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.

Authors' reply

We thank Kay Weng Choy for the interest in our work and we agree that the results of the chemical assays should consider endogenous compounds. However, performance analysis of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) serological assay that we used in our experiment showed that icterus and lipaemia were minimally affected, but false positive results can occur as a result of severe haemolysis.[1] However, there was no positive result in our test; therefore, there was no haemolysis in our specimens. Antibodies are known to remain stable in frozen storage over time,[2] and our specimens were stored at –80°C. Autoimmune diseases are immune disorders with overproduction of autoantibodies. Autoimmune disease with hypogammaglobulinaemia is very rare; between 1982 and 2006, detailed descriptions of patients with systemic lupus erythematosus who have hypogammaglobulinaemia only appeared in ten articles in the English literature and only 16 cases were reported.[3] Some patients will develop drug-related hypogammaglobulinaemia during treatment, but our serum samples were taken from patients with new onset disease who had not received prior treatment, and no patient had hypogammaglobulinaemia. To ensure this, these patients were routinely examined (eg, for antibodies, immunoglobulins, etc) and results were recorded on our database.

Although the SARS-CoV-2 test is not specific, a specificity of 91% still has a high positive predictive value, and we did not identify any false positive findings in the investigated population, which is as expected due to the absence of COVID-19 infection in patients when the samples were taken. We acknowledge and share the concerns about the negative predictive value due to the assay sensitivity of 89% but we believe the test is still a viable option for large-scale screening in an asymptomatic population. Indeed, specificity and sensitivity must be accurately identified in a low-prevalence setting.[4] Nevertheless, the purpose of our analysis was not to show that this serological test for COVID-19 should be used alone to diagnose patients. We wanted to show that there is no cross-reactivity with autoantibodies from autoimmune disease, and we believe that with the further clarifications described here we can still conclude that this absence of cross-reactivity is likely to be the case.

We declare no competing interests.

*Jialin Teng, *Jin Dai*
wzdjsx@sina.com

Department of Rheumatology and Immunology (JT) and Department of Laboratory Medicine (JD), Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai 200025, China

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