LAMPIRAN 1
THE STAR (NATION) : MUKA SURAT 3
TARIKH : 3 JULAI 2018 (SELASA)

Yeo Bee Yin
Energy, Technology, Science, Climate Change & Environment

Date of birth: May 26, 1983
Political background: Bakri MP, DAP Assistant Publicity Secretary, Former Damansara Utama state assemblyman
Education:
- Masters in Advanced Chemical Engineering, University of Cambridge
- Degree in Chemical Engineering, Universiti Teknologi Petronas

Tackling climate change a priority for Yeo

PETALING JAYA: Newly minted Energy, Green Technology, Science and Climate Change Minister Yeo Bee Yin is all set to come up with a roadmap to tackle climate change.

Yeo said her first order of business was to strategise and reorganise her ministry to make it work more effectively and productively.

Next would be to fulfil Pakatan Harapan's manifesto of setting up a council for climate change mitigation and adaptation.

"This council should be formed immediately and we are looking for experts, professionals and even civil servants to join this climate change council," said Yeo.

Among the other policies to be given priority are affordable green living for the public and cutting carbon emission.

"In this ministry, it is not only about the present but the future, too, so we have to be future ready and grow with science and technology by learning to adapt and mitigate," she said.

Yeo also wants to create more job opportunities for Malaysians in the green industry, which is a growing one.

LAMPIRAN 2
THE STAR (NATION) : MUKA SURAT 2
TARIKH : 3 JULAI 2018 (SELASA)

Their pledge: Taking their oath of office are (from left) Mohamaddin Ketapi, Darrel Leiking, Datuk Liew Vui Keong, Khalid Samad, Datuk Dr Mujahid Yusof Rawa and Yeo Bee Yin.

Long wait for new Cabinet is over

Line-up combines experienced representatives with fresh faces

New era: Sultan Muhammad V (centre) posing for a photo with Dr Mahathir and the new Cabinet after the swearing-in ceremony at Istana Negara. — Bernama

By ZUHRIN AZAM AHMAD
zuhrinazam@thestar.com.my

PETALING JAYA: Almost two months after the 14th General Election, Malaysia finally has virtually a full Cabinet. It is an intriguing line-up that combines multi-term representatives with a number of fresh faces, including the nation's youngest minister ever.

Many of the 26 ministers and 23 deputy ministers have little or no government experience. This adds to the expectation that there will be a significant difference in how the country will be steered over the next few years.

It is not clear why Prime Minister Tun Dr Mahathir Mohamad took this long to name the Cabinet members and deputy ministers. The first three members (other than himself and his deputy Datuk Seri Dr Wan Azizah Wan Ismail) were named on May 12.

Six days later, another nine were added to the list.

Given Dr Mahathir's vast experience as head of government, most people had thought that the rest of the line-up would be finalised and announced soon after that.

But clearly, it was no easy task because the ministers and deputy ministers were drawn from five parties – the four Pakatan Harapan components and Parti Warisan Sabah – that do not have a history of working together.

It is, of course, hard to please everybody. Despite DAP's Lim Kit Siang congratulating the ministers and deputy ministers in a well-received statement yesterday, the party's Socialist Youth chairman Wong Kah Woh said the Cabinet appointments "did not tally with the number of seats won by a party and did not show respect for the suggestions by a fellow coalition party leadership".

In fact, the Cabinet has room for three more ministers.

It is likely that newly appointed senators will fill these vacancies.

Apart from the trio of Home Minister Tan Sri Muhyiddin Yassin, Finance Minister Lim Guan Eng and Economic Affairs Minister Datuk Seri Mohamed Azmin Ali, the majority of the 113 Pakatan MPs and the eight from the Pakatan-friendly Warisan have little or no experience in federal or state governments.

While many of them are graduates and have professional experience, Dr Mahathir took his time to scrutinise each and every candidate proposed by the parties in Pakatan.

Priority was given to those holding leadership positions in the parties.

It is also an advantage if a candidate has government experience, including as a state exco member.

This helped narrow down the possibilities as people speculated on who else would be in the Cabinet. Hence, there was no major surprise when 13 more Pakatan MPs took their oath before Yang di-Pertuan Agong Sultan Muhammad V at Istana Negara yesterday.

> **Many of the 26 ministers and 23 deputy ministers have little or no government experience, adding to the expectation that there will be a significant difference in how the country will be steered over the next few years.**

Nevertheless, history was made when Syed Saddiq Syed Abdul Rahman was sworn in as Malaysia's youngest minister ever.

The Youth Chief of Parti Pribumi Bersatu Malaysia will only turn 26 in December.

While some may argue that his appointment as Youth and Sports Minister was a natural choice due to his popularity among youngsters, others are more excited about what he can do to take Malaysian sports to a higher level.

"It is a breath of fresh air. I am sure he will do a good job," said badminton champion Datuk Lee Chong Wei, adding that he hoped that Syed Saddiq would adopt a hands-on approach.

Syed Saddiq broke Datuk Seri Najib Tun Razak's record as the country's youngest minister. Najib was 33 when he became Youth and Sports Minister in 1986.

With the swearing-in of the 13 ministers, the Cabinet now has 27, including Dr Mahathir.

Seven of the ministers, including Dr Wan Azizah, are from Parti Keadilan Rakyat (PKR), which has 50 MPs.

DAP, with 42 MPs, has six ministers – the same number as that of Pribumi, the youngest political party in Malaysia.

In addition, Dr Mahathir is chairman of Pribumi, which has 13 MPs.

Parti Amanah Negara, which won 11 seats in GE14, was given five spots, including the Defence Ministry's post for its president Mohamad Sabu. Three ministers are from Warisan.

It is not surprising either that Pakatan powerhouse Selangor has the most ministers, with seven.

Johor, meanwhile, contributes five ministers – a clear indication that the state is set to be a Pakatan stronghold, if it is not already one.

Dr Mahathir also re-introduced the Entrepreneurial Development Ministry, which was scrapped in 2010.

Another "old" ministry, the Primary Industries, was also brought back after it had been renamed Ministry of Plantation Industries and Commodities.

The appointment of Warisan's Darell Leiking as Minister of International Trade and Industry must have been a pleasant surprise to Sabahans.

This is the first time the portfolio crossed the South China Sea and landed in the Land Below the Wind.

Dr Mahathir also kept the Works Ministry in the hands of a Sarawakian, which may be a sign that the Pan Borneo Highway construction will continue.

Five women have taken up full ministerial posts and four others were made deputy ministers. In comparison, the previous Cabinet of 35 ministers had three women ministers and six women deputy ministers.

LAMPIRAN 3
THE STAR (NATION) : MUKA SURAT 2
TARIKH : 3 JULAI 2018 (SELASA)

Youngest woman minister sworn in

PETALING JAYA: Bakri MP Yeo Bee Yin, the youngest woman member of the Cabinet, was sworn in yesterday as Energy, Green Technology, Science and Climate Change minister.

Yeo, 35, is also Pakatan Harapan Youth vice-chairman and DAP's national assistant publicity secretary.

Yeo made her mark at 29 when she contested for the first time in the 13th general election, winning by a majority of 30,689, and was elected Damansara Utama state assemblyman.

This made her the youngest member of the Selangor State Legislative Assembly.

In the 14th general election, she returned to her home state in Johor and won with a 23,211 majority – the highest majority ever achieved in the parliamentary constituency.

