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A research grant from the Family Larsson-Rosenquist Foundation supports investigation into the protective effect of mother's milk on development of a newborn infant's immune system

A new research project examines the mechanisms underlying breast milk's favourable impact on newborn infants' initial gut flora colonisation and long-term intestinal immunity.

The Family Larsson-Rosenquist Foundation (FLRF) has made a USD 400,000 grant to a U.S. physician to study the mechanisms underlying breast milk's influence on the initial bacterial colonisation of newborn infants and how these particular gut bacteria affect the development of a healthy immune system.

The two-year research project is conducted by the Mucosal Immunology and Biology Research Center at the Harvard-affiliated MassGeneral Hospital for Children in Boston, Massachusetts. This is led by Professor W. Allan Walker, a leading researcher in the field of protective mechanisms of breast milk during the newborn period, and his team. MassGeneral Hospital for Children is the pediatric department of Massachusetts General Hospital, a major teaching hospital of Harvard Medical School.

"Initial gut bacteria colonisation is an important factor in the development of a newborn infant's healthy immune system. This colonisation is favourably influenced by the presence of breast milk, yet the specific mechanisms and metabolomics remain under-researched, and require further investigation", explains Professor Walker, who is the Conrad Taff Distinguished Professor of Pediatrics at Harvard Medical School. "The project has a broad range of objectives. The research team intends to identify the differences in intestinal colonisation of bacteria between infants fed mother's milk versus formula, to elucidate the influence of specific health-promoting intestinal bacterial species on fundamental neonatal metabolic and immune functions, and to determine anti-inflammatory effects and their cellular pathways using foetal intestinal cells."

"We are pleased to partner with Professor Walker to support broader understanding of the important role breast milk plays in infant immunity – a vital building block to a child's health," says Göran Larsson, Chairman of FLRF Board.

"Breast milk is essential for long-term health. Projects like this, which provide research-based evidence to better comprehend the mechanisms underlying the way in which breast milk impacts an infant's immune system development, underscore the importance and long-lasting benefits of breastfeeding", adds Dr. Katharina Lichtner, Managing Director of FLRF.

Findings from the research project are expected to be published in 2020.

About the Harvard Medical School

Since the School was established in 1782, faculty members have improved human health by innovating in their roles as physicians, mentors and scholars. They've piloted educational models, developed new curricula to address emerging needs in health care, and produced thousands of leaders and compassionate caregivers who are shaping the fields of science and medicine throughout the world with their expertise and passion.

The Faculty of Medicine includes more than 11,000 individuals working to advance the boundaries of knowledge in labs, classrooms and clinics. The School's main quadrangle in Boston houses nearly 200 tenured and tenure-track faculty members in basic and social science departments as well as in classrooms where students spend their first two years of medical school.

Harvard Medical School has affiliation agreements with 15 of the world's most prestigious hospitals and research institutes, vital partners that provide clinical care and training. They also serve as home base for more than 10,000 physicians and scientists with faculty appointments.

More information: <https://hms.harvard.edu/>

About the Massachusetts General Hospital for Children

The Massachusetts General Hospital for Children (MGHfC) has the expertise and experience—as well as the state-of-the-art facilities and technologies — to provide exceptional care for their patients.

- The oldest provider of pediatric services in Boston, MGHfC has provided comprehensive, compassionate care to children since 1821.
- MGHfC treats more than 170,000 patients annually, including both primary care visits and specialty care visits.
- Annually, more than 12,000 pediatric emergency visits, 3,000 admissions and 3,500 births take place at MGHfC.
- MGHfC is home to the only proton beam facility in New England, which allows our team to provide groundbreaking therapy for children with cancerous brain tumors, eye tumors and other illnesses.
- MGHfC staff is involved in global health initiatives in developing countries and participates in national and international disaster relief efforts.

More information: www.massgeneral.org/children/

About the Family Larsson-Rosenquist Foundation

The Family Larsson-Rosenquist Foundation is one of the first foundations in the world with a prime focus on promoting and supporting breast milk and breastfeeding. Based in Zug, Switzerland, it was founded in 2013 with the aim of promoting the scientific and public recognition of breastfeeding and human milk as – given the current state of science – the best nutrition for newborns and infants. It considers itself as an instigator and promoter of new knowledge. The Foundation invests globally in projects and scientific research in breastfeeding and breast milk. It places high value on multidisciplinary collaboration and supports projects with a sustainable impact on the well-being of mother and child.

More information: www.larsson-rosenquist.org

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