

Supplemental Tables

Supplemental Table S1: Summary of the adhesion results on the different Titanium Implants surface. The table shows the amount of counted cells and the relative statistical significance at the tested timepoints. The data is significant with $p \leq 0.001$ (ANOVA followed by Bonferroni's post hoc test or paired t-test). *24h-3days, ^24h-7days and %3-7days (paired t-test) indicating significance.

Reference Implant	Timepoints	Between Timepoints	Cell Number	Implant Type	24 hours	3 days	7 days
Al Blast				Ti Blast	1	1	1
	24 hours	T1-T2(*) 0.784	65.3 ± 30	Laser Mach	<0.001	0.126	<0.001
	3 days	T1-T3(^) <0.001	67.3 ± 37.6	Laser Sint	<0.001	0.002	<0.001
	7 days	T2-T3(%) <0.001	35.7 ± 16.2	Cor Blast	1	<0.001	<0.001
Cor Blast				Ti Blast	1	0.001	0.024
	24 hours	T1-T2(*) <0.001	59.2 ± 48	Al Blast	1	<0.001	<0.001
	3 days	T1-T3(^) 0.006	145 ± 71.7	Laser Mach	<0.001	0.295	1
	7 days	T2-T3(%) 0.080	114 ± 64.2	Laser Sint	<0.001	1	<0.001
Ti Blast				Al Blast	1	1	1
	24 hours	T1-T2(*) 0.550	87.1 ± 20.1	Laser Mach	<0.001	0.889	<0.001
	3 days	T1-T3(^) 0.011	79.2 ± 56.2	Laser Sint	0.001	0.032	<0.001
	7 days	T2-T3(%) 0.278	62.7 ± 40.6	Cor Blast	1	0.001	0.024
Laser Sint				Ti Blast	0.001	0.032	<0.001
	24 hours	T1-T2(*) 0.084	152.8 ± 36.4	Al Blast	<0.001	0.002	<0.001
	3 days	T1-T3(^) 0.008	127.4 ± 62.14	Laser Mach	1	1	0.003
	7 days	T2-T3(%) 0.008	199.6 ± 63.2	Cor Blast	<0.001	1	<0.001
Laser Mach				Ti Blast	<0.001	0.889	<0.001
	24 hours	T1-T2(*) <0.001	159 ± 32.8	Al Blast	<0.001	0.126	<0.001
	3 days	T1-T3(^) 0.162	108.5 ± 39.9	Laser Sint	1	1	0.003
	7 days	T2-T3(%) 0.143	138.2 ± 83	Cor Blast	<0.001	0.295	1

Supplemental Table S2: Summary of the viability results on the different Titanium Implants surface. The table shows viability across the time-points respect the different implant types the relative statistical significance at the tested timepoints. The data is significant with $p \leq 0.001$ (ANOVA followed by Bonferroni's post hoc test or paired t-test). *24h-3days, ^24h-7days and %3-7days (paired t-test) indicating significance.

Reference Implant	Timepoints	Between Timepoints	Viability	Implant Type	24 hours	3 days	7 days
Al Blast				Ti Blast	1	1	0.139
	24 hours	T1(*) 0.016	0.03 ± 0.56	Laser Mach	1	0.008	0.007
	3 days	T2(^) 0.026	-0.5 ± 0.53	Laser Sint	1	<0.001	<0.001
	7 days	T3(%) <0.001	-0.88 ± 0.83	Cor Blast	<0.001	1	<0.001
Cor Blast				Ti Blast	<0.001	1	<0.001
	24 hours	T1(*) <0.001	1.7 ± 1.66	Al Blast	<0.001	1	<0.001
	3 days	T2(^) <0.001	-0.25 ± 0.67	Laser Mach	<0.001	0.191	0.006
	7 days	T3(%) 0.001	0.57 ± 0.92	Laser Sint	<0.001	<0.001	1
Ti Blast				Al Blast	1	1	0.139

