ARTICLES OF INTEREST – December 2018

Effect of high frequency oscillatory high flow nasal cannula on carbon dioxide clearance in a premature infant lung model: A bench study

The authors compared CO2 clearance in a fixed compliance lung model connected to a high flow nasal cannula (HFNC) system supplied with oscillatory versus non-oscillatory flow. As flow increased, oscillatory ETCO2 levels decreased linearly compared to non-oscillatory HFNC. There were no differences in ETCO2 levels between oscillation frequencies at any flow except at 6 Hz and 10 Hz. Oscillatory HFNC significantly improved CO2 clearance in this premature infant lung model and may prove to be a useful enhancement to non-invasive respiratory management.

Vitamin A supplementation by endotracheal application of a nano-encapsulated preparation Is feasible in ventilated preterm lambs

Although low vitamin A (VA) levels are associated with an increased risk of BPD, intramuscular VA is not widely used due to concerns about feasibility and pain. To determine the capacity of endotracheal VA to VA levels, the authors administered IV VA, endotracheal VA, or control to 85% gestation ventilated lambs with RDS. Animals treated with VA endotracheally directly after administration of surfactant showed significant increases of VA in serum and lung compared to controls as did IV treated animals. Endotracheal VA supplementation in preterm lambs is feasible and might offer advantages in comparison to IV.

Development of a points-based system for determining workload for a neonatology full-time equivalent

Major questions are: 1. What is a Full Time equivalent (FTE)? 2. How does one assign workload/productivity for clinicians working under different practice models? To address some of these complexities, Academic Division of Neonatology at Children’s Mercy, Kansas City, University of Missouri-Kansas City School of Medicine developed a scheduling and management system. This new quantitative system assigned points for each clinical activity, developing a model of “expected clinical points” that reflected the expected annual work hours per faculty member. Neonatologists from this division provide a wide range of services from fetal and complex neonatal care to high-risk infant follow up, including home ventilator management and work in Level IV and Level II-III NICUs in the community. Quantification of the diverse workload into points has created a clear guidance for predicting additional staffing needs. The development of a point-based model for calculating clinical work has successfully
created a homogeneous system to define and measure physician work expectations in a heterogeneous clinical environment.

**Analgesic efficacy and safety of morphine in the Procedural Pain in Premature Infants (POPPI) study: randomised placebo-controlled trial (PDF)**

In a single center masked trial, 31 infants were randomly allocated to either 100 µg/kg oral morphine sulphate or placebo 1 h before a clinically required heel lance and retinopathy of prematurity screening examination, on the same occasion. Eligible infants were born prematurely at less than 32 weeks’ gestation or with a birthweight lower than 1501 g and had a gestational age of 34–42 weeks at the time of the study. The co-primary outcome measures were the Premature Infant Pain Profile–Revised (PIPP-R) score after retinopathy of prematurity screening and the magnitude of noxious-evoked brain activity after heel lancing. No significant difference was found in the outcomes between the 2 groups. Study was stopped due to profound respiratory adverse effects without analgesic efficacy.

**Morphine vs methadone treatment for infants with neonatal abstinence syndrome**

The authors wished to estimate the relationship of initial pharmacotherapy with methadone or morphine and LOS in infants with NAS admitted to the NICU. Using the Pediatrix Clinical Data Warehouse database, they identified a total of 7667 eligible infants born at ≥36 weeks of gestation between 2011 and 2015 who were diagnosed with NAS, including 1187 treated with methadone (15%) and 6480 treated with morphine (85%). They found that among infants born at ≥36 weeks of gestation with NAS, initial methadone treatment was associated with a shorter LOS compared with morphine treatment.

**Contrast-enhanced ultrasound and near-infrared spectroscopy of the neonatal bowel: novel, bedside, noninvasive, and radiation-free imaging for early detection of necrotizing enterocolitis**

Early detection of ischemia and necrotic bowel is vital in improving morbidity and mortality associated with NEC; however, strategies for predicting and preventing NEC are lacking. Contrast-enhanced ultrasound (CEUS) and near-infrared spectroscopy (NIRS) are novel techniques in pediatrics that have been proven as safe modalities. This article is to reviews the current understanding of changes in bowel perfusion in NEC, discusses the accuracy of abdominal US in detecting NEC, and explains how the use of CEUS and NIRS will enhance the precise and early detection of altered/pathological bowel wall perfusion in the initial development and course of NEC.

