

BS2150: Applications Of Molecular Genetics In Biology

View Online



Ahmad, Parvaiz, Muhammad Ashraf, Muhammad Younis, Xiangyang Hu, Ashwani Kumar, Nudrat Aisha Akram, and others, 'Role of Transgenic Plants in Agriculture and Biopharming', *Biotechnology Advances*, 30.3 (2012), 524-40
<<https://doi.org/10.1016/j.biotechadv.2011.09.006>>

'Anti-GMO Groups - United States | GMO Awareness'
<<https://gmo-awareness.com/resources/anti-gmo-groups-america/>>

Betts, Holly C., Mark N. Puttick, James W. Clark, Tom A. Williams, Philip C. J. Donoghue, and Davide Pisani, 'Integrated Genomic and Fossil Evidence Illuminates Life's Early Evolution and Eukaryote Origin', *Nature Ecology & Evolution*, 2.10 (2018), 1556-62
<<https://doi.org/10.1038/s41559-018-0644-x>>

Boseley, Sarah, "'First British Volunteer Injected with Trial Ebola Vaccine in Oxford" on The Guardian Website', 2014
<<https://www.theguardian.com/society/2014/sep/17/ruth-atkins-first-british-volunteer-injected-trial-ebola-vaccine-oxford>>

Brown, T. A, *Genomes 3*, 3rd ed (New York: Garland Science, 2007)

Brown, T. A., *Genomes 4*, Fourth edition (New York: Garland Science, 2018)

———, 'Microarrays', in *Genomes 3*, 3rd Edition (New York: Garland Science, 2007), pp. 169-75

———, 'Molecular Phylogenetics', in *Genomes 3*, 3rd Edition (New York: Garland Science, 2007), pp. 609-20

———, 'Replication Slippage', in *Genomes 3*, 3rd Edition (New York: Garland Science, 2007), pp. 511-511

Cai, Na, 'Sparse Whole-Genome Sequencing Identifies Two Loci for Major Depressive Disorder', *Nature*, 523.7562 (2015), 588-91 <<https://doi.org/10.1038/nature14659>>

Chial, Heidi, 'Human Genome Project: Sequencing the Human Genome | Learn Science at Scitable', *Nature Education*, 1.1 (2008), 219-219
<<http://www.nature.com/scitable/topicpage/dna-sequencing-technologies-key-to-the-human-828>>

Chun, Yong Soon, Kyunghee Byun, and Bonghee Lee, 'Induced Pluripotent Stem Cells and

- Personalized Medicine: Current Progress and Future Perspectives', *Anatomy & Cell Biology*, 44.4 (2011), 245–55 <<https://doi.org/10.5115/acb.2011.44.4.245>>
- Daniell, Henry, Nameirakpam D. Singh, Hugh Mason, and Stephen J. Streatfield, 'Plant-Made Vaccine Antigens and Biopharmaceuticals', *Trends in Plant Science*, 14.12 (2009), 669–79 <<https://doi.org/10.1016/j.tplants.2009.09.009>>
- , 'Plant-Made Vaccine Antigens and Biopharmaceuticals', *Trends in Plant Science*, 14.12 (2009), 669–79 <<https://doi.org/10.1016/j.tplants.2009.09.009>>
- ""Different Types of Vaccines"" on History of Vaccines Website' <<http://www.historyofvaccines.org/content/articles/different-types-vaccines>>
- Durbin, Richard M., 'A Map of Human Genome Variation From Population-Scale Sequencing', *Nature*, 467.7319 (2010), 1061–73 <<https://doi.org/10.1038/nature09534>>
- 'EMBL-EBI Gene Ensembl' <<http://www.ensembl.org/index.html>>
- 'Erratum: Initial Sequencing and Analysis of the Human Genome', *Nature*, 411.6838 (2001), 720–720 <<https://doi.org/10.1038/35079657>>
- Escors, David, and Karine Breckpot, 'Lentiviral Vectors in Gene Therapy: Their Current Status and Future Potential', *Archivum Immunologiae et Therapiae Experimentalis*, 58.2 (2010), 107–19 <<https://doi.org/10.1007/s00005-010-0063-4>>
- Espinoza, C., R. Schlechter, D. Herrera, E. Torres, A. Serrano, C. Medina, and others, 'Cisgenesis and Intragenesis: New Tools for Improving Crops', *Biological Research*, 46.4 (2013), 323–31 <<https://doi.org/10.4067/S0716-97602013000400003>>
- Freeland, Joanna R., Heather Kirk, and Stephen Petersen, 'Predators and Prey', in *Molecular Ecology*, 2nd Edition (Oxford: Wiley-Blackwell, 2011), pp. 309–13
- , 'Predators and Prey', in *Molecular Ecology*, 2nd ed., 1st impression (Oxford: Wiley-Blackwell, 2011), pp. 309–13 <<https://doi.org/10.1002/9780470979365.ch7>>
- Gilbert, Natasha, 'Case Studies: A Hard Look at GM Crops', *Nature*, 497.7447 (2013), 24–26 <<https://doi.org/10.1038/497024a>>
- 'GMWatch Home' <<http://gmwatch.org/>>
- Grada, Ayman, and Kate Weinbrecht, 'Next-Generation Sequencing: Methodology and Application', *Journal of Investigative Dermatology*, 133.8 (2013), 1–4 <<https://doi.org/10.1038/jid.2013.248>>
- 'Greenpeace UK' <<http://www.greenpeace.org.uk/>>
- 'Guidance for Clinicians on the Use of RT-PCR and Other Molecular Assays for Diagnosis of Influenza Virus Infection | Health Professionals | Seasonal Influenza (Flu)' <<http://www.cdc.gov/flu/professionals/diagnosis/molecular-assays.htm>>
- Gunn, Alan, 'DNA Profiling', in *Essential Forensic Biology*, 2nd Edition (Oxford:

