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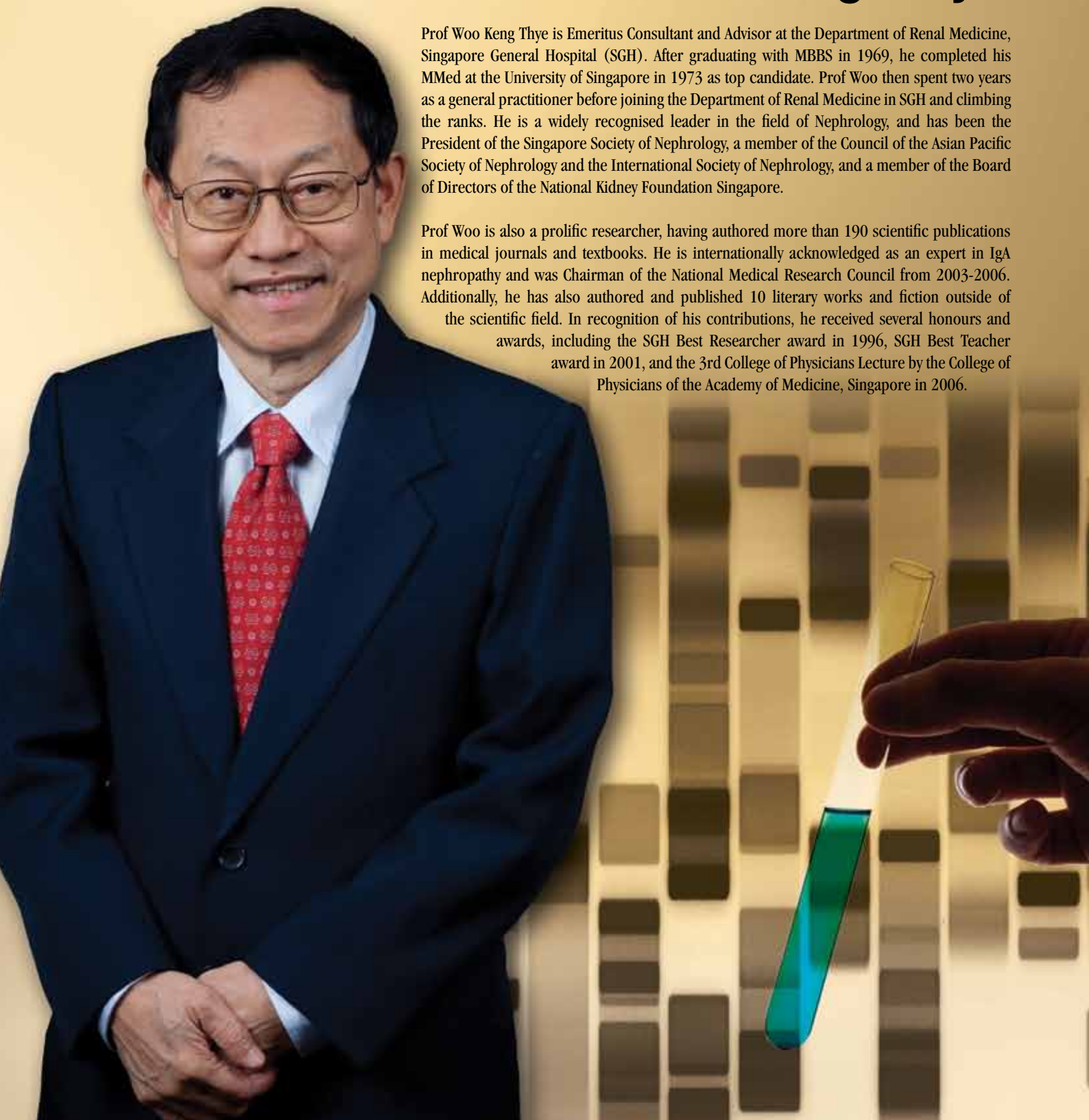
Interview with Prof Woo Keng Thye



