

# Horizontal gene transfer and adaptive evolution in bact

Nature Reviews Microbiology

20, 206-218

DOI: [10.1038/s41579-021-00650-4](https://doi.org/10.1038/s41579-021-00650-4)

Citation Report

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 3  | Evolution in small steps and giant leaps. <i>Evolution; International Journal of Organic Evolution</i> , 2022, 76, 67-77.   | 1.1 | 5         |
| 4  | Molecular mechanisms and drivers of pathogen emergence. <i>Trends in Microbiology</i> , 2022, 30, 898-911.  | 3.5 | 19        |
| 5  | IntegronFinder 2.0: Identification and Analysis of Integrons across Bacteria, with a Focus on Antibiotic Resistance in <i>Klebsiella</i> . <i>Microorganisms</i> , 2022, 10, 700.                               | 1.6 | 61        |
| 8  | Prediction of Prophages and Their Host Ranges in Pathogenic and Commensal <i>Neisseria</i> Species. <i>MSystems</i> , 2022, 7, e0008322.  | 1.7 | 9         |
| 9  | Insight into the antibacterial resistance of graphdiyne functionalized by silver nanoparticles. <i>Cell Proliferation</i> , 2022, 55, e13236.   | 2.4 | 10        |
| 10 | Comprehensive Analysis Reveals the Genetic and Pathogenic Diversity of <i>Ralstonia solanacearum</i> Species Complex and Benefits Its Taxonomic Classification. <i>Frontiers in Microbiology</i> , 2022, 13, .  | 1.5 | 3         |
| 11 | Editorial: Investigating Antimicrobial Resistance With Single-Molecule Sequencing Technologies: Opportunities and Challenges. <i>Frontiers in Microbiology</i> , 2022, 13, .                                    | 1.5 | 2         |
| 12 | Fomite Transmission Follows Invasion Ecology Principles. <i>MSystems</i> , 2022, , e0021122.  | 1.7 | 1         |
| 13 | The Notable Achievements and the Prospects of Bacterial Pathogen Genomics. <i>Microorganisms</i> , 2022, 10, 1040.  | 1.6 | 11        |
| 16 | Recent developments in horizontal gene transfer with the adaptive innovation of fermented foods. <i>Critical Reviews in Food Science and Nutrition</i> , 2023, 63, 569-584.                                     | 5.4 | 5         |
| 17 | Comparative Genomics Provides Insights Into Genetic Diversity of <i>Clostridium tyrobutyricum</i> and Potential Implications for Late Blowing Defects in Cheese. <i>Frontiers in Microbiology</i> , 2022, 13, . | 1.5 | 4         |
| 19 | From a large-scale genomic analysis of insertion sequences to insights into their regulatory roles in prokaryotes. <i>BMC Genomics</i> , 2022, 23, .  | 1.2 | 7         |
| 20 | The CRISPR/Cas Machinery Evolution and Gene Flow in the Hot Spring Cyanobacterium <i>Thermotrichus</i> . <i>Diversity</i> , 2022, 14, 502.  | 0.7 | 2         |
| 22 | Environmental Galenics: large-scale fortification of extant microbiomes with engineered bioremediation agents. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2022, 377, .     | 1.8 | 13        |
| 23 | The Spread of Antibiotic Resistance Genes In Vivo Model. <i>Canadian Journal of Infectious Diseases and Medical Microbiology</i> , 2022, 2022, 1-11.  | 0.7 | 27        |
| 24 | Core genes can have higher recombination rates than accessory genes within global microbial populations. <i>ELife</i> , 0, 11, .  | 2.8 | 9         |
| 26 | Genomic Insights Into the Interspecific Diversity and Evolution of <i>Mobiluncus</i> , a Pathogen Associated With Bacterial Vaginosis. <i>Frontiers in Microbiology</i> , 0, 13, .                              | 1.5 | 0         |
