

Study to derive a final lead candidate of TCR-T cell therapy for the treatment of EGFR L858R mutant lung cancer patients

Disease Area	ONCOLOGY
Product Type	TCR-T Cell Therapy
Indication	Solid tumor
Target	EGFR mutant neoantigen (peptide-MHC)
Mechanism of Action	<ul style="list-style-type: none">Targeting tumor specific neoantigen (peptide-MHC)Engineering patient-derived CD8+ T cells by replacing endogenous TCR with exogenous potent TCRsEnhancing cytotoxic T-cell’s tumor microenvironment (TME) infiltration and T-cell stemness by T-cell engineering with proprietary switch receptor and cytokines
Competitiveness	<ul style="list-style-type: none">DAAN Biotherapeutics TCR-T cell therapy targets an oncogenic driver mutation, EGFR-mutation, which is highly tumor specific, minimizing non-target toxicity for clinical developmentTARGET platform discovers novel TCRs recognizing neoantigens (peptide-MHC), as well as tumor-specific and tumor-associate antigens from patients’ tumor tissuesProprietary TCR-T cell therapy platform, which includes switch receptor and engineered cytokine, enhances anti-tumor efficacy by improving cytotoxic T-cell’s TME infiltration and T-cell memory functions
Development Stage	Preclinical development
Route of Administration	Ex vivo TCR gene/cell engineering – intravenous injection
Key Data	<div><div><div><div><div>DN - 101</div><div><div><div><div><div>Activation</div><div>Convert signal BOOSTS anti-tumor activity initiated by TCR-pMHC signal</div></div><div><div><div>Activation</div><div>Autocrine of cytokines promotes persistence in vivo</div></div></div><div><div>TCR</div><div>MHC I</div><div>Signal Converter</div><div>Inhibitory signal ligand</div><div>Cytokine</div></div><div><div>Cancer cell</div><div>High MHC class I</div><div>TME friendly condition</div></div></div></div></div><div><div>Target cell (EGFR L858R, HLA-A 33:03)</div><div><div><div>Cytolysis (%)</div><div>100</div><div>80</div><div>60</div><div>40</div><div>20</div><div>0</div></div><div><div>0</div><div>6</div><div>12</div><div>18</div><div>24</div><div>30</div><div>36</div></div><div><div>After co-culture with effector cell (hr)</div></div><div><div>Untransduced (UTD)</div><div>TCR KO</div><div>DN-101.1</div><div>DN-101.2ab</div></div></div></div><div><div>PDC in NOG mouse</div><div>(EGFR-L858R, HLA-A*33:03)</div><div><div><div>Control</div><div>TCR KO</div><div>UTD</div><div>DN101.1</div><div>DN101.2ab</div></div><div><div>50</div><div>25</div><div>0</div><div>-25</div><div>-50</div></div><div><div>TGI 50</div><div>TCI 75</div></div></div></div><div><div>Survival (%)</div><div>100</div><div>80</div><div>60</div><div>40</div><div>20</div><div>0</div></div><div><div>Control</div><div>UTD</div><div>TCR KO</div><div>DN101.1</div><div>DN101.2ab</div></div></div></div></div></div>