# David M Bedwell

## List of Publications by Citations

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| 65 papers | 4,847 citations | 37 h-index | 67 g-index |
| 67 ext. papers | 5,379 ext. citations | 8.5 avg, IF | 5.13 L-index |

| # | Paper | IF | Citations |
|---|---|---|---|
| 65 | Aminoglycoside antibiotics restore CFTR function by overcoming premature stop mutations. *Nature Medicine*, **1996**, 2, 467-9 | 50.5 | 399 |
| 64 | Suppression of a CFTR premature stop mutation in a bronchial epithelial cell line. *Nature Medicine*, **1997**, 3, 1280-4 | 50.5 | 281 |
| 63 | Aminoglycoside antibiotics mediate context-dependent suppression of termination codons in a mammalian translation system. *Rna*, **2000**, 6, 1044-55 | 5.8 | 272 |
| 62 | The spc ribosomal protein operon of Escherichia coli: sequence and cotranscription of the ribosomal protein genes and a protein export gene. *Nucleic Acids Research*, **1983**, 11, 2599-616 | 20.1 | 262 |
| 61 | The efficiency of translation termination is determined by a synergistic interplay between upstream and downstream sequences in Saccharomyces cerevisiae. *Journal of Molecular Biology*, **1995**, 251, 334-45 | 6.5 | 244 |
| 60 | Evidence that systemic gentamicin suppresses premature stop mutations in patients with cystic fibrosis. *American Journal of Respiratory and Critical Care Medicine*, **2001**, 163, 1683-92 | 10.2 | 211 |
| 59 | PTC124 is an orally bioavailable compound that promotes suppression of the human CFTR-G542X nonsense allele in a CF mouse model. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 2064-9 | 11.5 | 200 |
| 58 | Therapeutics based on stop codon readthrough. *Annual Review of Genomics and Human Genetics*, **2014**, 15, 371-94 | 9.7 | 174 |
| 57 | GTP hydrolysis by eRF3 facilitates stop codon decoding during eukaryotic translation termination. *Molecular and Cellular Biology*, **2004**, 24, 7769-78 | 4.8 | 139 |
| 56 | Aminoglycoside suppression of a premature stop mutation in a Cftr-/- mouse carrying a human CFTR-G542X transgene. *Journal of Molecular Medicine*, **2002**, 80, 595-604 | 5.5 | 138 |
| 55 | Leaky termination at premature stop codons antagonizes nonsense-mediated mRNA decay in S. cerevisiae. *Rna*, **2004**, 10, 691-703 | 5.8 | 127 |
| 54 | The vacuolar Ca2+/H+ exchanger Vcx1p/Hum1p tightly controls cytosolic Ca2+ levels in S. cerevisiae. *FEBS Letters*, **1999**, 451, 132-6 | 3.8 | 118 |
| 53 | Gentamicin-mediated suppression of Hurler syndrome stop mutations restores a low level of alpha-L-iduronidase activity and reduces lysosomal glycosaminoglycan accumulation. *Human Molecular Genetics*, **2001**, 10, 291-9 | 5.6 | 116 |
| 52 | Synthetic aminoglycosides efficiently suppress cystic fibrosis transmembrane conductance regulator nonsense mutations and are enhanced by ivacaftor. *American Journal of Respiratory Cell and Molecular Biology*, **2014**, 50, 805-16 | 5.7 | 110 |
| 51 | Characterization of defects in ion transport and tissue development in cystic fibrosis transmembrane conductance regulator (CFTR)-knockout rats. *PLoS ONE*, **2014**, 9, e91253 | 3.7 | 109 |
| 50 | Clinically relevant aminoglycosides can suppress disease-associated premature stop mutations in the IDUA and P53 cDNAs in a mammalian translation system. *Journal of Molecular Medicine*, **2002**, 80, 367-76 | 5.5 | 108 |
| 49 | Ataluren stimulates ribosomal selection of near-cognate tRNAs to promote nonsense suppression. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 12508-12513 | 11.5 | 108 |

