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Development of BET protein inhibitory macular degeneration treatment that simultaneously targets neovascularization and inflammation inhibition

BENOBIO Co., Ltd.

Disease Area	Ophthalmology(AMD)
Product Type	Synthetic small molecule drug
Indication	Wet AMD
Target	The Bromodomain Extraterminal (BRD) protein
Mechanism of Action	**BBRP11001(BBC1501)**: BBC1501 has been found to bind to BRD2 and inhibit the expression of genes that induce angiogenesis and inflammation. By employing a dual-targeted mechanism, it suppresses fundamental inflammation through the regulation of transcription levels of macular degeneration disease-related genes (IL6, CCL2, CXCL8) and inhibits neovascularization by suppressing the VEGF and PDGFB gene.
Competitiveness	***Expansion of Target for Macular Degeneration Treatment*** - By identifying a novel epigenetic target, it is possible to develop a first-in-class new drug that fundamentally addresses the root cause of macular degeneration through dual targeting of neovascularization and inflammation inhibition. - Such approach enhances treatment effectiveness for macular degeneration patients who have developed resistance to existing treatments by developing targeted therapies that are distinct from current macular degeneration treatments. ***Novel target protein for AMD therapy (BRD2)*** - Benobio research team's selected and developed BET inhibitor (BBC1501) exhibits a unique characteristic of selectively binding to BRD2, a protein that regulates the expression of genes involved in inflammation and angiogenesis.
Development Stage	Non-clinical study (GLP) & IND document
Route of Administration	Intravitreal Injections

Key Data