

PRESS RELEASE

12th International Breastfeeding and Lactation Symposium

April 7-8, 2017, Florence, Italy

The world's leading researchers agree: 130 million babies need breast milk now

Baar/Bologna, 18 April 2017. “Breast milk is food, medicine, and signal; it is the first food a baby has evolved to eat, and we do not know enough about it to replicate it.” With this statement, symposium speaker Assoc. Prof. Katie Hinde articulated the foremost reason for bringing together leading scientists and delegates from around the world for Medela’s 12th International Breastfeeding and Lactation Symposium. Breast milk is indispensable in providing all of the nutrients, hormones, stem cells, and hundreds of thousands of bioactive elements which fuel and form the brains, organs, and immune systems which 130 million children born each year globally will rely on for the rest of their lives. [Watch all nine speaker interviews here.](#)

“In Sweden, where almost all children are breastfed, there is practically no deadly necrotizing enterocolitis (NEC), even in preterm infants. We can try to minimize the differences, but we’re never going to match the benefits of mother’s milk,” says Prof. Bo Lönnerdal, Head of Paediatric Nutrition at the University of California, Davis, whose seminal studies on human milk proteins have alerted the world to the bioactivity in human milk. Recent studies reveal even more bioactive powers: Lactoferrin kills streptococcus, and reduces infant diarrhoea. The protein α -lactalbumin stimulates the immune system, builds a healthy gut microbiome, and helps infants to absorb vital micronutrients. Milk fat globule membrane (MFGM) protein functions as an anti-infection agent, improves cognitive development scores demonstrably at the 12-month milestone. Substantially more prolific in breast milk than in cow’s milk, osteopontin boosts the immune system and protects brain development. Find out more about how the combined bioactivities of breast milk proteins improve long-term intellectual outcomes and reduce obesity, diabetes, and cardiovascular disease, granting lifelong benefits to breastfed infants.

“We set out to understand the antibacterial properties in milk, and suddenly, we looked through the microscope to see the milk killing cancer cells. Now, we are on the verge of a next-generation cancer therapy—all from human milk.” Prof. Catharina Svanborg, Professor of Clinical Immunology at Lund University, Sweden, has dedicated more than twenty years to isolating and developing the protein-lipid complex HAMLET (Human α -lactalbumin made lethal to tumour cells) in breast milk, proven to kill over 40 cancers in vitro. It has shrunk glioblastomas (invasive brain tumours), and reduce bladder cancer, and colon cancer in mice, and is proven to protect them from colon cancer development. In humans, it has caused rapid reduction in both bladder cancer and viral skin tumours. The next stage will include large-scale clinical studies (bladder and cervical cancer), mass production, toxicology proofs and regulatory approval! What will make it a next-generation cancer therapy? The fact that it only kills tumour cells and has no detrimental side effects. This is why HAMLET represents new hope for cancer patients.

“Breast milk as an adaptation has evolved over 300 million years. Mother’s milk is fat from the mom’s reserves, she pulls minerals from her own skeleton, she liquefies her body to nurture her baby. Only mammals do this, only mammals suck. Within the mammalian order, every species, every culture, and every mother’s body is unique to suit her circumstances; so is her milk.” Assoc. Prof. Katie Hinde (Centre for Evolution and Medicine at Arizona State University, Director of the Comparative Lactation Laboratory at the California National Primate Research Centre) brought the full weight of the evolution of mammal and man to bear on breast milk and breastfeeding advocacy. Seals lactate for only 4 days, orangutans for 9 years, and the earliest humans breastfed for approximately as long as mothers today--proven by prehistoric dental records.

Hormones and bioactives in mother's milk signal the infant's brain to set developmental priorities. Seals get fat, orangutans stick to their mothers, humans need the most complex milk of all to fuel complex brains which compete, play, invent, and devise long-term plans. Not surprising from a scientist whose TED Talk "What We Don't Know About Mother's Milk" earned 427,000 views in a single week, through a brilliant and vivid comparison of lactation across species, she demonstrated the exclusive suitability of human milk for human babies.

"Nothing is more important than skin-to-skin contact and breast milk and breastfeeding for a baby and for the mother in the first few hours, days, and months of life, but if it leads to tragedy, nothing is worse." *Dr. Riccardo Davanzo* (Division of Neonatology, Trieste, and Chair of the Task Force on Breastfeeding of the Italian Ministry of Health) highlighted the rare but tragic deaths suffered by preterm and otherwise healthy infants from apparently innocuous practices like bed-sharing, and even breastfeeding and skin-to-skin contact in certain positions in the first few hours, days, or months of life. SIDS (Sudden Infant Death Syndrome) and Sudden Infant Collapse (SUPS) are often preventable tragedies, and Dr. Davanzo has devised a hospital protocol and homecare guidelines to help doctors, nurses, and parents remain alert to a baby's condition during the first hours and days of life during skin-to-skin contact and breastfeeding, and be vigilant about observing safe sleeping and breastfeeding practices in the delicate first three months. Recommended reading for all maternity and neonatal professionals and parents of newborns, to keep precious infant lives safe.

"Mother's own milk is the best medicine a premature infant can receive. This is what I have told every worried mother in the hospital. They have the power within them to help their babies. But I also believe that if a baby's own mothers cannot provide milk, that baby should not be deprived of the unique power of human milk. For them, donor's milk is next best. Now we can make donor's milk even better, through pasteurization that makes it hygienically safe, without destroying so many nutrients and vital bioactive properties in the milk." *Prof. Guido Moro* (formerly University of Milan; Macedonio Melloni Maternity Hospital in Milan, first president of the European Milk Bank Association and President of the Italian Association of Donated Human Milk Banks, awarded the "Gold Medal" from the City of Milan for his scientific and social work) has given voice to the needs of fragile and vulnerable infants across Europe, devoting decades to bringing human milk to each and every infant. He is now developing the high-temperature short-time pasteurization equipment which will preserve essential proteins, oligosaccharides, hormones, and other bioactive properties of human milk, to better nurture those infants who rely on donor milk, especially in their most fragile first few days.