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| 48 | Nucleotide sequence of the alpha ribosomal protein operon of Escherichia coli. *Nucleic Acids Research*, **1985**, 13, 3891-903 | 20.1 | 97 |
| 47 | Discrimination between defects in elongation fidelity and termination efficiency provides mechanistic insights into translational readthrough. *Journal of Molecular Biology*, **2005**, 348, 801-15 | 6.5 | 87 |
| 46 | Attenuation of nonsense-mediated mRNA decay enhances in vivo nonsense suppression. *PLoS ONE*, **2013**, 8, e60478 | 3.7 | 77 |
| 45 | Suppression of premature termination codons as a therapeutic approach. *Critical Reviews in Biochemistry and Molecular Biology*, **2012**, 47, 444-63 | 8.7 | 72 |
| 44 | Eukaryotic ribosomal RNA determinants of aminoglycoside resistance and their role in translational fidelity. *Rna*, **2008**, 14, 148-57 | 5.8 | 70 |
| 43 | Suppression of nonsense mutations as a therapeutic approach to treat genetic diseases. *Wiley Interdisciplinary Reviews RNA*, **2011**, 2, 837-52 | 9.3 | 66 |
| 42 | The designer aminoglycoside NB84 significantly reduces glycosaminoglycan accumulation associated with MPS I-H in the Idua-W392X mouse. *Molecular Genetics and Metabolism*, **2012**, 105, 116-25 | 3.7 | 62 |
| 41 | Clinical doses of amikacin provide more effective suppression of the human CFTR-G542X stop mutation than gentamicin in a transgenic CF mouse model. *Journal of Molecular Medicine*, **2006**, 84, 573-82 | 5.5 | 61 |
| 40 | Suppression of CFTR premature termination codons and rescue of CFTR protein and function by the synthetic aminoglycoside NB54. *Journal of Molecular Medicine*, **2011**, 89, 1149-61 | 5.5 | 58 |
| 39 | Discovery of Clinically Approved Agents That Promote Suppression of Cystic Fibrosis Transmembrane Conductance Regulator Nonsense Mutations. *American Journal of Respiratory and Critical Care Medicine*, **2016**, 194, 1092-1103 | 10.2 | 57 |
| 38 | Regulation of alpha operon gene expression in Escherichia coli. A novel form of translational coupling. *Journal of Molecular Biology*, **1987**, 196, 333-45 | 6.5 | 55 |
| 37 | The Golgi apparatus plays a significant role in the maintenance of Ca2+ homeostasis in the vps33Delta vacuolar biogenesis mutant of Saccharomyces cerevisiae. *Journal of Biological Chemistry*, **1999**, 274, 5939-47 | 5.4 | 54 |
| 36 | Distinct eRF3 requirements suggest alternate eRF1 conformations mediate peptide release during eukaryotic translation termination. *Molecular Cell*, **2008**, 30, 599-609 | 17.6 | 53 |
| 35 | Extracellular Ca(2+) sensing contributes to excess Ca(2+) accumulation and vacuolar fragmentation in a pmr1Delta mutant of S. cerevisiae. *Journal of Cell Science*, **2003**, 116, 1637-46 | 5.3 | 53 |
| 34 | Aminoglycosides as potential pharmacogenetic agents in the treatment of Hailey-Hailey disease. *Journal of Investigative Dermatology*, **2006**, 126, 229-31 | 4.3 | 51 |
| 33 | Identification of the amino acids inserted during suppression of CFTR nonsense mutations and determination of their functional consequences. *Human Molecular Genetics*, **2017**, 26, 3116-3129 | 5.6 | 49 |
| 32 | Distinct paths to stop codon reassignment by the variant-code organisms Tetrahymena and Euplotes. *Molecular and Cellular Biology*, **2006**, 26, 438-47 | 4.8 | 46 |
| 31 | Loss of the major isoform of phosphoglucomutase results in altered calcium homeostasis in Saccharomyces cerevisiae. *Journal of Biological Chemistry*, **2000**, 275, 5431-40 | 5.4 | 45 |