Prof Woo Keng Thye is Emeritus Consultant and Advisor at the Department of Renal Medicine, Singapore General Hospital (SGH). After graduating with MBBS in 1969, he completed his MMed at the University of Singapore in 1973 as top candidate. Prof Woo then spent two years as a general practitioner before joining the Department of Renal Medicine in SGH and climbing the ranks. He is a widely recognised leader in the field of Nephrology, and has been the President of the Singapore Society of Nephrology, a member of the Council of the Asian Pacific Society of Nephrology and the International Society of Nephrology, and a member of the Board of Directors of the National Kidney Foundation Singapore.

Prof Woo is also a prolific researcher, having authored more than 190 scientific publications in medical journals and textbooks. He is internationally acknowledged as an expert in IgA nephropathy and was Chairman of the National Medical Research Council from 2003-2006. Additionally, he has also authored and published 10 literary works and fiction outside of the scientific field. In recognition of his contributions, he received several honours and awards, including the SGH Best Researcher award in 1996, SGH Best Teacher award in 2001, and the 3rd College of Physicians Lecture by the College of Physicians of the Academy of Medicine, Singapore in 2006.

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Singapore Medical Association,
Level 2, Alumni Medical Centre,
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Tel: 6223 1264
Fax: 6224 7827

Email: **news@sma.org.sg**
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Interview with Prof Woo Keng Thye

SMA: You have worked for almost seven years as an Medical Officer, then a GP before subspecialising in renal medicine. How has this contributed to your growth and maturity as a doctor?

PROF WOO KENG THYE - WKT: When I was a medical student, I always told my classmates that when I graduated, I would work for a number of years in a hospital and then set up a clinic as a GP in my hometown in Ipoh in order to earn a lot of money. I did my housemanship in Ipoh General Hospital, got married in the latter part of my housemanship, and was posted to the surgical unit of Kluang Hospital. I grew to like surgery although it was hard work with long hours operating in a district hospital with my boss, an Anglo Indian, Mr TNC Roe who also doubled up as Obstetrician and Gynecologist. We did everything that could be resolved with a scapel.

Then a newly qualified MRACP was posted to the hospital as a Physician came into my life. He was Dr Wong Chong Wah, still burning with knowledge after his MRACP examination in Australia and the first thing he did was to set up the Kluang Study Group. He approached me several times to join his group. I told him I did not want to study, as I was happy operating and wanted to gain some more experience before setting up my own clinic as a GP. He was very persistent and one day I succumbed. I was impressed with the group. Half of them were GPs. It was in 1970 and they seemed to be so enthusiastic and knowledgable and it put me to shame. I realised how little I knew about Medicine since my MBBS days and decided to join the group to upgrade myself. Soon I too wanted study for the membership exam while the GPs were geared towards the MCGP exam also held in Singapore then. I became Dr Wong's disciple after his former disciple left to work for Datuk Lim Kee Jin (LKJ) in Johor Bahru General Hospital (GHJB). The Post Graduate Medical Centre in GHJB was the Mecca of Medicine in Malaysia at that time. There one could receive training from Datuk Lim and when judged to be suitably trained would be allowed to take the exam in Singapore. But one had to come highly recommended and be interviewed by LKJ before acceptance into his training programme.

After an apprenticeship of two years with Dr Wong, he told me I had to go to LKJ if I wanted to pass the exam as there was nothing much more he could teach me so I had a year's training with LKJ and passed the MMed Exam in 1973. He knew what was required for the exam and would train his candidates like racehorses with "lots of sand papering". He would not allow you to sit for the exam unless he thought you were ready.

After working in JB with LKJ for another six months after passing my exam, I returned to Kluang to join an old friend Dr Henry Chan's private practice where I was to work as a specialist GP earning $3000 a month, compared to an MO's salary of $1100 in JB. Initially I was elated with the huge salary increase but after a year of seeing coughs and colds most of the time with the occasional referral of a problem consultation where I charged $36 instead of the standard $12, I grew disenchanted and suffered from boredom. I missed the lively discussions and debate, which I could obtain in hospital practice.