"Mothers should eat, sleep & breastfeed for the first two weeks. Father should do, literally, everything else. The father's role is critical to helping the mother to initiate and sustain breastfeeding." *Prof. Diane Spatz* (University of Pennsylvania, Director of the Lactation Program at the Children's Hospital of Philadelphia, winner of the Lifetime Achievement Award from the National Association of Neonatal Nurses, USA) brought down the house with her passionate plea for a new approach to communicating the value of human milk to mothers, and to providing everything possible to support them in their breastfeeding journey. Her 10-step model for transforming hospitals, homes, and cultures into havens for breastfeeding mothers and infants has changed the lives of infants and mothers in countries as disparate as the US, Thailand, and India. "Is breastfeeding always natural? No, it might actually be hard work. Tell mothers this, and help them. Research shows that if women and their families understand how essential breastfeeding is, it helps them work through the challenges." From bedside fathers and peer counsellors, to nurse training, group sessions, in-house visits and regional assemblies, here is why the Spatz 10-step model provides the concrete steps to help even mothers of babies in intensive care breastfeed.

"Better hearts, smarter brains, more muscle, better behavioural control, more gorgeous: That's the power of breastfeeding." *Assoc. Prof. Donna Geddes* (University of Western Australia, the scientist who revealed through ultrasound the true internal anatomy of the lactating breast after 160 years of a false model) said it all in that short sentence. Breast milk feeding not only heightens cognitive development, lean muscle mass, and healthy cardiovascular development to establish a healthier lifelong trajectory for breastfed infants. The act of

breastfeeding reinforces the craniofacial bone structure at key pressure points to help it to grow properly, preventing the “crushed face” and mangled teeth of malocclusion. Breastfed infants are better looking as a result, and more importantly, they may avoid symptoms like ADHD and other neurological challenges which may be related to malformation. Her recent studies have centred on preterm infants, whose craniofacial structures are especially soft and susceptible to malformation without breastfeeding. Her new studies debunked the common belief that the preterm infant’s mouth vacuum is too weak to suck enough milk from the breast. It transpires that “Not getting enough milk” is simply equivalent to not getting enough time at the breast. Now she is developing vital interventions using breast shields to help tiny premature infants latch on more easily, to feed at the breast earlier and more.

“The medicinal and nutritional power of breast milk can change the lives of preterm infants even more than those of term infants. We must finally establish the right metrics and procedures to bring the full benefits of breast milk to preterm infants.” *Assoc. Prof. Luigi Corvaglia* (Paediatrics at the University of Bologna; NICU, Sant'Orsola-Malpighi Hospital, Bologna; Bologna Human Milk Bank). Based on formula feeding, conventional growth metrics in the neonatal ward show a sharp rise in growth (largely plumpness) in preterm infants, while those fed breast milk grow more slowly. However, growth, health and cognitive scores at ages two and five years clearly show that preterm infants fed breast milk have are more advanced than their formula-fed counterparts. Breast milk feeding also minimizes often deadly preterm illnesses like necrotizing enterocolitis. Sharing moving stories of the many infants who have been rescued by donor milk at the Bologna milk bank and across Italy, Dr. Corvaglia presented new growth metrics and feeding regimens to ensure the provision of donor milk to infants whose mothers cannot provide their own milk.”

“We don’t focus on infant outcomes, we focus on family outcomes, because that infant’s long-term health and happiness will depend on the health and happiness of his parents. Something is really wrong when parents feel uncomfortable taking their babies home after all that time in the hospital. We are changing that.” *Assoc. Prof. Karel O’Brien* (Paediatrics, Sinai Health System, Toronto, Canada) has helped to develop the Family Integrated Care (FICARE) Model with Professor Shoo Lee, and she presented this wonderful family model at the symposium. Early preterm infants require lengthy hospital stays, an average of 70 days. The urgent neonatal ward environment makes it challenging to even consider having parents in the ward. Yet, parents who barely see or hold their preterm infants feel less bonded to them, more stressed, and less prepared to care for their infants at home. A stressful home environment is bad for the infant and for the family. The Family Integrated Care Model therefore brings not only the mother, but also the father into the NICU, not as visitors, but as full-time caregivers. In addition to the mother breastfeeding, the mother and the father are trained by nurses in how to use essential medical devices and tools (everything except IV care and procedures). They receive peer support, participate in group counseling sessions, write in the medical charts, participate in daily care decisions, and provide all routine care for their babies. FICARE has demonstrated improved infant outcomes, increased breastfeeding rates and reduced parental stress and anxiety, from the hospital stay to beyond discharge.

Nine scientists, 450 global delegates, two intensive days, and compelling research which begs the question: Isn’t it time to put breast milk and breastfeeding at the top of the healthcare policy agenda? Why isn’t it already? 130 million babies born globally cannot speak for themselves. They need articulate advocates at every level, from prenatal care, to neonatal doctors, nurses, lactation consultants and hospital administrators, to insurers, and ultimately to policy makers.

Sara Funaro, Welfare and Health Councillor, City of Florence, raised her voice for those infants as she opened the event: “Florence is proud to host a symposium on something this important. It is time for politics at all levels to tackle these issues.”

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