

Best Advice from my Mentors



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清华大学 医学院
TSINGHUA MEDICINE



- **First, it's not** usually your immediate supervisor
- Imparts **direction, wisdom** and **experience**
 - Leader – experience in management, people skills, balance
 - Clinician – sharp clinical acumen; patient first
 - Scientist – understands academic landscape, publishes widely, regularly and recently; obtains competitive grants
- Has “**sufficient**” **time** for you
- **Encourages** but also **rebuts**
- Clear **values**; a **role** model

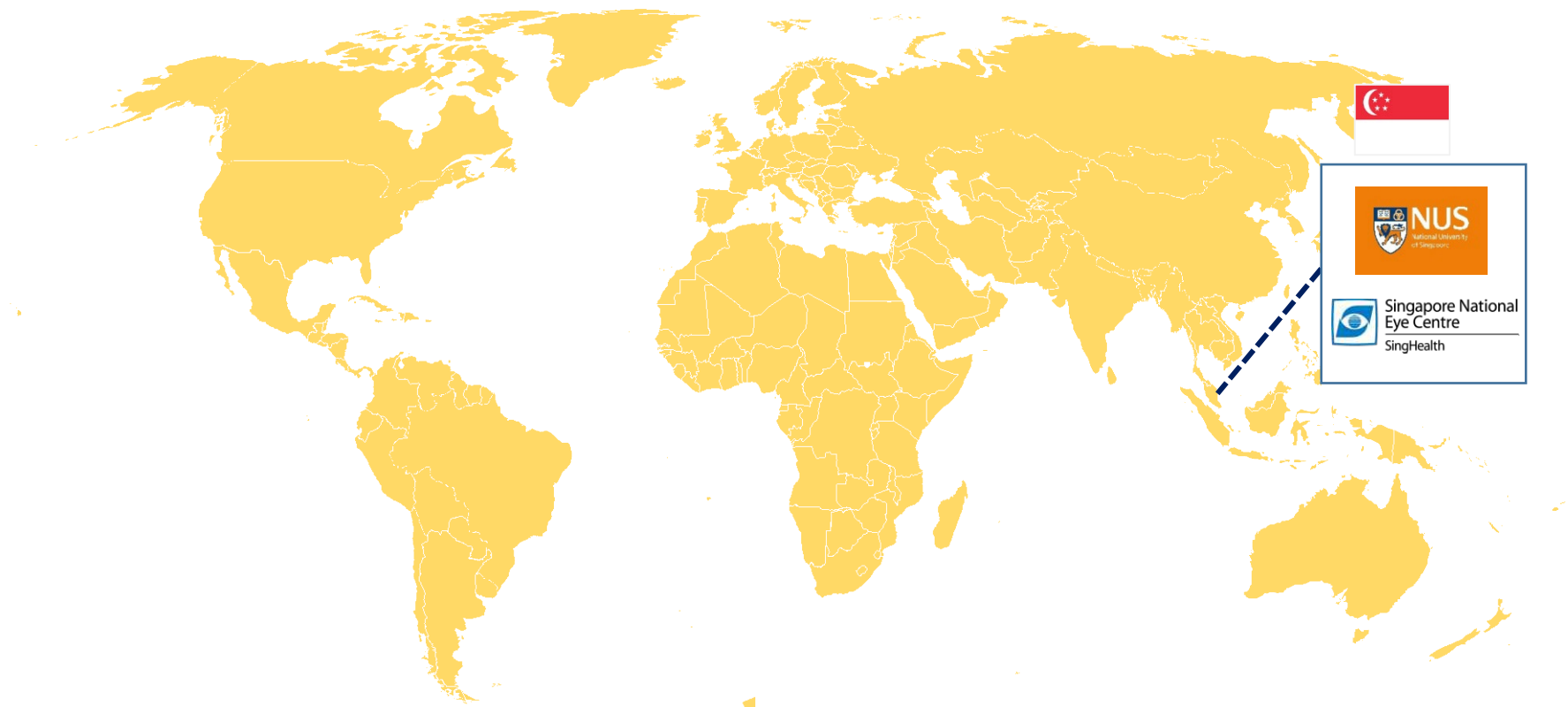
3 Groups of Mentors in my journey...

