APPENDICES

Appendix 1 – Taxonomy of the Immune Evasion Literature

Table A1-1 – Eight Aggregate Category Taxonomy of the Immune Evasion Literature

CL #	CLUSTER THEME	# REC
73	**ENHANCE CYTOTOXIC FUNCTION OF NATURAL KILLER CELLS TO REDUCE TUMOR CELL IMMUNE SYSTEM EVASION**	799
16	impact of shedding of MICA/B on tumor cell immune evasion, emphasizing treatments that reduce this shedding and augment the cytotoxic function of Natural Killer cells	171
19	Natural Killer Cell therapies against tumors, emphasizing reduction of immune evasion through enhancing activation and surveillance functions of NK cells	628
109	**REVERSE DOWNREGULATION OF MHC CLASS 1 TO REDUCE IMMUNE SYSTEM EVASION BY TUMORS**	1234
3	role of the immune checkpoint HLA-G in cancer mainly and viral infections secondarily	299
11	HLA Class 1 expression, emphasizing immune system evasion by cancer resulting from HLA Class 1 loss	278
29	1) tumor MHC Class 1 downregulation, 2) the consequent reduction in tumor cell immunosurveillance, and 3) immunotherapies that can reverse downregulation of MHC-I to aid in anti-tumor immunity	360
33	MHC class 1, especially the viral interference with the MHC Class I antigen processing and presentation pathway and the subsequent viral immune system evasion	297
114	**IMMUNOTHERAPIES TO COUNTER T-CELL SUPPRESSION BY TUMOR MICROENVIRONMENT AND ENHANCE IMMUNE CHECKPOINT BLOCKADE**	8193
6	role of fas and fasL in cancer, emphasizing immune evasion by T lymphocyte apoptosis	233
13	hepatocellular carcinoma, emphasizing the potential role of immunotherapies in countering tumor microenvironment-mediated immune system evasion	222
15	cancer immunotherapy using IDO1 inhibitors that will transform the tumor microenvironment from tolerogenic to normal immunogenic by interfering with the IDO1-kynurenine-aryl hydrocarbon receptor pathway	159
17	pancreatic cancer/pancreatic ductal adenocarcinoma, and the role of immunotherapies in countering the immune system evasion associated with a tolerogenic tumor microenvironment	199
18	1) the role of exosomes in cancer progression (especially their role in tumor microenvironment therapy resistance), and 2) immunotherapies to reduce the tolerance associated with the immunosuppressive tumor microenvironment	297
22	immune responses to human papillomavirus, especially the evasion of host immune defenses by hpv	135
28	myeloid-derived suppressor cells in the tumor microenvironment, especially immunotherapy that targets these cells and reduces their suppression of T-cell activity	471
32	breast cancer, emphasizing mechanisms of immune evasion and immunotherapy resistance	425

36	metabolic impacts on the immune system, especially on the contribution of metabolic dysfunction to the immunosuppressive tumor microenvironment	256
39	nanoparticles (especially cell membrane-coated biomimetic) for tumor drug delivery, emphasizing increased immune escape/evasion and enhanced circulation time	224
40	tumors, especially their escape and evasion from immune system control	402
44	cancer stem cells, and methods for targeting of cancer stem cells within the tumor microenvironment	318
45	head and neck squamous cell carcinomas, especially immunotherapies to counter evasion of the immune system	300
49	tumor microenvironment (especially the role of tumor-associated macrophages in promoting immunosuppression), emphasizing the targeting of these tumor-associated macrophages for cancer immunotherapy	435
56	construction of a cancer-associated long non-coding RNA signature to predict prognosis and immune landscape in myriad cancers	794
59	cancer immunotherapy, emphasizing the targeting of cancer immune evasion	1368
61	tumor microenvironment, especially immune suppression in the tumor microenvironment, and its role in promoting tumor growth	1086
62	cancer, especially the mechanisms of cancer progression and metastasis and their relation to epithelial-mesenchymal plasticity and immune evasion	869
119	**IMMUNOTHERAPIES TO COUNTER IMMUNOSUPPRESSIVE TUMOR MICROENVIRONMENT, EMPHASIZING THE PD-1 AND PD-L1 IMMUNE CHECKPOINT**	4069
2	CAR T-cell cancer immunotherapy for solid tumors, emphasizing efforts to overcome the tumor cell evasion of the immune system T-cells	233
14	Non-Small-Cell Lung Cancer, emphasizing regulation of PD-L1 expression on tumor cells to minimize tumor immune evasion which occurs by inhibiting functional activity of cytotoxic lymphocytes	350
25	role of immunosuppressive regulatory T cells in cancer immunology (which augment tumor development and progression by inhibiting antitumor immunity), emphasizing strategies to deplete Treg cells and control Treg cell functions to increase antitumor immune responses	472
41	immune checkpoint inhibitors for cancer immunotherapy, including mechanisms of resistance to immune checkpoint blockade	273
46	PD-L1 expression in advanced cancers, especially its contribution to immune escape	842
50	role of the PD-1 and PD-L1 immune checkpoint in immune escape, emphasizing its cancer immunotherapy targeting to inhibit immune escape	421
58	T cells (especially CD8+), emphasizing the role of T cell response suppression (in the tumor microenvironment) in immune system evasion	1478
12	**IMMUNE ESCAPE OF THE SARS-COV-2 OMICRON VARIANT**	510
12	immune escape of the SARS-CoV-2 Omicron variant	510
21	**SARS-COV-2, ITS VARIANTS AND MUTATIONS, AND THE MECHANISMS OF ITS IMMUNE EVASION/IMMUNE ESCAPE**	1260
21	SARS-CoV-2, its variants and mutations, and the mechanisms of its immune evasion/immune escape	1260

120	**MECHANISMS USED BY BACTERIA, FUNGI, AND PARASITES FOR IMMUNE SYSTEM EVASION**	6303
0	role of Helicobacter pylori in gastric cancer, emphasizing immune system evasion	166
5	biofilms (especially bacterial), emphasizing their survival by evasion of the immune system	163
9	immune system evasion by the Lyme Disease Spirochete Borrelia burgdorferi	155
23	pathogenicity and virulence of Staphylococcus aureus, emphasizing the immune system evasion of this gram-positive bacterium	637
30	variant surface glycoprotein coat density in African trypanosomes, emphasizing the mechanisms responsible for this parasite's evasion of its host's immune response	305
31	malaria parasite Plasmodium falciparum, emphasizing pathogenicity and immune evasion	509
37	complement, emphasizing evasion strategies of bacteria	308
42	Porphyromonas gingivalis primarily and Pseudomonas aeruginosa secondarily, emphasizing their immune escape and evasion mechanisms	233
47	fungal pathogens, especially the interactions of Candida albicans with innate host defense and its escape strategies	359
51	parasites (especially Trypanosoma cruzi, Leishmania, and Toxoplasma gondii), emphasizing their immune system evasion strategies	495
52	Streptococcus pneumoniae, emphasizing pathogenicity, virulence, and immune system evasion	366
53	Salmonella typhimurium and other bacteria, emphasizing their pathogenicity, virulence, and the molecular mechanisms they use to evade the immune system	375
55	Schistosoma mansoni and other helminth parasites, emphasizing evasion of host immunity during infection	537
57	bacteria (especially Neisseria meningitidis), emphasizing their pathogenesis and immune suppressive mechanisms	394
63	mechanisms associated with evasion of the host immune system by bacterial and viral pathogens	1301
121	**MECHANISMS USED BY VIRUSES FOR IMMUNE SYSTEM EVASION**	6668
1	Porcine Reproductive and Respiratory Syndrome Virus, emphasizing the role of immune system evasion in promoting viral replication	91
4	hepatitus C virus, especially on the role of immune system evasion in hcv persistence	375
7	immune system evasion by the Epstein-Barr Virus	197
8	escape mutants of the hepatitis B virus	560
10	mechanisms used by African Swine Fever Virus to evade host immune system response and promote viral replication	158
20	herpes simplex virus infections (especially hsv-1), emphasizing immune system evasion by hsv-1, and therapies to reduce this immune evasion	198
24	Kaposi's sarcoma-associated herpesvirus, emphasizing its immune evasion strategies	233
26	human cytomegalovirus disease, with emphasis on countering HCMV immune system evasion and immune escape	309
27	Mycobacterium tuberculosis, especially its mechanisms for evading the host immune response	450
34	B-cell lymphoma, emphasizing mechanisms of immune evasion by lymphoma cells	271

