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KT-621, an Oral, Once Daily, Targeted STAT6 Degrader: First-in-Human Phase 1a Safety, Pharmacokinetics, Pharmacodynamics and Th2 Biomarker Effects

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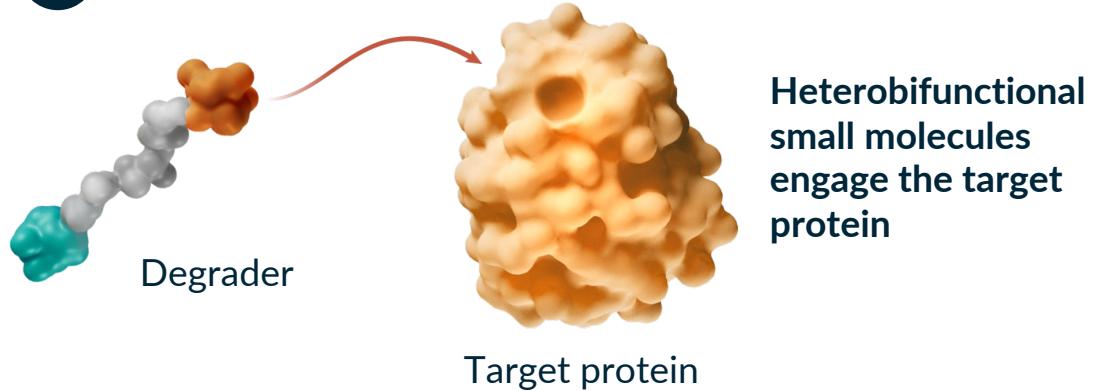
Conflict of Interest Disclosure

Arsalan Shabbir, Sagar Agarwal, Alice A. McDonald, Kelvin Shi, Annie L. Conery, Mahta Mortezaei, Nello Mainolfi, Jared Gollob, and Chad Nivens are employees with shares and stock options of Kymera Therapeutics, Inc.

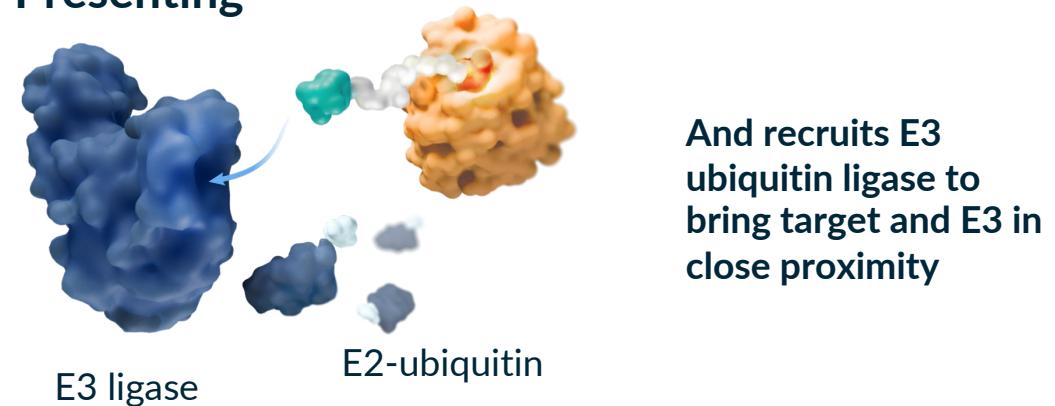
Pioneering Targeted Protein Degradation for New Oral Medicines

Targeted protein degradation (TPD) harnesses the natural cellular homeostasis and protein degradation system used to clear out misfolded or accumulated proteins to degrade disease causing proteins

