

Leo Yee Sin



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Research/Innovation Interests:

- Arboviruses (Dengue, Zika, Chikungunya)
- Emerging Infections
- Implementation Research
- Communicable Diseases and General Infectious Diseases
- Outbreak Diseases Management

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Biography

Professor Leo Yee Sin currently holds multiple portfolios, including Senior Consultant at the Director-General Health's Office in Ministry of Health, Singapore, and Senior Advisor in National Centre for Infectious Diseases (NCID) and National Healthcare Group (NHG).

Professor Leo holds dual specialist accreditations as an adult infectious disease physician and public health practitioner. She is the inaugural Executive Director of Singapore's National Centre for Infectious Diseases (NCID) from 2017 to 2023. During her tenure, she established NCID as an innovative institution integrating clinical care, public health, research, training, and community outreach. As an Infectious Disease specialist, she has led her team through multiple outbreaks in Singapore, notably from Nipah Virus in 1999, SARS in 2003, the pandemic influenza in 2009, Zika in 2016 and COVID-19 in 2020-2022.

She has published over 400 peer-reviewed scientific papers and received numerous national awards. She was recognised as the BBC 100 women in the year 2020 and was conferred the title of "Knight of the French Order of the Legion of Honour in 2022". A recognized authority in her field, she chairs and serves as member in numerous committees and advisory boards including multiple World Health Organization workgroups.

Selected Publications

- Ng OT, Marimuthu K, Chia PY, Koh V, Chiew CJ, De Wang L, Young BE, Chan M, Vasoo S, Ling LM, Lye DC, Kam KQ, Thoon KC, Kurupatham L, Said Z, Goh E, Low C, Lim SK, Raj P, Oh O, Koh VTJ, Poh C, Mak TM, Cui L, Cook AR, Lin RTP, Leo YS, Lee VJM. SARS-CoV-2 Infection among Travelers Returning from Wuhan, China. *N Engl J Med*. 2020 Apr 9;382(15):1476-1478. doi: 10.1056/NEJMc2003100. Epub 2020 Mar 12. PMID: 32163698; PMCID: PMC7121487.
<https://www.nejm.org/doi/full/10.1056/NEJMc2003100>
- Young BE, Ong SWX, Ng LFP Lin RTP, Leo YS, Renia L, Wang LF, Lye DC; Singapore 2019 Novel Coronavirus Outbreak Research team. Viral dynamics and immune correlates of COVID-19 disease severity. *Clin Infect Dis*. 2020; ciaa1280. doi: 10.1093/cid/ciaa1280. PMID: 32856707.
<https://academic.oup.com/cid/article/73/9/e2932/5898476?login=false>
- Young BE, Fong SW, Chan YH Leo YS, Wang LF, Renia L, Lee VJ, Smith GJD, Lye DC, Ng LFP. Effects of a major deletion in the SARS-CoV-2 genome on the severity of infection and the inflammatory response: an observational cohort study. *Lancet*. 2020; 396(10251):603-611. doi: 10.1016/S0140-6736(20)31757-8. PMID: 32822564.
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31757-8/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31757-8/fulltext)
- Tan CW, Chia WN, Young BE, Zhu F, Lim BL, Sia WR, Thein TL, Chen MI, Leo YS, Lye DC, Wang LF. Pan-Sarbecovirus Neutralizing Antibodies in BNT162b2-Immunized SARS-CoV-1 Survivors. *N Engl J Med*. 2021 Oct 7;385(15):1401-1406. doi: 10.1056/NEJMoa2108453. Epub 2021 Aug 18. PMID: 34407341; PMCID: PMC8422514.
<https://www.nejm.org/doi/full/10.1056/NEJMoa2108453>
- Rochwerg B, Agarwal A, Zeng L, Leo YS Guyatt G. Remdesivir for severe covid-19: a clinical practice guideline. *BMJ*. 2020; 370:m2924. doi: 10.1136/bmj.m2924. PMID: 32732352.
<https://www.bmj.com/content/371/bmj.m4542>
- Goh YS, Fong SW, Tay MZ, Rouers A, Chang ZW, Chavatte JM, Hor PX, Loh CY, Huang Y, Tan YJ, Wang B, Ngoh EZX, Mohd Salleh SN, Lee RTC, Lim G, Maurer-Stroh S, Wang CI, Leo YS, Lin RTP, Lam MC, Lye DC, Young BE, Ng LFP, Renia L. Higher Delta variant-specific neutralizing antibodies prevented infection in close contacts vaccinated with ancestral mRNA vaccines during the SARS-CoV-2 Delta wave. *Sci Rep*. 2023 Nov 7;13(1):19331. doi: 10.1038/s41598-023-46800-x.
<https://www.nature.com/articles/s41598-023-46800-x>
- McClelland A, Bali S, Dowell SF, Kruk M, Leo YS, Samaan G, Wang W, Hennenfent Z, Lazenby S, Liu A, Wanyenze RK, Nuzzo JB. Multisectoral resilience for the next global health emergency. *BMJ Glob Health*. 2023 Oct;8(Suppl 6):e013320. doi: 10.1136/bmjgh-2023-013320.
https://gh.bmj.com/content/8/Suppl_6/e013320

