



2011

MERDEKA AWARD
2011

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The Merdeka Award aims to promote thought leadership and innovation, foster a culture of excellence, encourage a world view, thereby enhancing Malaysia's standing as a dynamic, competitive 21st Century Global Player in all key sectors from science and technology to the arts.

www.merdekaaward.com



About the Merdeka Award



The Merdeka Award

– Fostering a Culture of Excellence

To commemorate Malaysia's 50th year of Independence in 2007, three of the nation's largest oil and gas players, PETRONAS, ExxonMobil and Shell came together in a spirit of camaraderie to establish the Merdeka Award to recognise and reward Malaysians and non-Malaysians who had made outstanding and lasting contributions to the nation and the people of Malaysia in their respective fields.

A reflection of the oil and gas fraternity's vision and commitment to the development and growth of the nation, the Merdeka Award was so named to reflect the Founding Members' aim to commemorate the true spirit of independence, which transcends the conventional definition of national sovereignty. It explores the liberation of the mind and spirit – factors that foster the realisation of human potential and the pursuit of excellence.

Four years on, the Merdeka Award continues to evolve as the premier award for excellence in Malaysia and to-date has recognised the achievements of 12 outstanding individuals and two organisations, in the fields of Education and Community; Environment; Health, Science and Technology; Outstanding Scholastic Achievement; and Outstanding Contribution to the People of Malaysia. The five award categories reflect focus areas that are regarded as instrumental to the overall growth and development of the nation.

The Merdeka Award's reputation continues to strengthen in part, a result of its uncompromising and stringent nomination and selection process, which strives to be independent, ethical, objective and fair. The focus of the selection process is on achievements and not personalities, and is based on original, significant and sustained contribution to the country.

At the same time, the Merdeka Award continues to reach out to and engage with its key stakeholders, in particular the post-Merdeka generation of Malaysians in raising awareness and in supporting efforts to foster a culture of excellence.

In 2011, the Merdeka Award initiated a new signature programme called the Merdeka Award Roundtables. The Merdeka Award Roundtables, a series of TV talk shows that bring together leading figures from Malaysia's academic, corporate and social spheres, provides the ideal platform to encourage informed and interesting debate and discourse on issues that are critical to the future of the nation. This programme is aimed at creating opportunities that will inspire Malaysians to think about how we too, as individuals, can play a role in the development of our country.

Since 2008, recipients of the Merdeka Award continue to make great strides in their respective areas of expertise. The Malaysian Nature Society (MNS), a 2008 recipient in the Environment Category, has embarked on a campaign to protect

and conserve a large tract of biodiversity-rich rainforest in northern Perak state. With the prize money from the Merdeka Award the organisation has set up the MNS-Merdeka Award Fund and allocated part of the money for its ongoing work and campaign at the Belum-Temenggor Forest Complex.

A 2009 recipient is Professor Dato' Ir Dr Zaini Ujang, who received the Merdeka Award in the category of Outstanding Scholastic Achievement for his study and scholarly contributions in various environment initiatives concerning water supply, sewage, river rehabilitation and industrial ecology.

In the last one year, Professor Dato' Zaini initiated a scientific programme on industrial biotechnology with the Massachusetts Institute of Technology and a scientific programme on sustainable technology with the Imperial College, London. Universiti Teknologi Malaysia and Imperial College London are collaborating in research to produce low-carbon vehicles. He also published five scientific papers in ISI indexed-journals and published three books on the environment, innovation and higher education. He received the ASEAN Federation of Engineering Organisation (AFEEO) Honorary Fellowship in 2011 for outstanding services to the engineering profession and was also appointed chair of the Proton Technology Advisory Council.

Professor Dr Halimaton Hamdan, the 2009 recipient in the Health, Science and Technology category, continues to make strides in the application of her research product Maerogel, made from discarded rice husks, as a commercially viable multi-purpose material. Her discovery has cut the cost of producing aerogel by 80%, making it affordable for commercial use.

The achievements of this year's recipients are equally commendable, and continue to reflect the true spirit of Merdeka, which is about raising human potential for Malaysia's progress and development.

As it continues to evolve, the Merdeka Award remains committed to its objective of promoting thought leadership and innovation, fostering a culture of excellence and encouraging a world-view, thereby enhancing Malaysia's standing as a dynamic, competitive 21st Century Global Player in all key sectors from science and technology to the arts.

Nomination & Selection

The nomination and selection of Merdeka Award recipients are administered by the Board of Trustees and six committees – five Nomination Committees and one Selection Committee.

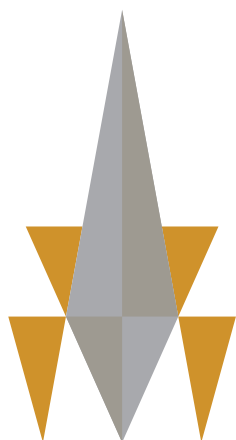
The Board of Trustees comprises two representatives from PETRONAS and one representative each from ExxonMobil and Shell, as well as two independent members.

The Board of Trustees and the various committees go through a long and rigorous selection process that reflects the high ideals of the Merdeka Award.