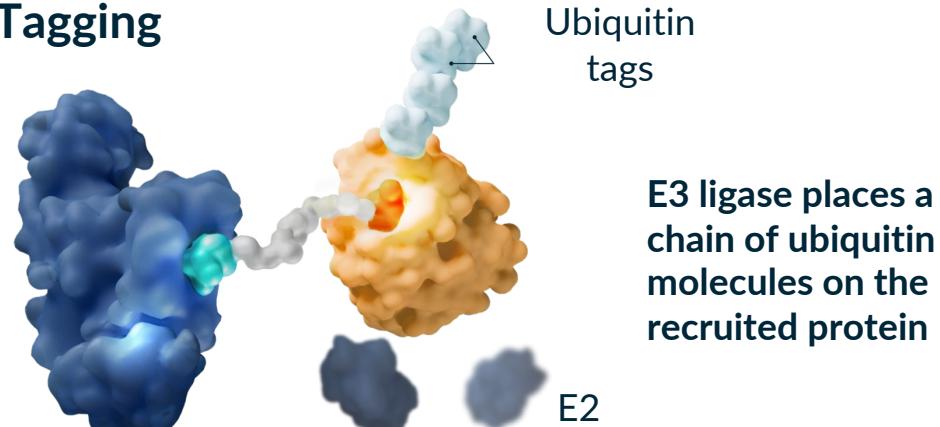
1 Catching



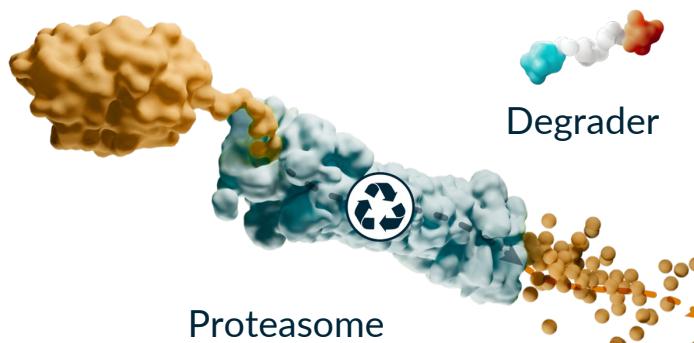
2 Presenting



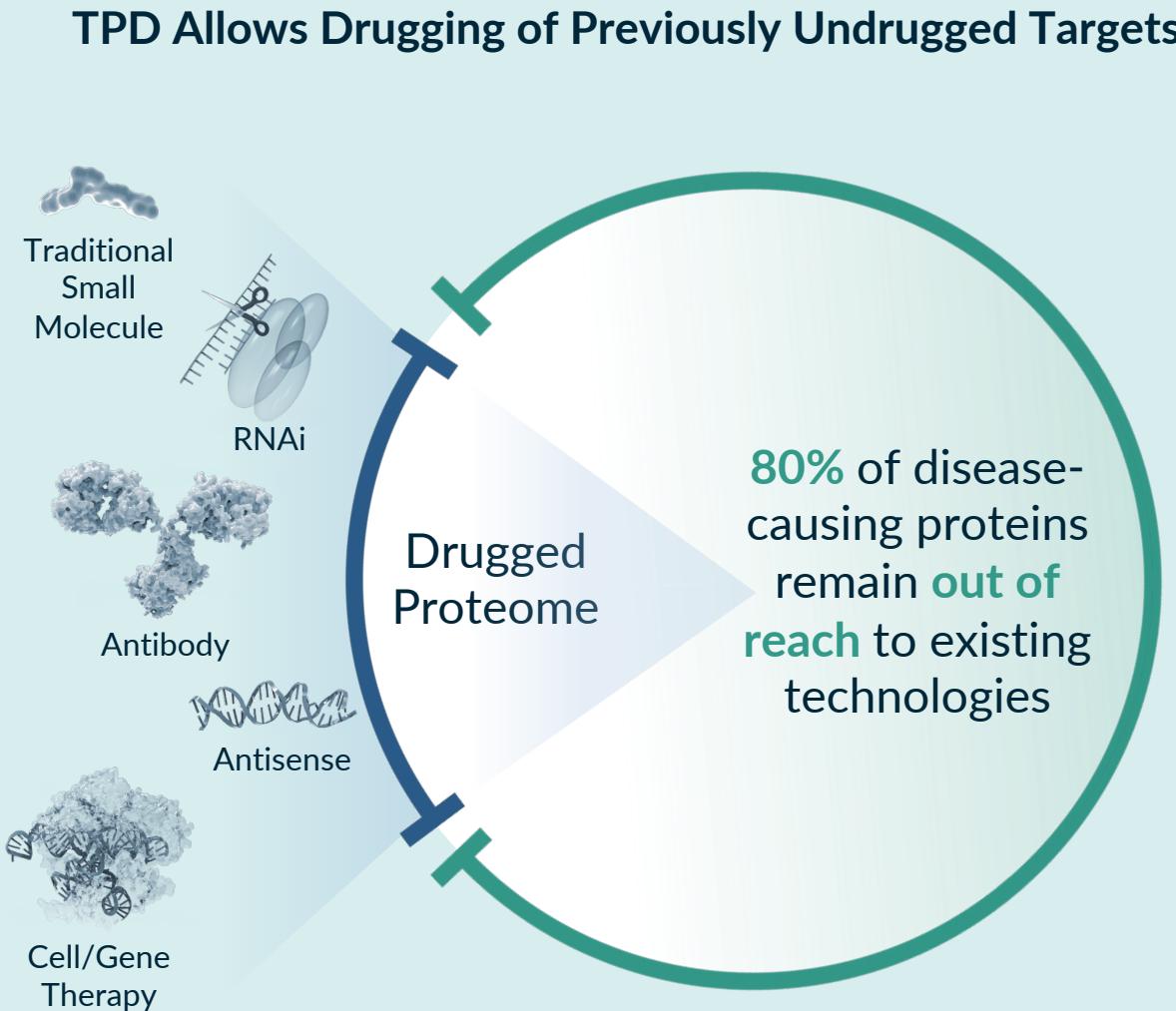
3 Tagging



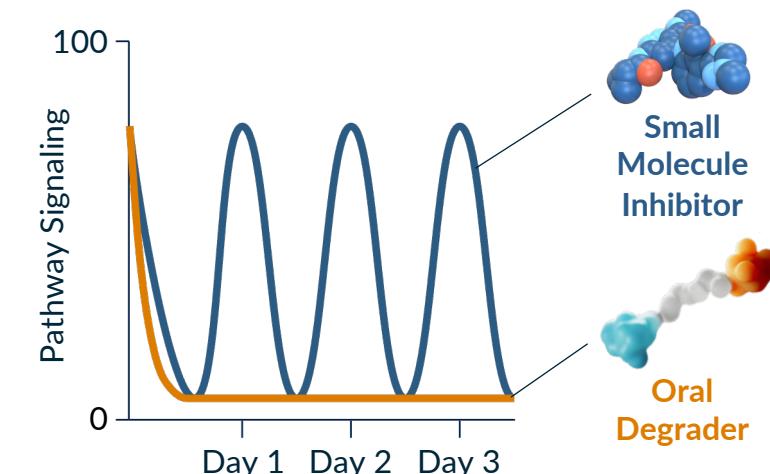
4 Degrading



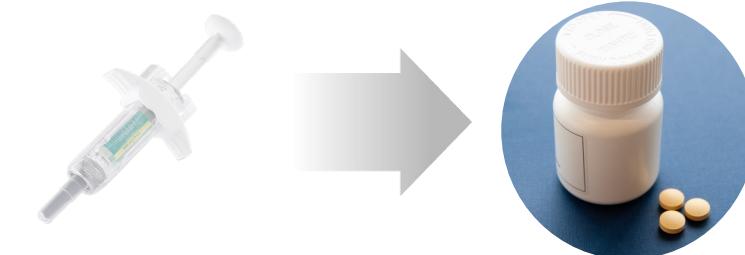
Small Molecule Oral Degraders Can Transform Drug Development



Oral Degraders Allow for Continuous, Complete Pathway Blockade

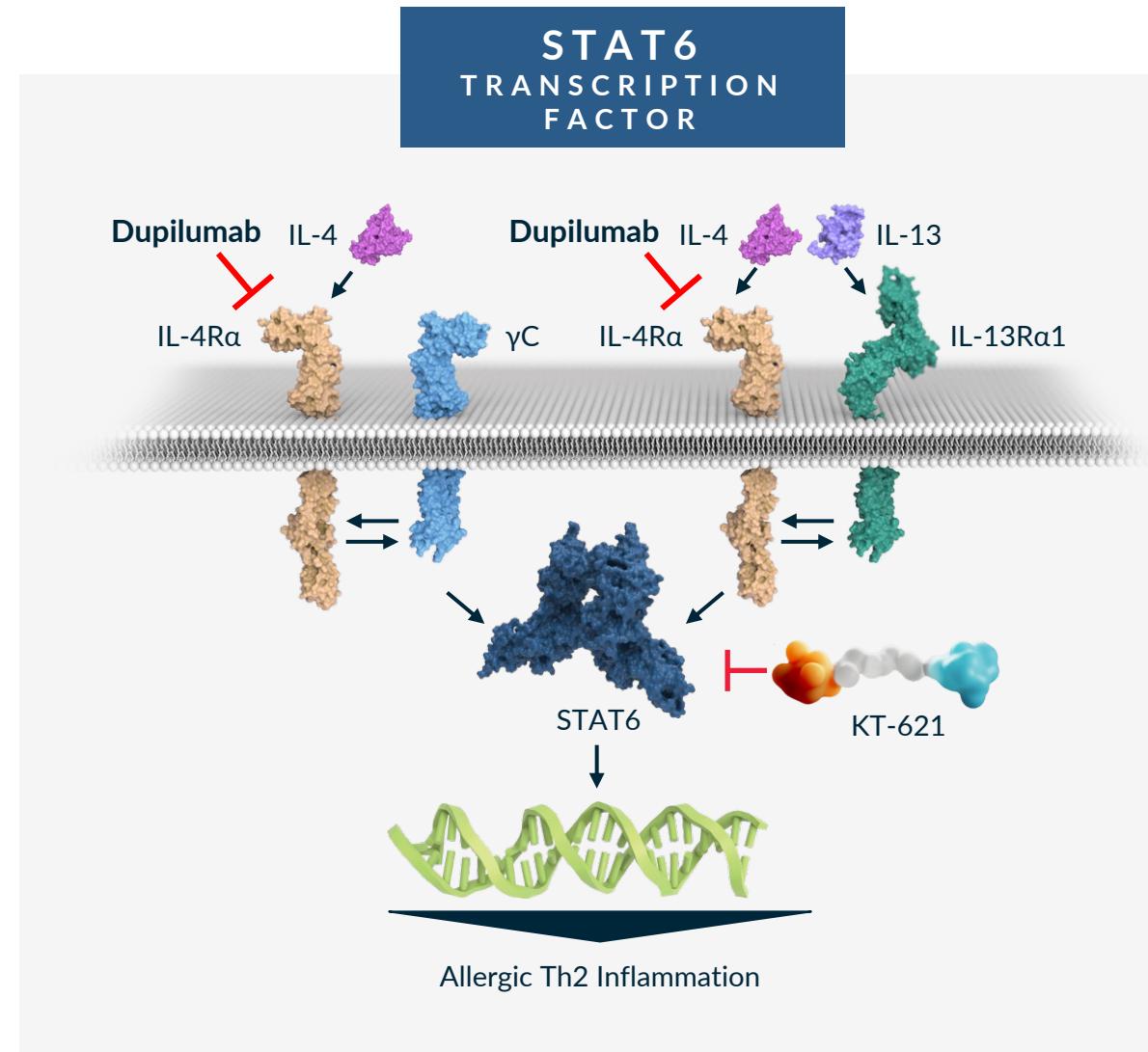


Oral Degraders Provide a Convenient Route of Administration Preferred by Patients



