

BIOLOGICAL AGENTS

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A REVIEW OF HUMAN CARCINOGENS

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OF CARCINOGENIC RISKS
TO HUMANS

LIST OF ABBREVIATIONS

4-NQO	4-nitroquinoline-N-oxide
5' SAGE	5' serial analysis of gene expression
8-oxodG	8-oxo-7,8-dihydro-2'-deoxyguanosine
AFB1	aflatoxin B1
AIDS	acquired immune deficiency syndrome
AIN1	anal intraepithelial neoplasia
<i>AlpA, AlpB, and HopZ</i>	adherence-associated lipoprotein
ALT	serum alanine aminotransferase
anti-HBc	antibody to hepatitis B core antigen
anti-HBs	antibody to hepatitis B surface antigen
anti-HCV	antibodies to HCV
ASD	Adult and Adolescent Spectrum of HIV Disease
ASR	annual standardized ratio
ATase	O6-alkylguanine-DNA alkyltransferase
ATL	adult T-cell leukaemia
ATLL	adult T-cell leukaemia/lymphoma
ATPase	adenosine triphosphatase
BabA	blood group antigen binding adhesion
BLCA-4	a nuclear matrix protein involved in gene regulation and produced only in neoplastic bladder cells
BLV	bovine leukaemia virus
BMI	body mass index
bp	base pairs
BRK	baby-rat kidney
BTG1	B-cell translocation protein
C	Core protein
cAMP	cyclic adenosine monophosphate
CCA	cholangiocarcinoma
ccc DNA	covalently closed circular
CDKIs	cyclin-dependent kinase-inhibitors
CDKs	cyclin-dependent kinases
CF/S	complement-fixing soluble antigens
CI	confidence interval
CLL/SLL	chronic lymphocytic leukaemia/small lymphocytic lymphoma
CMV	Cytomegalovirus
CRE	cAMP-responsive element
<i>CREB/ATF</i>	CRE-binding protein/activating transcription factor
Cryo-EM	Cryo-Electron Microscopy

C. pylori	Campylobacter pylori
C. sinensis	Clonorchis sinensis
CTAR	C-terminal activation region
CTL	cytotoxic T lymphocyte
CTLs	cytotoxic T cells
DDB1	UV-damaged DNA binding protein 1
DLBCL	diffuse large B-cell lymphoma
DS	dyad symmetry
E6-associated protein	E6AP
<i>E region</i>	early region
<i>EAs</i>	early antigens
EBER	EBV-encoded RNA
EBNA	EBV nuclear antigens
EBV	Epstein-Barr virus
ECM	extracellular matrix
εdA	1,N6-ethenodeoxyadenosine
εdC	3,N4-etheno-2'-deoxycytidine
EGF	epidermal growth factor
EGFR	epidermal growth-factor receptor
EIAs	enzyme immunoassays
<i>ELISAs</i>	enzyme-linked immunosorbent assays
EMT	epithelial-to-mesenchymal transdifferentiation
EPIYA	Glu-Pro-Ile-Tyr-Ala
ES	excretory–secretory
EST	Expressed Sequence Tag
EV	epidermodysplasia verruciformis
FLIP	FLICE (Caspase-8)-inhibitory protein
FR	family of repeats
gamma-HV68	gammaherpesvirus 68
GLUT1	glucose transporter 1
GR	glutathione reductase
GRE	glucocorticoid responsive element
GST	glutathione-S-transferase
HAART	Highly Active Anti-Retroviral Therapy
HAV	hepatitis A virus
HBs	hepatitis B surface proteins
HBV	hepatitis B virus
HBeAg	hepatitis B 'e' antigen
HbsAg	hepatitis B surface antigen
HBx	X protein
HBZ	HTLV-1 bZIP factor
HC2	hybrid capture 2
HCC	hepatocellular carcinoma
HCV	hepatitis C virus
HDL	High Density Lipoprotein
HF1-α	hypoxia-induced factor-1α
HGF	hepatocyte growth factor
HHV-4	human herpesvirus 4
HHV-8	human herpesvirus 8
HIV	Human immunodeficiency virus

