


特定非営利活動法人 日本免疫学会  
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 研究発表報告書

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出席会議名	Annual meeting for the American Association of Immunology 2023			
発表論文タイトル	Role of germinal center response in the antibody responses against SARS-CoV2- Spike protein			

実施結果:

My abstract was accepted for a poster presentation on the 14<sup>th</sup> of May, during the AAI meeting in Washington DC. Our poster elucidated how genetic defects in follicular T helper cells signaling and differentiation influences acquired immunity against variants spike proteins of SARS-CoV2. Interestingly, disrupting germinal center response at the early events of B cell activation by Spike protein significantly attenuated production of anti-Spike IgG titers, and resulted in weak cross-reactivity to Omicron variant, compared to control wild type mouse model. Surprisingly, this involvement of germinal center activity was absent after booster immunization, in which extrafollicular B cell responses could be at major play. Additionally, we evaluated the role of IL-4 and IL-21 cytokines, which are critical players in germinal center activation of B cells and found a crucial role of these cytokines in the induction of sufficient antibody production at early time points, which had a significant impact on cross-reactivity to other spike variants. In conclusion, our results suggest that dominant cytokine milieu at the earliest stage of differentiation dictates the broad immunity to SARS-CoV-2 spike variants.

In addition to presenting these findings and getting valuable feedback and eye-opening questions from experts in the field, my participation in this meeting supported me in creating a networking and useful circle of interaction with immunologists from various backgrounds. I could also attend different kinds of lectures and workshops, in immunology teaching techniques, grant writing tips, resume and interview mastering, in addition to immunology lectures in all topics of current interest.

I am very thankful for this financial and generous support from the JSI that provided me with this dream opportunity.