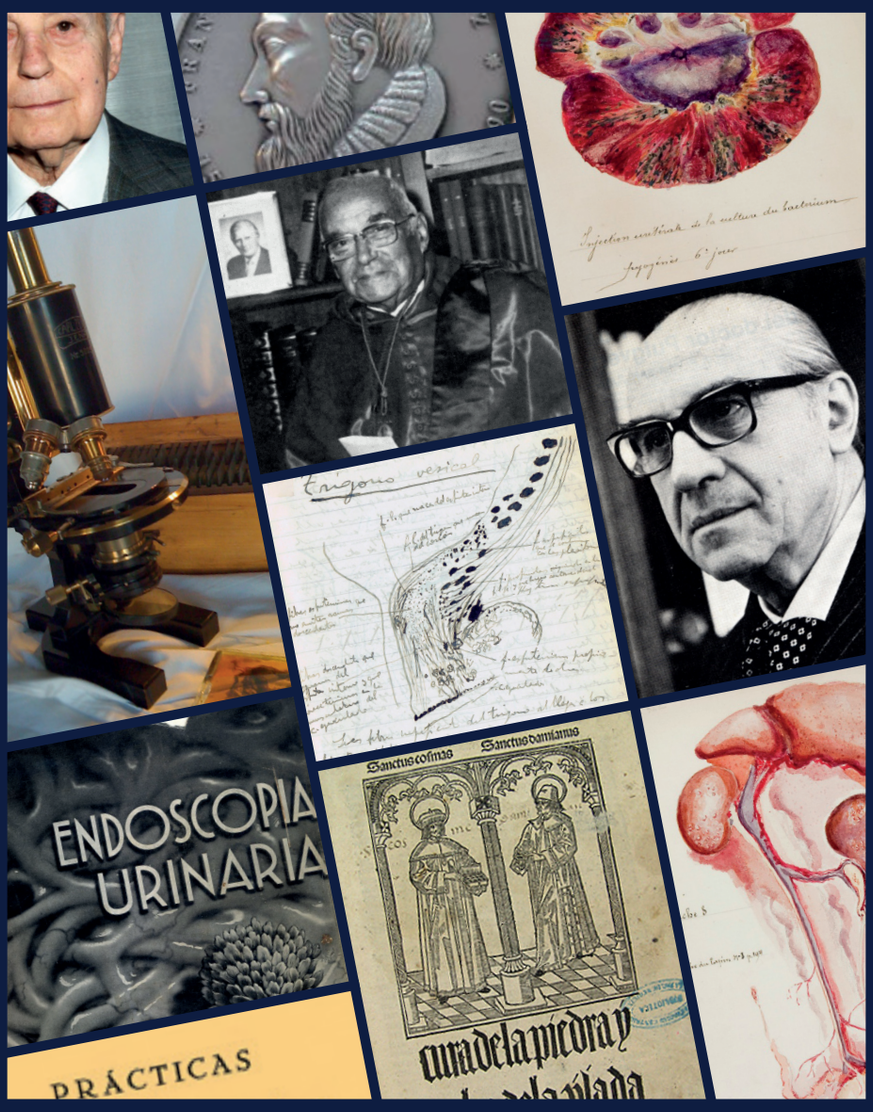
Historical Exhibition Brochure

SPANISH CONTRIBUTIONS TO UROLOGY



Luis A. Fariña-Pérez, José Salvador-Bayarri, Remigio Vela- Navarrete
José Maria Gil-Vernet Sedó, Javier Angulo-Cuesta, Juan José Gómiz-León, Philip Van Kerrebroeck

eau History Office

aeu asociación española de urología

Presented on the occasion of the 34th Annual EAU Congress

EAU19 | BARCELONA
15-19 March 2019

Most European countries have a history of events that influenced the evolution of medical knowledge and care of urogenital diseases. During the 16th and 17th centuries, Spain was one of the European political and economic powers, a fusion of Christian, Islamic and Jewish cultures and traditions, whose interactions greatly allowed the transmission of medical and surgical knowledge. **Averroes (Ibn Rushd), Maimonides and Abulcasis (Al-Zahrawi)** lived in these lands and left writings and disciples there.