Laser Sint	24 hours	T1(*) 0.718	-0.085 ± 0.69	Laser Mach	1	0.353	1
	3 days	T2(^) 0.298	-0.19 ± 0.87	Laser Sint	1	<0.001	0.011
	7 days	T3(%) 0.136	-0.36 ± 0.64	Cor Blast	<0.001	1	<0.001
				Ti Blast	1	<0.001	0.011
Laser Mach	24 hours	T1(*) 0.001	-0.23 ± 0.62	Al Blast	1	<0.001	<0.001
	3 days	T2(^) 0.003	0.78 ± 0.88	Laser Mach	1	0.354	0.204
	7 days	T3(%) <0.001	0.32 ± 0.54	Cor Blast	<0.001	<0.001	1
				Ti Blast	1	0.353	1
				Al Blast	0.403	0.464	0.007
	3 days	T2(^) 0.001	0.29 ± 0.94	Laser Sint	1	0.354	0.204
	7 days	T3(%) 0.288	-0.16 ± 0.55	Cor Blast	<0.001	0.191	0.006

Supplemental Table S3. Summary table of the ADSCs' m-RNA expression on different implants at various time points. Summary and comparison of the data analysis of the m-RNA (*alp*, *osn*, and *coll-I*) synthesized by the ADSCs on the different implants at different time points. The data is significant at $p \leq 0.05$ (paired t-test). Abbreviations: alkaline phosphatase(*alp*); osteonectin(*osn*); collagen type I (*coll-I*).

Reference Implant	Implant Type	coll-I			alp			osn		
		24 hours	3 days	7 days	24 hours	3 days	7 days	24 hours	3 days	7 days
Ti Blast	Al Blast	<0.001	0.038	<0.001	<0.001	<0.001	<0.001	N/C	<0.001	<0.001
	Laser Mach	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Laser Sint	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Cor Blast	0.037	<0.001	<0.001	0.191	<0.001	<0.001	<0.001	<0.001	<0.001
Al Blast	Ti Blast	<0.001	0.038	<0.001	<0.001	<0.001	<0.001	N/C	<0.001	<0.001
	Laser Mach	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Laser Sint	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.009	<0.001
	Cor Blast	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.107	<0.001
Laser Mach	Ti Blast	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Al Blast	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Laser Sint	1	0.473	1	0.005	<0.001	0.406	<0.001	0.002	0.001
	Cor Blast	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Laser Sint	Ti Blast	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Al Blast	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.009	<0.001
	Laser Mach	1	0.473	1	0.005	<0.001	0.406	<0.001	0.002	0.001
	Cor Blast	<0.001	0.07	<0.001	<0.001	0.51	<0.001	<0.001	1	<0.001
Cor Blast	Ti Blast	0.037	<0.001	<0.001	0.191	<0.001	<0.001	<0.001	<0.001	<0.001
	Al Blast	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.107	<0.001
	Laser Mach	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
	Laser Sint	<0.001	0.07	<0.001	<0.001	0.51	<0.001	<0.001	1	<0.001

Supplemental Table S4. Comparison of m-RNA expression on different implants at various time points. An overview of the data analysis comparison of the m-RNA (*alp*, *osn*, and *coll-I*) expressed by ADSCs on various implants at different time points. The data is significant with *24h-3days, ^24h-7days and %3-7days (paired t-test) indicating significance. Abbreviations: alkaline phosphatase (*alp*); osteonectin (*osn*); collagen type I (*coll-I*).

<i>Implant</i>	<i>Time points</i>	<i>coll-I</i>	<i>alp</i>	<i>osn</i>
<i>Ti Blast</i>	T1/T2 (*)	0.78	0.909	0.002
	T1/T3 (^)	0.007	0.001	<0.001
	T2/T3 (%)	0.001	0.001	0.001
<i>Al Blast</i>	T1/T2 (*)	0.017	N/D	0.01
	T1/T3 (^)	0.001	0.001	<0.001
	T2/T3 (%)	0.003	0.001	<0.001
<i>Laser Mach</i>	T1/T2 (*)	0.002	0.013	0.027
	T1/T3 (^)	0.004	0.004	0.018
	T2/T3 (%)	0.017	0.003	0.022
<i>Laser Sint</i>	T1/T2 (*)	0.006	0.686	0.001
	T1/T3 (^)	0.212	0.263	<0.001
	T2/T3 (%)	0.851	0.036	<0.001
<i>Cor Blast</i>	T1/T2 (*)	0.001	0.008	0.007
	T1/T3 (^)	0.425	0.443	0.001
	T2/T3 (%)	0.007	0.002	0.001