35	HIV-1, emphasizing 1) generation of vaccine-based broadly neutralizing antibodies against HIV-1 and 2) HIV-1 mutations and escape	456
38	Zika virus primarily and flaviviruses and Dengue virus secondarily, emphasizing immune system evasion	201
43	HIV escape mutations, emphasizing the role of the HIV-1 accessory protein Nef in viral pathogenesis, viral replication, and immune escape of HIV-infected cells	553
48	Type 1 interferon, emphasizing viral pathogen-induced mechanisms to antagonize mammalian interferon signaling pathways	729
54	influenza viruses, emphasizing the role of mutations in immune escape variants	643
60	viruses, emphasizing viral strategies for immune system evasion	1244

Appendix 2 – Selected Titles of Papers from Each Leaf Cluster

(Note: the first row of each table contains the leaf cluster number, the leaf theme, and the number of records in the leaf cluster (in parentheses))

Table A2-1, Cluster 0

Cluster 0 focuses on the role of Helicobacter pylori in gastric cancer, emphasizing immune system evasion (166)
The role of non-coding RNA in the diagnosis and treatment of Helicobacter pylori-related gastric cancer, with a focus on inflammation and immune response.
The impact of autophagic processes on the intracellular fate of Helicobacter pylori: more tricks from an enigmatic pathogen?
Strategies used by helicobacter pylori to establish persistent infection.
Biosynthesis, structure and biological function of cholesterol glucoside in Helicobacter pylori: A review.
Helicobacter pylori and Its Role in Gastric Cancer.
Helicobacter pylori and the Role of Lipopolysaccharide Variation in Innate Immune Evasion.
Unraveling the factors and mechanism involved in persistence: Host-pathogen interactions in Helicobacter pylori.
Helicobacter pylori evasion strategies of the host innate and adaptive immune responses to survive and develop gastrointestinal diseases.
T cell subsets play an important role in the determination of the clinical outcome of Helicobacter pylori infection.
Cholesterol glucosylation by Helicobacter pylori delays internalization and arrests phagosome maturation in macrophages.
Mucosal inflammation and disease in Helicobacter pylori infection.
Helicobacter pylori vaccination: is there a path to protection?
Helicobacter pylori arginase inhibits T cell proliferation and reduces the expression of the TCR zeta-chain (CD3zeta).
Adhesion and Invasion of Gastric Mucosa Epithelial Cells by Helicobacter pylori.
Helicobacter pylori immune escape is mediated by dendritic cell-induced Treg skewing and Th17 suppression in mice.
Compromised autophagy by MIR30B benefits the intracellular survival of Helicobacter pylori.
Systems-wide analyses of mucosal immune responses to Helicobacter pylori at the interface between pathogenicity and symbiosis.
Helicobacter pylori and T Helper Cells: Mechanisms of Immune Escape and Tolerance.
Oral immunization of mice with a multivalent therapeutic subunit vaccine protects against Helicobacter pylori infection.
Helicobacter pylori downregulates expression of human β-defensin 1 in the gastric mucosa in a type IV secretion-dependent fashion.
Induction of maturation and cytokine release of human dendritic cells by Helicobacter pylori.
Effect of Helicobacter pylori on gastric epithelial cells.
Suppression of cell division-associated genes by Helicobacter pylori attenuates proliferation of RAW264.7 monocytic macrophage cells.
Immune evasion strategies used by Helicobacter pylori.
Mechanisms of persistence, innate immune activation and immunomodulation by the gastric pathogen Helicobacter pylori.

Host genetic factors respond to pathogenic step-specific virulence factors of Helicobacter pylori in gastric carcinogenesis.
Helicobacter pylori resists phagocytosis by macrophages: quantitative assessment by confocal microscopy and fluorescence-activated cell sorting.
Serum-derived IgG1-mediated immune exclusion as a mechanism of protection against H. pylori infection.
Immune evasion by Helicobacter pylori: gastric spiral bacteria lack surface immunoglobulin deposition and reactivity with homologous antibodies.
Cholesterol glucosylation-based survival strategy in Helicobacter pylori.
Partial characterization of a cell proliferation-inhibiting protein produced by Helicobacter pylori.
Review: Pathogenesis of Helicobacter pylori infection.
Helicobacter pylori inflammation, immunity, and vaccines.
The Cyclopropane Fatty Acid Synthase Mediates Antibiotic Resistance and Gastric Colonization of Helicobacter pylori.
Helicobacter pylori cholesterol-α-glucosyltransferase manipulates cholesterol for bacterial adherence to gastric epithelial cells.
Helicobacter pylori arginase inhibits nitric oxide production by eukaryotic cells: a strategy for bacterial survival.
Immunity, inflammation, and vaccines for Helicobacter pylori.
[Pathogenesis of Helicobacter pylori infection].
Helicobacter pylori: present status and future prospects in Japan.
Helicobacter pylori attenuates lipopolysaccharide-induced nitric oxide production by murine macrophages.
Immune response modulation in inflammatory bowel diseases by Helicobacter pylori infection.
Interplay of the Gastric Pathogen Helicobacter pylori with Toll-Like Receptors.
Helicobacter pylori inhibits dendritic cell maturation via interleukin-10-mediated activation of the signal transducer and activator of transcription 3 pathway.
Helicobacter pylori Deregulates T and B Cell Signaling to Trigger Immune Evasion.
Helicobacter pylori inhibits phagocytosis by professional phagocytes involving type IV secretion components.
Multi-functional vesicles improve Helicobacter pylori eradication by a comprehensive strategy based on complex pathological microenvironment.
Negative selection of T cells by Helicobacter pylori as a model for bacterial strain selection by immune evasion.
Helicobacter pylori is invasive and it may be a facultative intracellular organism.
Helicobacter pylori cag pathogenicity island's role in B7-H1 induction and immune evasion.
Phagocytosis and persistence of Helicobacter pylori.
Helicobacter pylori virulence factors: subversion of host immune system and development of various clinical outcomes.
Helicobacter pylori targets dendritic cells to induce immune tolerance, promote persistence and confer protection against allergic asthma.
Helicobacter pylori-induced apoptosis in T cells is mediated by the mitochondrial pathway independent of death receptors.
Masking of typical TLR4 and TLR5 ligands modulates inflammation and resolution by Helicobacter pylori.
Prior to Foxp3^{+} regulatory T-cell induction, interleukin-10-producing B cells expand after Helicobacter pylori infection.

Lactobacillus gasseri Suppresses the Production of Proinflammatory Cytokines in Helicobacter pylori-Infected Macrophages by Inhibiting the Expression of ADAM17.
Helicobacter pylori infection: pathogenesis.
Cholesterol glucosylation promotes immune evasion by Helicobacter pylori.
Genome and population dynamics during chronic infection with Helicobacter pylori.
Stable isotope labeling by amino acids in cell culture based proteomics reveals differences in protein abundances between spiral and coccoid forms of the gastric pathogen Helicobacter pylori.
The Role of Helicobacter pylori Outer Membrane Proteins in Adherence and Pathogenesis.
H pylori and host interactions that influence pathogenesis.
[The chemical structure of Helicobacter pylori lipopolysaccharide and innate immune response].
Immune Response in H. pylori-Associated Gastritis and Gastric Cancer.
Helicobacter pylori Infection.
Colonize, evade, flourish: how glyco-conjugates promote virulence of Helicobacter pylori.
Events at the host-microbial interface of the gastrointestinal tract IV. The pathogenesis of Helicobacter pylori persistence.
Helicobacter pylori γ-glutamyltranspeptidase impairs T-lymphocyte function by compromising metabolic adaption through inhibition of cMyc and IRF4 expression.
Why can't we make an effective vaccine against Helicobacter pylori?
Pathogenesis of Helicobacter pylori infection.
Statins' Regulation of the Virulence Factors of Helicobacter pylori and the Production of ROS May Inhibit the Development of Gastric Cancer.
Comparative analysis of the interaction of Helicobacter pylori with human dendritic cells, macrophages, and monocytes.
Chimeric flagellin as the self-adjuvanting antigen for the activation of immune response against Helicobacter pylori.
Redox biology and gastric carcinogenesis: the role of Helicobacter pylori.
The Helicobacter pylori autotransporter ImaA (HP0289) modulates the immune response and contributes to host colonization.
Enhanced expression of indoleamine 2,3-dioxygenase in Helicobacter pylori-infected human gastric mucosa modulates Th1/Th2 pathway and interleukin 17 production.
Immune Cell Signaling by Helicobacter pylori: Impact on Gastric Pathology.
Helicobacter pylori VacA Targets Myeloid Cells in the Gastric Lamina Propria To Promote Peripherally Induced Regulatory T-Cell Differentiation and Persistent Infection.
In silico experiment with an-antigen-toll like receptor-5 agonist fusion construct for immunogenic application to Helicobacter pylori.
Helicobacter pylori versus the host: remodeling of the bacterial outer membrane is required for survival in the gastric mucosa.
Arginase II restricts host defense to Helicobacter pylori by attenuating inducible nitric oxide synthase translation in macrophages.
Immune response to H. pylori.
Prediction of Host-Pathogen Interactions for Helicobacter pylori by Interface Mimicry and Implications to Gastric Cancer.
Helicobacter pylori induces apoptosis of human monocytes but not monocyte-derived dendritic cells: role of the cag pathogenicity island.
Update on the immunologic basis of Helicobacter pylori gastritis.
Immune Evasion Strategies and Persistence of Helicobacter pylori.

