

## Foreword

---

I was 4 years old when my parents started to work in the field of breast pumps, back in 1962. The breastfeeding world looked different then as there was a strong belief it is possible to replicate everything that nature does – breastfeeding was at its low and formula was considered the norm. Still, my parents believed in the importance of breastfeeding and the importance of breast pumps to support mothers in need.

This belief in the life-long benefits of breastfeeding and breast milk eventually led us to establish the Family Larsson-Rosenquist Foundation.

When I started to become involved in the family business in the 1980s, it was clear to me as a trained scientist that we needed a scientific approach to better understand lactation. The first studies I did myself involved looking at the suction curves of babies at the breast. Through those studies a whole new world opened, and I learnt about the two distinct phases when an infant suckles at the breast – a stimulation and an extraction phase. Hence, I worked with our engineers to introduce these two phases to our breast pumps. This 2-Phase expression technology has today become the standard. This was also the start for our first research collaboration with Peter Hartmann and his team at the University of Western Australia.

Over the years our scientific network grew, as did our questions. I had many discussions with experts from different research fields including biochemistry, physiology, psychology and physics about breastfeeding and human lactation. It struck me how little knowledge there was in this field at the time and many thought that they knew all there was to know. It was clear to me that investment was needed to move the field forward - thus began our journey not only in product related research, but also in basic research to enlarge the knowledge base. This then led to some astounding findings: a new understanding of the anatomy of the lactating breast (updating knowledge that was over 150 years old) and the amazing discovery of stem cells in human milk. These findings showed us it was just the beginning – there is still so much more to know and learn.

Over the years our scientific network grew. We met and talked with many experts and multidisciplinary researchers in the field of breastfeeding, human milk and lactation, and the substantial long-term health benefits of breastfeeding and human milk for infants became clear.

As more evidence emerged, and with the realisation that research is key to ensuring that breastfeeding becomes the norm, it became my family's vision to help enable a world in which every child is granted an optimum start in life through the benefits of breastfeeding and human milk. This motivation was the signal needed for my family to establish the Family Larsson-Rosenquist Foundation, where science would take centre stage. I had the honour to be the founding president.

The vision for this book came following a visit to China in September 2013. Formula was dominating the market and breastfeeding rates at 6 months were extremely low (20.8%). One stop during this visit was the teaching hospital of Zhejiang Province (which has more than 50 million inhabitants). The dominance of formula was a big concern for the head of nursing research who was keen to reverse this trend – research was key to doing this. Her passion was clear, but one of her difficulties was getting an overview of research in the field of breastfeeding and human lactation. An example she shared, was the transfer of medications into the milk and she wished to do some research into this topic. I sent her Tom Hales' book about how drugs are transferred into mother's milk together with Hale & Hartmann's "Textbook of Human Lactation".

This is just one example of one hospital in a huge country that is facing an immense problem – formula dependence – with no practical solutions for change. I have found myself in many similar situations with would-be change-makers who are becoming increasingly interested in breastfeeding as the understanding of the health and economic benefits of human milk increases. The challenge they face is always the same: where and how can they access the research that will lead to solutions for change?

There are a lot of studies discussing the benefits of breastfeeding, but these mainly focus on the health issues and much of it is not standardised. Empowering individuals with the knowledge to make change, to increase interest at a local or even national level is key and I am therefore convinced that there is a growing need for a book which provides a multidisciplinary overview of breastfeeding and human milk. There are a lot of books written about 'how to' breastfeed, but the market lacks one that provides such diverse aspects. This book explores a plethora of key topics, and their practical implications. It is written by professionals who are experts within their respective fields and therefore provides a comprehensive, interdisciplinary view of the world of breastfeeding and hu-

man milk. It is designed to empower those interested in promoting the positive benefits of breastfeeding and human milk with the knowledge required to persuade decision-makers that this is the best option for improving short- and long-term health, decreasing health care-related spending and increasing productivity – the same values and goals my family stands for and which our foundation is pursuing on a daily base.

I hope that, one day soon, at home and when I travel, to find breastfeeding has again become the norm.

Zug (Switzerland), in July 2018

**Michael Larsson**