121 INTERFERON STIMULATED LONG NONCODING RNA LNCRNA-CMPK2 FACILITATES NEUTROPHILS INTERFERON PRODUCTION BY TLR7/8 AGONIST IN SLE

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Background and aims Neutrophils are important source of high interferon in SLE, we aimed to identify Long noncoding RNAs (LncRNAs) that can be strongly induced by interferon and simultaneously show different expression in neutrophils of SLE and healthy controls. We also investigated how this LncRNA modulate neutrophils interferon production.
Methods RNA-seq was performed in two series of samples, interferon stimulated neutrophils samples and SLE versus healthy controls neutrophils samples. LncRNA-CMPK2 was screened out by cross-reference the two RNA-seq results. Neutrophils interferon production was measured by qPCR and ISRE report gene assay after LncRNA-CMPK2 was knocked down using antisense oligos electrotransfection.
Results SLE neutrophils produced more interferon when stimulated by TLR7/8 agonist R848 as compared to healthy controls. Neutrophils enhanced interferon production capacity after interferon prime. LncRNA-CMPK2 was an interferon stimulated LncRNA in neutrophils and had an expression level correlated with SLE disease activity. Knock down LncRNA-CMPK2 attenuated neutrophils interferon production.
Conclusions Interferon can augment neutrophils interferon production capacity in regenerative feedback. LncRNA-CMPK2 was an important interferon stimulated LncRNA and can facilitate neutrophils interferon production in SLE. Accommodate the expression of LncRNA-CMPK2 could probably supply a new thread of thought to SLE treatment.

122 DENDRITIC CELLS DISPLAY ABERRANT TOLL-LIKE RECEPTOR 7/9 RESPONSES IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background and aims Systemic lupus erythematosus (SLE) is a multifactorial autoimmune disease that causes multi-organ damages. Plasmacytoid dendritic cells (pDCs) are potent type I interferon (IFN) producers and myeloid dendritic cells (mDCs) are professional antigen presenting cells. Clinically, serum IFN-alpha (IFNa) level correlates with disease severity and mDCs from patients also display activated phenotypes. These observations suggested that different DCs subsets may mediate SLE pathogenesis. Therefore, the aim of this study was to evaluate whether pDCs and mDCs possessed aberrant properties that might mediate SLE progression.
Methods The properties of DCs from the murine lupus model New Zealand Black/White F1 (BWF1) were evaluated using flow cytometry, ELISA and qPCR.
Results Splenic pDCs abundance was similar before and after disease onset. The induction of CD40, CD80 and MHC II on pDCs upon Toll-like receptor (TLR) 7 or TLR9 stimulation and the level of IFN-alpha produced by pDCs in symptomatic and pre-symptomatic mice was also comparable. In contrast, splenic mDCs expanded in symptomatic mice. These mDCs decreased CD80 and MHC II expression but their ability in stimulating allogenic T cell proliferation was similar to mDCs from pre-symptomatic mice. On the other hand, TLR7 and TLR9 expressions in BWF1 mDCs were higher than mDCs from age- and sex-matched parental NZW controls. The amount of IL-10 and CXCL13 produced by mDCs from symptomatic mice upon TLR7 or TLR9 stimulation was also higher than its pre-symptomatic counterparts.
Conclusions Myeloid DCs displayed heightened TLR7 and TLR9 responses in SLE. More work is needed to further dissect how mDCs promote SLE pathogenesis.

