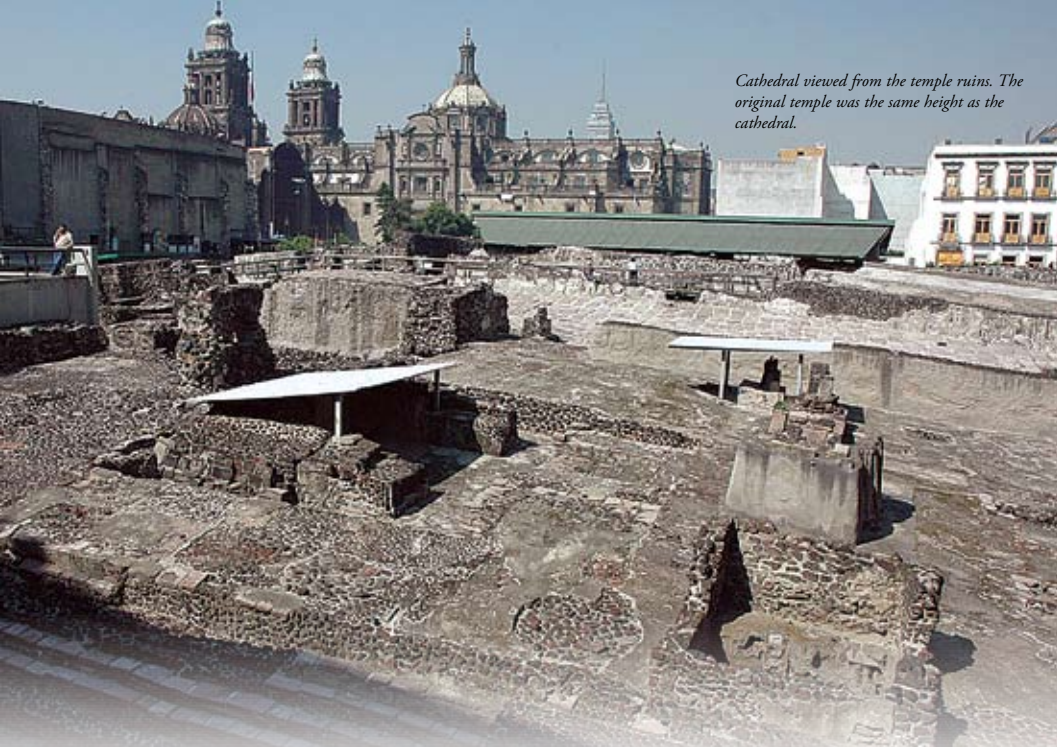
There are several different groups of Indians – the biggest are the Aztec around Mexico City near the middle of the southern part of Mexico, and the Maya in the South East. There are a number of smaller groups elsewhere. Those in the N.W. are related to the Pueblo Indians of New Mexico and those in the S. W. are possibly related to the Incas of Peru (although this is debatable).

The Indians were decimated by an epidemic of small pox in 1522. In the next two hundred years their numbers were further reduced by a series of epidemics of haemorrhagic fever (called Cocolix-

Continued page 2

The Cathedral with Cathedral Square. Two different styles of Architecture can be seen.





Cathedral viewed from the temple ruins. The original temple was the same height as the cathedral.

The exact cause of the haemorrhagic fever is not known. At one point during this time the number of Indians became similar to that of the Spaniards, and this resulted in considerable racial intermingling. By the early 1900s the Indian population reached the numbers that were encountered by the Spaniards at the time of first contact.

Brief history of the University and the Medical School in Mexico City

A University called the Royal and Pontifical University of Mexico was established in 1551 by Royal Decree of Charles 1 of Spain. It was staffed by Spanish Catholic clergy and it was based on the model of the University of Salamanca in Spain. Medicine was one of the original Faculties.

In 1850 those who were teaching medicine at the time purchased a building that was somewhat derelict. It had been built in the 1600s to house the Mexican branch of the Spanish Inquisition. It was situated on a corner block opposite the Church of St. Dominic and the square in front of the Church. At the conclusion of the Inquisition it had various uses – stables for horses, a prison, and for some years prior to 1850 it was abandoned and empty. It is now called the Antiguo Palacio de la Escuela de Medicina, and it is owned by the Faculty of Medicine of the National University of Mexico. A part of the building has been converted into a Museum of medical history.

