

# International Pathology

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**XXXI1 Int. Congress of IAP**  
**Amman, Jordan, by the Dead Sea**  
**October 14-18, 2018**

## A NEWS BULLETIN

Vol 58 No 1 2017

## Welcome to Jordan in 2018

On behalf of the Arab Division of the IAP I would like to invite the members of the International Academy of Pathology to attend the XXXII International Congress of the IAP to be held in Amman, Jordan, October 14 - 18, 2018.

Arabic Medicine had its roots in ancient civilizations, but 'modern' scientific medicine was brought to the region soon after it took hold in the 'Western' world. My own University was one of the earliest examples of that process. I would like to begin the articles proposed during the next two years to introduce you to Arab Medicine as it is today, by telling you about my own Medical School.

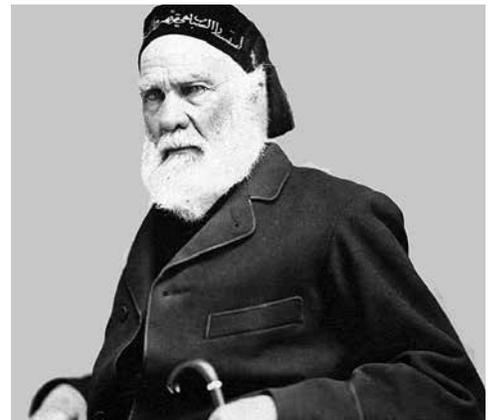
The story of the American University of Beirut started in 1866 with American Evangelical missionaries founding the Syrian Protestant College (SPC) to offer education to the people of the Levant (a term that was loosely used to refer to the countries bordering the Eastern Mediterranean Sea). The newly established College had been chartered by the Education Department of the State of New York in 1863 and this remains in effect until the present day.

Dr. Cornelius Van Dyck (1818-1895), a graduate of Jefferson College in Philadelphia and a missionary physician, travelled to Lebanon in 1840. He mastered the Arabic language, and translated the Bible into Arabic. He joined the Syrian Protestant College and was appointed Foundation Professor of Pathology & Internal Medicine. He authored an 800 page pathology book in Arabic, 'Basic Principles of Internal Pathology i.e. Theoretical and Practical Principles of Human Medicine.' This was used to teach general and systemic pathology for decades to follow.

Dr. Van Dyck contributed to the establishment of a pathology museum at the First Medical Hall, but unfortunately the specimens were lost with time. He held his faculty appointment until 1882 when he resigned in protest to the termination of a fellow faculty member who advocated the teaching of Darwin's theory of evolution, something that the Mission Council considered blasphemous to the biblical concept of creation.

During the early days of the College, the nearby Johanniter Hospital or Prussian Hospital, originally founded by the Order of Knights of St. John, served as the teaching hospital. After

*Continued back page*



*Dr. Cornelius Van Dyck*



*Above: Ramzi Cotran (1933-2000) a famous graduate of the American University of Beirut and Ibrahim Kalifeh a current member of staff at the American University of Beirut.*

*Below: Ghazi Zaatari and Samir Amr (a former President of the IAP) at the Arab Division stand during the most recent International Congress in Cologne, Germany in 2016. They have been the prime movers in the formation of the Arab Division of the IAP; which has provided continuing education activities in the Arab World in spite of the continuing wars in the Region. They have also contributed significantly to obtaining the XXXII International Congress of the IAP for Amman, Jordan.*



# Wax Anatomical Models in Northern Italy

## La Specola

From earliest times people seeking cures for illnesses or special favours from the deities would visit a 'shrine' to make their requests. As part of the request, or in thanksgiving for a request having been granted, those seeking the favour would leave a gift at the shrine. These gifts were called 'votive offerings.' The practice persists in some religions in the form of lighting small candles or incense in front of particular paintings or statues.

During the Middle Ages in Europe people began leaving small effigies of the organ for which they were requesting a favour at the shrine. Then they began to have wax models of themselves made. The more popular shrines became overwhelmed by these wax models. The habit ultimately died out and the wax models were melted to make candles.