STAT6 Transcription Factor, Highly Validated but Undrugged Target

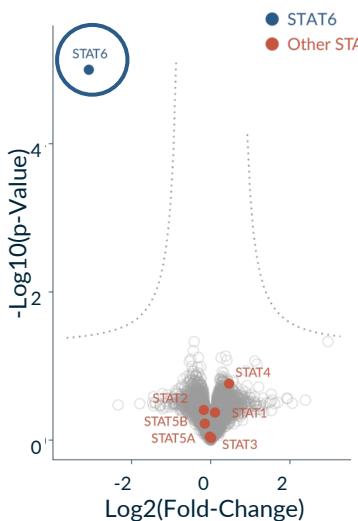
- Signal transducer and activator of transcription 6 (STAT6) is an essential transcription factor in the interleukin (IL)-4 and IL-13 pathway
- IL-4/IL-13 pathway is clinically validated by dupilumab across multiple respiratory, dermatologic and gastrointestinal T helper 2 (Th2) allergic diseases, such as AD and asthma
- STAT6 is genetically validated by human gain-of-function and heterozygous loss-of-function alleles, and mouse knockout phenotype
- While several therapies target the upstream IL-4/IL-13 receptors, there are no drugs that selectively target IL-4/IL-13 within the cell with oral delivery potential



KT-621: First STAT6-targeted Drug in Clinical Development

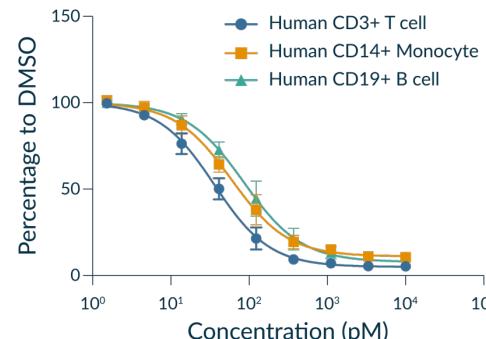
Compelling KT-621 Preclinical Package Provides Potential for Dupilumab-like Activity in a Pill

Exquisite Selectivity



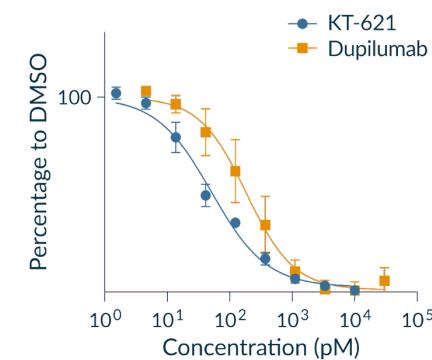
Robust Degradation in Relevant Cell Types

STAT6 Degradation in Immune Cells

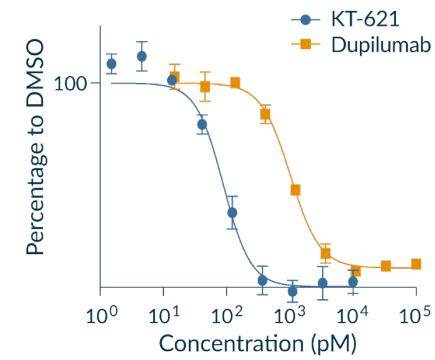


Full Inhibition of IL-4/IL-13 Pathways, More Potent than Dupilumab

IL-4 Induced TARC Release in Human PBMC



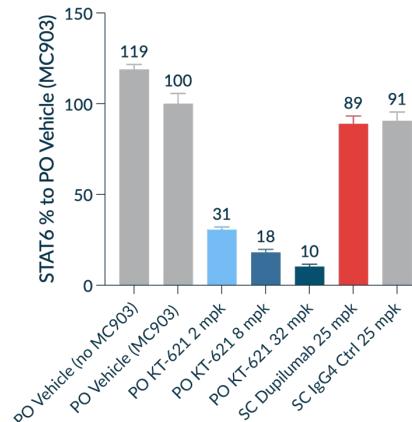
IL-13 Induced TAC1 Expression in iPSC Derived Human Sensory Neuron



Excellent Preclinical Efficacy

KT-621 has comparable *in vivo* efficacy to IL-4Ra saturating dose of dupilumab in the MC903 atopic dermatitis model

STAT6 Degradation in Mouse Spleen

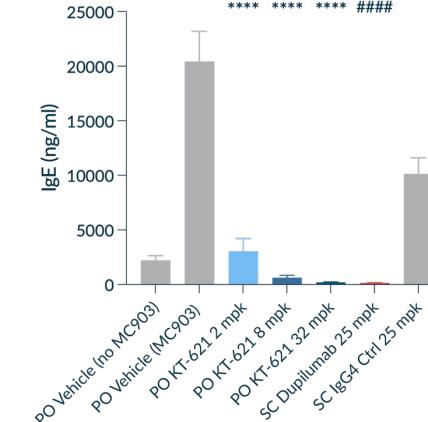


Favorable Safety Profile

Well tolerated in multiple preclinical species and safety studies at concentrations 40-fold above efficacious dose with up to 4 months of dosing

*Significance to PO vehicle (MC903);
#Significance to SC IgG4 25 mpk BIW

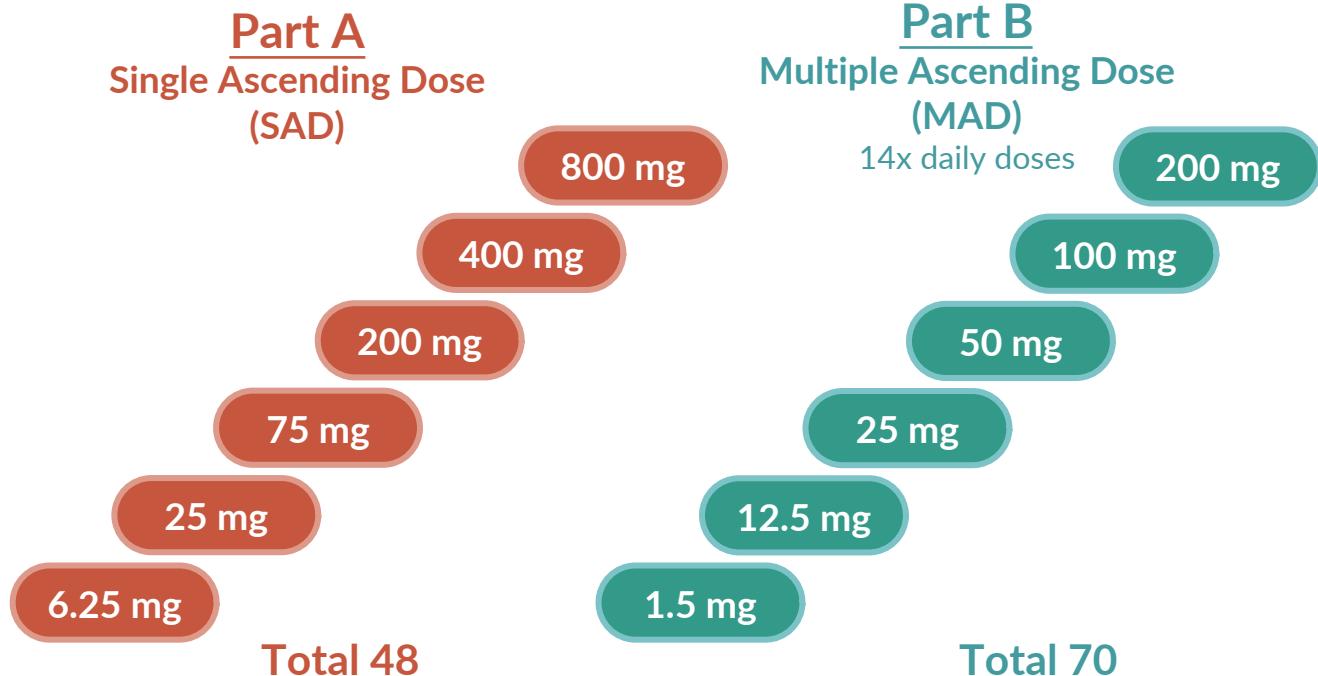
Total Serum IgE



KT-621: First-in-Human, Phase 1a Healthy Volunteer Study

Randomized, Double-blind, Placebo-controlled, Single Ascending Dose (SAD), Multiple Ascending Dose (MAD)

