$U \ll \lambda \;\; {
m Mutation \; regime}$  : "Weak U"

Distributed mutations
with only
1 mutational step

Stochastic evolution & demography  $U \gg \lambda$  Mutation regime: "Strong U"

Distributed mutations with an arbitrary number of mutational step

Deterministic evolution & Stochastic demography

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ER probabilty from *de novo* mutations  $P_R = 1 - exp(-N_0 \omega_R^{DN})$ 

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ER probabilty from *de novo* mutations

$$P_R = 1 - exp(-N_0 \,\omega_R^{DN})$$

ER probabilty from *de novo* mutations and **standing variance** 

$$P_R = 1 - exp(-N_0 \left(\omega_R^{DN} + \omega_R^{SV}\right))$$

 $U \ll \lambda \;\; {
m Mutation \; regime}$  : "Weak U"

Distributed mutations
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1 mutational step

Stochastic evolution & demography

 $U \gg \lambda$  Mutation regime : "Strong U"

Distributed mutations with an arbitrary number of mutational step

Deterministic evolution & Stochastic demography

ER probabilty from *de novo* mutations  $P_{R} = 1 - exp(-N_{0} \omega_{P}^{DN})$ 

$$P_R = 1 - exp(-N_0 (\omega_R^{DN} + \omega_R^{SV}))$$

Proportion of ER from standing variance

$$\phi_R^{SV} = \frac{\omega_R^{SV}}{\omega_R^{DN} + \omega_R^{SV}}$$