A talented wax modeller, Gaetano Zumbo (1656-1701) specialised in making small models of human



bodies in various stages of decomposition. The second last of the Medici family to rule Florence was Cosimo III (1642-1723). He commissioned Zumbo to make some of these small wax models. Two of them are now displayed in the Museum La Specola.

The Medici family ruled Florence for over 300 years. They were patrons of the Arts and Science, and Florence was at the heart of the Renaissance movement from the 13th to the 16th centuries (1200s to 1500s).

The last surviving member of the family was Anna Maria Luisa De'Medici (1667-1743), (pictured at left) the daughter of Cosimo III. She managed to have all the treasures of the Medici bequeathed to the city of Florence on her death. This provided the basis for the rich artistic



Above: One of the Medici tombs.

heritage that is studied and admired by millions of visitors every year.

The modelling tradition was further advanced by Ercole Lelli (1702-1766), an anatomist and artist from Bologna. Lelli performed anatomical dissections and then made plaster moulds of the dissection. From the moulds he crafted full sized bodies using human skeletons on which to lay fabric soaked in coloured wax. He then moulded the wax to the required form.

After the fall of the Medici, Florence came under the rule of the Austro Hungarian Empire. Peter Leopold 1 (1747 - 1792) the third son of Empress Maria Theresa of Austria became the second Grand Duke of Tuscany.

In 1765 he invited Felice Fontana (1730-1805), a multi

Below: The round Medici chapel contains an altar and tombs of some of the most prominent members of the Medici family.



Votive candles being lit in Florence Cathedral



Left and above: A case containing miniature models of decaying bodies of victims of the plague - the black death made by Gaetano Zumbo (1656-1701). Note that there is a rat on the chest of one of the victims. It was not until the plague epidemic in Hong Kong in 1894 that the causative organism was recognised and the method of transmission was shown to be the rat flea.

talented scholar to Florence to head a physics position in the Pitti Palace (the largest Museum in Florence). In 1771 Fontana suggested to the Duke that it would be useful to have a wax modelling facility that would be able to produce specimens that students of Art, Medicine and other subjects could examine without having to gain anatomical knowledge by attending or performing anatomical dissections on decomposing bodies. He was well aware of the wax models in Bologna and their usefulness in teaching.

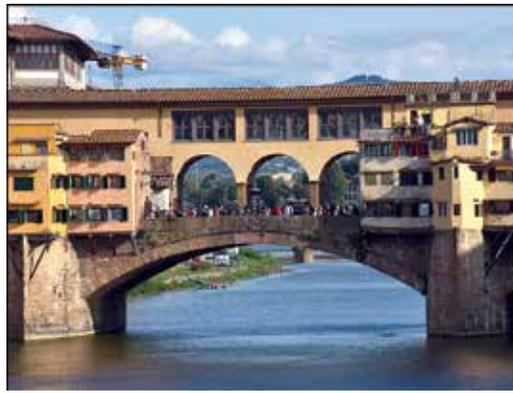
The Duke agreed to this and donated a block of houses fronting the via Romana that he had recently purchased from the Torrighiani family. The buildings were renovated and the existing wax models that had come from the Medici collection, and the associated workshop were moved into the newly renovated building. This building is still occupied by the Museum - La Specola.

Fontana established a School of wax modelling and a wax modelling factory in Florence. It flourished from 1771 to 1893. The school employed a large staff that included anatomists, artists, wax modellers and various others including a man to collect bodies and body parts from hospitals, and to arrange for burial of the parts after the dissections. They also needed space to accommodate the models as they were being prepared. Each model was made by adding sections as the modeller went along. This process required him to make a number of dissections in order to make one wax model. For example 100 cadavers had to be partially dissected to make one model of muscles dissected to show their origin and insertion (an Écorché). A model like this took about a year to complete. The model would need to be laid out in the workshop while the pieces were added.

