

**Table S1. Patient and graft characteristics of Treg and 108 historical control patients**

	Treg	Historical Controls	p-value
<b>Number of patients</b>	23	108	NA
<b>Age in years</b> <b>Median (range)</b>	52 (25–68)	51 (6-69)	.18
<b>Weight in kg</b> <b>Median (range)</b>	77 (50–133)	79 (22-145)	.54
<b>TNC (<math>\times 10^7/\text{kg}</math>)</b> <b>Median (range)</b>	4.1 (2.4–10.0)	3.7 (1.5-8.2)	.15
<b>CD34 (<math>\times 10^5/\text{kg}</math>)</b> <b>Median (range)</b>	5.0 (2.3–10.7)	5.2 (1.1-15.4)	.44
<b>CD3 (<math>\times 10^7/\text{kg}</math>)</b> <b>Median (range)</b>	1.6 (0.9–3.6)	1.3 (0.2-3.1)	<b>.01</b>
<b>Gender</b>			.21
Male	11 (48%)	67 (62%)	
<b>Patient CMV status</b>			.09
Negative	14 (61%)	45 (42%)	
Positive	9 (39%)	63 (58%)	
<b>HLA (donor #1+donor#2)</b>			.09
4/6 + 4/6	3 (13%)	36 (33%)	
4/6 + 5/6	6 (26%)	29 (27%)	
4/6 + 6/6	0	3 (3%)	
5/6 + 5/6	8 (35%)	32 (30%)	
5/6 + 6/6	3 (13%)	4 (4%)	
6/6 + 6/6	3 (13%)	4 (4%)	
<b>Diagnosis</b>			.43
ALL	3 (13%)	14 (13%)	
AML	8 (35%)	34 (31%)	
CML	0	3 (3%)	
Other Leukemia	4 (17%)	6 (6%)	
MDS	0	3 (3%)	
NHL	7 (30%)	26 (24%)	
Hodgkin's Lymphoma	1 (4%)	19 (18%)	
Myeloproliferative Disease	0	3 (3%)	

Treg, regulatory T-cells; TNC, total nucleated cell dose; CMV, cytomegalovirus; HLA, human leukocyte antigen; ALL, acute lymphoblastic leukemia; AML, acute myeloid leukemia; CML, chronic myeloid leukemia; MDS, myelodysplastic syndrome; NHL, non-Hodgkin's lymphoma.

