

REFERENCES

- Al-judaibi, E. (2014). Infection and Antibiotic Resistant Bacteria in Developing Countries : A Genetic Review, *4*(11), 10–17. <https://doi.org/10.5923/s.microbiology.201401.02>
- Alvarez-Anorve, L. I., Calcagno, M. L., & Plumbridge, J. (2005). Why Does Escherichia coli Grow More Slowly on Glucosamine than on N-Acetylglucosamine? Effects of Enzyme Levels and Allosteric Activation of GlcN6P Deaminase (NagB) on Growth Rates. *Journal of Bacteriology*, *187*(9), 2974–2982. <https://doi.org/10.1128/JB.187.9.2974>
- Blount, K., Puskarz, I., Penchovsky, R., & Breaker, R. (2006). Development and application of a high-throughput assay for glmS riboswitch activators. *RNA Biology*, *3*(2), 77–81. <https://doi.org/10.4161/rna.3.2.3102>
- Blount, Z. D. (2015). The unexhausted potential of E. coli. *eLife*, *4*, 1–12. <https://doi.org/10.7554/eLife.05826>
- Cho, K. H. (2017). The structure and function of the gram-positive bacterial RNA degradosome. *Frontiers in Microbiology*, *8*(FEB), 1–10. <https://doi.org/10.3389/fmicb.2017.00154>
- Collins, J. A., Irnov, I., Baker, S., & Winkler, W. C. (2007). Mechanism of mRNA destabilization by the glmS ribozyme. *Genes and Development*, *21*(24), 3356–3368. <https://doi.org/10.1101/gad.1605307>
- Cooper, G. M. (2000). *The Cell: A Molecular Approach* (2nd ed.). Sunderland: Sinauer Associates. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK9917/>
- Deigan, K. E., & Ferré-D'Amaré, A. R. (2011). Riboswitches: discovery of drugs that target bacterial generegulatory RNAs. *Acc Chem Res*, *44*(12), 1329–1338. <https://doi.org/10.1021/ar200039b>
- Deikus, G., Condon, C., & Bechhofer, D. H. (2008). Role of Bacillus subtilis RNase J1 endonuclease and 5'-exonuclease activities in trp leader RNA turnover. *Journal of Biological Chemistry*, *283*(25), 17158–17167. <https://doi.org/10.1074/jbc.M801461200>
- Ferré-D'Amaré, A. R. (2012). The glmS ribozyme: use of a small molecule coenzyme by a gene-regulatory RNA. *Quarterly Reviews of Biophysics*, *43*(4), 423–447. <https://doi.org/10.1017/S0033583510000144>
- Govind, P. (2011). Model organisms used in molecular biology or medical research. *International Research Journal of Pharmacy*, *2*(11), 62–65. Retrieved from http://www.embase.com/search/results?subaction=viewrecord&from=export&id=L364640633%5Cnhttp://sfx.metabib.ch/sfx_locator?sid=EMBASE&issn=22308407&id=doi:&atitle=Model+organisms+used+in+molecular+biology+or+medical+research&stitle=Int.+Res.+J.+Pharm.&title
- Guzman, L. M., Belin, D., Carson, M. J., & Beckwith, J. (1995). Tight regulation, modulation, and high-level expression by vectors containing the arabinose P(BAD) promoter. *Journal of Bacteriology*, *177*(14), 4121–4130. <https://doi.org/10.1128/jb.177.14.4121-4130.1995>
- Hammann, C., Luptak, A., Perreault, J., & De La Peña, M. (2012). The ubiquitous hammerhead ribozyme. *Rna*, *18*(5), 871–885. <https://doi.org/10.1261/rna.031401.111>
- Haseloff, J., & Gerlach, W. L. (1988). Simple RNA enzymes with new and highly specific endoribonuclease activities. *Nature*, *334*(6183), 585–591. <https://doi.org/10.1038/334585a0>
- Idalia, V. N., & Bernardo, F. (2017). Escherichia coli as a Model Organism and Its Application in Biotechnology. *Intech*.
- Kalamorz, F., Reichenbach, B., März, W., Rak, B., & Görke, B. (2007). Feedback control of glucosamine-6-phosphate synthase GlmS expression depends on the small RNA GlmZ and involves the novel protein Yhbj in Escherichia coli. *Molecular Microbiology*, *65*(6), 1518–1533. <https://doi.org/10.1111/j.1365-2958.2007.05888.x>
- Kirchner, M., & Schneider, S. (2017). Gene expression control by Bacillus anthracis purine riboswitches. *Rna*, *23*(5), 762–769. <https://doi.org/10.1261/rna.058792.116>
- Kirchner, M., Schorpp, K., Hadian, K., & Schneider, S. (2017). An in vivo high-throughput screening for riboswitch ligands using a reverse reporter gene system. *Scientific Reports*, *7*(1), 7732. <https://doi.org/10.1038/s41598-017-07870-w>