It would appear that the Medical Faculty some time after 1850 embraced the curricula being developed in Europe. They chose to follow predominantly the French model, and French textbooks were used until the early 1950s. Like the new medical schools being established in North America at this time, they purchased teaching aids from Europe. A lingering memory of the French influence is the collection of 16 wax anatomical models that were purchased in Paris and are now displayed in the Museum. The models were the work of the moulageur Raymond Rouppert.

The University was closed by the President in 1883 and did not open again until 1902. During this period medicine was taught by the individual specialist departments of the Hospital. As a result of the political turmoil in the early years of the 20th century, scientific activities – including in medicine – were greatly depressed. As the political turmoil subsided, in 1920 the University became the National Autonomous University of Mexico which meant that it had control of its own funds and the appointment of its staff.

In 1956 the Medical School moved to a new location in University City at a distance from the city centre. This was the site for the 1968 Olympic Games and the facilities constructed then have since been used by the University. The lectures are in Spanish. A good number of textbooks are locally produced, and there are many Spanish translations of English language textbooks.

Some comments on the development of Pathology

Pathology continued to be taught by clinical staff in the various specialties until 1939. From 1939 – 1945 it was taught by Isaac Costero, a pathologist who was invited by the National Institute of Cardiology to become the cardiac pathologist in the Institute. The Institute was not completed when he arrived, but as soon as he was established he started a training programme for pathologists. His influence was so great that he is regarded as being the 'Father of modern Mexican Pathology,' and perhaps the



Above: A view of part of the remains of the temple. Human sacrifice was routinely performed. The victim would bend over backwards over the upright stone on the right. Four men would hold him while the priest would remove the heart and lungs via an abdominal incision. The beating heart was held aloft in an offering to the God and then burned.

Above right: Priest holding the bowl for the heart.

Right: In the Medical Museum, one of the exhibits consists of 16 Wax anatomical models. They were purchased from France in the late 1800s when most of the new Medical Schools in North America were buying such teaching aids from Europe when they began to teach 'scientific medicine.'



Left: A gold angel at the top of the Independence column in the Paseo de la Reforma. It commemorates the 10 year war for independence from Spain 1810 – 1820. The five figures represent the most important leaders in that campaign. This whole monument has been slowly subsiding into the original lake bed and in 1958 it had to have considerable renovations when it was toppled by an earthquake.

Below: Opposite St. Dominic's Church is the old Medical School. It was built in the 1600s to house the Mexican branch of the Spanish Inquisition. In 1850 those who were teaching medicine at the time purchased the building and converted it to a Medical School.





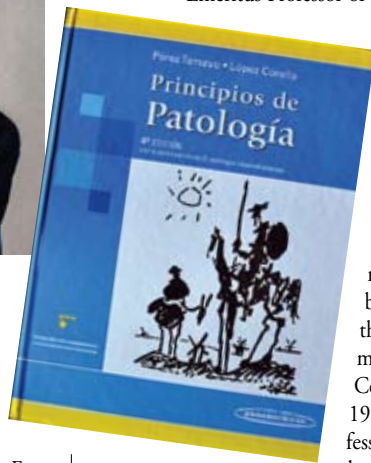
Top: University of Mexico Medical School. The building on the left was opened in 1956. That on the right (red brick) was opened later. It features very modern lecture theatres.

Above: University of Mexico Library

Below: Ruy Perez Tamayo, A distinguished former Director of the University Department of Pathology. He is wearing the Medal of Merit from his home State.

Below right: Principles of Pathology. A textbook in Spanish for medical students in Mexico written by Ruy Perez Tamayo and Eduardo Lopez-Corella.

Below left: Diana the huntress - one of the fountains in the Paseo de la Reforma, a long boulevard that runs through the business centre of Mexico City.



University of Mexico. There is a long, wide open space between the entrance to the University and the Medical School at the other end of the space. Students in couples were everywhere and this group is being entertained by a bagpiper who is accompanied by a drummer.

