

Compiled by YVONNE HO

JUST as how the Covid-19 pandemic has ripped families apart, it has brought together others. One is the family of Dr Wu Lien-Teh, dubbed the "Plague Fighter".

Born into a Malayan Peranakan family in Penang, Dr Wu was an English-educated Queen's Scholar and Cambridge University's first Chinese graduate medical doctor.

Dr Wu is internationally renowned for his distinguished career as a physician, public health practitioner and social activist. He is also the inventor of the Wu mask, the precursor of today's N95 mask.

A gentleman of honour and humility, in 1935, he became the first Malaysian to be nominated for the Nobel Prize.

Dr Wu, at only 31, led the fight against the deadly 1910-1911 pneumonic plague epidemic in Manchuria, northern China. He was given broad authority to act as Commander-in-Chief of the huge anti-plague organisation and gave orders to local doctors, the police, military and public officials alike. As a result, this outbreak ended quickly, lasting only three months.

This amazing feat earned him accolades in China and he became one of the few, if not the only person, to be decorated by both the Qing Dynasty as well as the Republic of China. Beyond China, Dr Wu has been honoured internationally by countries including France, Japan and Russia, and was bestowed an honorary doctorate by the Johns Hopkins University, USA.

In Malaysia, Dr Wu is memorialised in many ways, including three roads that are named after him (two in Penang and one in Ipoh), a mural at SJKC Hu Yew Seah (George Town, Penang), the Wu Lien-Teh sports house at his alma mater Penang Free School, a gallery at the Malaysian Institute for Medical Research (Kuala Lumpur) and by the Dr Wu Lien-Teh Society. There are further Dr Wu artefacts in China (at the Peking University People's Hospital in Beijing and Harbin Medical University), in Singapore and in the United Kingdom.

Straddling networks between Malaysia, Australia and the world as the first Malaysian-born woman to be awarded the Order of Australia, as a radiologist and music educationalist, I am a connector of people. Having achieved Covid-19 projects including that of bridging the human medical with the animal medical worlds (between intensivists and veterinarians), a second project that links Australian healthcare workers with a Taiwan-based international humanitarian organisation, I then embarked upon the mission to unite the living medical and scientific descendants of Dr Wu Lien-Teh. While there may be others

**DR CARREN TEH**  
Otorhinolaryngologist, Hospital Sungai Buloh, Selangor, Malaysia  
Dr Wu was Dr Teh's great-great-grand-uncle\*

I am an ENT (Ear, Nose and Throat) Specialist in Hospital Sungai Buloh, which is a designated Covid-19 hospital. I am not a frontliner but provide ENT consultation including those with Covid-19. Most of the Covid-19 cases of Selangor and Kuala Lumpur, the two regions that contribute to the highest number of cases in Malaysia, are sent here. Thankfully, the number of cases that we have received so far has been manageable.

What is unique about my centre is that



**DR TANG YEW WAI**,  
General practitioner Glasgow, United Kingdom  
Dr Wu was Dr Tang's great-grand-uncle\*

MY family is from Ipoh and my parents were fortunate enough to know Dr Wu when he lived and worked there during his later years.

He died just before I was born but I have known of him since I was young, as my parents always talked about him as a revered doctor and as the Plague Fighter.

With such a rousing description, to a little boy, I had imagined that he carried a gun.

Of course, his weapons were in the laboratory, and that was at a time when

who haven't been discovered yet, there are currently 17 known medical and scientific descendants of Dr Wu living in 11 different cities spanning four different continents. Six of them live in Malaysia.

These descendants are experts in a wide range of medical specialties. As our pandemic looms, all play significant roles in our respective countries.

In May 2020, I organised the Inaugural Meeting of the Medical and Scientific Descendants of Dr Wu Lien-Teh via video conferencing. No descendant had previously met all other medical or scientific descendants prior to this meeting. To honour him, we, the medical/scientific relatives, each wrote a short essay about our own pandemic front whilst reflecting upon the life and work of our ancestor and upon the knowledge that each is a descendant of Dr Wu Lien-Teh, internationally acclaimed plague fighter and noble son of Malaysia, China and the world.

Crucially, one century later, Dr Wu's legacy in Public Health lives on.

His concepts of self-protection, patient isolation, infection control and organised work processes continue to be just as relevant today as it was more than 100 years ago.

His successes, based on the principles of fighting diseases with medicine and science, and with international cooperation, away from politics, are even more relevant today than it has ever been.

This is also a story about discovering and renewing multigenerational family relationships, as we celebrate the 63rd year of the independence of Malaysia.

Here are six of Dr Wu's descendants. Selamat Hari Merdeka, Malaysia!

**Dr Yvonne Ho, a radiologist and nuclear medicine specialist, and board director of the Royal Australian and New Zealand College of Radiologists, who lives in Melbourne, Australia. Dr Wu was Dr Ho's great-grand-uncle\*. If you are a medical/scientific blood-relative of Dr Wu, please get in touch with Dr Ho via www.DrYvonneHo.com and let her know how you are related to Dr Wu Lien-Teh.**

Sungai Buloh has a historical background of being a leprosarium, known as the National Leprosy Centre. It is a Unesco Heritage site with patients who continue to live at the centre. Hospital Sungai Buloh was built in the early 2000s next to this and currently manages the National Leprosy Centre. I am proud to be part of history in the making, the second time around.