Notable Research Awards & Grants from Past 5 Years

Name of Awards & Grants	Year Obtained
NHIC Innovation to Develop (I2D) Grant A Rapid Point-of-Care Test Kit for Diagnosing Zika Virus Infection	2019
NHIC Innovation to Protect (I2P) Grant Invention Title: Biomarker Detection System	2019

Translating Research Into Healthcare

2023:

- Elderly urged to get 2nd Covid-19 booster jab to protect against severe illness. Published on 07 Jan 2023. <https://www.straitstimes.com/singapore/people-80-years-and-older-should-get-up-to-date-vaccine-protection-to-ward-against-severe-covid-19-say-experts>
- The Big Read: Through the frontliners' eyes, what went well and what fell short in Singapore's Covid-19 fight. Published on 18 Feb 2023.
<https://www.todayonline.com/big-read/big-read-through-frontliners-eyes-what-went-well-and-what-fell-short-singapores-covid-19-fight-2110646>
<https://www.todayonline.com/big-read/big-read-short-report-card-ground-spores-covid-19-fight-2110696>
<https://www.channelnewsasia.com/singapore/big-read-covid-19-pandemic-frontliners-vaccines-foreign-workers-3288056>
- Experts' verdict: mostly an A. Published on 20 Feb 2023.
<https://www.straitstimes.com/singapore/s-pore-handled-covid-19-well-despite-a-few-shortcomings-experts>
- "சிங்கப்பூர் மிகவும் சிறப்பாக ாயல்பட்டது (S'pore handled Covid-19 well, despite a few shortcomings: Experts)". Published on 20 Feb 2023. *No url
- Heart of the Matter - S3E33: NCID chief and vaccine expert on long days, missed meals and flying in a fog during COVID-19 fight. Published on 31 Mar 2023.
CNA Corporate Webpage (HOTM page):
<https://www.channelnewsasia.com/listen/heart-matter/ncid-chief-and-vaccine-expert-long-days-missed-meals-and-flying-fog-during-covid-19-fight-3386786>
CNA Facebook Page:
<https://www.facebook.com/93889432933/posts/pfbid0oXpPQ1g1pmBneiQAGxcyuJEeS91KNKB9Dp5VXrJc8XLdGgpRxvGawyLqJq3b68mhl/?d=w&mibextid=DcJ9fc>
CNA938 Facebook Page:
<https://www.facebook.com/100055657225487/posts/pfbid0sYyrFUYk45DYkRm2Zp5W7MSJ4yN8rSFsPXo82FT9nfm6vTMpMBUEpMpt3Uug6LvGl/?d=w&mibextid=DcJ9fc>
CNA LinkedIn Page:
https://www.linkedin.com/posts/channelnewsasia_heart-of-the-matter-s3e33-ncid-chief-and-activity-7047371926930927617-krdH?utm_source=share&utm_medium=member_ios
- Heart of the Matter: NCID chief and vaccine expert reflect on sacrifices and lessons in COVID-19 fight. Published 01 Apr 2023.
<https://www.channelnewsasia.com/podcasts/heart-matter-ncid-chief-and-vaccine-expert-reflect-sacrifices-and-lessons-covid-19-fight-3387676>
<https://m.youtube.com/watch?v=ZC-L2VVgb8I>
<https://www.channelnewsasia.com/watch/heart-matter-ncid-chief-and-vaccine-expert-experience-they-went-through-singapores-covid-19-fight-video-3401496?fg-aqp=ZoFf0IPi9ZOQA1aFZ1A5ju%252FqQiUsZBLUKhxu88tpYffBkXQ0MvLVWj3VR%252FAxCTmDOU%252F0oT%252FCvuyf7uU7455O%252BpNRrRGoZIDkTPsfAb6nA%252Fma%252FuwaT6HX2JRHjb1ByEWOLKr%252BbYPY2LYyGtWfqDrxnaHeYjPEfouTI6qOEd9jai85v2Ej%252FGZ5NKLqxnTcGSc45wjQo4RI%252FZ7Jch%252Br%252B4jFeQ73QTD25%252B%252F69xntPc%252FW7FiQS9KjyYbKR4DVzVnC6JZoGJobxP87rOC70XephRpfM%252FfBr2HK5Wem5wq70lhXLumvZtr2Tzpf8%252F2xRlf%252BeX%252F7ju8dYONijGuywKJM%253D>

