

Presentations of the 1999 Ian Donald Gold Medals



Presentation of the Ian Donald Gold Medal to Kypros Nicolaides by Stuart Campbell at King's College Hospital, London

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The presentation of this medal could not take place as is usual at the World Congress of Obstetrics and Gynecology due to the fact that Kypros could not travel to Buenos Aires. So the ceremony occurred at one of Kypros' international courses at King's College Hospital, London.

Professor Campbell made the following speech:

'It gives me great personal pleasure to present the most prestigious award of our society to the most famous practitioner, researcher and teacher in obstetrics and ultrasound in the world, namely Kypros Nicolaides. Kypros was born in Paphos, Cyprus in 1953, the only son of a well-known politician and general practitioner. Despite his strong hatred for English colonialism which he saw at first hand, he decided to train as a doctor at King's College School of Medicine and Dentistry in London and he has been a King's man ever since. Kypros began his research in the early 1980s when he joined my Department at King's and was first assistant to Charles Rodeck who was pursuing fetoscopic studies. Charles had developed the first fetal medicine unit in the United Kingdom which became known as the Harris Birthright unit. Kypros quickly demonstrated his impressive manual dexterity and the Rodeck-Nicolaides team produced important

papers on the use of fetoscopy in the management of a wide range of conditions such as Rhesus iso-immunization, fetal hydrops and intrauterine growth restriction and blood and tissue sampling in the diagnosis of single gene defects. When Charles Rodeck left King's to take over as Professor and Head of the Department at Queen Charlotte's Hospital, Kypros became director of the Harris Birthright Unit and began a programme of research and teaching that made King's a mecca for visiting doctors from all over the world. His first move was to discard the fetoscope and pursue all blood sampling procedures by cordocentesis (a name he popularized). Although the technique had been pioneered in France by Fernand Daffos, Kypros developed the single operator method and became the leading practitioner of cordocentesis exploring, with the help of a series of research fellows, every aspect of fetal physiology and pathophysiology over the next 10 years. With Peter Soothill, he published on fetal blood gases and acid-base status, with Katia Bilardo, Sanjay Vyas and Kurt Hecher, on correlations between fetal blood gases and Doppler, with Demetri Economides, on fetal metabolism, with Guy Thorpe Beeston on fetal endocrinology, with Basky Thilaganathan on fetal immunology, with Douglas Salvesson on fetal biochemistry in diabetic pregnancies and with Anthony Abbas on fetal hematology. It is impossible to emphasize the significance of this seminal body of work on

our understanding of fetal physiology and our interpretation of fetal monitoring tests. Kypros was also busy during this period in writing papers on ultrasound imaging and prenatal diagnosis. His 1986 paper on cranial and cerebellar signs (i.e. lemon and banana signs) in spina bifida has transformed antenatal screening for this condition and his detailed studies on the relationship between fetal abnormalities and chromosome defects remain the most significant data on this subject.

By 1992 Kypros was made a Professor of Fetal Medicine and in 1997 he became Head of Department of Obstetrics and Gynaecology at King's, following my departure to take over at St George's Hospital Medical School. In 1992 Kypros teamed up with Yves Ville, a visiting doctor from France, to produce the first paper on endoscopic laser therapy for severe twin-twin transfusion syndrome. In the same year, Kypros began a series of studies on the measurement of nuchal translucency in the first trimester fetus, a project which has consumed much of his energy for 8 years and which has transformed the way obstetrics is practised in many parts of the world. Kypros single-handedly organized a massive project with 20 district hospitals in the South of England visiting each Department personally and supervising the training of the sonographers. Uniquely he built in quality control by providing each sonographer with regular computer updates of the mean and standard deviations of his or her measurements. As a result, the value of screening by nuchal translucency has been explored in such detail that its role in identifying not just Down's syndrome but all genetic disease and severe cardiac abnormalities, has been definitively established. Kypros has since expanded his screening studies into 52 countries worldwide including over 500 centres.