But during the 18 months as a GP, one was exposed to the many vicissitudes of life. I learnt very quickly the harsh realities of poverty and sickness on children and families who did not earn much tapping rubber in the estates, drunken husbands and wife beaters or gamblers who did not provide for the family. I also learned about unscrupulous doctors and their brand of medical practice, the quacks and the charlatans. I learnt to be charitable, waived consultation fees, gave away medicine and sometimes even gave cash to poor patients who did not have enough to feed their family. I enjoyed the many house calls I made to patients' homes where I could see how they lived, the poor and the rich. It was like a page out of AJ Cronin's book, *The Citadel*. But in the end I knew that private practice was not meant for me. I could not visualise myself growing old and prosperous with a rotund figure in the years ahead. I had matured in the way I viewed the world but I felt that my own practice of Medicine might be rotting and the longer I stayed, even though the money was good, the

more difficult it would be for me to extricate myself because of the financial attraction.

At the end of GP practice, I obtained a job in Singapore where I was posted by Dr Andrew Chew, then DMS, to the Department of Renal Medicine under Dr Lim Cheng Hong in 1975. In those days, renal medicine was in its infancy. My starting salary as a specialist renal MO then was $1250 a month. However, the money I earned was not enough to feed my family, wife and two young daughters. Fortunately, I had amassed about $30,000 from my GP practice and with this money I had to supplement the household and living expenditure of $1450 as we suffered a shortfall of $200 a month. But I was happy living in Singapore and so was my family.

When Dr Andrew Chew posted me to work under Dr Lim Cheng Hong at the Department of Renal Medicine, he gave me the chance to specialise in nephrology. My MMed in internal medicine was for me only a passport to subspecialty training. After a few months' exposure to nephrology working with Dr Lim, I told him that I would like to do the FRACP in nephrology, which would require a training period of three years. The training would require a period in Australia. He agreed to be my supervisor and obtained a fellowship in Australia for me to train with Professor Priscilla Kincaid Smith who was then the foremost nephrologist in Australia and the President of the Australasian College of Physicians who also happened to be a good friend. Dr Lim was an inspiring mentor and provided me with whatever support I needed. Under his tutelage I acquired the basic skills in renal medicine including dialysis and renal transplantation. The College stipulated that trainees had to spend six months to acquire basic laboratory research experience and Dr Lim granted me protected time to do research in immunology with Prof Chan Soh Har at the WHO Research Laboratories at MacAlister Road. This crucial step also established my research career. Today, the department owes much of its research reputation to the foresight of Dr Lim. When the department was set up, he had provided for renal research laboratories. He himself was interested in research and knew its importance as nephrology was then a young science and much was required in order to advance our knowledge. I benefitted from his vision and was able to help build the research infrastructure in the department after I returned from Australia with a sure and confident style.

After my return from Melbourne, Prof Seah told me, "Now that you have been trained, you must remain to serve the people and not think of going into private practice again." My response at that time was that I would stay for a long time, as long as my services were needed. Since then, I have not looked back on my career and just moved steadily ahead and eventually grew old in the field, chronologically and nephrology-wise.

Those were the days when we had to play God, as those we accepted into the dialysis programme would live. Dialysis places were very few then and many had to die. In deciding who gets into the programme, we had to be fair and not favour any particular patient or doctor taking care of the patient because all our patients must be treated equally. So if we have to play God, we should be a good God.

SMA: What are your feelings on the residency programme?