Dr Wu is a distant family member. It is only recently that we heard about his contributions to society. However, even more than 100 years later, Dr Wu's legacy continues to be seen every day in our fight against Covid-19.

This is particularly so in the ENT Department because its procedures cause significant

# The good doctor from Penang

## Medical and scientific descendants around the world honour Dr Wu Lien-Teh, the internationally acclaimed 'Plague Fighter'.

Where the medical and scientific descendants of Dr Wu Lien-Teh, The Plague Fighter, are



- Los Angeles
- Boston
- Belfast
- Glasgow
- London
- Penang
- Ipoh
- Kuala Lumpur
- Singapore
- Melbourne
- Sydney

**Malaysian success:**  
At the age of 31, Dr Wu led the successful fight against the deadly 1910-1911 pneumonic plague epidemic in Manchuria, China.

aerosolisation, requiring appropriate masking and other precautions to ensure the safety of staff, their families and patients. In his time, Dr Wu was also a champion of universal masking and other precautions for staff, patients and the public.

There is nothing I would change about how we are handling the current situation. I am very happy with the ways that public health, hospitals and clinics have come together to manage this disease. The majority of the public has played its role to help flatten the curve and this has been successful so far.

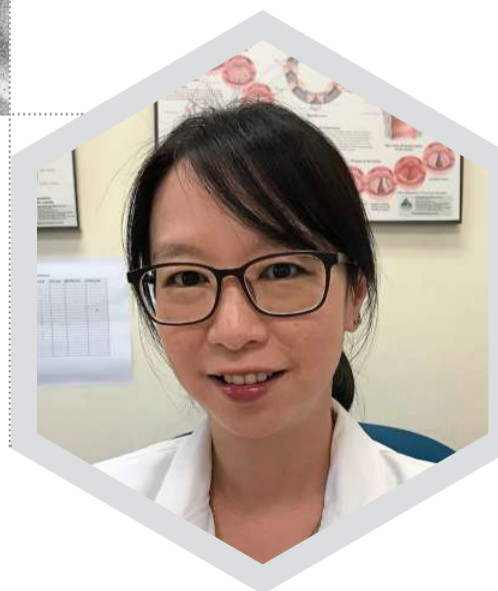
I hope the public will continue to practice the new normal because we know that this disease is not going away anytime soon.

science was not fully understood, resources were not made available and political masters had other ideas – no change there then.

Dr Wu was extremely astute in recognising that there must be an invisible airborne contagion that was responsible for the outbreak of the Manchurian pneumonic plague in 1910.

While many aspects of the practice and understanding of modern medicine have no semblance to what they were like in Dr Wu's day, his principles for the management of infectious diseases formed the foundations of what we know today and what we are grappling with in the current pandemic.

However, despite medical advances in the



last 100 years, there is still no effective treatment for Covid-19 or any available immunisation.

Trying to limit the spread of the virus has been the main direction in fighting this pandemic and the world is in lockdown.

The logistics and effects of managing a pandemic cannot be underestimated and difficult decisions have been made at the national level to balance people's lives against financial and economic cost.

As the nation and society come to grips with this pandemic, we realise that things will not be the same in terms of how people behave, how services are provided and what people expect from their healthcare service.



**DR K.W. ROY NG**  
Senior consultant, National University Hospital Singapore and associate professor, Department of Obstetrics & Gynaecology, National University Singapore  
Dr Wu was Dr Ng's grand-uncle\*

I was inspired to pursue my profession by Dr Wu Lien-Teh.

He has continued to inspire me during the SARS, Nipah, H1N1 and Covid-19 pandemics through the knowledge that he successfully brought the 1910-11 pneumonic plague in Manchuria under control with in four months, by his diplomatic negotiations with the Chinese and neighbouring governments to stop the railways, to lockdown, isolate, quarantine and mass cremate instead of bury and via the wearing of the Wu mask.

At my Department of Obstetrics & Gynaecology



frontline of this pandemic, we have prioritised our manpower, services and beds by cancelling non-essential leave, postponed non-urgent sub-specialty services apart from Obstetrics, Gynaecologic Oncology and emergencies.

We protect our team with the necessary PPE, restrict movement of healthcare professionals (HCPs) in our own and different departments and hospitals and split teams working in different areas in daily as well as weekly shifts with adequate rest.

HCPs are required to submit electronically their twice daily temperatures, illnesses, quarantine and medical leave daily. Medical leave for respiratory symptoms is a compulsory five days; febrile and/or symptomatic staff would have their RT-PCR nasopharyngeal swabs. We have commenced telemedicine, tele-education and telecommunication.

Lessons learnt from Dr Wu include: The Circuit Breaker (Partial lockdown), apart from the 10 essential services from April 7 to June 1, 2020, after the surge of Covid-19 cases in foreign worker dormitories; widespread targeted testing of the latter; de-isolating the positive but asymptomatic or mildly symptomatic workers to different non-hospital facilities; 14-day quarantine, contact tracing and monitoring of negative patients in their dormitories and mandatory wearing of face masks by all when leaving their homes since April 4, 2020.