**Neurodevelopmental outcomes in infants with birth weight ≤500 g at 3 years of age**

This retrospective study included 460 surviving infants with a BW of ≤500g from 2003 to 2012 in the Neonatal Research Network of Japan. Infants were evaluated at 36 to 42 months of age for neurodevelopmental impairment (NDI). The overall proportion of NDI (cerebral palsy, visual impairment, hearing impairment, or a developmental quotient score of <70) was 59.1% and the authors found that neurodevelopmental outcomes of infants with a BW of ≤500 g have not improved from 2003 to 2012.

**Delivery room management of meconium-stained newborns and respiratory support**

This multicenter cohort study compared 130 nonvigorous newborns born during the retrospective 1-year period before the implementation of new NRP guidelines (October 1, 2015, to September 30, 2016)
to 101 infants born during the 1-year prospective period after implementation (October 1, 2016, to September 30, 2017). The authors found that a significantly higher proportion of newborns were admitted to the NICU for respiratory issues in the prospective group compared with the retrospective group (40% vs 22%) with an odds ratio (OR) of 2.2 (95% confidence interval [CI]: 1.2-3.9). While the NRP guideline change was not associated with an increased incidence of meconium aspiration syndrome, the need for mechanical ventilation, oxygen, and surfactant therapy was increased in this cohort.

OTHER NOTEWORTHY PUBLICATIONS – December, 2018

**Pediatrics**
Risk stratification of febrile infants ≤60 days old without routine lumbar puncture
Intellectual disability in children conceived using assisted reproductive technology
Neurodevelopmental outcomes in infants with birth weight ≤500 g at 3 years of age
Delivery room management of meconium-stained newborns and respiratory support
Adherence of newborn-specific antibiotic stewardship programs to CDC recommendations
Uninterrupted infant sleep, development, and maternal mood
Maternal intellectual or developmental disability and newborn discharge to protective services
Neonatal outcomes of very preterm or very low birth weight triplets
Sex differences in mortality and morbidity of infants born at less than 30 weeks’ gestation
Screening examination of premature infants for retinopathy of prematurity
Management of neonates born at ≥35 0/7 weeks’ gestation with suspected or proven early-onset bacterial sepsis
Management of neonates born at ≤34 6/7 weeks’ gestation with suspected or proven early-onset bacterial sepsis
When parents have misunderstandings about the risks and benefits of palliative surgery
Case report: Neonatal abstinence syndrome due to maternal Kratom use

**Journal of Pediatrics**
Turning a negative into a positive
Lean use of antibiotics in fragile neonates as well as children in the community: we can do better
Trends in PDA treatment: is less really more?
The long journey to eradication of hepatitis C virus infection should begin with the smallest victims
Timing of umbilical cord clamping and infant brain development
Perinatal transmission of hepatitis C virus: defining the cascade of care
Diet during pregnancy and infancy and the infant intestinal microbiome

Infant colic represents gut inflammation and dysbiosis

Early antibiotic exposure and adverse outcomes in preterm, very low birth weight infants

Predicting risk of infection in infants with congenital diaphragmatic hernia

Evaluation of gentamicin exposure in the neonatal intensive care unit and hearing function at discharge

Early glycemic profile is associated with brain injury patterns on magnetic resonance imaging in hypoxic ischemic encephalopathy

Cord blood metabolites associated with newborn adiposity and hyperinsulinemia

Neonatal outcomes in extremely preterm newborns admitted to intensive care after no active antenatal management: a population-based cohort study

Parental perspectives on diagnosis and prognosis of neonatal intensive care unit graduates with cerebral palsy

Antenatal and intrapartum risk factors for hypoxic-ischemic encephalopathy in a US birth cohort

