Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

normal load group, 45 (88·2% [76·1–95·6], p<0·0001) of 51 participants in the sonelokimab 120 mg augmented load group, and 41 (77·4% [63·8–87·7], p<0·0001) of 53 participants in the secukinumab 300 mg group. Compared with the placebo group (0 [0·0%; 95% CI 0·0–7·0] of 52 participants), a significantly higher proportion of participants in the sonelokimab 120 mg augmented load group had a PASI 90 response at week 12 (39 [76·5%; 62·5–87·2] of 51 participants; p<0·0001).

Although not formally powered as a head-to-head study of sonelokimab versus secukinumab, the preliminary findings reported in this Article[1] suggest that nanobody IL-17 inhibition could match or even surpass traditional antibody therapies used in psoriasis. Studies have shown that inhibition of IL-17A binding to the IL-17 receptor A chain is 30-fold higher with sonelokimab versus secukinumab.[3] Further studies to evaluate the comparative advantages of blockade with nanobodies versus canonical antibodies in psoriasis and other disorders treated with biologics are needed, and the potential of this class of molecules to improve current treatments for psoriatic arthritis is also anticipated.

Therapeutic blockade of the IL-17 pathway is not without risk, and the side-effects of this class of drugs, including mucocutaneous fungal infection and possible exacerbation of inflammatory bowel disease, were also observed in this study.[1] A higher incidence of *Candida* infections was observed in patients who received sonelokimab compared with those who received placebo. Similarly, a higher incidence of mucocutaneous infections were reported in patients with psoriasis who were given bimekizumab, which targets both human IL-17A and IL-17F, than observed in trials of other biologics used to treat chronic plaque psoriasis.[4] As highlighted by the authors,[1] the smaller size of the nanobody compared with conventional monoclonal antibodies, combined with the addition of IL-17F modulation, could impart important differences that influence the overall safety and improve the efficacy of psoriasis treatment.

This research is noteworthy for a few reasons. First, the study represents the first phase 2b assessment of nanobody technology in psoriasis and expands the number of patients and duration of therapy of sonelokimab in those with chronic plaque psoriasis. Second, the results add to what is known about the efficacy and safety of IL-17 blockade when specific receptor profiles are interrupted. Finally, this is the first phase 2b study in which two forms of IL-17 blockade were investigated.

Nanotechnology in immunotherapeutics continues the trajectory of more targeted, efficacious, and commercially stable treatment options, building on the knowledge of inhibition of the downstream effects of the IL-17 ligand–IL-17 receptor complex. Concurrent advances in the safety of such specific targeting is also imperative and are eagerly awaited.

I declare no competing interests.

Diana Rubel
diana@wodendermatology.com.au

Australian National University, Canberra, ACT 2605, Australia

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Human rights and fair access to COVID-19 vaccines: the International AIDS Society–*Lancet* Commission on Health and Human Rights

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The rapid development of safe and effective COVID-19 vaccines has been an unprecedented scientific achievement and offers a promise for a healthy post-pandemic future. However, inequitable vaccine access has jeopardised that vision, and our global governance institutions have failed to anticipate, prevent, or redress this inequality. As of March 21, 2021, 78% of 447 million deployed doses of COVID-19 vaccines were in only ten countries.[1,2] Nearly a quarter of the world's population might not have access to these vaccines before 2022.[3]

As members of the newly established International AIDS Society–*Lancet* Commission on Health and Human Rights, we are dismayed at how little attention has been given to human rights in discussions of access to COVID-19 vaccines. This must change. Unless we hold to the principle that everyone has equal rights to dignity, to health, and to benefit from scientific progress, our success against COVID-19 is at risk.

Unlike research efforts to develop COVID-19 vaccines, plans for distributing vaccines in low-income and middle-income countries (LMICs) have been underwhelming.[4] The consequences are serious. SARS-CoV-2, like any virus, mutates.[5] Incomplete vaccine coverage, alongside ongoing community transmission, facilitates emergence of SARS-CoV-2 variants, which may lower vaccine efficacy, something already seen in South Africa.[6] Yet the internationally supported COVAX funding mechanism provides only 20% coverage of immunisation for LMICs.[7] This coverage is insufficient to reach all who need it or to control viral spread. What citizen, health-care provider, or public health official of a wealthy nation would find 20% vaccine coverage acceptable?