Wiley-Blackwell, 2008), pp. 88–91

Hoffman, Eric P., Abby Bronson, Arthur A. Levin, Shin'ichi Takeda, Toshifumi Yokota, Andreas R. Baudy, and others, 'Restoring Dystrophin Expression in Duchenne Muscular Dystrophy Muscle', *The American Journal of Pathology*, 179.1 (2011), 12–22
<<https://doi.org/10.1016/j.ajpath.2011.03.050>>

'Home - Genome - NCBI' <<http://www.ncbi.nlm.nih.gov/genome/>>

'Human Genome Announcement at the White House', 2000
<<https://www.youtube.com/watch?v=slRyGLmt3qc>>

'International Service for the Acquisition of Agri-Biotech Applications'
<<http://www.isaaa.org/>>

Istrail, Sorin, and Granger G. Sutton, 'Whole-Genome Shotgun Assembly and Comparison of Human Genome Assemblies', *Proceedings of the National Academy of Sciences of the United States of America*, 101.7 (2004), 1916–21
<http://www.jstor.org/stable/3371370?seq=1#page_scan_tab_contents>

James, Clive, 'ISAAA Report on Global Status of Biotech/GM Crops' (ISAAA International Service for the Acquisition Of Agri-biotech Applications (ISAAA) <http://www.isaaa.org>, 2014)
<<https://www.isaaa.org/resources/publications/briefs/49/pptslides/pdf/B49-Slides-English.pdf>>

Jedelský, Petr L., Pavel Doležal, Petr Rada, Jan Pyrih, Ondřej Šmíd, Ivan Hrdý, and others, 'The Minimal Proteome in the Reduced Mitochondrion of the Parasitic Protist *Giardia Intestinalis*', *PLoS ONE*, 6.2 (2011) <<https://doi.org/10.1371/journal.pone.0017285>>

Jones, Nathaniel G., Carolina M. C. Catta-Preta, Ana Paula C. A. Lima, and Jeremy C. Mottram, 'Genetically Validated Drug Targets in *Leishmania*: Current Knowledge and Future Prospects', *ACS Infectious Diseases*, 4.4 (2018), 467–77
<<https://doi.org/10.1021/acsinfecdis.7b00244>>

Kaltenboeck, Bernhard, and Chengming Wang, 'Advances in Real-Time PCR: Application to Clinical Laboratory Diagnostics', *Advances in Clinical Chemistry*, 40 (2005), 219–59
<[https://doi.org/10.1016/S0065-2423\(05\)40006-2](https://doi.org/10.1016/S0065-2423(05)40006-2)>

Kindt, Thomas J, Barbara Anne Osborne, Richard A Goldsby, and Janis Kuby, *Immunology*, 6th ed (New York: W. H. Freeman, 2007)