An engineer by training, Yeo graduated from University Technology Petronas with a first-class honours degree in Chemical Engineering.

She also has credentials from the University of Cambridge in the United Kingdom, with a commendation in Advanced Chemical Engineering.

Yeo was also a recipient of the prestigious Gates Cambridge Scholarship for her post-graduate studies.

BERNAMAPIX

Yeo receiving her instrument of appointment from the Yang di-Pertuan Agong, Sultan Muhammad V, at Istana Negara yesterday.

LAMPIRAN 4
NEW STRAITS TIMES (STORY OF THE DAY) : MUKA SURAT 3
TARIKH : 3 JULAI 2018 (SELASA)

New cabinet ministers taking their oath before Yang di-Pertuan Agong Sultan Muhammad V at Istana Negara, Kuala Lumpur, yesterday. (Inset) Works Minister Baru Bian and Deputy Domestic Trade and Consumer Affairs Minister Chong Chieng Jen (left) after the swearing-in ceremony.
AGENCY PIX

LAMPIRAN 5
KOSMO (MENTERI KABINET) : MUKA SURAT 6
TARIKH : 3 JULAI 2018 (SELASA)

INFO Profil 13 menteri baharu dalam Kabinet kerajaan Pakatan Harapan

MENTERI BELIA DAN SUKAN
Syed Saddiq Syed Abdul Rahman
Umur: 25 tahun
Tempat lahir: Johor Bahru, Johor
Pendidikan: Ijazah Sarjana Muda Undang-Undang Universiti Islam Antarabangsa Malaysia
Parti: Ahli Parlimen Muar (PKR-PPBM)

MENTERI LUAR
Datuk Saifuddin Abdullah
Umur: 57 tahun
Tempat lahir: Mentakab, Pahang
Pendidikan: Ijazah Sarjana Muda Sastera (Kepujian) Universiti Malaya
Parti: Ahli Parlimen Indera Mahkota (PKR-PKR)

MENTERI TENAGA, TEKNOLOGI, SAINS, PERUBAHAN IKLIM DAN ALAM SEKITAR
Yeo Bee Yin
Umur: 35 tahun
Tempat lahir: Segamat, Johor
Pendidikan: Sarjana Kejuruteraan Kimia Universiti Cambridge, United Kingdom
Parti: Ahli Parlimen Bakri (PKR-DAP)

MENTERI PERDAGANGAN ANTARABANGSA DAN INDUSTRI
Ignatius Darell Leiking
Umur: 47 tahun
Tempat lahir: Penampang, Sabah
Pendidikan: Ijazah Sarjana Muda Undang-undang Universiti Hertfordshire, United Kingdom
Parti: Ahli Parlimen Penampang (Warisan)

MENTERI INDUSTRI UTAMA
Teresa Kok Suh Sim
Umur: 54 tahun
Tempat lahir: Kuala Lumpur
Pendidikan: Ijazah Sarjana Falsafah, Universiti Malaya
Parti: Ahli Parlimen Seputeh (PKR-DAP)

MENTERI PEMBANGUNAN USAHAWAN
Mohd. Redzuan Md. Yusof
Umur: 61 tahun
Tempat lahir: Masjid Tanah, Melaka
Pendidikan: Ijazah Sarjana Muda Kejuruteraan Awam Universiti Leeds, United Kingdom
Parti: Ahli Parlimen Alor Gajah (PKR-PPBM)

MENTERI PELANCONGAN, SENI DAN BUDAYA
Datuk Mohamaddin Ketapi
Umur: 61 tahun
Tempat lahir: Lahad Datu, Sabah
Pendidikan: Ijazah Sarjana Muda Undang-undang University of Buckingham, United Kingdom
Parti: Ahli Parlimen Silam (Warisan)

MENTERI WILAYAH
Khalid Abdul Samad
Umur: 61 tahun
Tempat lahir: Kota Bharu, Kelantan
Pendidikan: Ijazah Sarjana Muda Kejuruteraan Petroleum dan Tenaga Universiti Leeds, United Kingdom
Parti: Ahli Parlimen Shah Alam (PKR-Amanah)

MENTERI PERDAGANGAN DALAM NEGERI DAN HAL EHWAL PENGGUNA
Datuk Saifuddin Nasution Ismail
Umur: 55 tahun
Tempat lahir: Singapura
Pendidikan: Ijazah Sarjana Muda Sains Pertanian Universiti Putra Malaysia
Parti: Ahli Parlimen Kulim-Bandar Baharu (PKR-PKR)

MENTERI KERJA RAYA
Baru Bian
Umur: 60 tahun
Tempat lahir: Lawas, Sarawak
Pendidikan: Ijazah Sarjana Muda Undang-Undang Universiti Melbourne, Australia
Parti: Ahli Parlimen Selangau (PKR-PKR)

MENTERI AIR, TANAH DAN SUMBER ASLI
Dr. A. Xavier Jayakumar
Umur: 65 tahun
Tempat lahir: Ipoh, Perak
Pendidikan: Ijazah Sarjana Muda Pembedahan Pergigian College of Dental Surgery, Manipal, India
Parti: Ahli Parlimen Kuala Langat (PKR-PKR)

MENTERI DI JABATAN PERDANA MENTERI (UNDANG-UNDANG)
Datuk Liew Vui Keong
Umur: 58 tahun
Tempat lahir: Kota Belud, Sabah
Pendidikan: Ijazah Sarjana Muda Undang-Undang University of North London, England
Parti: Ahli Parlimen Sandakan (Warisan)

MENTERI DI JABATAN PERDANA MENTERI (AGAMA)
Datuk Mujahid Yusof Rawa
Umur: 54 tahun
Tempat lahir: Georgetown, Pulau Pinang
Pendidikan: Ijazah Doktor Falsafah Siyasah Syariah Universiti Malaya
Parti: Ahli Parlimen Parit Buntar (PKR-Amanah)

LAMPIRAN 6
BERITA HARIAN (DASAR & PENTADBIRAN) : MUKA SURAT 6
TARIKH : 3 JULAI 2018 (SELASA)

Bee Yin tekad kaji isu, masalah pembalakan

Kuala Lumpur: Bermula sebagai seorang sukarelawan untuk DAP pada 2012, Ahli Parlimen Bakri, Yeo Bee Yin, meningkatkan kerjaya politiknya pada usia muda.

Semalam, beliau melonjak satu langkah lagi dalam karier politiknya apabila dilantik menjadi Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar.

Bercakap kepada pemberita selepas Istiadat Angkat Sumpah di Istana Negara, beliau berkata isu pembalakan antara perkara yang akan diberi perhatian.

Bee Yin komited untuk mengkaji isu berkenaan termasuk juga langkah penguatkuasaan yang perlu bagi menangani permasalahan itu di negara ini.

"Kita akan kaji masalah pembalakan dan penguatkuasaan tetapi terlalu awal untuk berhujah. Saya akan teliti perkara ini dan akan keluarkan sebarang dasar kemudian," katanya.

Mengulas tindakannya pada minggu pertama bergelar menteri, Bee Yin berkata, beliau akan memberi fokus terhadap usaha menyusun semua tiga kementerian yang digabung menjadi satu.

Katanya, portfolionya ketika ini adalah kombinasi Kementerian Sains, Teknologi dan Inovasi (MOSTI), Kementerian Tenaga, Teknologi Hijau dan Air (KETTHA) dan Kementerian Sumber Asli dan Alam Sekitar.