118 Healthy Volunteers Were Enrolled in Parts A and B



Endpoints

Primary

- Safety & tolerability of escalating single and multiple doses of KT-621

Secondary

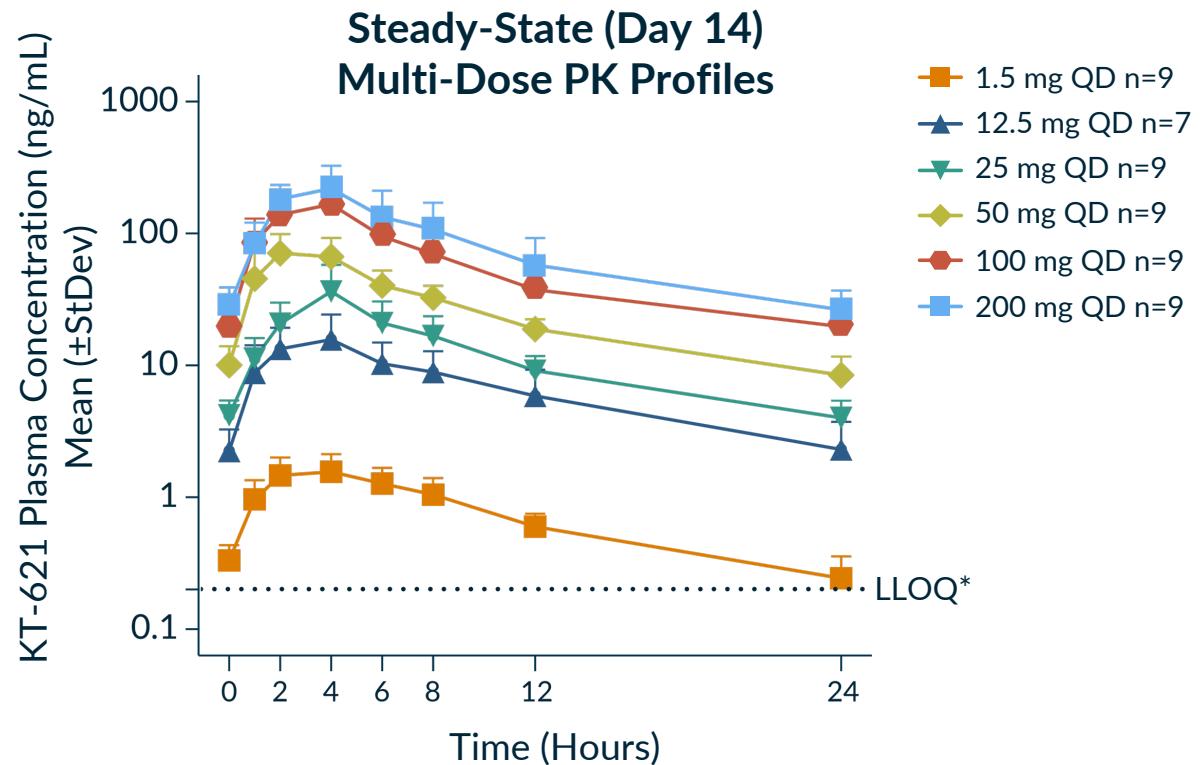
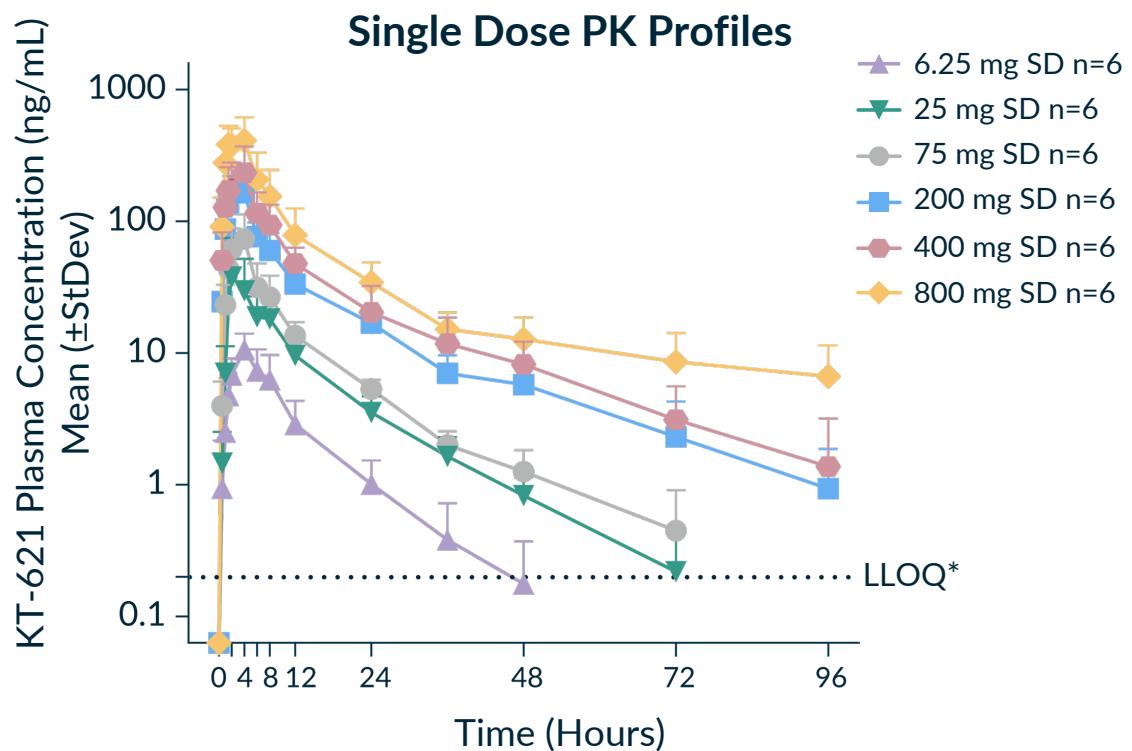
- Pharmacokinetic measures

Exploratory

- STAT6 protein levels in blood (SAD/MAD) and skin (MAD)
- T helper 2 (Th2) biomarkers in blood (MAD)

*Part B: 10 subjects were enrolled onto 12.5 mg (7 KT-621 and 3 placebo). Additional information on the trial is available on <https://clinicaltrials.gov/>: NCT06673667.
mg: milligrams