In one of the first uses of printing in Toledo, **Julián Gutiérrez de Toledo** wrote the Spanish text *Cure of the stone and flank pain and/or kidney colic* (1498). His findings are not very different from those that could be taught today:

> *"The stone that prevents urine flow is sometimes in the orifice of the kidneys ... Sometimes at the beginning next to the kidneys, sometimes in the narrow middle, sometimes in the mouth of the bladder neck, and sometimes in the pipe of the phallus..."*

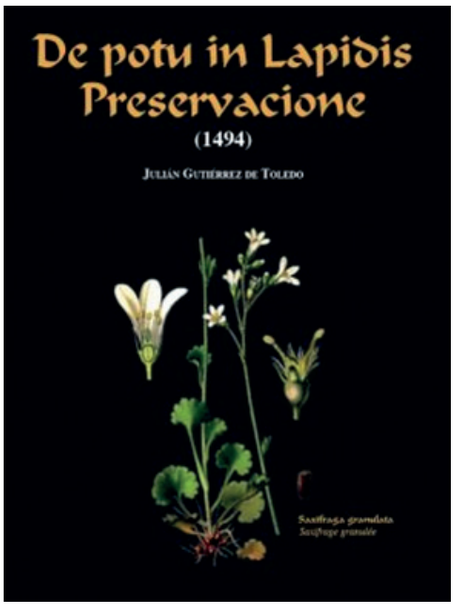
In a book printed in Latin in 1494, De potu in lapidis preservacione ('On drinking in stone prevention') the same author makes a careful reflection on the therapeutic prescription among old texts on different wines and diuretic infusions to prevent urinary stones:

> *"... red wine is not convenient in terms of preventing the stone.... White wine is allowed, and there is no divergence on this... Everyone allows it when it comes to preventing stones: Hippocrates, Galen, Avicenna, Razis and all others."*

By the 16th century, three giants of the Renaissance in Europe will coincide in the anatomical school of Jacobus **Silvius**, in Paris: Andrés Laguna, **Andreas Vesalius** and **Miguel Servet**. Their books will mark the evolution of anatomy, therapeutics and physiology. A few years later **Juan Valverde de Amusco** will publish in Spanish his widely-read and reissued "*History of the composition of the human body*" (1556), with some substantial changes on the urogenital anatomy contained in the Vesalius' s Fabrica.

The *Newly printed treatise of all the diseases of the kidneys, bladder and carnosities of the phallus and urine* (1588) by **Francisco Díaz**, is a compendium of anatomy, medicine and practical surgery, dealing for the first time with the diseases of the urinary tract as an anatomical and functional unit.

The third part of this book –translated into English in 2018 by the History Office of the Spanish Association of Urology- deals with strictures of the urethra that had become highly prevalent (nowadays considered to have been the result of sexually-transmitted urethritis), together with benign and malignant prostatic diseases, although they could not yet be differentiated from diseases of the urethra and bladder neck.



TRATADO
NVEVAMENTE
IMPRESSO, DE TODAS
LAS ENFERMEDADES DELOS
Kiñones, Vexiga, y Carnosidades dela verga, y Vrina, diuidido en tres libros. Compuesto por Francisco Diaz Dotor en Medicina, y maestro en Filosofia, por la insigne vniuersidad de Alcala de Henares, y Cirujano del Rey nuestro Señor.

DIRIGIDO AL DOTOR VALLE
Protomedico del Rey nuestro Señor, y Medico

CON PRIVILEGIO.
Impresso en Madrid por Francisco Sanchez.
Año. 1588.

*The **Francisco Diaz medal** has on the obverse an imaginary relief of Diaz, and in reverse the names of the promoters: The Puigvert Foundation and Spanish Association of Urology. Below, the 1998 reproduction of Diaz's instrumento cisorio.*

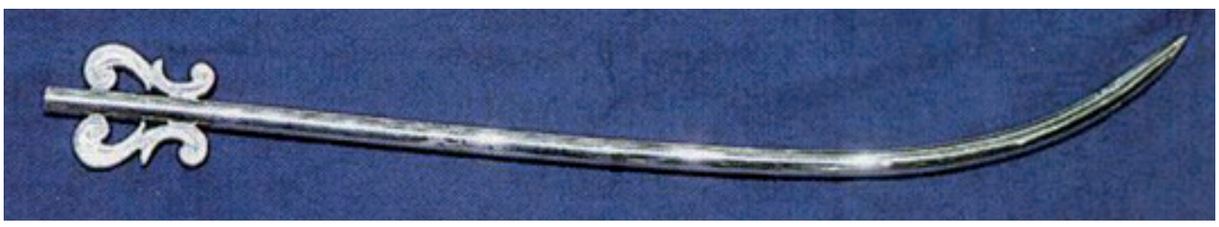
Francisco Diaz vehemently promoted the early and expert treatment of strictures of the urethra with sounds and dilators (*candelillas* or "little candles"). To perform a urethrotomy guided by touch, Diaz suggests the use of a cutting instrument, the *instrumento cisorio* (reproduction made in 1998 by the Spanish Association of Urology), which bears resemblance to instruments suggested both by Islamic scholars and by Ambroise Paré.