Long-term neurodevelopment of low-birthweight, preterm infants with patent ductus arteriosus

Social adversity and cognitive, language, and motor development of very preterm children from 2 to 5 years of age

Morphine vs methadone treatment for infants with neonatal abstinence syndrome

Factors associated with breastfeeding initiation and continuation: a meta-analysis

Predicting maintenance of any breastfeeding from exclusive breastfeeding duration: a replication study

A structured gradual exposure protocol to baked and heated milk in the treatment of milk allergy

Echocardiographic measurements of right ventricular mechanics in infants with bronchopulmonary dysplasia at 36 weeks postmenstrual age

The impact of pulmonary hypertension in preterm infants with severe bronchopulmonary dysplasia through 1 year

Covariation of neonatal intensive care unit-level patent ductus arteriosus management and in-neonatal intensive care unit outcomes following preterm birth

Role of genetic susceptibility in the development of bronchopulmonary dysplasia

Optimal mean arterial blood pressure in extremely preterm infants within the first 24 hours of life

Effects of delayed cord clamping on 4-month ferritin levels, brain myelin content, and neurodevelopment: a randomized controlled trial
Guidance document for hepatic hemangioma (infantile and congenital) evaluation and monitoring
Maternal lifetime trauma and birthweight: effect modification by in utero cortisol and child sex
Early childhood inpatient costs of critical congenital heart disease
Early postnatal ventricular dysfunction is associated with disease severity in patients with congenital diaphragmatic hernia
Exome-wide rare variant analyses in sudden infant death syndrome
Respiratory health in adolescents born moderately-late preterm in a community-based cohort
Sharing data to accelerate medicine development and improve neonatal care: data standards and harmonized definitions
Surfactant components and tracheal aspirate inflammatory markers in preterm infants with respiratory distress syndrome
Proximal preaxial hallucal polysyndactyly with tibial hemimelia: diabetic embryopathy
An infant with tachypnea and failure to thrive
https://www.ncbi.nlm.nih.gov/pubmed/30177352
Congenital pneumonia owing to mycoplasma pneumoniae

**Pediatric Research**

Defining outcomes following congenital diaphragmatic hernia using standardized clinical assessment and management plan (SCAMP) methodology within the CDH EURO consortium
Prenatal, perinatal, and neonatal risk factors of autism spectrum disorder
Predictors of anemia and iron status at birth in neonates born to women carrying multiple fetuses
Extreme neonatal hyperbilirubinemia, acute bilirubin encephalopathy, and kernicterus spectrum disorder in children with galactosemia
Gastric fluid used to assess changes during the latency period in preterm prelabor rupture of membranes
Cerebral blood flow and serum neuron-specific enolase in early-onset neonatal sepsis
Altered metabolites in newborns with persistent pulmonary hypertension (PDF)
https://www.nature.com/articles/s41390-018-0023-y.pdf
Incidence of neonatal hypertension from a large multicenter study [Assessment of Worldwide Acute Kidney Injury Epidemiology in Neonates—AWAKEN]
Does prolonged severe hypercapnia interfere with normal cerebrovascular function in piglets?
Neonatologist Performed Echocardiography (NPE) Special Edition
Education, training, and accreditation of neonatologist performed echocardiography in Europe-framework for practice
Introduction to neonatologist-performed echocardiography
The role of neonatologist performed echocardiography in the assessment and management of neonatal shock
Tissue doppler velocity imaging and event timings in neonates: a guide to image acquisition, measurement, interpretation, and reference values
Application of neonatologist performed echocardiography in the assessment and management of persistent pulmonary hypertension of the newborn
Deformation imaging and rotational mechanics in neonates: a guide to image acquisition, measurement, interpretation, and reference values
Application of NPE in the assessment of a patent ductus arteriosus
Application of neonatologist performed echocardiography in the assessment and management of neonatal heart failure unrelated to congenital heart disease
Role of neonatologist-performed echocardiography in the assessment and management of patent ductus arteriosus physiology in the newborn