Helicobacter pylori outer membrane protein, HomC, shows geographic dependent polymorphism that is influenced by the Bab family.
HomA and HomB, outer membrane proteins of Helicobacter pylori down-regulate activation-induced cytidine deaminase (AID) and Ig switch germline transcription and thereby affect class switch recombination (CSR) of Ig genes in human B-cells.
Periplasmic cleavage and modification of the 1-phosphate group of Helicobacter pylori lipid A.
Microbial carcinogenesis: Lactic acid bacteria in gastric cancer.
Helicobacter pylori interferes with leukocyte migration via the outer membrane protein HopQ and via CagA translocation.
Immunology of Helicobacter pylori: insights into the failure of the immune response and perspectives on vaccine studies.
Helicobacter pylori and the innate immune system.
Nod1 Imprints Inflammatory and Carcinogenic Responses toward the Gastric Pathogen Helicobacter pylori.
Helicobacter pylori type IV secretion, host cell signalling and vaccine development.
Activity and Functional Importance of Helicobacter pylori Virulence Factors.
Potential animal models of Helicobacter pylori infection in immunological and vaccine research.
Lipopolysaccharide Lewis Antigens.
Cellular evasion strategies of Helicobacter pylori in regulating its intracellular fate.
The role of genome diversity and immune evasion in persistent infection with Helicobacter pylori.
Vitamin D3 activates the autolysosomal degradation function against Helicobacter pylori through the PDIA3 receptor in gastric epithelial cells.
The leukocyte-associated immunoglobulin (Ig)-like receptor-1 modulating cell apoptosis and inflammatory cytokines secretion in THP-1 cells after Helicobacter pylori infection.
Helicobacter pylori induces apoptosis of macrophages in association with alterations in the mitochondrial pathway.
Helicobacter pylori gene silencing in vivo demonstrates urease is essential for chronic infection.
Inhibition of heat shock protein expression by Helicobacter pylori.
Lewis X biosynthesis in Helicobacter pylori. Molecular cloning of an alpha(1,3)-fucosyltransferase gene.
Why Helicobacter pylori has Lewis antigens.
High Helicobacter pylori Bacterial Load and Low Cytokine Expression Levels Are Associated with Nodular Gastropathy.
Virulence mechanisms and persistence strategies of the human gastric pathogen Helicobacter pylori.
Biochemical and pathophysiological characterization of Helicobacter pylori asparaginase.
Lipopolysaccharide Structure and Biosynthesis in Helicobacter pylori.
Helicobacter pylori flagellins have very low intrinsic activity to stimulate human gastric epithelial cells via TLR5.
Immune evasion by Helicobacter pylori is mediated by induction of macrophage arginase II.
Moonlighting of Helicobacter pylori catalase protects against complement-mediated killing by utilising the host molecule vitronectin.
mRNA expression profiling reveals a role of Helicobacter pylori vacuolating toxin in escaping host defense.
Role of AmiA in the morphological transition of Helicobacter pylori and in immune escape.
The Helicobacter pylori virulence effector CagA abrogates human β-defensin 3 expression via inactivation of EGFR signaling.

Lipopolysaccharide in bacterial chronic infection: insights from Helicobacter pylori lipopolysaccharide and lipid A.
Relevance of fucosylation and Lewis antigen expression in the bacterial gastroduodenal pathogen Helicobacter pylori.
Phase-variable restriction/modification systems are required for Helicobacter pylori colonization.
HLA-G 14-bp Ins/Ins Genotype in Patients Harbouring Helicobacter pylori Infection: A Potential Risk Factor?
Modulation of lymphocyte proliferation induced by gastric MALT lymphoma-associated Helicobacter pylori strains.
Helicobacter pylori infection interferes with epithelial Stat6-mediated interleukin-4 signal transduction independent of cagA, cagE, or VacA.
In vitro suppression of dendritic cells by Helicobacter pylori OipA.
Helicobacter pylori induces ERK-dependent formation of a phospho-c-Fos c-Jun activator protein-1 complex that causes apoptosis in macrophages.
Phase variation mediated niche adaptation during prolonged experimental murine infection with Helicobacter pylori.
Modification in the ppk gene of Helicobacter pylori during single and multiple experimental murine infections.
Induction of Mincle by Helicobacter pylori and consequent anti-inflammatory signaling denote a bacterial survival strategy.
Helicobacter pylori flagellin: TLR5 evasion and fusion-based conversion into a TLR5 agonist.
Modulation of the CD4+ T-cell response by Helicobacter pylori depends on known virulence factors and bacterial cholesterol and cholesterol α-glucoside content.
How Helicobacter pylori acquired its name, and how it overcomes gastric defence mechanisms.
A comprehensive analysis of Helicobacter pylori plasticity zones reveals that they are integrating conjugative elements with intermediate integration specificity.
Immunosuppressive proteins isolated from spiral and coccoid cytoplasmic solutions of Helicobacter pylori.
Outer membrane biogenesis in Escherichia coli, Neisseria meningitidis, and Helicobacter pylori: paradigm deviations in H. pylori.
Transcriptional phase variation of a type III restriction-modification system in Helicobacter pylori.
An enzymatic ruler modulates Lewis antigen glycosylation of Helicobacter pylori LPS during persistent infection.
sncRNAs packaged by Helicobacter pylori outer membrane vesicles attenuate IL-8 secretion in human cells.
Serologic IgG response to urease in Helicobacter pylori-infected persons from Mexico.
Species-specific immunity to Helicobacter suis.
Molecular modelling of the gastric barrier response, from infection to carcinogenesis.
Helicobacter pylori proteins response to nitric oxide stress.
Crystallization and preliminary crystallographic studies of Helicobacter pylori arginase.
Oxidative stress-induced peptidoglycan deacetylase in Helicobacter pylori.
Variations in Helicobacter pylori lipopolysaccharide to evade the innate immune component surfactant protein D.
Arginase 2 deletion leads to enhanced M1 macrophage activation and upregulated polyamine metabolism in response to Helicobacter pylori infection.
IgA antibodies impair resistance against Helicobacter pylori infection: studies on immune evasion in IL-10-deficient mice.

Regulation of vacuolar pH and its modulation by some microbial species.
Molecular anatomy and pathogenic actions of Helicobacter pylori CagA that underpin gastric carcinogenesis.
Beta2 integrin mediates entry of a bacterial toxin into T lymphocytes.
Helicobacter pylori colonization of the human gastric epithelium: a bug's first step is a novel target for us.
Who ate whom? Adaptive Helicobacter genomic changes that accompanied a host jump from early humans to large felines.
Therapeutic potential of cholesteryl O-acyl α-glucoside found in Helicobacter pylori.
Comparison of enzymatic properties and small molecule inhibition of γ-glutamyltranspeptidases from pathogenic and commensal bacteria.
East-Asian Helicobacter pylori strains synthesize heptan-deficient lipopolysaccharide.
Epigenetics and Helicobacter pylori.
Antiparasitic drug nitazoxanide inhibits the pyruvate oxidoreductases of Helicobacter pylori, selected anaerobic bacteria and parasites, and Campylobacter jejuni.
Recombinant herpesvirus glycoprotein G improves the protective immune response to Helicobacter pylori vaccination in a mouse model of disease.
Helicobacter pylori Outer Membrane Vesicles Protect the Pathogen From Reactive Oxygen Species of the Respiratory Burst.
Molecular mimicry of ferret gastric epithelial blood group antigen A by Helicobacter mustelae.
Preclinical studies of amixicile, a systemic therapeutic developed for treatment of Clostridium difficile infections that also shows efficacy against Helicobacter pylori.
Characterization of Helicobacter pylori VacA-containing vacuoles (VCVs), VacA intracellular trafficking and interference with calcium signalling in T lymphocytes.
At home with hostility: How do pathogenic bacteria evade mammalian immune surveillance to establish persistent infection?
Characterization of the non-glandular gastric region microbiota in Helicobacter suis-infected versus non-infected pigs identifies a potential role for Fusobacterium gastrosuis in gastric ulceration.
Potential role of enterohepatic Helicobacter species as a facilitating factor in the development of Chlamydia trachomatis proctitis.
Structural, enzymatic and biochemical studies on Helicobacter pylori arginase.
Role of lipid rafts in persistent Helicobacter pylori infection: a narrative review.