WKT: For a chap like myself, having the good fortune of staying in two medical units, under the close mentoring of two dedicated physicians, both helping to shape me for a career in Medicine and the following three years of specialisation in Nephrology again under the mentorship of Dr Lim Cheng Hong, Prof Seah Cheng Siang and Prof Kincaid Smith, I believe that even in those days, my own traineeship was akin to the present day residency programme of five years within a single department/hospital. I would therefore subscribe to it. However, the present residency is undergoing the phase where there are teething problems. It will need much supervision and support from staff and authorities involved in the system.

SMA: What words of wisdom do you wish to impart especially to medical students and junior doctors now?

WKT: Datuk Wong Chong Wah once told me, "When drinking, always remember the fountain."

Dr Lim Cheng Hong taught me two principles; the first being, "Be humble if you do not know and do not pretend that you do." It is only when you acknowledge your ignorance that you will make progress. Secondly, he taught me, "Be fair to your patients and colleagues." Those were the days when we had to play God, as those we accepted into the dialysis programme would live. Dialysis places were very few then and many had to die. In deciding who gets into the programme, we had to be fair and not favour any particular patient or doctor taking care of the patient because all our patients must be treated equally. So if we have to play God, we should be a good God.

Prof Seah Cheng Siang once told me: "Humility is the hallmark of a great man. The greater he is, the humbler he becomes."

SMA: Over your career, what do you think are some key differences in the management of renal patients?

WKT: In the early 1970s many patients with end stage renal failure had to die because facilities for dialysis were very limited. Very few people received kidney transplants.

Today we are in much happier circumstances, largely because of the National Kidney Foundation (NKF) and the Kidney Dialysis Foundation, which provide most of the dialysis facilities for many of our needy patients. Since 1987, with the passage of the Human Organ Transplant Act we could harvest about 50 kidneys a year for kidney transplantation; before this we averaged only about 5 kidneys yearly. The options for various forms of kidney transplants have also grown wider. The law now allows living donor transplants between spouses, good friends and Samaritans in addition to those from parents and siblings. The NKF has set aside a fund of 10 million dollars for donor expenses and compensation plus insurance cover should anything go amiss during the transplant operation/donation.

SMA: Can you recount to us the early years of Singapore nephrology?

WKT: Haemodialysis in Singapore started in 1961 when a patient with acute renal failure was dialysed using the twin coil artificial

kidney. In 1968, a chronic haemodialysis programme was established in the Singapore General Hospital (SGH). In 1975, the first self-dependency dialysis unit (SDDU) was set up in Alexandra Hospital and in 1983 the second SDDU was set up in Tan Tock Seng Hospital. These are the subsidised state-supported haemodialysis programmes where patients were dialysed with the help of their spouses or relatives. In 1981, with the opening of the new SGH, a new dialysis centre was set up there. This remains as the main dialysis centre today, and patients with problems on dialysis at the National Kidney Foundation Centres or other centres are referred, including those requiring renal transplant workup.

Continuous Ambulatory Peritoneal Dialysis (CAPD) was introduced in 1980 when five patients were enrolled in the programme. In 1987, a CAPD unit was established in SGH to provide an integrated approach to patient training, management and education. By 1996, there were close to 400 patients in SGH and the National University Hospital. The peritonitis rate used to be about one in 27 patient months. Today with technical advances the peritonitis rate is one in 48 patient months. CAPD is an equally viable alternative to haemodialysis.

Renal transplantation remains the ideal renal replacement therapy. The first cadaveric renal transplant in Singapore was performed in July 1970. Living related donor transplant has been performed since 1976. Since 1985, cyclosporine A was introduced and this has resulted in better transplant survival rates. The Medical Therapy, Research and Education Act was passed in Parliament in 1972. Under this Act, individuals can pledge or will their kidneys for transplant purposes in the event of death. Relatives of the deceased can also give consent for kidneys to be retrieved for transplantation. But until 1987, the average number of kidneys obtained was only five a year. Faced with this shortage of cadaver kidneys, the Human Organ Transplant Act (HOTA) was implemented in 1988 and has resulted in a dramatic increase in the yield of cadaver kidneys.

