“Genome-wide approaches to Group B Streptococcus epidemiology and pathogenesis”

Despite major advances in preventing child mortality over the past several decades, a substantial burden remains. In 2020, one in 27 children died before reaching age five, with the first days of life representing a time of unique vulnerability. My research group investigates major infectious causes of neonatal morbidity and mortality, with a particular focus on Group B Streptococcus (GBS), a leading cause of bacterial sepsis in newborns worldwide. Using a combination of field studies, genomic epidemiology, and laboratory-based models of infection, we strive to understand the contribution of specific bacterial factors, including the capsular polysaccharide that is the target of current vaccine candidates, to GBS epidemiology and pathogenesis. The overall goal of our work is to help optimize the design and implementation of preventive strategies for this important neonatal pathogen.