

Trainee Expansion Program

AWARDEES SUMMER 2018



We are pleased to present the awardees of the TEP Bridge Funds and the TEP Travel Funds, who each received up to USD 100,000 or up to USD 10,000 respectively to advance their academic career.

TEP Bridge Fund Awardees

Eva Naninck



Mum don't stop bugging me – does stress affect breastmilk composition and the neonatal gut microbiome?

TBF Awardee 2018

Stephanie L. Martin



Acceptability and feasibility of interventions to improve exclusive breastfeeding among informal working mothers in urban Tanzania

TBF Awardee 2018

TEP Travel Fund Awardee

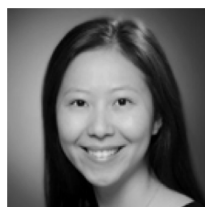
Grace Carroll



Costing a maternity leave cash-transfer to support breastfeeding among women employed in the informal economy

TTF Awardee 2018

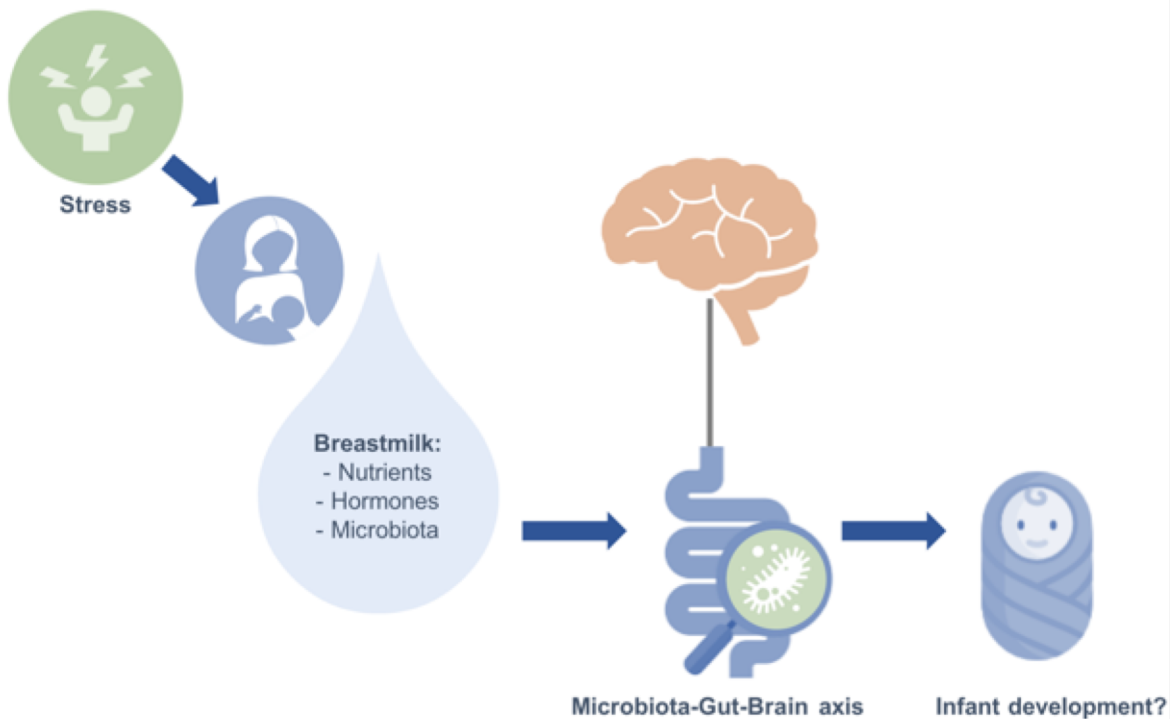
Yimin Chen



Bioactive peptides in digested human milk

TTF Awardee 2018

EVA NANINCK

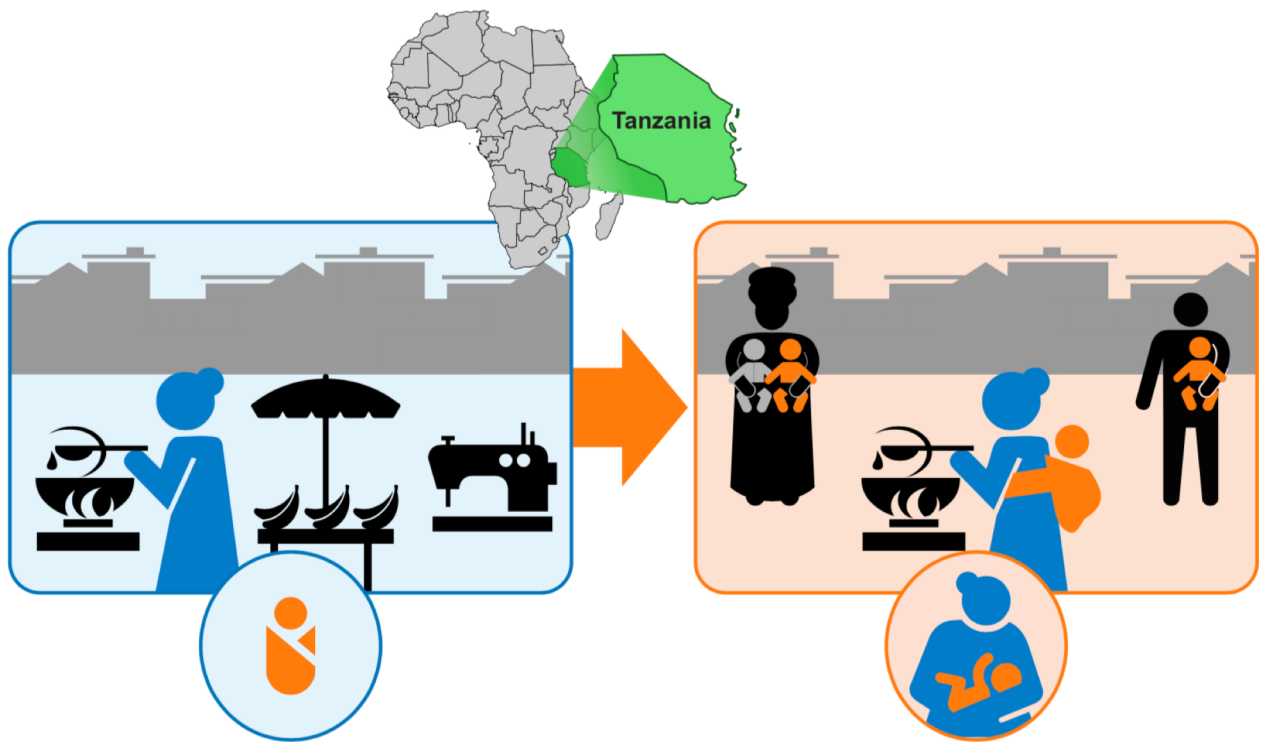


Stress is a very common, unavoidable factor in the lives of many mothers and their infants, known to have a lasting impact on infant development and later health. Human milk conveys biological messages from mother to infant via numerous bioactive compounds, including microbiota, an important emerging factor in neonatal health and programming. However, currently we know remarkably little about how stress affects human milk composition. This project aims to fill this gap.