States after a short stay in Puerto Rico. From Puerto Rico he went to Boston where he worked at the Peter Bent Brigham Hospital. He retired with the title of Emeritus Professor of Harvard University.

Ruy spent two years in St. Louis in the department of Lauren V. Ackerman. After Franz left, Ruy became the driving force in the establishment of the Pathology Department, and led it to become the core of the pathological communities in Mexico and Central America. From 1953-1967 he was Professor and Chairman of the Pathology Department

in the National Autonomous University of Mexico Medical School. He had a distinguished career as leader of this department and he held high posts on the Board of Directors of the University. He continues as Director of the Department of Experimental Medicine of the National Autonomous University of Mexico.

His research interests have been varied and they have included collagen and connective tissue, immunopathology and amoebiasis. Amoebiasis used to be very common, but it is now very much less so.

In 1964 Ruy was a visiting Professor at Harvard University. During that year he wrote a textbook in English 'Mechanisms of Disease - an Introduction to Pathology.' A 4th edition in Spanish 'Principios de Patología' was published in 2007 with Eduardo Lopez-Corella, Director of Pathology at the National

Institute for Pediatrics as a co author, and with contributions from 27 other pathologists.

After Dr. Perez Tamayo left there were three other Directors before the current Director, Patricia Alonso-de Ruiz became Head of the Department in 2009. She is an internationally recognized pathologist and cytologist. She began her training with Dr. Tamayo and then spent 18 months in post graduate study at the Beth Israel Hospital in Boston with David Freidman.

Prof. Alonso-de Ruiz's research interests have been in projects aimed at reducing the incidence of cervical cancer. Some of these have been in association with the International Agency for Research in Cancer (IARC) with headquarters in Lyon, France. Others have been conducted in association with the National Institute of Public Health in Mexico. These projects have involved introducing novel procedures in the cervical cancer screening programme that involved HPV testing, and the participation in a small scale HPV vaccination trial.

1967 to 2011

This has been a period of tremendous growth in Pathology as a medical specialty rather than as just a Medical School subject. Pupils of Costero, but above all, of Ruy Perez Tamayo from the General Hospital, spread out into the rest of the country. A National Social Security System with a multilevel hospital structure and a Health Care System for public service employees has been formed. This has resulted in a system that is now training highly qualified pathologists in many Hospitals and Universities outside of Mexico City. Many of these, especially Guadalajara, Monterrey, San Luis Potosi, Hermosillo, Merida and many others now have their own residency programs.

Specialist training in Pathology

The undergraduate medical course is 6 years (5 years in school followed by a pregraduate clinical clerkship). Most students enter specialist training immediately after graduation from Medical School. They sit an entrance examination and then embark on a 3 year training programme followed by an optional 4th year.

There are 23 trainees in Anatomical Pathology in the Department of Pathology in the University Hospital of Mexico. There are many other trainees in other hospitals in Mexico City and in other cities as indicated above. During their training they prepare a thesis which is usually based on case reviews. They also do a 2 day 'Board' examination that includes theoretical questions and practical microscopy.

There are just over 1000 pathologists in Mexico to service a population of 106 million people. The main professional association is the Mexican Pathological Society which was formed 60 years ago and has an office and a full time staff. This Society runs regional and national continuing education courses during the year, and an annual educational meeting that attracts about 600 registrants.

There are a number of State-based Societies of Pathology and some Regional ones as well. In recent years The



'Father of Latin American Pathology' as well.

Costero trained in Madrid under Pio del Rio Hortega. Hortega was a pupil of Santiago Ramon y Cajal, the famous Spanish neuropathologist who was the winner of the first Nobel Prize for Medicine in 1906. Just before the Spanish Civil War Costero spent a year in Berlin. For political reasons he could not return to Spain and he accepted the invitation of the National Institute of Cardiology in Mexico City. He remained in Mexico until he retired with the title of Emeritus Professor in the Institute of Neurology. He died a few years after his retirement.

