

Questionnaire

UK COVID-19 Inquiry: Module 2 - Rule 9 Request to Professor Danny Altmann - Reference: M2/ISAGE/01/PDA

1. A brief overview of your qualifications, career history, professional expertise and major publications.

Synopsis of career history, expertise, publications:

BSc University of London; PhD University of Bristol (1983) - Department of Microbiology, University of Bristol. (MRC Training Award): The Immunoregulation of Herpes Simplex Infection

Work as a medical research scientist at international centres of excellence: Weizmann Institute of Science, Imperial Cancer Research Fund, MRC Clinical Sciences Centre, Imperial College Faculty of Medicine. Professor of Immunology at Imperial College since 2005.

2011-2013: Wellcome Trust. Head: Pathogens, Immunity and Population Health

Medical journal Editorships (since 2000): Clinical and Experimental Immunology; Immunology; Vaccine; Oxford Open Immunology

Expertise:

Altmann's infectious disease/immunology contributions span cellular and molecular immunology discoveries, and during the pandemic, roles in research, policy- and public-engagement.

He is an authority on HLA gene products and their interactions with T cell receptors, among the first 'hands-on' creators of transgenic strains for immunogenetic characterisation of immunity, his HLA transgenic strains adopted for decades as a global community resource. Early examples of cloning, expression, function and disease studies included studies on HLAII and ICAM-1 in antigen presentation and of HLAII presentation in bacterial or autoimmune disease. Work with a former clinical fellow, D Douek, first showed HIV-mediated breakdown in gut mucosal integrity and chronic microbial translocation leading to inflammation, as then targeted in many clinical trials.

The Altmann-Boyton lab rapidly mobilised for **COVID-19 and Long Covid** – their papers among the most highly cited of immunology studies during the pandemic. An early paper is considered the first peer-reviewed piece addressing **Long Covid, setting out the research agenda**. There was real-time need for immune correlates in SARS-CoV-2 infection and vaccination. Examples included work on the **relationship between T cell and neutralising antibody following infection**, the discovery of enhanced **'hybrid immunity'** in infected-then-vaccinated people, and **'immune imprinting' by variants followed by vaccination**. The team published the first evidence of COVID reinfection, the first comparative meta-analysis of vaccine efficacy and, in Science, one of the first papers delineating the impact of oncoming variants of concern on vaccine efficacy. **Policy impact** was demonstrable, the work highlighted at Tony Fauci's televised White House briefing. The team have published 43 peer-reviewed papers on COVID-19, including 5 in Science, 2 in Lancet and 1 in Nature - papers widely featured in the international press (Altmetrics:2000-7000).

Altmann acted in a wide range of policy advisory roles during the pandemic, including the House of Commons and House of Lords Science Committees, the Long Covid APPG, advice to the Cabinet Office, to Sir Keir Starmer/Shadow Cabinet, the EU, Scottish Parliament, WHO, NICE. He wrote policy papers as part of the British Society for Immunology (BSI) Task Force to **SAGE**. With Sir Patrick Vallance, he presented the UK view at the European 'Pandemic to Endemic' policy meeting. **With a patient he co-authored the Penguin Long Covid Handbook** (published 20/10/22). He has had a high comms profile, including near-daily TV, radio, and newspaper appearances, BBC Panorama, BBC Newsnight, and

invited columns in The Guardian and The Times. With the BSI he worked extensively with community groups across ethnic backgrounds, addressing vaccine hesitancy.

Altmann has diverse infectious disease-global health collaborations, including research/training links in Vietnam, Thailand, Ethiopia, Brazil - with A. Siqueira, setting up REBRACOVID, a pan-Brazilian COVID-19 cohort.

Key peer-reviewed publications during Covid-19

Altmann DM, Douek DC, Boyton RJ. What policy makers need to know about COVID-19 protective immunity. *The Lancet*. 2020 May 16;395(10236):1527-1529. doi: 10.1016/S0140-6736(20)30985-5. Epub 2020 Apr 27. PMID: 32353328; PMCID: PMC7185915.

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after first vaccine dose. **Science**. 2021 Apr 30;372(6549):1418–23. doi: 10.1126/science.abh1282. Epub ahead of print. PMID: 33931567; PMCID: PMC8168614.

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2. An outline of when you participated in Independent SAGE, the role that you performed and any matters that you advised on.

I had appeared in Independent SAGE broadcasts as an expert discussing vaccinations in April 2020, and was then invited to join as a permanent member. Since then I have taken part in the weekly public broadcasts as an expert on immunity, vaccines, boosters and Long Covid and am a co-author on 2 publications from the group.

3. A summary of any reports and/or articles you have written, interviews and/or evidence you have given regarding the work of SAGE and/or its subcommittees and/or the UK's response to the Covid-19 pandemic. Please include links to those documents where possible.

As far as I am aware, I have not written or given evidence about SAGE or its sub-committees. Any views that bear on the UK COVID-19 response have been within newspaper columns for the Guardian and the BMJ:

<https://www.theguardian.com/commentisfree/2022/apr/16/vaccines-long-covid-science>

<https://www.theguardian.com/commentisfree/2022/jul/01/herd-immunity-covid-virus-vaccine>

<https://www.theguardian.com/commentisfree/2022/mar/28/uk-cant-rely-on-boosters-new-wave-covid>

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<https://www.bmj.com/content/bmj/378/bmj.o1793.full.pdf>

<https://blogs.bmj.com/bmj/2020/08/14/finding-the-best-covid-19-vaccine-should-not-be-a-race/>

4. Your views as to whether the work of SAGE and/or its subcommittees in responding to the Covid-19 pandemic (or the UK's response more generally) succeeded in its aims.

We have previously invited independent members of SAGE and its subcommittees to address this issue by reference to the matters set out below. You may find them of assistance, although we recognise that some are likely to be beyond your knowledge. Please address this issue as you see fit.

- Not having been present for the meetings themselves I am poorly placed to answer this. Briefly:
- I know and have worked with many of the SAGE members. On the whole the groups were appropriately configured.
- *The advice given and/or recommendations that were made/The extent to which applicable structures and policies were utilised and/or complied with and their effectiveness:* I can only comment to the general effect that, as far as I was aware, appropriate expertise was present and sound recommendations offered.

4. Your views as to any lessons that can be learned from the UK's response to the Covid-19 pandemic, in particular relating to the work of SAGE and/or its subcommittees. Please describe any changes that have already been made, and set out any recommendations for further changes that you think the Inquiry should consider making.

- I have worked on Pandemic Preparedness since I was taking part in international forums on this while at the Wellcome Trust in 2011. My impression is that we came into COVID-19 exceptionally poorly prepared. There are many lessons to be learned ready for the undoubted appearance of future pandemics, including from cross-over into humans of other related coronaviruses. I am unaware of any evidence that such lessons are being taken on board. I was gratified by willingness early in the pandemic to be 'guided by the science'. Indeed, the UK had an invaluable and widely envied resource in its national ONS and NHS datasets, supported by add-ons such REACT. I would have valued greater, ongoing adherence to this approach, as I consider that threats to public health are best addressed using public health measures and expertise.

6. A brief description of documentation relating to these matters that you hold (including soft copy material held electronically). Please retain all such material. I am not asking for you to provide

None