Table A2-2, Cluster 1

Cluster 1 focuses on Porcine Reproductive and Respiratory Syndrome Virus, emphasizing the role of immune system evasion in promoting viral replication (91)
MicroRNA-376b-3p Promotes Porcine Reproductive and Respiratory Syndrome Virus Replication by Targeting Viral Restriction Factor TRIM22.
MicroRNA 373 Facilitates the Replication of Porcine Reproductive and Respiratory Syndrome Virus by Its Negative Regulation of Type I Interferon Induction.
Taming PRRSV: revisiting the control strategies and vaccine design.
Porcine Reproductive and Respiratory Syndrome Virus: Immune Escape and Application of Reverse Genetics in Attenuated Live Vaccine Development.
The Function of the PRRSV-Host Interactions and Their Effects on Viral Replication and Propagation in Antiviral Strategies.

Phylogenetic analysis of porcine reproductive and respiratory syndrome virus in Vietnam, 2021.
Nonstructural protein 11 (nsp11) of porcine reproductive and respiratory syndrome virus (PRRSV) promotes PRRSV infection in MARC-145 cells.
Evasion of Antiviral Innate Immunity by Porcine Reproductive and Respiratory Syndrome Virus.
Role of transcription factors in porcine reproductive and respiratory syndrome virus infection: A review.
Evasion strategies of porcine reproductive and respiratory syndrome virus.
N-Acetyltransferase 9 Inhibits Porcine Reproductive and Respiratory Syndrome Virus Proliferation by N-Terminal Acetylation of the Structural Protein GP5.
Exosomes Mediate Intercellular Transmission of Porcine Reproductive and Respiratory Syndrome Virus.
Porcine Reproductive and Respiratory Syndrome Virus Nonstructural Protein 4 Cleaves Porcine DCP1a To Attenuate Its Antiviral Activity.
Innate and adaptive immunity against Porcine Reproductive and Respiratory Syndrome Virus.
Interleukin-1 receptor antagonist: an early immunomodulatory cytokine induced by porcine reproductive and respiratory syndrome virus.
RBM39 Alters Phosphorylation of c-Jun and Binds to Viral RNA to Promote PRRSV Proliferation.
Both Nsp1β and Nsp11 are responsible for differential TNF-α production induced by porcine reproductive and respiratory syndrome virus strains with different pathogenicity in vitro.
Porcine reproductive and respiratory syndrome virus vaccines: current status and strategies to a universal vaccine.
Induction of HOXA3 by Porcine Reproductive and Respiratory Syndrome Virus Inhibits Type I Interferon Response through Negative Regulation of HO-1 Transcription.
SILAC-based quantitative proteomic analysis of secretome of Marc-145 cells infected with porcine reproductive and respiratory syndrome virus.
Interaction between innate immunity and porcine reproductive and respiratory syndrome virus.
Porcine Reproductive and Respiratory Syndrome Virus Enhances Self-Replication via AP-1-Dependent Induction of SOCS1.
Porcine reproductive and respiratory syndrome virus-infected alveolar macrophages contain no detectable levels of viral proteins in their plasma membrane and are protected against antibody-dependent, complement-mediated cell lysis.
Regulation and evasion of antiviral immune responses by porcine reproductive and respiratory syndrome virus.
miR-382-5p promotes porcine reproductive and respiratory syndrome virus (PRRSV) replication by negatively regulating the induction of type I interferon.
Porcine Reproductive and Respiratory Syndrome Virus Evades Antiviral Innate Immunity via MicroRNAs Regulation.
Phenotypic and functional modulation of bone marrow-derived dendritic cells by porcine reproductive and respiratory syndrome virus.
[Advance in immunology and immune evasion of PRRSV].
Interferon-Induced Transmembrane Protein 3 Is a Virus-Associated Protein Which Suppresses Porcine Reproductive and Respiratory Syndrome Virus Replication by Blocking Viral Membrane Fusion.
Porcine reproductive and respiratory syndrome virus counteracts the porcine intrinsic virus restriction factors-IFITM1 and Tetherin in MARC-145 cells.
Replication-competent recombinant porcine reproductive and respiratory syndrome (PRRS) viruses expressing indicator proteins and antiviral cytokines.

Quantitative interactome reveals that porcine reproductive and respiratory syndrome virus nonstructural protein 2 forms a complex with viral nucleocapsid protein and cellular vimentin.
The N-N non-covalent domain of the nucleocapsid protein of type 2 porcine reproductive and respiratory syndrome virus enhances induction of IL-10 expression.
Porcine reproductive and respiratory syndrome virus increases SOCS3 production via activation of p38/AP-1 signaling pathway to promote viral replication.
Transcriptomic Analysis of Liver Indicates Novel Vaccine to Porcine Reproductive and Respiratory Virus Promotes Homeostasis in T-Cell and Inflammatory Immune Responses Compared to a Commercial Vaccine in Pigs.
Porcine reproductive and respiratory syndrome virus-mediated lactate facilitates virus replication by targeting MAVS.
Evaluation of immune responses to porcine reproductive and respiratory syndrome virus in pigs during early stage of infection under farm conditions.
Key Gaps in the Knowledge of the Porcine Respiratory Reproductive Syndrome Virus (PRRSV).
Targeting Swine Leukocyte Antigen Class I Molecules for Proteasomal Degradation by the nsp1α Replicase Protein of the Chinese Highly Pathogenic Porcine Reproductive and Respiratory Syndrome Virus Strain JXwn06.
Highly Pathogenic Porcine Reproductive and Respiratory Syndrome Virus Nsp4 Cleaves VISA to Impair Antiviral Responses Mediated by RIG-I-like Receptors.
Strategies to broaden the cross-protective efficacy of vaccines against porcine reproductive and respiratory syndrome virus.
Impact of PRRSV on activation and viability of antigen presenting cells.
Porcine Reproductive and Respiratory Syndrome Virus Nonstructural Protein 1 Beta Interacts with Nucleoporin 62 To Promote Viral Replication and Immune Evasion.
PRRSV Non-Structural Proteins Orchestrate Porcine E3 Ubiquitin Ligase RNF122 to Promote PRRSV Proliferation.
Porcine reproductive and respiratory syndrome virus (PRRSV) could be sensed by professional beta interferon-producing system and had mechanisms to inhibit this action in MARC-145 cells.
Porcine reproductive and respiratory syndrome virus genetic variability a management and diagnostic dilemma.
Downregulation of miR-122 by porcine reproductive and respiratory syndrome virus promotes viral replication by targeting SOCS3.
Nonstructural proteins nsp2TF and nsp2N of porcine reproductive and respiratory syndrome virus (PRRSV) play important roles in suppressing host innate immune responses.
Porcine Reproductive and Respiratory Syndrome Virus nsp11 Antagonizes Type I Interferon Signaling by Targeting IRF9.
Challenges for porcine reproductive and respiratory syndrome virus (PRRSV) vaccinology.
Pathogenesis of porcine reproductive and respiratory syndrome virus.
Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) Inhibits RNA-Mediated Gene Silencing by Targeting Ago-2.
LGP2 Promotes Type I Interferon Production To Inhibit PRRSV Infection via Enhancing MDA5-Mediated Signaling.
Transcriptome sequencing analysis of porcine alveolar macrophages infected with PRRSV strains to elucidate virus pathogenicity and immune evasion strategies.
Identification of Differentially Expressed Non-coding RNA in Porcine Alveolar Macrophages from Tongcheng and Large White Pigs Responded to PRRSV.