- Liu, B., & Pop, M. (2009). ARDB - Antibiotic resistance genes database. *Nucleic Acids Research*, 37, 443–447. <https://doi.org/10.1093/nar/gkn656>
- Machtel, P., Bąkowska-Żywicka, K., & Żywicki, M. (2016). Emerging applications of riboswitches – from antibacterial targets to molecular tools. *Journal of Applied Genetics*, 57(4), 531–541. <https://doi.org/10.1007/s13353-016-0341-x>
- Mathy, N., Bénard, L., Pellegrini, O., Daou, R., Wen, T., & Condon, C. (2007). 5'-to-3' Exoribonuclease Activity in Bacteria: Role of RNase J1 in rRNA Maturation and 5' Stability of mRNA. *Cell*, 129(4), 681–692. <https://doi.org/10.1016/j.cell.2007.02.051>
- Matzner, D., Schüller, A., Seitz, T., Wittmann, V., & Mayer, G. (2017). Fluoro-Carba-Sugars are Glycomimetic Activators of the glmS Ribozyme. *Chemistry - A European Journal*, 23(51), 12604–12612. <https://doi.org/10.1002/chem.201702371>
- Mayer, G., & Famulok, M. (2006). High-throughput-compatible assay for glmS riboswitch metabolite dependence. *ChemBioChem*, 7(4), 602–604. <https://doi.org/10.1002/cbic.200500490>
- McCown, P. J., Roth, A., & Breaker, R. R. (2011). An expanded collection and refined consensus model of glmS ribozymes. *Rna*, 17(4), 728–736. <https://doi.org/10.1261/rna.2590811>
- Pley, H. W., Flaherty, K. M., & McKay, D. B. (1994). Three-dimensional structure of a hammerhead ribozyme. *Nature*. <https://doi.org/10.1038/372068a0>
- Rolain, J. M., Abat, C., Jimeno, M. T., Fournier, P. E., & Raoult, D. (2016). Do we need new antibiotics? *Clinical Microbiology and Infection*, 22(5), 408–415. <https://doi.org/10.1016/j.cmi.2016.03.012>
- Taj, M. K., Samreen, Z., Ling, J. X., Taj, I., & Yunlin, W. (2014). Escherichia coli as a Model Organism. *International Journal of Engineering Research and Science & Technology*, 3(April), 1–10.
- Ventola, C. L. (2015). The antibiotic resistance crisis: part 1: causes and threats. *Pharmacy and Therapeutics*, 40(4), 277–283.
- Walsh, C. T., & Wencewicz, T. A. (2014). Prospects for new antibiotics: A molecule-centered perspective. *Journal of Antibiotics*, 67(1), 7–22. <https://doi.org/10.1038/ja.2013.49>
- Winkler, W. C., Nahvi, A., Roth, A., Collins, J. A., & Breaker, R. R. (2004). Control of gene expression by a natural metabolite-responsive ribozyme. *Nature*, 428, 281–286. <https://doi.org/10.1038/nature02362>
- Zaman, S. Bin, Hussain, M. A., Nye, R., Mehta, V., Mamun, K. T., & Hossain, N. (2017). A Review on Antibiotic Resistance: Alarm Bells are Ringing. *Cureus*, 9(6). <https://doi.org/10.7759/cureus.1403>
- Zang, R., Li, D., Tang, I.-C., Wang, J., & Yang, S.-T. (2012). Cell-Based Assays in High-Throughput Screening for Drug Discovery. *International Journal of Biotechnology for Wellness Industries*, 1, 31–51. <https://doi.org/10.6000/1927-3037.2012.01.01.02>
- Zhang, S., Stancek, M., & Isaksson, L. A. (1997). The efficiency of a cis-cleaving ribozyme in an mRNA coding region is influenced by the translating ribosome in vivo. *Nucleic Acids Research*, 25(21), 4301–4306. <https://doi.org/10.1093/nar/25.21.4301>
- Zhang, Z., Guan, N., Li, T., Mais, D. E., & Wang, M. (2012). Quality control of cell-based high-throughput drug screening. *Acta Pharmaceutica Sinica B*, 2(5), 429–438. <https://doi.org/10.1016/j.apsb.2012.03.006>
- Zhao, Y., Chen, H., Du, F., Yasmeen, A., Dong, J., Cui, X., & Tang, Z. (2014). Signal amplification of glucosamine-6-phosphate based on ribozyme glmS. *Biosensors and Bioelectronics*, 62, 337–342. <https://doi.org/10.1016/j.bios.2014.06.067>