Teachers...

Visionaries (“north star”)...

Guardians (“靠山 ”)

Early Years





THE SINGAPORE NATIONAL EYE CENTRE
OFFICIAL OPENING CEREMONY
FRIDAY, 18 JANUARY 1991
GUEST-OF-HONOUR: MR YEO CHEOW TONG,
MINISTER FOR HEALTH

WELCOME

SNEC
OFFICIAL
OPENING
CEREMONY



...“SNEC will be a national center with highest quality clinical care, most innovative teaching methods and cutting-edge research” **Prof Arthur Lim, Founding Medical Director**



Advice #1. Aim high...make an impact internationally...

Arthur Lim - Inspiring perfection and fear

20 Nov 2014 | Tomorrow's Medicine

By Prof Wong Tien Yin

Medical Director, Singapore National Eye Centre
Professor and Vice Dean, Office of Clinical Sciences, Duke-NUS
Group Director, Research, SingHealth

Prof Arthur Lim was an inspiration.

I remember very clearly my first meeting with him 20 years ago when I was asked to meet him at the newly setup SNEC.

At that time, as a young first-year medical student working in a polyclinic, I was still undecided as to which medical career path to take. I was neither strongly inclined towards Ophthalmology nor prepared to be considered a competitive candidate for Ophthalmology residency. Yet upon my first meeting with Prof Lim, his raw energy and sense of mission made me accept his invitation to join him in realising his grand vision for Ophthalmology in Singapore.

As a young resident, two of the most memorable aspects of training at SNEC were an overarching sense of perfection and fear of not meeting his exacting standard. Everyone was expected to be present and punctual for the professor's teaching round. We prepared our cases as if they were for our final examinations. There was little room for mistakes. Prof Lim used to remind us that "a patient's eye is not for experimentation", and he introduced many of the quality control processes and audit that are now considered routine in our hospitals.

Prof Lim was tough, demanding and unforgiving. He was like Alex Ferguson in the way he extracted the best from his team. Prof Lim was also a polarising figure who had detractors such as those who did not agree with his policy and methods.

For example, there was unhappiness that a new breakthrough technique in cataract surgery (phacoemulsification) was introduced in SNEC almost a decade after it had been widely practised in US and other parts of Asia. However, to Prof Lim, a conservative and proven approach to surgery was important, as emphasised in his motto, "A patient's eye is not for experimentation".

Many of the best medical students were attracted to Ophthalmology in their early years because of his leadership and charisma. Many of them, like Donald Tan (past Medical Director of SNEC) and Ang Chong Lye (CEO of SGH), have given a quarter of a century to public service in SNEC, the National University of Singapore, and Ophthalmology.

Most of all, Prof Lim provided a vision for the future that would be fulfilled years later. In 1997, years before biomedical research took off in Singapore and before the conceptualisation of academic medical centres, Prof Lim saw the need for an academic environment in SNEC and formed SERI. He also started a trend of nurturing clinician-scientists and a group of MD-PhDs.

SE
be

**Advice #1. Aim high...make an impact internationally
...set high expectations to your team**



Early Years





1995...attended a lecture in SNEC...