Profil

Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar

- **Nama:** Yeo Bee Yin
- **Umur:** 35
- **Pekerjaan:** Jurutera
- **Pendidikan:** Ijazah Sarjana Muda Kejuruteraan Kimia Kepujian Kelas Pertama Universiti Teknologi PETRONAS, Sarjana Kejuruteraan Kimia Universiti Cambridge, United Kingdom
- **Politik:** Penolong Setiausaha Publisiti DAP

Laksana tugas dengan efektif

Katanya, langkah itu untuk memastikan segala tugas boleh dilaksanakan dengan efektif untuk disampaikan kepada rakyat.

"Petang ini (semalam), saya akan mendengar taklimat. Saya rasa tidak boleh tangguh kerja lagi," katanya yang berterima kasih kepada Perdana Menteri, Tun Dr Mahathir Mohamad di atas kepercayaan kepadanya.

"Saya amat teruja dengan semangat Malaysia baharu. Saya rasa Kabinet baharu sangat berbeza. Ramai juga (menteri dan timbalan menteri) umur bawah 40 tahun.

"Ini menunjukkan suara anak muda boleh dibawa ke peringkat tertinggi untuk buat keputusan demi negara. Langkah baik bawa suara anak muda dalam Kabinet," katanya.

LAMPIRAN 7
KOSMO (PELANTIKAN MENTERI) : MUKA SURAT 2
TARIKH : 3 JULAI 2018 (SELASA)

SULTAN MUHAMMAD V (duduk di tengah) berkenan bergambar dengan Mahathir (duduk tujuh dari kiri) dan Azizah (duduk tujuh dari kanan) serta barisan jemaah menteri pada Istiadat Mengangkat Sumpah Jawatan dan Setia Serta Sumpah Simpan Rahsia di Istana Negara, Kuala Lumpur semalam.

Kabinet PH sudah ada 26 menteri, 23 timbalan menteri

13 menteri angkat sumpah

Oleh MANIRAH OTHMAN dan HAFIZI AHMAD

KUALA LUMPUR – Selepas 53 hari memenangi Pilihan Raya Umum ke-14 (PRU-14), akhirnya teka-teki mengenai Kabinet lengkap kerajaan Pakatan Harapan (PH) terjawab apabila 13 menteri tambahan dan 23 timbalan menteri mengangkat sumpah jawatan di hadapan Yang di-Pertuan Agong, Sultan Muhammad V di Istana Negara di sini semalam.

Pelantikan tersebut menjadikan kerajaan PH pimpinan Perdana Menteri, Tun Dr. Mahathir Mohamad kini mempunyai keseluruhan 25 kementerian yang diketuai 26 menteri.

Pada 21 Mei lalu, 13 orang menteri diketuai Timbalan Perdana Menteri, Datuk Seri Dr. Wan Azizah Wan Ismail yang juga Menteri Pembangunan Wanita, Keluarga dan Masyarakat mengangkat sumpah jawatan sebagai menteri selepas kemenangan PH pada PRU-14 lalu.

Pelantikan tersebut menyaksikan Parti Pribumi Bersatu Malaysia (PPBM) mempunyai 10 orang wakil dalam Kabinet, manakala Parti Keadilan Rakyat (PKR) menempatkan 14 wakil, DAP (12), Parti Amanah Negara (Amanah) (sembilan) dan Parti Warisan Sabah (lima).

Istiadat yang bermula pada pukul 11 pagi dimulakan dengan kumpulan pertama jemaah menteri mengangkat sumpah diketuai Ahli Parlimen Muar, Syed Saddiq Syed Abdul Rahman sebagai Menteri Belia dan Sukan.

Sejurus menerima surat cara pelantikan, Syed Saddiq melafazkan ikrar sumpah jawatan dan taat setia sebelum menandatangani dokumen rasmi pelantikan tersebut.

ENAM menteri (dari kiri) Mohamaddin, Darrel Leiking, Vui Keong, Khalid Samad, Mujahid Yusof dan Bee Yin mengangkat sumpah sebagai menteri di hadapan Sultan Muhammad V di Istana Negara, Kuala Lumpur semalam.

DARI KIRI: Timbalan Menteri Kerja Raya, Mohd. Anuar Mohd. Tahir; Timbalan Menteri Sumber Manusia, Mahfuz Omar dan Timbalan Menteri Perdagangan Antarabangsa dan Industri, Dr. Ong Kian Ming menandatangani surat cara sebagai timbalan menteri di Istana Negara.

Beliau diiringi oleh Ahli Parlimen Alor Gajah, Mohd. Redzuan Md Yusof (Menteri Pembangunan Usahawan); Ahli Parlimen Kuala Langat, Dr A. Xavier Jayakumar (Menteri Air, Tanah dan Sumber Asli); Ahli Parlimen Kulim-Bandar Baharu, Datuk Saifuddin Nasution Ismail (Menteri Perdagangan Dalam Negeri dan Hal Ehwal Pengguna); Ahli Parlimen Selangau, Baru Bian (Menteri Kerja Raya); Ahli Parlimen Indera Mahkota, Datuk Saifuddin Abdullah (Menteri Luar) dan Anggota Parlimen Seputeh, Teresa Kok (Menteri Industri Utama).

Kumpulan kedua menteri yang mengangkat sumpah diketuai Ahli Parlimen Parit Buntar, Datuk Dr. Mujahid Rawa (Menteri di Jabatan Perdana Menteri - Agama); Ahli Parlimen Bakri, Yeo Bee Yin (Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar); Ahli Parlimen Shah Alam, Khalid Abd. Samad (Menteri Wilayah); Ahli Parlimen Batu Sapi, Liew Vui Keong (Menteri di Jabatan Perdana Menteri-Undang-Undang); Ahli Parlimen Penampang, Ignatius Darell Leiking (Menteri Perdagangan Antarabangsa dan Industri); dan Ahli Parlimen Silam, Datuk Mohamaddin Ketapi (Menteri Pelancongan, Seni dan Budaya).

Bacaan angkat sumpah 23 Timbalan Menteri dipecahkan kepada empat kumpulan.

Kesemua upacara ikrar sumpah jawatan dan taat setia disaksikan oleh Hakim Besar Sabah dan Sarawak, Tan Sri Richard Malanjum yang mewakili Ketua Hakim Negara dan Ketua Setiausaha Negara, Tan Sri Dr. Ali Hamsa.

Mahathir bersama isteri Tun Dr. Siti Hasmah Mohamad Ali dan Timbalan Perdana Menteri, Datuk Seri Dr. Wan Azizah Wan Ismail turut menyaksikan istiadat yang berlangsung di Balairong Seri Istana Negara itu.

Dalam pada itu, Mahathir ketika ditemui selepas istiadat tersebut berkata, tiga lagi menteri akan dilantik dalam Kabinet menjadikan keseluruhan 29 menteri berbanding 26 yang sudah dilsi sekarang.

Perdana Menteri berkata, ketiga-tiga calon menteri itu bagaimanapun tidak melibatkan Ahli Parlimen dan perlu dilantik menjadi Senator terlebih dahulu sebelum menjadi Menteri.

"Mereka perlu diangkat menjadi Senator dulu sebelum angkat sumpah, selagi kita tak ada acara mengangkat sumpah menjadi Senator, mereka tak boleh (menjadi menteri).

