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Orr & Unckless 2008

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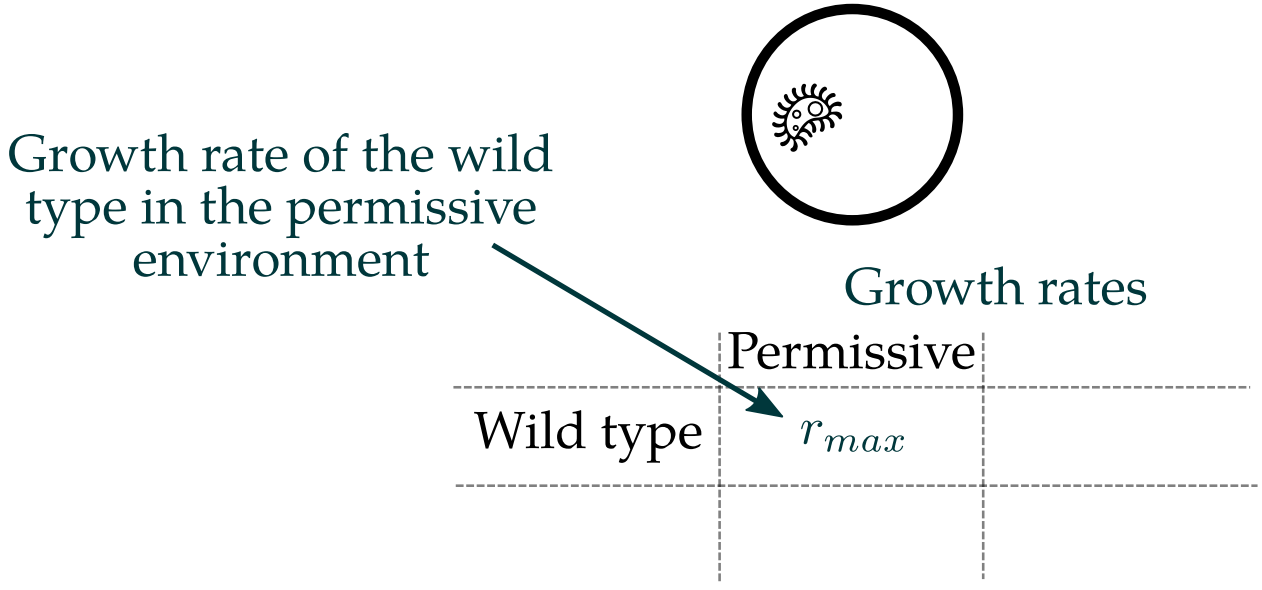

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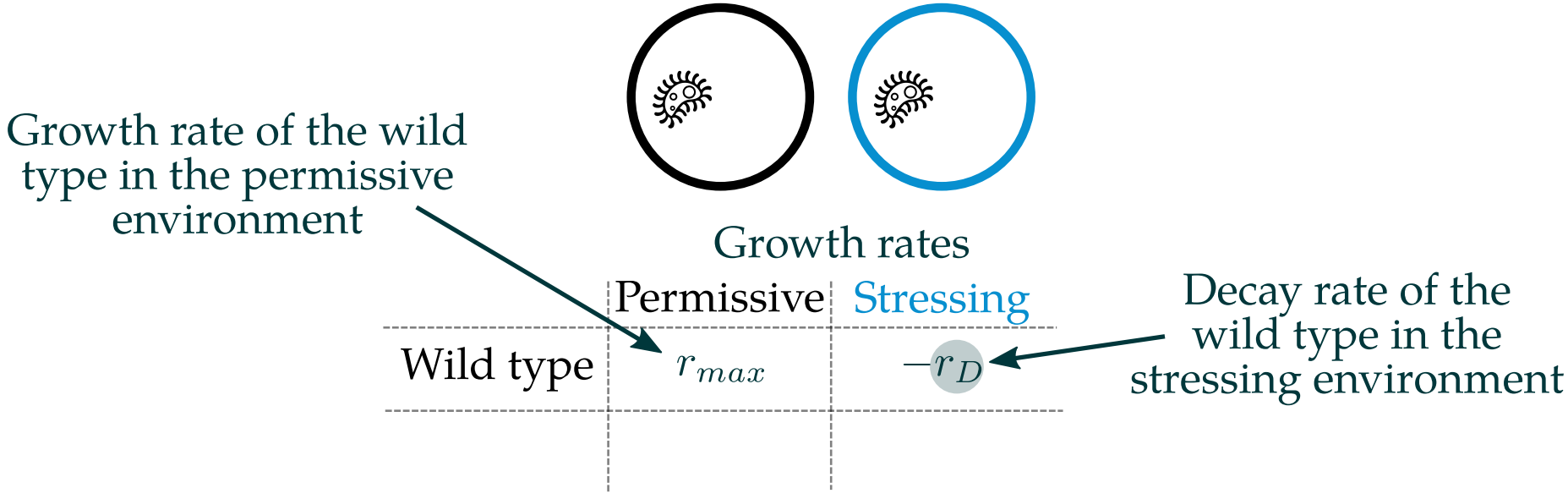