If I could, I would mandate the public to wear a face mask when in public from the beginning of today's pandemic on Jan 23 2020 (the first case in Singapore), instead of the WHO's advice of wearing a mask only when unwell, until a surge of new cases.

**DR ALDRIN TAI KIT-SENG**  
General practitioner  
Sydney, Australia  
Dr Wu was Dr Tai's great-grand-uncle\*

I feel honoured to be a relative of the great Dr Wu Lien-Teh, and even though I was only made cognizant of Dr Wu's achievements recently, when I was privileged to read the book *Memories of Dr Wu Lien-Teh, Plague Fighter*, I am utmostly appreciative for the opportunity to have pursued a career in medicine and treasuring it as a lifelong vocation.

I am in awe of Dr Wu's remarkable contribution to medicine, especially in the field of infectious diseases, public health and



Dr Wu is one of the few, if not the only person, who has been decorated by both the Qing Dynasty as well as the Republic of China.



**DR LAM SAI KIT**  
Clinical virologist and research consultant at Universiti Malaya and senior fellow, Academy of Sciences Malaysia  
Petaling Jaya, Malaysia  
Dr Wu was Dr Lam's first cousin once removed\*

IN this month of Merdeka, it is timely to recall some Malaysian heroes that make us proud to be where we are today. An unsung hero is Dr Wu Lien-Teh.

Working with inadequate medical instruments in a laboratory that had no running water or adequate electrical supply, Dr Wu performed autopsies and cultured the bacteria responsible, providing proof that the epidemic was due to bubonic plague.

He designed a mask which offered protection to the deadly bacteria spread by droplets, and this became the forerunner of the N95 mask we know today.

Having been involved in the Nipah encephalitis outbreak in Malaysia in 1998, as well as outbreaks of emerging infectious diseases such as dengue, chikungunya, influenza and SARS over a span of 50 years, I know what it must have been like for Dr Wu to combat this zoonotic infection, multi-tasking as a clinician, epidemiologist, bacteriologist, pathologist and public-health officer.

The Covid-19 pandemic drew many lessons from the pioneering work of this Malaysian hero, the need for containment and mitigation, the wearing of face masks, the restriction on travels and the importance of contact tracing and quarantine.

Dr Wu brought the deadly plague to a close within three months.

Applying similar public health measures, Malaysia did well to control Covid-19, initiating the movement control order (MCO) on March 18, not too long after the World Health Organisation (WHO) declared it a pandemic.

I am proud to have been a signatory to the Lancet statement published on February 18 in support of Chinese scientists and health professionals to counter the conspiracy theory about the emergence of the 2019 novel coronavirus disease, and emphasise throughout the pandemic that we should practice internationalism in the fight against the pandemic, with no politicisation.

I am proud of Dr Wu Lien-Teh whose life and work has inspired me throughout my career as a virus hunter.

Selamat Hari Merdeka!



**DR KEVIN TAI MENG SENG**  
General practitioner specialising in acupuncture, Sydney, Australia  
Dr Wu was Dr Tai's great-grand-uncle\*

Dr Wu's forms of infection control continue to be essential today. This includes mask-wearing when he realised that the causative pathogen was transmissible from humans to humans and cessation of all rail travel to prevent the spread of the disease.

In today's pandemic, masking in public and suspension of air travel continue to be paramount to prevent spread.

However, these should have been undertaken earlier on.

Given that there is currently no treatment or vaccine to fight against Covid-19, we require public health measures to control the disease for the plague from a hundred years ago.

Currently, at my own frontline in Sydney, we use masks, wash hands regularly and hand-sanitise between patients and try to maintain distance between individuals as much as possible. The government has agreed to cover the cost of telehealth (that is, telephone or video conferencing for patients to consult the doctor), hence reducing the risk of infection between healthcare workers and patients.

If I could change things in today's pandemic, I would institute consistency in regulations in various states in Australia and hope governments heed warnings very early on from the WHO.

research. Being his great grand nephew, I am very proud of his achievements and he will forever be a shining light and a source of inspiration in my medical practice.

Being a family physician and GP, I am definitely in the frontline of the medical workforce in the current Covid-19 pandemic. I have witnessed a great deal of fear and anxiety in the community, the difficulty in procuring PPE and masks in the initial stages of the pandemic, and being aware of one's own vulnerability.

I can imagine the frontline in this day and age would be more challenging. More technology, more information to digest, with speed of communication leading to the need to process ideas and thoughts rapidly. Expectations are

high for a ground-breaking vaccine for Covid-19 and medicine regimes to curb this rampant infection. The fear of not procuring enough ventilators to treat our critical patients was always in the back of our minds.

Nothing could change the old adage of Dr Wu's innate qualities, astuteness, good organisational skills, compassion, resilience and the brilliant medical mind of the great man.

These are essential qualities required during our current pandemic.

\* Based on original English language kinship terminology  
For more stories of Dr Wu's descendants, see [www.DrWuLienTeh.com](http://www.DrWuLienTeh.com)