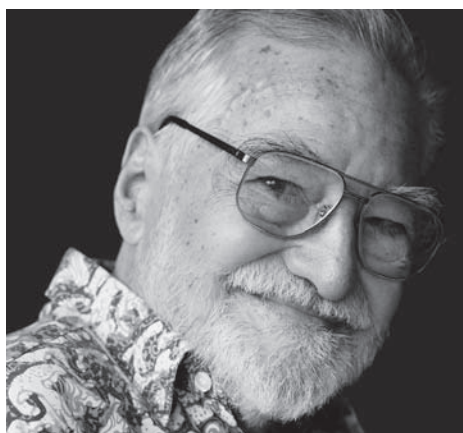
The committee members are made up of eminent Malaysians and non-Malaysians, bringing with them a wealth of knowledge, experience and expertise to allow them to nominate and select outstanding individuals and/or organisations that have laboured tirelessly, with great sincerity and conviction for the good of this country and its people.

Each year, the committee members will deliberate, examine the merits and finer qualities of each nominee, and in the end, identify those who stand above and beyond the rest, in their embodiment of the Merdeka spirit.

Merdeka Award Past Recipients



MERDEKA AWARD 2008



EDUCATION AND COMMUNITY

Royal Professor Ungku Abdul Aziz bin Ungku Abdul Hamid

For outstanding contribution to the eradication of poverty, rural economics, the development of Tabung Haji and in the field of education



ENVIRONMENT



Malaysian Nature Society (MNS)

For outstanding contribution to the Belum-Temenggor Forest Complex Conservation Initiative.



HEALTH, SCIENCE AND TECHNOLOGY

Nipah Virus Encephalitis Investigation Team from The Faculty of Medicine, University of Malaya (Joint Recipient)

For outstanding contribution to the discovery and understanding of the causes, effects and control of the Nipah encephalitis viral infection



HEALTH, SCIENCE AND TECHNOLOGY

Professor Dato' Dr Khalid Kadir (Joint Recipient)

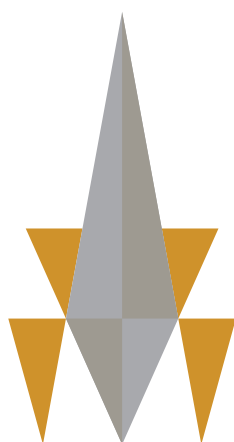
For outstanding contribution to the study and understanding of diabetes and the relationship between hormones and stresses in various tissues



OUTSTANDING CONTRIBUTION TO THE PEOPLE OF MALAYSIA

Datuk Leslie Davidson

*For outstanding contribution in the introduction of the pollinating insects *Elaeidobius kamerunicus* from Africa to the oil palm and plantations in Malaysia, leading to the rapid development of the palm oil industry.*



MERDEKA
AWARD
2009



EDUCATION AND COMMUNITY

Tun Fatimah Hashim
(Joint Recipient)

For outstanding contribution to the empowerment of women in Malaysia and for protecting and securing rights and economic opportunities for women through advocacy



EDUCATION AND COMMUNITY

Tan Sri Dato' Lim Phaik Gan
(Joint Recipient)

For outstanding contribution to the empowerment of women in Malaysia and for protecting and securing rights and economic opportunities for women through advocacy



HEALTH, SCIENCE AND
TECHNOLOGY

Professor Dr Halimatun Hamdan

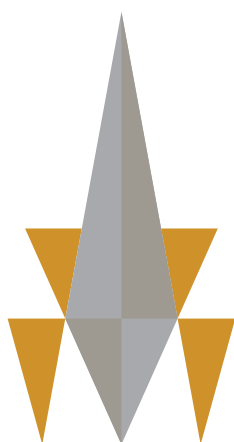
For outstanding contribution in the development and application of Maerogel as a commercially viable multi-purpose material



OUTSTANDING SCHOLASTIC
ACHIEVEMENT

Professor Dato' Ir Dr Zaini Ujang

For outstanding study and scholarly contributions in the various environmental initiatives concerning water supply, sewage, river rehabilitation and industrial ecology



MERDEKA
AWARD
2010



EDUCATION AND COMMUNITY

**Datin Paduka Mother A Mangalam
A/P S Iyaswamy Iyer**

For outstanding contribution in promoting the welfare of the underprivileged and for fostering national unity



OUTSTANDING SCHOLASTIC
ACHIEVEMENT

Professor Emeritus Dr Yong Hoi Sen
(Joint Recipient)

For outstanding contribution to the development of basic and applied knowledge of Genetics, Molecular Biology, Biological Systematics, Evolutionary Biology and Biological Diversity of Malaysian flora and fauna



OUTSTANDING SCHOLASTIC
ACHIEVEMENT

Professor Dr Harith Ahmad
(Joint Recipient)

For outstanding contribution in research and promoting the development of photonics in Malaysia



OUTSTANDING CONTRIBUTION TO
THE PEOPLE OF MALAYSIA

Tan Sri Just Faaland

For outstanding contribution to the advocacy of equitable growth through eradication of poverty and reduction of socio-economic polarisation

Categories & Recipients 2011

EDUCATION AND COMMUNITY

No Recipient

ENVIRONMENT

YBhg Dato' Dr Kenneth Yeang

For outstanding contribution to the development of design methods for the ecological design and planning of the built environment

HEALTH, SCIENCE AND TECHNOLOGY

No Recipient

OUTSTANDING SCHOLASTIC ACHIEVEMENT

YBhg Professor Dato' Dr Goh Khean Lee

For outstanding contribution in elevating the study and practice of gastroenterology and hepatology in Malaysia to global standards

&

Professor Dr Mak Joon Wah

For outstanding fundamental and applied research in parasitology and parasitic diseases, public health and pathology

OUTSTANDING CONTRIBUTION TO THE PEOPLE OF MALAYSIA

No Recipient

Environment

Awarded to individuals and/or organisations to honour the development, research and application of new technology and practices in renewing and protecting the environment.

