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Joint press release by the Whitehead Institute of Biomedical Science and the Family Larsson-Rosenquist Foundation

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Whitehead's Dr. Jing-Ke Weng receives research grant from the Family Larsson-Rosenquist Foundation to examine herbs thought to boost mothers' milk supply

Project will investigate the effectiveness and toxicity of four herbs widely used by breastfeeding women worldwide to promote milk production

Many cultures traditionally use herbs believed to increase milk supply, such as anise, blessed thistle, fennel, fenugreek, goat's rue, and milk thistle – so called galactagogues – although scientific data for efficacy, possible side effects, and toxicity are lacking. Now Whitehead Institute Member Jing-Ke Weng and the Family Larsson-Rosenquist Foundation are teaming up to explore the effects of galactagogues on milk production.

Breastfeeding has multiple health benefits for both child and mother, and the World Health Organization and UNICEF recommend that infants are exclusively breastfed for the first six months. Yet many mothers stop breastfeeding earlier, frequently citing insufficient milk production. Scientific studies are underway to identify the underlying problems, whether being environmental or physiological.

Using a grant from the Family Larsson-Rosenquist Foundation of more than \$850,000 over the course of five years, Dr. Weng will take an interdisciplinary chemical biology approach to try to identify the specific natural compounds underlying the potential milk increasing effect of four herbal galactagogues and to elucidate their pharmacokinetic mechanisms of action in promoting milk production in breast tissue.

One important goal of the project is to provide guidance for the proper usage and the safety of these herbs. As Dr. Weng explains, "Based on literature and our recent research, popular herbal galactagogues may also contain toxic natural products, which may pose health risks if the plants are consumed in large quantities. We will evaluate the underlying compounds, which could lead to better guidance for the safe use of the four herbs."

Göran Larsson, Chairman of the Family Larsson-Rosenquist Foundation's Board, says, "We believe in the importance of scientific research to uncover basic physiological mechanisms of lactation. We expect this project to discover new therapeutic lead compounds as well as their modes of action for increasing milk production in breastfeeding women.

"We are glad to team up with Whitehead Institute and provide funding to this interdisciplinary research. We



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hope to eventually provide fact-based knowledge to breastfeeding mothers to allow them to effectively and safely use the four galactagogues to increase their milk production, directly contributing to the health of infants.”

Whitehead Director David Page adds, “We are excited about our new partnership with the Family Larsson-Rosenquist Foundation and for their support of Jing-Ke’s research. We applaud their recognition of the important and essential role basic discovery research plays in developing safe and effective therapies.”

Whitehead Institute for Biomedical Research

Whitehead Institute is a world-renowned non-profit research institution dedicated to improving human health through basic biomedical research. Wholly independent in its governance, finances, and research programs, Whitehead shares a close affiliation with Massachusetts Institute of Technology through its faculty, who hold joint MIT appointments.

Family Larsson-Rosenquist Foundation

The Family Larsson-Rosenquist Foundation is the first foundation in the world with a prime focus on promoting and supporting human milk nutrition and breastfeeding. Based in Zug/Switzerland, it was founded in 2013 with the aim to promote the scientific and public recognition of 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 about human milk nutrition and breastfeeding. The Foundation invests globally in projects and scientific activities in human milk research and breastfeeding promotion. It places high value on interdisciplinarity and sustainable impact for the well-being of mother and child. Learn more at www.larsson-rosenquist.org.

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