Specifically, the goal of this project is to investigate the microbial content of breastmilk from stressed and control mothers and study how this relates to gut microbiome establishment and emotional development of their infants. For this, the Amsterdam-Mother's-Milk-Study cohort will be used, a collaborative initiative of stress researchers (Dr. Korosi) and experts in neonatal care (Prof. van Goudoever) and nutritional scientists in the Netherlands. The use of this cohort will allow for the integration of microbial analyses of breast milk and infant fecal samples with ancillary information on maternal stress levels, nutritional and hormonal human milk composition and measures of child development. The findings of this project hopefully lead to recommendations for nursing mothers in inevitably stressful situations.

Eva Naninck, PhD, is a postdoctoral researcher at the University of Amsterdam (the Netherlands) where she manages the Amsterdam Mother's Milk Study. Eva received her B.Sc. in psychobiology and her M.Sc. in Neuroscience (with honors) from the University of Amsterdam. During her PhD at the SILS center for Neuroscience under the supervision of Dr. Korosi and Prof. Lucassen, she studied how stress impacts brain development, with a focus on the role of early nutrition. Her preclinical research showed that nutritional supplementation of the lactating dam can protect her offspring from the negative effects of stress exposure in early life. After obtaining her PhD, Eva started translating her findings 'from bench to bedside'. She set up the Amsterdam Mother's Milk Study to investigate how stress modulates human milk composition. Her research is aimed to provide a new, integrated understanding on how various key components of human milk essentially contribute to infant health and development and how this is affected by stress.