> *"It has to be used in this way: put this instrument to where the flesh or callus was and then squeeze and cut slowly, with the greatest skill you could."*

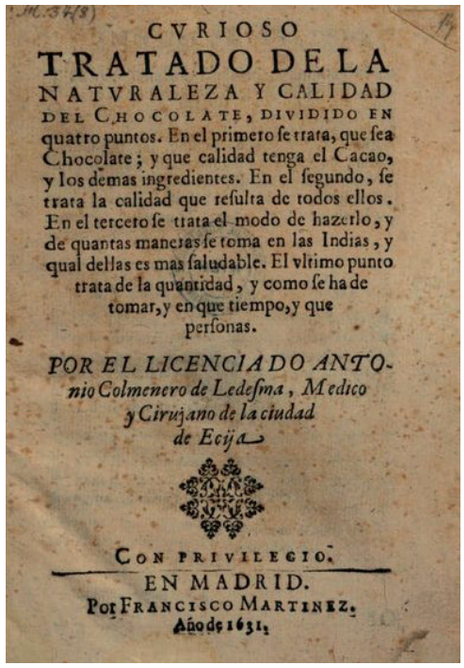
Diaz's treatise was rediscovered at the end of the 19th and the beginning of the 20th century, and praised by several humanistic surgeons, and afterwards by the influential urologist **Antonio Puigvert**, who in 1973 created the **Francisco Díaz medal**. This medal was adopted by the Spanish Association of Urology as an annual award to a Latin-American or international urologist, recognizing a scientific, associative or educational achievement.

The origin of the therapeutic use of many medicinal plants, such as opiates, curare, and aphrodisiac or invigorating cocoa and its derivative chocolate, come from this time, rich in new geographical awareness after Europe meet the peoples of America (1492), Asia and Oceania.

The alimentary, therapeutic and recreational use of various species and plants from local communities was transferred to European botany and pharmacopoeia, among others by **Nicolás Monarde**s in his *Medical History of the things that are brought from our West Indies, which serve Medicine* (1580), a book that was translated into Latin (lingua franca) and other European languages.




DVE LIBRI
DELL'HISTORIA
DE I SEMPLICI, AROMATI,
ET ALTRE COSE, CHE VENGONO PORTATE DALL'INDIE ORIENTALI, pertinenti alla Medicina,
DI DON GARZIA DALL'HORTO, Medico Portughese; con alcune breui annotationi di CARLO CLVSIO.
ET DVE ALTRI LIBRI
PARIMENTE DI QVELLE CHE SI PORTANO dall'Indie Occidentali,
DI NICOLÒ MONARDES, Medico di Siuiglia.
Hora tutti tradotti dalle loro lingue nella nostra Italiana da M. ANNIBALE Briganti, Marrucino da Ciuità di Chieti, Dottore & Medico eccellentissimo.
CON PRIVILEGIO.
IN VENETIA, M D LXXVI.

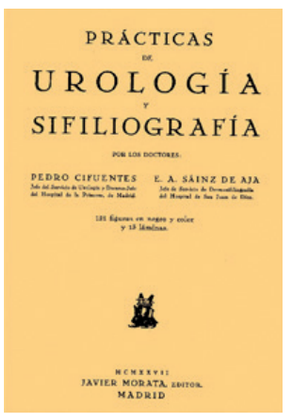

CVRIOSO
TRATADO DE LA
NATVRALEZA Y CALIDAD
DEL CHOCOLATE, DIVIDIDO EN quatro puntos. En el primero se trata, que sea Chocolate; y que calidad tenga el Cacao, y los demas ingredientes. En el segundo, se trata la calidad que resulta de todos ellos. En el tercero se trata el modo de hazerlo, y de quantas maneras se toma en las Indias, y qual dellas es mas saludable. El vltimo punto trata de la quantidad, y como se ha de tomar, y en que tiempo, y que personas.
POR EL LICENCIADO ANTONIO Colmenero de Ledesma, Medico y Cirujano de la ciudad de Ecija
CON PRIVILEGIO.
EN MADRID.
Por FRANCISCO MARTINEZ.
Año de 1631.

