

**Table 3: Lymphocytes analysis in the organs of Artemis mice treated by gene therapy**

**Bone marrow Sca1+ cells from Artemis-deficient mice (Art-/-) were transduced by PGK-Art lentiviral vector and transplanted in Artemis-deficient mice after 3Gy irradiation**

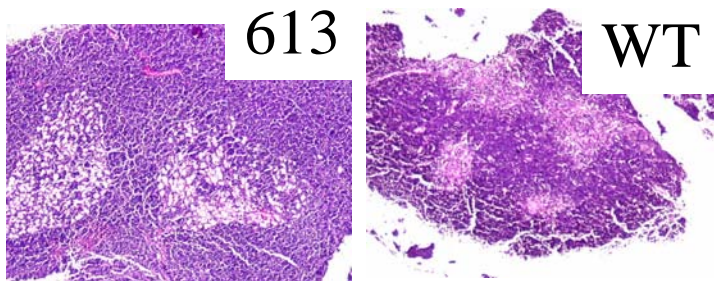
**Mouse 613 was analysed 6 months after transplantation.**

	5 Weeks PT	15 Weeks PT	25 Weeks PT
<b>PBL ( cells/mm<sup>3</sup>)</b>	720	1400	1200
<b>T lymphocytes</b>			
CD3+/CD4+ (%)	10.4	16.2	6.3
total CD3+/CD4+	75.2	227.4	75.6
CD3+/CD8+ (%)	6.5	9.4	6.6
total CD3+/CD8+	46.6	131.6	79.2
CD4+/CD8+ (%)	ND	ND	0.3
total CD4+/CD8+	ND	ND	0.2
CD3+/TCRb+ (%)	17.4	27.4	14.6
total CD3+/TCRb+	125.5	383.6	11.6
<b>B lymphocytes</b>			
B220+ /IgM+ (%)	1.7	2.6	1.9
total B220+ /IgM+	12	36.4	22.8
B220+ /IgD+ (%)	0.8	2.6	1.9
total B220+ /IgD+	5.6	36.4	22.8
<b>Myeloid cells</b>			
Gr1+ /Mac1+ (%)	ND	<b>40</b>	<b>41</b>
total Gr1+ /Mac1+	ND	560	491.6
Gr1- /Mac1+ (%)	ND	9	ND
total Gr1- /Mac1+	ND	126	ND
NK1.1+ (%)	ND	12.7	ND
total NK1.1+	ND	177.8	ND

**25 Weeks PT**

	Spleen	Lymph nodes	Thymus	BM
	15.10 <sup>6</sup>	4.3.10 <sup>6</sup>	<b>312.10<sup>6</sup></b>	31.5.10 <sup>6</sup>
<b>T lymphocytes</b>				
CD3+/CD4+ (%)	18.7	42.3	4	1
total CD3+/CD4+	2.8.10 <sup>6</sup>	1.8.10 <sup>6</sup>	12.5.10 <sup>6</sup>	3.1.10 <sup>5</sup>
CD3+/CD8+ (%)	11.6	41.7	3.9	1.4
total CD3+/CD8+	1.7.10 <sup>6</sup>	1.8.10 <sup>6</sup>	12.3.10 <sup>6</sup>	4.2.10 <sup>5</sup>
CD4+/CD8+ (%)	0.5	0.9	<b>96.8</b>	0.3
total CD4+/CD8+	7.5.10 <sup>4</sup>	3.9.10 <sup>4</sup>	302.10 <sup>6</sup>	7.9.10 <sup>4</sup>
CD3+/TCRb+ (%)		83	4.2	
total CD3+/TCRb+		3.6.10 <sup>6</sup>	13.10 <sup>6</sup>	
<b>B lymphocytes</b>				

B220+ /IgM+ (%)	23.2	8.2		0.5
total B220+ /IgM+	$3.5 \cdot 10^6$	$3.5 \cdot 10^5$		$1.6 \cdot 10^5$
B220+ /IgD+ (%)	19.2	7.4		0.5
total B220+ /IgD+	$2.9 \cdot 10^6$	$3.2 \cdot 10^5$		$1.6 \cdot 10^5$
<b>Myeloid cells</b>				
Gr1+ /Mac1+ (%)	1.5			45.2
total Gr1+ /Mac1+	$2.2 \cdot 10^5$			$1.4 \cdot 10^7$
Chimerism (%)		58	56	7
PGK-Art (copy/cell)		0.3	0.9	0.05