**“come and spend a year with us”
Prof Alfred Sommer, Dean, Johns Hopkins**

THE LANCET

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No 8759

ORIGINAL ARTICLES

Efficacy of vitamin A in reducing preschool child mortality in Nepal

KEITH P. WEST, JR R. P. POKHREL JOANNE KATZ
STEVEN C. LECLERQ SUBARNA K. KHATRY
SHARADA R. SHRESTHA ELIZABETH K. PRADHAN
JAMES M. TIELSCH M. R. PANDEY ALFRED SOMMER

Community trials of the efficacy of vitamin A supplementation in reducing preschool childhood mortality have produced conflicting results. To resolve the question, a randomised, double-masked, placebo-controlled community trial of 28 630 children aged 6–72 months was carried out in rural Nepal, an area representative of the Gangetic flood plain of South Asia. Randomisation was carried out by administrative ward; the vitamin-A-supplemented children received 60 000 retinol equivalents every 4 months and placebo-treated

field trial in India failed to confirm a reduction in child mortality with vitamin A,⁸ thus, concern was raised about the potential impact of improved vitamin A nutrition on child survival across different cultures.^{9–11}

As a follow-up to the original large-dose vitamin A trial in Indonesia,⁵ a community trial in rural Nepal was undertaken to assess the efficacy of vitamin A supplementation every 4 months in reducing preschool child mortality. Such supplementation is recommended by the World Health Organisation for prevention of xerophthalmia¹² and may represent an achievable delivery schedule for child survival.


Observation that children with Vit A deficiency and night blindness → 4X higher mortality

RCT in Indonesia showing Vit A supplementation → 34% reduction in childhood mortality

Replication: RCT in Nepal showing Vit A → 30% reduction in childhood mortality
→ → RCT stopped at 12 months...

