Centre for Global Child Health Catalyst Grant Awardees
(awardees for each year are presented alphabetically by last name)

2020
Primary Applicant: Jo-Anna Baxter
Co-Investigators: Allison Daniel, Deborah O’Connor, Yaqub Wasan, Asad Ali, Robert Bandsma, Céline Bourdon, Zulfiqar Bhutta
Project Title: Investigating pathways between maternal nutritional status, breastmilk composition, and infant linear growth in rural Pakistan

Abstract: Breastmilk is considered optimal for infant growth and development. However, emerging evidence suggests that breastmilk composition can vary according to maternal nutritional status. We have established a hypothesized pathway model, reflecting pathways between maternal nutritional status, breastmilk composition, and infant linear growth. From a complete breast expression collected at 3-months postpartum, we aim to examine the pathways using structural equation modelling. Participants will include a subset of mother-infant pairs enrolled in an ongoing trial in rural Pakistan (MaPPS Trial; ClinicalTrials.gov identifier: NCT03287882). This research is critical to improving the understanding of pathways leading to infant linear growth, and has the potential to inform the design of evidence-based interventions for improving both maternal and infant nutritional status.

Primary Applicant: Mariella Munyuzangabo
Co-Investigators: Jean-Luc Kortenaar, Chantal Shaib, Delvin So, Lauren Erdman, Huma Qamar, Diego Bassani
Project Title: Using Machine Learning to improve the efficiency and sensitivity of literature reviews

Abstract: Abstract screening phases during literature reviews can be long and error-laden processes, requiring multiple reviewers to ensure the inclusion criteria are met. Recent advances in Natural Language Processing (NLP) can be used to automatically rank abstracts according to their relevance for subsequent human screening. In addition to speeding up the review process, such models can identify potential human errors in screening, improving the overall quality and comprehensiveness of literature reviews. We leverage a transformer-based language model RoBERTa to accurately embed and classify abstracts for inclusion in literature reviews. The goal of this project is to develop an open source, highly efficient and high-performing algorithm with a user-friendly interface, which would allow researchers to conduct literature reviews or update their past literature reviews efficiently.
2019
Primary Applicant: Nancy Dale
Project Title: Improving the Outcomes of Community-based Management of Acute Malnutrition

Primary Applicant: Sumit Gupta
Project Title: Economics of Childhood Cancer in Africa

2018
Primary Applicant: Avi Denburg
Project Title: Childhood Cancer Drug Access in Low- and Middle-Income Countries: A Pilot Study

Primary Applicant: Laura Vresk
Project Title: Paediatric Nutrition Support in a Low-Resource Hospital Setting

2017
Primary Applicant: Céline Bourdon
Project Title: Malnutrition-induced Gut Dysfunction Treated by Milk-derived Exosomes: Proof of Concept

Primary Applicant: Heather Christine Millar
Project Title: Starting at the Roots: Using Human-centred Design to Create an Adolescent Pregnancy Program in Eldoret, Kenya

Primary Applicant: Nandita Perumal
Project Title: The Effect of Nutrition-specific National Policies on Micronutrient Malnutrition among Young Children in Low- and Middle-income Countries

2016
Primary Applicant: Michael Leung
Project Title: Maternal-child Exposures to Persistent Organic Pollutants in Dhaka, Bangladesh

2015
Primary Applicant: John Parkinson
Project Title: Investigating the Role of Eukaryotic Microbiota in Malnutrition

Primary Applicant: Lillian Sung
Project Title: Quality of Life, Fatigue and Family Functioning for Children with Relapsed Acute Leukemia in El Salvador