Objective For 26 patients with neonatal seizure, we designed a panel with 741 seizures related genes and performed target sequencing.

Methods The subjects were consisted of 26 neonatal convulsions with unknown cause. Among them, 18 (69.2%) were female and 8 (30.8%) were male. 741 genes coding regions capture was performed using the SureSelect Target Enrichment kit from Agilent.

Results Overall, we identified 87,920 SNVs in 26 patients. Of the 1497 variants with unknown significant (VUSs), 3 were nonsense variants, 3 were in splicing site, and 33 missense variants predicted to be damage by SIFT and PolyPhen2. These 39 variants affected 32 genes were found in 19 probands. We identified pathogenetic mutations in 7 cases (26.9%).

Conclusion The sequencing analysis of 741 seizures related genes was performed in 26 patients with neonatal convulsions. We identified pathogenetic mutation in 6 cases (23.1%) which may contribute to the selection of specific medication treatment.

PO-0483b REVISED NICHD DEFINITION FOR BRONCHOPULMONARY DYSPLASIA (BPD) PREDICTS NEURODEVELOPMENTAL IMPAIRMENT (NDI) AT 2 YEARS CORRECTED AGE IN SINGAPORE

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PO-0483c PUNCTATE LESIONS ON MR IMAGES IN PRETERM INFANTS AT TERM CORRECTED AGE

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Introduction We studied Punctate Lesions detected by cerebral Magnetic Resonance (MR) in a large group of preterm infants recruited to the Evaluation of Preterm Imaging Programme (ePrime).

Methods We studied 511 of 2133 eligible infants cared for in 13 neonatal units including 5 Perinatal Centre. 254 were male and 84 from multiple pregnancies. Median (range) gestational age (GA) was 30 (23–32) weeks and birthweight 1270 (552–3160) g. T1 and T2 weighted MR images were obtained at 38–44 weeks GA in 479 and 44–60 weeks GA in 32 infants, and reported using conventional diagnostic criteria.

Results Neuroradiological analysis detected punctate lesions in 98 infants (19%), of whom 42 (8%) had more than 20 lesions. Preliminary analysis found no relation with more extreme prematurity, multiple pregnancy, birthweight, surfactant or antenatal steroid therapy, length of respiratory support or treatment for patent ductus arteriosus. No punctate lesions were reported on contemporaneous cranial ultrasonography, and 87/98 of those scans were reported as normal.

Conclusions Punctate lesions are common, of unclear aetiology, and not detected by ultrasonography.

PO-0483d NO NEUROPROTECTIVE EFFECTS OF CANNABIDIOL AFTER SEVERE HYPOXIA-ISCHEMIA IN NEWBORN PIGLETS

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Background and aim Hypothermia is limiting neurological sequelae after perinatal asphyxia. Still a significant number of infants have minimal effect of the treatment. Adjacent neuroprotective strategies are therefore needed. In animal studies the phytocannabinoid Cannabidiol (CBD) has shown great promise as a