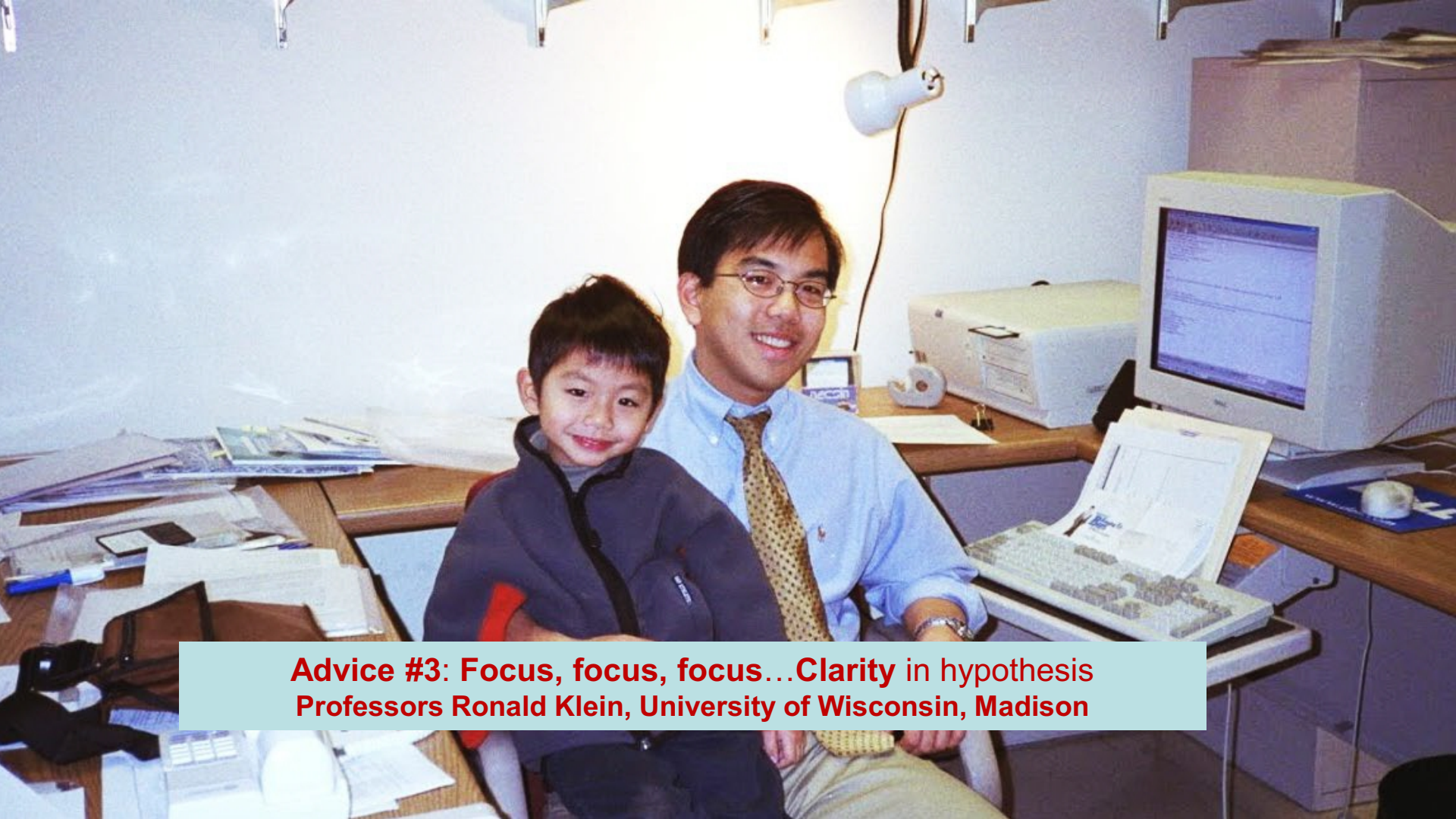


...Lasker Award “for understanding and demonstration that low-dose **vitamin A supplementation** in millions of 3rd world children can **prevent death & blindness** from infectious diseases”



