

## Barnaby Edward Young

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Research Interests



- Respiratory viruses
- Clinical Trials
- Immunology and Vaccines
- Human challenge studies

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### Biography

A/Prof Barnaby Young is an infectious disease senior consultant at NCID and TTSH and jointly appointed at Lee Kong Chian School of Medicine. He is Head of the Singapore Infectious Disease Clinical Research Network (SCRN) at NCID and co-ordinates prospective observational studies and randomised controlled trials in collaboration with public hospitals and polyclinics in Singapore. His research interests are in respiratory viral infections including SARS-CoV-2 and influenza. He is database core lead in Programme for Research in Epidemic Preparedness and Response (PREPARE), Ministry of Health and received the NMRC CSA to conduct a SARS-CoV-2 Human Challenge Study. He has held >\$8 million in research grants as principal investigator and published >110 peer reviewed papers in top journals such as NEJM, Lancet, JAMA and Science.

### Selected Publications

- 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.  
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- 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>
- Pung R, Chiew CJ, Young BE, Chin S, Chen MI, Clapham HE, Cook AR, Maurer-Stroh S, Toh MPHS, Poh C, Low M, Lum J, Koh VTJ, Mak TM, Cui L, Lin RVTP, Heng D, Leo YS, Lye DC, Lee VJM; Singapore 2019 Novel Coronavirus Outbreak Research Team. Investigation of three clusters of COVID-19 in Singapore: implications for surveillance and response measures. *Lancet*. 2020 Mar 28;395(10229):1039-1046. doi: 10.1016/S0140-6736(20)30528-6  
<https://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2820%2930528-6/fulltext>
- Young BE, Fong SW, Chan YH, Mak TM, Ang LW, Anderson DE, Lee CY, Amrun SN, Lee B, Goh YS, Su YCF, Wei WE, Kalimuddin S, Chai LYA, Pada S, Tan SY, Sun L, Parthasarathy P, Chen YYC, Barkham T, Lin RTP, Maurer-Stroh S, 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 Aug 29;396(10251):603-611. doi: 10.1016/S0140-6736(20)31757-8. Epub 2020 Aug 18. PMID: 32822564; PMCID: PMC7434477.  
[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)
- Tong SYC, Lye DC, Yahav D, Sud A, Robinson JO, Nelson J, Archuleta S, Roberts MA, Cass A, Paterson DL, Foo H, Paul M, Guy SD, Tramontana AR, Walls GB, McBride S, Bak N, Ghosh N, Rogers BA, Ralph AP, Davies J, Ferguson PE, Dotel R, McKew GL, Gray TJ, Holmes NE, Smith S, Warner MS, Kalimuddin S, Young BE, Runnegar N, Andresen DN, Anagnostou NA, Johnson SA, Chatfield MD, Cheng AC, Fowler VG Jr, Howden BP, Meagher N, Price DJ, van Hal SJ, O'Sullivan MVN, Davis JS; Australasian Society for Infectious Diseases Clinical Research Network. Effect of Vancomycin or Daptomycin With vs Without an Antistaphylococcal  $\beta$ -Lactam on Mortality, Bacteremia, Relapse, or Treatment Failure in Patients With MRSA Bacteremia: A Randomized Clinical Trial. *JAMA*. 2020 Feb 11;323(6):527-537. doi: 10.1001/jama.2020.0103. PMID: 32044943; PMCID: PMC7042887.  
<https://jamanetwork.com/journals/jama/fullarticle/2760737>
- Young BE, Ong SWX, Kalimuddin S, Low JG, Tan SY, Loh J, Ng OT, Marimuthu K, Ang LW, Mak TM, Lau SK, Anderson DE, Chan KS, Tan TY, Ng TY, Cui L, Said Z, Kurupatham L, Chen MI, Chan M, Vasoo S, Wang LF, Tan BH, Lin RTP, Lee VJM, Leo YS, Lye DC; Singapore 2019 Novel Coronavirus Outbreak Research Team. Epidemiologic Features and Clinical Course of Patients Infected With SARS-CoV-2 in Singapore. *JAMA*. 2020 Apr 21;323(15):1488-1494. doi: 10.1001/jama.2020.3204