| 27 | Plant and Human Pathogenic Bacteria Exchanging their Primary Host Environments. <i>Journal of Horticultural Research</i> , 2022, 30, 11-30.   | 0.4 | 3         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 29 | Horizontal gene transfer in yeasts. <i>Current Opinion in Genetics and Development</i> , 2022, 76, 101950.   | 1.5  | 4         |
| 30 | Coastal Transient Niches Shape the Microdiversity Pattern of a Bacterioplankton Population with Reduced Genomes. <i>MBio</i> , 2022, 13, .   | 1.8  | 1         |
| 31 | HGT is widespread in insects and contributes to male courtship in lepidopterans. <i>Cell</i> , 2022, 185, 2975-2987.e10.   | 13.5 | 55        |
| 32 | Population genomics of Group B <i>Streptococcus</i> reveals the genetics of neonatal disease onset and meningial invasion. <i>Nature Communications</i> , 2022, 13, .  | 5.8  | 7         |
| 33 | Propagation of Recombinant Genes through Complex Microbiomes with Synthetic Mini-RP4 Plasmid Vectors. <i>BioDesign Research</i> , 2022, 2022, .  | 0.8  | 5         |
| 34 | Repeat sequences limit the effectiveness of lateral gene transfer and favored the evolution of meiotic sex in early eukaryotes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .                              | 3.3  | 3         |
| 35 | Corpse decomposition of freshwater economic fish leads to similar resistomes and the enrichment of high-risk antibiotic resistance genes in different water types. <i>Journal of Environmental Management</i> , 2022, 320, 115944.                                 | 3.8  | 3         |
| 36 | Detecting bacterial adaptation within individual microbiomes. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2022, 377, .   | 1.8  | 12        |
| 37 | Genome-centric metagenomics insights into functional divergence and horizontal gene transfer of denitrifying bacteria in anammox consortia. <i>Water Research</i> , 2022, 224, 119062.   | 5.3  | 10        |
| 38 | Accelerated spread of antibiotic resistance genes (ARGs) induced by non-antibiotic conditions: Roles and mechanisms. <i>Water Research</i> , 2022, 224, 119060.  | 5.3  | 53        |
| 39 | A multifunctional Fe <sub>2</sub> O <sub>3</sub> @MoS <sub>2</sub> @SDS Z-scheme nanocomposite: NIR enhanced bacterial inactivation, degradation antibiotics and inhibiting ARGs dissemination. <i>Colloids and Surfaces B: Biointerfaces</i> , 2022, 219, 112833. | 2.5  | 3         |
| 40 | Reduced and Nonreduced Genomes in <i>Paraburkholderia</i> Symbionts of Social Amoebas. <i>MSystems</i> , 0, , .  | 1.7  | 5         |
| 41 | Endocytosis-like DNA uptake by cell wall-deficient bacteria. <i>Nature Communications</i> , 2022, 13, .  | 5.8  | 11        |
| 42 | Using Genomes and Evolutionary Analyses to Screen for Host-Specificity and Positive Selection in the Plant Pathogen <i>Xylella fastidiosa</i> . <i>Applied and Environmental Microbiology</i> , 2022, 88, .  | 1.4  | 6         |
| 43 | Microbial communities of stratified aquatic ecosystems of Kandalaksha Bay (White Sea) shed light on the evolutionary history of green and brown morphotypes of <i>Chlorobiota</i> . <i>FEMS Microbiology Ecology</i> , 2022, 98, .                                 | 1.3  | 3         |
| 44 | Nramp: Deprive and conquer?. <i>Frontiers in Cell and Developmental Biology</i> , 0, 10, .   | 1.8  | 3         |
| 45 | A Novel Module Promotes Horizontal Gene Transfer in <i>Azorhizobium caulinodans</i> ORS571. <i>Genes</i> , 2022, 13, 1895.   | 1.0  | 2         |
| 46 | Elucidation of the O-antigen structure of <i>Escherichia coli</i> O93 and characterization of its biosynthetic genes. <i>Glycobiology</i> , 2023, 33, 289-300.   | 1.3  | 1         |

