

Subject Index (vol. 96, 2021)

agouti signaling protein gene

Phylogeographic study using nuclear genome sequences of *Asip* to infer the origins of ventral fur color variation in the house mouse *Mus musculus*. 271

albinism

A mutant gene for albino body color is widespread in natural populations of tanuki (Japanese raccoon dog). 33

ANRIL

ANRIL as a prognostic biomarker in colon pre-cancerous lesion detection via non-invasive sampling. 285

anti-silencing

Silencing and anti-silencing mechanisms that shape the epigenome in plants. 217

Argonaute

Spatiotemporal regulation and roles of reproductive phasiRNAs in plants. 209

Arnica

Identification of management units in threatened populations of *Arnica mallotopus* Makino (Asteraceae) using novel EST-SSR markers. 159

artificial intelligence

AI for the collective analysis of a massive number of genome sequences: various examples from the small genome of pandemic SARS-CoV-2 to the human genome. 165

BANCR

ANRIL as a prognostic biomarker in colon pre-cancerous lesion detection via non-invasive sampling. 285

bioinformatic methods

Bioinformatic analysis of differentially expressed genes as prognostic markers in pheochromocytoma and paraganglioma tumors. 55

bioinformatics analysis

Identification of key carcinogenic genes in Wilms' tumor. 141

Branchiopoda

Three nuclear protein-coding genes corroborate a recent phylogenomic model of the Branchiopoda (Crustacea) and provide estimates of the divergence times of the major branchiopodan taxa. 13

budding yeast

Establishment of an “*in saccharo*” experimental system. 107

Burmattia nepalensis

Development of microsatellite markers for the myco-heterotrophic species *Burmattia nepalensis* (Miers) Hook.f. based on RAD sequencing. 293

Burmattiaceae

Development of microsatellite markers for the myco-heterotrophic species *Burmattia nepalensis* (Miers) Hook.f. based on RAD sequencing. 293

carcinogen

Identification of key carcinogenic genes in Wilms' tumor. 141

cell migration

Possible roles for the hominoid-specific DSCR4 gene in human cells. 1

chromosomal vector

Establishment of an “*in saccharo*” experimental system. 107

chronology of cladogenesis

Three nuclear protein-coding genes corroborate a recent phylogenomic model of the Branchiopoda (Crustacea) and provide estimates of the divergence times of the major branchiopodan taxa. 13

CIBERSORT

SELL and IFI44 as potential biomarkers of Sjögren's syndrome and their correlation with immune cell infiltration. 71

COI sequence

Genetic diversity and population structure of the long-tailed hamster *Cricetulus longicaudatus* in Shanxi Province, China. 237

colorectal cancer

ANRIL as a prognostic biomarker in colon pre-cancerous lesion detection via non-invasive sampling. 285

colorectal cancer (CRC)

Genetic association of *ARID5B* with the risk of colorectal cancer within Jammu and Kashmir, India. 187
Can *hypoxia-inducible factor-1α* overexpression discriminate human colorectal cancers with different microsatellite instability? 193

complementation of fission yeast SUMO mutant

Characterization of novel SUMO family genes in the rice genome. 25

conservation genetics

Identification of management units in threatened populations of *Arnica mallotopus* Makino (Asteraceae) using novel EST-SSR markers. 159

COVID-19

AI for the collective analysis of a massive number of genome sequences: various examples from the small genome of pandemic SARS-CoV-2 to the human genome. 165

Cricetulus longicaudatus

Genetic diversity and population structure of the long-tailed hamster *Cricetulus longicaudatus* in Shanxi Province, China. 237

cytochrome b

Development and evaluation of a loop-mediated isothermal amplification (LAMP) assay for quick identification of the Japanese salamander *Hynobius tokoyoensis*. 247

Dalbergia

Evaluating the genetic diversity in two tropical leguminous trees, *Dalbergia cochinchinensis* and *D. nigrescens*, in lowland forests in Cambodia and Thailand using MIG-seq. 41

deletion

A mutant gene for albino body color is widespread in natural populations of tanuki (Japanese raccoon dog). 33

diagnostic

SELL and IFI44 as potential biomarkers of Sjögren's syndrome and their correlation with immune cell infiltration. 71

differentially expressed genes

Bioinformatic analysis of differentially expressed genes as prognostic markers in pheochromocytoma and paraganglioma tumors. 55