Left: Italian translation of the book by Monardes. Right: "Treaty of the nature and quality of chocolate" by Antonio Colmenero (1631), which was also translated into several languages. It contains an aphrodisiac recipe with the following composition: "One and three quarters of cocoa, one and a half pound of sugar, two ounces of cinnamon, fourteen chili peppers, half an ounce of clove."

In these three centuries the devastating epidemic spread of syphilis, with its genital and dermatological lesions (bubo disease), has taken place in many European countries. Hispanic historians contributed to record their probable extent after the first contacts with the American populations. The treatment with guaiacwood (Guaiacum officinale) comes from the use given by the American Indian communities, and was promoted by Spanish doctors.

The improvement in the use of metals and the transformation of materials such as latex provided new means of constructing more sophisticated surgical instruments and consistent and durable urethral catheters for the relief of bladder obstruction, either caused by infections or allowing the recognition of prostatic diseases.

As in the rest of the surrounding countries, at the end of the 19th century, transurethral "blind" **lithotripsy**, so-called as opposed to lithotripsy under endoscopic vision, was quite common in Spain. Blind lithotripsy replaced the bloody perineal lithotomies, which had few survivors until the beginning of the 19th century.


PRÁCTICAS
DE
UROLOGÍA
Y
SIFILIOGRAFÍA
POR LOS DOCTORES
PEDRO CIFUENTES
E. A. SÁINZ DE AJA
MCMXXVI
JAVIER MORATA, EDITOR.
MADRID

Pedro Cifuentes was the best exponent in Spain of the dermatological and venereological practice, one of the origins of the specialization in the diagnosis and treatment of diseases of the urethra. Right: his book Prácticas de Urologia y sifilografía (Practices in urology and syphilography).

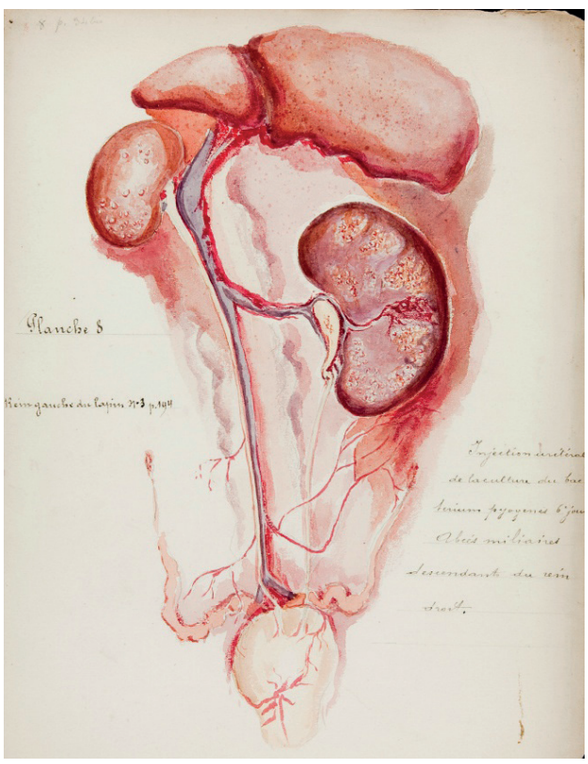
Joaquín Albarrán (1860-1912), born in Cuba (at the time still a Spanish colony), studied medicine in Barcelona before moving to Paris as a disciple and successor of **Felix Guyon**, and was one of the most influential European surgeons at the beginning of urology. A number of Spanish and Latin-American urologists who disseminated the urological specialty in their countries in the first half of the 20th century trained with him, as well as with those who succeeded him in the direction of the Necker Hospital in Paris, particularly **Felix Legueu** and **George Marion**.