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 47 | RfaH Counter-Silences Inhibition of Transcript Elongation by H-NSâ€“StpA Nucleoprotein Filaments in Pathogenic Escherichiacoli. MBio, 2022, 13, .  | 1.8 | 2         |
| 48 | Antibiotic resistance bacteria and antibiotic resistance genes survived from the extremely acidity posing a risk on intestinal bacteria in an in vitro digestion model by horizontal gene transfer. Ecotoxicology and Environmental Safety, 2022, 247, 114247. | 2.9 | 6         |
| 49 | Biologically evolved dual-pathway catalytic pattern indicating an efficient bioremediation strategy for phenol removal. Chemical Engineering Journal, 2023, 454, 140195.   | 6.6 | 6         |
| 50 | Conjugation across Bacillus cereus and kin: A review. Frontiers in Microbiology, 0, 13, .  | 1.5 | 0         |
| 52 | DNA Gyrase Inhibitors Increase the Frequency of Bacteriophage-like RcGTA-Mediated Gene Transfer in Rhodobacter capsulatus. Genes, 2022, 13, 2071.  | 1.0 | 1         |
| 53 | Evaluating the occurrence frequency of horizontal gene transfer induced by different degrees of heavy metal stress. Journal of Cleaner Production, 2023, 382, 135371.  | 4.6 | 10        |
| 54 | Evolution of the connectivity and indispensability of a transferable gene: the simplicity hypothesis. BMC Ecology and Evolution, 2022, 22, .   | 0.7 | 0         |
| 55 | Examining the impact of zinc on horizontal gene transfer in Enterobacterales. Scientific Reports, 2022, 12, .  | 1.6 | 3         |
| 56 | Association of CRISPR-Cas System with the Antibiotic Resistance and Virulence Genes in Nosocomial Isolates of Enterococcus. Infection and Drug Resistance, 0, Volume 15, 6939-6949.  | 1.1 | 5         |
| 57 | The preference priority of Bacillus subtilis in uptaking free DNA during the natural transformation. Trakya University Journal of Natural Sciences, 0, , .   | 0.4 | 0         |
| 58 | The Evaluation of Different Bacteriocinogenic Bacillus spp. with Activity Against Staphylococcus spp. and Their Beneficial and/or Hazardous Properties. Probiotics and Antimicrobial Proteins, 2024, 16, 35-52.  | 1.9 | 0         |
| 59 | Clonal Lineages and Virulence Factors of Carbapenem Resistant E. coli in Alameda County, California, 2017â€“2019. Antibiotics, 2022, 11, 1794.   | 1.5 | 2         |
| 60 | Genomic islands and their role in fitness traits of two key sepsis-causing bacterial pathogens. Briefings in Functional Genomics, 2024, 23, 55-68.   | 1.3 | 1         |
| 61 | Convergent evolution and horizontal gene transfer in Arctic Ocean microalgae. Life Science Alliance, 2023, 6, e202201833.  | 1.3 | 6         |
| 62 | How has horizontal gene transfer shaped the evolution of insect genomes?. Environmental Microbiology, 2023, 25, 642-645.   | 1.8 | 1         |
| 63 | Hormetic Effect of Pyroligneous Acids on Conjugative Transfer of Plasmid-mediated Multi-antibiotic Resistance Genes within Bacterial Genus. ACS Environmental Au, 2023, 3, 105-120.  | 3.3 | 4         |
| 64 | Phylogenomics of five Pseudanabaena cyanophages and evolutionary traces of horizontal gene transfer. Environmental Microbiomes, 2023, 18, .  | 2.2 | 1         |
| 65 | Application of Cloning-Free Genome Engineering to Escherichia coli. Microorganisms, 2023, 11, 215.   | 1.6 | 1         |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 66 | Gifts hidden in shadowy genome islands. <i>Cell</i> , 2023, 186, 5-7.  | 13.5 | 0         |
| 67 | Functional Endophytes Regulating Plant Secondary Metabolism: Current Status, Prospects and Applications. <i>International Journal of Molecular Sciences</i> , 2023, 24, 1153.  | 1.8  | 19        |
| 68 | Advances in linking single-cell bacterial stress response to population-level survival. <i>Current Opinion in Biotechnology</i> , 2023, 79, 102885.  | 3.3  | 6         |
| 69 | Comparative Genome Analysis of 19 <i>Trueperella pyogenes</i> Strains Originating from Different Animal Species Reveal a Genetically Diverse Open Pan-Genome. <i>Antibiotics</i> , 2023, 12, 24.                         | 1.5  | 1         |
| 70 | Pharmaceuticals and Personal Care Products in the Environment with Emphasis on Horizontal Transfer of Antibiotic Resistance Genes. <i>Chemistry, Didactics, Ecology, Metrology</i> , 2022, 27, 35-51.                    | 0.1  | 1         |
| 71 | Elevated temperature and CO <sub>2</sub> strongly affect the growth strategies of soil bacteria. <i>Nature Communications</i> , 2023, 14, .  | 5.8  | 10        |
| 72 | The Impact of Non-Pathogenic Bacteria on the Spread of Virulence and Resistance Genes. <i>International Journal of Molecular Sciences</i> , 2023, 24, 1967.  | 1.8  | 7         |
| 74 | Transposable Elements Co-Option in Genome Evolution and Gene Regulation. <i>International Journal of Molecular Sciences</i> , 2023, 24, 2610.  | 1.8  | 2         |
| 75 | Leveraging comparative genomics to uncover alien genes in bacterial genomes. <i>Microbial Genomics</i> , 2023, 9, .  | 1.0  | 4         |
| 76 | Robust analysis of prokaryotic pangenome gene gain and loss rates with Panstripe. <i>Genome Research</i> , 2023, 33, 129-140.  | 2.4  | 6         |
| 78 | An integrated eco-evolutionary framework to predict population-level responses of climate-sensitive pathogens. <i>Current Opinion in Biotechnology</i> , 2023, 80, 102898.   | 3.3  | 2         |
| 80 | Biodegradation of Oil by a Newly Isolated Strain <i>Acinetobacter junii</i> WCO-9 and Its Comparative Pan-Genome Analysis. <i>Microorganisms</i> , 2023, 11, 407.  | 1.6  | 1         |
| 81 | Ceftazidime-avibactam resistance in <i>Klebsiella pneumoniae</i> sequence type 37: a decade of persistence and concealed evolution. <i>Microbial Genomics</i> , 2023, 9, .   | 1.0  | 0         |
| 83 | Cholera Dynamics and the Emergence of Pandemic <i>Vibrio cholerae</i> . <i>Advances in Experimental Medicine and Biology</i> , 2023, , 127-147.  | 0.8  | 1         |
| 84 | Horizontal Gene Transfer, Fitness Costs and Mobility Shape the Spread of Antibiotic Resistance Genes into Experimental Populations of <i>Acinetobacter Baylyi</i> . <i>Molecular Biology and Evolution</i> , 2023, 40, . | 3.5  | 2         |
| 85 | The MksG nuclease is the executing part of the bacterial plasmid defense system MksBEFG. <i>Nucleic Acids Research</i> , 2023, 51, 3288-3306.  | 6.5  | 8         |
| 86 | The honeybee gut resistome and its role in antibiotic resistance dissemination. <i>Integrative Zoology</i> , 2023, 18, 1014-1026.  | 1.3  | 5         |
| 87 | Cell-to-cell natural transformation in <i>Bacillus subtilis</i> facilitates large scale of genomic exchanges and the transfer of long continuous DNA regions. <i>Nucleic Acids Research</i> , 2023, 51, 3820-3835.       | 6.5  | 1         |