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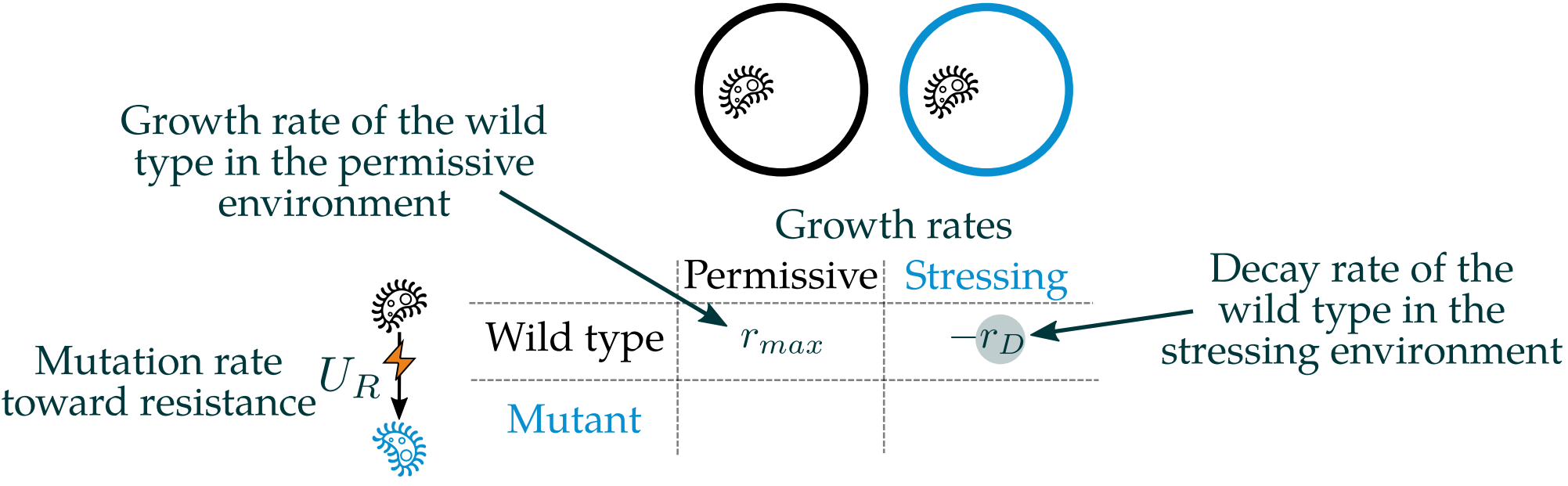