The bulk of the clinical service work is in the area of clinical nephrology with glomerulonephritis constituting the major portion. Asymptomatic haematuria and proteinuria is the commonest presentation for patients with glomerulonephritis. This group of patients we now know have IgA nephritis, which is the most common form of glomerulonephritis seen in Singapore and overseas. It is to the credit of the first generation nephrologists in Singapore that two years after the founding of the Singapore Society of Nephrology, they organised the First Asian Colloquium in November 1974. The papers published included those on glomerulonephritis, urinary tract infection, acute renal failure, haemodialysis and renal transplantation.

SMA: What are some of the exciting frontiers of nephrology?

WKT: The three main pillars of in the practice of nephrology are in clinical nephrology, dialysis and renal transplantation. For clinical nephrology, we can now detect many types of kidney diseases at a very early stage and offer treatment before the disease causes harm. For those with established kidney disease, kidney damage and renal failure, we can now offer treatment to arrest the progression. For those with mild renal failure we can even reverse the situation with drugs currently available.

In the field of dialysis, what is awaited for most eagerly by many patients on dialysis is the Automated Wearable Artificial Kidney (AWAK). AWAK technology was incorporated in 2007 and dedicated to the development of wearable artificial kidneys. It was jointly founded by Dr Gorden Ku (Chairman of Kidney Dialysis Foundation) and the two chief scientists and inventors, Prof David Lee and Dr Martin Roberts from UCLA, USA. AWAK is based on the technique of peritoneal dialysis and sorbent based regeneration of used dialysate. It is both bloodless and waterless and provides round the clock dialysis and ultrafiltration, and represents the ultimate form of frequent dialysis, which provides a steady state of metabolic and fluid regulation. It weighs about two pounds and is battery

operated.

In renal transplantation, a big taboo area of ABO incompatibility has now been bypassed with the latest technology for removal of ABO antibodies by plasma exchange and newer methods of immunomodulation. Many more patients can now be transplanted. In fact over the past five to six years, most of the barriers of transplantation, including the one pertaining to the elderly donor and recipient, have been surmounted. As long as the patient is fit and does not have significant comorbidities, patients in their seventies can now receive or even donate under the "Old for Old Renal Transplantation Programme" which was first initiated in the USA and is now practiced in most established renal transplant centres. This is as it should be, considering the aging population with many renal patients surviving into their eighties.

SMA: Can you give us an insight into your role in the management of glomerulonephritis, and why medical research is important for the healthcare sector in Singapore?

WKT: At the very beginning of my career as a nephrologist, I had always been interested in research. This was especially relevant in a young science like nephrology where many things were still largely unknown and treatment for many forms of kidney diseases were very empirical, more based on gut feeling rather than evidence. From 1976, without fail, every year I had been successful in getting at least $1000 for research from the Medical Clinical Research Committee (MCRC). Its main role was to grant licenses for the conduct of clinical trials but it also had a purse of $100,000 a year for supporting medical research in the form of small research grants of $1000 to $2000 annually. The accounting was very stringent and every dollar spent was scrutinised as the officers were civil servants and were more than bureaucratic. Subsequently, with the setting up of the Department of Clinical Research by the Ministry of Health, I was able to get close to $10,000 a year for research and later on research was made easier as there were other sources of funding from the hospital's research committee, cluster research and finally the National Medical Research Council. From 1976 with yearly funding for research, I was able to pursue my research work on IgA nephritis, which has remained my passion for the past three decades and more.

Clinical research was made much easier for me as my boss Dr Lim had already provided for renal laboratories with our own dedicated scientist Dr Lau Yeow Kok and laboratory technicians. I had a firm foundation in research methods from my early days spent with Prof Chan Soh Har and subsequently during my stint in Melbourne with Prof Kincaid Smith and Prof Judith Whitworth.

I also ensured that my junior colleagues were similarly given training locally and overseas so that they could engage in clinical research to find new cures for various diseases through clinical trials of their research findings. I was glad to have mentored many of them in both research and clinical work and set up various research cum clinical teams to achieve better treatment of our patients.