KT-621: Favorable PK Profile After Single and Multiple Dosing

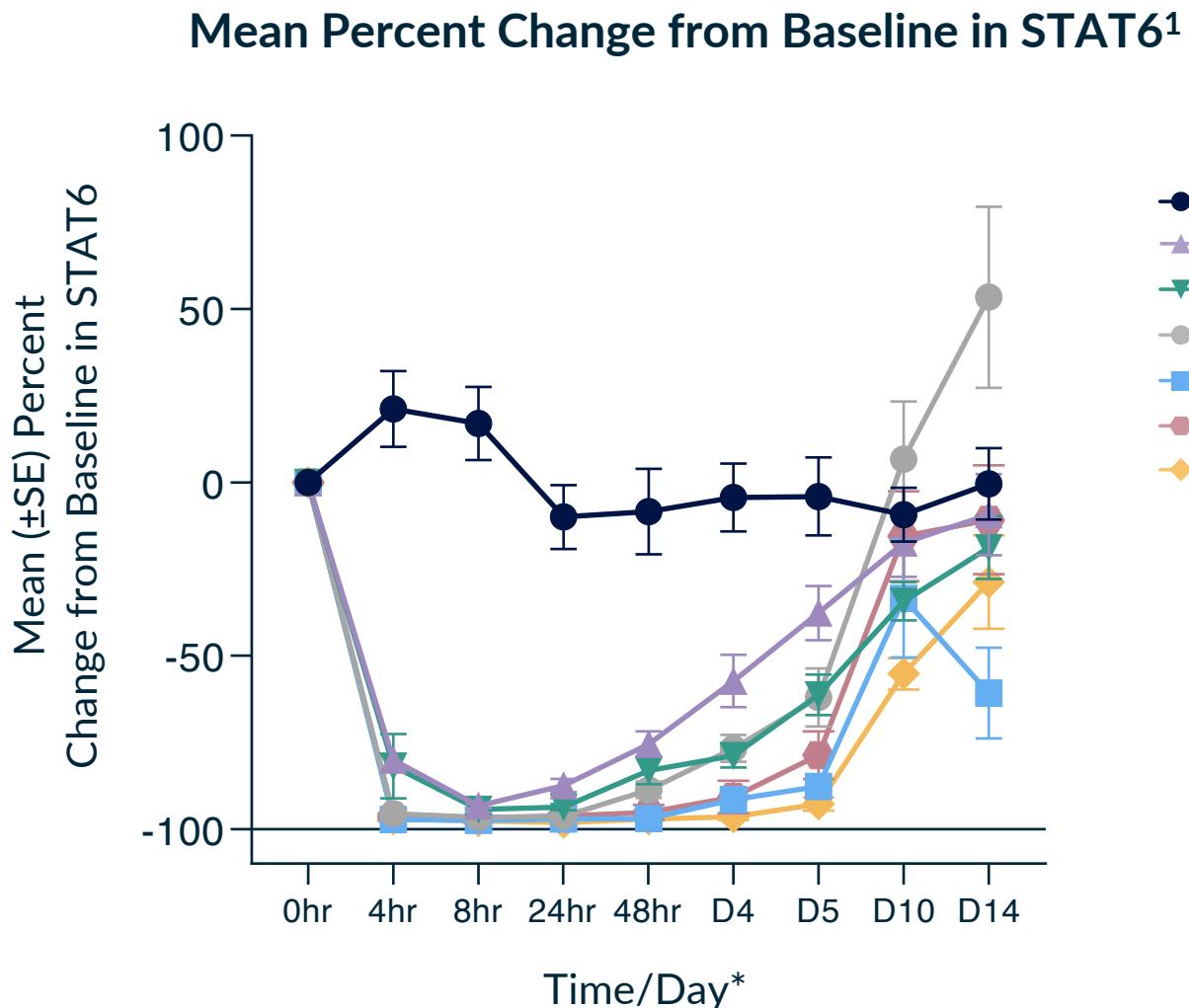


- Rapid absorption with median t_{max} of 2-4 hours and mean half-life of 9-36 hours
- Generally dose-proportional increase in exposure after single and multiple doses with low-moderate variability
- Steady-state achieved by Day 4 of once daily dosing

*Lower Limit of Quantification (LLOQ): below this level, value is assumed to be zero for calculation of summary statistics.

PK: pharmacokinetics, ng: nanograms, mL: milliliter, StDev: standard deviation, SD: single dose, SSE: standard error, hr: hour, D: Study Day, QD: once daily, n: # participants, mg: milligram, t_{max} : time to peak drug concentration

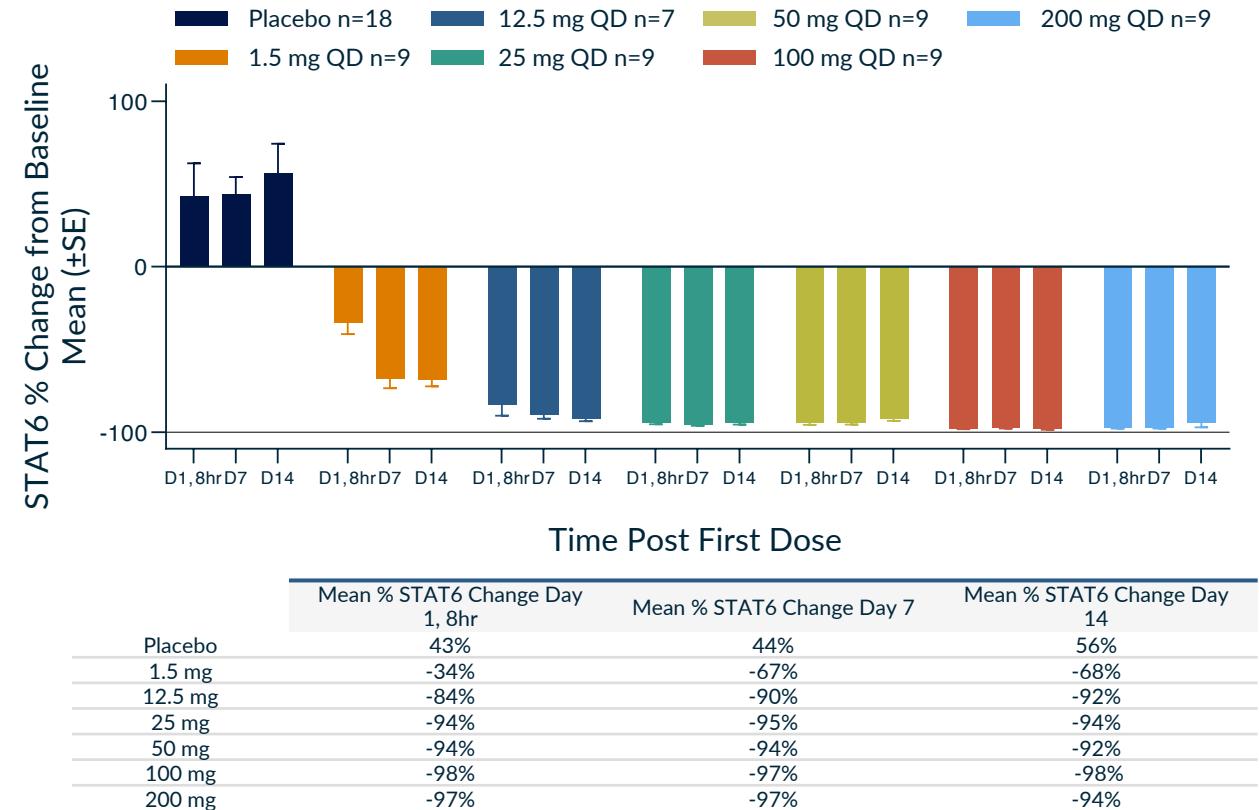
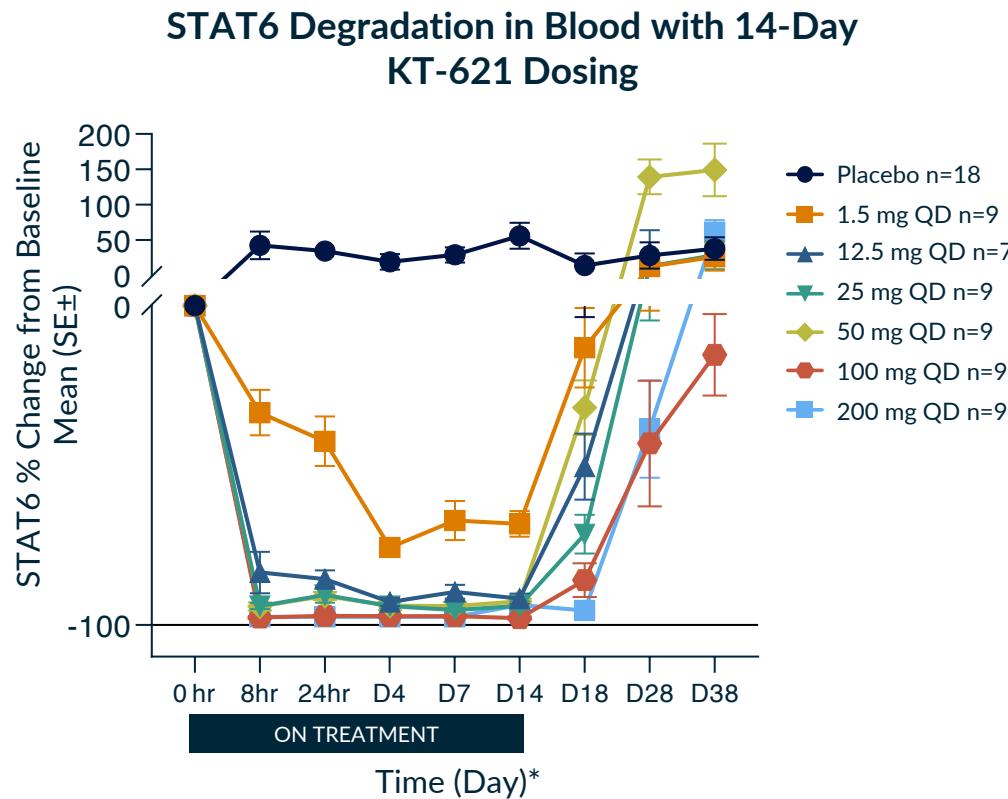
Single Doses of KT-621 Achieved Rapid, Deep and Prolonged STAT6 Degradation in Blood



