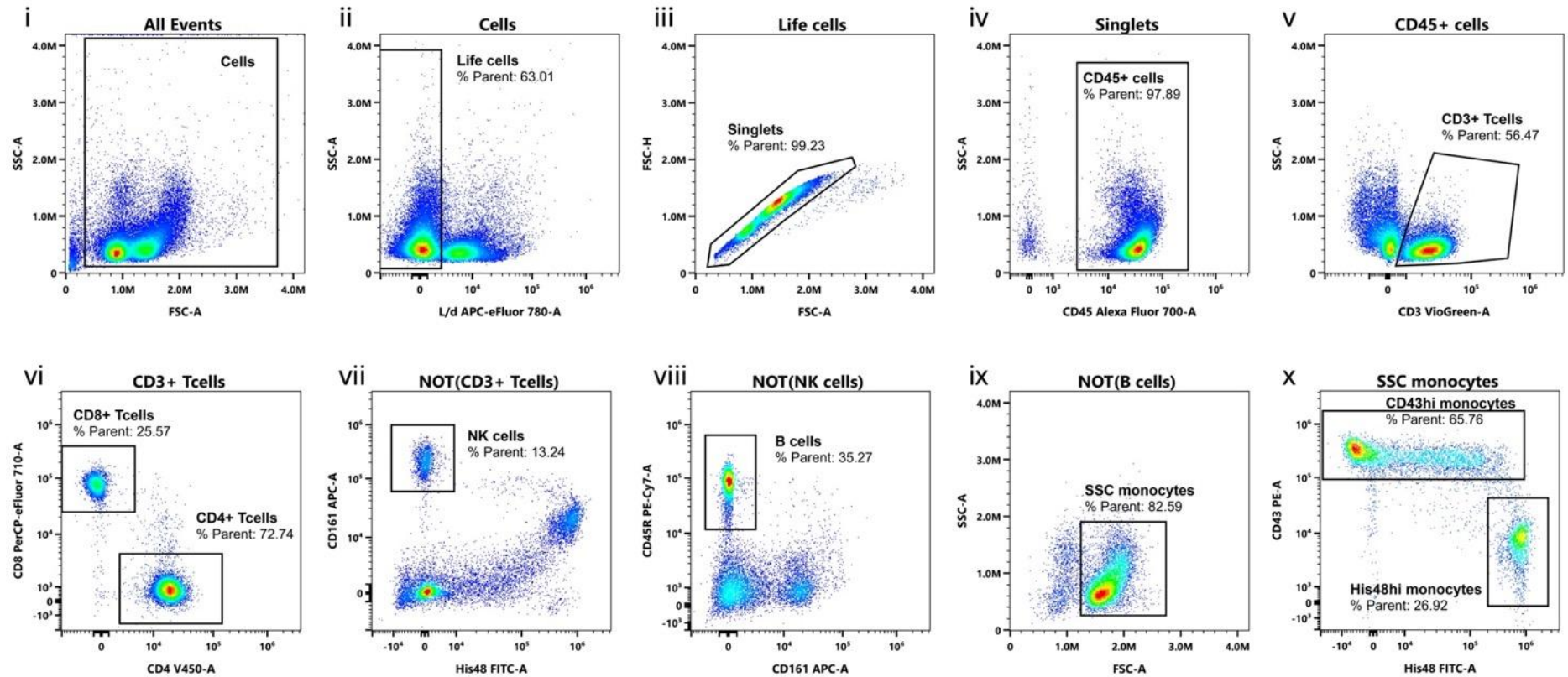


Longitudinal Profiling Reveals Divergent Kidney and Brain Immune Responses during Metabolic Syndrome