ORF5 of porcine reproductive and respiratory syndrome virus (PRRSV) is a target of diversifying selection as infection progresses from acute infection to virus rebound.
Identification of three site mutations in nonstructural protein 1β, glycoprotein 3 and glycoprotein 5 that correlate with increased interferon α resistance of porcine reproductive and respiratory syndrome virus.
Nsp1α of Porcine Reproductive and Respiratory Syndrome Virus Strain BB0907 Impairs the Function of Monocyte-Derived Dendritic Cells via the Release of Soluble CD83.
Porcine reproductive and respiratory syndrome virus productively infects monocyte-derived dendritic cells and compromises their antigen-presenting ability.
Mucosal vaccines to prevent porcine reproductive and respiratory syndrome: a new perspective.
Post-transcriptional control of type I interferon induction by porcine reproductive and respiratory syndrome virus in its natural host cells.
Porcine reproductive and respiratory syndrome virus nonstructural protein 1beta modulates host innate immune response by antagonizing IRF3 activation.
Porcine reproductive and respiratory syndrome virus infection inhibits NF-κB signaling pathway through cleavage of IKKβ by Nsp4.
Porcine reproductive and respiratory syndrome virus nucleocapsid protein modulates interferon-β production by inhibiting IRF3 activation in immortalized porcine alveolar macrophages.
Modulation of host cell responses and evasion strategies for porcine reproductive and respiratory syndrome virus.
A Bayesian phylogeographical analysis of type 1 porcine reproductive and respiratory syndrome virus (PRRSV).
Porcine reproductive and respiratory syndrome virus 3C protease cleaves the mitochondrial antiviral signalling complex to antagonize IFN-β expression.
Pathogenic characteristics of three genotype II porcine reproductive and respiratory syndrome viruses isolated from China.
Identification of differentially expressed proteins in porcine alveolar macrophages infected with virulent/attenuated strains of porcine reproductive and respiratory syndrome virus.
Porcine arterivirus activates the NF-kappaB pathway through IkappaB degradation.
Acute phase response in porcine reproductive and respiratory syndrome virus infection.
Targeted mutations in a highly conserved motif of the nsp1β protein impair the interferon antagonizing activity of porcine reproductive and respiratory syndrome virus.
Genetic diversity and phylogenetic analysis of glycoprotein 5 of European-type porcine reproductive and respiratory virus strains in Spain.
Control of porcine reproductive and respiratory syndrome (PRRS) through genetic improvements in disease resistance and tolerance.
The role of porcine reproductive and respiratory syndrome virus infection in immune phenotype and Th1/Th2 balance of dendritic cells.
Amino acid residues in the non-structural protein 1 of porcine reproductive and respiratory syndrome virus involved in down-regulation of TNF-α expression in vitro and attenuation in vivo.
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Table A2-3, Cluster 2

Cluster 2 focuses on CAR T-cell cancer immunotherapy for solid tumors, emphasizing efforts to overcome the tumor cell evasion of the immune system T-cells (233)
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Table A2-4, Cluster 3

Cluster 3 focuses on the role of the immune checkpoint HLA-G in cancer mainly and viral infections secondarily (299)
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Table A2-5, Cluster 4

Cluster 4 focuses on hepatitus C virus, especially on the role of immune system evasion in hcv persistence (375)
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Table A2-6, Cluster 5

Cluster 5 focuses on biofilms (especially bacterial), emphasizing their survival by evasion of the immune system (163)
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Probiotics for human lactational mastitis.

Mechanisms of resistance to antimicrobial peptides in staphylococci.
Properties and antimicrobial susceptibility of Trueperella pyogenes isolated from bovine mastitis in China.
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Role of luxS in immune evasion and pathogenicity of piscine Streptococcus agalactiae is not dependent on autoinducer-2.

Table A2-7, Cluster 6

Cluster 6 focuses on the role of fas and fasL in cancer, emphasizing immune evasion by T lymphocyte apoptosis (233)
Irradiation-induced up-regulation of Fas in esophageal squamous cell carcinoma is not accompanied by Fas ligand-mediated apoptosis.
Co-expression of Fas and Fas ligand in malignant glial tumors and cell lines.
Fas (APO-1/CD95) ligand and Fas expression in renal cell carcinomas: correlation with the prognostic factors.
[The significance of Fas/FasL molecular system in breast cancer].
Positive and negative consequences of Fas/Fas ligand interactions in the antitumor response.
Fas ligand is expressed on human squamous cell carcinomas of the head and neck, and it promotes apoptosis of T lymphocytes.
[Fas, fas ligand, immune tolerance, and cancer: implications in cancer of the colon].
Fas and Fas ligand expression in tumor cells and in vascular smooth-muscle cells of colonic and renal carcinomas.
The distribution and intracellular location of Fas and Fas Ligand following gastric carcinogenesis: Fas Ligand expressing gastric carcinoma cells can inhibit local immune response.
Prognostic value of the Fas/Fas ligand system in breast cancer.
[The role of Fas/Fas ligand in tumorgenesis, immune escape, and counterattack in colonic cancer].
Mechanism of counterattack of colorectal cancer cell by Fas/Fas ligand system.
Fas ligand expression in primary colon adenocarcinomas: evidence that the Fas counterattack is a prevalent mechanism of immune evasion in human colon cancer.
The Fas/Fas ligand system and cancer: immune privilege and apoptosis.
Transitional cell carcinoma expresses high levels of Fas ligand in vivo.
Serial in vivo loss and in vitro gain of Fas expression and function in human cancerous pancreatic duct cells.
Fas ligand expression is correlated with metastasis in colorectal carcinoma.
Expression of Fas ligand in retinoblastoma.
Fas-related apoptosis in gastric adenocarcinoma.
Addressing the "Fas counterattack" controversy: blocking fas ligand expression suppresses tumor immune evasion of colon cancer in vivo.
Blockade of the Fas-triggered intracellular signaling pathway in human melanomas is circumvented by cytotoxic lymphocytes.
Resistance to Fas (APO-1/CD95)-mediated apoptosis and expression of Fas ligand in esophageal cancer: the Fas counterattack.
[The evaluation of Fas/Fas ligand system in renal cell carcinoma--the effect of preoperative interferon-alpha therapy].

Expression of Fas and Fas ligand in human gastric adenomas and intestinal-type carcinomas: correlation with proliferation and apoptosis.
Fas/Fas ligand system and apoptosis induction in testicular carcinoma.
Up-regulation of Fas ligand and down-regulation of Fas expression in oral carcinogenesis.
Fas function and tumor progression: use it and lose it.
Tumor-derived Fas ligand induces toxicity in lymphoid organs and plays an important role in successful chemotherapy.
Pre-existing Fas ligand (FasL) in cancer cells elicits tumor-specific protective immunity, but delayed induction of FasL expression after inoculation facilitates tumor formation.
FASL -844C polymorphism is associated with increased activation-induced T cell death and risk of cervical cancer.
Functional polymorphisms in FAS/FASL system increase the risk of neuroblastoma in Chinese population.
Frequent loss of Fas expression and function in human lung tumours with overexpression of FasL in small cell lung carcinoma.
Immunohistochemical analysis of Fas ligand expression in sarcomas. Sarcomas express high level of FasL in vivo.
Expression of Fas ligand in liver metastases of human colonic adenocarcinomas.
Fas and Fas ligand are highly expressed in lymphocytes from cervical intraepithelial neoplasia and cervical cancer patients: A possible role for immune escaping.
Co-expression of Fas (APO-1, CD95)/Fas ligand by BeWo and NJG choriocarcinoma cell lines.
Melanoma cell expression of Fas(Apo-1/CD95) ligand: implications for tumor immune escape.
The effect of Fas/FasL pathway blocking on apoptosis and stemness within breast cancer tumor microenvironment (preclinical study).
The role of fas/fas ligand system in the pathogenesis of liver cirrhosis and hepatocellular carcinoma.
Fas (Apo-1/CD95) and Fas ligand interaction between gastric cancer cells and immune cells.
Functional polymorphisms in cell death pathway genes FAS and FASL contribute to risk of lung cancer.
Significance of Fas and Fas ligand in tuberculous lymphadenitis.
Human lung carcinomas express Fas ligand.
[Mechanism of immune escape in renal cell carcinoma].
Apoptosis and Fas system are significantly involved in the process of liver cirrhosis converting into hepatocellular carcinoma.
Human urinary bladder transitional cell carcinomas acquire the functional Fas ligand during tumor progression.
Fas (CD95/APO-1) and Fas ligand expression in normal pancreas and pancreatic tumors. Implications for immune privilege and immune escape.
Fas ligand is expressed in normal skin and in some cutaneous malignancies.
Not so Fas: Re-evaluating the mechanisms of immune privilege and tumor escape.
Influence of cytokines on the expression of fas ligand and CD44 splice variants in colon carcinoma cells.
Relationship of Fas, FasL, p53 and bcl-2 expression in human non-small cell lung carcinomas.
Expression of Fas ligand by human gastric adenocarcinomas: a potential mechanism of immune escape in stomach cancer.
Autocrine secretion of Fas ligand shields tumor cells from Fas-mediated killing by cytotoxic lymphocytes.
Intracellular Fas ligand in normal and malignant breast epithelium does not induce apoptosis in Fas-sensitive cells.