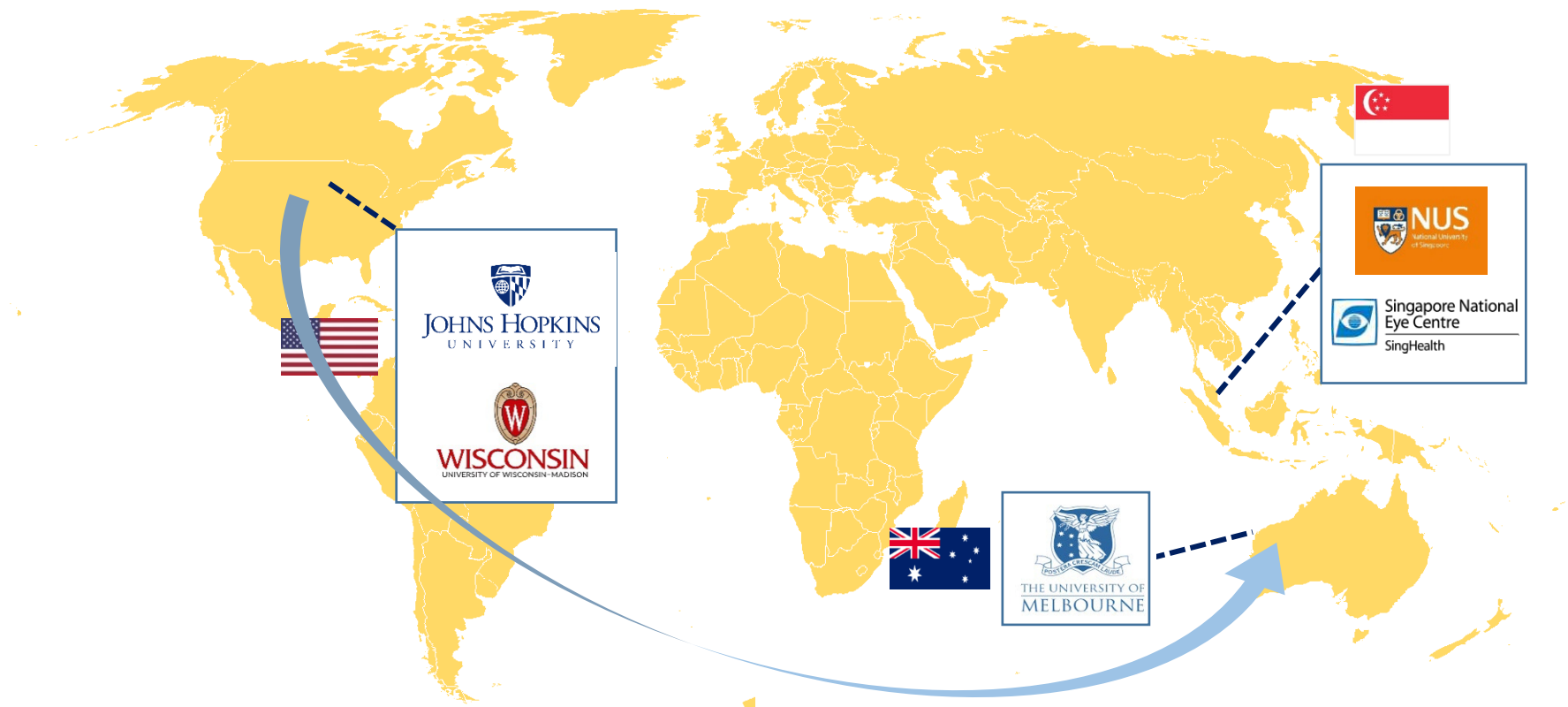
...**tradition** and **academic medicine ecosystem**; diverse **global** faculty; young, ambitious and hungry **international students**...