- Tan CW, Chia WN, Qin X, Liu P, Chen MI, Tiu C, Hu Z, Chen VC, Young BE, Sia WR, Tan YJ, Foo R, Yi Y, Lye DC, Anderson DE, Wang LF. A SARS-CoV-2 surrogate virus neutralization test based on antibody-mediated blockage of ACE2-spike protein-protein interaction. *Nat Biotechnol.* 2020 Sep;38(9):1073-1078. doi: 10.1038/s41587-020-0631-z. Epub 2020 Jul 23. PMID: 32704169.  
<https://www.nature.com/articles/s41587-020-0631-z>
- Wee LE, Tay AT, Chiew C, Young BE, Wong B, Lim R, Lee CL, Tan J, Vasoo S, Lye DC, Tan KB. Real-world effectiveness of nirmatrelvir/ritonavir against COVID-19 hospitalizations and severe COVID-19 in community-dwelling elderly Singaporeans during Omicron BA.2, BA.4/5, and XBB transmission. *Clin Microbiol Infect.* 2023 Oct;29(10):1328-1333. doi: 10.1016/j.cmi.2023.06.016. Epub 2023 Jun 17.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10275656/>
- Chia WN, Tan CW, Tan AWK, Young B, Starr TN, Lopez E, Fibriansah G, Barr J, Cheng S, Yeoh AY, Yap WC, Lim BL, Ng TS, Sia WR, Zhu F, Chen S, Zhang J, Kwek MSS, Greaney AJ, Chen M, Au GG, Paradkar PN, Peiris M, Chung AW, Bloom JD, Lye D, Lok S, Wang LF. Potent pan huACE2-dependent sarbecovirus neutralizing monoclonal antibodies isolated from a BNT162b2-vaccinated SARS survivor. *Science advances.* 2023 Jul 28;9(30):eade3470. doi: 10.1126/sciadv.ade3470 [doi] eade3470  
<https://www.science.org/doi/10.1126/sciadv.ade3470>
- Poh XY, Tan CW, Lee IR, Chavatte JM, Fong SW, Prince T, Hartley C, Yeoh AYY, Rao S, Chia PY, Ong SWX, Lee TH, Sadarangani SP, Lin RJH, Lim C, Teo J, Lim DRX, Chia W, Hiscox JA, Ng LFP, Ren EC, Lin RTP, Renia L, Lye DC, Wang LF, Young BE. Antibody Response of Heterologous vs Homologous Messenger RNA Vaccine Boosters Against the Severe Acute Respiratory Syndrome Coronavirus 2 Omicron Variant: Interim Results from the PRIBIVAC Study, a Randomized Clinical Trial. *Clin Infect Dis.* 2022 Dec 19;75(12):2088-2096. doi: 10.1093/cid/ciac345  
<https://academic.oup.com/cid/article/75/12/2088/6583615>

## Notable Research Awards & Grants

Name of Awards & Grants	Year Obtained
<b>RIE2020 Collaborative CG Seed Funding</b> A multi-centered prospective study to detect and characterise 2019 Novel Coronavirus (2019-nCoV)	2020
<b>NMRC COVID-19 Research Fund</b> Understanding the clinical features and immune-pathogenesis of COVID-19	2020
<b>NMRC COVID-19 Research Fund</b> ACTIV-3: Therapeutics for Inpatients with COVID-19	2020
<b>COVID-19 Research Fund 3rd Grant Call</b> Duration of immune response and identification of markers of sequelae in SARS-CoV-2 recovered patients	2020
<b>NMRC COVID-19 Research Fund</b> Singapore COVID-19 Vaccine Immune Response and Protection Study (SCOPE)	2021
<b>NMRC COVID-19 Research Fund</b> Heterologous Prime-Boost-Boost Vaccine Combinations for Long-Term Humoral and Cellular Immunity Against COVID-19	2021
<b>Programme for Research in Epidemic Preparedness And Response (PREPARE) Core Funding 1 (Infectious Disease Clinical and Research Databases)</b>	2022
<b>Clinician Scientist Award (CSA) Investigator (INV) Category</b> The Singapore Platform for Controlled Human Infections with SARS-CoV-2 ('Sing-CoV')	2023

## Translating Research Into Healthcare

- Long Covid casts a long shadow over Asia as patients cry out for a cure. Published on 29 Jan 2023. <https://www.scmp.com/week-asia/health-environment/article/3208117/long-covid-casts-long-shadow-over-asia-patients-cry-out-cure>
- RVAC gets HSA approval to begin phase 1B trial in Singapore to evaluate three Covid-19 mRNA vaccine candidates. Published on 21 Feb 2021. <http://www.pharmabiz.com/NewsDetails.aspx?aid=156474&sid=2>
- RVAC Medicines Secures HSA Approval to Initiate Phase 1B Clinical Trial in Singapore. Published on 27 Feb 2023. <https://medicaex.com/prnewswire/rvac-medicines-secures-hsa-approval-to-initiate-phase-1b-clinical-trial-in-singapore/>

- Detik Semasa 2023/2024 S1 Ep1. Published 17 May 2023. <https://www.mewatch.sg/show/Detik-Semasa-2023-2024-367693>
- Local study: Inflammation of long COVID can be recovered within two years. Published on 27 Jun 2023. <https://www.zaobao.com.sg/news/singapore/story20230626-1408125>
- Vaccination matters: He lost all his immunity to cancer treatment and then got Covid-19. Published on 26 Jul 2023. <https://www.straitstimes.com/life/vaccination-matters-he-lost-all-his-immunity-to-cancer-treatment-and-then-got-covid-19>
- CLINICAL UPDATE: Vaccination reduces risks of long-COVID and death. Published on 23 Aug 2023. <https://specialty.mims.com/topic/vaccination-reduces-risks-of-long-covid-and-death>