



MUTATION RESEARCH - FUNDAMENTAL AND MOLECULAR MECHANISMS OF MUTAGENESIS

A section of Mutation Research

AUTHOR INFORMATION PACK

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DESCRIPTION

Mutation Research (MR) provides a platform for publishing all aspects of **DNA mutations and epimutations**, from basic evolutionary aspects to translational applications in genetic and epigenetic diagnostics and therapy. Mutations are defined as all possible **alterations in DNA sequence and sequence organization**, from point mutations to genome structural variation, chromosomal aberrations and aneuploidy. Epimutations are defined as **alterations in the epigenome**, i.e., changes in DNA methylation, histone modification and small regulatory RNAs.

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Genomic instability, Aneuploidy, Fluorescence in situ hybridization, Cancer, Aging, Mammary gland development, Breast tumorigenesis, Cervical cancer, Cell free DNA

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DNA methylation, cancer mutations, 5-hydroxymethylcytosine, epigenetics, tobacco carcinogenesis

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DNA Repair, Carcinogenesis, Mutagenesis, intestinal microbiota

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Genetics; mouse; meiosis; DNA repair; reproduction; DNA replication

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DNA repair, genomic instability, oxidative stress, cell senescence

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DNA recombination, genomic instability, DNA structure, mutagenesis mechanism, genome structure, genetic disease, genetics, bacterial genetics, mutagenesis, nucleic acid structure, DNA damage, neurodegenerative disease, DNA topoisomerase, chromatin structure, trinucleotide repeat disease, molecular genetics, DNA, Huntington disease

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DNA Repair, base excision repair, DNA damage response, ADP-ribose, Poly-ADP-ribose polymerase, DNA polymerases, NAD⁺ metabolism

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Functional genomics of aging, genetics of age-related disease, genetic and epigenetic variation, miRNAs, role of non-coding variants in human age-related traits, high-throughput genomic technologies

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Mutagenesis, autoimmunity, genomic instability, DNA damage, DNA repair

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Mutagenesis, DNA repair, ionizing radiation, epigenetic gene silencing, environmental epigenetics

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DNA damage, Xeroderma pigmentosum, cell transformation, neoplastic, ovarian cancer, breast cancer, Li-Fraumeni syndrome

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DNA damage and repair, mismatch repair, mammalian cell cycle, chemotherapy resistance, glioblastoma

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Genomics, regulatory toxicology, adverse outcome pathways, heritable genetic effects

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INTRODUCTION

Mutation Research: Fundamental and Molecular Mechanisms of Mutagenesis broadly encompasses all aspects of research that address the detection of mutations, the mechanisms by which mutations in genes and chromosomes arise, and the modulation of mutagenesis by mutation avoidance pathways such as DNA repair, cell cycle control and apoptosis. It includes the role of genetic variation in the genesis and manifestation of mutations, ranging from the variable manner in which xenobiotics are metabolized to variations in the capacity of cells to replicate and repair damaged DNA. It also includes the contributions of these mechanisms, when perturbed, to animal disease models and to human disease, with particular emphasis on carcinogenic mechanisms. The Journal will publish articles on the genesis of aneuploidy and isodisomy, including the roles played by recombination, cell cycle checkpoints, spindle microtubules, centrosomes and kinetocore proteins, and agents that might disrupt them. Submission of appropriate epidemiological studies as well as consequences, including methods for high throughput SNP detection, whole genome and exonic sequencing, DNA microarrays, RNAseq approaches and proteomics are welcome. Submission of preliminary epidemiological studies that associate SNPs with a phenotype but provide no mechanistic insight is discouraged. The broader scope of the journal is a reflection of the rapid advances in the field of mutation research and the recognition that understanding of the mutagenic process requires full knowledge of the cellular response to DNA damage including DNA repair, cell cycle checkpoint arrest and apoptosis.

Types of Paper

Mutation Research - Fundamental and Molecular Mechanisms of Mutagenesis publishes the following types of article: (I) Research papers - papers reporting results of original, fundamental research. (II) Short communications of up to 5 printed pages. (III) Rapids - are accelerated publications - research papers identified by the Editor as being of significant quality and thereby qualifying for rapid reviewing, and publication within 8-10 weeks of acceptance. (IV) Current issues are generally short, 1-2 page comments on a topical theme, and are published within 10 weeks of acceptance. (V) Volunteered and invited Mini-reviews of less than 10 printed pages, using references generally no later than 2 years old.

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References

References

[dataset] M. Oguro, S. Imahiro, S. Saito, T. Nakashizuka, Mortality data for Japanese oak wilt disease and surrounding forest compositions, Mendeley Data, v1, 2015. <http://dx.doi.org/10.17632/xwj98nb39r.1>.

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