1. No.
   2023Y006

2. Title
   Potential Involvement of α7 nAChR in the Onset and Exacerbation of Myasthenia Gravis

3. Period
   2023-2025

4. Summary
   This study was conducted based on the hypothesis that the α7 nicotinic acetylcholine receptor is involved in the regenerative mechanisms of the neuromuscular junction in myasthenia gravis, using both muscle biopsy specimens and clinical data. Although clear detection of motor endplates and complement deposition was not achieved in muscle biopsy samples, this was considered likely due to sampling limitations inherent to biopsies performed in routine clinical practice. In contrast, clinical analysis revealed a higher tendency for progression to generalized disease among patients with a history of smoking, suggesting the involvement of nicotine-related pathways. Taken together, while direct evaluation using human tissue has inherent limitations, these findings suggest a potential role of α7 receptor–mediated mechanisms in disease modulation, warranting further investigation using animal models.