An indication of the scale of this operation is that the current La Specola Anatomical Museum has 562 cases in rosewood cabinets with gold bordering. There are 1300 wax models, 19 of which are life sized statues. Then there are the pathological specimens in the Careggi Institute of Pathology, and the other specimens that are scattered around in other museums in Italy and elsewhere. As well many models of zoological and botanical specimens are also housed in other departments of La Specola. The man who became the Master Modeller was Clemente Susini (1754-1814). He was appointed in 1773 at the age of 19 years.

*(Information for this section was kindly provided by Claudia Corti, Curator of the Anatomical Wax Collection, Vertebrate Zoology and Herpetology, La Specola, University of Florence and Fausto Barbagli, Curator of Ornithology and Historical Archives, La Specola, University of Florence. Photographs were taken by Robin Cooke with permission from Claudia Corti.)*

*From the Piazzale of Michelangelo one gets a grand view of Florence with the Cathedral dominating the skyline to the South of the Arno River.*



*Ponte Vecchio - the mediaeval bridge across the Arno that carries the via Romana. It is lined by small shops that sell all kinds of artefacts.*



*La Specola entrance from the via Romana - Prof. Gabriella Nesi (Careggi Institute of Pathology and Curator of the Anatomical Pathology museum) and Fausto Barbagli (Curator of ornithology and Historical Archives, La Specola).*



*Full sized wax models of a man and a woman in the Museum in Bologna.*



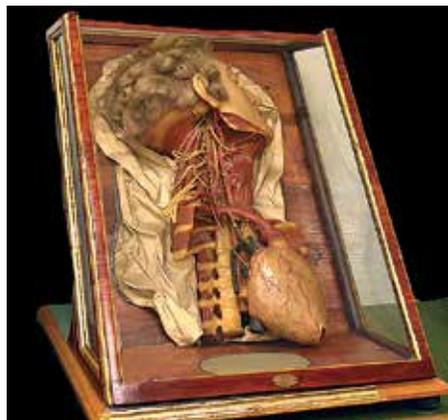
*At the end of a short entrance corridor to the museum collection on the third floor there is the skeleton of a giant. Note the metal rods for support.*



*Full sized model of a man to show the muscles. He is standing in an artistic pose. All of the full sized, standing models are presented in artistic, glass fronted wooden cabinets - (Bologna).*

*Below right: A head and neck dissection and far right, a drawing of the dissection with numbers on the lines.*

*Below right: This wall demonstrates the method used by Fontana and his team to demonstrate small specimens. Each wax model is presented in a rosewood box with gold bordering and fronted by a glass cover. On the wall behind there are drawings made by the artist Claudio Valvani. He drew a circle around each specimen and he labelled each part of the specimen by drawing a line to each feature. Each line was given a number. He then drew another copy of the specimen and the numbers were replaced by the names of the features. This copy was kept in a small wooden drawer in the base of each specimen cabinet. This touch was added by Fontana so that students would not necessarily need the help of a tutor to study the specimens. These labels are now no longer kept in the drawers for the sake of their preservation.*





Two major show piece specimens. A full body size female and a full body size male. There are small specimens around the walls and there are drawings that show numbers to the names of the structures.



Full body female created by Clemente Susini. The skin can be removed in one piece to reveal the muscles which are on another sheet that can then be removed to show the internal organs with a pregnant uterus opened to show the foetus. Long hair and necklace complete the effect. This type of model was called a Venus model. Many of them were made and examples can be seen in a number of other Museums in Northern Italy. The skin layer of this model is no longer removed because of its fragility.



Above: This Venus I photographed in Bologna in 1986 was also made by Clemente Susini. The layers of the body have been removed to display the anatomy.



## Careggi

The Anatomical Pathology Museum of Florence University is situated at the Careggi General Hospital, the leading Hospital in Florence.

### Origin of this museum

In 1824 an Academy of 'men of letters' in Florence decided to establish a Pathological Museum that would record the appearances of diseases as they occurred at that time.