Advice #2. Take **some risks**...life-changing opportunities once **every 7-10 years** (...leave your comfort zone, new direction, new area, new learning, larger impact)



Advice #3: Focus, focus, focus...Clarity in hypothesis
Professors Ronald Klein, University of Wisconsin, Madison

Early Years





Advice #5. Build your network...“let me introduce you to Tien...”
Prof Paul Mitchell, University of Sydney

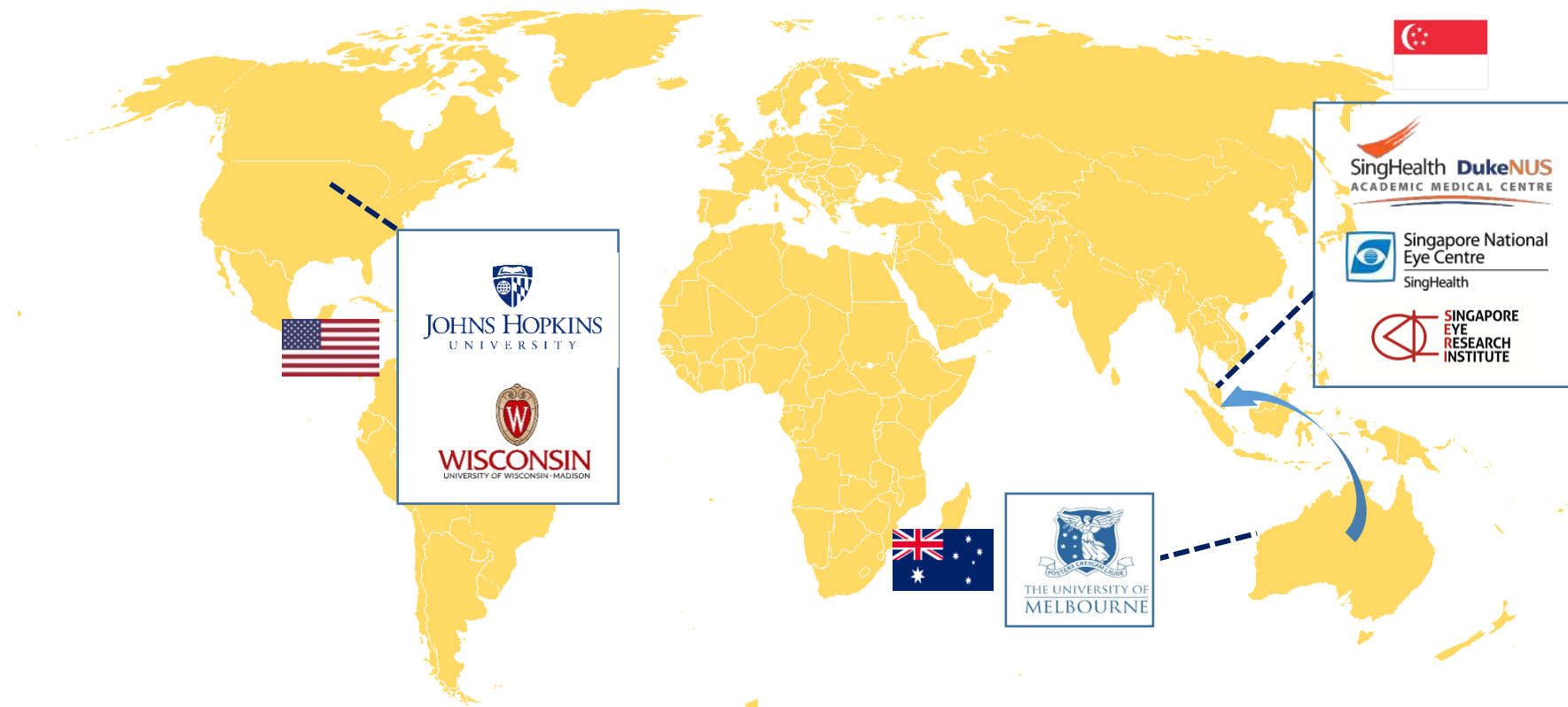
2005



Advice #6: Develop your own ideas and career direction....

“My job is to **provide the paper and the paint...you **paint** the picture...”**

Prof Hugh Taylor, University of Melbourne





2009...returned to **SERI & SNEC**...



**Advise #7. “Equanimity...don’t need to win all battles, pick and choose”
“take the long view, outlast detractors” Prof Soo Khee Chee**

Now & Future





TSINGHUA
RANKED

12th

2025 TIMES WORLD
UNIVERSITY RANKINGS

8th

“Why does Tsinghua need a **medical school**?”

Always asked **2 questions**: first question “**Why** am I in China?”

My Singaporean friends... “Am I **enjoying** it?” ...Chinese friends... “Do I **regret** it?”

New Tsinghua Medical Students Class

[2022高考情报局]清华大学医学学科带头人黄天荫：清华启动卓越医师-科学家培养计划

education.news.cn/20220606/c4dc7692dbc74725ac20e809d9245cfe/c.html





授袍仪式





...typical **weekday evenings**...

...typical **Sunday** afternoon...





Why do students work so hard?

In China, **fairness = equality of opportunity** → **Imperfect but “fair” policy measures** (e.g., high school exam 高考, publications in high IF journals) is the **least-worst** alternative...

Suffering can be endured, but not unfairness

Chaguan met Ms Xing, a medical student, praying at the God of Examinations pavilion in the museum grounds. Yes, China teaches to the test and maybe that limits innovation, she ventured. But China is unequal, with very rich and very poor regions. In such a country, collective interests trump the “personal development” that is important to foreigners, she suggested. “Just as in ancient times, people are equal when they are in the same exam.”

Inside the museum a young doctor, Ms Wang, pointed at a rowdy school group. In Western countries teachers can foster individual creativity, she said. “We have to stick to the tests, and we have no way to do tailored education.” The poor, including her former classmates from rural Henan, can change their destinies only with books and exams, she says. The party knows to take that sort of stubborn, unflashy ambition seriously. Bold talk of delivering a prosperous, high-tech China for all may have to wait, as the economy slows. But in these hard times, guaranteeing a fair shot for the diligent is one promise that rulers can ill afford to



Many students yearn to go to overseas, particularly US (美国)
...however, this has **changed** and significant **hurdles** in place



**My Advice #1. For clinician-scientist, do not give up clinical work...
30 years later...importance of being (and being seen) as a clinician in China**