DNA polymerase gene

Three nuclear protein-coding genes corroborate a recent phylogenomic model of the Branchiopoda (Crustacea) and provide estimates of the divergence times of the major branchiopodan taxa. 13

Down syndrome

Possible roles for the hominoid-specific DSCR4 gene in human cells. 1

DRD1

DRD1, a SWI/SNF-like chromatin remodeling protein, regulates a heat-activated transposon in *Arabidopsis thaliana*. 151

Drosophila

The *Drosophila Neprilysin 4* gene is essential for sperm function following sperm transfer to females. 177

DSCR4

Possible roles for the hominoid-specific DSCR4 gene in human cells. 1

endangered species

Development and evaluation of a loop-mediated isothermal amplification (LAMP) assay for quick identification of the Japanese salamander *Hynobius tokyoensis*. 247

engrailed

A new allele of *engrailed*, *en*^{NK14}, causes supernumerary spermathecae in *Drosophila melanogaster*. 259

environmental response

Silencing and anti-silencing mechanisms that shape the epigenome in plants. 217

epigenome

Silencing and anti-silencing mechanisms that shape the epigenome in plants. 217

Ericaceae

Development and characterization of microsatellite markers for *Rhododendron purdomii* (Ericaceae) using next-generation sequencing. 253

EST-SSR

Identification of management units in threatened

populations of *Arnica mallotopus* Makino (Asteraceae) using novel EST-SSR markers. 159

evolutionary history

Genome-wide analyses of tandem repeats and transposable elements in patchouli. 81

female sperm storage

The *Drosophila Neprilysin 4* gene is essential for sperm function following sperm transfer to females. 177

flower color polymorphism

Development and characterization of nuclear microsatellite markers to reveal the neutral demographic background of flower color polymorphism in *Geranium thunbergii* (Geraniaceae). 99

gene silencing

Establishment of an “*in saccharo*” experimental system. 107

genetic diversity

Development and characterization of nuclear microsatellite markers to reveal the neutral demographic background of flower color polymorphism in *Geranium thunbergii* (Geraniaceae). 99

Identification of management units in threatened populations of *Arnica mallotopus* Makino (Asteraceae) using novel EST-SSR markers. 159

Genetic diversity and population structure of the long-tailed hamster *Cricetulus longicaudatus* in Shanxi Province, China. 237

genetic variation

Evaluating the genetic diversity in two tropical leguminous trees, *Dalbergia cochinchinensis* and *D. nigrescens*, in lowland forests in Cambodia and Thailand using MIG-seq. 41

Development of microsatellite markers for the geographically parthenogenetic stick insect *Phraortes elongatus* (Insecta: Phasmatodea). 199

genital imaginal disc

A new allele of *engrailed*, *en*^{NK14}, causes supernumerary spermathecae in *Drosophila melanogaster*. 259

Geranium thunbergii

Development and characterization of nuclear microsatellite markers to reveal the neutral demographic background of flower color polymorphism in *Geranium thunbergii* (Geraniaceae). 99

haplotype

Genetic diversity of two populations of the tufted puffin *Fratercula cirrhata* (Pallas, 1769). 119

heat acclimation

Heat memory in plants: histone modifications, nucleosome positioning and miRNA accumulation alter heat memory gene expression. 229

heat memory

Heat memory in plants: histone modifications, nucleosome positioning and miRNA accumulation alter heat memory gene expression. 229

heat stress

DRD1, a SWI/SNF-like chromatin remodeling protein, regulates a heat-activated transposon in *Arabidopsis thaliana*. 151