¹STAT6 levels measured in isolated PBMC using targeted mass spectrometry; *Compound dosed on Day 1.

- Maximal degradation seen as quickly as 4 hours after a single dose of KT-621
- Robust degradation maintained as long as 4 days after single dose with recovery by Day 14
- Multiple subjects with STAT6 levels below LLOQ at doses of 75 mg or greater

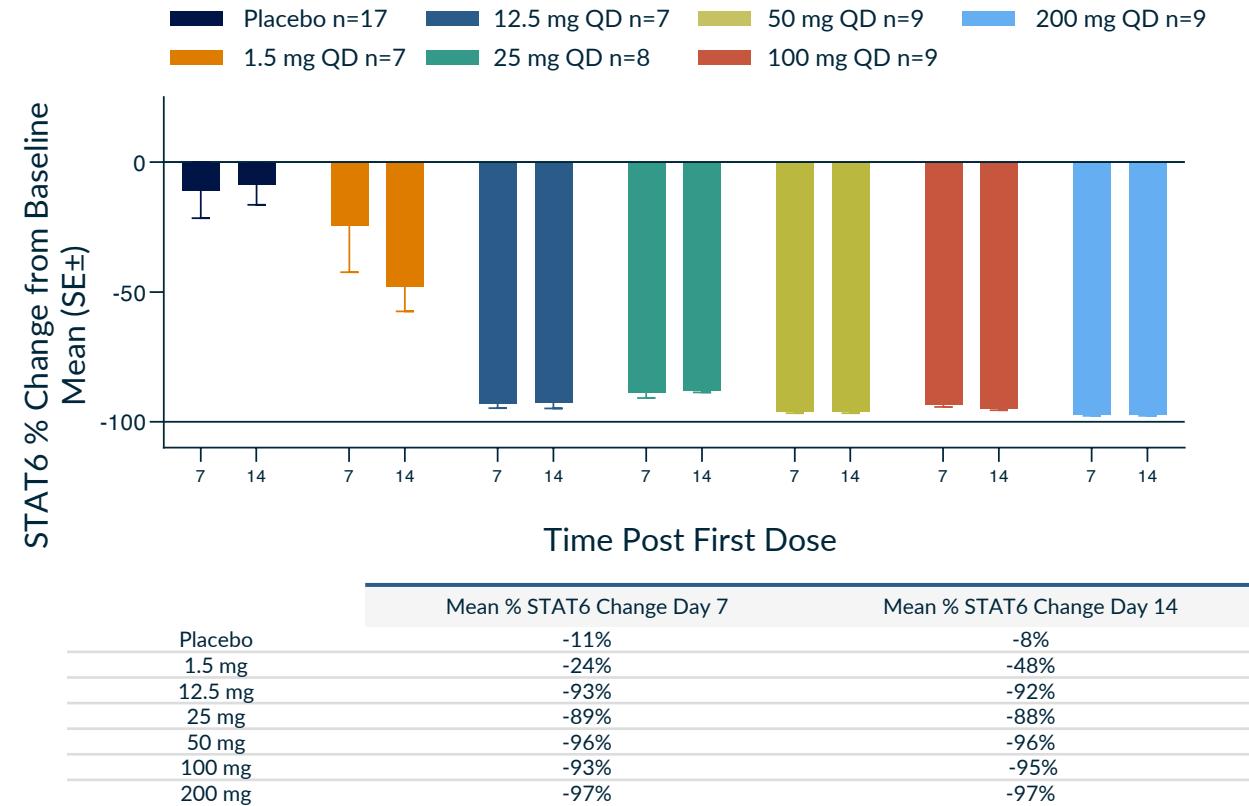
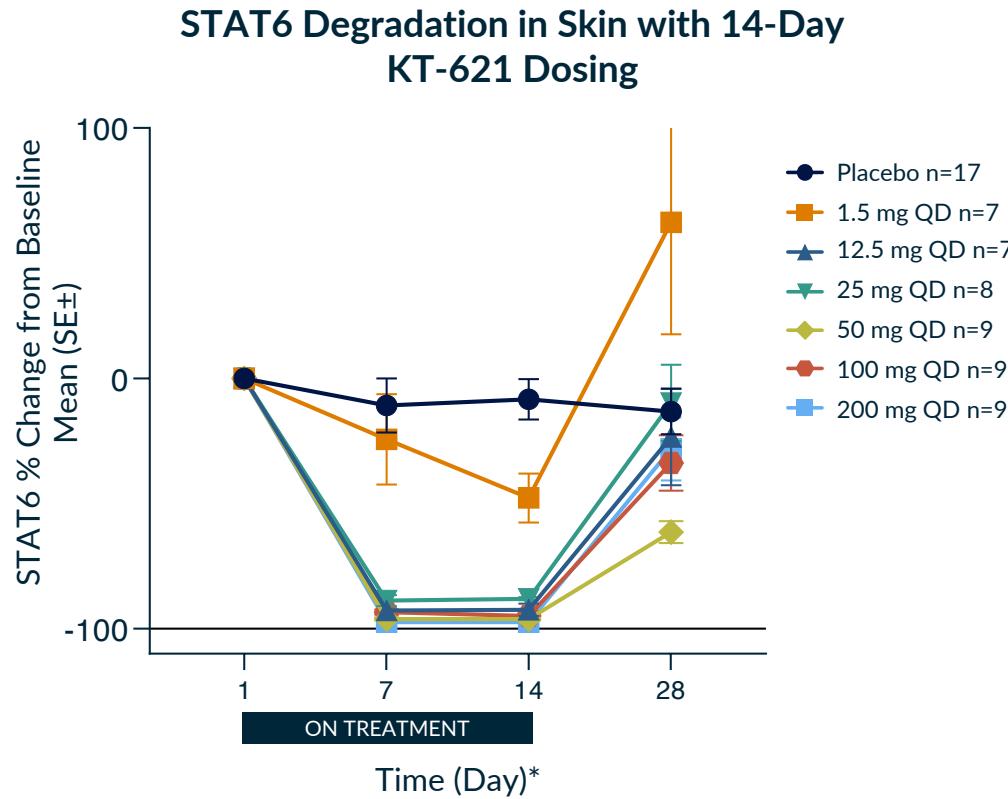
KT-621: Daily Doses Over 14 Days Rapidly Achieve Complete STAT6 Degradation in Blood



- Steady-state maximum degradation in blood achieved as early as 8hr post-first dose with recovery starting at 4 days post-last dose
- Complete STAT6 degradation, characterized by $\geq 95\%$ decrease from baseline and/or undetectable levels in most participants, was achieved at doses ≥ 50 mg

