

# Development of a novel c-Abl and LRRK2 dual inhibitor for Parkinson's Disease Treatment

1ST Biotherapeutics, Inc.



NEUROSCIENCE	Phase 1
Product Type	NCE
Indication	Parkinson's Disease (PD) and other neurodegenerative diseases
Target	c-Abl/LRRK2 dual inhibitor
MoA(Mechanism of Action)	<ul style="list-style-type: none"> <li>• Reduction of <math>\alpha</math>-synuclein aggregation and inhibition of neuroinflammation: Suppresses c-Abl-induced <math>\alpha</math>-syn aggregation and microglial inflammation, preventing degeneration and neuronal death.</li> <li>• Induction of autophagy, particularly increased autolysosomal flux: Restores lysosomal function and LRRK2-related impaired autophagy, aiding in the removal of abnormal protein aggregates like <math>\alpha</math>-syn, A<math>\beta</math>, and tau—known contributors to degenerative brain diseases.</li> </ul>
Competitiveness	<ul style="list-style-type: none"> <li>• A first-in-class disease-modifying agent for treatment of neurodegeneration</li> <li>• Unique mechanisms through simultaneous inhibition of c-Abl and LRRK2</li> <li>• Extremely selective over off-target kinases/GPCR's/channels</li> <li>• Excellent brain penetration and developability</li> <li>• Desired therapeutic index to achieve biomarker alteration</li> </ul>
Development Stage	Phase 1
Route of Administration	Oral Administration (PO)