"Kita semua 29 orang (menteri), tadi 26 (menteri) jadi ada tiga orang lagi (akan dilantik)," katanya.

INFO Jumlah Menteri, Timbalan Menteri Mengikut Parti

Menteri (termasuk Perdana Menteri)

Parti	Bilangan	Peratus (%)
PPBM	6	22.22
PKR	7	25.92
DAP	6	22.22
Amanah	5	18.51
Warisan	3	11.11
Jumlah	**27**	**100**

Senarai Timbalan Menteri Mengikut Parti

Parti	Bilangan	Peratus (%)
PPBM	4	17.39
PKR	7	30.43
DAP	6	26.09
Amanah	4	17.39
Warisan	2	8.69
Jumlah	**23**	**100**

INFO Pecahan Menteri/Timbalan Menteri ikut negeri

Negeri	Menteri	T. Menteri
Perlis	-	-
Kedah	2	2
Pulau Pinang	1	3
Kelantan	-	-
Perak	2	2
Pahang	1	3
Terengganu	-	-
Selangor	7	3
Kuala Lumpur	3	2
N. Sembilan	1	1
Melaka	1	1
Johor	5	3
Sabah	3	2
Sarawak	1	1

LAMPIRAN 8
KOSMO (PELANTIKAN MENTERI) : MUKA SURAT 3
TARIKH : 3 JULAI 2018 (SELASA)

Saya akan menstrukturkan semula organisasi kementerian ini supaya ia lebih cekap memandangkan ia telah menggabungkan tiga portfolio iaitu Kementerian Sains, Teknologi dan Inovasi; Kementerian Tenaga, Teknologi Hijau dan Air serta Kementerian Sumber Asli dan Alam Sekitar

YEO BEE YIN
Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar

LAMPIRAN 9
KOSMO (PELANTIKAN MENTERI) : MUKA SURAT 3
TARIKH : 3 JULAI 2018 (SELASA)

TERIMA kasih kerajaan Malaysia (Pakatan Harapan) dan kerajaan Sabah (Warisan) di atas pelantikan serta tanggungjawab yang diamanahkan. Tugas sebenar sebagai YB (Yang Berhormat) baru bermula.

ISNARAISSAH MUNIRAH MAJILIS @ FAKHARUDY
Timbalan Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar

LAMPIRAN 10
KOSMO (PELANTIKAN MENTERI) : MUKA SURAT 8
TARIKH : 3 JULAI 2018 (SELASA)

Sekitar Istiadat Angkat Sumpah Menteri

ENAM menteri baharu yang dilantik melafaz sumpah jawatan dan setia serta sumpah simpan rahsia di Istana Negara, Kuala Lumpur semalam.

YANG di-Pertuan Agong, Sultan Muhammad V berbual bersama Perdana Menteri, Tun Dr. Mahathir Mohamad (kiri) dan Timbalan Perdana Menteri, Datuk Seri Dr. Wan Azizah Wan Ismail pada Istiadat Pengurniaan Surat Cara Pelantikan dan Istiadat Mengangkat Sumpah Jawatan dan Setia serta Sumpah Simpan Rahsia di Balairong Seri, Istana Negara.

DARI KIRI: Menteri Industri Utama, Teresa Kok; Menteri Luar, Datuk Saifuddin Abdullah; Menteri Kerja Raya, Baru Bian; Menteri Perdagangan Dalam Negeri dan Hal Ehwal Pengguna, Datuk Saifuddin Nasution Ismail; Menteri Air, Tanah dan Sumber Asli, Dr. Xavier Jayakumar; Menteri Pembangunan Usahawan, Mohd. Redzuan Md. Yusof dan Menteri Belia dan Sukan, Syed Saddiq Syed Abdul Rahman mengangkat sumpah jawatan dan setia serta sumpah simpan rahsia di hadapan Sultan Muhammad V.

YANG di-Pertuan Agong berkenan menyerahkan surat cara pelantikan kepada Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar kepada Yeo Bee Yin.

IGNATIUS DARELL LEIKING yang dilantik sebagai Menteri Perdagangan Antarabangsa dan Industri menerima surat cara pelantikan daripada Yang di-Pertuan Agong.

ENAM menteri menandatangani surat sumpah jawatan dan setia serta sumpah simpan rahsia di Istana Negara.

KANAN: Barisan menteri wanita DAP iaitu Teresa Kok, Teo Nie Ching, Hannah Yeoh dan Yeo Bee Yin mengabdikan gambar kenangan di Istana Negara.

LAMPIRAN 11
KOSMO (PELANTIKAN MENTERI) : MUKA SURAT 6
TARIKH : 3 JULAI 2018 (SELASA)

Teresa, Mujahid, Bee Yin berusaha lakukan perubahan demi kebaikan rakyat

Sedia galas tanggungjawab berat

Oleh HAFIZI AHMAD

KUALA LUMPUR – Teresa Kok Suh Sim yang dilantik sebagai Menteri Industri Utama tidak perlu diperkenalkan kepada umum apatah lagi beliau boleh dikatakan individu paling berpengaruh di kawasan Parlimen Seputeh di sini.

Namanya cukup sinonim di kawasan itu dengan kejayaan mengekalkan popularitinya selepas disahkan menang pada Pilihan Raya Umum ke-14 (PRU-14) menewaskan calon Barisan Nasional, Chan Quin Er dengan majoriti besar sebanyak 56,059 undi.

Veteran DAP yang dilahirkan pada 31 Mac 1964 itu menerima Ijazah Sarjana Muda Komunikasi Massa dari Universiti Sains Malaysia diikuti Ijazah Sarjana keduanya dalam jurusan Sains Politik dan Ijazah Sarjana Falsafah di Universiti Malaya.

Ketika ditemui selepas mesyuarat pertama di kementeriannya di Putrajaya, Teresa berkata, beliau akan mendengar pandangan semua pihak dalam melaksanakan tugasnya di Kementerian Industri Utama.

"Saya rasa lebih baik kita mendengar penerangan daripada persatuan dan pemain industri sebelum sebarang dasar serta visi kementerian diumumkan.

TERESA (duduk di tengah) bersama timbalannya, Shamsul Iskandar Md. Akin (kanan) menghadiri mesyuarat pertama Kementerian Industri Utama di Putrajaya semalam.

"Perkara ini lebih bagus dalam memastikan tiada perkara tertinggal," katanya yang menjadi Ahli Parlimen Seputeh sejak tahun 1999.

Sementara itu, ketokohan Naib Presiden Parti Amanah Negara, Datuk Dr. Mujahid Yusof Rawa yang dilantik sebagai Menteri di Jabatan Perdana Menteri (Agama) dilihat mampu mengukuhkan lagi institusi agama di negara ini.

Anak kepada Mursyidul Am Pas yang pertama iaitu Allahyarham Tuan Guru Yusof Rawa bukan sahaja aktif dalam politik tanah air malah di peringkat antarabangsa sama seperti bapanya.

Mujahid yang merupakan Ahli Parlimen Parit Buntar sejak PRU-12 ketika ditemui berharap urusan pentadbiran agama Islam di negara ini dapat diberi pandangan oleh semua pihak supaya proses yang dilakukan dapat menghasilkan platform untuk melakukan reformasi.

"Jabatan Kemajuan Islam Malaysia sudah tentu kekal cuma bezanya ialah ia perlu dibuat reformasi tetapi yang lebih penting, saya beri jaminan badan ini akan dijadikan contoh terbaik institusi Islam di dunia," katanya.