Inequitable access to COVID-19 vaccines and therapeutics mirrors wider health and health-care inequities and is grounded in broader structural inequalities, putting some populations at greater risk than others. In many countries, COVID-19 cases and deaths are highest among Indigenous populations and racial minorities, the working poor, as well as prisoners and detainees.[8,9] In some regions, such as southeast Asia, migrant workers are not prioritised for vaccination despite high risks for COVID-19 infection due to poor living conditions.[10,11] Many millions of displaced people are barely considered in COVID-19 vaccine distribution schemes.[12,13] Some, including the Rohingya refugees from Myanmar, have been actively excluded.[14]

A human rights approach offers an alternative. The right to the highest attainable standard of health was first articulated in 1946 in the Constitution of WHO, and nearly every country in the world has ratified at least one international agreement that imposes specific obligations on governments regarding the right to health, including obligations related to "The prevention, treatment and control of epidemic, endemic, occupational and other diseases".[15] The International Covenant on Economic, Social and Cultural Rights lays out extraterritorial obligations for international assistance and cooperation that are widely understood to include equitable global vaccine distribution.[15]

The notion that it is acceptable for the global wealthy to be protected from a life-threatening virus while the global poor suffer unprotected was challenged decades ago. After the development of effective antiviral therapy for HIV/AIDS, about 95% of the world's people living with HIV had no access. But by 2000, the obligation to respond was uncontested, leading to the establishment of The Global Fund to Fight AIDS, Tuberculosis and Malaria and the US President's Emergency Plan for AIDS Relief (PEPFAR), increased financing from development partners, and a restructuring of global trade and financing structures for HIV treatments, driven by grassroots activism, which enabled access to affordable therapy worldwide.[16]

Similarly, the global community understood with smallpox eradication in the 1970s that smallpox anywhere was smallpox everywhere. A successful smallpox vaccine effort was achieved, despite the tensions of the Cold War, amid multiple wars of decolonisation and liberation.[17] It was understood, on scientific and social justice grounds, that all of humanity would need to be protected to eradicate the disease.

As science achieves such remarkable advances as the COVID-19 vaccines, it is compellingly clear that we cannot exclude our fellow human beings from benefiting from this advance. Allowing that kind of injustice is not only legally, politically, and morally unacceptable, but it also undermines all of our humanity. Inequitable access to COVID-19 vaccines is also reckless public health practice.

There have been demands for a people's COVID-19 vaccine with expedited vaccine production and equitable distribution.[18] The governments of South Africa and India have asked the World Trade Organization to waive some intellectual property rights for medical products until widespread vaccination is in place worldwide.[19] UN human rights experts have called on pharmaceutical

***Panel:* Framing questions the Commission will interrogate**

1 What is the future of the health and human rights framework?
2 How can the health and human rights framework be revitalised and reinvigorated to achieve healthy communities?
3 What domains of the health and human rights framework are most relevant for ensuring robust health systems and universal access to prevention and care?

companies to "refrain from causing or contributing to adverse impacts on the rights to life and health by invoking their intellectual property rights and prioritizing economic gains".[20] On scientific, humanitarian, and human rights grounds, we need a major effort to create a comprehensive system for COVID-19 vaccine production, funding, allocation, distribution, and deployment, based on true global solidarity.[21] The potential introduction of COVID-19 vaccine passports reinforces the importance of equitable vaccine distribution to avoid unfair distribution within resource-constrained settings and further undermining the development of emerging economies.[22] We should insist that a substantial proportion of vaccines manufactured for the high-income countries be made available to LMICs, concentrating on those vaccines with the best data on effectiveness for all; this was the approach taken with the smallpox vaccine programme and could serve as a precedent for use of COVID-19 vaccines, which must be seen as global public goods.

The Commission had its first meeting in early 2021 and expects to produce its first full report in 2022. The key questions that will inform our work are shown in the panel. We are charged with examining how to ensure that human rights are at the core of global health efforts, enabling them to fulfil the lofty goals outlined in the WHO Constitution, in international human rights treaties, and in many national constitutions and legal frameworks: that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction and that the health of all peoples is fundamental to the attainment of peace and security and is dependent on the fullest cooperation of individuals and states.[23] The Commission's work will seek to strengthen and expand health and human rights efforts to include emerging areas that impact the right to health, including misinformation, disinformation, social media, and the politicisation of health information; the climate crisis and the right to a sustainable environment; and the social determinants of health arising from inequity, social injustice, and conflict and displacement.