“Dato’ Dr Ken Yeang’s extensive work is a testimony to his success in expanding the ecological horizons of architecture and design.”

*Tan Sri Dr Salleh Mohd Nor
Member of the Nomination Committee
Environment*



YBHG DATO' DR KENNETH YEANG



PROFILE

Dato' Dr Kenneth Yeang was born in Penang in 1948. He began his primary education at Wellesley Primary School and Westlands School in Penang in 1954. His secondary schooling was at the Penang Free School in 1962, completing this at the Cheltenham Boys College in Gloucestershire (UK) in 1966.

Dato' Yeang received his first qualifications in architecture from the Architectural Association School ('AA') in London. His work on the green agenda started in the 1970s with his doctoral dissertation at the University of Cambridge on ecological design and planning.

"I became a green architect more by default rather than by design – as did most of the things that happened to me, often fortuitously by chance," he says.

At the University of Cambridge's Faculty of Architecture, Dato' Yeang started as a Research Assistant to work on the design for the 'Autonomous House' project, a proposal for a residence that is independent and not connected to urban infrastructure and utilities such as sewage, electricity or water.

After six months into the project, he concluded that the project lacked a theoretical basis and that much more was required to achieve an ecologically sustainable building. The proposition, nevertheless, intrigued him and he sought leave to embark instead as a graduate student to do a doctorate in ecological design and planning, which was a pioneering green-field subject at the time.

"In those days I was regarded as a 'long-haired hippie' – as anybody who was



interested in green technology and ecology was regarded. Nevertheless I persisted and completed my doctorate in the topic which subsequently became my life's agenda," he says.

"I have an agenda of the things I want to do in my life – essentially wanting to make the world green through design innovation. This is my mission in life. Once I decided that this is what my life is all about then everything else fell in place in fulfilling the agenda and achieving this to the best that I can and doing it better than anybody else. This is what drives me – serendipity, discovery and invention.

Globally recognised now for his work on developing ecological design and master planning, Dato' Yeang dedicated his professional life to this pursuit and to deriving design methods for the ecological design and master planning of our built environment, over nearly four decades of his professional life that delivered over 200 built projects.

"Back in then when we first started, I just could not get clients to accept green design. Nobody wanted it. It wasn't considered relevant so it was no point pushing it overtly because it was just like hitting my head against a hard wall," he says, '...so I designed green privately and adopted a design approach that was a subset of ecological design, being 'bioclimatic design' which is the designing of buildings as passive low energy structures responsive to local climatic conditions. This is design that optimises the natural ambient energies of the place where the building



is located. Clients soon perceived the obvious benefits.. One of the early low energy bioclimatic buildings he built was his own home, the 'Roof-Roof' House in 1984 in Ampang, so called because of its double roofs.

"It was an experiment in passive mode, low energy bioclimatic concepts and devices. When I look back, it remains one of my favourites," he says. "The house provided a life-size working prototype for my ideas then that subsequently extended to larger scale urban high-rise situations. In this regard, it successfully served its purpose as an experimental project."

His early built works, adopting climate-responsive bioclimatic principles as passive-mode low-energy design, became a useful armature for his later ecologically sustainable design work. The approach was also a critical regionalist endeavor, enabling the

derivation of a local identity in the architecture where the architecture has a link to its place though relating the built-form to the local climatic conditions. He then successfully extended the application of these principles to the high-rise building type which led to his being widely regarded as the 'father' or inventor of the 'bioclimatic skyscraper'.

Dato' Yeang is a principal in the firm, T R Hamzah and Yeang Sdn Bhd, first formed by Tengku Dato' Robert Hamzah, his contemporary at the AA School in London. In 2005, he also became Design Director and subsequently Chairman of its sister firm in the UK, Llewelyn Davies Yeang, a firm originally founded by Lord Richard Llewelyn Davies. Recently the Malaysian firm was nominated as the '8th Most Innovative Architectural Firm' globally by the US Magazine, Fast Company.

SINGLE-MINDED PURSUIT OF ECODESIGN

Dato' Yeang's single-minded and relentless pursuit of ecodesign through his designs, his built and master planning work, and in his writings has for close to four decades, greatly influenced countless architects all around the world and professionals in the design fields not just in the way they approach design, architecture and planning but aesthetically – in defining what a green building should look like.



Because ecodesign in the 1970's did not have the benefit of research or academic theoretical models, he developed his own research, investigative design programme and concerted testing of ecological design systems. This led to his authoring several definitive books on ecological design.

Few architects do all these - designing, building, researching, teaching as well as writing. In this regard, his theoretical advancements, technical work and his meticulous recording of these prolifically in his books and monographs set him apart from other green architects.

Dato' Yeang has lectured at many schools of architecture and conferences at over 30 countries including holding visiting and adjunct professorships at several universities including the University of Malaya, Tongji University (Shanghai), Texas A & M University (USA), Deakin University (Australia), besides holding full professorship as the University of Illinois, as the Distinguished Plym Professor, and at the University of Sheffield as the Graham Willis Chair Professor and at the University of Southern California as the Provost's Distinguished Visiting Scholar.

