

## High-dose plerixafor (480 µg/kg) can be safely administered in healthy donors and mobilizes greater numbers of CD34+ cells than conventional-dose plerixafor (240 µg/kg)



Phase II, open-label, single-center, investigator-initiated, randomized, crossover trial



23 healthy stem-cell donors



National Institutes of Health (NIH) Clinical Center in Bethesda, MD, USA



plerixafor



1<sup>st</sup> dose: 240 µg/kg

2 weeks washout

2<sup>nd</sup> dose: 480 µg/kg



plerixafor



1<sup>st</sup> dose: 480 µg/kg

2 weeks washout

2<sup>nd</sup> dose: 240 µg/kg

### Primary endpoints

peak CD34+ count in the blood (cells/µL)	27.8	32.2	p=0.0009
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### Secondary endpoints

CD34+ cell area under the curve over 24 hours (h cells/µL)	446	553	p<0.0001
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CD34+ count at 24 hours (cells/µL)	10.7	17.8	p<0.0001
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time to peak CD34+ (hours)	8.4	10.5	p=0.012
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8.4



7 subjects mobilized poorly (peak CD34+ ≤ 20 cells/µL) but after the 480 µg/kg dose

- 6/7 achieved higher peak CD34+ cell numbers
- 7/7 achieved higher CD34+ AUCs over 24 hours