Dalam pada itu, Ahli Parlimen Bakri, Yeo Bee Yin yang dilantik sebagai Menteri Tenaga, Teknologi, Sains, Perubahan Iklim dan Alam Sekitar berkata, beliau berbesar hati kerana diberi tanggungjawab mengemudi sebuah kementerian baharu yang menggabungkan tiga kementerian lama dalam kerajaan dahulu.

"Ini adalah kementerian baharu yang menggabungkan Kementerian Sains, Teknologi dan Inovasi; Kementerian Tenaga, Teknologi Hijau dan Air serta Kementerian Sumber Asli dan Alam Sekitar.

"Saya akan menstrukturkan semula organisasi kementerian ini supaya ia lebih cekap memandangkan ia telah menggabungkan tiga portfolio utama sebelum ini. Perkara ini perlu diberi fokus bagi memberi perkhidmatan terbaik kepada rakyat," katanya yang masih bujang.

Pemegang Ijazah Sarjana Muda Kejuruteraan Kimia dengan Kepujian Kelas Pertama di Universiti Teknologi Petronas itu menambah, tiada masalah untuknya menggalas tanggungjawab sebagai menteri walaupun baru berusia 35 tahun.

LAMPIRAN 12
THE STAR (NATION) : MUKA SURAT 6
TARIKH : 3 JULAI 2018 (SELASA)

Five from Sabah in new Cabinet

Three full and two deputy ministers are from Warisan

By FATIMAH ZAINAL
fatimah@thestar.com.my

PETALING JAYA: In the Cabinet, Sabah has three full and two deputy ministers, all five from Parti Warisan Sabah.

They are International Trade and Industry (Miti) Minister Darell Leiking, Tourism, Arts and Culture Minister Datuk Mohamaddin Ketapi and Minister in the Prime Minister's Department (Law) Datuk Liew Vui Keong.

The two Deputy Ministers are Sepanggar MP Datuk Mohd Azis Jamman for the Home Ministry and Kota Belud MP Isnaraissah Munirah Majilis in the Energy, Technology, Science, Climate Change and Environment Ministry.

Leiking said his ministry was open to both the Opposition and the government for questioning and comment, especially in Parliament.

The two-term Penampang MP and Warisan deputy president said he would be fair and accountable in looking into whatever the Opposition raised about Miti.

"This is to ensure that the government can best balance the trade and bilateral ties with other nations," Leiking told *The Star* in an interview.

His first move would be to deliberate whether the policies and planning that was previously done by Miti were beneficial to the nation.

"We need to redistribute the benefits and multipliers of economy and trade more equitably all over the nation.

"Besides ensuring positive bilateral ties and solving direct disputes, we also want Malaysians to benefit as we move into being a strong economy," said Leiking.

Leiking said while Tun Dr Mahathir Mohamad had the vision to reignite and troubleshoot the economy, he would try and complement the Prime Minister's effort by bringing in positive trade and industry for the nation.

"As a Sabahan, it is an honour to serve the new government that proposes a Malaysia *baru*," he said.

Mohamaddin, a seasoned politician who first became Lahad Datu assemblyman in 1986, wants his ministry to attract more foreign investments for tourism projects in the country.

"What I'd do differently is to attract more foreign investors to build up high quality, international standard establishments that could give us more tourism receipts.

"The impact of marketing is bigger when you have high-level names or brands here. I will get more investors to come in so we can further develop high-standard tourism," said the Silam MP.

Mohamaddin also said he wanted to help boost inbound tourism activities for Sabah as it had a lot of pull factors but lacked international promotion.

LAMPIRAN 13
NEW STRAITS TIMES (SCHOOL TIMES) : MUKA SURAT 12
TARIKH : 3 JULAI 2018 (SELASA)

e news on events or programmes at your school together with high resolution photos and captions to: schooltimes@nst.com.my

SCHOOL NEWS

LAUNCH

New lab for STEM initiatives

SECONDARY school students from Penang and the Northern region will soon be able to explore and dive into the exciting world of science, technology, engineering, and mathematics (STEM) with the launching of a new STEM Lab at INTI International College Penang (INTI).

A combined effort of Motorola Solutions Foundation and INTI, the initiative is targeted to address the growing need for STEM professionals in the country.

Hemalatha Murugiah, Chief Executive of INTI, explained that the need for STEM professionals in the country had reached a critical stage.

"Encouraging an interest in STEM must start at an early age, especially if we are to fulfil the nation's aim of a 60:40 ratio of science stream to non-science students, especially in meeting the global shift towards a STEM-driven economy.

"The establishment of this STEM Lab provides a space for academic and industry leaders to connect with students and carry out STEM-related programmes that help them increase students' awareness, and inspire them to opt for STEM careers in the future," she said.

The STEM Lab was established with funding received from the Motorola Solutions Foundation.

Motorola Solutions Malaysia Sdn Bhd managing director Solomon A. Lorthu explained, "We are pleased to be a part of INTI's efforts in aligning education with industry and the nation's needs, especially in preparing students for the demands of the Fourth Industrial Revolution and beyond."

Secondary school students interacting with Dr Hari Narayanan (standing, left), Hemalatha Murugiah (standing, middle), and Jess Tinawin, vice president, Career Services at INTI International University & Colleges (standing, right) before learning how to build an audio USB player at the newly-launched STEM Lab.

"We also see the importance of exposing secondary school students as early as possible in STEM subjects to help lay a solid foundation for their educational future and interests. As we continue to work with INTI in engaging these students, we hope they will be encouraged to take up STEM-related careers and not only enhance their own capabilities, but those of the country," he said.

In addition to the launch of the STEM Lab, a forum for secondary school teachers was also organised on the topic Science, Technology and Innovation (STI) in designing our Nation's Future.

The forum was attended by INTI's industry partners and teachers from partner schools, and led to fruitful discussions on current issues and opportunities to develop the interest in science, technology and innovation among secondary school students.

Concurrently, secondary school students who attended the launch had a great time learning how to build their own audio USB player at the STEM Lab.

"Industry-academic collaborations are an important means through which we can meet the needs of the 21st century. The launch of the STEM Lab at INTI serves to provide a space for students from all ages to explore the possibilities of STEM and to connect and learn from industry leaders such as Motorola Solutions.

"Through these engagements, students are in a better position to understand the practical applications of STEM in everyday life and to explore potential careers they may have never have thought about. Empowered with such knowledge, our hope is that in the long run, this future generation of professionals will carry Malaysia forward in achieving its goals," added Murugiah.

The STEM lab was launched by Motorola Solutions Malaysia Sdn Bhd's former managing director of Motorola Solutions Malaysia Sdn Bhd, Dr Hari Narayanan.

Also present were students and representatives from Chung Ling High School, SM Bukit Jambul and SM Penang Free School.

LAMPIRAN 14
THE STAR (BRIGHT KIDS) : MUKA SURAT 5
TARIKH : 3 JULAI 2018 (SELASA)

Reimagining the modern classroom

TECHNOLOGY is everywhere. It is entwined with almost every part of our lives. If used correctly, technology can be important for teaching and learning in schools.

At Sunway International School (SIS), technology forms a bridge between teachers and students, allowing both parties to bond over a common platform.

When used as an educational tool, technology can create endless possibilities in learning, research and discussion.