His contribution to architectural design is also acknowledged internationally through numerous awards for his built work. Among the accolades include the:

- Aga Khan Award for Menara Mesinaga, Selangor, Malaysia, his early tower that exemplifies his low-energy principles for the design of the bioclimatic skyscraper

- CNN Building Award for Spire Edge Tower (India) which is a signature tower that espouses the idea of a vertical ecoinfrastructure and which is certified LEED Platinum,
- Pertubuhan Arkitek Malaysia Gold Medal (2010)
- Prince Claus Award (Netherlands)
- UIA (International Union of Architects) Auguste Perret Award

When Dato' Yeang started practicing in Malaysia in 1974, "clients thought I was crazy and was wasting their money. But today, clients want green not only because it can be commercially viable but because it's for them an ethical issue. Today's companies and their accountants want to see green as a triple-bottom-line. Thirty or forty years ago this wasn't the case," he says.

On public perception and the media, Yeang says: " ..creating awareness of the green agenda with the media is now no longer an issue because every time you pick up the newspaper or magazine, there will be an article or mention of green issues or green products and popular topics such as '100 things to do to make your life or homes green'. The hazard is that those who write these articles do not fully know about green design. What results is 'green-wash' giving a wrong and simplistic perception of green design. When the public gets too much of this, it simply puts them off. The more effective way to effect change in perception is through education".

"One way to commercially justify green design is through demonstrating energy and water savings. For instance

we just completed a building in Singapore where the energy and water savings were at least half a million US dollars per annum" he adds.

Dato' Yeang works a 14-hour day and what drives him to work late into the early hours of the morning is the chance of discovering something new in this field, of the opportunities of inventing and innovating. He says, "...nature is the biggest source of inspiration and invention. We cannot replicate nature 100% with human-made machines but we can replicate selected aspects or parts of it and do these better than nature but in a very mechanistic and singular way. The difference between machines and organisms is the holistic properties of organisms, where the whole is greater than the sum of its parts."

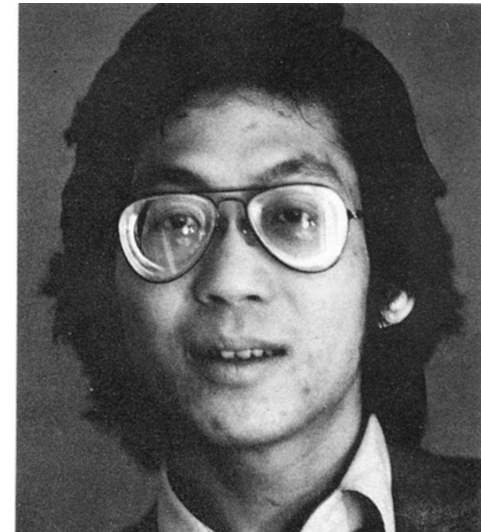
To generate new ideas, Dato' Yeang does what he calls 'rota reading'. He would select five to a dozen new books from his shelves and decides what he wants to get out from each,

then selectively reads those pages or sections that interest him or which he considers important. He writes down the ideas and then rotationally moves on to the next book. He finds that, " in this way within one evening I cover several books, getting different ideas out of each. Then I go to sleep with all these ideas bouncing away in my head and I wake up in the morning with totally new ideas. It's a very fulfilling experience," he says.

To the younger generation of architects, he says: "it is important to start with a gut feel of what you want to do with your life and then to have the stamina and persistence over several years or decades to achieve this."

"Secondly, the pursuit of innovation is crucial because it is the key to progress, advancement and competing in any field of endeavour. Innovation can very often simply mean bringing several ideas or aphorisms together. Thirdly, it is crucial to do things that are beneficial to humankind





and which can change the lives of people for the better," he adds. What's next for Dato' Yeang? He says he simply wants to achieve as much of his personal mission in making the world greener by design invention, "before I start pushing daisies".

CONCLUDING REMARKS

Dato' Yeang is widely regarded as an architect ahead of his time. He recognised 40 years ago that environmental degradation and global warming would adversely affect the natural balance of the earth and its ecosystems. Adopting an ecology based approach, he has successfully applied those principles to architecture and urban design.

Dato' Yeang uses his fundamental concepts of ecodesign in all his architectural work. Through constant experimentation over many decades he has acquired a reputation as a pioneer, an advocate,

and innovator in ecological design.

Based on his principles of ecomimicry, Dato' Yeang's design work seeks to imitate the processes, structure and attributes of ecosystems, in an ecological nexus and connectivity with the landscape, and to achieve a benign and seamless biointegration between the human built environment and the natural environment.

"Nature by itself exists in a more or less state of stasis. What we humans have done is to disrupt biospheric processes and ecological stability. Take for example our carbon emissions and discharge of waste into the environment. In nature there is no waste as everything is reused and recycled. So if our human systems are able to mimic this attribute of ecosystems then we will have no waste as the outputs become reusable and recyclable, thereby reducing waste and making it as closed a loop as possible. That is what ecomimicry is about," he says.

"Architecture is about making people's lives fulfilling, happy and pleasurable. Achieving these is so much easier if we have clean air, clean water and clean land," he adds.

Quoting Kermit the Frog from the popular children's TV programme, Sesame Street, Dato' Yeang concludes by saying: "It's not easy being green".

Dato' Yeang's extensive work in his field of endeavor is a testimony to his success in advancing the ecological horizons of architecture and design. His lifetime dedication and commitment to green design personifies the true spirit of Merdeka through a relentless pursuit of excellence.

In the words of the famous UK architect, Lord Norman Foster: "...Ken Yeang has developed a distinctive vocabulary that extends beyond questions of style to confront issues of sustainability and how we can build in harmony with the natural world.."