Klee, Harry J., Yvonne M. Muskopf, and Charles S. Gasser, 'Cloning of an Arabidopsis Thaliana Gene Encoding 5-Enolpyruvylshikimate-3-Phosphate Synthase: Sequence Analysis and Manipulation to Obtain Glyphosate-Tolerant Plants', *MGG Molecular & General Genetics*, 210.3 (1987), 437–42 <<https://doi.org/10.1007/BF00327194>>

Klümper, Wilhelm, and Matin Qaim, 'A Meta-Analysis of the Impacts of Genetically Modified Crops', *PLoS ONE*, 9.11 (2014) <<https://doi.org/10.1371/journal.pone.0111629>>

Koch, Linda, 'Genomics: Adding Another Dimension to Gene Regulation', *Nature Reviews Genetics*, 16.10 (2015), 563–563 <<https://doi.org/10.1038/nrg4007>>

Krieger, S., 'Trypanosomes Lacking Trypanothione Reductase Are Avirulent and Show Increased Sensitivity to Oxidative Stress', *Molecular Microbiology*, 35.3 (2002), 542-52
<<https://doi.org/10.1046/j.1365-2958.2000.01721.x>>

Lander, Eric S., 'Initial Impact of the Sequencing of the Human Genome', *Nature*, 470.7333 (2011), 187-97 <<https://doi.org/10.1038/nature09792>>

Leadbeater, E., J. M. Carruthers, J. P. Green, N. S. Rosser, and J. Field, 'Nest Inheritance Is the Missing Source of Direct Fitness in a Primitively Eusocial Insect', *Science*, 333.6044 (2011), 874-76 <<https://doi.org/10.1126/science.1205140>>

Leger, Michelle M., Martin Kolisko, Ryoma Kamikawa, Courtney W. Stairs, Keitaro Kume, Ivan Čepička, and others, 'Organelles That Illuminate the Origins of Trichomonas Hydrogenosomes and Giardia Mitosomes', *Nature Ecology & Evolution*, 1.92 (2017)
<<https://doi.org/10.1038/s41559-017-0092>>

Martincová, Eva, 'Probing the Biology of Giardia Intestinalis Mitosomes Using In Vivo Enzymatic Tagging [Open Access]', *Molecular and Cellular Biology*, 35.16 (2015), 2864-74
<<https://mcb.asm.org/content/35/16/2864.long>>

Napier, Johnathan, and Douglas Tocher, 'Alpha & Omega: Making Omega-3 Fish Oils in GM Camelina Plants' (BBSRC Great British Bioscience Festival (GBBF), Rothamsted Research, Institute of Aquaculture Stirling)

Nicholl, Desmond S. T., *An Introduction to Genetic Engineering*, 3rd Edition (Cambridge: Cambridge University Press, 2008)

———, *An Introduction to Genetic Engineering*, 3rd Edition (Cambridge: Cambridge University Press, 2008)
<<https://www-dawsonera-com.ezproxy01.rhul.ac.uk/abstract/9780511568053>>

Nussbaum, Robert L., Roderick R. McInnes, and Huntington F. Willard, *Thompson & Thompson Genetics in Medicine*, 8th Edition (Philadelphia: Elsevier, 2016)

———, *Thompson & Thompson Genetics in Medicine*
<<https://ebookcentral.proquest.com/lib/rhul/detail.action?docID=2074362>>

'OMIM - Online Mendelian Inheritance in Man' <<http://www.omim.org/>>

Primrose, S. B., and Richard M. Twyman, *Principles of Gene Manipulation and Genomics*, 7th Edition (Malden, Massachusetts: Blackwell, 2006)

Primrose, Sandy B., and Richard Twyman, *Principles of Gene Manipulation and Genomics*, 7th Edition (Hoboken: Wiley, 2009)
<<https://www-dawsonera-com.ezproxy01.rhul.ac.uk/abstract/9781444309096>>

'Pyrosequencing Technology and Platform Overview - QIAGEN'
<<https://www.qiagen.com/gb/resources/technologies/pyrosequencing-resource-center/technology-overview/>>

Rahman, M. M., K. K. Wong, H. Alfizah, S. Hussin, and I. Isahak, 'Influenza and Respiratory

Syncytial Viruses: Efficacy of Different Diagnostic Assays', *Pakistan Journal of Medical Sciences*, 31.4 (1969), 791–94 <<https://doi.org/10.12669/pjms.314.7003>>