123 MIR-127–3P AS A NOVEL REGULATOR OF TYPE I INTERFERON SIGNALLING PATHWAY IN SLE

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Background and aims Type 1 interferon(IFN) is a critical pathogenic factor in Systemic Lupus Erythematosus(SLE) and its associated nephritis, as elevated IFN inducible genes have been found in the kidney tissues and deficiency of IFN receptor protects lupus mouse model from developing nephritis. In this study, we want to find if there are miRNAs abnormal in the kidneys of lupus patients.
Methods miRNAs were quantified by RT-qPCR. Interferon-stimulated response element(ISRE)-luciferase reporter assay and western blotting were used to investigate the function of candidate miRNAs. Genes that were affected by specific miRNA were identified by microarray. Antagomir(chemical modified miRNA inhibitors) was used to inhibit the function of candidate miRNA to validate its function. We administrated agomir (chemical modified miRNA mimics) into pristane induced pulmonary haemorrhage(PH) mouse model to investigate the *in vivo* function of the candidate miRNA.
Results The expression of miR-127-3p decreased in kidney tissues from lupus nephritis patients and pristane induced lupus mice. miR-127-3p was found negatively regulating the type 1 IFN signalling by directly targeting JAK1 and knocking down of miR-127-3p enhanced type 1 IFN signalling. Overexpression of miR-127-3p prevented pristane induced lung haemorrhage.
Conclusions Our study shows miR-127-3p can inhibit IFN signalling and is reduced in kidneys of lupus nephritis patients indicating a new mechanism of overactivated IFN response in the kidney of SLE. *In vivo* inhibitory effects of miR-127-3p on IFN signalling suggest its therapeutic potential of treating lupus. Ongoing mouse model studies about the effects of miR-127-3p on lupus nephritis will give us more insights into its therapeutic value.

Paediatric SLE

124 LUPUS NEPHRITIS IN CHILDREN: A 7 YEAR SINGLE CENTRE EXPERIENCE FROM INDIA

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Background and aims There is no class I evidence available to treat children with lupus nephritis (LN). This study looked at our experience of management of LN and contribute to the existing world literature. In addition to treatment of LN, care is given to educate the family, manage lipids, BMI, restricting steroid use to 1 mg/kg/day at onset, give hydroxychloroquine to all and vaccinate if possible.

- To study the clinical profile and lab parameters of children at onset of nephritis.
- To see which of the two drugs cyclophosphamide(CYC) or mycophenolate mofetil (MMF)were more effective by studying the time to renal flare.
- To analyse the side effects and disease related damage in these children

Methods All children with lupus nephritis who attended the Paediatric Rheumatology clinic from Sept 2009 to Sept 2016 were included.

Results 166 children with SLE, 67 had LN **67/166 (40.3%);** Male: Female=**1: 2.72. Median SLEDAI at nephritis onset:18** 57 renal biopsies:Class I:1, Class II:5, Class III:19, Class IV:26, Class V:6 MMF used to induce remission:43(64%), Cyclophosphamide (CYC) 19 (28%) Azathioprine:5(7%). 67% achieved complete remission during induction. 25% partial remission/flared after an initial response within induction period. Median time to response during induction therapy: 4 months (2–17 months). MMF was given to 82% and Azathioprine to 18% for maintenance. 36/62 (58%) never flared, 23/62 (37%) flared during induction therapy and 3/62 (5%) were in partial remission.

Abstract 124 Table 2 Outcome variables

Variable	
Median duration of induction therapy	7 months(3-35)
Median duration of follow up since nephritis diagnosis	48months(3-159)
Median SLEDAI at onset of nephritis	18 (4-52)
Median SLEDAI at last follow up	0 (0-43)
At last follow up:	
Complete remission	58%
Active ds	9%
Disease flare	7%
Complete remission off DMARDs	4%
Lost to follow up	16%
Deaths	4%
Infection profile	
Cellulitis	4%
Tuberculosis	3%
Enteric fever	3%
Viral infections:	34% (23/67)
Herpes zoster	40%(9/23)
Dengue	40%(9/23)
CMV reactivation	13%(3/23)
Varicella	4%(1/23)
Adeno virus	4%(1/23)

The primary outcome measure, time to renal flare was statistically insignificant regardless of the induction agent used

Conclusions MMF and CYC were equally effective as induction agents and neither was superior to prevent renal flares. No factor: demographic, clinical or laboratory could predict renal flares. 58% were in renal remission, 33% on steroids.

Abstract 124 Table 1 Basic demographics

Median	
Age at onset of SLE disease	11years(4-18years)
Age at diagnosis of SLE disease	11.75 years(4.5-18.16years)
Delay to diagnosis	2.76 months(0.24-72)
Age at nephritis diagnosis	12.2 years(4.5-24.5 years)
Time to onset of nephritis (46 children had simultaneous onset of SLE disease and nephritis)21 children had a delayed onset	19 months((6.72-120 months)
Sr. Creatinine at onset of induction	0.7mg/dl (0.27-2.84)
Sr.Creatinine at onset of maintenance	0.42mg/dl (0.16-3)
Urine spot protein/creatinine ratio at onset of induction	1.96(0.35-13.19)
Urine spot protein/creatinine ratio at onset of maintenance	1.3gm(0.240-5.5)