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Epigenetics

Recent patents relating to epigenetic modification and analysis.

Patent number	Description	Assignee	Inventor	Date
US12180524B2	Methods of epigenetic modification of fungi and uses thereof. Also described are compounds that can have antileishmanial activity and formulations thereof, and methods of treating leishmanial infection in a subject that include the step of administering a compound or formulation thereof to the subject.	University of South Florida (Tampa, FL, USA), National Polytechnic Institute (Mexico City, Mexico), King AbdulAziz University (Jeddah, Saudi Arabia)	Baker BJ, Kyle DE, Rodriguez-Pérez MA, Limon ACD, Azhari A	12/31/2024
US12098399B2	Epigenetics-modifying DNA-targeting systems, such as CRISPR–Cas/guide RNA systems for the transcriptional repression of genes to promote a cellular phenotype that leads to reduction of low-density lipoprotein. Also, methods and uses related to the provided epigenetics-modifying DNA targeting systems in connection with treatments for cardiovascular disease and familial hypercholesterolemia.	Tune Therapeutics (Durham, NC, USA)	Kwon J, Congdon K	9/24/2024
US12091660B2	Compositions and methods for detection of dynamic loci in a genome, where such loci may comprise structural variations as a result of DNA recombination, DNA duplication, insertions, deletions, transpositions and epigenetic changes. The methods may utilize microfluidic platforms and functionalized polymer matrices to allow determination of mechanisms of cell-type-specific, programmed genomic heterogeneity. The method and compositions allow determination of mechanisms of cell-type-specific, programmed genomic heterogeneity.	Board of Trustees of Stanford University (Stanford, CA, USA), Board of Regents of the University of Texas System (Austin, TX, USA)	Shoura M, Fire AZ, Levene S	9/17/2024
US12060604B2	Spatial analysis of epigenetic modifications, including methods of identifying a methylation status of an analyte in a biological sample and methods that combine identifying the methylation status with spatial technology to identify the location of a methylation status in a biological sample.	10x Genomics (Pleasanton, CA, USA)	Katiraee L, Schnall-Levin M, Galonska C, Stoeckius M	8/13/2024
US11946044B2	Methods for isolating DNA, such as cell-free DNA or DNA from a tissue sample, for example, in which the DNA is partitioned into hypermethylated and hypomethylated partitions. After differential tagging of the partitions, portions of the hypomethylated partition are pooled with the hypermethylated partition or pooled separately. Epigenetic and sequence-variable target regions are captured from the pool comprising DNA from the hypermethylated and hypomethylated partitions, and sequence-variable target regions are captured from the pool comprising DNA from the hypomethylated partition. This approach can reduce costs and/or bandwidth by limiting sequencing of epigenetic target regions from the hypomethylated partition, which may be less informative than other DNA.	Guardant Health (Palo Alto, CA, USA)	Jaimovich A, Duenwald SJ, Grauman PV, He Y, Eid CS, Axelrod HD	4/2/2024
US11866790B2	A combination of DNA methylation markers and the use thereof, primers, probes and a kit for early detection of ovarian cancer, wherein the combination of DNA methylation markers comprises at least one methylated fragment of each of four genes, including *PCDHB18P*, *CDO1*, *HOXA9* and *LYPD5*. The detection primers and probes detect possible gynecological malignant tumors early through molecular epigenetic methods using methylation detection technology.	Beijing OriginPoly Bio-Tec Co., Ltd. (Beijing)	Liu P, Wang L	1/9/2024
US11672788B2	Histone deacetylase inhibitors for immunomodulation in the tumor microenvironment, their production and applications. The compounds possess epigenetic immunomodulatory activities in the tumor microenvironment and thus inhibit growth of tumor cells.	Great Novel Therapeutics Biotech & Medicals (Taipei, Taiwan)	Chen J-S, Yang M-H, Wu Y-H, Chu S-H, Chou C-H, Chao Y-S, Chen C-N	6/13/2023

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