

## Davidson, Mark

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**From:** Davidson, Mark  
**Sent:** Wednesday, May 24, 2017 3:30 PM  
**To:** Rizwana Sproule (RSproule@KitePharma.com)  
**Cc:** Nadia Agopyan (NAgopyan@KitePharma.com); 'Alex Babayan'  
**Subject:** Kite Pharma BLA 125643 Clinical Pharmacology Information Request May 24, 2017

**Importance:** High

Dear Dr. Sproule,

We have the following Clinical Pharmacology IR regarding Kite BLA 125643 :

1. Per FDA Guidance to Industry: Format and Content of the Human Pharmacokinetics and Bioavailability Section of an Application (posted 02/01/1987, <https://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM072112.pdf>), a summary of the analytical method employed in each in vivo biopharmaceutical study should be provided and detailed information should be provided with the individual study. Please provide a summary and detailed individual report for all the analytical method used in your clinical studies # KTE-C19-101 and # (b) (4) analytical method procedures, method validation, and sample analysis report. In addition, you measured anti-CD19 CAR T cells levels in blood samples using a (b) (4) assay. However, you did not submit method validation report and bioanalytical report for measurement of anti-CD19 CAR T cell levels in blood samples using this (b) (4) assay for your clinical studies # KTE-C19-101 and (b) (4)
2. Reference is made to your clinical studies KTE-C19-101 and (b) (4), according to the study report, (b) (4) was employed to quantify the CAR-T pharmacokinetics. Please provide the PK data in the unit of (b) (4) for both studies if available. In addition, please provide details how the count of CART (nCART) as listed in data "ADPCR" under KTE-C19-101, as well as NCART as listed in "ADCAR" under (b) (4) were derived. Please provide above information by noon EST Tuesday, May 30th, 2017.
3. For clinical studies # KTE-C19-101 and # (b) (4), you conducted pharmacokinetic (PK) assessment for KTE-C19 (anti-CD19 CAR T cells) by evaluating peak levels (Cmax), area under the blood concentration vs time curve (AUC) from Day 0 to Day 28 (AUC0-28). You also measured cytokines, chemokines and effector molecules as pharmacodynamics (PD) evaluation. Please provide PK reports for the PK/PD findings of above two studies.
4. Product characteristics may affect the pharmacokinetic/pharmacodynamics (PK/PD) profiles of your product. Please explore the relationships between product characteristics and the PK/PD profiles of your product, KTE-C19 (anti-CD19 CAR T cells) based on available information.

Please verify when received.

**Please respond by 12:00 noon EST, Tuesday, May 30, 2017.**

Thank You

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