'Recent Debate on GMOs | Standard Media', 2015
<<http://www.standardmedia.co.ke/ktnhome/video/watch/2000097876/the-gmo-debate-continues>>

Regoes, Attila, Danai Zourmpanou, Gloria León-Avila, Mark van der Giezen, Jorge Tovar, and Adrian B. Hehl, 'Protein Import, Replication, and Inheritance of a Vestigial Mitochondrion', *Journal of Biological Chemistry*, 280.34 (2005), 30557–63
<<https://doi.org/10.1074/jbc.M500787200>>

Rowe, Graham, Michael Sweet, and Trevor Beebee, 'Assignment Tests', in *An Introduction to Molecular Ecology*, Third edition (Oxford: Oxford University Press, 2017)

———, 'DNA Barcoding', in *An Introduction to Molecular Ecology*, Third edition (Oxford: Oxford University Press, 2017)

———, 'Identifying Relatives in Behavioural Ecology', in *An Introduction to Molecular Ecology*, Third edition (Oxford: Oxford University Press, 2017)

———, 'Microsatellites', in *An Introduction to Molecular Ecology*, Third edition (Oxford: Oxford University Press, 2017)

———, 'Mutation Rates', in *An Introduction to Molecular Ecology*, Third edition (Oxford: Oxford University Press, 2017)

———, 'Prey ID', in *An Introduction to Molecular Ecology*, Third edition (Oxford: Oxford University Press, 2017)

Rowe, Graham, Michael Sweet, and Trevor J. C. Beebee, *An Introduction to Molecular Ecology*, 3rd Edition (Oxford: Oxford University Press, 2017)

Rowe, Graham, Michael Sweet, and Trevor Sweet, 'mtDNA and rRNA', in *An Introduction to Molecular Ecology*, Third edition (Oxford: Oxford University Press, 2017)

Sadanand, Saheli, 'Vaccination: The Present and the Future', *Yale Journal Of Biology And Medicine*, 2011, 353–59 <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3238332/>>

'Say NO to GM - Alliance for Natural Health International'
<<http://anhinternational.org/campaign/say-no-to-gm/>>

Schlott, Anja C., Anthony A. Holder, and Edward W. Tate, 'Myristoylation as a Drug Target in Malaria: Exploring the Role of ———-Myristoyltransferase Substrates in the Inhibitor Mode of Action', *ACS Infectious Diseases*, 4.4 (2018), 449–57
<<https://doi.org/10.1021/acsinfecdis.7b00203>>

Schouten, Henk J., Frans A. Krens, and Evert Jacobsen, 'Cisgenic Plants Are Similar to Traditionally Bred Plants: International Regulations for Genetically Modified Organisms Should Be Altered to Exempt Cisgenesis', *EMBO Reports*, 7.8 (2006), 750–53
<<https://doi.org/10.1038/sj.embor.7400769>>

Serruto, Davide, and Rino Rappuoli, 'Post-Genomic Vaccine Development', *FEBS Letters*, 580.12 (2006), 2985–92 <<https://doi.org/10.1016/j.febslet.2006.04.084>>

Slatkin, Montgomery, 'Linkage Disequilibrium - Understanding the Evolutionary Past and Mapping the Medical Future', *Nature Reviews Genetics*, 9.6 (2008), 477–85 <<https://doi.org/10.1038/nrg2361>>

Small, Juliana C., and Hildegund C. J. Ertl, 'Viruses - From Pathogens to Vaccine Carriers', *Current Opinion in Virology*, 1.4 (2011), 241–45 <<https://doi.org/10.1016/j.coviro.2011.07.009>>

———, 'Viruses From Pathogens to Vaccine Carriers', *Current Opinion in Virology*, 1.4 (2011), 241–45 <<https://doi.org/10.1016/j.coviro.2011.07.009>>

'Soil Association' <<https://www.soilassociation.org/>>

Strachan, T., Andrew P. Read, and Tom Strachan, 'Genetic Approaches to Treating Disease', in *Human Molecular Genetics*, 4th Edition (New York: Garland Science, 2011), pp. 677–718

———, 'Genetic Mapping of Mendelian Characters', in *Human Molecular Genetics*, 4th Edition (New York: Garland Science, 2011), pp. 441–67