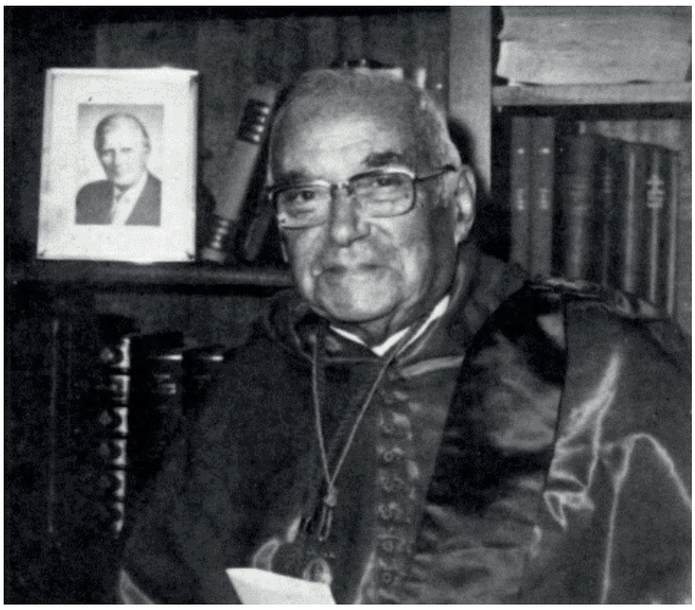
Towards the middle of the 20th century, two urological figures with an extraordinary vision of the specialty –and a desire to create continuity in the field through the creation of training schools- stood out and left an important mark for European urology: **Salvador Gil Vernet and Antonio Puigvert**.

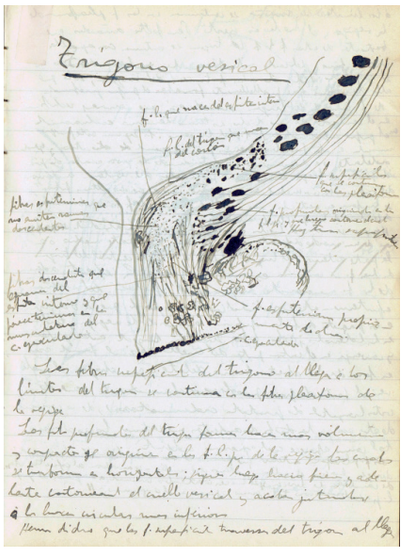
Salvador Gil Vernet created a transcendent anatomical, morphological and clinical work in the three volumes of *Patologia urogenital. Enfermedades de la próstata* (Urogenital Pathology, Prostate Diseases), published between 1942 and 1958. He discovered two parts of the prostate with different embryological origin, histopathology and diseases.

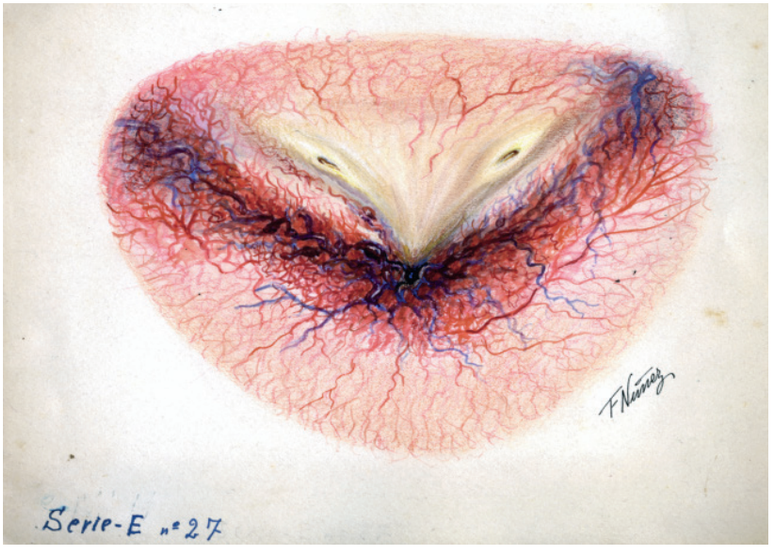
His anatomical model was praised by **Charles Huggins**, winner of the Nobel Prize in Medicine, and later confirmed with the development of the variants of open and endoscopic enucleation of prostatic hyperplasia. Gil Vernet also described the periprostatic neurovascular bundles coming from sacral and pelvic nerves that end up as the nerves responsible for the erection.

Original illustrations from Joaquín Albarrán's doctoral thesis "Le rein des urinaires" (The kidney of the urinary patients), donated in 2012 to the Spanish Association of Urology by the Cuban historian Dra Marlene Fernández after her work on the biography Joaquín Albarrán: Life and scientific passion of a great doctor.