Aberrant expression of Fas and FasL pro-apoptotic proteins in basal cell and squamous cell carcinomas.
Increased Fas ligand expression by T cells and tumour cells in the progression of actinic keratosis to squamous cell carcinoma.
Fas ligand promotes tumor immune evasion of colon cancer in vivo.
p53 promotes selection for Fas-mediated apoptotic resistance.
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Constitutive expression of Fas (Apo-1/CD95) ligand on multiple myeloma cells: a potential mechanism of tumor-induced suppression of immune surveillance.
The Fas counterattack: Fas-mediated T cell killing by colon cancer cells expressing Fas ligand.
Tissue microarray analysis of Fas and FasL expressions in human non-small cell lung carcinomas; with reference to the p53 and bcl-2 overexpressions.
Activation-induced cell death: the controversial role of Fas and Fas ligand in immune privilege and tumour counterattack.
T cell dependent and independent antitumor immunity generated by the expression of Fas ligand on mouse lung carcinoma cells.
Frequency of apoptosis of tumor-infiltrating lymphocytes induced by fas counterattack in human colorectal carcinoma and its correlation with prognosis.
Suppression of FasL expression in tumor cells and preventing tumor necrosis factor-induced apoptosis by adenovirus 14.7K is an effective escape mechanism for immune cells.
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Involvement of doxorubicin-induced Fas expression in the antitumor effect of doxorubicin on Lewis lung carcinoma in vivo.
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H3K9 Trimethylation Silences Fas Expression To Confer Colon Carcinoma Immune Escape and 5-Fluorouracil Chemoresistance.
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Fas ligand expression in thyroid carcinomas: a potential mechanism of immune evasion.
Posttranslational regulation of Fas ligand function.
Predominant expression of Fas (CD95) ligand in metastatic melanoma revealed by longitudinal analysis.
Suppression of FasL expression in tumor cells and preventing TNF-induced apoptosis was better for immune cells survival.
[The role of Fas/FasL system in the regulation of tumor-immune system interactions in papillary thyroid carcinoma in children and adolescents].
Fas ligand downregulation with antisense oligonucleotides in cells and in cultured tissues of normal skin epidermis and basal cell carcinoma.
Tumor escape mechanism involving Fas and Fas-L molecules in human colorectal tumors.
The Btk-dependent PIP5K1γ lipid kinase activation by Fas counteracts FasL-induced cell death.
Fas ligand expression in esophageal carcinomas and their lymph node metastases.
The Fas/Fas-ligand system: a mechanism for immune evasion in human breast carcinomas.
Relationship between Fas-ligand expression on carcinoma cell and cytotoxic T-lymphocyte response in lymphoepithelioma-like cancer of the stomach.

Expression of Fas and Fas-ligand and analysis of argyrophilic nucleolar organizer regions in squamous cell carcinoma: relationships with tumor stage and grade, and apoptosis.
Decreased Fas expression in advanced-stage bladder cancer is not related to p53 status.
Expression of FasL in squamous cell carcinomas of the cervix and cervical intraepithelial neoplasia and its role in tumor escape mechanism.
Expression of Fas and Fas ligand in uveal melanoma: biological implication and prognostic value.
Bladder cancer cells acquire competent mechanisms to escape Fas-mediated apoptosis and immune surveillance in the course of malignant transformation.
Apoptosis induced in T cells by human neuroblastoma cells: role of Fas ligand.
Induction of FAS ligand expression in a human hepatoblastoma cell line by HCV core protein.
Omega-6 fatty acids can inhibit Fas-mediated apoptosis in a human colorectal carcinoma cell line: a potential mechanism for escape from immune surveillance.
Association between up-regulation of Fas ligand expression and apoptosis of tumor-infiltrating lymphocytes in human breast cancer.
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Activated cytotoxic lymphocytes promote tumor progression by increasing the ability of 3LL tumor cells to mediate MDSC chemoattraction via Fas signaling.
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Expression of Fas ligand by microglia: possible role in glioma immune evasion.
[Expression of Kai1 and FasL in non-small cell lung cancer and its clinicopathological significance].
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Expression of fas ligand in human hepatoma cell lines: role of hepatitis-B virus X (HBX) in induction of Fas ligand.
Membrane-bound Fas (Apo-1/CD95) ligand on leukemic cells: A mechanism of tumor immune escape in leukemia patients.
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Translocation of Fas by LPA prevents ovarian cancer cells from anti-Fas-induced apoptosis.
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Apoptosis of T lymphocytes invading glioblastomas multiforme: a possible tumor defense mechanism.
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A modification of the JAM test is necessary for a correct determination of apoptosis induced by FasL+ adherent tumor cells.
Influence of antitumor drugs on the expression of Fas system in SW480 colon cancer cells.
[Immune evasion of human lung carcinoma cell A549 suppressed by human lymphoma cell Jurkat via Fas/FasL pathway].
Loss of functional Fas ligand enhances intestinal tumorigenesis in the Min mouse model.
Normal breast epithelial cells induce apoptosis of breast cancer cells via Fas signaling.
The evaluation of soluble Fas and soluble Fas ligand levels of bronchoalveolar lavage fluid in lung cancer patients.
Elevated Fas expression is related to increased apoptosis of circulating CD8+ T cell in patients with gastric cancer.
The Inhibitor of Apoptosis Protein Livin Confers Resistance to Fas-Mediated Immune Cytotoxicity in Refractory Lymphoma.
Fas ligand gene transfer to the vessel wall inhibits neointima formation and overrides the adenovirus-mediated T cell response.
Regulative effect of IFN-gamma on the Fas/Fas L system of cholangiocarcinoma cells.
FasL gene knock-down therapy enhances the antiglioma immune response.
Expression level of c-FLIP versus Fas determines susceptibility to Fas ligand-induced cell death in murine thymoma EL-4 cells.
Alteration of apoptotic regulatory molecules expression during carcinogenesis and tumor progression of renal cell carcinoma.
Action and mechanism of Fas and Fas ligand in immune escape of gallbladder carcinoma.
Cross-talk between tumor cells and neutrophils through the Fas (APO-1, CD95)/FasL system: human glioma cells enhance cell viability and stimulate cytokine production in neutrophils.

Role of Fas ligand (CD95L) in immune escape: the tumor cell strikes back.
Loss of Fas Expression and Function Is Coupled with Colon Cancer Resistance to Immune Checkpoint Inhibitor Immunotherapy.
Correlation of Fas/FasL expression to cell apoptosis in Epstein-Barr virus-associated gastric carcinoma.
Depressing the immune escape of acute myelomonocytic leukemia via an anti-Fas ribozyme.
Soluble Fas and Fas-ligand in bladder cancer in vitro and in vivo.
Immunological escape mechanisms in pancreatic carcinoma.
Expression and distribution of S-100, CD83 and apoptosis-related proteins (Fas, FasL and Bcl-2) in tissues of thyroid carcinoma.
Prevalence of HLA-DRB1 genotype and altered Fas/Fas ligand expression in adrenocortical carcinoma.
CD44 stimulation down-regulates Fas expression and Fas-mediated apoptosis of lung cancer cells.
Corticotropin-releasing hormone (CRH) is expressed in the human cervical carcinoma cells (HeLa) and upregulates the expression of Fas ligand.
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The human melanoma cell line MelJuSo secretes bioactive FasL and APO2L/TRAIL on the surface of microvesicles. Possible contribution to tumor counterattack.
Ceramide mediates FasL-induced caspase 8 activation in colon carcinoma cells to enhance FasL-induced cytotoxicity by tumor-specific cytotoxic T lymphocytes.
Functional characterization of Fas ligand on tumor cells escaping active specific immunotherapy.
Depletion of the natural killer cell population in the peritoneum by AK-5 tumor cells overexpressing fas-ligand: a mechanism of immune evasion.
Influence of FasL gene expression on hepatic metastasis of colorectal carcinoma.
Fas receptor counterattack against tumor-infiltrating lymphocytes in vivo as a mechanism of immune escape in gastric carcinoma.
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Role of IFN-gamma produced after intraperitoneal transplantation of AK-5 cells in the induction of Fas ligand expression by tumor cells leading to immune evasion.
Prognostic significance of Fas expression in retinoblastoma.
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Yin-Yang-1 decreases Fas-induced apoptosis in acute lymphoblastic leukemia under hypoxic conditions: its implications in immune evasion.
EphB receptors trigger Akt activation and suppress Fas receptor-induced apoptosis in malignant T lymphocytes.
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Expression of Fas(APO-1/CD95) in tumor-infiltrating and peripheral blood lymphocytes in patients with renal cell carcinoma.
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The role of MAPK-ERK pathway in 67-kDa laminin receptor-induced FasL expression in human cholangiocarcinoma cells.