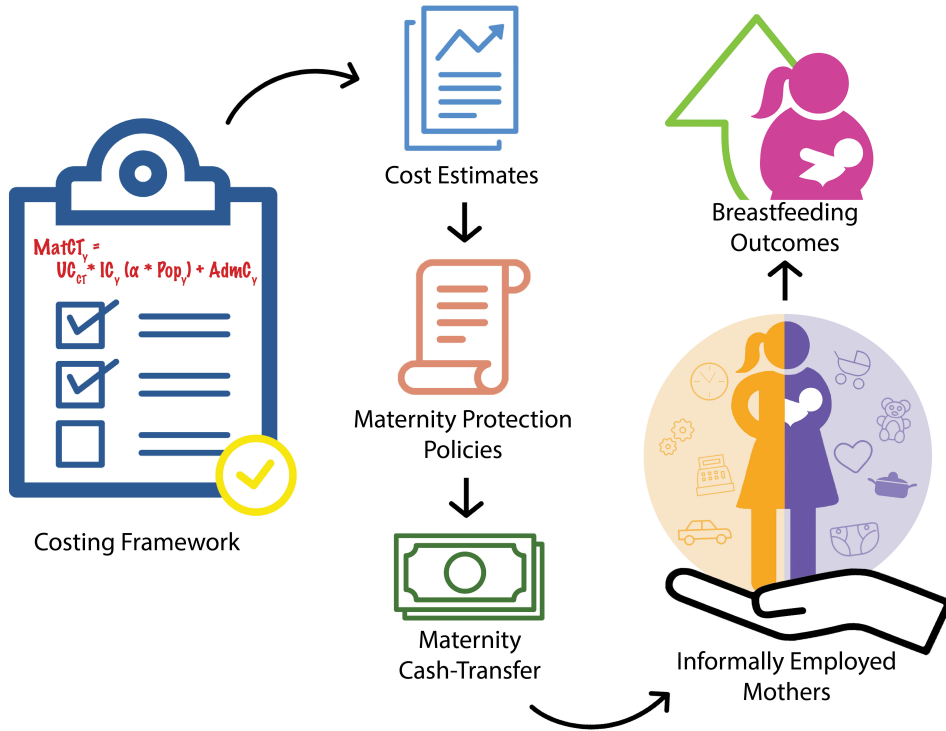
STEPHANIE L. MARTIN



Tanzania, like many countries in Sub-Saharan Africa, is experiencing rapid urban growth. While urbanization can contribute to health improvements and economic advances, current infant feeding practices and child health outcomes in urban areas of Tanzania fall below those of their rural counterparts. Maternal employment is a barrier to optimal breastfeeding practices worldwide, and for women in urban areas working informally (without legal or social protection) exclusive breastfeeding for 6 months is particularly challenging. As the urban population grows, context-specific interventions to support optimal infant feeding practices are needed. This project will use qualitative methods to examine barriers and facilitators to exclusive breastfeeding and assess the acceptability and feasibility of potential interventions to support exclusive breastfeeding among women working informally in Moshi Urban District, Tanzania.

Stephanie Martin, PhD, is an assistant professor in the Department of Nutrition at the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill. She is also a fellow of the University's Carolina Population Center and a Certified Lactation Counselor. Dr. Martin's research focuses on the design and evaluation of behavioral interventions to improve infant feeding practices and maternal and child nutrition in resource limited settings. She is currently examining family members' experiences supporting infant feeding practices in East Africa. Dr. Martin completed her PhD in nutrition at Cornell University in 2016. Prior to pursuing her PhD, she worked as a global health practitioner, and implemented policy-, health facility-, and community-level programs to promote exclusive breastfeeding and maternal and child nutrition.