A medical member of this Academy, Pietro Betti (1784-1863) persuaded the Academy to develop this museum using wax models of pathological anatomy. It was a logical extension of the work of the wax model workshop of La Specola.

In 1840 the first Chair of Pathological Anatomy in Italy was established in the University of Florence.

The first Professor was a surgeon, Carlo Burci (1815-1875), but the best known Professor was Guido Banti (1852-1925). He was Professor from 1889 until his death in 1925, and he was noteworthy for his investigations on the function of the spleen.

Burci began to add wet pathological preparations to the wax models. His successors continued to do this and so the representation of diseases that occurred in the late 1880s and early 1900s was widened. No new specimens have been added since 1943 - the end of WW2.

The Pathological Institute in which the Museum is now housed was built in 1930. When I first visited in 1983 the specimens were covered in dust. Since then a major refurbishment has been done. The wax models have been cleaned and the containers of the wet preparations have also been cleaned, but the old solutions have not been changed as yet.

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Above: In the display case along the front wall there is a mixture of skeletons and wax models.

Left and below: Clemente Susini's masterpiece - the superficial lymphatics.



## Congenital Abnormalities



Front and side views of a man with Acromegaly and a dwarf. The side view shows the characteristic protrusion of the mandible well beyond the maxilla; and the large hands.



Acromegaly: close view of the head and the lower jaw.



Heart, single ventricle (wax model)



The skeleton of a child with hydrocephalus together with a wax model of hydrocephalus from another part of the cabinet.

Below: Wax model of a conjoined twin with two heads, and a terra cotta model of a posterior encephalocele. In the cabinet of congenital anomalies there are a number of real examples of conjoined twins.



Some other advanced Infectious Diseases from the late 1800s and early 1900s



Skin, neurofibromatosis. On the left is a piece of skin preserved in fixative in a glass display jar. On the right is a wax model of neurofibromatosis.



Cutaneous fungal infection (wax model)



Cutaneous tuberculosis (wax model)



Intra abdominal tuberculosis (wax model)



Back wall with wax models, and in the foreground the highlight of the collection, a man with advanced scabies. This model was made by the wax modeller from La Specola, Luigi Calamai (1796-1851) in 1851. It is likely that the artist died as a result of being exposed to the mercury solution that was used for the preservation of the body. This man was the driver of a fiacra (a horse drawn sully). Fiacras are still operating in Florence). The majority of the wax models were made by Egisto Tortoli (1829-1893) from La Specola.



Face, small pox (wax model)



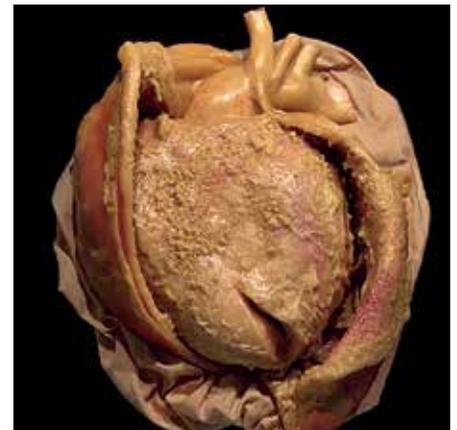
Brain, hydatid cyst (wax model)



Leg, elephantiasis from filarial infection (wax model). Patient from Africa.



Kidney, acute pyelonephritis (wax model)



Heart, acute pericarditis (wax model)



Views of the man with advanced scabies



Examples of advanced tumours before surgery was available



Leg, cutaneous horn (wax model)



Hand, SCC (Squamous Cell Carcinoma) (wax model)



Below: Breast, carcinoma (wax model)



Above: Liver, secondary melanoma (wax model)

Left: Right Eye, melanoma cornea (wax model)

Robin Cooke

(The information for this article was kindly provided by Professor Gabriella Nesi, Curator of the Museum of Anatomical Pathology, University of Florence. The photographs were taken by Robin Cooke with permission from Prof. Nesi).