Archives of Disease in Childhood - Fetal & Neonatal Edition
Postnatal steroids: still a dilemma for neonatologists and parents?
Little and large: the effects of twin growth discordance
Challenge of determining true outcome of congenital diaphragmatic hernia
Corticosteroids for the prevention of bronchopulmonary dysplasia in preterm infants: a network meta-analysis
Cognitive outcome in childhood of birth weight discordant monochorionic twins: the long-term effects of fetal growth restriction
Early population-based outcomes of infants born with congenital diaphragmatic hernia
High versus standard dose caffeine for apnoea: a systematic review
Physiologically based cord clamping stabilises cardiac output and reduces cerebrovascular injury in asphyxiated near-term lambs
Haemodynamic effects of umbilical cord milking in premature sheep during the neonatal transition
Epidemiology of UK neonatal infections: the neonIN infection surveillance network
Persistent pulmonary hypertension of the newborn in extremely preterm infants: a Japanese cohort study

Neonatal mannequin comparison of the upright self-inflating bag and snap-fit mask versus standard resuscitators and masks: leak, applied load and tidal volumes

Dose-dependent relationship between acidosis at birth and likelihood of death or cerebral palsy

Referrals to a perinatal specialist palliative care consult service in Ireland, 2012–2015

Updated birth weight centiles for England and Wales

Stem cell-based therapies in neonatology: a new hope

Fetal surgery for spina bifida aperta

Perforated necrotising enterocolitis presenting as a rapidly expanding abdominal mass in a preterm neonate

Ischaemic limb lesion in monochorionic twin infant

Oesophageal atresia with tracheo-oesophageal fistula: an unusual radiological presentation

Journal of Perinatology

Development of a points-based system for determining workload for a neonatology full-time equivalent

Hyaline membrane disease (HMD): an historical and Oslerian perspective

Does inhaled budesonide for bronchopulmonary dysplasia affect the neurodevelopmental outcomes?

Low birthweight in second children after nurse home visiting

True knot at the time of delivery: electronic fetal monitoring characteristics and neonatal outcomes

Risk factors for poor perineal outcome after operative vaginal delivery

Tidal volume monitoring during emergency neonatal transport

Elevated brain oxygen extraction fraction in preterm newborns with anemia measured using noninvasive MRI

Physical examination score predicts need for surgery in neonates with necrotizing enterocolitis

Pharmacologic treatment of infants with neonatal abstinence syndrome in community hospitals compared to academic medical centers
Outcomes of early inhaled nitric oxide use in premature African American neonates
Preserved speed of processing and memory in infants with a history of moderate neonatal encephalopathy treated with therapeutic hypothermia
https://www.ncbi.nlm.nih.gov/pubmed/30323324
Survival and healthcare utilization of infants diagnosed with lethal congenital malformations
Transmission infrared spectroscopy for rapid quantification of fat, protein, and lactose concentrations in human milk
Valid serial length measurements in preterm infants permit characterization of growth patterns
https://www.ncbi.nlm.nih.gov/pubmed/30267002
Evolution of empiric vancomycin dosing in a neonatal population
“Screening for pulmonary hypertension in preterm infants—not ready for prime time”

Neonatology
Catch-up growth, rapid weight growth, and continuous growth from birth to 6 years of age in very-preterm-born children
Effect of a low-dose/high-frequency training on real-life neonatal resuscitation in a low-resource setting
Elimination of ABO blood group incompatible fetal red blood cells in the maternal circulation: relevance to the diagnosis of fetal-maternal hemorrhage
Biomarker discovery by mass spectrometry in cerebrospinal fluid and plasma after global hypoxia-ischemia in newborn piglets
Perinatal anemia is associated with neonatal and neurodevelopmental outcomes in infants with moderate to severe perinatal asphyxia
Variations in oxygen saturation targeting, and retinopathy of prematurity screening and treatment criteria in neonatal intensive care units: an international survey
Vertical transmission of mycoplasma pneumoniae infection
Non-immune hydrops, hypotonia, encephalopathy, and liver failure with novel compound heterozygous AHCY mutations
Predictive value of thompson-score for long-term neurological and cognitive outcome in term newborns with perinatal asphyxia and hypoxic-ischemic encephalopathy undergoing controlled hypothermia treatment
Optimal thermal control with sufficient nutrition may reduce the incidence of neonatal jaundice by preventing body-weight loss among non-low birth weight infants not admitted to neonatal intensive care unit
Maternal high-fat diet modifies the immature hippocampus vulnerability to perinatal asphyxia in rats
Navigating a mid-level gap in neonatal resuscitation
Melatonin acts in synergy with hypothermia to reduce oxygen-glucose deprivation-induced cell death in rat hippocampus organotypic slice cultures

