

Editorial

Dissemination reports are concise informative reports of health-related research supported by the Health and Medical Research Fund (and its predecessor funds) administered by the Food and Health Bureau. In this edition, we present 13 dissemination reports of projects related to children's health, neurology, reproductive health, and stroke and brain injury. In particular, three projects are highlighted due to their potentially significant findings, impact on healthcare delivery and practice, and/or contribution to health policy formulation in Hong Kong.

Necrotising enterocolitis (NEC) is one of the most devastating complications of prematurity. Despite advances in neonatal management for preterm very-low-birth-weight infants, NEC-associated morbidities and mortality remain high. Ng et al¹ analysed gene expression microarray data of surgical tissues from infants with NEC and controls to identify potential biomarkers. These biomarkers were then validated in another case-control cohort. Performance of these biomarkers and existing biomarkers was compared. They found that two proteins, namely hepatocarcinoma-intestine-pancreas protein and intestinal bile acid binding proteins, are novel biomarkers for early diagnosis of NEC when used in combination, with reasonably high sensitivity of 85% and specificity of 91%. Use of these biomarkers in a risk stratification scheme could promptly help in the identification and management of preterm infants with NEC.

Over 13 million babies preterm (under 37 gestational weeks) are born each year globally. Currently, the best predictive markers for spontaneous preterm birth are shortened cervical length and elevated cervicovaginal foetal fibronectin, but their sensitivity at high specificity is only moderate.

Chim et al² systematically profiled the transcriptome of maternal peripheral blood collected during preterm labour. They found that two RNA transcripts related to inflammation and defence response to bacteria were up-regulated in preterm labour, compared with control groups. In a validation cohort, preterm labour women test-positive for the two RNA transcripts were more likely to deliver sooner. Thus, maternal peripheral blood can be used as a relatively non-invasive way for predicting spontaneous preterm birth.

Dysexecutive syndrome (DES) is an impairment of executive functions such as goal setting, planning, action initiation and inhibition, social cognition, theory of mind, insight, and metacognition. DES comprises behavioural and cognitive domains, and behavioural DES (BDES) is a common condition among stroke survivors. Tang et al³ performed magnetic resonance imaging on 369 patients with first-ever or recurrent acute ischaemic stroke and studied the clinical course of BDES. At 3 months after stroke, BDES was identified in 18.7% of stroke survivors. More severe anxiety symptoms, presence of current depression, and poor cognitive functioning predicted BDES at 3 months after stroke. BDES significantly improved at 38 months after stroke. No radiological variable was found to be associated with BDES.

We hope you will enjoy this selection of research dissemination reports. Electronic copies of these dissemination reports and the corresponding full reports can be downloaded individually from the Research Fund Secretariat website (<https://rfs2.fhb.gov.hk/>). Researchers interested in the funds administered by the Food and Health Bureau also may visit the website for detailed information about application procedures.

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References

1. Ng EW, Ng PC, Lam HS, et al. Gut barrier proteins in diagnosing necrotising enterocolitis in preterm infants: abridged secondary publication. *Hong Kong Med J* 2020;26(Suppl 6):S20-3.
2. Chim SS, Chan TF, Leung TY. Whole-transcriptome analysis of maternal blood for identification of RNA markers for predicting spontaneous preterm birth among preterm labour women: abridged secondary publication. *Hong Kong Med J* 2020;26(Suppl 6):S20-3.
3. Tang WK, Wong KS, Mok VC, Chu CW, Wang D, Wong A. Behavioural dysexecutive syndrome after stroke: abridged secondary publication. *Hong Kong Med J* 2020;26(Suppl 6):S30-3.