Members of the Fcγ receptor (FcγR) family. FcγRIIA is the most abundantly expressed FcγR in human blood circulation. However, mice do not express FcγRIIA, and murine platelets are completely devoid of FcγRs.

**Methods** To model IC-mediated response more accurately, as they occur in humans, transgenic FcγRIIA (FcγRIIA\(^{TGN}\)) mice expressing FcγRIIA on platelets and certain leukocytes, were used in this study. As acute model, we intravenously injected ICs in FcγRIIA\(^{TGN}\) and FcγRIIA\(^{GN}\) mice and monitored mouse reaction and platelet activation. To model platelet response to chronic exposure to ICs, we backcrossed NZB mice with FcγRIIA\(^{TGN}\) mice, generating NZB:FcγRIIA\(^{TGN}\) mice and crossed the mice with NZW mice, thus generating NZB::NZW:FcγRIIA\(^{TGN}\) and NZB::NZW:FcγRIIA\(^{GN}\) mice. Platelet activation was monitored through time in these mice.

**Results** Platelet activation by acute exposure to ICs through a mechanism requiring expression of platelet FcγRIIA resulted in the induction of systemic shock. IC-driven shock was dependent on release of serotonin from platelet dense granules secondary to platelet outside-in signaling by αIIbβ3 and its ligand fibrinogen. On FcγRIIA activation, platelets underwent sequestration, but surprisingly they returned in the blood circulation with emptied granules after activation. Strikingly, remiscient observations were made in lupus NZB::NZW:FcγRIIA\(^{TGN}\) mice. We found significant platelet activation and circulating degranulated platelets, uniquely in mice expressing FcγRIIA.

**Conclusions** Platelet activation in IC-mediated pathogenesis is well recognized. In lupus patients, platelets are found activated in blood circulation, however, to what extend ICs and FcγRIIA contribute to platelet activation was unknown. Here, we showed that the expression of FcγRIIA is critical to adequately examine platelet role in lupus.

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**AI-06**

**LUPUS NEPHRITIS IS LINKED TO DYSBIOSIS, INCREASED GUT LEAKINESS AND IMMUNITY TO AN INTESTINAL COMMENSAL LACHNOSPIRACEA SPECIES**

**Background** A transmissible agent has long been suspected in the pathogenesis of SLE, yet the potential contribution of the human intestinal microbiome has been little examined. We therefore characterized the gut microbiota of patients with SLE, with special interest in those with lupus nephritis (LN).

**Methods** To model IC-mediated response more accurately, as they occur in humans, transgenic FcγRIIA (FcγRIIA\(^{TGN}\)) mice expressing FcγRIIA on platelets and certain leukocytes, were used in this study. As acute model, we intravenously injected ICs in FcγRIIA\(^{TGN}\) and FcγRIIA\(^{GN}\) mice and monitored mouse reaction and platelet activation. To model platelet response to chronic exposure to ICs, we backcrossed NZB mice with FcγRIIA\(^{TGN}\) mice, generating NZB:FcγRIIA\(^{TGN}\) mice and crossed the mice with NZW mice, thus generating NZB::NZW:FcγRIIA\(^{TGN}\) and NZB::NZW:FcγRIIA\(^{GN}\) mice. Platelet activation was monitored through time in these mice.

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**Conclusions** Platelet activation in IC-mediated pathogenesis is well recognized. In lupus patients, platelets are found activated in blood circulation, however, to what extend ICs and FcγRIIA contribute to platelet activation was unknown. Here, we showed that the expression of FcγRIIA is critical to adequately examine platelet role in lupus.

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