Overexpression of thymosin beta-4 renders SW480 colon carcinoma cells more resistant to apoptosis triggered by FasL and two topoisomerase II inhibitors via downregulating Fas and upregulating Survivin expression, respectively.
Fas counterattack in cholangiocarcinoma: a mechanism for immune evasion in human hilar cholangiocarcinomas.
Antiretroviral cytolytic T-lymphocyte nonresponsiveness: FasL/Fas-mediated inhibition of CD4(+) and CD8(+) antiviral T cells by viral antigen-positive veto cells.
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Fas ligand expression in lynch syndrome-associated colorectal tumours.
CD8+ tumor-infiltrating lymphocytes are primed for Fas-mediated activation-induced cell death but are not apoptotic in situ.
FASL polymorphism is associated with response to bacillus Calmette-Guérin immunotherapy in bladder cancer.
Crystal Structure of the Complex of Human FasL and Its Decoy Receptor DcR3.
Increased angiogenesis and Fas-ligand expression are independent processes in acute myeloid leukemia.
The role of Fas-mediated apoptosis in thyroid disease.
Defective death receptor signaling as a cause of tumor immune escape.
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Oral cancer cell lines can use multiple ligands, including Fas-L, TRAIL and TNF-alpha, to induce apoptosis in Jurkat T cells: possible mechanisms for immune escape by head and neck cancers.
Expression of RCAS1 and FasL in human trophoblasts and uterine glands during pregnancy: the possible role in immune privilege.
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The "Fas counterattack" is not an active mode of tumor immune evasion in colorectal cancer with high-level microsatellite instability.
Evasion of myofibroblasts from immune surveillance: a mechanism for tissue fibrosis.
CD95 (Fas) ligand expression of Epstein-Barr virus (EBV)-infected lymphocytes: a possible mechanism of immune evasion in chronic active EBV infection.
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Decoy receptor 3 overexpression and immunologic tolerance in hepatocellular carcinoma (HCC) development.
Mouse interleukin-12/FasTI: A novel bi-functional fusion protein for cancer immuno/gene therapy.
Significant association among the Fas -670 A/G (rs1800682) polymorphism and esophageal cancer, hepatocellular carcinoma, and prostate cancer susceptibility: a meta-analysis.
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Survivin-3B promotes chemoresistance and immune escape by inhibiting caspase-8 and -6 in cancer cells.
Requirement of inositol 1,4,5-trisphosphate receptors for tumor-mediated lymphocyte apoptosis.

Soluble Fas ligand released by colon adenocarcinoma cells induces host lymphocyte apoptosis: an active mode of immune evasion in colon cancer.
Serum levels of soluble molecules associated with evasion of immune surveillance: a study in biliary disease.
Role of cytokines in promoting immune escape of FasL-expressing human colon cancer cells.
Malignant counterpart of myeloid dendritic cell (DC) belonging to acute myelogenous leukemia (AML) exhibits a dichotomous immunoregulatory potential.
Fas (APO-1, CD95) receptor expression and new options for immunotherapy in childhood medulloblastomas.
Interleukin-2 enhances susceptibility of colon cancer cells to FasR mediated apoptosis by up-regulating Fas receptor level and down-regulating FAP-1 expression.
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Cytokine associated sensitivity of colon carcinoma cells to FasR-mediated cytotoxicity of CTL.
Immunohistochemical analysis of cytokines and apoptosis in tuberculous lymphadenitis.
Role of Fas ligand expression in promoting escape from immune rejection in a spontaneous tumor model.
Expression of human tumor-associated antigen RCAS1 in Reed-Sternberg cells in association with Epstein-Barr virus infection: a potential mechanism of immune evasion.
ATM kinase regulates tumor immunoreactions in lymphocyte-predominant breast cancer through modulation of NKG2D ligand and TNF cytokines on tumor cells.
Fas (Apo-1, CD95) receptor expression in childhood astrocytomas. Is it a marker of the major apoptotic pathway or a signaling receptor for immune escape of neoplastic cells?
Selective expression of FLIP in malignant melanocytic skin lesions.
Host immunosurveillance controls tumor growth via IFN regulatory factor-8 dependent mechanisms.
Valproic acid cooperates with hydralazine to augment the susceptibility of human osteosarcoma cells to Fas- and NK cell-mediated cell death.
Escaping Death: How Cancer Cells and Infected Cells Resist Cell-Mediated Cytotoxicity.
Opposite roles of metastasin (S100A4) in two potentially tumoricidal mechanisms involving human lymphocyte protein Tag7 and Hsp70.
Endogenous interleukin-18 modulates immune escape of murine melanoma cells by regulating the expression of Fas ligand and reactive oxygen intermediates.
Elevated serum levels of soluble Fas/APO-1 (CD95) in patients with hepatocellular carcinoma.
Resistance of infant leukemia with MLL rearrangement to tumor necrosis factor-related apoptosis-inducing ligand: a possible mechanism for poor sensitivity to antitumor immunity.
Study on blocking the leukemia immune escape after BMT by Fas-Fas ligand pathway.
Immunocytochemical detection of leukocyte-associated and apoptosis-related antigen expression in childhood brain tumors.
Amplification and expression of a decoy receptor for fas ligand (DcR3) in virus (EBV or HTLV-I) associated lymphomas.
Induction of apoptosis by IFNgamma in human neuroblastoma cell lines through the CD95/CD95L autocrine circuit.
Azidothymidine Sensitizes Primary Effusion Lymphoma Cells to Kaposi Sarcoma-Associated Herpesvirus-Specific CD4+ T Cell Control and Inhibits vIRF3 Function.
[Experimental study on blocking immune escape of leukemia cells in the recipient after bone marrow transplantation].

Immunophenotypic characterization of sphere-forming cells derived from the human renal cell carcinoma cell line 786-O.
SPI-CI and SPI-6 cooperate in the protection from effector cell-mediated cytotoxicity.
The granzyme B inhibitor, PI-9, is differentially expressed during placental development and up-regulated in hydatidiform moles.
Amyloid precursor-like protein 2 suppresses irradiation-induced apoptosis in Ewing sarcoma cells and is elevated in immune-evasive Ewing sarcoma cells.

Table A2-8, Cluster 7

Cluster 7 focuses on immune system evasion by the Epstein-Barr Virus (197)
Immunity and Immune Evasion Mechanisms of Epstein-Barr Virus.
MicroRNAs of Epstein-Barr Virus Attenuate T-Cell-Mediated Immune Control In Vivo.
Epstein-Barr virus immunossuppression of innate immunity mediated by phagocytes.
EBV, the human host, and the 7TM receptors: defense or offense?
Epstein-Barr virus: Biology and clinical disease.
[Regulation and evasion of host immune responses by Epstein-Barr virus].
CD4+ T cell responses in the immune control against latent infection by Epstein-Barr virus.
Immunological aspects of Epstein-Barr virus infection.
An update: Epstein-Barr virus and immune evasion via microRNA regulation.
The interplay between Epstein-Barr virus and B lymphocytes: implications for infection, immunity, and disease.
Immune Evasion by Epstein-Barr Virus.
A spectrum of clinical manifestations caused by host immune responses against Epstein-Barr virus infections.
The oncogenic role of Epstein-Barr virus-encoded microRNAs in Epstein-Barr virus-associated gastric carcinoma.
Differential methylation of Epstein-Barr virus latency promoters facilitates viral persistence in healthy seropositive individuals.
Epstein-Barr virus microRNAs in the pathogenesis of human cancers.
Manipulation of immune responses by Epstein-Barr virus.
Immune escape by Epstein-Barr virus associated malignancies.
Epstein-Barr Virus and Cancer.
Epstein-Barr Virus and the Origin of Myalgic Encephalomyelitis or Chronic Fatigue Syndrome.
Cutaneous lymphoproliferative disorders associated with Epstein-Barr virus infection: a clinical overview.
Inhibition of macrophage inflammatory protein-1 alpha production by Epstein-Barr virus.
Dynamic Epstein-Barr virus gene expression on the path to B-cell transformation.
Interplay among viral antigens, cellular pathways and tumor microenvironment in the pathogenesis of EBV-driven lymphomas.
New strategies and patent therapeutics in EBV-associated diseases.
A Temporal Proteomic Map of Epstein-Barr Virus Lytic Replication in B Cells.
Latency and lytic replication in Epstein-Barr virus-associated oncogenesis.
Innate Immune Recognition of EBV.
Epstein-Barr Virus miR-BART6-3p Inhibits the RIG-I Pathway.