Development and Validation of a Deep Learning System for Diabetic Retinopathy and Related Eye Diseases Using Retinal Images From Multiethnic Populations With Diabetes

Daniel Shu Wei Ting, MD, PhD; Carol Yim-Lui Cheung, PhD; Gilbert Lim, PhD; Gavin Siew Wei Tan, FRCSed; Nguyen D. Quang, BEng; Alfred Gan, MSc; Haslina Hamzah, BSc; Renata Garcia-Franco, MD; Ian Yew San Yeo, FRCSed; Shu Yen Lee, FRCSed; Edmund Yick Mun Wong, FRCSed; Charumathi Sabanayagam, MD, PhD; Mani Baskaran, MD, PhD; Farah Ibrahim, MB, BCh, BAO; Ngai Chuan Tan, MCI, FAMS; Eric A. Finkelstein, MHA, PhD; Ecosse L. Lamoureux, PhD; Ian Y. Wong, FRCOph; Neil M. Bressler, MD; Sobha Sivaprasad, FRCOph; Rohit Varma, MD, MPH; Jost B. Jonas, MD, PhD; Ming Guang He, MD, PhD; Ching-Yu Cheng, MD, PhD; Gemmy Chui Ming Cheung, FRCOph; Tin Aung, MD, PhD; Wynne Hsu, PhD; Mong Li Lee, PhD; Tien Yin Wong, MD, PhD

THE NEW ENGLAND JOURNAL of MEDICINE



THE NEW ENGLAND
JOURNAL of MEDICINE

ORIGINAL ARTICLE

Artificial Intelligence to Detect Papilledema from Ocular Fundus Photographs

D. Milea, R.P. Najjar, J. Zubo, D. Ting, C. Vasseneix, X. Xu, M. Aghsaei Fard, P. Fonseca, K. Vanikieti, W.A. Lagrèze, C. La Morgia, C.Y. Cheung, S. Hamann, C. Chiquet, N. Sanda, H. Yang, L.J. Mejico, M.-B. Rougier, R. Kho, T. Thi Ha Chau, S. Singhal, P. Gohier, C. Clermont-Vignal, C.-Y. Cheng, J.B. Jonas, P. Yu-Wai-Man, C.L. Fraser, J.J. Chen, S. Ambika, N.R. Miller, Y. Liu, N.J. Newman, T.Y. Wong, and V. Biousse, for the BONSAI Group*

Digital technology and COVID-19

The past decade has allowed the development of a multitude of digital tools. Now they can be used to remediate the COVID-19 outbreak.

Daniel Shu Wei Ting, Lawrence Carin, Victor Dzau and Tien Y. Wong

THE LANCET
Digital Health

A deep learning model for detection of Alzheimer's disease based on retinal photographs: a retrospective, multicentre case-control study




Carol Y Cheung*, An Ran Ran*, Shujun Wang*, Victor T T Chan, Kaiser Sham, Saima Hlail, Narayanaswamy Venkatasubramanian, Ching-Yu Cheng, Charumathi Sabanayagam, Yih Chung Tham, Leopold Schmetterer, Gareth J McKay, Michael A Williams, Adrian Wong, Lisa W C Au, Zhihui Lu, Jason C Yam, Clement C Tham, John J Chen, Oana M Dumitrascu, Pheng-Ann Heng, Timothy C Y Kwok, Vincent C T Mok, Dan Milea†, Christopher Li-Hsian Chen†, Tien Yin Wong†



My Advise #2. “Develop broad interests...read broadly...identify the future!”

天下難事
必作於易
天下大事
必作於細

老子德經第六十
三章詞典網集



My Advice #3: Approach to complex challenges

“To tackle the most difficult...start with the easiest...the biggest...start with smallest”

Final advice...back to question...“Do I regret it?”

“**No**, grateful for opportunity & journey...exceptional **learning**”

谢谢大家!



清华大学 医学院
TSINGHUA MEDICINE



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