| #   | ARTICLE  | IF   | CITATIONS |
|-----|--|------|-----------|
| 88  | Characterization of cephalosporin and fluoroquinolone resistant Enterobacterales from Irish farm waste by whole genome sequencing. <i>Frontiers in Microbiology</i> , 0, 14, .   | 1.5  | 1         |
| 89  | Phylogroup-specific variation shapes the clustering of antimicrobial resistance genes and defence systems across regions of genome plasticity in <i>Pseudomonas aeruginosa</i> . <i>EBioMedicine</i> , 2023, 90, 104532. | 2.7  | 11        |
| 91  | The Effect of Outer Space and Other Environmental Cues on Bacterial Conjugation. <i>Microbiology Spectrum</i> , 0, , .   | 1.2  | 2         |
| 93  | Assessment of plasmids for relating the 2020 <i>Salmonella enterica</i> serovar Newport onion outbreak to farms implicated by the outbreak investigation. <i>BMC Genomics</i> , 2023, 24, .                              | 1.2  | 0         |
| 94  | Microbiome-based enrichment pattern mining has enabled a deeper understanding of the biomeâ€“speciesâ€“function relationship. <i>Communications Biology</i> , 2023, 6, .   | 2.0  | 0         |
| 95  | The role of the ecological scaffold in the origin and maintenance of whole-group trait altruism in microbial populations. <i>Bmc Ecology and Evolution</i> , 2023, 23, .   | 0.7  | 2         |
| 96  | Intrahost evolution of the gut microbiota. <i>Nature Reviews Microbiology</i> , 2023, 21, 590-603.   | 13.6 | 8         |
| 97  | The Operon as a Conundrum of Gene Dynamics and Biochemical Constraints: What We Have Learned from Histidine Biosynthesis. <i>Genes</i> , 2023, 14, 949.  | 1.0  | 0         |
| 109 | CRISPR-Cas-Based Antimicrobials: Design, Challenges, and Bacterial Mechanisms of Resistance. <i>ACS Infectious Diseases</i> , 2023, 9, 1283-1302.  | 1.8  | 7         |
| 135 | From parasites to partners: exploring the intricacies of host-transposon dynamics and coevolution. <i>Functional and Integrative Genomics</i> , 2023, 23, .  | 1.4  | 0         |
| 165 | Climate extremes disrupt fungalâ€“bacterial interactions. <i>Nature Microbiology</i> , 2023, 8, 2226-2229.   | 5.9  | 1         |
| 189 | Horizontal gene transfer in eukaryotes: aligning theory with data. <i>Nature Reviews Genetics</i> , 0, , .   | 7.7  | 0         |
| 191 | Horizontal Gene Transfer in Fungi and Its Ecological Importance. , 2024, , 59-81.  |      | 0         |