Outstanding Scholastic Achievement

Awarded to a reseacher/fellow conducting or playing a major role
in academic research resulting in significant discovery at
a postgraduate level in a local or foreign university.

A black and white portrait of Professor Dato' Goh Khean Lee, a middle-aged man with short, slightly graying hair, wearing glasses and a dark suit with a white shirt. He is smiling and looking towards the camera. The background is dark and out of focus.

*“Professor Dato’ Goh Khean Lee’s
achievements in Gastroenterology
and Hepatology have had a deep and
lasting impact in Malaysia and,
also Internationally.”*

*Professor Dr Harith Ahmad
Member of the Nomination Committee
Outstanding Scholastic Achievement*

YBHG PROFESSOR DATO’ DR GOH KHEAN LEE



PROFILE

Professor Dato' Goh was born on 15 July 1956 in Penang. His father was a government officer in the Inland Revenue Department and his mother, a schoolteacher. He spent the first five years of his life in Penang before the family moved to Ipoh where he studied at St Michael's Institution. His father was later posted to Kuala Lumpur and Professor Dato' Goh studied at La Salle Brickfields before continuing his secondary education at St John's Institution.

A bright boy, he did well at school and was accepted into University of Malaya's medical school. "In those days there was only one medical school, University of Malaya. To get into UM was a big achievement," he says.

He read for a Bachelors Degree of Medicine and Surgery at the University of Malaya between the years 1975 and 1980.

In 1984, he began his career as a lecturer at the Faculty of Medicine, University of Malaya, and rose through the ranks to become Professor of Medicine in 1998. While working at the University Hospital, he pursued his higher professional specialist degree obtaining his MRCP (UK) qualification in 1984.

Professor Dato' Goh has spent training stints at the Royal Infirmary, Glasgow in 1987 and at the Academic Medical Centre, University of Amsterdam, in 1991.



Finding that good clinical practice required good clinical research, Professor Dato' Goh began publishing papers on gastroenterology and internal medicine. As a senior fellow in Gastroenterology and Advanced Therapeutic Gastrointestinal Endoscopy in Amsterdam, he studied advanced therapeutic endoscopic biliary and pancreatic work acquiring valuable experience in the field. "The professor there suggested that I do a thesis on *Helicobacter pylori*, the germ that causes ulcers, which was what I did, earning my doctoral degree," he says.

Professor Goh obtained his doctorate Doctor of Medicine (Mal) in 1997 and is one of few Malaysians in the medical field with a doctoral degree.

Inspired by the excellent clinical and research work that was going on in Amsterdam, Professor Dato' Goh began transforming the sub-specialisation into a recognised unit back home in Malaysia.

"The experience in Amsterdam was an eye-opener and indeed they were ahead of their time. When I came back, the Deputy Director of University Hospital, also agreed that we needed to formalise and develop a top-class gastrointestinal endoscopy unit and so we did, building it to what it is today," he says.

As the Head of the Division of Gastroenterology and Hepatology and the Gastrointestinal Endoscopy unit at the University of Malaya Medical Centre (UMMC), Professor Dato' Goh



established the division and unit as one of the best in the country with an excellent international reputation.

"We started off doing endoscopy in a surgical, minor operating theatre before moving into the current space at UMMC in the mid 1990s. The use of scopes enhances the discipline so we shared this very much with surgeons. Surgeons being surgeons, they spent more time operating so they left a lot of the endoscopy to non-surgeons. Endoscopy is a full fledged discipline so you spend your whole life doing it, almost," he adds.

The Unit was fittingly recognised by the World Digestive Endoscopy Organization which, after a stringent selection process awarded its prestigious "Centre of Excellence" award to the

UMMC GI Endoscopy unit in June 2008.

The UMMC Endoscopy Unit is the only one in Malaysia and one of only four centres in Asia accorded this prestigious honour. The GI Endoscopy Unit at UMMC is now a highly sought after training centre both locally and internationally.

To unwind, Professor Dato' Goh reads history and enjoys playing tennis with his children. He says his family is his source of strength. Wife, Su Lin is a consultant ophthalmologist in private practice; and he feels that his daughters Li Yen (a third year medical student in the United Kingdom), Li Syuen and son, Li Han are growing up too fast.

PIONEERING THE DISCIPLINE OF GASTRO- ENTEROLOGY AND ENDOSCOPY AS AN ESTABLISHED SUB-SPECIALTY IN MALAYSIA

A prolific writer and researcher, Professor Dato' Goh has published 196 peer reviewed full papers in international journals, seven book chapters, and 287 abstracts to-date. He continues to publish consistently and was awarded the prize of "highest impact paper in a journal" by University of Malaya in 2008.



Professor Dato' Goh has the highest number of publications and citations in the biomedical field in Malaysia with papers in high impact journals such as the American Journal of Gastroenterology, Gastrointestinal Endoscopy and GUT.

His expertise is widely acknowledged internationally and he is globally known as an international authority and leader in gastroenterology and gastrointestinal endoscopy.

"Stimulation and interest in my work keeps me going," he says. Personable and modest, Professor Dato' Goh is well-liked and highly regarded by his patients and his peers in the medical fraternity.

He is currently the President of the Asia Pacific Association of Gastroenterology (APAGE). In May 2011, he was voted Vice President of the World Gastroenterology Organisation (WGO), the first Malaysian to be given such an honour.

He has spoken at numerous international meetings and served as an invited faculty member for various international endoscopy workshops and currently serves as Editor Emeritus of the Journal of Gastroenterology and Hepatology. He also sits on the Editorial Board of seven international journals and has had stints as a visiting professor at the University of Arizona, USA (2004) and University of Magdeburg, Germany (2005).