Two of the pupils of Isaac Costero were Ruy Perez Tamayo and his close friend, Franz von Lichtenberg. The latter was a Hungarian who emigrated to Mexico where he had his College and Medical School training. They both went to the USA for postgraduate training and then returned to Mexico City. On their return they jointly planned and founded the Pathology Department at the Mexico City General Hospital. Soon after, Franz returned to the United

Federation of Pathology has been formed with the hope that it would be able to combine all the existing Pathology societies. This organisation conducts some training programmes but it has not yet achieved its objective of amalgamating all the existing organisations. Some pathologists travel overseas for post graduate training, going to the United States, France, Germany and Spain.

The University Hospital and its Pathology Museum

The hospital was built in 1905 and was laid out in pavilion style with single and two level buildings. The buildings were connected by covered walkways with trees and gardens in the spaces between the buildings. At the end of 2010 these buildings were demolished and a new multistorey hospital with modern fittings is being built in its place.

The Pathology Department has a large museum of pathological specimens that are housed in locked, glass display cases in a walkway that runs through the ground floor of the Pathology building. Members of the public are encouraged to view the specimens. A security man is on duty to prevent damage being done to them. The Museum is under the supervision of Dr. Gerardo Aristi who is progressively adding new specimens from the surgical and post mortem material. The museum is actively used for the teaching of students.

New Perspex specimen containers are being made to the correct size for each specimen by the Curator, Mr. Augustin Soto. He works in a small, cramped, hot workroom and makes beautiful specimen containers.

As in all working museums, the specimens reflect the diseases that are common in the community at the time. This museum has a wide range of specimens including some of diseases, such as amoebiasis that are not commonly seen at present.

Compiled by Robin A. Cooke from information kindly provided by: Patricia Alonso-de Ruiz, Eduardo Lopez-Corella and Ruy Perez Tamayo.



Above: An advanced SCC of the cervix. This is a common cancer, and presentation is usually at an advanced stage of the disease.

Below: Staff of the Pathology Department of the National Institute of Pediatrics - Blanca Camacho, Mara Cardenas, Cecilia Ridauna, Pedro Pasquel, Eduardo Lopez-Corella (Director), Eladio Fuentes, Rodolfo Rodriguez-Jurado, Mauricio Rojas-Maruri.

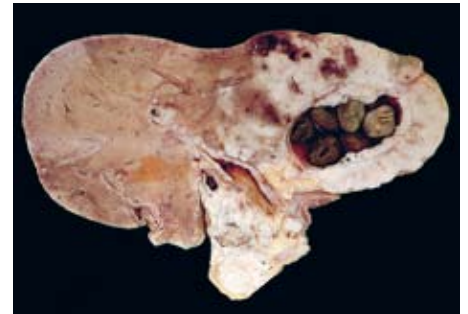


Above right: The National Institute of Pediatrics next to the New University City at some distance from the centre of Mexico City.

Above: Eric Contreras a pathology trainee and an expert on Aztec culture and Patricia Alonso-de Ruiz, Professor and Director of the University Department of Pathology.



Students examining specimens just inside the ground floor entrance to the Museum.



Above: Gerardo Aristi, Curator of the Pathology Museum of the University of Mexico.

Left: One of the large, glass display cabinets that house some of the beautifully presented specimens in the Museum. The specimen on the right of the middle shelf is a carcinoma of the gall bladder which is a commonly encountered disease. Shown below.



Left: Some senior staff of the University Department of Pathology in the General Hospital. Jesus Aguirre Garcia, Laura Chavez, Patricia Alonso-de Ruiz and Juan Olvera-Rabiela

Below: Augustin Soto who makes the Perspex specimen jars.





Delegates attending the meeting of the Arab Division in Sudan

Report from the Arab Division

On March 15-17, 2011 the Arab/British School of Pathology conducted a workshop on Soft Tissue Tumours in Khartoum, Sudan. Prof Mary Leader, Dublin, Ireland represented the British Division and Dr. Samir Amr represented the Arab Division. Between them they covered major areas in Soft Tissue Tumours with didactic lectures, slide seminars and case presentations.

The Chairman of the Arab School of Pathology, Dr Ismail Matalka attended the workshop. About 70 registrants who came from various areas of this vast African Arab country of one million square mile surface area and 20 million people, attended the workshop.