- "近期冠病病例偏高 超市口罩检测仪销量增两三成 (With recent rise in COVID-19 cases, sale of masks and ART test kits in supermarkets increased by 20 per cent). Published on 13 Apr 2023. <https://www.8world.com/singapore/covid-19-rise-in-demand-for-masks-and-art-kits-following-recent-surge-in-cases-2105261>
- Not true that Omicron deadlier than flu, say Singapore experts. Published on 17 Apr 2023. <https://www.straitstimes.com/singapore/not-true-that-omicron-is-more-deadly-than-the-flu-say-experts-here>
- Bukit Panjang Covid-19 volunteers, PA staff given medallions as appreciation for helping residents. Published on 30 Apr 2023. <https://www.straitstimes.com/singapore/bukit-panjang-covid-19-volunteers-pa-staff-given-medallions-as-appreciation-for-helping-residents>
- 梁玉心：望二合一疫苗推出 同时对抗冠病及流感 (Professor Leo hopes that there can be a vaccine that deals with Omicron and Influenza). Published on 30 Apr 2023. https://www.zaobao.com.sg/realtime/singapore/story20230430-1389027?fbclid=IwAR1LqvP-7Bplv2V_KJ5ybpFRn3q3pYXi3MqHayR3wp7pb3wrhe8lefr6zKI
- "Usaha atasi virus baru harus dipergiat walau pandemic Covid-19 berlalu: NCID (Efforts to overcome the new virus should be intensified even after the Covid-19 pandemic passes: NCID). Published on 30 Apr 2023. <https://www.beritaharian.sg/setempat/usaha-atasi-virus-baru-harus-dipergiat-walau-pandemik-covid-19-berlalu-ncid?fbclid=IwAROPz4woncbNMb4uyabrO7BAmhC4iyogr4tLi0rvFvBL21Qn7TSabxUgWv8>
- "NCID executive director Leo Yee-Sin looks forward to the availability of 2-in-1 vaccine to fight COVID-19, influenza at the same time 梁玉心：望二合一疫苗推出 同时对抗冠病及流感. Published on 01 May 2023. https://www.zaobao.com.sg/realtime/singapore/story20230430-1389027?fbclid=IwAR1LqvP-7Bplv2V_KJ5ybpFRn3q3pYXi3MqHayR3wp7pb3wrhe8lefr6zKI
- Executive Director of the National Centre for Infectious Diseases: COVID-19 gradually ending, but tasks to deal with future variants of virus come into focus. Covid-19 kian berlalu tapi tugas tangani virus baru pada masa depan giat dapat tumpuan. Published on 01 May 2023. <https://www.beritaharian.sg/setempat/pengarah-eksekutif-pusat-penyakit-berjangkit-nasional-covid-19-kian-berlalu-tapi-tugas>
- Bukit Panjang COVID-19 volunteers, PA staff given medallions as appreciation for helping 9நவிக் கரம் நீட்டியோருக்கு அங்க்காரம் ,பதக்க"Published on 01 May 2023. *No url
- Hospitalisations and ICU admissions for COVID-19 reach highest levels this year; expert warns of more mild cases being admitted to prevent severe illness. 冠病患者 住院及 ICU 人数今年最高" Published on 02 May 2023. *No url
- "It's a good time to pass the baton": NCID chief Leo Yee Sin on leaving her role after six years". Published on 05 May 2023. [It's a good time to pass the baton': NCID chief Leo Yee Sin on leaving her role after six years - CNA \(channelnewsasia.com\)](https://www.channelnewsasia.com/singapore/ncid-chief-leo-yee-sin-leaving-role-after-six-years)
- Why do people get reinfected with COVID and are the symptoms more severe. Published on 05 May 2023. <https://www.mediaportal.com/0jg2012349278>

- "Leo Yee-Sin: Epidemic network should be established throughout country to prevent large-scale infectious diseases in the future.梁玉心：吸取冠病疫情教训 全国应建立流行病网络防治未来大规模传染病" Published on 08 May 2023.
<https://www.zaobao.com.sg/realtime/singapore/story20230507-1391852>
<https://www.zaobao.com.sg/news/singapore/story20230508-1391933>
- Behind The Mask: Our Healthcare Story. Published on 12 May 2023.
<https://www.channelnewsasia.com/watch/behind-the-mask>
- Moving from front line to command post in war on diseases. Published on 04 Jun 2023.
<https://www.straitstimes.com/singapore/leo-yee-sin-shifting-from-front-lines-to-the-war-room-in-fight-against-future-disease-outbreaks>