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## **SigN's clinical immunomonitoring platform for the assessment of immune responses in cohort studies and clinical trials**

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The Clinical Immunomonitoring Platform at the Singapore Immunology Network (SigN) is dedicated to defining immunomarkers and immunological endpoints with clinically relevant impact via high-throughput acquisition of immunological data from cohort studies and clinical trials. The Platform leverages on the scientific expertise of SigN's Principal Investigators (PI) supported by a suite of capabilities including the following facilities: Flow Cytometry/FACS/ Luminex, CyTOF, Functional Genomics, and a comprehensive Bioinformatics team. The Platform is routinely involved from the initial stages of study design to sample processing, biobanking, assay running and downstream analysis. The complex datasets generated from the measurement of immune and clinical parameters are integrated into the translational data warehousing system, TranSMART, analyzed using well-established pipelines, and interpreted. The Platform has a well-defined workflow and project management infrastructure, which is capable of engaging all phases of research from early discovery all the way up to the assessment of Phase IV clinical trials. The Platform's capabilities can be exploited to yield outcomes spanning diverse applications including biomarker discovery, target identification and the assessment of vaccine clinical trials. Examples of current clinical trial studies conducted by the Platform include (i) The assessment of immunosenescence and responsiveness to Influenza vaccination in the elderly and (ii) An investigation of the microbiome and host immune modulation during treatment with different antibiotic regimens.

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