**American Journal of Perinatology**
The association of metabolic dysfunction with breastfeeding outcomes in gestational diabetes
Contrast-enhanced ultrasound and near-infrared spectroscopy of the neonatal bowel: novel, bedside, noninvasive, and radiation-free imaging for early detection of necrotizing enterocolitis
The practical challenges of diagnosis and treatment options in persistent pulmonary hypertension of the newborn: a developing country's perspective
Clinical outcomes among diagnostic subgroups of infants with severe bronchopulmonary dysplasia through 2 years of age
The relationship of assisted reproductive technology on perinatal outcomes in triplet gestations
Variability in immunization practices for preterm infants
Oral feeding outcome after analgesic and sedative exposure in VLBW preterm infant
A standardized approach for category ii fetal heart rate with significant decelerations: maternal and neonatal outcomes
Regional tissue oxygen extraction and severity of anemia in very low birth weight neonates: a pilot NIRS analysis
National survey of neonatal intensive care unit medication safety practices
https://www.ncbi.nlm.nih.gov/pubmed/29906795
Maternal obesity is an independent risk factor for intensive care unit admission during delivery hospitalization
Respiratory syncytial virus hospitalizations among U.S. preterm infants compared with term infants before and after the 2014 American academy of pediatrics guidance on immunoprophylaxis: 2012–2016
Rationale for in-neonatal intensive care unit administration of live, attenuated rotavirus vaccination

**Journal of Neonatal-Perinatal Medicine**
The relationship of cervical microbiota diversity with race and disparities in preterm birth

**Maternal Health, Neonatology and Perinatology**
The use of milrinone in neonates with persistent pulmonary hypertension of the newborn - a randomised controlled trial pilot study (MINT 1): study protocol and review of literature
Reinforcing kangaroo mother care uptake in resource limited settings
Temporal trends, patterns, and predictors of preterm birth in California from 2007 to 2016, based on the obstetric estimate of gestational age
Neoreviews
International perspectives: Hypothermic neuroprotection for neonatal encephalopathy in low- and middle-income countries: a new approach to an old problem
http://neoreviews.aappublications.org/content/19/12/e735
Congenital hypopituitarism in neonates
http://neoreviews.aappublications.org/content/19/12/e742
Posterior urethral valves: prenatal, neonatal, and long-term management
http://neoreviews.aappublications.org/content/19/12/e753
Case 1: The impact of methylergometrin maleate toxicity on neonates
http://neoreviews.aappublications.org/content/19/12/e762
Case 2: Feeding intolerance following topical atropine instillation in a premature infant
http://neoreviews.aappublications.org/content/19/12/e765
Case 3: Refractory seizures continuing into infancy in a term neonate with definite history of perinatal asphyxia
http://neoreviews.aappublications.org/content/19/12/e770
Legal briefs: Could herpes meningocephalitis have been prevented in this infant?
http://neoreviews.aappublications.org/content/19/12/e773
Strip of the month: Preeclampsia in a monochorionic-diamniotic twin gestation
http://neoreviews.aappublications.org/content/19/12/e776
Visual diagnosis: An infant with severe stridor and cyanosis at birth
http://neoreviews.aappublications.org/content/19/12/e783

JAMA Pediatrics
Effect of docosahexaenoic acid supplementation vs placebo on developmental outcomes of toddlers born preterm: a randomized clinical trial
Association of prenatal phthalate exposure with language development in early childhood
Infant and youth mortality trends by race/ethnicity and cause of death in the United States