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SUPPLEMENTARY DATA



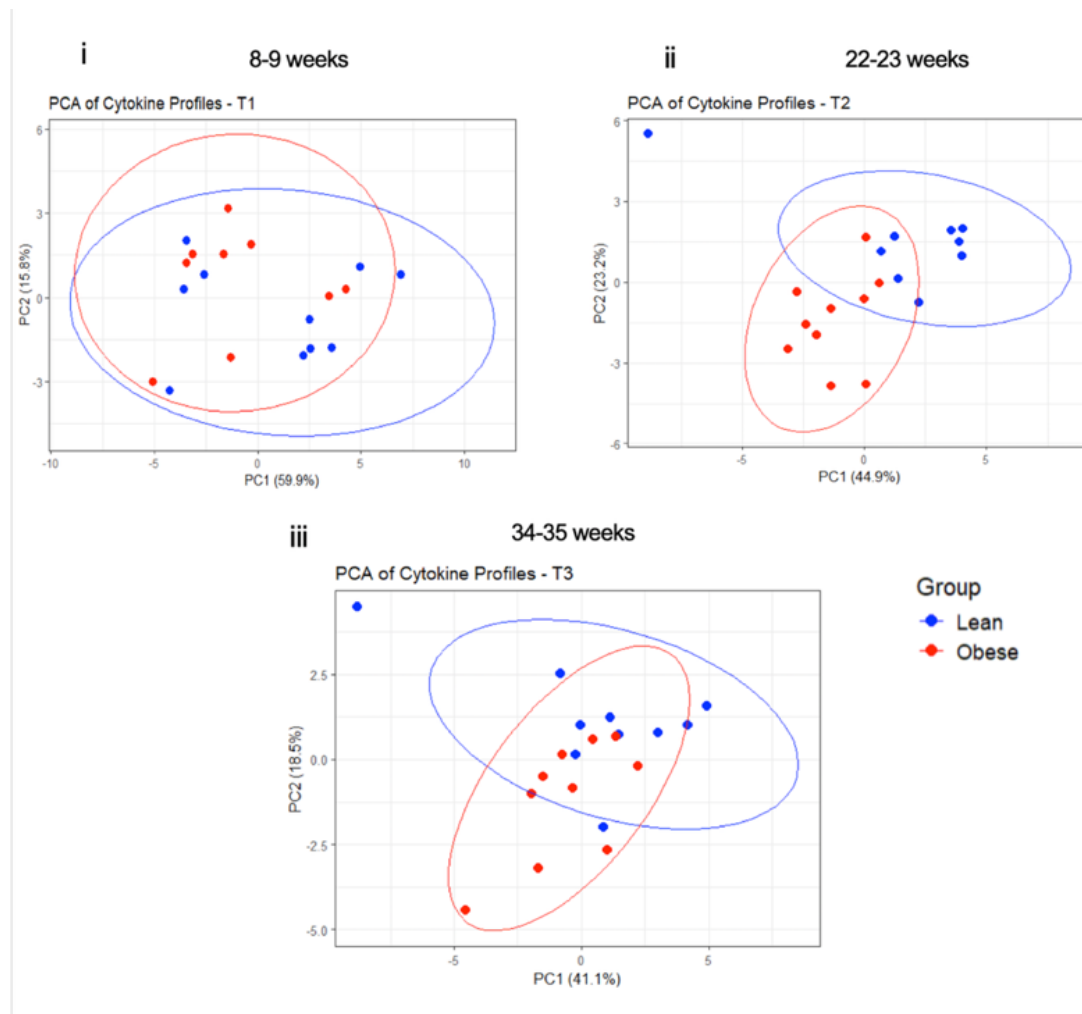
Supplementary Figure 1: Representative dot plots of PBMCs isolated from Lean and Obese ZSF1 rats at 8-9 weeks (8-9w), 22-23 weeks (22-23w) and 34-35 weeks (34-35w).

SUPPLEMENTARY DATA

Table S1: Plasma levels of cytokines and chemokines (in pg/mL) in Lean and Obese ZSF1 rats at all timepoints: T1: 8-9 weeks; T2: 22-23 weeks; T3: 34-35 weeks. Mean $\pm$ SD, 2-way ANOVA (p_{page} , p_{group} , $p_{\text{page} \times \text{group}}$, p value in bold: $<0,05$). Tukey's multiple comparison post-test: *: $p<0,05$, **: $p<0,1$; ***: $p<0,01$; ****: $p<0,001$.

