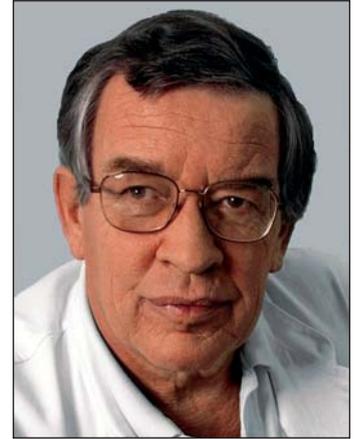


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# LEGENDS IN UROLOGY

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I was flattered to be invited by The Canadian Journal of Urology to contribute this article. However, I first had to consult a dictionary to be certain I understood the definition of “legend.” I discovered that “legend” often refers to a tale about a saint or a supernatural being. Neither description applies to me and my career. Although many of my research projects required hard work and the ability to overcome setbacks and disappointments and they sometimes brought delayed gratification, I was mostly lucky to be in the right place at the right time and meet the right people. Thus I had a very enjoyable career of which I am very proud. So let me provide you with a chronology of my career as an urologist.

Born January 1945, I graduated from Medical School at Ludwig-Maximilian University (LMU) in Munich, Germany, in 1970. After 2 years of postgraduate studies at the Department of Internal Medicine and Surgery, I received my Medical Degree in 1972, followed by a Doctorate in Medicine for my studies of “Motility and temperature of an extracorporeally haemoperfused intestinal segment.”

In 1972, I started my scientific career and became a staff member at the Institute for Surgical Research, LMU, which was headed by Prof. Dr. Walter Brendel, my first academic teacher. He had a unique gift to motivate and guide young people while giving them enough freedom to be creative. He personified the example that successful research is only possible with teamwork. Without him there would not be the mixture of the ever-curious researcher and basic urologist, Christian Chaussy.

During those years, my main interest was Transplantation Immunology with a special focus on Xenotransplantation. For this work, in 1975, Claus Hammer and I received the Langenbeck Award from the German Surgical Society. I then worked for several months with Sir Roy York Calne, the transplantation legend, in Cambridge. After I returned to Munich, Walter Land and I founded the Transplantation Unit at LMU, in a cooperative project between the Surgical and Urological Departments. I was an active Staff member and Co-Director of the unit from 1975 to 1976, and I remained on the team until 1984.

In 1975, I also started my residency in Urology at LMU. I was lucky again to find in Prof. Dr. Egbert Schmiedt, head of the Department of Urology, another academic teacher who gave me a solid base in urology and supported my interest in Transplantation Surgery. He also had the foresight to accept the offer from physicists working for Dornier Medizintechnik GmbH (now known as Dornier MedTech) to research the effects of shock waves on kidney stones. He provided me with support and the freedom to start and proceed with this “strange” project of extracorporeal shock wave lithotripsy (ESWL).

Because of my previous years in research, and ongoing close connection to the Institute for Surgical Research I had not only the experience but was also convinced and stubborn enough to take on this experiment despite the opinions and jokes from most German urologists. Together with Ferdinand Eisenberger, the Vice Chairman at the Department of Urology, and Bernd Forssmann, a physicist at Dornier, I began the basic research for the project of “extracorporeal shock wave lithotripsy”.

After preliminary studies with cells, cell cultures, erythrocytes, lymphocytes, and tissue reactions in vitro and in vivo, we performed studies on animal models. On February 7, 1980, after 7 years of research, our group, now consisting of myself, Bernd Forssmann, and Dieter Jocham, successfully used this technique to treat our first patient with a kidney stone.

ESWL was born and we were rewarded with the Maximilian-Nitze Award from the German Urological Society, and the European Science Award. However, this technique was still viewed as “beyond belief” by most national and international urologists. Our article “Extracorporeally induced destruction of kidney stones by shockwaves,” which was published in late 1980 as a Letter to the Editor in *Lancet*, did not greatly change the perceptions of members of the urologic community, possibly because they didn’t read *Lancet*. However, Birdwell Finlayson, head of the Department of Urology, University of Gainesville, Florida, and a physicist, did read the paper, and within 2 weeks of reading the article he came to Munich to see the Dornier HM1 lithotripter in action. During the 3 days he spent in Munich he changed from a skeptic to a believer. He was followed by hundreds of international visitors per year who went through the same experience. Nevertheless, the abstract that we submitted for the 1981 AUA meeting did not get accepted.

In January 1982 the search for potential investigational sites for FDA approval of ESWL for patients with kidney stones began. The chosen sites were Indianapolis (with investigators Dan Newman and Jim Lingeman), Houston (Don Griffith), Gainesville (Birdwell Finlayson), Boston (Steve Dretler), and Charlottesville (Jay Gillenwater). The latter investigator, who was then Editor of the *Journal of Urology*, was very helpful in getting the first article about ESWL in his journal published. This article finally changed the opinion of the urological community about ESWL.