BMC Pediatrics
High mortality due to congenital malformations in children aged < 1 year in French Guiana
Hospitalisation after birth of infants: cross sectional analysis of potentially avoidable admissions across England using hospital episode statistics
https://www.ncbi.nlm.nih.gov/pubmed/30572847
Point-of-care testing for procalcitonin in identifying bacterial infections in young infants: a diagnostic accuracy study
What is the impact of the use of transanastomotic feeding tube on patients with esophageal atresia: a systematic review and meta-analysis
C-Reactive Protein (CRP) levels in neonatal meningitis in England: an analysis of national variations in CRP cut-offs for lumbar puncture

Pediatric Critical Care Medicine
To PICC or not to PICC, that is the question!
Duration and time trends in hospital stay for very preterm infants differ across European regions
Analysis of patient characteristics and risk factors for thrombosis after surgery for congenital heart disease

New England Journal of Medicine
Neurodevelopment in infants exposed to Zika virus in utero (PDF)

Lancet
Use of morphine before retinopathy of prematurity examinations (PDF)
https://www.thelancet.com/action/showPdf?pii=S0140-6736%2818%2932324-9
Analgesic efficacy and safety of morphine in the Procedural Pain in Premature Infants (Poppi) study: randomised placebo-controlled trial (PDF)
https://www.thelancet.com/action/showPdf?pii=S0140-6736%2818%2931813-0

JAMA
Reducing maternal mortality in the United States

BMJ
Baby care: RCOG finds average of seven factors behind each stillbirth, neonatal death, and brain injury
Research waste is still a scandal—an essay by Paul Glasziou and Iain Chalmers

Pediatric Infectious Disease Journal
Viral acute respiratory illnesses in young infants increase the risk of respiratory readmission
Is there a higher risk of mother-to-child transmission of HIV among pregnant women with perinatal HIV infection?
Infectious morbidity, mortality and nutrition in HIV-exposed, uninfected, formula-fed infants: results from the HPTN 040/PACTG 1043 trial
Second-trimester ultrasound and neuropathologic findings in congenital Zika virus infection
Optimum detection of Ureaplasma in premature infants
Simplified treatment of possible severe bacterial infection in young infants when referral is not feasible. What happened there? What are the implications here?
Human parechovirus 1, 3 and 4 neutralizing antibodies in Dutch mothers and infants and their role in protection against disease
Bacterial load and molecular markers associated with early-onset group b streptococcus: a systematic review and meta-analysis
**Pediatric Cardiology**
- Catheter, MRI and CT imaging in newborns with pulmonary atresia with ventricular septal defect and aortopulmonary collaterals: quantifying the risks of radiation dose and anaesthetic time
- Neonatal outcomes in total anomalous pulmonary venous return: the role of prenatal diagnosis and pulmonary venous obstruction
- Primary draining vein stenting for obstructive total anomalous pulmonary venous connection in neonates with right atrial isomerism and functional single ventricle improves outcome
- Right ventricular systolic function parameters in hypoplastic left heart syndrome
- Neonatal myocardial perfusion in right ventricle dependent coronary circulation: clinical surrogates and role of troponin-i in postoperative management following systemic-to-pulmonary shunt physiology
- Stent angioplasty for critical native aortic coarctation in three infants: up to 15-year follow-up without surgical intervention and review of the literature
- Systemic ventricular dysfunction between stage one and stage two palliation
- Echocardiographic follow-up of congenital aortic valvular stenosis II.
- Prenatal ultrasonic diagnosis and prognostic analysis of isolated left subclavian artery (ilsca) and left brachiocephalic trunk (ilbct) malformation
- Targeted next-generation sequencing of 406 genes identified genetic defects underlying congenital heart disease in down syndrome patients
- Perioperative cerebral oxygenation metabolism in neonates with hypoplastic left heart syndrome or transposition of the great arteries
- Predictors of extended length of hospital stay following surgical repair of congenital heart diseases

**Pediatric Neurology**
- Embryopathy associated with a vitamin therapy
- Genetic evaluation of common neurocutaneous syndromes