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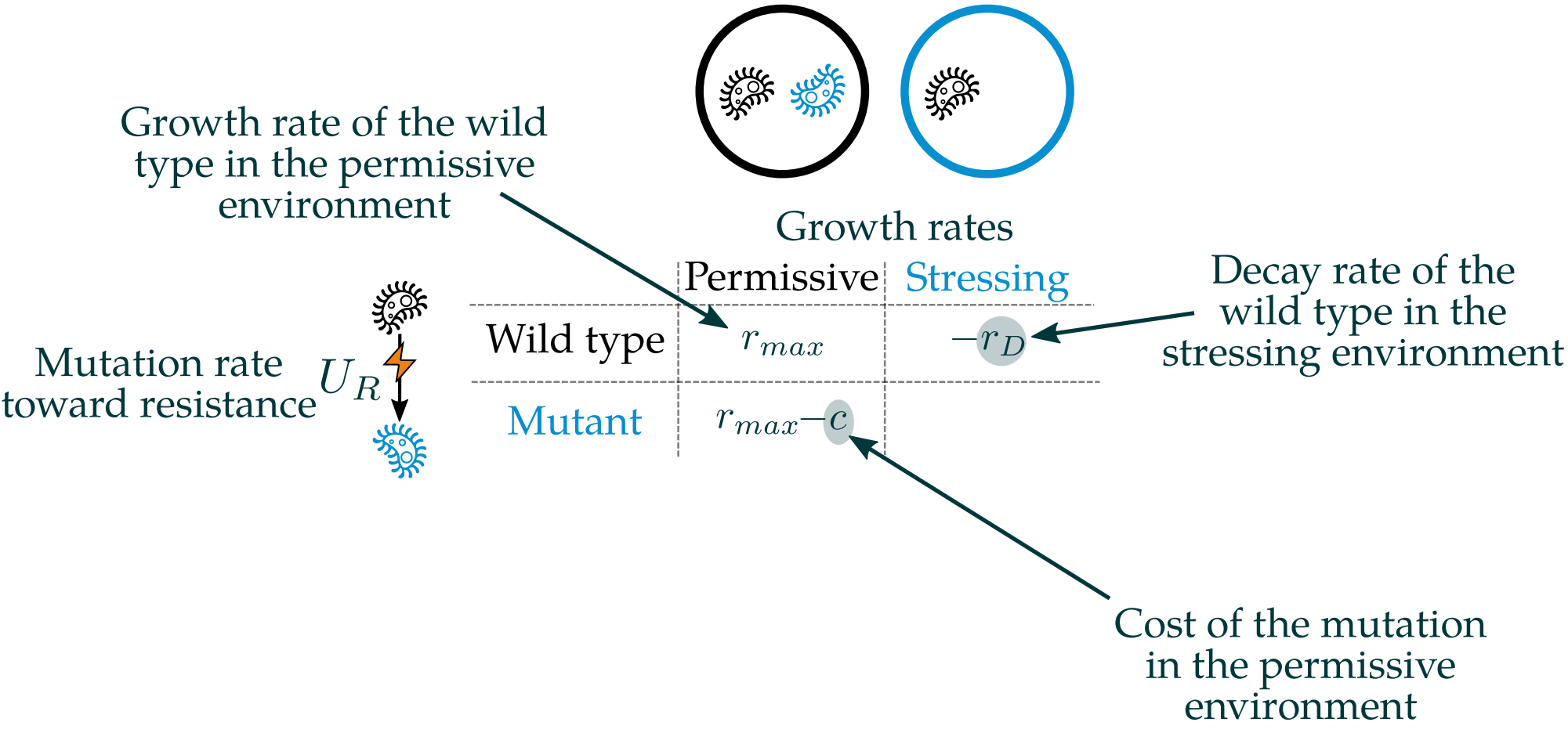

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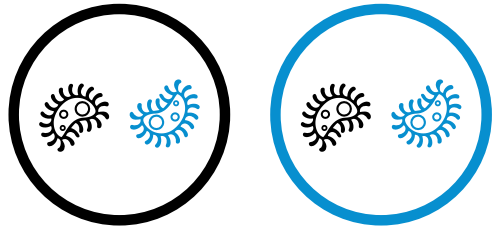