His scientific contributions have earned him fellowships in a number of International medical colleges and societies including:

- Royal College of Physicians and Surgeons, Glasgow
- Royal College of Physicians, London
- American College of Gastroenterology
- American Society of Gastrointestinal Endoscopy
- Hong Kong Society of Gastroenterology
- Society of Gastrointestinal Endoscopy of India

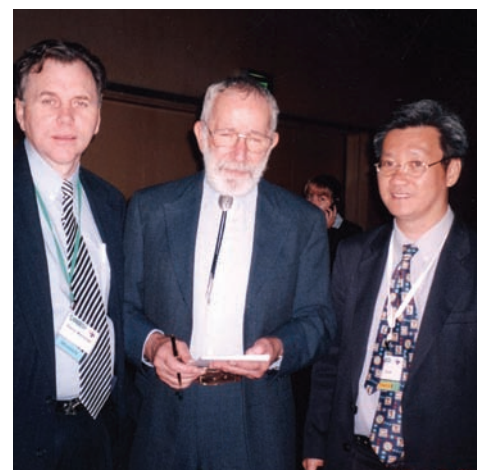
Professor Goh's work credo has always been "honesty, hard work and humility." He believes that in the field of clinical medicine there is no alternative to hard work.



"In medicine you don't work smart. You always have to work hard. When you say you work smart, you're basically not working or you're riding on other people. I am very disdainful of that," he says.

As a teacher and mentor, a testimony to his work is the large number of his students who are now highly successful gastroenterologists in their own right, both locally and abroad.

Since 1993, the Gastrointestinal Endoscopy Unit at UMMC has been holding annual therapeutic endoscopy workshops and the Centre has gained wide international reputation and prestige. Cases are conducted and transmitted live to an audience who can interact with the physician performing



the procedure. The Centre started accepting international trainees from 2005.

"The aim of these live workshops is to also bring in the top guns (invited faculty, leading experts and pioneers



in the field) from overseas so that they can share with us and we learn from them. We run three working rooms with 500-600 participants a year,” he says.

The Centre treats almost 10,000 patients a year encompassing various forms of endoscopy work such as therapeutic, diagnostic, curative and palliative endoscopy.

