

28AB-ISMS05 **Identification of Predictive Gene Expression Signatures Associated with the Therapeutic Effects of Infliximab, Tocilizumab and Abatacept in Rheumatoid Arthritis**

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While the best outcomes using biologic agents to treat Rheumatoid Arthritis (RA) patients, depends on timely adaptation of therapies, determining first biologic for RA patients still lacks a standard methodology. We studied the baseline genome-wide gene expression patterns of 209 RA patients' whole blood, prior to administration of infliximab (IFX), tocilizumab (TCZ) or abatacept (ABT). Based on gene set enrichment analysis, we have identified predictive gene signatures associated with the therapeutic effects of IFX, TCZ and ABT, namely inflammasome pathway, genes specifically expressed in B cells and in NK cell-specific genes, respectively. We believe each gene signature is likely related to the target pathway of each biologic agent.