This was the first ever pathology workshop done by the IAP there, and the first workshop on pathology conducted by international speakers in Sudan. This was an example of collaboration between Divisions, in this instance the British and the Arab Divisions, and on how the IAP is reaching under-served areas in Africa.

Depending on the political stability of the host country, the Arab Division plans to hold some more workshops during 2011. It is planned to hold the next meeting (the 23rd) of the Arab Division



in Sudan in November or December 2012.

Special award for Dr Ghazi Zaatari

On the 10th of June Dr Ghazi Zaatari, Professor of Pathology at the American University, Beirut, Lebanon, Secretary of the Arab Division of IAP for the last 11 years, and Vice President for Asia, IAP, was given a special award acknowledging his contributions on a global level in medical education at John Hopkins School of Medicine, Baltimore, USA.

Since his return to Lebanon over 15 years ago, he has been involved heavily in medical education particularly in pathology in the Arab region in the Middle East through his work as a Secretary of the Arab Division, his involvement with the Arab British School of Pathology and the Arab School of Pathology and his participation in the Education Committee of IAP.

Plaque for David Hardwick

At the recent USCAP meeting in San Antonio, David Hardwick was presented with a plaque to acknowledge his support for the Arab Division and for what he has done to promote education in pathology on a global level.

Samir S Amr, MD,
President Elect, IAP

*L - R Dr Nadia Eldawi, Dr Ehsan, Dr Ismail Matalka (Chairman, Arab School of Pathology), Prof Mary Leader, Dr Salwa Mekki, Dr Samir S Amr, Dr Sana'a, Dr Nazik Elmalaika Husain
Drs Nadia, Ehsan, Salwa, Sana'a and Nazik are from the local Sudanese organizing committee for the workshop.*

Report of the Hong Kong Division



Office bearers

President : Gary Tse
President-Elect : Loretta Tse
Secretary : Joshua Kan
Treasurer : Colin Mak

Annual Scientific Meeting 2010

December 4-5, 2010

Dr Stuart Schnitt, Harvard University, was the keynote speaker on breast pathology. The meeting was an enormous success with over 250 registrants.

Advanced Course in Neuropathology

Jan. 7-10, 2011

Held at the Chinese University of Hong Kong This was co-sponsored by the Division, the Hong Kong Society of Neurology and the Hong Kong Neurosurgical Society The speakers were Drs Gregory Fuller (MD Anderson), Kalman Kovacs (University of Toronto) and Werner Paulus (Munster, Germany). There were over 550 registrants with 45 from China and the Region.

Spring Annual Scientific Meeting 2011

May 28-29, 2011.

Drs Elizabeth Montgomery and Jonathan Epstein, Johns Hopkins University, spoke on urology and soft tissue.

Annual Scientific Meeting 2011

October 15-16

at the Chinese University of Hong Kong. This will be co-organized with the International Liver Pathology Study Group.

Interaction with other Asia Pacific Divisions and pathology organizations

The Hong Kong Division was actively engaged in the 7th Asia Pacific Congress of the International Academy of Pathology (APIAP) in Taipei on May 20-24, 2011. With the new name a new chapter has begun. H K Ng stepped down as the Convenor of the APIAP. Bob Osamura became the new Convenor and Gary Tse the Secretary.

Eighth Meeting of the Association of Directors of Pathology of China in Shanghai.

October 22-24, 2010

Co - organized by the Chinese Division, the Hong Kong Division and the Shanghai Cancer Hospital. The conference was an enormous success with attendance over 700, being restricted mainly by the availability of accommodation during the World Expo at Shanghai. It was the last such conference that the Chinese Division and the Hong Kong Division will co-organize for a long time. In the future, they will in fact not organize their own big conference but will instead join forces with the Chinese Society of Pathology in its annual conference.

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Interactions with other international organizations of pathologists.

The Division interacts actively with the International Association of Chinese Pathologists (IACP) and Chinese American Pathologists' Association (CAPA). Both of these pathology organizations are made up mainly of pathologists of Chinese ethnic origin practising in North America. They meet regularly at USCAP Meetings. The President of the Hong Kong Division, Gary Tse and I lecture in regional meetings of pathology several times a year and interact often with the Thai, Taiwan and Chinese Divisions and Malaysian and Singaporean pathology organizations.