The proliferation of technology and social media in the modern way of life has enhanced the way SIS teachers teach, increasing productivity, convenience and relevance, and creating a richer learning environment.

Incorporating hi-tech experiences in classrooms has brought about progressive benefits for teachers and students at SIS.

Students find that they can relate to the usage of technology in lessons, which leads to better understanding and information absorption. At the same time, teachers provide meaningful, updated experiences that make more sense to students and call upon their innovativeness, awareness and critical thinking.

As students learn to be increasingly tech-savvy, they become more engaged and empowered as their technology literacy improves.

In presentations, assignments or collaborative work, SIS students are eager to explore new features and test various skills as they become adept at operating software. They are curious and courageous when it comes to picking up new technology – qualities that aid them in understanding lessons and consolidating new material.

SIS ensures that students are aware of how to use technology for learning by incorporating hi-tech tools into lessons.

In addition, SIS teachers note a marked increase in students' accountability once they have adopted technology as part of their work.

Gone are the days when students study with paper and pencil for two hours every evening. Technology allows students to enjoy a collaborative work environment in real time with peers and teachers not only in class, but at home as well.

Teachers observed major improvements in student productivity, which is measured through creativity, quality and timeliness of assignment submission.

Lessons are never dull at SIS – not with the high degree of interaction and personalised attention. Students participate in diverse activities and exercises such as stimulating debates, role-playing and independent research that are designed to enhance and facilitate their understanding of concepts and theories.

SIS teachers apply the Ontario Education Ministry's best practices to assess a student's individual capability and subsequently design lesson plans that support their strengths and potential.

Teachers work closely with students by coaching, tutoring and mentoring them. Their classroom practices are guided and informed by international standards. This translates to a highly interactive environment where critical thinking, social responsibility and experiential reflection are emphasised in everyday life.

SIS teachers foster an open, communicative atmosphere that empowers students' accountability over their academic performances, which helps each student work towards developing their full potential by nurturing their unique aptitudes and creativity.

Students appreciate that teachers practise a holistic approach to education, enabling students to examine different routes to success based on their individual strengths. The interactive learning approaches employed encourage students to be inquisitive and independent lifelong learners and, above all, experience an engaging and enjoyable time in the classroom.

SIS complements all spaces within the school with wireless Internet access for students to work on their laptops and electronic tablets, while each of its 29 classrooms and five laboratories houses an interactive whiteboard to run multimedia programs.

SIS' upcoming intake is scheduled for July 16.

■ For more information, call 03-7491 8070/07-533 8070 or visit *sis.sunway.edu.my*

LAMPIRAN 15
THE SUN (SUNBIZ) : MUKA SURAT 13
TARIKH : 3 JULAI 2018 (SELASA)

The kick-off event for the research project held at University of Malaya last year.

Blockchain Regulatory Research Report launch on Thursday

PETALING JAYA: University of Malaya's Faculty of Law and Quanta RegTech Capital Plc (QRC Plc) have collaborated to produce the Blockchain Regulatory Research Report, the first of its kind in the region, in a bid to delve deep into the legal issues surrounding the proliferation of the technology.

The QRC Group founded QRC Ventures in 2017which focuses investments on two key types of projects: RegTech products that have potential blockchain use cases, and blockchain projects that have potential RegTech use cases.

The aim of the 242-page report is to build the foundation for a compliant blockchain ecosystem in Malaysia and provide an unprecedented analysis on the legal issues arising from this transformative technology and key recommendations for public and private blockchain stakeholders.

The research team is comprised of project leader Nur Husna Zakaria, Dr Sherin Kunhibava, Dr Ershadul Karim, Raphael Kok, Prof Abu Bakar Munir, assisted by Thong Ming Sen and Ridoan Karim.

The launch ceremony and a forum will be held on July 5 at the Renaissance Hotel, Kuala Lumpur.

The event will be officiated by Department of Standards Malaysia, Ministry of Science, Technology and Innovation director-general Datuk Fadilah Baharin, while University of Malaya vice-chancellor Datuk Abdul Rahim Hashim and the Dean of the Faculty of Law Associate Professor Dr Johan Shamsuddin Sabaruddin, are to give keynote speeches.

LAMPIRAN 16
BERITA HARIAN (PENDIDIKAN) : MUKA SURAT 19
TARIKH : 3 JULAI 2018 (SELASA)

KV Keningau ungguli inovasi dunia

Kuala Lumpur: Kolej Vokasional (KV) Keningau, Sabah membuktikan kehebatan pada peringkat global apabila mengungguli masing-masing empat pingat emas dan anugerah khas inovasi dalam Pertandingan Inovasi Penciptaan Dunia (WIC) di Pusat Konvensyen-Dewan Seni Chung Mu, Seoul, Korea Selatan, baru-baru ini.

Kolej itu mengetepikan peserta yang mewakili sembilan negara lain iaitu Amerika Syarikat, Filipina, Mesir, Sri Lanka, Taiwan, India, Vietnam, Thailand dan Indonesia.

Pingat emas masing-masing diraih menerusi tiga pensyarah, iaitu Mohd Sirhajwan Idek, Saumon Maliki dan Sadzul Hamzasin serta dua pelajar, iaitu Terrence Fong dan Mohd Azley Jalday.

Mohd Sirhajwan mengungguli pingat emas kategori *Think Tales*, selain Anugerah Khas Persatuan Penciptaan Kreativiti Asia, manakala Saumon memenangi pingat emas menerusi projek *Pastry Dough Leveller* dan Anugerah Khas Akademi Penciptaan Korea.

Terus bersaing

Terrence Fong yang menghasilkan projek *Mini Fogging* pula memenangi pingat emas dan Anugerah Khas Persatuan Penciptaan Dunia dan satu lagi pingat emas diraikan gandingan pensyarah dan pelajar, iaitu Sadzul dan Mohd Azley yang meraih pingat emas dan Anugerah Khas Persatuan Penciptaan Dunia.

Dalam pada itu, Sirhajwan berkata Kolej Vokasional Keningau diwakili masing-masing empat pensyarah dan dua pelajar.

"Kami bukan sahaja membawa nama Kolej Vokasional Keningau, tetapi juga mewakili negeri dan negara tercinta.

"Kolej Vokasional Keningau tidak akan berhenti berusaha menghasilkan lebih banyak inovasi selepas ini dan kami mahu terus bersaing secara kompetitif pada peringkat antarabangsa," katanya.

WIC menghimpunkan pencipta, pensyarah, pelajar, Profesor dan penyelidik anjuran Korea Invention News (KINEWS) dan Akademi Penciptaan Korea (KIA).

Tahun ini adalah kali keempat penganjuran WIC dan menjadi penghormatan kepada peserta menonjolkan daya kreativiti serta persaingan pada peringkat dunia.

Wakil KV Keningau berjaya memenangi empat pingat emas dan empat anugerah khas *pada Pertandingan WIC.*

LAMPIRAN 17
UTUSAN MALAYSIA (LUAR NEGARA) : MUKA SURAT 14
TARIKH : 3 JULAI 2018 (SELASA)

WANITA yang mengalami masalah kesuburan kini boleh hamil dengan ovari buatan. - AGENSI

Harapan baharu bagi wanita tidak subur akibat jalani kemoterapi

Saintis hasilkan ovari buatan

■ LONDON 2 JULAI

WANITA yang tidak dapat hamil kini mempunyai harapan baharu apabila saintis berjaya mencipta ovari buatan untuk tujuan itu.