The process for FDA approval began under George Drach, who was chosen as the monitor for the project. In preliminary discussions with the FDA, I was able to make it mandatory that all doctors who ran the investigational sites had to be trained for 2 weeks with me in Munich. At Harvard, a radiologist wanted to take over ESWL. However, since I consequently refused to train radiologists, ESWL stayed with Steve Dretler and, throughout the world, in urology. In 1989 our group (Egbert Schmiedt, Ferdinand Eisenberger, and I) was rewarded by the AUA with the Distinguished Contribution Award.

My research in ESWL found its academic recognition in the *venia legendi* (permission to teach) for Urology, in 1980. I had received my board certification in Urology in January 1980. In 1981, I became Professor of Urology, University of Munich, followed by an appointment as director of the Lithotripsy Unit at the Department of Urology, LMU.

In 1983, J. J. Kaufmann and W. Goodwin, two true legends, offered me a tenured position at UCLA as Chairman of the new Lithotripsy Unit, which I accepted. I became certified by the California Board of Medical Quality Assurance in January 1985 and subsequently became - in addition to Director of the Stone Center - Member of the Faculty and Professor of Urology/Surgery. Gerhard Fuchs joined me at UCLA and together with Joe Kaufman and André Lupu we constituted the core team of this new Unit.

However, in 1986, when I was offered the Chairmanship at the Department of Urology of the university-associated Klinikum Harlaching in Munich, I decided to return to Munich, and Gerhard Fuchs took over my position at UCLA. Following my return to Munich, in addition to being Chairman of the Department of Urology, for several years I was also a member of the Board of Directors at the Laser Center and Medical Vice Chairman of the Klinikum Harlaching.

In 1996, Stefan Thüroff and I, along with Albert Gelet from the University of Lyon, France, started intensive clinical research on the possibilities of treating prostate cancer with high intensity focused ultrasound (HIFU). To date, the Munich group has the most extensive database on this topic, having performed more than 2500 treatments, which is the largest worldwide patient population for this treatment. These studies were rewarded with the First Prize of the Bavarian Ministry for Social Affairs and the Award of the Lingen Foundation.

During my years at the University of Munich, I held teaching appointments at the Institute for Surgical Research and the Transplantation Unit, and I was Instructor for Urology, Assistant Professor of Urology, Director of the Stone Center, and Director of the Continuous ESWL and Endourology Training Program at the Department of Urology, LMU. Since 1981, I have been full Professor of Urology, LMU, Munich, and have been continuously involved in student and residency programs. In 1987, I was appointed Examiner for Medical Exams at the University of Munich and Examiner for the Board of Urology, Bavaria, FRG.

Many medical and scientific national and international societies have found me worthy of honorary membership. The AUA elected me for membership in 1983. I was also especially grateful for honorary memberships from the Bay Surgical Society, the Brazilian College of Surgeons, the Royal College of Surgeons (Edinburgh), and the Urological Society, Republic of China. The Medical University of Beijing, China, awarded me with an Honorary Professorship. In 2007, my work in the field of Urology was recognized by the Endourological Society with the Lifetime Achievement Award. In 2009, I was honored by the President of the Federal Republic of Germany from whom I received the Federal Cross of Merit. In 2010 the German Society of Urology honored me with their most distinguished “Ritter von Frisch” award.

Although I retired in February 2010 from my position as Chairman of the Department of Urology, I still have many ideas regarding SWL, focal therapy, and urology in general. Therefore I started my “retirement” as consultant professor at the department of urology at the University of Regensburg and as President elect of the Endourological Society.

During my professional career I was always very lucky to find the right people with whom I was able to follow my ideas and proceed with my plans. Without a competent, reliable, and motivated team, research is not possible, especially with ever occurring setbacks and eventual necessary detours. Nowadays, the ESWL project that needed 7 years until it was safe enough to treat the first patient would probably not receive funding. Nevertheless, anyone who is interested in research and in pursuing a certain idea should not be discouraged by impediments that are certain to occur.

With all research and striving for medical improvement and new possibilities in medicine, no doctor should ever forget who the main “subject” in medicine is: THE PATIENT. We are there for the patient, to provide him or her with the best, most suitable, and least invasive treatment; it is not the patient who has to help us proceed with our career. Nevertheless, I will always be grateful to my first patient who was brave enough to undergo the first worldwide treatment with ESWL. For many years we had good contact and met every now and then either to celebrate an anniversary or to have another one of his recurring kidney stones removed.

Besides having patients who trust their doctor and his suggestions and being involved with and working with a great team, one cannot live a successful life and have a satisfying career without luck, not only in research and clinical work but also in private life. I am very lucky to have a wonderful family. Tina, my wife, has always supported my often somewhat crazy ideas, and our two children, Michael and Isabella, have become our best friends. What else can a “legend” ask for?

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