H.K. Ng

Asia Pacific Vice President of IAP, Chairman of Education Committee of IAP.

Report from the Ukraine



The 3rd Conference of the Ukrainian Division of the International Academy of Pathology with the theme 'Modern problems of Oncomorphology' took place on the 12th and 13th of May 2011 at the National Medical University of Kharkov.

The conference was attended by 250 pathologists from various regions of Ukraine and abroad. There were four foreign speakers whose topics were as follows:

Prof. Michael Wells, United Kingdom, President of the European Society of Pathology,

'The Pathology of Gestational Trophoblastic Disease'

Prof. George Kontogeorgos, Greece, Vice-President for Europe of the International Academy of Pathology

'Medullary adrenal tumors' and 'Cortical adrenal lesions'.

Prof Antonio Lombart – Bosch, Spain, Past-President of the IAP

'Immunohistochemistry of breast carcinoma based upon the new molecular classification: Prognostic implications' and

'EuroBoNet, a European Project for the study of Bone Tumors'.

Dr. Jan Pijnenburg, Netherlands

'Experience of the European laboratories in IHC researches'

One of the many prominent speakers from the Ukraine was Prof. Alina M. Romanenko, Past-President of the Ukrainian Division of the International Academy of Pathology *'Carcinogenesis peculiarities in the prostate gland after the accident at the Chernobyl nuclear power station (histological and molecular studies)'*

It was agreed by all that lectures by renowned pathologists from various countries can raise the professional level of Ukrainian pathologists to new heights, which is crucial for modern pathology in Ukraine.

Professor Olga S. Reshetnikova, President of the Ukrainian Division of the IAP.

A Museum made for the 21st Century



The Kawasaki Medical School in Kurashiki city, Japan is a private medical school that opened with 100 students in each year of a 6 year course in 1970. At that time the traditional medical course in Japan was based on lectures that were research orientated. This school used an integrated, patient orientated method of teaching. To help to achieve this they used audio-visual materials. However, these were not popular with students.

In 1980, to mark the 10th year since the foundation of the Medical School, a new building was constructed as an educational museum designed to be a better way of presenting interactive learning opportunities for both undergraduate and post graduate students. An addition to this was the opportunity to help to provide facilities for ongoing education of physicians. Professor Toshiaki Manabe was Professor of Pathology during this time and he had a considerable input into the design of the course and of the new building.

A 5 storey, purpose built building was constructed a short distance away from the Medical School and the teaching hospital. All the buildings are connected by underground passages so that access is easy under all weather conditions.

Initially 13 staff were appointed but this number quickly rose to 16. They prepared interactive exhibits that used models as well as real anatomical and pathological specimens. 30 years after its establishment there are 2 medical and 10 technical staff. Anatomical and pathological specimens are prepared using a number of different techniques – Perspex jars, plastination, corrosion. The emphasis is on modern medicine rather than on historical items. Progressively, more and more material is being presented as computer based learning exercises.

The ground floor of the building is used as a workshop. The other floors house the exhibits which are displayed in spacious surroundings which cater for group discussions as well as for private study. There are 2 auditoriums with 300 and 175 seats respectively. The top floor is



Top: View of the Museum interior with a station for private study.

Above: Takuya Moriya and his Museum staff in front of a large model of a full term fetus that welcomes visitors at the entrance to the Museum.

Below: A family group visiting the museum

devoted to a clinical skills laboratory.

The Museum building is being used as an educational resource for the whole Medical School. The first floor is equipped as a Health Education Museum which is open to the public from 9am to 5pm every day except Sundays and holidays. This attracts over 6,000 external visitors annually. These include high school students, the general public, ambulatory patients and their relatives.

DVD and printed handout material is in Japanese, English, Korean and Chinese. The web site at <http://www.kawaskai-m.ac.jp/mm/open-e.html> is in the same languages.

Information and pictures for this article were provided by Professor Takuya Moriya, Deputy Director of the Museum.