# Phase I treatment plan

## UCB-derived regulatory T Cells

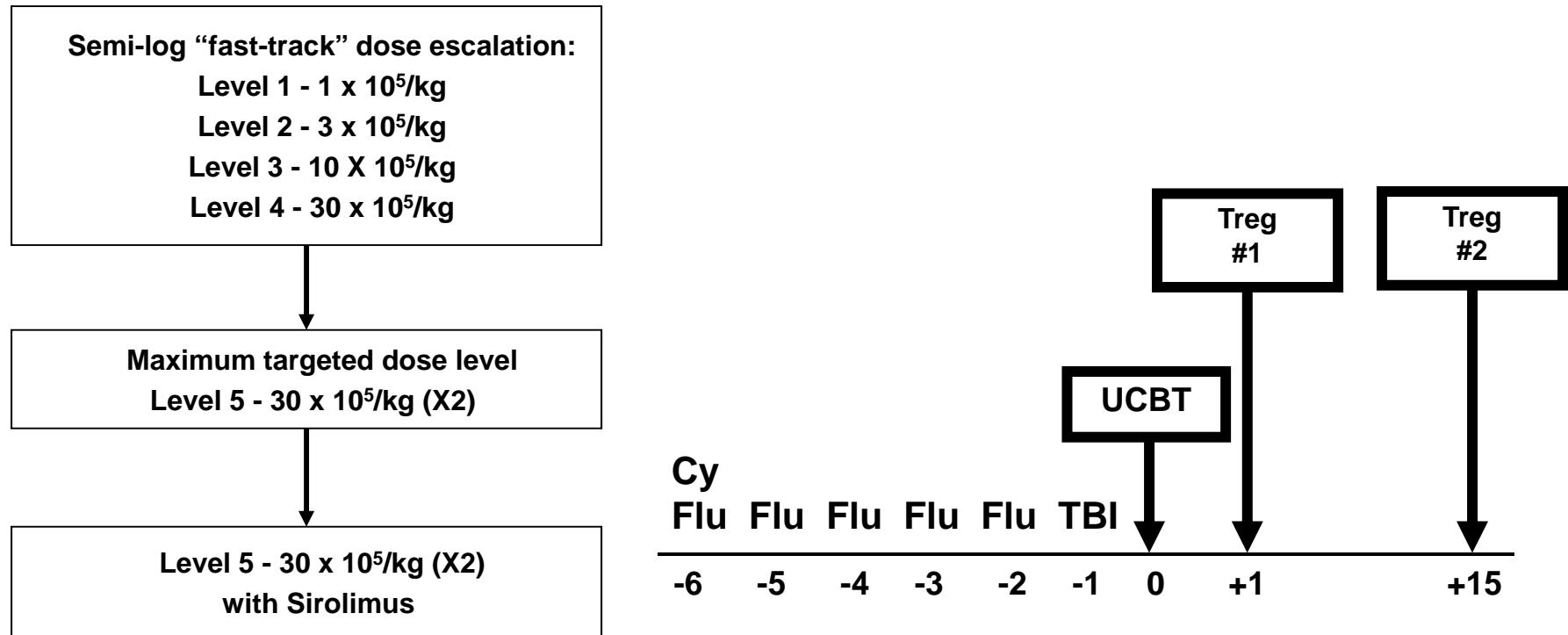
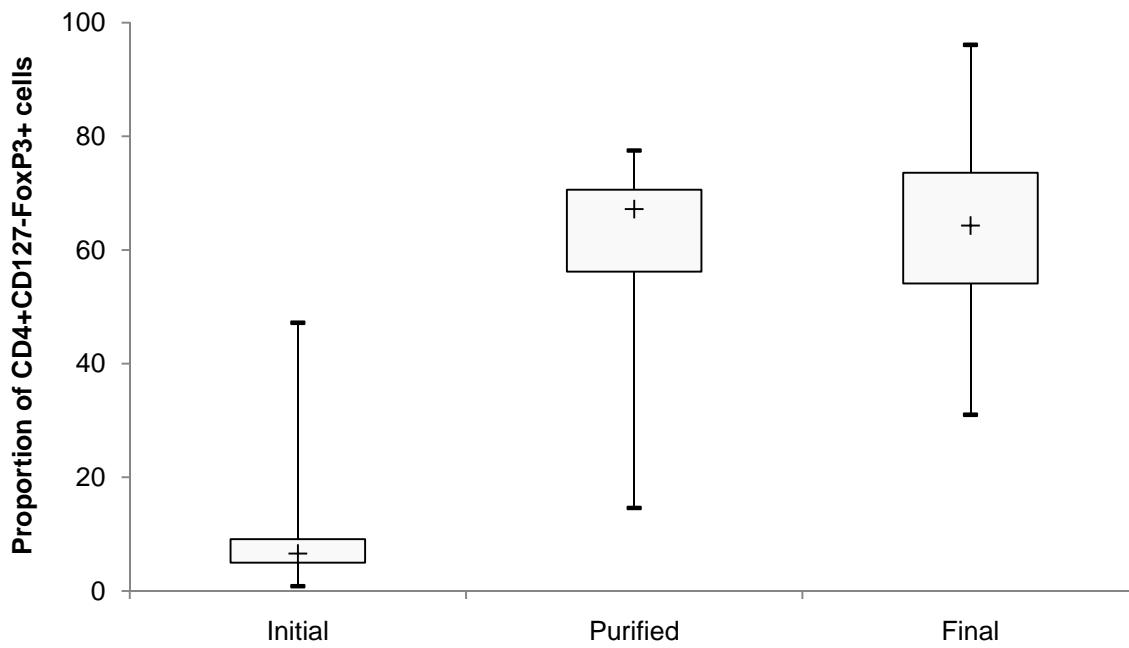


Figure S1. Treatment strategy and dose escalation in the protocol



**Figure S2. Proportion of CD4<sup>+</sup>CD127<sup>-</sup>FoxP3<sup>+</sup> cells before and after CD25<sup>+</sup> selection and at the end of the expansion culture period**