Growth rate of the wild type in the permissive environment

Growth rates

	Permissive	Stressing
Wild type	r_{max}	$-r_D$
Mutant	$r_{max}-c$	$+r$

Decay rate of the wild type in the stressing environment

Growth rate of the wild type in the stressing environment

Cost of the mutation in the permissive environment

Mutation rate toward resistance U_R

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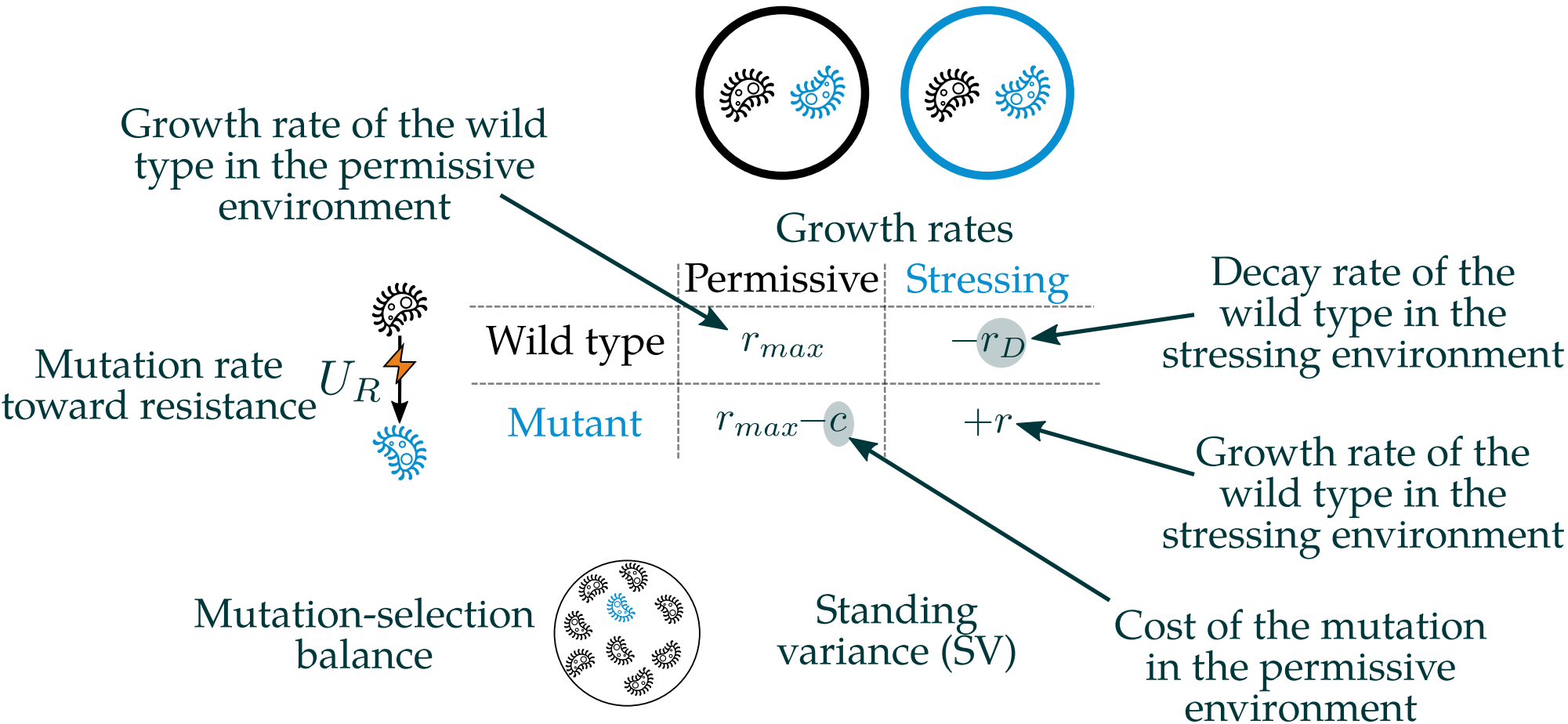

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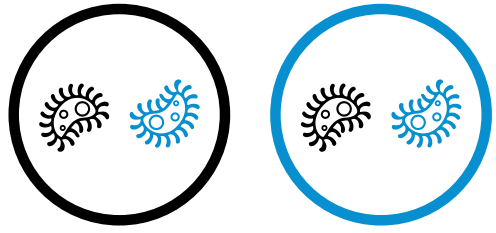

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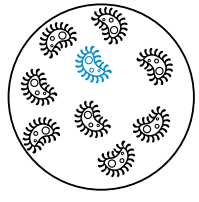
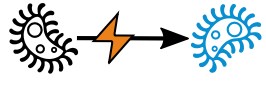


Standing variance (SV)



De novo mutations (DN)

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ER probability from *de novo* mutations

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

Rate of ER from *de novo* mutations *per* individual

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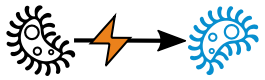

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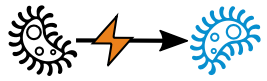

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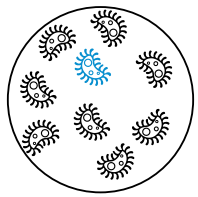

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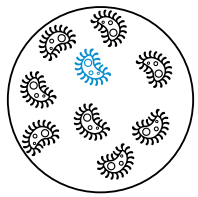

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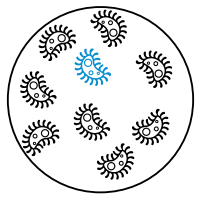

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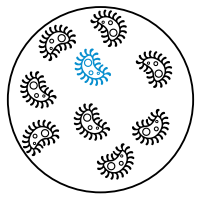