Organ sintetik yang diperbuat daripada tisu wanita itu sendiri akan dipindahkan kepada wanita berkenaan yang menjadi tidak subur akibat menjalani rawatan perubatan dan seterusnya boleh menghasilkan ovari secara semula jadi.

Lapor *Daily Mail*, teknik terkini itu direka cipta bagi membantu golongan wanita dan gadis yang menjalani kemoterapi untuk merawat kanser.

Ubat kemoterapi boleh menyebabkan seseorang wanita tidak subur kerana ovari mereka menjadi rosak.

Gadis yang tidak mengalami tahap baligh boleh menjadi subur sebelum ovari mereka menghasilkan ovum atau telur.

Satu kaedah untuk menghalang keadaan ini adalah dengan membekukan tisu ovari yang menghasilkan ovum sebelum rawatan dan menggantikannya selepas rawatan.

Namun, pesakit kanser berisiko terdedah semula kepada sel kanser yang terkandung dalam tisu ovari yang dipindahkan.

Teknik baharu ini menghalang keadaan ini dengan membuang semua sel kanser dari tisu ovari dan meninggalkan hanya sarang protein yang tidak lagi mengandungi sel, menghapuskan kemungkinan kanser bakal berulang.

Sarang berkenaan menyediakan persekitaran untuk folikel pesakit yang menjana beratus-ratus telur untuk terus berkembang.

Ia kemudian boleh dimasukkan ke dalam badan pesakit dan membolehkan seseorang wanita menghasilkan telur secara semula jadi pada setiap bulan.

Eksperimen ini akan diumumkan oleh Dr. Susanne Pors dari Makmal Biologi Pembiakan Rigshospitalet di Copenhagen pada persidangan Persatuan Pembiakan dan Embriologi Manusia Eropah di Barcelona.

Dr. Pors berkata, teknik ovari buatan membolehkan telur manusia berkembang 'dalam tisu yang bebas daripada bahaya' di makmal.

Dalam percubaan lanjut pada tikus, dia berkata, mereka mendapati bahawa sel ovari telah berjaya dibangunkan.

Percubaan terhadap manusia dijangka dilaksanakan dalam tempoh lima tahun lagi.

LAMPIRAN 18
BERITA HARIAN (WANITA) : MUKA SURAT 73
TARIKH : 3 JULAI 2018 (SELASA)

Profil

Dr Oon Chern Ein

→ **Umur:** 34 tahun
→ **Latar pendidikan:**
- Ijazah Sarjana Muda Kepujian dalam Bioteknologi di Universiti Kebangsaan Malaysia (UKM).
- Ijazah Kedoktoran dalam bidang Perubatan Onkologi di Universiti Oxford, United Kingdom

→ **Anugerah:**
- Geran Penyelidikan Royal Society Flexi-Grant 2018
- Anugerah Saintis Muda Kebangsaan 2018
- Anugerah Penyelidikan Kanser Majlis Kanser Nasional (MAKNA) 2016
- Felo antarabangsa Union for International Cancer Control Fellowship 2016
- L'Oreal-UNESCO for Women in Science - National Fellowship 2015
- Peserta Lindau Nobel Laureate Meeting, Jerman 2015
- Anugerah Saintis Muda Exiqon - South East Asia 2014
- Tabung Amanah Penyelidikan Perubatan Dr Ranjeet Bhagwan Singh 2014

Impi kerjaya saintis jadi kenyataan

Anugerah peringkat global, tempatan iktiraf usaha Dr Chern Ein

[FOTO DANIAL SAAD/BH]

Dr Chern Ein menunjukkan antara sijil *pengiktirafan dan anugerah dimenanginya.*

TOKOH WANITA

Oleh Siti Sofia Md Nasir
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Georgetown

Sejak kecil Dr Oon Chern Ein sering mengimpikan kerjaya sebagai saintis, apatah lagi minat itu sering dipupuk bapanya yang bekerja sebagai ahli kimia di Universiti Sains Malaysia (USM), di sini.

Impian Pensyarah Kanan Institut Penyelidikan Perubatan Molekul Kesihatan (INFORMM) di USM itu tercapai, lebih manis apabila anak kelahiran Pulau Pinang ini, diiktiraf sebagai wanita pertama memenangi Anugerah Wanita Masa Hadapan - Asia Tenggara 2018 bagi kategori Sains, Teknologi dan Digital, baru-baru ini.

Majlis berprestij berlangsung di Singapura, baru-baru itu julung kali diadakan di Asia Tenggara dan Dr Chern Ein, menewaskan empat lagi calon untuk kategori berkenaan.

Pencapaian itu juga melakar pencapaian membanggakan kepadanya pada usia 35 tahun.

Selain itu, kecemerlangan dalam bidang diceburi terserlah pada peringkat tempatan dan global sebelum ini apabila anak bongsu daripada dua beradik ini menerima Anugerah Saintis Muda Exiqon - Asia Tenggara pada 2014 dan L'Oreal UNESCO for Women in Science pada 2015.

Ke mana tumpahnya kuah kalau tidak ke nasi. Tugas bapanya sebagai ahli kimia USM memboleh-

> "Saya sering ikut ayah ke USM ketika kecil. Kadangkala ke perpustakaan dan sejak itu saya begitu meminati sains dan berhasrat bergelar penyelidik. Membesar sebagai anak bongsu dan satu-satunya anak perempuan dalam keluarga menyebabkan cita-cita itu sering dihalang ibu"
>
> ***Dr Oon Chern Ein,*** *Pensyarah Kanan INFORMM, USM*

kannya sering mengikuti ayahnya itu ke universiti berkenaan setiap kali berkesempatan berbuat demikian.

"Saya sering ikut ayah ke USM ketika kecil. Kadangkala ke perpustakaan dan sejak itu saya begitu meminati sains dan berhasrat bergelar penyelidik.

"Namun, membesar sebagai anak bongsu dan satu-satunya anak perempuan dalam keluarga menyebabkan cita-cita itu sering dihalang ibu.

"Ibu khuatir hasrat itu akan menyebabkan saya terpaksa mengetepikan urusan untuk berkeluarga kerana tugas yang dipikul memerlukan komitmen tinggi," katanya ketika ditemui di pejabatnya di USM, baru-baru ini.

Impian jadi saintis

Dr Chern Ein berkata, impiannya untuk bergelar saintis diteruskan apabila melanjutkan pengajian Ijazah Sarjana Muda dalam bidang Sains Bioteknologi di Universiti Kebangsaan Malaysia (UKM), selepas tamat Tingkatan Enam di Penang Free School (PFS).

Selepas memperoleh Ijazah Sarjana Muda Kelas Pertama, beliau seterusnya ditawarkan program *fast track* untuk program Ijazah Doktor Falsafah (PhD) dan berpeluang meneruskan pengajian di sebuah universiti di United Kingdom (UK).

"Segala-galanya berubah apabila di UK, saya langsung tidak sangka dapat melanjutkan pelajaran ke Universiti Oxford dengan pengkhususan perubatan onkologi. Di UK, saya berjumpa lebih ramai pelajar hebat yang memberi semangat untuk terus gigih menguasai bidang dipelajari," katanya.

Di sana juga beliau melakukan pelbagai kajian, terutama dalam usaha menyekat pertumbuhan serta pembentukan saluran darah dalam sel kanser melalui prosedur + perubatan terbaik.