# Philipp Schwartz:

## The Forgotten Savior

Philipp Schwartz (1894-1977) was born to a Jewish family, raised and educated in Hungary. After medical school in Budapest he got his training at the University of Frankfurt, where he became professor in the Institute of Pathology, specializing in neuropathology.

On March 23rd 1933 – the day of the empowerment act of the Nazi regime - he avoided an impending arrest by the secret police, by escaping to Zurich, Switzerland. Here he became very active, founding the Emergency Committee of German Scientists, publishing a list of 1794 displaced German scholars, and succeeding to arrange for positions of 30 German professors at Turkish universities by the end of 1933.

Schwartz became Chairman of the Institute of Anatomical Pathology at the University of Istanbul. A well known pathologist from Munich, Siegfried Oberndorfer (1876-

1944) who in 1907 was the first to identify the carcinoid tumour of the small intestine became Chairman of General and Experimental Pathology.

Schwartz held this position until 1952 when the political situation in Turkey changed. He wanted to return to the University of Frankfurt. However, his wish was not fulfilled so he started a 3rd career in Warren State Hospital, Pennsylvania, U.S.A., where he did seminal work as a neuropathologist, especially focusing on the pathology of ageing. After retirement he died in Florida in 1977.

Only years later, chiefly due to research on his biography by H. Kreft in Frankfurt, Philipp Schwartz was rediscovered as the forgotten savior, whose activities helped thousands of political German fugitives to find positions in foreign countries. In 2014 a stele (a memorial pillar) was dedicated to him at the University Hospital in Frankfurt. It shows his picture, and engraved on it are the names of 1794 politically displaced German scholars. A list of their names is also kept inside the stele.

Thereafter the story of Schwartz's merits were also acknowledged by non-medical publications, for instance by the "Neue Zürcher Zeitung." His ashes were transferred to an honorary grave in the Fluntern Cemetery in Zurich, where James Joyce and Elias Cannetti (Nobel Prize: literature) are buried.

In 2016 in Germany a "Philipp Schwartz Foundation" was created, to support current academic political fugitives.

**Peter Meister**  
Munich, Germany



*Continued from front page*

WWI, this property became a war bounty to the French who first turned it into a military hospital, then an Embassy complex and in recent years it has become a college campus.

For the period of 1883-1889, Dr. Charles Dight was appointed professor and chair of Pathology and Practice of Medicine. He was followed by Dr. Harris Graham who held the title of Professor of Pathology, Bacteriology and Practice of Medicine until his death in Beirut in 1922. In 1920 the College was renamed the American University of Beirut. This paved the way for the establishment of: the several academic Departments and Schools as we know them today to set the stage for integrated programs and having a free standing Pathology Building in 1925. (The building had classroom auditorium, laboratories, autopsy room, and animal care facility.)

Dr. Harald Krischner, from the University of Graz, Austria, oversaw the designing of the building, but sadly his tenure was short as he succumbed in 1931 to septicemia acquired while performing an autopsy.

War times, especially WWII and the Lebanese Civil War of 1956, placed tremendous strain on the pathology department. The functions of the Department were run by a skeleton staff, and it was difficult to recruit new faculty.

From 1945-1969, the Department was headed by Dr. Philip Sahyoun, a graduate of SPC who had training and academic experience in USA. He was a highly regarded pathologist who set a strong foundation for the Department by providing uninterrupted teaching and clinical services during difficult times. He was assisted by a few locally trained faculty members and visiting faculty from abroad. Among the former group, Dr. L. Ghandour and Dr. N. Tuqan who joined the Department after completing their initial training at AUB and then traveling abroad for more training.

One highlight of pathology and medical teaching at the American University Hospital from the 1920s until the late 1960s was the weekly Clinico-pathologic Conference (CPC) which was conducted dynamically by Dr. Tuqan. Despite the regional conflicts, the pathology lab was well recognized and attracted specimens from several countries in the region. Emerging oil companies relied on AUH for the healthcare of its employees and so did UNRWA for the care of the Palestinian refugees. They both referred pathology specimens to the American University Hospital. It is noteworthy that the department has records of autopsies and surgical pathology reports dating back to 1922. An indexing system for surgical pathology cases and the cytopathology service was begun in 1953. In 1969, automated tissue processing was introduced to the surgical pathology service.