*Compound dosed on Day 1. SE: standard error, hr: hour, D: Study Day, QD: once daily, n: # participants, mg: milligram

KT-621: Daily Doses Over 14 Days Rapidly Achieve Complete STAT6 Degradation in Skin

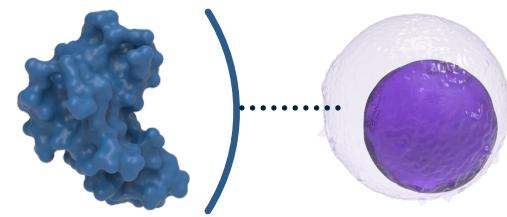


- Steady-state maximum degradation in skin achieved by Day 7 at doses >1.5 mg with recovery observed 14 days post-last dose
- Complete STAT6 degradation was achieved at doses \geq 50 mg at Day 14, showing correlation between degradation in skin and blood

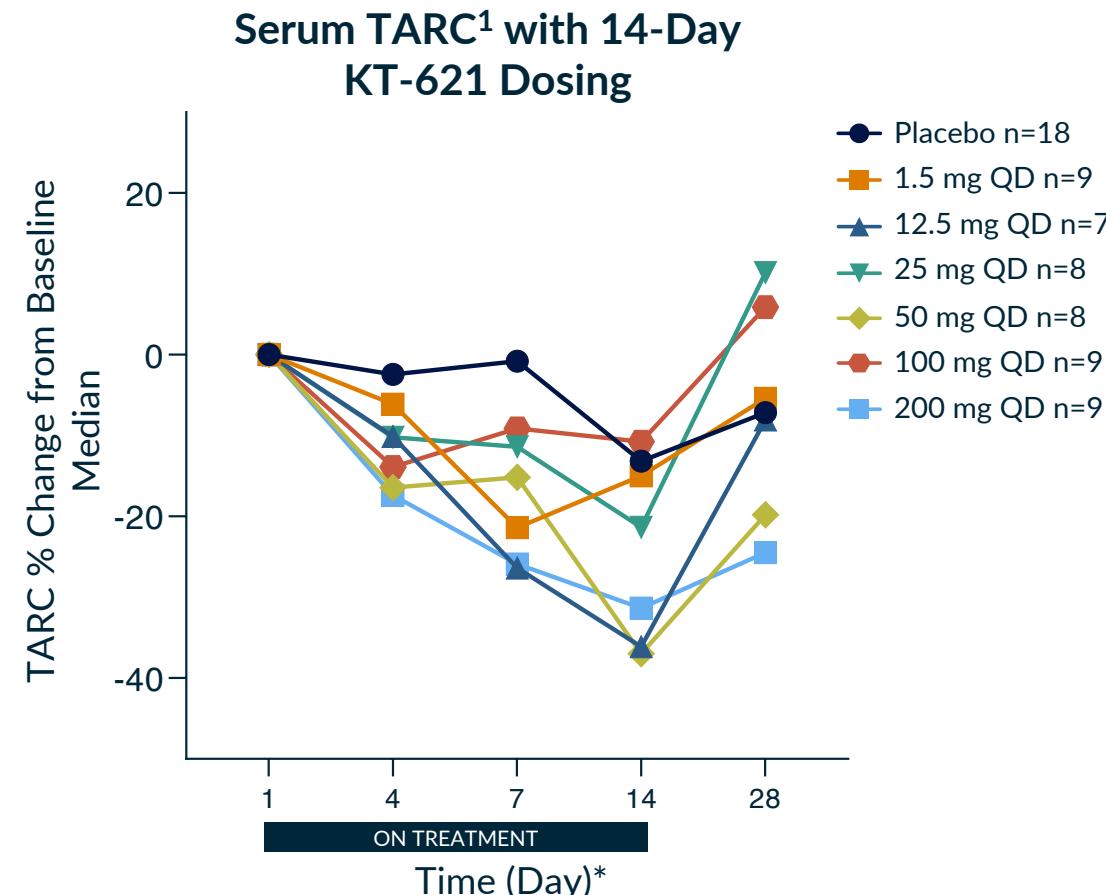
*Compound dosed on Day 1. SE: standard error, hr: hour, D: Study Day, QD: once daily, n: # participants, mg: milligram

KT-621: Daily Doses Over 14 Days Achieved Median TARC Reduction of Up to 37%

Thymus and Activation-regulated Chemokine (TARC) [CCL17]



- TARC is the chemokine responsible for chemotaxis of CCR4-expressing T cells (e.g., Th2) to sites of inflammation
- **TARC is a validated biomarker in patients** for suppression of Th2 driven inflammatory responses

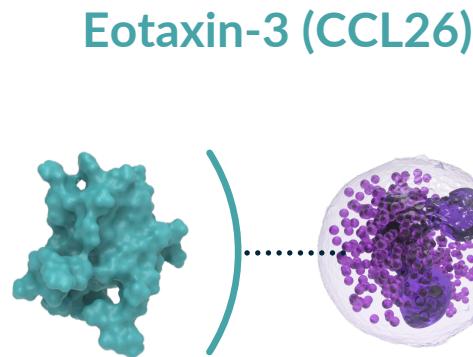


Arm	Day 14 TARC (% Change From Baseline Median)
Placebo	-13%
1.5 mg	-15%
12.5 mg	-36%
25 mg	-21%
50 mg	-37%
100 mg	-11%
200 mg	-31%

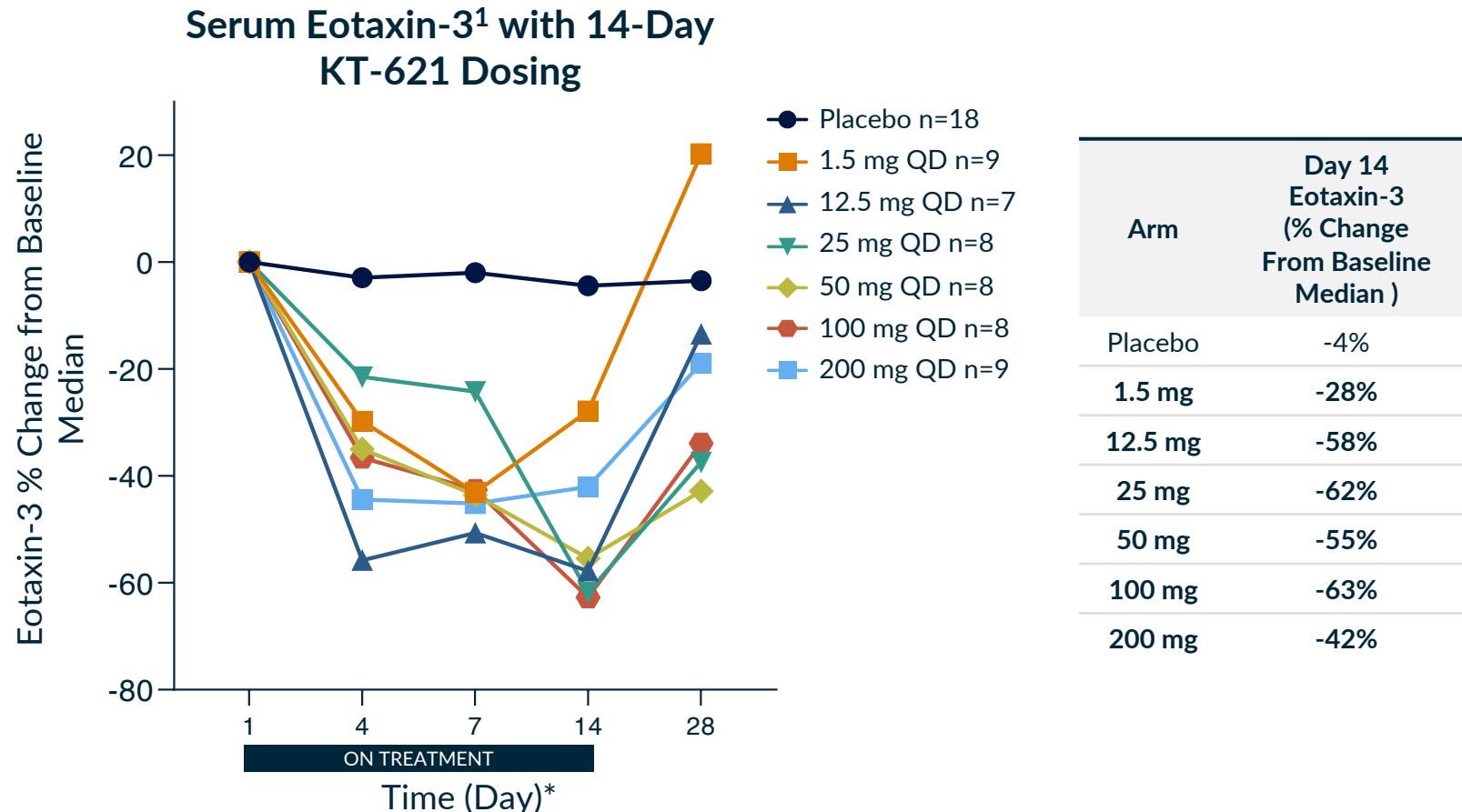
- TARC reduction comparable to what has been reported for dupilumab in healthy subjects^{2,3}