Immunohistochemical staining performed on thymus section demonstrated the disturbed architecture of this organ

**Bone marrow Sca1<sup>+</sup> cells from Artemis-deficient mice (Art<sup>-/-</sup>) were transduced by EF1 $\alpha$ -Art lentiviral vector and transplanted in Artemis-deficient mice after 5Gy irradiation**

**Mouse 8 was analysed 9 months after transplantation.**

	5 Weeks PT	15 Weeks PT	25 Weeks PT
<b>PBL</b> ( cells/mm <sup>3</sup> )	1440	1260	1000
<b>T lymphocytes</b>			
CD3 <sup>+</sup> /CD4 <sup>+</sup> (%)	6.9	19.3	2.6
total CD3 <sup>+</sup> /CD4 <sup>+</sup>	99.5	243.2	25.5
CD3 <sup>+</sup> /CD8 <sup>+</sup> (%)	5.1	13.3	1.9
total CD3 <sup>+</sup> /CD8 <sup>+</sup>	72.7	167.6	18.8
CD4 <sup>+</sup> /CD8 <sup>+</sup> (%)	ND	ND	ND
total CD4 <sup>+</sup> /CD8 <sup>+</sup>	ND	ND	ND
CD3 <sup>+</sup> /TCRb <sup>+</sup> (%)	11.9	30.9	6.4
total CD3 <sup>+</sup> /TCRb <sup>+</sup>	171.9	388.7	64.1
<b>B lymphocytes</b>			
B220 <sup>+</sup> /IgM <sup>+</sup> (%)	3	8.6	0.7
total B220 <sup>+</sup> /IgM <sup>+</sup>	42.5	108.4	6.9
B220 <sup>+</sup> /IgD <sup>+</sup> (%)	2.8	8.6	0.7
total B220 <sup>+</sup> /IgD <sup>+</sup>	40.3	108.4	6.6
<b>Myeloid cells</b>			
Gr1 <sup>+</sup> /Mac1 <sup>+</sup> (%)	ND	<b>38</b>	4.4
total Gr1 <sup>+</sup> /Mac1 <sup>+</sup>	ND	478.8	44.2
Gr1 <sup>-</sup> /Mac1 <sup>+</sup> (%)	ND	34.8	6.4
total Gr1 <sup>-</sup> /Mac1 <sup>+</sup>	ND	438.5	64.4
NK1.1 <sup>+</sup> (%)	ND	0.2	0.9
total NK1.1 <sup>+</sup>	ND	1.9	8.7

	Spleen	liver	Lymph nodes	Thymus	Ascite
Chimerism (%)	71	64	100	97	95
PGK-Art (copy/cell)	3	3	1.9	2.1	2

**Mouse 31 was analysed 4 months after transplantation.**

	<b>5 Weeks PT</b>	<b>15 Weeks PT</b>
<b>PBL</b> ( cells/mm <sup>3</sup> )	2880	1240
<b>T lymphocytes</b>		
CD3+/CD4+ (%)	15.5	19.8
total CD3+/CD4+	446.4	245.5
CD3+/CD8+ (%)	5.7	13.8
total CD3+/CD8+	162.7	171.1
CD4+/CD8+ (%)	ND	ND
total CD4+/CD8+	ND	ND
CD3+/TCRb+ (%)	21.5	31.2
total CD3+/TCRb+	619.2	386.9
<b>B lymphocytes</b>		
B220+ /IgM+ (%)	1.9	6.9
total B220+ /IgM+	54.7	85.6
B220+ /IgD+ (%)	2.4	6.6
total B220+ /IgD+	69.1	81.8
<b>Myeloid cells</b>		
Gr1+ /Mac1+ (%)	ND	<b>33.4</b>
total Gr1+ /Mac1+	ND	413.5
Gr1- /Mac1+ (%)	ND	<b>23.4</b>
total Gr1- /Mac1+	ND	290.2
NK1.1+ (%)	ND	<b>35</b>
total NK1.1+	ND	434

	<b>Spleen</b>	<b>Lymph nodes</b>
Chimerism (%)	47	44
PGK-Art (copy/cell)	1.4	3.5

PT = post-transplantation  
PBL = peripheral blood cells  
ND = Not done

The chimerism is calculated as followed: % donor cells/%recipient cells