"Hari ini, serangan kanser bukan sesuatu luar biasa dalam masyarakat kita. Jika dahulu penyakit ini jarang didengari, kini, kanak-kanak seawal umur satu tahun boleh mendapat kanser.

"Kajian ini penting kerana menjurus kepada usaha menghalang pembentukan kanser, seterusnya dirawat dengan lebih baik," katanya yang ditawar melanjutkan pengajian Ijazah Pasca Kedoktoran di Karolinska Institute, Sweden selepas menamatkan pengajian di Oxford selama tiga tahun setengah.

Kajian pertumbuhan kanser

Katanya, selama satu tahun setengah di Sweden, beliau meneruskan kajian lanjutan berhubung sel persekitaran yang menggalakkan pertumbuhan kanser.

"Ketika ini di USM, saya meneruskan kajian sama dengan menggunakan sebatian baharu bagi merencatkan pembentukan saluran darah yang menggalakkan pertumbuhan kanser.

"Kajian bermula sejak 2013 menjurus kepada usaha untuk dipatenkan supaya manfaatnya diterima semua pihak," katanya.

Ditanya apakah yang menyebabkannya bersemangat dalam dunia perubatan, ibu kepada seorang bayi perempuan ini, berkata perasaan ingin membantu orang sering tersemat dalam sanubarinya.

"Saya percaya, tidak ada yang betul atau salah dalam sains. Apa yang penting kita perlu tetapkan pendirian dan percaya dengan diri sendiri," katanya.

LAMPIRAN 19
NEW STRAITS TIMES (SCHOOL TIMES) : MUKA SURAT 2
TARIKH : 3 JULAI 2018 (SELASA)

A.I. beats docs at cancer diagnoses

A COMPUTER was better than human **dermatologists** at identifying skin cancer in a study that **pitted** human against machine in the **quest** for better, faster **diagnostics**, researchers said in Paris recently.

A team from Germany, the United States and France taught an **artificial intelligence** system to tell apart dangerous skin **lesions** from **benign** ones, by showing it more than 100,000 images.

The machine – a **deep learning convolutional neural network** or CNN – was then tested against 58 dermatologists from 17 countries, shown photos of **malignant melanomas** and benign **moles**.

Just over half the dermatologists were at "expert" level with more than five years of experience, 19 per cent had between two and five years' experience, and 29 per cent were beginners with less than two years **under their belt**.

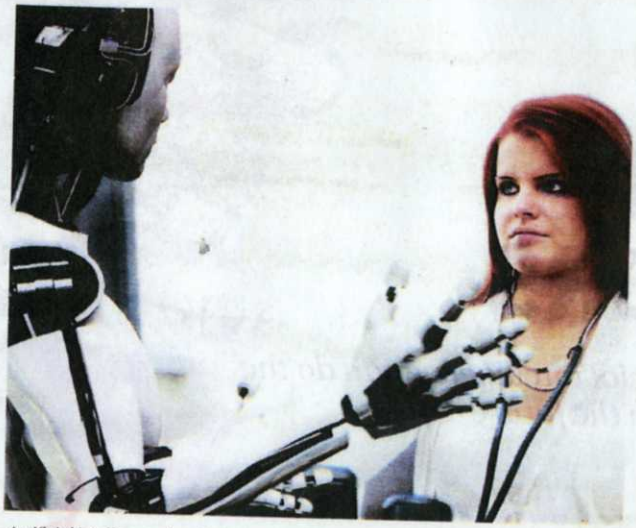
"Most dermatologists were **outperformed** by the CNN," the research team wrote in a paper published in the journal *Annals of Oncology*.

On average, flesh and blood dermatologists accurately **detected** 86.6 per cent of skin cancers from the images, compared with 95 per cent for CNN.

"CNN missed fewer melanomas, meaning it had a higher sensitivity than the dermatologists," the study's first author, Holger Haenssle of the University of Heidelberg, said.

It also "misdiagnosed fewer benign moles as malignant melanoma... this would result in fewer surgeries".

The dermatologists' performance improved when they were given more information of the patients and their skin lesions.



Artificial intelligence in robots can now help to diagnose diseases.

FOR DISCUSSION
Do you think robots can replace doctors in the near future? What are the pros and cons? Discuss.

The team said AI might be a useful tool for faster, easier diagnosis of skin cancer.

There were about 232,000 new cases of melanoma, and 55,500 deaths, in the world each year, they added.

But it is unlikely that a machine will take over from human doctors entirely, as it would be working rather as an aid.

Melanoma in some parts of the body, such as the fingers, toes and **scalp**, are difficult to image, and AI may have difficulty recognising "**atypical**" lesions or ones that patients themselves are unaware of.

"Currently, there is no **substitute** for a thorough clinical examination," experts Victoria Mar from Monash University in Melbourne and Peter Soyer of the University of Queensland wrote in an **editorial** published with the study.

From an AFP article in NST dated May 30, 2018

GLOSSARY

dermatologists [dur-muh-tol-uh-jists] doctors who study and treat skin diseases

pitted [pit-id]
make someone compete or fight against someone or something else

quest [kwest] search for something

diagnostics [dahy-uhg-nos-tiks]
device or substance used for the analysis or detection of diseases or other medical conditions

artificial intelligence [ahr-tuh-fish-uhl + in-tel-i-juhns]
the ability of a computer or other machine to perform actions thought to require intelligence

lesions [lee-zhuhns]
injury or wounds to someone's body

benign [bih-nahyn] not harmful

deep learning [deep + lur-ning]
a part of machine learning in Artificial Intelligence (AI) that has networks capable of learning by itself from data that is free or unlabelled

convolutional neural network [kon-vuh-loo-shuh-nuhl + nyoo-ruhl + net-wurk]
a specific type of artificial nerves network that uses a machine learning unit algorithm for supervised learning, to analyse data

malignant [muh-lig-nuhnt]
infectious and dangerous

melanomas [mel-uh-noh-muhs]
any of several types of skin tumours that develop from the pigment-containing cells known as melanocytes

moles [mohls]
small, natural spots or blemishes on the human skin

under their belt [uhn-der + ther + belt]
(idiom) experience

outperformed [out-per-fawrmd]
performed better than

detected [dih-tek-tid]
discovered; identified

scalp [skalp]
the skin covering the head, excluding the face

atypical [ey-tip-i-kuhl]
different from all others of the same type; unusual

substitute [suhb-sti-tyoot]
replace a person or thing with another person or thing

editorial [ed-i-tawr-ee-uhl]
article in a newspaper that expresses the editor's opinion on a subject of particular interest at the present time

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TASK: Match the questions with the correct answers based on the article read.

	Question
1.	Who or what was found to be better than humans at identifying skin cancer?
2.	How many benign and malignant tumours were shown altogether to the computer?
3.	How many of the dermatologists had between two and five years' experience?
4.	How did the dermatologists fare compared to the computer?
5.	Where were the scientists who conducted the study from?
6.	What was concluded regarding the machine's AI?

Answer
19 per cent of the dermatologists had between two and five years' experience.
On average, the dermatologists accurately detected 86.6 per cent of skin cancers from the images, compared with 95 per cent for computer.
They were from Germany, the United States and France.
A computer with Artificial Intelligence (AI) capability.
It might be a useful tool for faster, easier diagnosis of skin cancer.
Over 100,000.