¹TARC levels measured in serum using MSD VPLEX; ²Hamilton et al. Clinical & Experimental Allergy. 2021. ³No head-to-head trials have been conducted comparing KT-621 to dupilumab. Phase 1 clinical data for KT-621 may not be directly comparable to dupilumab's clinical data due to differences in molecule composition, trial protocols, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable.;CCL17: C-C motif chemokine ligand 17, CCR4: C-C motif chemokine receptor 4, Th2: T helper 2, QD: once daily, n: # participants, mg: milligram. *Compound dosed on Day 1.

KT-621: Daily Doses Over 14 Days Achieved Median Eotaxin-3 Reduction of Up to 63%



- The chemokine responsible for chemotaxis of CCR3-expressing inflammatory cells (e.g., eosinophils) to sites of inflammation
- **Eotaxin-3 is a highly specific downstream cytokine of IL-4/IL-13 pathway**
- Eotaxin-3 reduction comparable or superior to what was reported with dupilumab in asthma or CRSwNP at 52 weeks^{2,3}



¹Eotaxin-3 levels measured in serum using MSD VPLEX; ²Hamilton et al. Clinical & Experimental Allergy. 2021. ³No head-to-head trials have been conducted comparing KT-621 to dupilumab. Phase 1 clinical data for KT-621 may not be directly comparable to dupilumab's clinical data due to differences in molecule composition, trial protocols, dosing regimens, and patient populations and characteristics. Accordingly, cross-trial comparisons may not be reliable; CCL26: C-C motif chemokine ligand 26, CCR3: C-C motif chemokine receptor 3, IL: interleukin, QD: once daily, n: # participants, mg: milligram. *Compound dosed on Day 1.

KT-621: Safety Summary

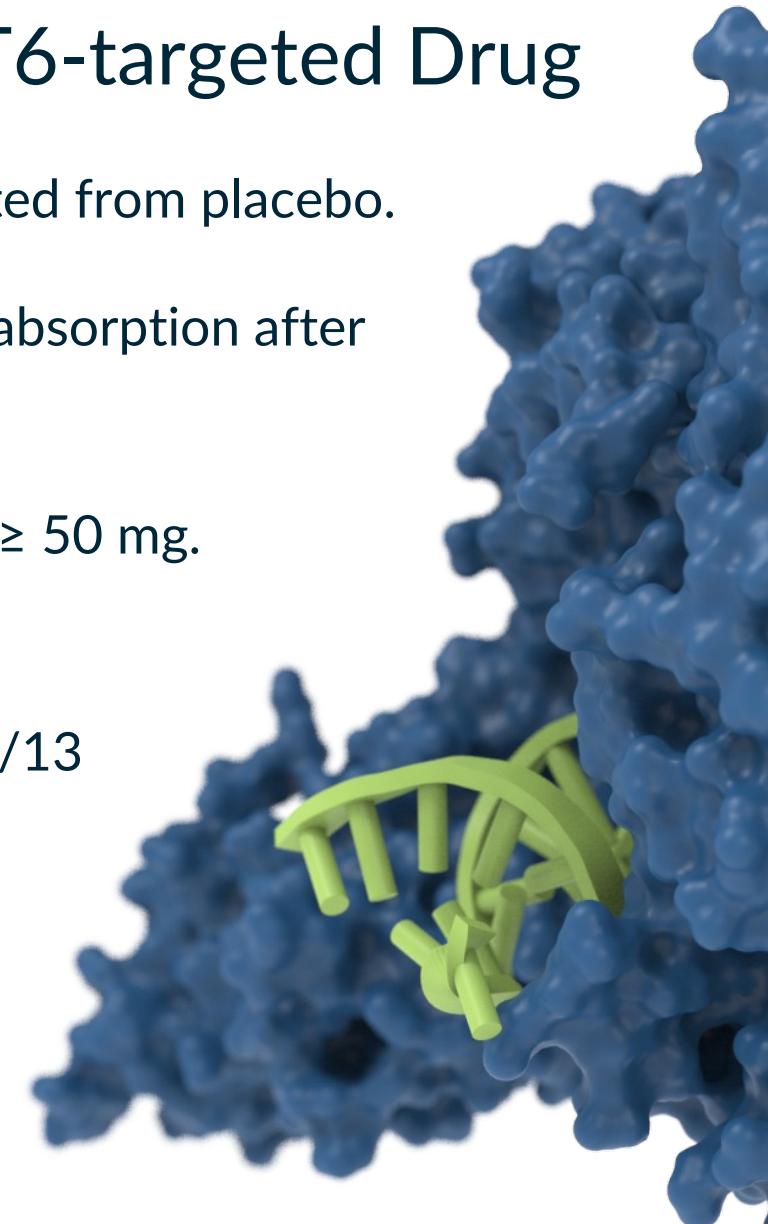
Well Tolerated Across All Doses Evaluated and Safety Profile Undifferentiated from Placebo

- No Serious Adverse Events
- No Severe Adverse Events
- No dose dependent pattern in Treatment Emergent Adverse Events (TEAEs)
- No Treatment Related AE (TRAЕ) reported in >1 participant
- No related TEAEs leading to discontinuation
- No clinically relevant changes in vital signs, laboratory tests, and ECGs

TRAEs by Preferred Term: SAD Cohorts		
AE Term (severity)	SAD Placebo (n=12)	SAD KT-621 (n=36)
Headache (mild)	1 (8.3%)	0
TRAEs by Preferred Term: MAD Cohorts		
AE Term (severity)	MAD Placebo (n=18)	MAD KT-621 (n=52)
Nausea (mild)	1 (5.6%)	0
Asthenia (mild)	0	1 (1.9%)

KT-621: First Clinical Proof of Concept for STAT6-targeted Drug

- Well-tolerated across all dose levels with safety profile undifferentiated from placebo.
- Favorable PK profile after single and multiple daily doses, with rapid absorption after oral dosing and dose-proportional increase in exposure.
- Complete STAT6 degradation in blood and skin with oral daily doses ≥ 50 mg.
- STAT6 degradation associated with suppression of blood Th2 biomarkers Eotaxin-3 and TARC, demonstrating inhibition of the IL-4/13 pathway comparable or superior to dupilumab.
- Phase 1b study in atopic dermatitis ongoing (patient data expected 4Q25)
- Phase 2b studies in atopic dermatitis and asthma planned to start in 4Q25 and 1Q26, respectively.





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