**Obstetrics and Gynecology**
- Neonatal morbidity after management of vaginal noncephalic second-twin delivery by residents
- Child neurodevelopmental outcomes by prepregnancy body mass index and gestational weight gain

**American Journal of Obstetrics & Gynecology**
- Ignaz Semmelweis: the "Savior of Mothers": On the 200th anniversary of his birth
- A first step to improving maternal mortality in a low-literacy setting; the successful use of singing to improve knowledge regarding antenatal care
Prediction of spontaneous preterm delivery in women presenting with premature labor: a comparison of placenta alpha microglobulin-1, phosphorylated insulin-like growth factor binding protein-1, and cervical length

Intrapartum magnesium sulfate is associated with neuroprotection in growth-restricted fetuses

Sildenafil crosses the placenta at therapeutic levels in a dually perfused human cotyledon model

Best practice guidelines regarding prenatal evaluation and delivery of patients with skeletal dysplasia

BASIC SCIENCE SELECTIONS

Vitamin a supplementation by endotracheal application of a nano-encapsulated preparation is feasible in ventilated preterm lambs

Hyperoxia-induced cellular senescence in fetal airway smooth muscle cells

Effect of high frequency oscillatory high flow nasal cannula on carbon dioxide clearance in a premature infant lung model: a bench study

Perinatal hypoxic-ischemic brain injury in large animal models: relevance to human neonatal encephalopathy

Intrauterine hyperglycemia-induced inflammatory signalling via the receptor for advanced glycation end products in the cardiac muscle of the infants of diabetic mother rats

Osteopontin is indispensable for activation of astrocytes in injured mouse brain and primary culture

Measuring fetal brain and lung transcripts in amniotic fluid supernatant: a comparison of digital PCR and RT-qPCR methods
http://www.ncbi.nlm.nih.gov/pubmed/28805106

TNF alpha-stimulated protein 6 (tsg-6) reduces lung inflammation in an experimental model of bronchopulmonary dysplasia

Chorioamnionitis exposure remodels the unique histone modification landscape of neonatal monocytes and alters the expression of immune pathway genes
ADDITIONAL JOURNAL SELECTIONS

Bradycardias are associated with more severe effects on cerebral oxygenation in very preterm infants than in late preterm infants

Mesenchymal stem cells for severe intraventricular hemorrhage in preterm infants: phase 1 dose-escalation clinical trial

Oxidative stress and bronchopulmonary dysplasia
Wang J, Dong W. Gene.

Evaluation of the s100 protein a12 as a biomarker of neonatal sepsis

Serum neurotrophins at birth correlate with respiratory and neurodevelopmental outcomes of premature infants

The efficacy of inhaled nitric oxide treatment in premature infants with acute pulmonary hypertension

Components of the antepartum, intrapartum, and postpartum exposome impact on distinct short-term adverse neonatal outcomes of premature infants: a prospective cohort study

Therapeutic hypothermia for mild neonatal encephalopathy: a systematic review and meta-analysis

Comparison of the longitudinal effects of persistent periodic breathing and apnoea on cerebral oxygenation in term- and preterm-born infants

Pharyngo-esophageal and cardio-respiratory interactions: potential implications for premature infants at-risk of clinically significant cardiorespiratory events

Association between asthma and lung function in adolescents born very preterm: results of the EPiPAGE cohort study
Enteral lactoferrin to prevent infection for very preterm infants: the ELFIN RCT

Changes in long-term prognosis with increasing postnatal survival and the occurrence of postnatal morbidities in extremely preterm infants offered intensive care: a prospective observational study

Early inotrope use associated with higher risk of death and/or severe brain injury in extremely premature infants

Development of a retinopathy of prematurity activity scale and clinical outcome measures for use in clinical trials

Delta-opioid receptor-NRF-2-mediated inhibition of inflammatory cytokines in neonatal hypoxic-ischemic encephalopathy

The optimization of home oxygen weaning in premature infants trial: design, rationale, methods, and lessons learned

Impact of surfactant administration through a thin catheter in the delivery room: a quality control chart analysis coupled with a propensity score matched cohort study in preterm infants