It is necessary for doctors to be engaged in clinical research because what we learn in medical school very soon becomes outdated. Clinical research enables a doctor to find answers to his clinical problems. These answers may result in better treatment and cures for his patients. Research will help to keep our doctors at the forefront of Medicine. The healthcare sector in Singapore is very much involved in clinical research as part of the government's initiative to grow a culture of translational research within the scientific and medical community. The goal is to make Singapore a clinical hub with translational research as the focus, and doctors from the healthcare clusters are involved as clinician scientists and clinical investigators.

SMA: Even as a great pioneer of Singapore nephrology, who were your own mentors in this field?

WKT: My first mentor in nephrology was Dr Lim Cheng Hong. He set high standards from the beginning. He inspired the vision to achieve and emulate the renowned overseas centres of excellence. He knew what was good for us and how to enable me to go over to harvest the goodies and return home and set them up in our centre. Dr Lim was very interested in research and wanted me to do research. That was the start of my research career.

The other good thing that Dr Lim did was to send me to train with Professor Priscilla Kincaid Smith, the foremost nephrologist in Australia at the Royal Melbourne Hospital. With the special hands on intensive training for one year under Prof Kincaid Smith and her able Deputy, Prof Judith Whitworth, my third mentor in nephrology, I returned to Singapore with a broad based knowledge and a renal philosophy which certainly provided me with the necessary knowledge and clinical skills to develop nephrology in our relatively young renal centre at that time. I was able to train and impart my skills to those who came after me. The department gained strength and grew in time to become what it is today. Judith, herself a skilled researcher in nephrology also provided me with research training and facilities. Through her, I also acquired a strong foundation for clinical research which I was able to further strengthen on my return to Singapore.

> I tell myself that life is short and there are lots I would like to do. I compress my time and my day so you can stretch it out like an accordion, which means time management and priorities are of paramount importance. Ironically, you must firstly tell yourself that you are not Superman and cannot achieve or have everything. You cannot go into great depth as well as have broad based knowledge all the time for everything; you will crash or go bonkers. You have to learn to focus on the essentials.

SMA: You were the Chairman of the Psychology Club in school, and that your short stories have a distinct psychological slant – any thoughts before in training to be a psychiatrist?

WKT: My ambition in life was to be a doctor and a writer. Initially, I thought that if I were to become a doctor, then I wanted to become a psychiatrist. In my dreams, I often had vivid imaginings of myself analysing a patient on a couch under hypnosis. As a sixth former in school, I wrestled the post of Chairman from another sixth former who was from the Arts stream. I was from the Science stream and the

Arts people had been running the club for years. I won the election by a very narrow margin and during my Chairmanship, introduced many new ideas to revamp the activities of the club with much appeal.

Years later, when I began my writing more seriously as a third year medical student, I often added a twist at the end of the story followed by a psychological or clinical explanation. I had discovered even then that human actions with their weird and unexpected happenings often have a psychological basis. I have always been a great fan of Freud and Jung.

I never became a psychiatrist. But my eldest daughter, Bernardine is a child psychiatrist. Perhaps I influenced her unconsciously. My younger daughter Geraldine is a musician but I am not musically inclined. Her gift came from my wife.

SMA: You have achieved so much – having a distinguished medical career, well published in medical and literary fields, and raising a great family – how did you manage to juggle everything?

WKT: I tell myself that life is short and there are lots I would like to do. I compress my time and my day so you can stretch it out like an accordion, which means time management and priorities are of paramount importance. Ironically, you must firstly tell yourself that you are not Superman and cannot achieve or have everything. You cannot go into great depth as well as have broad based knowledge all the time for everything; you will crash or go bonkers. You have to learn to focus on the essentials. This is where my training in poetry is very useful, because you have to be sparse with words and yet remain precise and poetic with maximum impact for imagery. It would also mean that you must sleep well and have frequent breaks for planning and envisioning.

