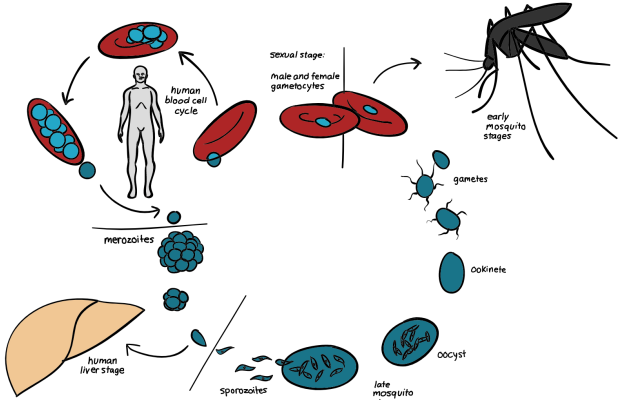


BAMM: a Bayesian Adaptive Mathematical framework for Malaria transmission dynamics

This paper introduces BAMM: a Bayesian Adaptive Mathematical framework for Malaria transmission dynamics. BAMM begins by utilising an existing malaria mathematical compartmental model & informs the parameterisation of the model in a Bayesian setting by deriving an indirect mapping between both social economic factors & medical data and the relevant transmission dynamics posterior parameter estimates. The framework provides a software tool in the form of a dashboard that allows researchers to posit & simulate any number of feasible scenarios. Making assessing either isolated events or the interaction effect of events trivial. The framework allows for hypothesis testing on a wide variety of topics including (but not limited to): temperature changes, access to



treatment, changes in inequality measures & growth in GDP.