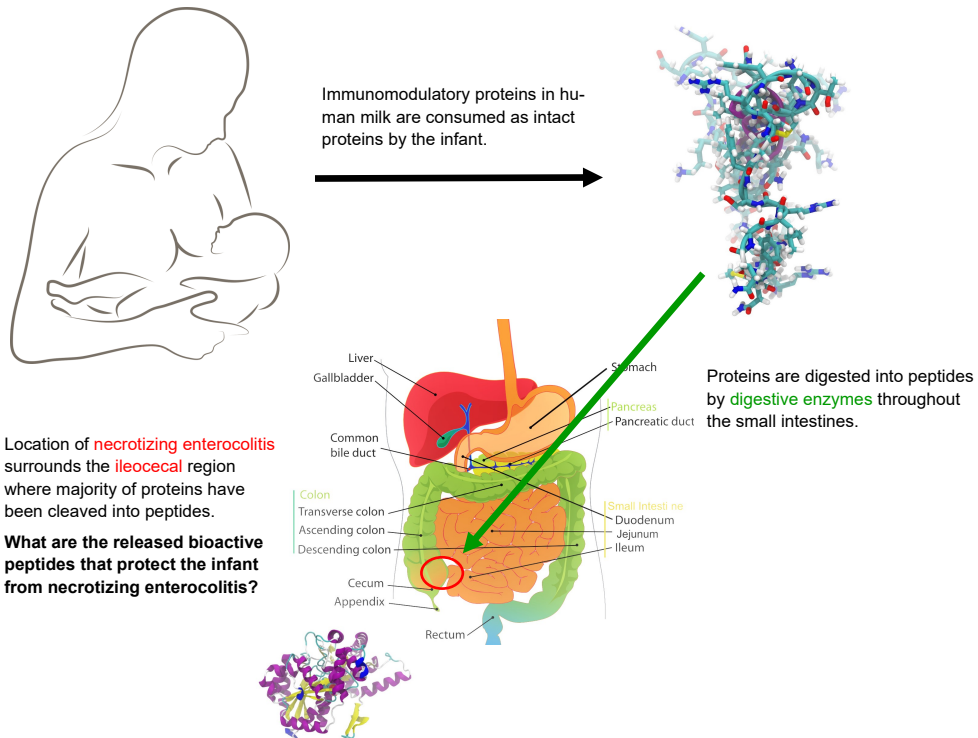
GRACE CARROLL



Many women living in low- and middle-income countries lack maternity leave benefits as they are more likely to be engaged in unprotected jobs in the informal economy. This absence of social protection is one of the structural and societal barriers that interfere with women's ability to breastfeed optimally. Investing in maternity protection for working women in the informal economy is an important social equity mechanism that can also improve breastfeeding outcomes. Currently, there is a lack of country-level guidance for estimating costs to support governments assess the financial feasibility for scaling up breastfeeding programs, such as maternity leave benefits. With mentorship from Dr. Mireya Vilar-Compte, Grace will standardize a costing framework and estimate the costs for a maternity cash-transfer for informally employed women in three low- and middle-income countries.

Grace Carroll is a Research Associate at the Yale School of Public Health and a member of the Becoming Breastfeeding Friendly research team. Grace's research interests are focused on improving breastfeeding outcomes and preventing chronic diseases among vulnerable populations by effectively translating research into policy. Grace holds a Bachelor of Science in Biology from Union College, a Masters of Arts in Education from Oakland University, and a Masters of Public Health in Social and Behavioral Sciences from the Yale School of Public Health. Grace anticipates this project funded by the TEP Travel Fund will help prepare her for a doctoral program and career in the field of maternal and child nutrition and health. Grace will be mentored by Dr. Mireya Vilar-Compte, a distinguished mentor and professor in health economics at the Universidad Iberoamericana in Mexico City.

YIMIN CHEN



Human milk (HM) is the single intervention that has consistently been shown to protect premature infants from developing necrotizing enterocolitis, which is characterized by severe inflammation and tissue necrosis. The most common location of disease occurs at the ileocecal region – the most distal portion of the small intestine and most proximal portion of the large intestine. HM consumed by the infant is fully digested when it reaches this region of the gastrointestinal tract, thus it is most clinically relevant to ascertain bioactive peptides released from digestion and determine the peptides most responsible for suppressing inflammation and cytotoxicity. Once these bioactive peptides are identified, it is Dr. Chen's long-term goal to determine specific maternal characteristics that influence the presence and quantity of these bioactive peptides, and subsequently translating this information to maternal interventions that will positively modify the peptide profile in the HM produced.

Dr. **Yimin Chen** is a postdoctoral research associate at the University of Illinois at Chicago. She completed her PhD with a 15-year background as a nutrition support dietitian with specialization in the gastroenterology, critical care, and neonatology. Dr. Chen's dissertation research showed that in vitro digested colostrum/transitional human milk (tHM) from different mothers suppressed inflammation and cytotoxicity in varying degrees. She will extend this research by profiling the bioactive peptides released in digested colostrum/tHM to determine the peptides responsible for inflammation and cytotoxicity suppression with the support of the Trainee Travel Fund. She will be mentored by Dr. Dallas at Oregon State University, and gain mass spectrometry-based peptidomics expertise.