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*Commissioners of and collaborators with the International AIDS Society–*Lancet *Commission on Health and Human Rights*

cbeyrer@jhu.edu

The Commissioners of the International AIDS Society–*Lancet* Commission on Health and Human Rights are *Chris Beyrer (Commission Co-chair), Pascale Allotey, Joseph J Amon, Stefan D Baral, Mary T Bassett, Harriet Deacon, Lorraine T Dean, Lilianne Fan, Rita Giacaman, Carolyn Gomes, Sofia Gruskin, Samer Jabbour, Michel Kazatchkine, Lucy Stackpool-Moore, Allan Maleche, Martin McKee, Sandra Hsu Hnin Mon, Vera Paiva, Alena Peryskina, Dainius Pūras, Leonard Rubenstein, and Adeeba Kamarulzaman (Commission Co-chair). Lawrence Corey is an author of this Comment but is not a formal member of the Commission.

Center for Public Health and Human Rights, Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD 21205, USA (CB, SDB, SHHM, LR); United Nations University International Institute for Global Health, Kuala Lumpur, Malaysia (PA); Office of Global Health, Drexel Dornsife School of Public Health, Philadelphia, PA, USA (JJA); Francois-Xavier Bagnoud Center for Health and Human Rights, Harvard University, Boston, MA, USA (MTB); Department of Anthropology, University of Cape Town, Cape Town, South Africa (HD); Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA (LTD); Geutanyoe Foundation and Asia Pacific Refugee Rights Network, Kuala Lumpur, Malaysia (LF); Institute of Community and Public Health, Birzeit University, Birzeit, West Bank, occupied Palestinian territory (RG); NGO Delegation, Global Fund for HIV, Tuberculosis and Malaria, Kingston, Jamaica (CG); Institute on Inequalities in Global Health, University of Southern California, Los Angeles, CA, USA (SG); Faculty of Health Sciences, American University of Beirut, Lebanon (SJ); Global Health Center, Graduate Institute for International Affairs and Development, Geneva, Switzerland (MK); International AIDS Society, HIV Programmes and Advocacy, Geneva, Switzerland (LS-M); Kenya Legal and Ethical Issues Network on HIV and AIDS, Nairobi, Kenya (AM); London School of Hygiene & Tropical Medicine, London, UK (MM); Institute of Advanced Studies, University of São Paulo, Brazil (VP); AIDS Infoshare, Moscow, Russia (AP); Human Rights Monitoring Institute, Department of Psychiatry, Vilnius University, Vilnius, Lithuania (DP); Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia (AK)

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Build back fairer: achieving health equity in the Eastern Mediterranean region of WHO

The Eastern Mediterranean region of WHO stretches from Morocco in the west to Pakistan in the east. This region's 22 countries and territories contain great contrasts. Life expectancy in Kuwait—84 years for women, 79 years for men—is 25 years longer than in Somalia.[1] The region contains among the richest countries in the world, measured by income per person (Kuwait, Qatar, and United Arab Emirates), and among the poorest (Afghanistan, Djibouti, and Yemen).[2] Similar to other regions, non-communicable diseases are a major burden, and ischaemic heart disease is the leading cause of premature mortality in the region.[3] Unlike other regions, deaths related to conflict are increasing in the Eastern Mediterranean region. There have been more than 100 000 conflict-related deaths per year since 2014 in this region, and most such deaths in the world occur in the Eastern Mediterranean region.[4] Linked to conflict is massive displacement of people. By 2019, an estimated 6·7 million people had left Syria and 6·2 million had been internally displaced.[5] In Yemen and Iraq, the numbers of displaced people are in the millions.[6,7] Looking more generally at migrants, large numbers are received by Iran, Jordan, Lebanon, Pakistan, and Saudi Arabia.[8]

Conflict and COVID-19 both expose and amplify existing inequities in society. Inequities in health can be linked to poverty and income inequality; inequities in social conditions through the life course; gender inequities; problems related to extremes of weather, made worse by climate change; and land degradation with impacts on supplies of food and water. Against this background, the Commission on Social Determinants of Health in the Eastern Mediterranean was charged with assembling the evidence on social determinants of health and on inequities in health within and between countries and to make recommendations. The Commission was convened in 2019 by the WHO Regional Office for the Eastern Mediterranean in collaboration with the Institute of Health Equity at University College London and the Alliance for Health Policy and Systems Research, Geneva. The Commission's report *Build Back Fairer: Achieving Health Equity in the Eastern Mediterranean Region* was published on March 31, 2021.[9] The *Build Back Fairer* title was chosen as a deliberate echo of a 2020 report on COVID-19 and socioeconomic and health inequalities in England.[10] Emerging from the COVID-19 pandemic, with its large impacts on society, is an opportunity to ask how, based on the best evidence, societies and health systems can be rebuilt in a way that benefits all people. Doing so will be a major step to building greater health equity.

Khaled Abdullah/Reuters

A woman with her children at a camp for internally displaced people, outskirts of Sanaa, Yemen, March 1, 2021

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