HIF-1 α

Can *hypoxia-inducible factor-1 α* overexpression discriminate human colorectal cancers with different microsatellite instability? 193

histone modification

Heat memory in plants: histone modifications, nucleosome positioning and miRNA accumulation alter heat memory gene expression. 229

human evolution

Possible roles for the hominoid-specific DSCR4 gene in human cells. 1

Hynobius

Development and evaluation of a loop-mediated isothermal amplification (LAMP) assay for quick identification of the Japanese salamander *Hynobius tokyoensis*. 247

immune cells

SELL and IFI44 as potential biomarkers of Sjögren's syndrome and their correlation with immune cell infiltration. 71

in saccharo experimental system

Establishment of an "in saccharo" experimental system. 107

inter-subspecies hybridization

Phylogeographic study using nuclear genome sequences of *Asip* to infer the origins of ventral fur color variation in the house mouse *Mus musculus*. 271

Ion PGM

Development of microsatellite markers for the geographically parthenogenetic stick insect *Phraortes elongatus* (Insecta: Phasmatodea). 199

Jammu and Kashmir (J&K)

Genetic association of *ARID5B* with the risk of colorectal cancer within Jammu and Kashmir, India. 187

LAMP

Development and evaluation of a loop-mediated isothermal amplification (LAMP) assay for quick identification of the Japanese salamander *Hynobius tokyoensis*. 247

long non-coding RNA

ANRIL as a prognostic biomarker in colon pre-cancerous lesion detection via non-invasive sampling. 285

male sterility

The *Drosophila Neprilysin 4* gene is essential for sperm function following sperm transfer to females. 177

melanocortin-1 receptor

A 1-bp deletion in *Mc1r* in a Norway rat (*Rattus norvegicus*) from Sado Island, Japan gives rise to a yellowish color variant: an insight into mammalian *MC1R* variants. 89

metagenome

AI for the collective analysis of a massive number of genome sequences: various examples from the small genome of pandemic SARS-CoV-2 to the human genome. 165

microRNA

Spatiotemporal regulation and roles of reproductive phasiRNAs in plants. 209

microsatellite

Development of microsatellite markers for the geographically parthenogenetic stick insect *Phraortes elongatus* (Insecta: Phasmatodea). 199

microsatellite instability (MSI)

Can *hypoxia-inducible factor-1 α* overexpression discriminate human colorectal cancers with different microsatellite instability? 193

microsatellite loci

Genetic diversity and population structure of the long-tailed hamster *Cricetulus longicaudatus* in Shanxi Province, China. 237

microsatellite marker

Development and characterization of nuclear microsatellite markers to reveal the neutral demographic background of flower color polymorphism in *Geranium thunbergii* (Geraniaceae). 99

microsatellites

Development and characterization of microsatellite markers for *Rhododendron purdomii* (Ericaceae) using next-generation sequencing. 253

Development of microsatellite markers for the myco-heterotrophic species *Burmannia nepalensis* (Miers) Hook.f. based on RAD sequencing. 293

migration

A mutant gene for albino body color is widespread in natural populations of tanuki (Japanese raccoon dog). 33

MIG-seq

Evaluating the genetic diversity in two tropical leguminous trees, *Dalbergia cochinchinensis* and *D. nigrescens*, in lowland forests in Cambodia and Thailand using MIG-seq. 41

miRNA

Heat memory in plants: histone modifications, nucleosome positioning and miRNA accumulation alter heat memory gene expression. 229

Mmel1

The *Drosophila Neprilysin 4* gene is essential for sperm function following sperm transfer to females. 177

molecular phylogeny and evolution

Three nuclear protein-coding genes corroborate a recent phylogenomic model of the Branchiopoda (Crustacea) and provide estimates of the divergence times of the major branchiopodan taxa. 13

MSI-H

Can *hypoxia-inducible factor-1 α* overexpression dis-

criminate human colorectal cancers with different microsatellite instability? 193

MSI-L

Can *hypoxia-inducible factor-1α* overexpression discriminate human colorectal cancers with different microsatellite instability? 193

Mus musculus

Phylogeographic study using nuclear genome sequences of *Asip* to infer the origins of ventral fur color variation in the house mouse *Mus musculus*. 271

mutation

A mutant gene for albino body color is widespread in natural populations of tanuki (Japanese raccoon dog). 33

mycoheterotrophic plant

Development of microsatellite markers for the mycoheterotrophic species *Burmannia nepalensis* (Miers) Hook.f. based on RAD sequencing. 293