One noted graduate of the University during this era was Dr. Ramzi Cotran (1933-2000) who graduated in 1956 and then went to the USA where he became a leading figure in academic pathology in the Brigham and Women's Hospital, Boston. In 1979, he took over the editorship of 'Robbins Pathologic Basis of Disease' from the founding editor, Stanley Robbins. Subspecialty in the Department of Pathology began in 1969 with Dr. Jean Rebeiz covering Neuropathology, Dr. Janine Tomb covering Cytopathology, and a year later Dr. Ramez Azouri covering Gynecologic Pathology.

The inauguration of a new medical center in 1970 presented the department with more spacious diagnostic facilities and modern technologies. Dr. Harald Noltenius was appointed Professor and Chair of the Department of Pathology. He was an active immunopathology researcher, and through his prior affiliation with the Institute of

Pathology of Freiburg, he acquired 450 gross pathology specimens to enrich the deteriorating teaching collection of the pathology museum. A good percentage of these specimens remains until the present day, and the specimens are being used, albeit on a limited scale, in undergraduate pathology teaching.

The Civil War of the 1970-80s was protracted and had greater devastating effect on the Department. Because of the progressively deteriorating living and safety conditions in the city, several pathologists left the country for the USA. Dr. Charles Allam was pulled out of the Clinical Pathology Department to assist in covering the anatomic pathology service. The Department had to rely on visiting scholars and lecturers from abroad to assist in covering its educational activities. It was not until early to mid-1980s that a new wave of recruits started joining the Department after completing their pathology training abroad, mostly in USA. These included Dr. Amjad Mufarrij, Dr. Fadi Abdul-Karim, Dr. Nina Shabb and Dr. Ayman Tawil. In 1996, the Department of Pathology and Department of Laboratory Medicine were merged to become the Department of Pathology and Laboratory Medicine with Dr. Ghazi Zaatari as chair.

Dr. Zaatari is a graduate of AUB who spent 20 years in the USA - training at Johns Hopkins Hospital, Memorial Sloan Kettering Cancer Center, and practicing at Emory University and Methodist Hospitals of Dallas - before returning to Lebanon to assume this position. Over the past two decades, the unified Department grew sizably in its faculty, staff, clinical services, technologies, postgraduate training, and research. The new services included modern Diagnostic Molecular Pathology and Neuromuscular Labs. Moreover, the Department carried on with two well-structured postgraduate training programs in anatomic pathology and clinical pathology.

During the past 20 years, about 50 graduates finished partly or completely their anatomic pathology training at AUB. Of the 25 residents who completed their full training at AUB, 12 are practicing in Lebanon, 3 in the region, and 10 in N. America. Those who did partial training mostly moved to the USA for additional training and are now practicing there in academic centers, or private practice, or have moved back to Lebanon.

Promoting and supporting pathology education in Lebanon and the region has been at the core of the Department. In the recent decade it supported the activities of the Arab Division of the International Academy of Pathology, helped establishing the Arab School of Pathology and the Arab-British School of Pathology, and the Arab Board of Pathology under the auspices of the Arab Board of Health Specializations. The Faculty of the Department are actively engaged in a number of national, regional and international research activities.

The recent war in Syria resulted in over 1.2 million refugees into Lebanon. One of the medical consequences of this was an epidemic of leishmaniasis that provided the opportunity for a staff member, Ibrahim Kalifeh to perform some useful research on this topic.

*Ghazi Zaatari, Secretary, Arab Division of the IAP*

### NOTICE

**University of California San Francisco School of Medicine will conduct a course - Current Issues in Anatomic Pathology - at the Nikko Hotel, San Francisco May 25-27, 2017. This follows a Cytology Seminar on May 24. Contact: [cme.ucsf.edu](mailto:cme.ucsf.edu)**