

7 March 2022

HOST RESISTANCE + TOLERANCE

• definitions

- resistance • host's ability to prevent infection OR reduce parasite load
- tolerance • ability to sustain infection without loss of fitness

• competence

~~host~~ (tolerant)

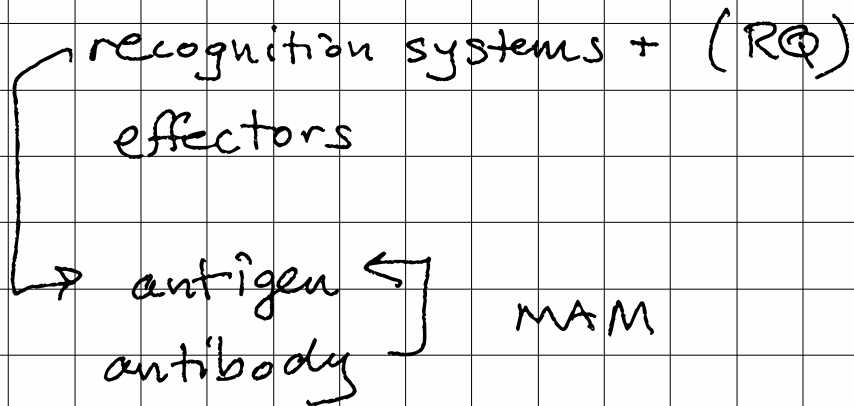
MECHANISMS

{ avoid (close encounter filter)
kill (close compatibility filter)
tolerate

Klemme et al -

- boldness
- avoidance
- resistance
- tolerance

mechanisms



specificity

major histocompatibility complex



somatic recombination

↪ self-deletion

• resistance by passive means.

CCR5 · Δ32 · HIV

?

Inverse MAM

Countermeasures : trypanosomes
immunosuppression

Population - level

• RESISTANCE allele

- spreads in population
- parasite prevalence decreases
-

{ (prob of infect) \times (fitness loss if infected)
— cost of resistance
[\rightarrow polymorphic equilibrium]

• TOLERANCE.

} \rightarrow apparent competition
 \rightarrow fixation