Naturalized population

Spatiotemporal characterization of *S* receptor kinase (*SRK*) alleles in naturalized populations of *Raphanus sativus* L. var. *raphanistroides* on Yakushima island. 129

nephroblastoma

Identification of key carcinogenic genes in Wilms' tumor. 141

Neprilysin genes

The *Drosophila Neprilysin 4* gene is essential for sperm function following sperm transfer to females. 177

NK14

A new allele of *engrailed*, *en*^{NK14}, causes supernumerary spermathecae in *Drosophila melanogaster*. 259

nuclear genome sequence

Phylogeographic study using nuclear genome sequences of *Asip* to infer the origins of ventral fur color variation in the house mouse *Mus musculus*. 271

nucleosome positioning

Heat memory in plants: histone modifications, nucleosome positioning and miRNA accumulation alter heat memory gene expression. 229

nucleotide sequence

Genetic diversity of two populations of the tufted puffin *Fratercula cirrhata* (Pallas, 1769). 119

null mutant

A 1-bp deletion in *Mc1r* in a Norway rat (*Rattus norvegicus*) from Sado Island, Japan gives rise to a yellowish color variant: an insight into mammalian *MC1R* variants. 89

oligonucleotide composition

AI for the collective analysis of a massive number of genome sequences: various examples from the small genome of pandemic SARS-CoV-2 to the human genome. 165

ONSEN

DRD1, a SWI/SNF-like chromatin remodeling protein,

regulates a heat-activated transposon in *Arabidopsis thaliana*. 151

orphan gene

Possible roles for the hominoid-specific DSCR4 gene in human cells. 1

parthenogenesis

Development of microsatellite markers for the geographically parthenogenetic stick insect *Phraortes elongatus* (Insecta: Phasmatodea). 199

patchouli

Genome-wide analyses of tandem repeats and transposable elements in patchouli. 81

phasiRNA

Spatiotemporal regulation and roles of reproductive phasiRNAs in plants. 209

pheochromocytoma and paraganglioma

Bioinformatic analysis of differentially expressed genes as prognostic markers in pheochromocytoma and paraganglioma tumors. 55

plants

Spatiotemporal regulation and roles of reproductive phasiRNAs in plants. 209

Silencing and anti-silencing mechanisms that shape the epigenome in plants. 217

polymorphism

Genetic diversity of two populations of the tufted puffin *Fratercula cirrhata* (Pallas, 1769). 119

population decline

Identification of management units in threatened populations of *Arnica mallotopus* Makino (Asteraceae) using novel EST-SSR markers. 159

population genetics

Development and characterization of nuclear microsatellite markers to reveal the neutral demographic background of flower color polymorphism in *Geranium thunbergii* (Geraniaceae). 99

Development and characterization of microsatellite markers for *Rhododendron purdomii* (Ericaceae) using next-generation sequencing. 253

population structure

Evaluating the genetic diversity in two tropical leguminous trees, *Dalbergia cochinchinensis* and *D. nigrescens*, in lowland forests in Cambodia and Thailand using MIG-seq. 41

Genetic diversity and population structure of the long-tailed hamster *Cricetulus longicaudatus* in Shanxi Province, China. 237

post-translational modification

Characterization of novel SUMO family genes in the rice genome. 25

prognostic markers

Bioinformatic analysis of differentially expressed genes as prognostic markers in pheochromocytoma and paraganglioma tumors. 55

RAD-seq

Development and characterization of microsatellite markers for *Rhododendron purdomii* (Ericaceae) using next-generation sequencing. 253

Development of microsatellite markers for the myco-heterotrophic species *Burmannia nepalensis* (Miers) Hook.f. based on RAD sequencing. 293

Raphanus sativus* L. var. *raphanistroides

Spatio-genetic characterization of *S* receptor kinase (*SRK*) alleles in naturalized populations of *Raphanus sativus* L. var. *raphanistroides* on Yakushima island. 129

