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Title: An Open-labeled Phase II Trial of VDJ-001, a High-Affinity IL-6R Antagonist Antibody, for the Treatment of Patients with Idiopathic Multicentric Castleman Disease

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Introduction: Interleukin-6 (IL-6) targeted therapy has been recommended as the most important treatment option for idiopathic Multicentric Castleman Disease (iMCD). This study aims to assess the safety and efficacy of VDJ-001, a novel IL-6R monoclonal antibody (mAb), in iMCD.

Methods: A total of 9 iMCD patients with active disease were enrolled in this single-arm, open-label, multi-center, dose-escalation study from April, 2022 to September, 2022. All patients received VDJ-001 infusion in three dose groups (4mg/kg, n=3; 6mg/kg, n=3; 8mg/kg, n=3) every 2 weeks (each infusion was considered as a cycle) for 22 cycles, 4mg/kg dose were subsequently given to all patients since C23D1.

Results: The median age at the time of enrollment was 42 (29-52) years old, and the male to female ratio was 2:1. By May 31, 2024, a median of 46 cycles (92 weeks) (range: 38-52 cycles) of treatment were given to patients. All three doses of VDJ-001 were safe and well-tolerated, even during the Covid-19 pandemic. While most of them revealed low grade 1-2 of adverse reaction, three patients experienced Grade 3 level of adverse events which did not lead to discontinuation of the drug. By Week 8, the overall response rate (ORR) (according to CDCN criteria) was 55.56%; by week 20, the ORR was 77.78%; by week 32, the ORR was 88.89%; by week 80, the ORR was 100%.

Summary: VDJ-001, a novel high-affinity anti-IL-6R mAb, exhibited excellent safety and efficacy profiles in iMCD patients.