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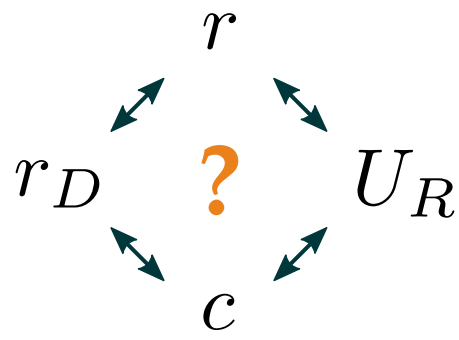
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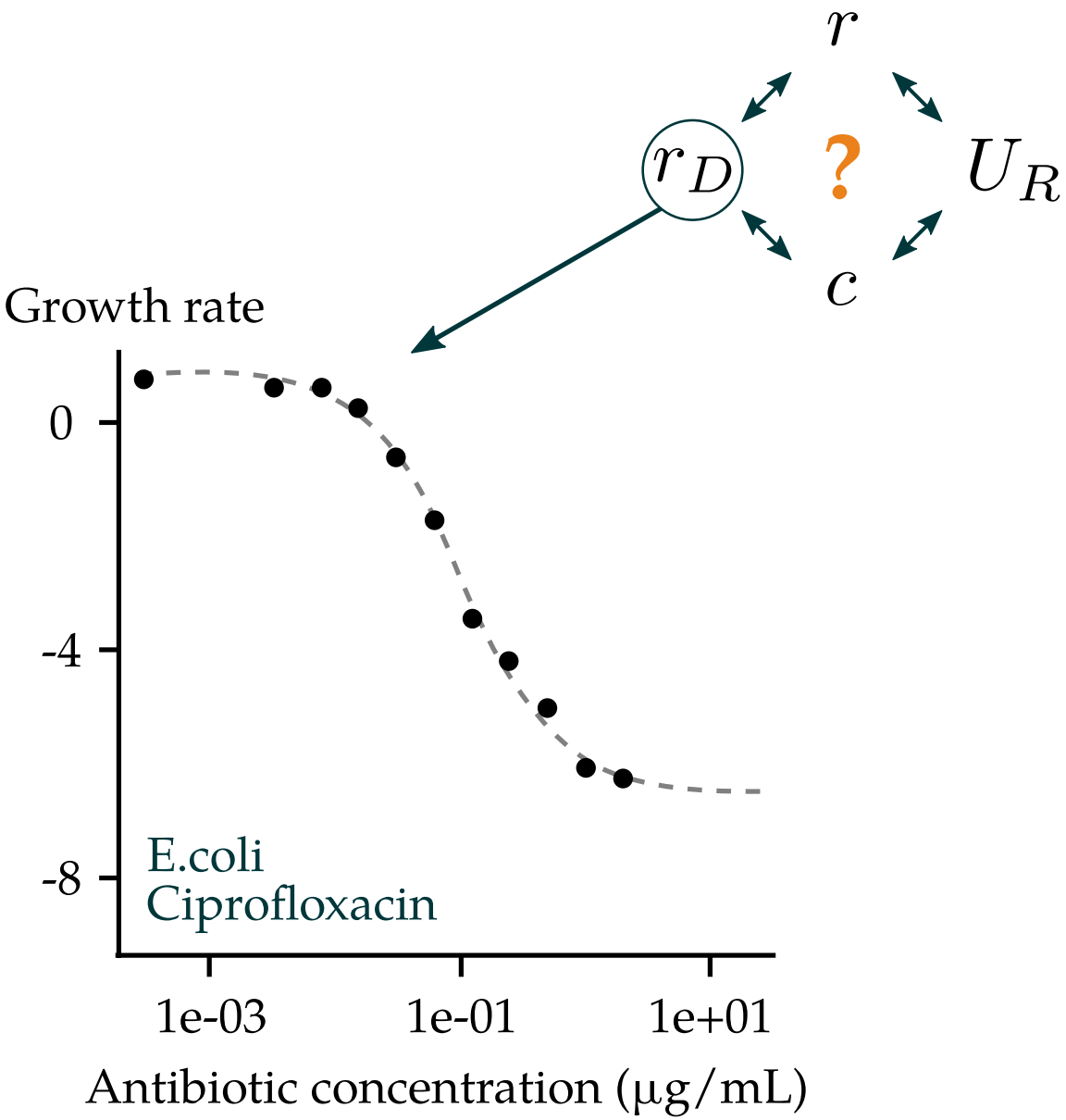
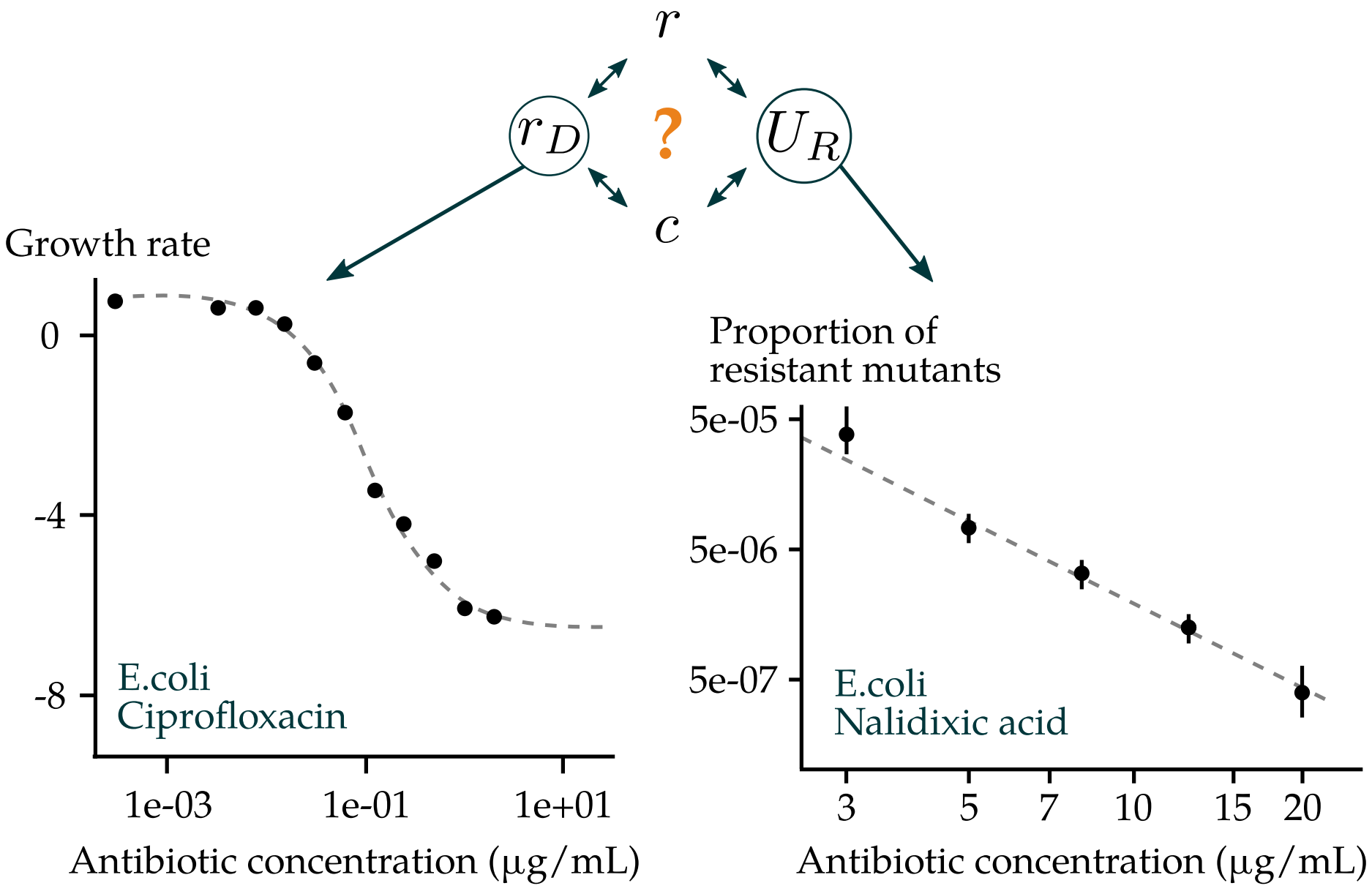
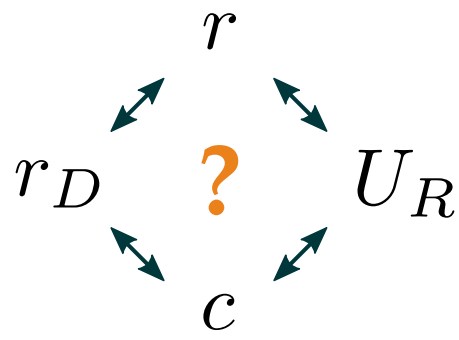


Regoes et al. 2004



Regoes et al. 2004

Harmand et al. 2017



Main objectif of my thesis:

Derive ER models for asexual organisms integrating a **dependence between the environmental and the genetic contexts**