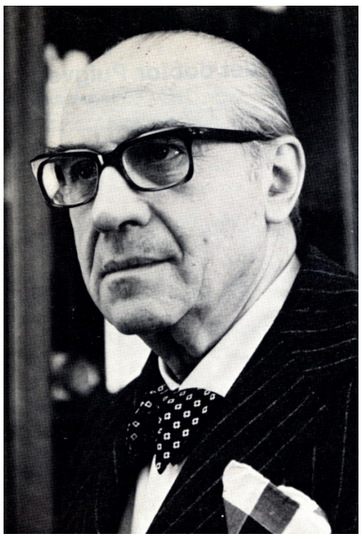
Picture of Salvador Gil Vernet and his microscope (top). Handmade notes by Gil Vernet and anatomical drawings made by F. Núñez for one of his books.

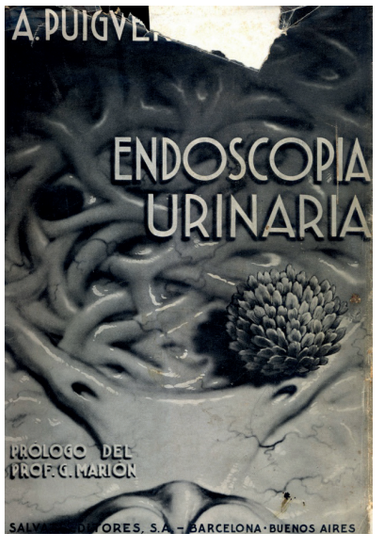
Antonio Puigvert has a great history of publishing, supported by extensive references, his own clinical observations of urological diseases with new instruments, such as radiology with endocavitary and endovenous contrast media, and endoscopy with improved optics. His works *Urografia clinica (Clinical Urography)* and *Endoscopia urinaria (Urinary Endoscopy)* had great impact in Spain and Latin America, also through the Puigvert Foundation, which has trained more than 300 professionals since its establishment in 1943. Also his *Tratado de operatoria urológica (Treatise of urological surgery)*, of encyclopedic and exclusive authorship, is a work of high quality and impact.

Puigvert's work was widely covered in the media of his time, which helped to make Urology known as a surgical speciality.

Both Gil Vernet and Puigvert recognized the advantage of quality medical illustration to show anatomical and functional details, and applied them in beautiful books made with the help of some of the best illustrators of their time.

See also "The Role of the Medical Illustrator" in this year's De Historia Urologiae Europaeae Vol. 26.

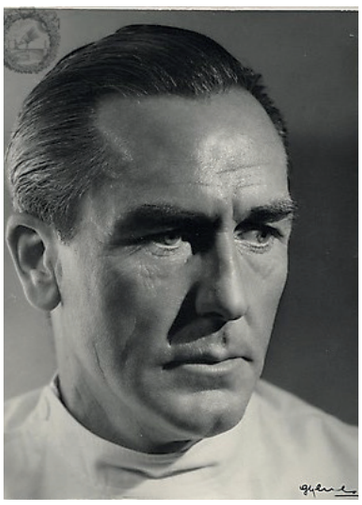


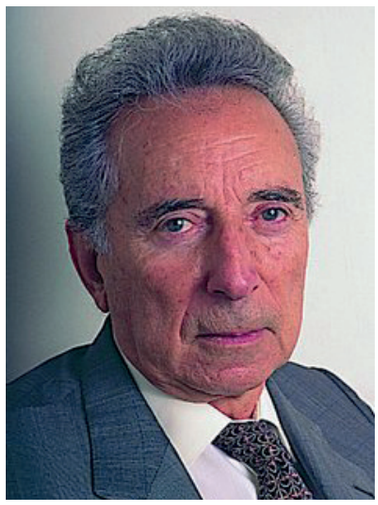


Antonio Puigvert (left) and the 1st edition of Urinary endoscopy.

In the last quarter of the 20th century, technical progress improved the diagnosis and transurethral endoscopic surgery of prostate and bladder diseases, where **Alfonso de la Peña and Luis Cifuentes Delatte** highlighted with interesting publications, the latter with impact studies in the area of lithogenesis and urinary tract infections.

Progress and social demand also progressively changed conventional stone surgery, in which **José Maria Gil-Vernet** had excelled with daring intrasinusal dissection techniques that were widely disseminated in the international literature and adopted in complex renal lithiasis.





