

# Development of Hit/Lead compound using PKC $\eta$ inhibitory drugs for treating multiple sclerosis

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| IMMUNOLOGY               | Hit   |
|--------------------------|---|
| Product Type             | Small molecule  |
| Indication               | Relapsing-Remitting MS (RRMS), Secondary-Progressive MS (SPMS), Primary-Progressive MS (PPMS)   |
| Target                   | PKC $\eta$  |
| MoA(Mechanism of Action) | <ul style="list-style-type: none"> <li>Cellular mechanism: Induction of regulatory T cells/ Suppression of Th17 cells</li> <li>Molecular mechanism: Inhibition of PKC<math>\eta</math></li> </ul>   |
| Competitiveness          | <ul style="list-style-type: none"> <li>In patients with multiple sclerosis, the number and function of regulatory T cells are impaired. Ocrelizumab, which depletes B cells, has shown positive clinical outcomes, but prolonged administration leads to vulnerability to infections. Moreover, current medications have continuous relapse upon drug discontinuation. Therefore, a therapeutic strategy that increases regulatory T cells in the body to induce long-term immune tolerance is considered a key approach for multiple sclerosis.</li> <li>The small molecule targeting PKC<math>\eta</math> in this project can induce regulatory T cells, thereby alleviating disease progression over the long-term.</li> </ul> |
| Development Stage        | Hit   |
| Route of Administration  | Oral administration   |