Rattus norvegicus

A 1-bp deletion in *Mc1r* in a Norway rat (*Rattus norvegicus*) from Sado Island, Japan gives rise to a yellowish color variant: an insight into mammalian *MC1R* variants. 89

repetitive sequence

Genome-wide analyses of tandem repeats and transposable elements in patchouli. 81

reproduction

Spatiotemporal regulation and roles of reproductive phasiRNAs in plants. 209

Rhododendron purdomii

Development and characterization of microsatellite markers for *Rhododendron purdomii* (Ericaceae) using next-generation sequencing. 253

ribosomal RNA gene (rDNA)

Establishment of an “*in saccharo*” experimental system. 107

rice

Characterization of novel SUMO family genes in the rice genome. 25

RNA polymerase gene

Three nuclear protein-coding genes corroborate a recent phylogenomic model of the Branchiopoda (Crustacea) and provide estimates of the divergence times of the major branchiopodan taxa. 13

RNA-directed DNA methylation

DRD1, a SWI/SNF-like chromatin remodeling protein, regulates a heat-activated transposon in *Arabidopsis thaliana*. 151

***S* allele**

Spatio-genetic characterization of *S* receptor kinase (*SRK*) alleles in naturalized populations of *Raphanus sativus* L. var. *raphanistroides* on Yakushima island. 129

seabird

Genetic diversity of two populations of the tufted puffin *Fratercula cirrhata* (Pallas, 1769). 119

self-incompatibility

Spatio-genetic characterization of *S* receptor kinase (*SRK*) alleles in naturalized populations of *Raphanus sativus* L. var. *raphanistroides* on Yakushima island. 129

self-organizing map

AI for the collective analysis of a massive number of genome sequences: various examples from the small genome of pandemic SARS-CoV-2 to the human genome. 165

silencing

Silencing and anti-silencing mechanisms that shape the epigenome in plants. 217

single-nucleotide polymorphism (SNP)

Genetic association of *ARID5B* with the risk of colorectal cancer within Jammu and Kashmir, India. 187

Sjögren's syndrome

SELL and IFI44 as potential biomarkers of Sjögren's syndrome and their correlation with immune cell infiltration. 71

species identification

Development and evaluation of a loop-mediated isothermal amplification (LAMP) assay for quick identification of the Japanese salamander *Hynobius tokioensis*. 247

sperm storage

A new allele of *engrailed*, *en*^{NK14}, causes supernumerary spermathecae in *Drosophila melanogaster*. 259

spermatheca

A new allele of *engrailed*, *en*^{NK14}, causes supernumerary spermathecae in *Drosophila melanogaster*. 259

***SRK* gene**

Spatio-genetic characterization of *S* receptor kinase (*SRK*) alleles in naturalized populations of *Raphanus sativus* L. var. *raphanistroides* on Yakushima island. 129

stick insects

Development of microsatellite markers for the geographically parthenogenetic stick insect *Phraortes elongatus* (Insecta: Phasmatodea). 199

SUMOylation using the bacterial expression system

Characterization of novel SUMO family genes in the rice genome. 25

synaptopodin

Identification of key carcinogenic genes in Wilms' tumor. 141

tandem repeats

Genome-wide analyses of tandem repeats and transposable elements in patchouli. 81

transposable elements

Genome-wide analyses of tandem repeats and transposable elements in patchouli. 81

transposon

DRD1, a SWI/SNF-like chromatin remodeling protein, regulates a heat-activated transposon in *Arabidopsis thaliana*. 151

tumor-infiltrating immune cells

Bioinformatic analysis of differentially expressed genes as prognostic markers in pheochromocytoma and paraganglioma tumors. 55

ventral fur color variation

Phylogeographic study using nuclear genome sequences of *Asip* to infer the origins of ventral fur color variation in the house mouse *Mus musculus*. 271

wildlife

A mutant gene for albino body color is widespread in natural populations of tanuki (Japanese raccoon dog). 33

Wilms' tumor

Identification of key carcinogenic genes in Wilms' tumor. 141

yellowish coat color

A 1-bp deletion in *Mc1r* in a Norway rat (*Rattus norvegicus*) from Sado Island, Japan gives rise to a yellowish color variant: an insight into mammalian *MC1R* variants. 89