———, *Human Molecular Genetics*, 4th Edition (New York: Garland Science, 2011)

———, 'Identifying Human Disease Genes and Susceptibility Factors', in *Human Molecular Genetics*, 4th Edition (New York: Garland Science, 2011), pp. 497–536

———, 'Mapping Genes Conferring Susceptibility to Complex Diseases', in *Human Molecular Genetics*, 4th Edition (New York: Garland Science, 2011), pp. 467–93

'"The Development of HIV Vaccines" on History of Vaccines Website' <<http://www.historyofvaccines.org/content/articles/development-hiv-vaccines>>

'The Future of Food' <<http://www.thefutureoffood.com/About.html>>

'"The Future of Immunization" on History of Vaccines Website' <<http://www.historyofvaccines.org/content/articles/future-immunization>>

'The Genetics of Society | The Scientist Magazine' <<http://www.the-scientist.com/?articles.view/articleNo/41704/title/The-Genetics-of-Society/>>

'The Golden Rice Project' <<http://www.goldenrice.org/>>

'"The Human Immune System and Infectious Disease" on History of Vaccines Website' <<http://www.historyofvaccines.org/content/articles/human-immune-system-and-infectious-disease>>

'The Pyrosequencing Reaction Cascade System', 2014 <<https://www.youtube.com/watch?v=bNKEhOGvcaI>>

Tovar, Jorge, Anke Fischer, and C. Graham Clark, 'The Mitosome, a Novel Organelle Related to Mitochondria in the Amitochondrial Parasite *Entamoeba Histolytica*', *Molecular Microbiology*, 32.5 (1999), 1013–21 <<https://doi.org/10.1046/j.1365-2958.1999.01414.x>>

Tovar, Jorge, Shane Wilkinson, Jeremy C. Mottram, and Alan H. Fairlamb, 'Evidence That Trypanothione Reductase Is an Essential Enzyme in *Leishmania* by Targeted Replacement of the Trya Gene Locus', *Molecular Microbiology*, 29.2 (1998), 653–60 <<https://doi.org/10.1046/j.1365-2958.1998.00968.x>>

'"Types of Vaccines" on History of Vaccines Website'
<<http://www.historyofvaccines.org/content/types-vaccines>>

'UCSC Genome Browser Home' <<https://genome.ucsc.edu/>>

Urwin, Rachel, and Martin C.J. Maiden, 'Multi-Locus Sequence Typing: A Tool for Global Epidemiology', *Trends in Microbiology*, 11.10 (2003), 479–87 <<https://doi.org/10.1016/j.tim.2003.08.006>>

Venter, J. C., 'The Sequence of the Human Genome', *Science*, 291.5507 (2001), 1304–51 <<https://doi.org/10.1126/science.1058040>>

Voleman, Luboš, 'Giardia Intestinalis Mitosomes Undergo Synchronized Fission but Not Fusion and Are Constitutively Associated With the Endoplasmic Reticulum', *BMC Biology*, 15.1 (2017) <<https://doi.org/10.1186/s12915-017-0361-y>>

Wang, Zhong, Mark Gerstein, and Michael Snyder, 'RNA-Seq: A Revolutionary Tool for Transcriptomics', *Nature Reviews Genetics*, 10.1 (2009), 57–63 <<https://doi.org/10.1038/nrg2484>>

———, 'RNA-Seq: A Revolutionary Tool for Transcriptomics', *Nature Reviews Genetics*, 10.1 (2009), 57–63 <<https://doi.org/10.1038/nrg2484>>

'What Are Genome-Wide Association Studies? - Genetics Home Reference'
<<https://ghr.nlm.nih.gov/primer/genomicresearch/gwastudies>>

Williamson, Shannon J., Lisa Zeigler Allen, Hernan A. Lorenzi, Douglas W. Fadrosh, Daniel Bami, Mathangi Thiagarajan, and others, 'Metagenomic Exploration of Viruses Throughout the Indian Ocean', *PLoS ONE*, 7.10 (2012) <<https://doi.org/10.1371/journal.pone.0042047>>

Wright, Megan H., 'Validation of N-Myristoyltransferase as an Antimalarial Drug Target Using an Integrated Chemical Biology Approach', *Nature Chemistry*, 6.2 (2014), 112–21 <<https://doi.org/10.1038/nchem.1830>>