

# INTRODUCTION TO COLGEM: COALESCENT LIKELIHOOD FOR GENERALIZED EPIDEMIOLOGIC MODELS

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### 1. WHAT colgem DOES

colgem is intended to provide a simple set of methods for calculating the likelihood of a coalescent genealogy under the assumption of user-defined epidemiologic model of arbitrary complexity. Typically the coalescent genealogy not directly observed unobserved but rather estimated from a set of sequence data using relaxed clock phylogentic methods [XXX-beast]

### 2. COALESCENT LIKELIHOOD FOR AN UNSTRUCTRED EPIDEMIOLOGIC MODEL

An unstrucutred epimiologic model is any model where there is only one infected class.

### 3. COALESCENT LIKELIHOOD FOR A STRUCTRED EPIDEMIOLOGIC MODEL

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