	Lean T1	Lean T2	Lean T3	Obese T1	Obese T2	Obese T3	p_{page}	p_{group}	$p_{\text{page} \times \text{group}}$
IL18	146 $\pm$ 97	65 $\pm$ 61	84 $\pm$ 45	104 $\pm$ 50	77 $\pm$ 26	83 $\pm$ 39	0,02	0,50	0,31
IL6	3152 $\pm$ 2006	749 $\pm$ 468	2028 $\pm$ 1437	2445 $\pm$ 2084	1275 $\pm$ 472	2487 $\pm$ 1180	<0,01	0,80	0,32
IL2	129 $\pm$ 110	35 $\pm$ 13	66 $\pm$ 54	76 $\pm$ 63	34 $\pm$ 15	56 $\pm$ 23	0,01	0,18	0,33
IL13	66 $\pm$ 42	34 $\pm$ 5	47 $\pm$ 20	50 $\pm$ 24	41 $\pm$ 8	67 $\pm$ 31	0,05	0,59	0,12
IFNg	253 $\pm$ 156	120 $\pm$ 62	140 $\pm$ 27	164 $\pm$ 61	134 $\pm$ 25	198 $\pm$ 98	0,04	0,81	0,06
IL17A	66 $\pm$ 59	13 $\pm$ 8	34 $\pm$ 19	39 $\pm$ 26	28 $\pm$ 9 *	46 $\pm$ 23	0,02	0,94	0,09
IL4	88 $\pm$ 59	18 $\pm$ 10	46 $\pm$ 21	75 $\pm$ 70	40 $\pm$ 14 **	50 $\pm$ 19	<0,01	0,66	0,38
IL12p70	323 $\pm$ 220	99 $\pm$ 33	182 $\pm$ 126	194 $\pm$ 125	148 $\pm$ 43 *	173 $\pm$ 56	0,01	0,36	0,10
TNFa	9,1 $\pm$ 5,5	3,0 $\pm$ 3,8	3,5 $\pm$ 3,5	4,3 $\pm$ 3,7	1,8 $\pm$ 0,9	2,9 $\pm$ 2,2	<0,01	0,04	0,21
MIP1a	12,4 $\pm$ 7,7	7,3 $\pm$ 4,8	8,0 $\pm$ 4,1	8,5 $\pm$ 5,2	9,8 $\pm$ 1,6	8,6 $\pm$ 2,3	0,33	0,84	0,13
IL5	141 $\pm$ 58	117 $\pm$ 64	111 $\pm$ 36	124 $\pm$ 59	107 $\pm$ 17	108 $\pm$ 25	0,27	0,43	0,88
IL1a	111 $\pm$ 77	38 $\pm$ 17	56 $\pm$ 22	61 $\pm$ 45	69 $\pm$ 14 **	104 $\pm$ 54	0,10	0,43	0,01
MCP1	817 $\pm$ 355	432 $\pm$ 161	516 $\pm$ 229	689 $\pm$ 318	722 $\pm$ 132 **	715 $\pm$ 100	0,06	0,05	0,02
GCSF	76 $\pm$ 48	34 $\pm$ 34	36 $\pm$ 12	49 $\pm$ 39	34 $\pm$ 8	73 $\pm$ 39	0,04	0,77	0,02
VEGF	60 $\pm$ 40	60 $\pm$ 13	70 $\pm$ 23	45 $\pm$ 17	81 $\pm$ 20 *	79 $\pm$ 14	0,01	0,44	0,06
Fractalkine	41 $\pm$ 16	49 $\pm$ 10	48 $\pm$ 10	42 $\pm$ 11	49 $\pm$ 6	47 $\pm$ 14	0,15	0,99	0,92
Leptin	2850 $\pm$ 1797	16952 $\pm$ 7819	21322 $\pm$ 9810	77480 $\pm$ 51532 *	91824 $\pm$ 29974 ****	124894 $\pm$ 46693	0,01	<0,0001	0,24
IP10	128 $\pm$ 66	128 $\pm$ 28	131 $\pm$ 41	170 $\pm$ 60	195 $\pm$ 45 **	261 $\pm$ 53 ****	0,01	<0,0001	0,02
IL1b	29 $\pm$ 11	60 $\pm$ 37	75 $\pm$ 52	22 $\pm$ 9	99 $\pm$ 47	226 $\pm$ 221	0,01	0,02	0,08
IL10	92 $\pm$ 38	172 $\pm$ 114	189 $\pm$ 104	70 $\pm$ 40	230 $\pm$ 119	438 $\pm$ 345 **	<0,001	0,03	0,04
RANTES	292 $\pm$ 100	313 $\pm$ 85	396 $\pm$ 134	387 $\pm$ 171	590 $\pm$ 123 ****	521 $\pm$ 158 *	0,01	<0,0001	0,08
LIX	1094 $\pm$ 633	1377 $\pm$ 760	2531 $\pm$ 813	1402 $\pm$ 922	2992 $\pm$ 724 ***	3204 $\pm$ 1532	<0,0001	<0,01	0,11