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| 30 | Tpa1p is part of an mRNP complex that influences translation termination, mRNA deadenylation, and mRNA turnover in Saccharomyces cerevisiae. *Molecular and Cellular Biology*, **2006**, 26, 5237-48 | 4.8 | 43 |
| 29 | Feedback regulation of RNA polymerase subunit synthesis after the conditional overproduction of RNA polymerase in Escherichia coli. *Molecular Genetics and Genomics*, **1986**, 204, 17-23 | | 37 |
| 28 | Poly-L-aspartic acid enhances and prolongs gentamicin-mediated suppression of the CFTR-G542X mutation in a cystic fibrosis mouse model. *Journal of Biological Chemistry*, **2009**, 284, 6885-92 | 5.4 | 35 |
| 27 | Long-term nonsense suppression therapy moderates MPS I-H disease progression. *Molecular Genetics and Metabolism*, **2014**, 111, 374-381 | 3.7 | 34 |
| 26 | Nonsense suppression activity of PTC124 (ataluren). *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, E64; author reply E65 | 11.5 | 34 |
| 25 | Characterization of an MPS I-H knock-in mouse that carries a nonsense mutation analogous to the human IDUA-W402X mutation. *Molecular Genetics and Metabolism*, **2010**, 99, 62-71 | 3.7 | 33 |
| 24 | Hexose phosphorylation and the putative calcium channel component Mid1p are required for the hexose-induced transient elevation of cytosolic calcium response in Saccharomyces cerevisiae. *Molecular Microbiology*, **2002**, 44, 1299-308 | 4.1 | 31 |
| 23 | Intracellular glucose 1-phosphate and glucose 6-phosphate levels modulate Ca2+ homeostasis in Saccharomyces cerevisiae. *Journal of Biological Chemistry*, **2002**, 277, 45751-8 | 5.4 | 30 |
| 22 | Identification of eRF1 residues that play critical and complementary roles in stop codon recognition. *Rna*, **2012**, 18, 1210-21 | 5.8 | 27 |
| 21 | Mutations within the first LSGGQ motif of Ste6p cause defects in a-factor transport and mating in Saccharomyces cerevisiae. *Journal of Bacteriology*, **1996**, 178, 1712-9 | 3.5 | 27 |
| 20 | The posttranslational modification of phosphoglucomutase is regulated by galactose induction and glucose repression in Saccharomyces cerevisiae. *Journal of Bacteriology*, **1995**, 177, 3087-94 | 3.5 | 26 |
| 19 | Increased expression of ribosomal genes during inhibition of ribosome assembly in Escherichia coli. *Journal of Molecular Biology*, **1985**, 184, 23-30 | 6.5 | 26 |
| 18 | Pharmacological Suppression of Premature Stop Mutations that Cause Genetic Diseases. *Current Pharmacogenomics and Personalized Medicine: the International Journal for Expert Reviews in Pharmacogenomics*, **2005**, 3, 259-269 | | 22 |
| 17 | Mutations in the yeast Hsp40 chaperone protein Ydj1 cause defects in Axl1 biogenesis and pro-a-factor processing. *Journal of Biological Chemistry*, **1999**, 274, 34396-402 | 5.4 | 20 |
| 16 | The amino terminus of the F1-ATPase beta-subunit precursor functions as an intramolecular chaperone to facilitate mitochondrial protein import. *Molecular and Cellular Biology*, **1997**, 17, 7169-77 | 4.8 | 19 |
| 15 | Inhibition of phosphoglucomutase activity by lithium alters cellular calcium homeostasis and signaling in Saccharomyces cerevisiae. *American Journal of Physiology - Cell Physiology*, **2005**, 289, C58-67 | 5.4 | 18 |
| 14 | Both the autophagy and proteasomal pathways facilitate the Ubp3p-dependent depletion of a subset of translation and RNA turnover factors during nitrogen starvation in Saccharomyces cerevisiae. *Rna*, **2015**, 21, 898-910 | 5.8 | 17 |
| 13 | Eukaryotic release factor 1 phosphorylation by CK2 protein kinase is dynamic but has little effect on the efficiency of translation termination in Saccharomyces cerevisiae. *Eukaryotic Cell*, **2006**, 5, 1378-87 | | 16 |

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| 12 | Mice with missense and nonsense NF1 mutations display divergent phenotypes compared with human neurofibromatosis type I. *DMM Disease Models and Mechanisms*, **2016**, 9, 759-67 | 4.1 | 16 |
| 11 | A Saccharomyces cerevisiae mutant unable to convert glucose to glucose-6-phosphate accumulates excessive glucose in the endoplasmic reticulum due to core oligosaccharide trimming. *Eukaryotic Cell*, **2003**, 2, 534-41 | | 15 |
| 10 | The Ca2+ homeostasis defects in a pgm2Delta strain of Saccharomyces cerevisiae are caused by excessive vacuolar Ca2+ uptake mediated by the Ca2+-ATPase Pmc1p. *Journal of Biological Chemistry*, **2004**, 279, 38495-502 | 5.4 | 15 |
| 9 | Overproduction of PDR3 suppresses mitochondrial import defects associated with a TOM70 null mutation by increasing the expression of TOM72 in Saccharomyces cerevisiae. *Molecular and Cellular Biology*, **2001**, 21, 7576-86 | 4.8 | 15 |
| 8 | Characterization of a HindIII-generated DNA fragment carrying the glutamine synthetase gene of Salmonella typhimurium. *Gene*, **1980**, 11, 227-37 | 3.8 | 15 |
| 7 | Connection between stop codon reassignment and frequent use of shifty stop frameshifting. *Rna*, **2009**, 15, 889-97 | 5.8 | 13 |
| 6 | A small molecule that induces translational readthrough of CFTR nonsense mutations by eRF1 depletion. *Nature Communications*, **2021**, 12, 4358 | 17.4 | 12 |
| 5 | Mutation-Directed Therapeutics for Neurofibromatosis Type I. *Molecular Therapy - Nucleic Acids*, **2020**, 20, 739-753 | 10.7 | 8 |
| 4 | Recoding Therapies for Genetic Diseases. *Nucleic Acids and Molecular Biology*, **2010**, 123-146 | | 6 |
| 3 | Marked repression of CFTR mRNA in the transgenic Cftr(tm1kth) mouse model. *Journal of Cystic Fibrosis*, **2014**, 13, 351-2 | 4.1 | 3 |
| 2 | Reply to Nonstop treatment of cystic fibrosis *Nature Medicine*, **1996**, 2, 608-609 | 50.5 | 3 |
| 1 | Analysis of patient-specific NF1 variants leads to functional insights for Ras signaling that can impact personalized medicine. *Human Mutation*, **2021**, | 4.7 | 2 |