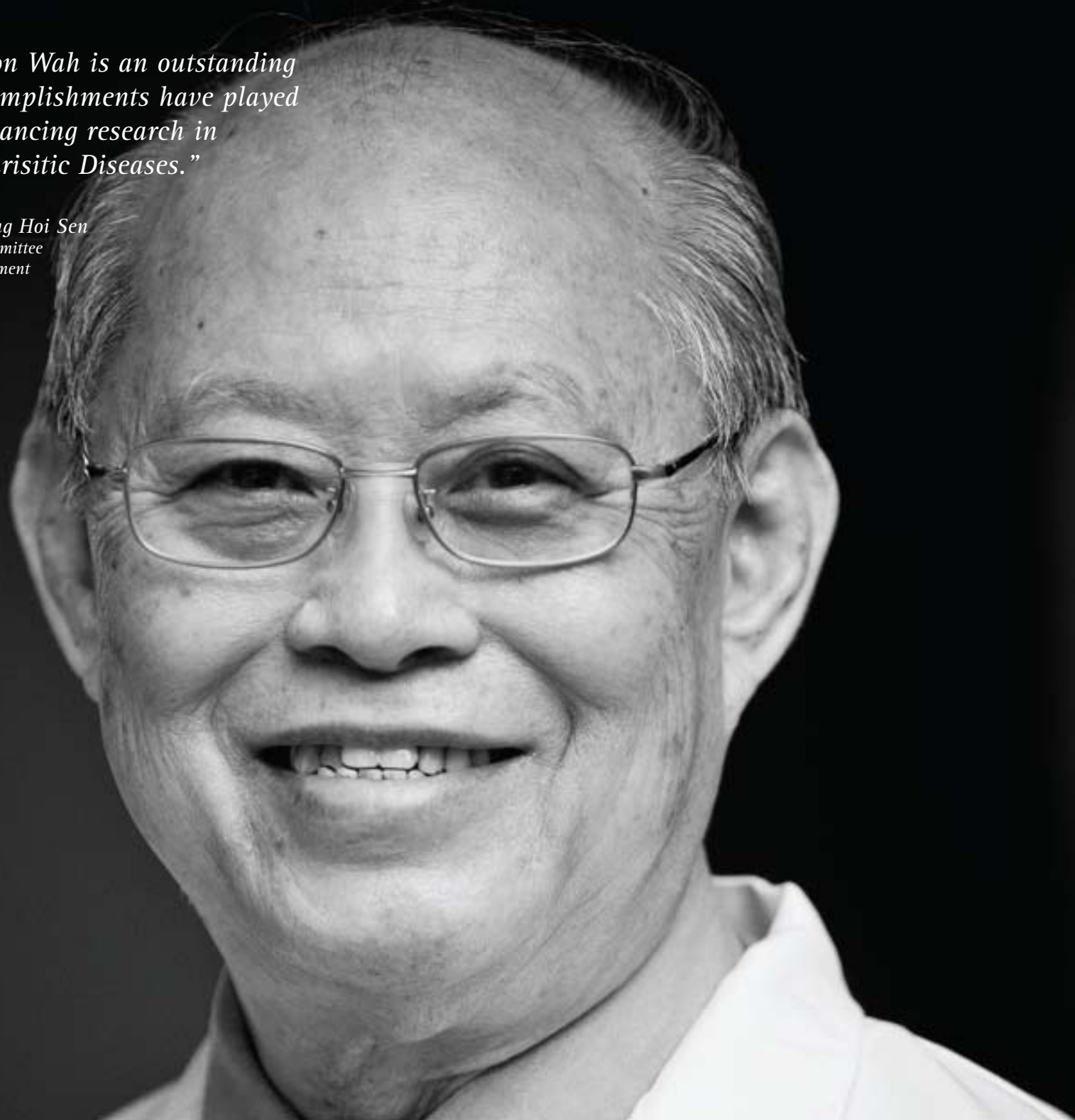
CONCLUDING REMARKS

Professor Dato’ Goh has been instrumental in putting the nation on the map as a centre of excellence in the field of gastroenterology and hepatology that has benefited thousands while inspiring the younger generation to become better physicians.

His professional achievements have had a deep and lasting impact in Malaysia and, also, internationally. His dedication and passion has elevated the practice of Gastroenterology and Hepatology in Malaysia to Global Standards and reflects the Merdeka Award’s ideals of fostering a culture of excellence.

“Professor Mak Joon Wah is an outstanding scholar whose accomplishments have played a major role in advancing research in Parasitology and Parasitic Diseases.”

*Professor Emeritus Dr Yong Hoi Sen
Member of the Nomination Committee
Outstanding Scholastic Achievement*



PROFESSOR DR MAK JOON WAH



PROFILE

Professor Mak was born in Penang on 11 December 1942 during the Japanese Occupation of Malaya. He almost didn't make it past childhood after contracting pneumonia at a very young age. But the determined efforts of a General Practitioner who treated him had a deep impact on him in his later life.

"It was a difficult period for everybody in Malaysia at that time. I became very ill during my early years and because of the war situation it was difficult to get medicine."

In spite of the difficult circumstances, the doctor managed to treat him with the latest drugs available at that time and he became better.

"Later on as I grew older, the same doctor became my family doctor. I had heard so much about his service to the nation and to the people of Penang. For example, he would not take money from those who could not afford to pay for treatment. That inspired me to learn and do things as he did for the people. That triggered me to want to do medicine as a career," he says.

Professor Mak graduated as a medical doctor from the University of Singapore in 1967. Completing his housemanship in 1968, Professor Mak's posting to Hospital Parit Buntar at the border of Penang and Perak planted the first seeds of interest in researching parasitic infections.

The only doctor in charge of the 120-bed hospital at the time, Professor Mak had his hands full tending to the medical wards as well as the obstetrics and gynaecology wards where babies were being born every night.

At that time, Parit Buntar Hospital served many people from the surrounding areas such as Gunung Semanggor, Kuala Kurau and Bagan Serai. Surrounded by paddy fields and irrigation canals, people did a lot of their daily chores in the waterways, he says. As a result, parasitic infections were rampant causing diarrhoea due to *amoebiasis* and '*kaki gajah*' or *elephantiasis* caused by *filiariasis* transmitted by mosquitoes.



Following his stint at Parit Buntar Hospital, Professor Mak was transferred back to Penang Hospital where he seized the opportunity to enrol for a postgraduate Diploma in Applied Parasitology and Entomology at the Institute of Medical Research (IMR) to learn more about parasites and the causes of infections.

“I graduated top of the class and the then IMR Director, Dr R Bhagwan Singh, insisted that I continue to work in IMR. Thus began my fantastic journey into research and looking into ways in which to control the infections which plagued the nation in those years,” he says.

“*Malaria* at the time was prevalent with up to 30,000 cases being recorded during the 1970s and 1980s and *filiariasis* was rampant as well. It was a big problem. We did lots of research on *malaria* and *filiariasis* as well as other parasitic infections,” he adds.

Tirelessly conducting and participating in countless surveys in the region, Professor Mak and his team went on the ground nationwide in affected areas such as Felda land schemes, rubber estates and *Orang Asli* settlements. He also surveyed different forms of *filiariasis* in countries such as Indonesia, India, Philippines and some parts of China by studying the people’s living and health conditions while gathering valuable data for his research on parasitic infections.

For example, he discovered that 40%-50% of the 500,000 leaf monkeys (*Presbytis cristata*, *Presbytis melalophos*

and *Presbytis obscura*) found in Peninsular Malaysia were infected with ‘*Brugia malayi*’, the name of the filarial parasite that causes *elephantiasis*.

He observed that these monkeys lived very close to rubber estates because they probably like to feed on rubber shoots and seeds at the treetops and on the ground at dawn. This was when rubber tappers tapped rubber and mosquitoes were most active at dawn, transmitting the filarial parasite.

“There was this perfect cycle of transmission of *filariasis* from monkeys to the rubber tappers. We looked at these epidemiological and ecological situations and devised strategies which would control the zoonotic infection among rubber estate workers, a term that describes transmission of the infection from animals to human beings,” he says.

To meet the World Health Organization’s (WHO’s) urgent need for the development of drugs for both *filariasis* and *onchocerciasis* (a parasitic infection caused by another filarial worm), Professor Mak and his team developed the “*in vitro*” culture of the filarial parasite (*Brugia malayi*) from the third stage to juvenile adults.

This feat has never been achieved before and represents a significant advance in filariasis research. The WHO deemed it so important an advance that it decided to conduct a training workshop on this method in 1984 to disseminate this technique.



