via flow cytometry to identify immune cell subsets. Spleen cells were treated with vehicle or TLR7/8 agonist overnight prior to supernatant analysis. In a parallel experiment, mice were treated for two weeks with a topical TLR7 agonist (R848) to assess effects on immune cell populations.

Results Immune cell subsets in spleen were similar in all mice. Cell counts of *ex vivo* and Flt3L- cultured BM-DCs were reduced in NOER mice. Conventional DCs (cDCs) were increased in MOER mice, and NOER mice trended higher in CD19+ cells. Other immune populations remained similar. NOER mice trended lower in IL-6 response after overnight R848 stimulation.

Conclusion Preliminary results suggest membrane ERα-initiated events are required to develop certain innate immune cell subsets and for robust expansion of DCs. Membrane and nuclear functions of ERα may compensate for each other in some cases. More studies are needed to clarify the role of ERα localization in modulating immune cell development and function.

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1005 CHARACTERIZATION OF REGULATORY RECEPTORS ON PLASMACYTOID DENDRITIC CELLS IN LUPUS

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Regulatory or suppressive receptors on plasmacytoid dendritic cells (PDCs) are an attractive therapeutic target in systemic lupus erythematosus (SLE), given the role type I interferon (IFN) plays in this disease. In this study, we determine whether SLE patient PDC regulatory receptor expression and function associates with disease features in SLE. We used quantitative multicolor flow cytometry to measure regulatory receptors on PDCs from SLE patients and control subjects, including immunoglobulin like transcript 7 (ILT7), bone marrow derived antigen 2 (BDCA2), ILT3, leukocyte-associated immunoglobulin-receptor 1 (LAIR1), natural killer cell P44-related protein (NKp44), bone marrow stromal cell antigen 2 (BST2), and dendritic cell (DC) immunoreceptor (DCIR). For functional studies, cells from 9 SLE patients and 9 controls were treated with ILT7 and BDCA2 crosslinking antibodies followed by TLR9 agonists. ILT7 and BDCA2 expression on SLE patient PDCs were inversely correlated with disease activity by SLEDAI score. High IFN SLE patients had increased levels of the ILT7 ligand BST2, and at the same time reduced ILT7 expression. BDCA2 levels were 5-fold higher than ILT7 levels, and crosslinking ILT7 only weakly inhibited IFN secretion. Crosslinking BDCA2 significantly reduced IFN production in SLE patient cells, but this effect on IFN was much greater in patients with low SLEDAI scores than those with high SLEDAI scores. In conclusion, we identify associations between PDC regulatory receptor expression and clinical disease in SLE, and dominant inhibitory function of BDCA2 over ILT7 in PDC type I IFN secretion with dependency upon disease activity.

1101 URINE COMPLEMENT ACTIVATION PRODUCTS IN LUPUS NEPHRITIS

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Background Complement activation plays a critical role in the development of kidney injury during lupus nephritis (LN). Clinical trials targeting the complement pathway are now underway in LN. It is therefore important to understand the

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Parameter	Spearman r			P Value			95% Confidence Interval		
	Ba	C5a	C5b-9	Ba	C5a	C5b-9	Ba	C5a	C5b-9
Activity Index	0.31	0.25	0.37	0.0004	0.005	<0.0001	0.14,0.47	0.07,0.41	0.20,0.52
•Endocapillary Hypercell	0.25	0.23	0.36	0.005	<0.01	<0.0001	0.07,0.41	0.05,0.39	0.19, 0.51
•Hyaline Deposits	0.19	0.23	0.23	0.036	0.018	0.0094	0.008,0.36	0.031,0.38	0.05,0.39
•PMN/Karyorrhexis	0.18	0.18	0.32	0.044	0.044	0.0003	0.0005,0.35	0.0004,0.35	0.15,0.47
•Necrosis	0.19		0.21	0.027	0.42	0.017	0.018,0,37		0.034,0.38
•Crescents	0.21		0.21	0.019	0.06	0.004	0.03,0.38		0.08,0.42
•Interstitial Inflammation	0.35	0.26	0.27	<0.0001	0.003	0.002	0.18,0.50	0.08,0.42	0.097,0.43
Chronicity Index	0.29	0.19		0.0005	0.022	0.22	0.13,0.44	0.02,0.35	
•Glomerulosclerosis				0.23	0.36	0.73			
•Fibrous Crescents				0.94	0.37	0.83			
•Tubular Atrophy	0.31	0.24		0.0002	0.031	0.17	0.15,0.45	0.079,0.39	
•Interstitial Fibrosis	0.31	0.24		0.0002	0.031	0.16	0.15,0.45	0.079,0.39	
Proteinuria	0.41	0.54	0.42	<0.0001	<0.0001	<0.0001	0.25,0.54	0.42,0.66	0.27,0.55
Serum Creatinine	0.51	0.31		<0.0001	0.0001	0.61	0.38,0.63	0.15,0.46	
Complement C3	-0.31			0.0002	0.06	0.16	-0.46,-0.15		
Complement C4				0.09	0.18	0.25			
Urine Ba		0.71	0.46		<0.0001	<0.0001		0.62,0.78	0.31,0.58
Urine C5a			0.68			<0.0001			0.59,0.76