

## RESEARCH

## A sample article title

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available at the end of the article**Abstract****First part title:** Text for this section.**Second part title:** Text for this section.**Keywords:** sample; article; author**Content**

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**Section title**

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In this section we examine the growth rate of the mean of  $Z_0$ ,  $Z_1$  and  $Z_2$ . In addition, we examine a common modeling assumption and note the importance of considering the tails of the extinction time  $T_x$  in studies of escape dynamics. We will first consider the expected resistant population at  $vT_x$  for some  $v > 0$ , (and temporarily assume  $\alpha = 0$ )

$$E[Z_1(vT_x)] = \int_0^{v \wedge 1} Z_0(uT_x) \exp(\lambda_1) du.$$

If we assume that sensitive cells follow a deterministic decay  $Z_0(t) = xe^{\lambda_0 t}$  and approximate their extinction time as  $T_x \approx -\frac{1}{\lambda_0} \log x$ , then we can heuristically estimate the expected value as

$$\begin{aligned} E[Z_1(vT_x)] &= \frac{\mu}{r} \log x \int_0^{v \wedge 1} x^{1-u} x^{(\lambda_1/r)(v-u)} du. \end{aligned} \quad (1)$$

Thus we observe that this expected value is finite for all  $v > 0$  (also see [1, 2, 3, 4, 5, 6]).

## Appendix

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### Acknowledgements

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### Funding

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### Abbreviations

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### Availability of data and materials

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### Ethics approval and consent to participate

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### Competing interests

The authors declare that they have no competing interests.

### Consent for publication

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### Authors' contributions

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### References

1. Koonin, E.V., Altschul, S.F., Bork, P.: Brca1 protein products: functional motifs. *Nat. Genet.* **13**, 266–267 (1996)
2. Jones, X.: Zeolites and synthetic mechanisms. In: Smith, Y. (ed.) *Proceedings of the First National Conference on Porous Sieves: 27-30 June 1996; Baltimore*, pp. 16–27 (1996)
3. Margulis, L.: *Origin of Eukaryotic Cells*. Yale University Press, New Haven (1970)
4. Schnepf, E.: From prey via endosymbiont to plastids: comparative studies in dinoflagellates. In: Lewin, R.A. (ed.) *Origins of Plastids*, 2nd edn., pp. 53–76. Chapman and Hall, New York (1993)
5. Kohavi, R.: *Wrappers for performance enhancement and obvious decision graphs*. PhD thesis, Stanford University, Computer Science Department (1995)
6. ISSN International Centre: *The ISSN register* (2006). <http://www.issn.org> Accessed 20 Feb 2007

### Figures

**Figure 1** Sample figure title

**Figure 2** Sample figure title

### Tables

**Table 1** Sample table title. This is where the description of the table should go

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A2	...	..	.
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