Meditation is most helpful. And always be prepared to sacrifice and learn to be content with just a taste or a small sampling of anything, like tasting wine without swallowing or puffing on a pipe or cigar with little inhalation. Then you can go the distance.

But the most important factor in my success is my supportive wife who has been a wonderful mother to our two children, and grandmother to our two granddaughters. For me, she has also been my advisor and confidante all these years. She shouldered the hefty burden of raising the children and managing the family so as to allow me to do my work.

SMA: Which five books would you bring to a deserted island, air-con study room provided of course.

WKT: I am always hungry for books, especially second hand ones. On my last trip to Ipoh, I went to my usual haunt at Novel Hut in Jusco and bought 31 second or umpteen hands old novels for 80 ringgit. Eight of them were old Westerns or cowboy novels with two by Louis L'Amour and two by JT Edson. Contentment can be bought very cheaply if you know how and have simple taste. Most people would just borrow books from our public libraries but they do not stock old books. They have some out of print books on diskettes though.

I would bring along the following:

(i) Collected poetry of T S Eliot, in particular, I would love to read again the *Wasteland* and *Ash Wednesday* which I consider his two best poems.

(ii) *The Old Man and the Sea* by Ernest Hemingway. I love the style forming mastery of the English language (these are words from his Nobel prize for literature citation). I have memorised many passages of his book. The first paragraph is the most beautiful, and reads so melodiously, like a song.

(iii) The collected short stories of Guy de Maupassant. I consider him a French genius who writes with great passion. He was a great lover of women and such a gentleman. He understood their true nature well.

(iv) The collected short stories (Malayan and Borneo stories) of Somerset Maugham. For me, he was the greatest short story writer. His best short story in my opinion is *Rain*. I would have awarded him the Nobel Prize for literature or at least the Pulitzer prize.

(v) *Use Enough Gun* by Robert Ruark. He was the author of UHURU on Hunting Big Game. He was a skillful hunter and story teller. His gun and camera were used as background material for his novels.

Since my African safari, I have become interested in African writers and one of them is Wilbur Smith, a renowned writer from South Africa. His novels are action packed like a cowboy or Western.

SMA: What would constitute a great meal for you?

WKT: In Ipoh, it is a must for me to have a meal at Mun Choong Seafood Restaurant in Pasir Pinji. My meal would usually begin with a bowl of fish lips boiled with crab meat. This

is followed by large freshwater prawns cooked in two different styles, steamed with ginger, and cooked in black sauce.

Next would be a fresh *lam khor yee* (freshwater carp) done to perfection, the flesh very smooth and sweet with the texture just right. Then, a break with a large plate of baby *kai lan* fried with shallots. This is the equivalent of the sherbet in a Western meal.

Then comes the *yim coked hai*, crabs baked in salt. The flesh is sweet and succulent and not too salty with the charateristic smoky flavour.

In between there must be generous sips of Chinese tea. My favourite is *ching nin heong* or a Thousand Year Fragrance. This is not available from the restaurant, and one must bring it in. Finally we have the *chiew pai* noodle. This is the restaurant's signature noodles in *hakka* style.

I would also like a dessert of red bean paste with a glutinous peanut dumpling but that's available in another restaurant called Kok Thye. However, if one is game, one can have a delicious bowl in the hawker centre at Wooley's in Ipoh Garden, but without the dumpling.

And the crowning glory after such a meal must be followed by the enjoyment of the flavour of Henri Wintermann Number 2 cigar. Flavour in cigar terms is "the intermingled sensation of taste and aroma" sensed in the tongue and palate but pleasurised in the cerebral cortex. Sadly, restaurants in Malaysia do not allow smoking and I can only enjoy this in the comfort of my own room shut off from my family. My grand daughters will tell me, "Grandpa, you will have black lungs if you smoke."

SMA: Thank you, Prof Woo.

SMA