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Supplemental information

Allometric-like scaling of AAV gene therapy for systemic protein delivery

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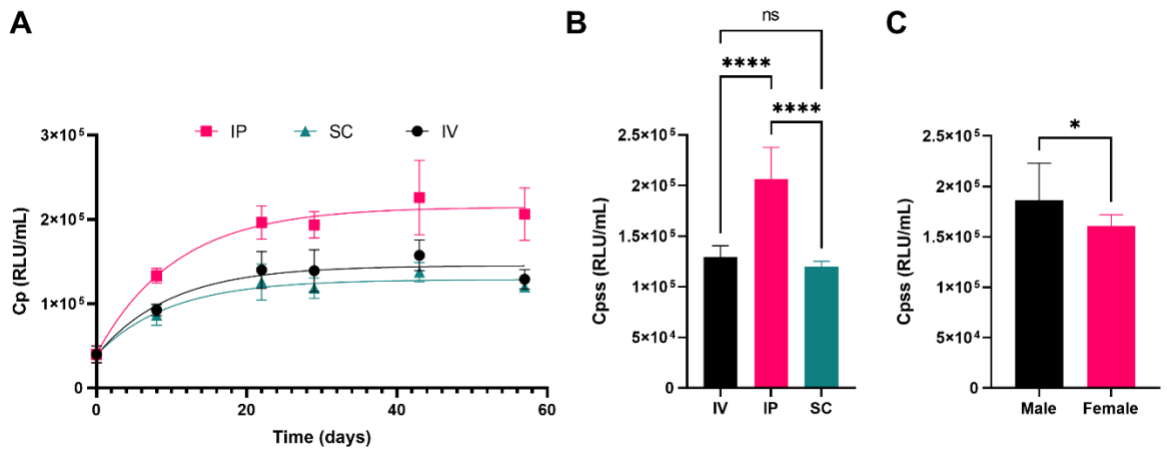


Figure S1. GLuc concentration varies with systemic administration route. (A) Concentration of GLuc in the plasma (Cp) over time (RLU/mL) for each administration route: IV = intravenous, IP = intraperitoneal, SC = subcutaneous. Data points show are the mean \pm SD for replicates (n=8, 4 male/4 female, per group). Solid lines represent curve-fit for an exponential plateau equation to estimate steady-state. (B) Steady-state concentration (RLU/mL) as determined by the curve-fit is shown for each administration route. (C) Comparison of male and female concentrations for all routes of administration. Bars represent mean \pm SD for replicates. NS = non-significant, *p<0.05, **** p<0.0001.

PK model of recombinant GLuc

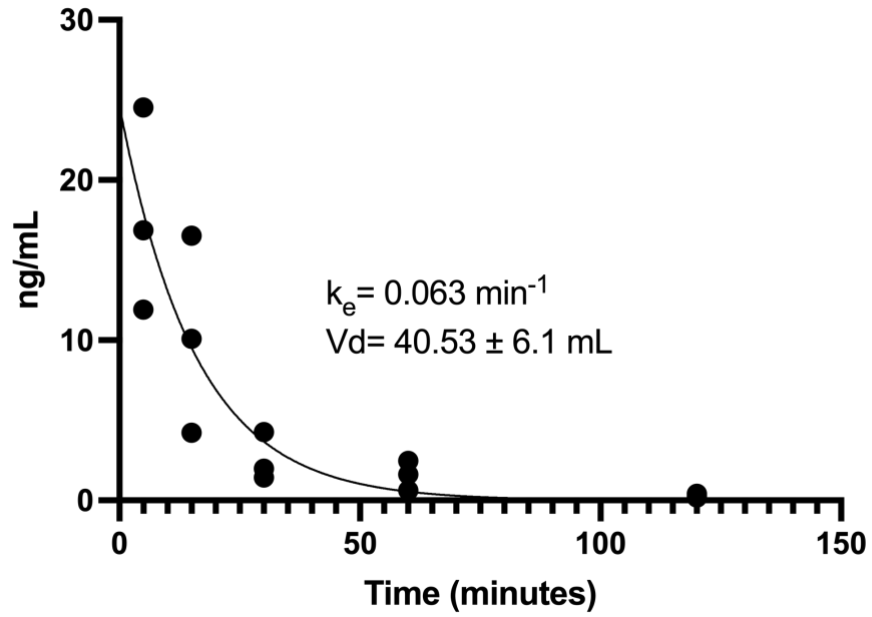


Figure S2. A single dose kinetic study with 1ug of the recombinant Gluc protein injected intravenously (n=3 mice/timepoint). Parameters for GLuc were determined by fitting the data to Equation 3 and extracting values of the elimination constant and the volume of distribution.

Table S1. Study information for data sets used for literature mining study

<u>Publication</u>	<u>Serotype</u>	<u>Promoter / Transgene</u>	<u># of doses tested</u>	<u># of mice</u>	<u>Route of Administration</u>	<u>Sex, Strain</u>	<u>Timepoint for dose-response</u>
Nathwani et al, 2009	scAAV2/8	LP1-hFIX	4	5-8	tail vein IV	male C57BL/6	57 days
	scAAV2/9						
	scAAV2/7						
	scAAV2/rh10						
Nathwani et al, 2006	scAAV2/8	LP1-hFIXco	4	4	tail vein IV	male C57BL/6	42 days
	ssAAV2/8	HCR-hAAT-hFIX	6				
Davidoff et al, 2005	ssAAV5/5	HCR-hAAT-hFIX	8	4	tail vein IV	male C57BL/6	116 days
	ssAAV2/8		6				
Grimm et al, 2003	ssAAV2/2	HCR-hAAT-hFIX	6	4-5	portal vein	C57BL/6	42 days
	ssAAV2/1		5				
	ssAAV2/6		7				
Nakai et al, 2002	ssAAV2/2	HCR-hAAT-hFIX	9	5	portal vein	female C57BL/6 , male C57BL/6 rag-1	70 days
Nakai et al, 2005	ssAAV2/1	EF1 α -nlslacZ	4	3-6	portal vein	male C57BL/6	42 days
	ssAAV2/2						
	ssAAV2/8						
Abbreviation: Ss: single-stranded genome, sc: self-complementary stranded genome							