

# Immunonutrition for very preterm infants

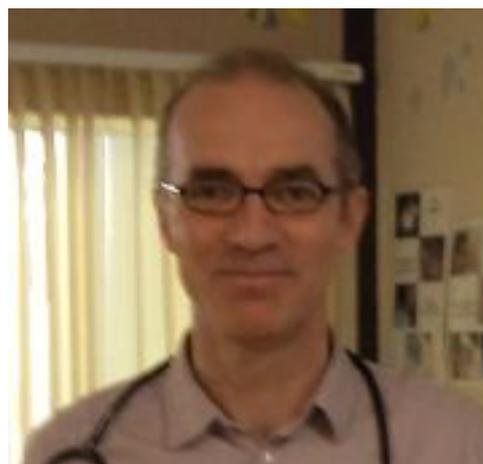
**William McGuire**

**Thursday 23 May, 1:30pm-2:30pm**  
**ARRC Auditorium**

Although antenatal and neonatal interventions have increased survival and improved long-term outcomes for very preterm (<32 weeks gestation) infants, the incidence of necrotising enterocolitis (NEC) and late-onset (nosocomial) infection remains high. Attributable mortality is >20%, especially for severe NEC and Gram-negative bacillus or fungal infection.

These conditions are now responsible for more deaths beyond the early neonatal period than any other causes. NEC and late-onset infection are also associated with important morbidities including reduced nutrient intake and slow growth, a longer duration of intensive care and hospital stay, and a higher incidence of long-term neurological disability. Recent research efforts have focussed on the possible role of "immunonutrients" in promoting functional adaptation of the immature gastrointestinal tract in order to reduce the incidence and severity of NEC and late-onset infection in very preterm infants.

I will discuss the evidence-base for key interventions including the use of maternal or donor breast milk, prebiotics and probiotics, essential amino acids (glutamine and arginine) and other immunomodulatory products including lactoferrin.



Bill McGuire is the Associate Dean for Research and Professor of Child Health at HYMS and the NIHR Centre for Reviews and Dissemination, University of York.

His main research interests are in neonatal nutrition and infection. He is involved in evidence synthesis, randomised controlled trials, and knowledge translation and quality improvement projects that aim to improve outcomes for preterm or sick newborn infants and their families.

Bill trained in general medicine and paediatrics in the UK and Australia before specialising in neonatology. His formative research experience was as a Wellcome Trust Advanced Training Fellow at the Institute of Molecular Medicine in Oxford and MRC Tropical Unit, Fajara, The Gambia.

Bill's interest in evidence-based practice and research synthesis was fostered by a RCPCH Fellowship at the Institute of Child Health in London in 1999 and developed during spells as Senior Lecturer at the Tayside Institute of Child Health and Associate Professor of Neonatology at the Australian National University.

Bill has been an enthusiastic reviewer for the Cochrane Collaboration, principally contributing to the work of the Neonatal and Pregnancy and Childbirth Groups.