Kypros is an electrifying teacher combining a razor-sharp wit with an almost forensic intellectual rigour which can simplify and clarify the most complex of subjects. He is an uncompromising seeker after truth and will tolerate no obstacles in accomplishing his aims. He does not seek political advancement and he has no time for the tedium of committees with their politicking, political compromise and intrigue. As a result, he has had many brushes with the medical establishment in his drive to achieve his goals. For example, he has been constantly frustrated by the Royal College of Obstetricians and Gynaecologists in his desire to improve their teaching of fetal medicine. Kypros is undaunted by such opposition, and in 1996 he established The Fetal Medicine Foundation which runs regular courses with an international panel of speakers and delegates attending from all round the world. He has established a Diploma in Fetal Medicine which is now becoming the most important certification in fetal medicine in Europe and in other countries. At present, 200 candidates from 46 countries take the Fetal Medicine Foundation Diploma examinations each year. Such energy and commitment make him unique in the world of ultrasound and fetal medicine.

As always happens with shakers and movers it takes time for the older established societies to recognize the contribution of such pioneers but ISUOG is a society which recognizes individuals for their merit and not political nominees from political Institutions. For this reason Kypros was overwhelmingly voted by our Gold Medal Committee as the recipient of the 1999 Ian Donald Gold Medal. Ladies and gentleman I am pleased to present on your behalf, the Ian Donald Gold Medal for 1999 to Kypros Nicolaides'.

Presentation of the Ian Donald Gold Medal for Technical Development to Carl Kretz

Today Carl Kretz has the honor to be awarded the 1999 Ian Donald Gold Medal for Technical Development by the International Society of Ultrasound in Obstetrics and Gynecology. Since 1965 he has dedicated his professional life to the development of medical ultrasound equipment

Carl studied telecommunications techniques at the Technical University of Vienna and gained his engineering qualification there in 1960. He worked first as a research and development engineer with ELIN in Austria and then with Landis & Gyr in Switzerland, where he was responsible for developing electronic equipment for automatic product monitoring. In 1965 his uncle, engineer Paul Kretz, the founder of Kretztechnik, invited him to join his staff as Head of the Research Department, which at the time was developing a particular interest in the new area of transistor technology. His first success was the development of a fully transistorized piece of equipment for non-destructive material testing. It was not surprising therefore when I asked him to devise a piece of equipment which could be used for the examination of pregnant women, he questioned whether I knew what his company was

manufacturing. Despite this, his co-operation with ophthalmologists and obstetricians continued, progressing to his investigation of possible applications of ultrasound equipment for medical diagnosis. In the years following, Carl Kretz and his staff developed the first transistorized contact-compound scanner. The meeting with Professor Ian Donald in Glasgow in which he demonstrated this scanner was unforgettable. We arrived late, soaked to the skin by the Scottish rain, carrying this instrument split into its component parts. Within 20 minutes the equipment was assembled and worked! This achievement was acknowledged by Ian Donald as recognition of the technical skills of Carl Kretz.

The dependency of progress on available technology can be clearly demonstrated by the incorporation of gray-scale techniques into the then current ultrasound equipment. The required scan converters were produced primarily to overcome the difference in the number of lines in the television monitors used to transmit information from the United States of America to Europe. Subsequent to this development all manufacturers of ultrasound equipment

made use of this technology. The machines that Carl Kretz produced which incorporated this advance were the Combison II, 200 and 202.

One of the milestones in Carl Kretz' professional life was the development of the real-time scanner. This revolutionary concept arose from the clinical need of a totally new concept for probes, together with new and faster scan converters. Carl Kretz rose to this challenge. The combination of unorthodox ideas, a profound knowledge of electronics, mechanics and physics and team-building abilities corresponded precisely with the talents of Carl Kretz. Thus the first real-time machine, the Combison 100, was born.

From the early 1970s Carl was mentally engaged in the ultrasonic demonstration of an organ not only in single scan planes but as an entire volume. His first prototype

was produced 1989. Once again a new technique developed by Carl Kretz and his team looks set to change the face of medical ultrasound examination.

Carl Kretz retired in 1994. He has spent his retirement working once more with his beloved telecommunications. It is a reflection of his unassuming character that he should place an advertisement in the local newspaper requesting, firstly, a special capacitor and, secondly, a building plot in a suitable position for a radio amateur.

I would like to thank him for his pioneering development of medical ultrasound equipment and to congratulate him on the honor awarded to him by the International Society of Ultrasound in Obstetrics and Gynecology.

Professor Alfred Kratochwil
Vienna, Austria