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# **OPT-MOM:** Oro-pharyngeal therapy with mother's own milk to protect extremely premature infants against infectious morbidities

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Estremely premature infants are born before the last trimester of pregnancy and experience an abrupt cessation of amniotic fluid exposure. Their oropharynx is no longer bathed with protective biofactors, which stimulate the immune system and promote intestinal maturation. Many of these biofactors are highly concentrated in the milk (especially colostrum) expressed by women who deliver extremely premature infants; which suggest an important biological function for facilitating extrauterine transition. Unfortunately, clinical instability precludes enteral feeding for extremely premature infants in the first days of life. The post-birth fasting leads to intestinal atrophy and abnormal intestinal microbiota which contribute to the pathogenesis of infection. Once started, enteral feeds of mother's milk are administered via a nasogastric tube, which bypasses the infant's oropharynx. Oropharyngeal exposure to protective (milk) biofactors does not occur until the infant begins per oral feeds; typically at 32 weeks corrected gestational age. Thus, post-birth oropharyngeal exposure to protective biofactors is delayed for up to 10 weeks for the smallest extremely premature infants; born as early as 22/23 weeks gestation. This deficit has never been addressed in neonatology and may be contributing substantially to prematurity-associated infectious morbidities, including late-onset sepsis and necrotizing enterocolitis. Oropharyngeal therapy with mother's own milk (OPT-MOM) can serve as an easy, inexpensive oral immune therapy to mimic the protective effects of amniotic fluid exposure for extremely premature infants until per oral feedings can be safely introduced. Current evidence will be presented. Clinical implications and future directions for multidisciplinary research will be discussed.

#### **Biography**

Nancy Adrianna Garofalo is a Neonatal Nurse Practitioner at the NorthShore University HealthSystem and a Senior Clinician Researcher at the Pritzker School of Medicine, University of Chicago. She received a BSN from Loyola University, an MS in Nursing Administration from Aurora University, an MSN in the Neonatal Nurse Practitioner specialty and also a PhD from Rush University, Chicago IL. Her dissertation introduced the concept of oropharyngeal administration of colostrum into the medical literature, and she is currently leading a multi-center RCT to investigate the immune effects and clinical outcomes of extremely premature infants who receive the OPT-MOM intervention..

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**Notes:**