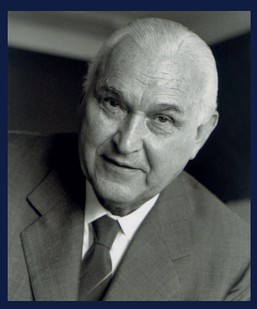
Alfonso de la Peña Pineda, Luis Cifuentes and José Maria Gil-Vernet.

In a totally new area of access and interventions in the urinary tract, the contribution of two Hispanic urologists stands out: **Enrique Pérez-Castro Ellendt** devised the rigid ureteroscope, an instrument that allowed transurethral access to the exploration and treatment of ureteral and intrarenal diseases, stones in particular. **José Gabriel Valdivia** demonstrated in a highly number of cases that percutaneous access to the kidney was possible and safe with the patient in the supine position, nowadays a highly-favoured choice (the Valdivia position).

Since its birth in 1973, and in particular coinciding with the ambitious development since 1996, the EAU has had the enthusiastic collaboration of Spanish urologists and both Madrid and Barcelona have repeatedly hosted the EAU's Annual Congress.

The 2019 EAU Desnos Prize

This year, the EAU awarded the Desnos Prize for contributions to the History of Urology to the company Karl Storz SE & Co. The company was nominated by the EAU History Office for their important contributions to the development of endoscopy, more particularly in the field of Urology, and especially for its efforts to preserve the history of endoscopy for future generations.



Karl Storz SE & Co was founded in 1945 by Karl Storz (1911-1996) in Tuttlingen, Germany. Initially the company was intended for the production of ENT instruments, headlamps and binocular loupes. However Karl Storz's interest in medical vision, illumination, and thus physics consequently led him to specialize in endoscopes, and he became fascinated with the idea of developing instruments that would enable the physician to look inside the body.

The technology available at the time was still very limited, and the area under examination in the interior of the human body was illuminated with miniature electric lamps that caused many problems. Alternatively, attempts were made to reflect light from an external source into the body through an endoscopic tube.

Karl Storz quickly realized that this method would not provide adequate illumination, and so he resolved to find an alternative. Two inventions crucial in paving the way for an unforeseen endoscopy boom in the second half of the 20th century, and both are very closely associated with developments initiated by Karl Storz together with Prof. Harold Hopkins: the cold light source and the Hopkins® rod lens telescope. The combination of these two innovations allowed for very bright light, generated by an external light source, to be introduced into the body through a flexible fibre optic light cable.

This principle of "cold light illumination" paved the way for modern endoscopy, and enabled diagnosis with previously unheard-of precision. It allowed for the development of surgical techniques that are now known as "minimally invasive". In urology these developments were the basis for the modern resectoscope, that allowed easier and safer transurethral resection of the prostate and bladder tumours. Furthermore this made the construction of the first ureterorenoscope possible, as well as for the equipment used in percutaneous nephrolithotomy.

For the past 74 years Karl Storz SE & Co has been part of every phase of this revolutionary, on-going development. Dr. med. h.c. Karl Storz died in 1996 at the age of 85, and the management of the company was transferred to his daughter, Mrs. Sybill Storz.

In 2011 the Karl Storz Visitor Centre was opened that includes beside an exposition of current innovations in 20 specialties of human medicine, veterinary medicine and the industrial group, a section that retraces the history of endoscopy and endo-urology on 1400 square meters. In 2013 the company opened a Visitor and Training Centre in Berlin, following the successful renovation of the historic Empress Augusta Hospital.

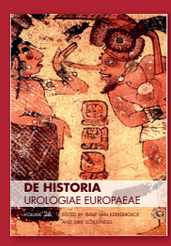
Over the years Karl Storz SE & Co were also very supportive in promoting publications on the history of endoscopy. Two major examples of these contributions are the books (each in two volumes) *Philipp Bozzini. The beginning of Modern Endoscopy* and *The Development of Endoscopy in the 19th Century* by Peter Paul Figdor, published in 2002 and 2010.

For all these achievements the History Office of the EAU unanimously decided to award the 2019 EAU Desnos Award to Karl Storz SE & Co.

The EAU History Office at EAU19

Special Session: Spanish Contributions to Urology
Friday, 15 March 12:30 - 15:00
Green Area, Room 14

Poster Session 68: History of Urology
Monday, 18 12:15 - 13:45
Green Area, Room 12



Available at EAU19 for EAU Members:
De Historia Urologiae Europaeae
Vol. 26
This book can be collected by entitled EAU Members at the EAU Booth (G60) in the Exhibition on a first-come, first-served basis.