

List of Publications

Arren Bar-Even

Publications

(My publications have received >900 citations so far; >500 of which are of papers on which I am the first author)

22. Bar-Even, A., Noor, E., Milo, R. and Tawfik, D. S. (2013) **Futile encounters and the moderately efficient enzyme. To be submitted soon.**

21. Noor, E.* , Bar-Even, A.* , Flamholz, A., Reznik, E., Liebermeister, W. and Milo, R. (2013) **Pathway thermodynamics uncovers kinetic obstacles in central metabolism. To be submitted soon.** (* equal contribution)

20. Flamholz, A., Noor, E., Liebermeister, W., Bar-Even, A. and Milo, R. (2013) **A note on the decomposition of the kinetics of enzyme action. Submitted.**

19. Flamholz, A., Noor, E., Bar-Even, A., Liebermeister, W. and Milo, R. (2013) **Glycolytic strategy as a tradeoff between energy yield and protein cost. Proc Natl Acad Sci USA**, published online.

18. Bar-Even, A.‡ (2013) **Does acetogenesis really require especially low reduction potential? BBA Bioenergetics**, 1827(3), 395-400. (‡ corresponding author)

17. Bar-Even, A.‡ and Tawfik, D. S. (2013) **Engineering specialized metabolic pathways - is there a room for enzyme improvements? Curr Opin Biotechnol**, 24(2), 310-319. (‡ corresponding author)

16. Bar-Even, A.‡ Noor, E., Flamholz, A. and Milo R. (2013) **Design and analysis of metabolic pathways supporting formatotrophic growth for electricity-dependent cultivation of microbes. BBA Bioenergetics**, published online. (‡ corresponding author)

15. Zelcbuch, L., Antonovsky, N., Bar-Even, A., Levin-Karp, A., Barenholz, A. Diagi, M., Liebermeister, W., Flamholz, A., Noor, E., Amram, S., Brandis, A., Yofe, I., Jubran, H. and Milo, R. (2013) **Spanning expression space using ribosome binding site combinatorics. Nucleic Acids Res**, published online.

14. Bar-Even, A., Flamholz, A., Noor, E. and Milo R. (2012) **Thermodynamic constraints shape the structure of carbon fixation pathways. BBA Bioenergetics**, 1817(9), 1646–1659.

13. Bar-Even, A., Flamholz, A., Noor, E. and Milo, R. (2012) **Rethinking glycolysis: on the biochemical logic of metabolic pathways. Nat Chem Biol**, 8, 509-517.

12. Noor, E.* , Bar-Even, A.* , Flamholz, A., Lubling, Y., Davidi, D. and Milo, R. (2012) **An integrated open framework for thermodynamics of reactions that combines accuracy and coverage. Bioinformatics**, 28(15), 2037-2044. (* equal contribution)

11. Bar-Even, A., Noor, E., Flamholz, A. and Milo, R. (2012) **A survey of carbon fixation pathways through a quantitative lens. J Exp Bot**, 63(6), 2325-2342.

10. Flamholz, A., Noor, E., Bar-Even, A. and Milo, R. (2011) **eQuilibrator – the biochemical thermodynamics calculator.** *Nucleic Acids Res*, 40(D1), D770-D775.
9. Bar-Even, A., Noor, E., Flamholz, A., Buescher, J. M. and Milo, R. (2011) **Hydrophobicity and charge shape cellular metabolite concentrations.** *PLoS Comp Biol.* 7(10):e1002166.
8. Bar-Even, A., Noor, E., Savir, Y., Liebermeister W., Davidi, D., Tawfik, D. S. and Milo, R. (2011) **The moderately efficient enzyme: evolutionary and physico-chemical trends shaping enzyme kinetics.** *Biochemistry*, 50(21), 4402-4410.
7. Bar-Even, A., Noor, E., Lewis, N. E. and Milo, R. (2010) **Design and analysis of synthetic carbon fixation pathways.** *Proc Natl Acad Sci USA*, 107(19), 8889-8894.
6. Bar-Even, A., Paulsson, J., Maheshri, N., Carmi, M., O'Shea, E., Pilpel, Y. and Barkai, N. (2006) **Noise in protein expression scales with natural protein abundance.** *Nature Genet*, 38, 636-643.
5. Kafri, R., Bar-Even, A. and Pilpel, Y. (2005) **Transcription control reprogramming in genetic backup circuits.** *Nature Genet*, 37, 295-299.
4. Shenhav, B., Bar-Even, A., Kafri, R. and Lancet, D. (2005) **Polymer GARD: computer simulation of covalent bond formation in reproducing molecular assemblies.** *Orig Life Evol Biosph*, 35(2), 111-133.
3. Yanai, I., Benjamin, H., Shmoish, M., Chalifa-Caspi, V., Shklar, M., Ophir, R., Bar-Even, A., Horn-Saban, S., Safran, M., Domany, E., Lancet, D. and Shmueli, O. (2005) **Genome-wide midrange transcription profiles reveal expression level relationships in human tissue specification.** *Bioinformatics*, 21, 650-659.
2. Bar-Even, A., Shenhav, B., Kafri, R. and Lancet, D. (2005) **The Lipid World: from catalytic and informational headgroups to micelle replication and evolution without nucleic acids.** *In Life in the Universe: From the Miller Experiment to the Search for Life on Other Worlds*, 7, 111.
1. Lancet, D., Benjamin-Rodrig, H., Shmoish, M., Chalifa-Caspi, V., Shklar, M., Ophir, R., Bar-Even, A., Horn-Saban, S., Safran, M., Domany, E., Yanai, I. and Shmueli, O. (2004) **Whole genome expression patterns: the importance of being suppressed.** *Journal of Neurochemistry*, 90, 130.