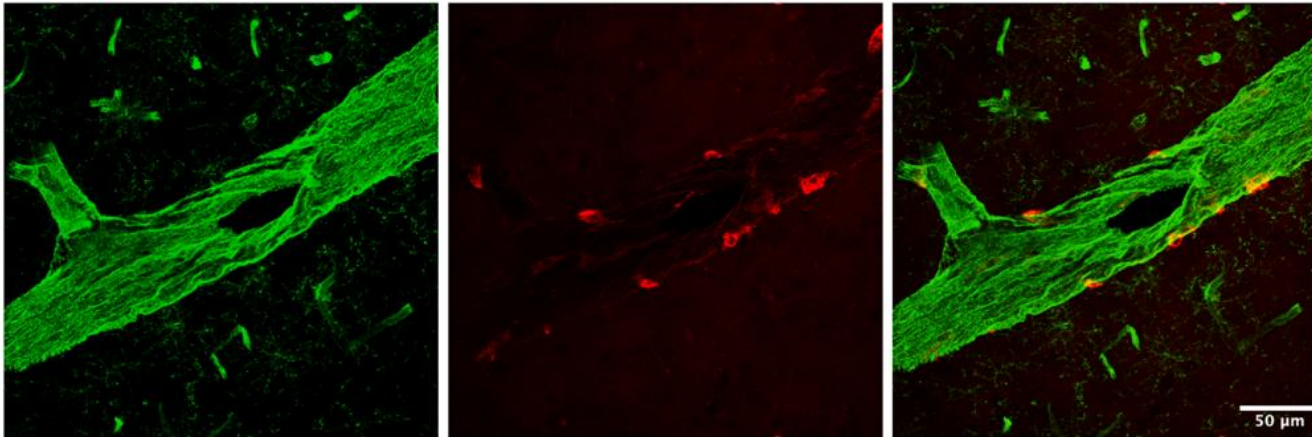
SUPPLEMENTARY DATA



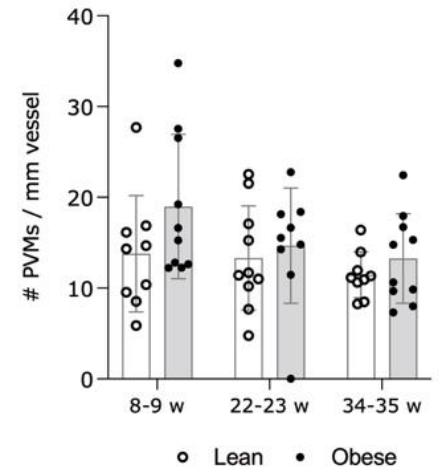
Supplementary Figure 2: Principal component analysis (PCA) of plasma cytokines and chemokines measured in Lean and Obese rats at all timepoints: T1: 8-9 weeks; T2: 22-23 weeks; T3: 34-35 weeks. Scatterplots of principal components 1 and 2 of log2-transformed 27-Plex analyte changes in plasma of lean and obese rats. Each point represents an individual animal, with ellipses representing 95% confidence intervals around the means for each group. The blue and red symbols represent the lean and obese groups, respectively, whereas the corresponding ellipses represent the clusters of the various populations.

SUPPLEMENTARY DATA

A



B



Supplementary Figure 3: No difference in the number of Perivascular macrophages (PVMs) in ZSF1 rats at 8-9 weeks (8-9w), 22-23 weeks (22-23w) and 34-35 weeks (34-35w). **(A)** Representative images of vessels (green, left panel), CD206+ PVMs (red, middle panel), and merged image (right panel) **(B)** Quantification of PVM number corrected for vessel length in mm. (2-way ANOVA: $p_{\text{age}}=0.11$, $p_{\text{group}}=0.08$, $p_{\text{age} \times \text{group}}=0.55$) Mean $\pm$ SD; n=9-10 rats/group. Scale bar = 50 μ