HIV-1	Human immunodeficiency virus type 1
HIV-NHL	HIV-associated non-Hodgkin lymphoma
HNE	trans-4-hydroxy-2-nonenal
HNSCC	human head and neck squamous cell carcinomas
Hop	Helicobacter outer membrane proteins
HOPS	Project and the HIV Outpatient Study
H. pylori	Helicobacter pylori
HPNE	4-hydroperoxy-2-nonenal
HPV	Human papillomavirus
HRC	Hodgkin and Reed-Sternberg cells
HSCs	hepatic stellate cells
HTLV-1	human T-lymphotropic virus type 1
HVMF-1	herpesvirus Macaca fascicularis 1
ICC	intrahepatic cholangiocarcinoma
ICO	Catalan Institute of Oncology
IGF	insulin-growth factor
IGF-1	insulin-like growth factor 1
IGF-2	insulin-like growth factor-2
IgR	immunoglobulin-receptor
iNOS	inducible nitric oxide synthase
IRAK2	IL1R-associated kinase 2
IRS	insulin receptor substrates,
ISDR	interferon sensitivity determining region
ITAM	Immunoglobulin Transactivation Motif
ITS2	internally transcribed spacer region
K14	human keratin 14
KSHV	Kaposi-sarcoma-associated herpesvirus
L region	late region
LANA	latent nuclear antigen
LCR	long control region
LCV	lymphocryptovirus
LDLr	low-density lipoprotein receptor
LHBs	large hepatitis B surface proteins
LMP2	low molecular weight protein 2
LMPs	latent membrane proteins
LTR	long terminal repeat
M1dG	malondialdehyde-deoxyguanine
MALT	Gastric mucosa-associated lymphoid tissue
MALT	mucosa-associated lymphoid tissue
MALTs	muco-associated lymphoid tissue lymphomas
MAPK	Mitogen Activated Protein Kinase
MDA	malondialdehyde
MGUS	monoclonal gammopathy of undetermined significance
MHBs	medium hepatitis B surface proteins
MHC	major histocompatibility complex
MHC I	complex such as class I heavy chain
MHV 68	murine herpesvirus 68-
miRNA	micro-RNAs
mtCOI	mitochondrial cytochrome c oxidase subunit I
MTOC	microtubule-organizing centre

MTP	microsomal triglyceride transfer protein
N7-MedGp	N7-methyldeoxyguanosine 3' monophosphate
NAFLD	non-alcoholic fatty liver disease
NANBH	non-A, non-B hepatitis
NCRs	non-coding regions
NDMA	N-nitrosodimethylamine
NFκB	nuclear factor-κ-B
NHANES III	National Health and Nutrition Examination survey
NRE	negative regulatory element
NTRK2	neurotropic tyrosin receptor kinase 2
NSI	non-syncytia-inducing
nuclear PML bodies	protein-specific nuclear bodies containing the promyelocytic leukaemia protein.
OR	odds ratio
ORCs	origin recognition complexes
ORFs	open-reading frames
OriP	origin of replication
O. viverrini	Opisthorchis viverrini
P	Polymerase
p42 MAPK1	p42 mitogen-activated protein kinase 1
PAHs	polycyclic aromatic hydrocarbons
PBM	PDZ-binding motif
PBMC	peripheral blood mononuclear cells
PCNA	proliferating cell nuclear antigen
PCR	polymerase chain reaction
PEG-IFN	pegylated interferon
PIN	Preneoplastic intraepithelial lesions
PKC	protein kinase C
PLA-2	phospholipase A2
PML	nuclear promyelocytic leukaemia bodies
POR	prevalence odds ratios
pRB	phosphorylated retinoblastoma
Prkar1α	protein kinase A regulatory subunit 1α
PTEN	Phosphatase and Tensin homology deleted on chromosome 10
PTLV	primate T-lymphotropic viruses
QNG	quantitative nuclear grading
RBV	ribavirin
rc DNA	relaxed-circular
RIG-I	retinoic-acid-inducible gene I
RR	relative risk
RT	reverse transcriptase
SabA	sialic acid binding adhesion
SEER	Surveillance, Epidemiology and End Results
SHBs	small hepatitis B surface proteins
S. haematobium	Schistosoma haematobium
SI	syncytia-inducing
SIGN	Safe Injection Global Network
sIL2R	interleukin-2 receptor-α
SIR	standardized incidence ratio
SIR	standardized incidence ratio
SIV	simian immunodeficiency virus

SIVsm	SIV of sooty mangabeys (<i>Cercocebus atys</i>)
SMAHRT	SEER-Medicare Assessment of Hepatopoietic Malignancy Risk Traits
SMRs	standardized mortality ratios
SNPs	single nucleotide polymorphisms
SR-BI	scavenger receptor B1
STDs	sexually transmitted diseases
STLV	simian T-cell leukaemia virus
TAP1	transporter associated with antigen processing subunit 1
TGF- α	transforming growth factor- α
TNFR	TNF-receptor
TNF- α	tumour necrosis factor- α
TORCs	transducers of regulated CREB activity
TPA	tetradecanoyl phorbol ester acetate
TR	terminal-repeat
TRE	Tax-responsive element
TSP/HAM	tropical spastic paraparesis/HTLV-1-associated myelopathy
UVB	ultraviolet light
UNAIDS	United Nations programme on HIV/AIDS
UV	ultraviolet
VaIN	Vaginal intraepithelial neoplasia
VCA	viral capsid antigens
VEGF	vascular endothelial growth factor
VIN	vulvar intraepithelial neoplasia
vLDL	very low density lipoproteins
VLPs	virus-like particles
WHV	woodchuck hepatitis virus
XAP-1	HBx-associated protein
XLP	X-linked lymphoproliferative syndrome