Professor Mak and his team also developed and introduced primate animal models for the WHO, to be used in the screening and testing of anti filarial compounds. The findings represented a significant advance in *filariasis*.

He has also carried out clinical drug trials to assess the efficacy of newer compounds against *filariasis*. The results of these studies have contributed immensely to the current WHO recommended treatment for *lymphatic filariasis* and *onchocerciasis* which affects millions of people globally.

Recognising the immense contribution of the IMR under Professor Mak, the WHO designated the IMR as the “WHO Collaborating Center for Taxonomy and Immunology of *Filariasis* and Screening and Clinical Trials of Drugs against “*Brugian Filariasis*” with Professor Mak as the Director from 1981 to 1996.

Professor Mak is currently the Vice President (Research) as well as Dean of Postgraduate Studies and Research at the International Medical University (IMU) in Kuala Lumpur.

DEDICATED AND PROLIFIC SCHOLAR

A dedicated and prolific scholar since 1972, Professor Mak has contributed immensely to the research and control of parasitic and tropical diseases. He is recognised globally for contributions to the treatment, epidemiology and control of tropical diseases such as *filariasis* (the filarial parasite that causes *elephantiasis*) and malaria.



Professor Mak has played an influential role in the development of tropical medicine in Malaysia. He has had leadership roles in various professional bodies such as the Malaysian Society of Parasitology and Tropical Medicine.

He is also the Founding Editor of *Tropical Biomedicine* which is the first Malaysian biomedical journal to be listed under ISI Thompson.

Professor Mak has successfully obtained research grants based on open international competition from the WHO for *filariasis* and other parasitic infections, a reflection of the recognition of his work by the global scientific community.

Based on his immense contribution to the basic and applied knowledge of *filariasis* at the national and international levels, he was awarded the National Science Award in 1985.



Professor Mak has published 340 scientific papers, and presented 78 scientific papers at local and international seminars. He is also a member of several Societies including the Royal College of Pathologists.

An internationally recognised scholar for his contributions to the treatment, epidemiology and control of tropical diseases in general and *filariasis* and *malaria* in particular, Professor Mak is recognised as a global expert in *filariasis* and *malaria* by the WHO and has been appointed as consultant on these two diseases on no less than 17 different occasions.

Professor Mak believes that excellence must be our goal in whatever we set out to do, and this can only be achieved through perseverance, critical thinking, and passion. “I think we must always persevere and work hard and very importantly learn from anybody around you. Learn from your colleagues, from those above and below you. I think that is the essence of developing yourself in whatever you do. Always ask questions, have an inquisitive mind and above all, be hard-working because there are no shortcuts to success,” he says.

Professor Mak is currently working on environment-related problems such as indoor and outdoor air quality, water resources and hospital acquired infections. “These are the places where tiny organisms can cause a lot of problems such as allergies and protozoan parasites that carry bacterial and viral infections,” he says.

Not one to slow down, he is also keen on writing more books through which he wants to capture the important elements of his area of expertise for the next generation to learn, to be trained and to have the inclination for good research. “It is through research that you improve yourself, contribute to your country and the people around you,” he adds.



CONCLUDING REMARKS

Professor Mak is an outstanding scholar whose accomplishments have played a major role in advancing research in Parasitology and Parasitic Diseases. His wide ranging works on tropical diseases, particularly *filariasis* and *malaria*, have had worldwide impact and embody the Spirit of Merdeka.

“I think it is very important to be a good role model. Many of us who have achieved what we hope to achieve is because of the role models which we emulate. We must be conscious of the fact that whatever we do, people observe. If we do the right things you will have a positive impact on others just as others have had a positive impact on us. That is important,” he adds.



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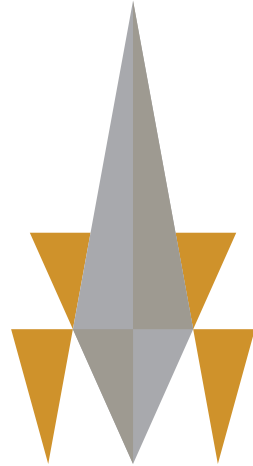
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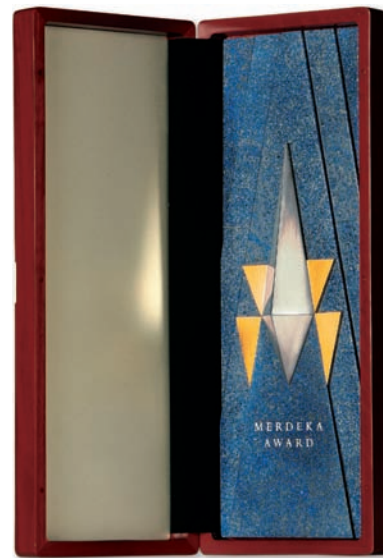
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The Logo and Trophy



M E R D E K A
A W A R D



Designed by Dato' Johan Ariff, the trophy is a three dimensional version of the Merdeka Award logo. It expresses convergence and ascension, the same qualities celebrated in the achievements of the Merdeka Awards recipients. The trophy also represents environmental concerns in the form of a plant shoot *Rebung*, transparency, ethics, and the glorious five decades of Malaysian independence.

An Artistic Vision of Excellence



This Latiff Mohidin sculpture incorporates the kinetic element of a rotating ball symbolising freedom. The sculpture rests on a granite base denoting strength and fortitude. The piece also incorporates the traditional elements of *Sulur Bayur* underscoring heritage and *Pucuk Rebung* signifying excellence.





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