The EBV immunoevasins vIL-10 and BNLF2a protect newly infected B cells from immune recognition and elimination.
The role of Epstein-Barr virus in epithelial malignancies.
The roles of EBV-encoded microRNAs in EBV-associated tumors.
A cluster of virus-encoded microRNAs accelerates acute systemic Epstein-Barr virus infection but does not significantly enhance virus-induced oncogenesis in vivo.
Multiple Viral microRNAs Regulate Interferon Release and Signaling Early during Infection with Epstein-Barr Virus.
Understanding the interplay between host immunity and Epstein-Barr virus in NPC patients.
Dithiocarbamates and viral IL-10 collaborate in the immortalization and evasion of immune response in EBV-infected human B lymphocytes.
The hide-and-seek game of the oncogenic Epstein-Barr virus-encoded EBNA1 protein with the immune system: An RNA G-quadruplex tale.
Epstein-Barr virus in systemic autoimmune diseases.
Immune Escape by Non-coding RNAs of the Epstein Barr Virus.
MicroRNAs of Epstein-Barr Virus Control Innate and Adaptive Antiviral Immunity.
Knockout of Epstein-Barr virus BPLF1 retards B-cell transformation and lymphoma formation in humanized mice.
Identification of multiple sclerosis-related genes regulated by EBV-encoded microRNAs in B cells.
Strategies of Epstein-Barr virus to evade innate antiviral immunity of its human host.
Epstein-Barr virus, rapamycin, and host immune responses.
Molecular Properties and Therapeutic Targeting of the EBV-Encoded Receptor BILF1.
Modes of infection and oncogenesis by the Epstein-Barr virus.
Epstein-Barr viral miRNAs inhibit antiviral CD4+ T cell responses targeting IL-12 and peptide processing.
Epstein-Barr virus, interleukin-10 and multiple sclerosis: A ménage à trois.
Human B cells on their route to latent infection--early but transient expression of lytic genes of Epstein-Barr virus.
Diversification and expansion of the EBV-reactive cytotoxic T lymphocyte repertoire following autologous haematopoietic stem cell transplant for multiple sclerosis.
Epstein barr virus encodes miRNAs to assist host immune escape.
Epigenetics of Epstein Barr virus - A review.
Epstein–barr virus vaccines.
Molecular biology of EBV in relationship to AIDS-associated oncogenesis.
Methylation of the Epstein-Barr virus genome in normal lymphocytes.
EBV-infected B cells in infectious mononucleosis: viral strategies for spreading in the B cell compartment and establishing latency.
[Epstein-Barr virus infection and lymphoproliferative disorders].
Stage-specific inhibition of MHC class I presentation by the Epstein-Barr virus BNLF2a protein during virus lytic cycle.
Transcribed B lymphocyte genes and multiple sclerosis risk genes are underrepresented in Epstein-Barr Virus hypomethylated regions.
Epstein-Barr virus infection alters cellular signal cascades in human nasopharyngeal epithelial cells.
MicroRNA and Other Non-Coding RNAs in Epstein-Barr Virus-Associated Cancers.
Methionine metabolism controls the B cell EBV epigenome and viral latency.

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Critical review of Epstein-Barr virus microRNAs relation with EBV-associated gastric cancer.
Epstein-Barr Virus BZLF1-Mediated Downregulation of Proinflammatory Factors Is Essential for Optimal Lytic Viral Replication.
Natural killer T cell strategies to combat Epstein-Barr virus infection.
Epstein-Barr Virus Early Protein BFRF1 Suppresses IFN-β Activity by Inhibiting the Activation of IRF3.
Multiple roles of LMP1 in Epstein-Barr virus induced immune escape.
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Table A2-9, Cluster 8

Cluster 8 focuses on escape mutants of the hepatitis B virus (560)
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Table A2-10, Cluster 9

Cluster 9 focuses on immune system evasion by the Lyme Disease Spirochete Borrelia burgdorferi (155)
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Author Correction: Immune evasion of Borrelia miyamotoi: CbiA, a novel outer surface protein exhibiting complement binding and inactivating properties.
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Genomic blueprint of a relapsing fever pathogen in 15th century Scandinavia.
B1b lymphocytes confer T cell-independent long-lasting immunity.

Table A2-11, Cluster 10

Cluster 10 focuses on mechanisms used by African Swine Fever Virus to evade host immune system response and promote viral replication (158)
The African swine fever virus I10L protein inhibits the NF-κB signaling pathway by targeting IKKβ.
African Swine Fever Virus F317L Protein Inhibits NF-κB Activation To Evade Host Immune Response and Promote Viral Replication.
Deletion of African Swine Fever Virus (ASFV) H240R Gene Attenuates the Virulence of ASFV by Enhancing NLRP3-Mediated Inflammatory Responses.
The African Swine Fever Virus with MGF360 and MGF505 Deleted Reduces the Apoptosis of Porcine Alveolar Macrophages by Inhibiting the NF-κB Signaling Pathway and Interleukin-1β.
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Modulation of Host Antiviral Innate Immunity by African Swine Fever Virus: A Review.
African Swine Fever Virus H240R Protein Inhibits the Production of Type I Interferon through Disrupting the Oligomerization of STING.
African Swine Fever Virus EP364R and C129R Target Cyclic GMP-AMP To Inhibit the cGAS-STING Signaling Pathway.
African Swine Fever Virus E120R Protein Inhibits Interferon Beta Production by Interacting with IRF3 To Block Its Activation.
African Swine Fever Virus MGF360-12L Inhibits Type I Interferon Production by Blocking the Interaction of Importin α and NF-κB Signaling Pathway.
Transcriptome Profiling in Swine Macrophages Infected with African Swine Fever Virus (ASFV) Uncovers the Complex and Close Relationship with Host.
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African swine fever virus MGF360-9L promotes viral replication by degrading the host protein HAX1.
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Proteome Analysis of Swine Macrophages after Infection with Two Genotype II African Swine Fever Isolates of Different Pathogenicity.

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African Swine Fever Virus L83L Negatively Regulates the cGAS-STING-Mediated IFN-I Pathway by Recruiting Tollip To Promote STING Autophagic Degradation.
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African swine fever virus M1249L protein antagonizes type I interferon production via suppressing phosphorylation of TBK1 and degrading IRF3.
African Swine Fever Virus MGF360-14L Negatively Regulates Type I Interferon Signaling by Targeting IRF3.
Identification and utility of innate immune system evasion mechanisms of ASFV.
African Swine Fever Virus Regulates Host Energy and Amino Acid Metabolism To Promote Viral Replication.
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African Swine Fever Virus Cysteine Protease pS273R Inhibits Type I Interferon Signaling by Mediating STAT2 Degradation.
African Swine Fever Virus pI215L Negatively Regulates cGAS-STING Signaling Pathway through Recruiting RNF138 to Inhibit K63-Linked Ubiquitination of TBK1.
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Exosomes mediate the antibody-resistant intercellular transmission of porcine epidemic diarrhea virus.

Table A2-12, Cluster 11

Cluster 11 focuses on HLA Class 1 expression, emphasizing immune system evasion by cancer resulting from HLA Class 1 loss (278)
Total loss of HLA class I expression on a melanoma cell line after growth in nude mice in absence of autologous antitumor immune response.
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Prognostic Value of HLA Class I in Patients with Hepatocellular Carcinoma.
Different mechanisms can lead to the same altered HLA class I phenotype in tumors.
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Targetless T cells in cancer immunotherapy.
High-resolution analysis of HLA class I alterations in colorectal cancer.
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Human Leukocyte Antigen Class I and Programmed Death-Ligand 1 Coexpression Is an Independent Poor Prognostic Factor in Adenocarcinoma of the Lung.
Regressing and progressing metastatic lesions: resistance to immunotherapy is predetermined by irreversible HLA class I antigen alterations.
High frequency of HLA-B44 allelic losses in human solid tumors.
HLA class I expression on the materno-fetal interface.
The Challenges of HLA Class I Loss in Cancer Immunotherapy: Facts and Hopes.
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Loss of heterozygosity at 6p21.3 underlying HLA class I downregulation in gastric cancer.
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The role of classical and non-classical HLA class I antigens in human tumors.
HLA class I antigen processing machinery defects in antitumor immunity and immunotherapy.
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Cytokeratin 8-MHC class I interactions: a potential novel immune escape phenotype by a lymph node metastatic carcinoma cell line.
Expression of HLA class I, beta(2)-microglobulin and HLA class II antigens in primary orbital melanoma.
The Escape of Cancer from T Cell-Mediated Immune Surveillance: HLA Class I Loss and Tumor Tissue Architecture.
HLA antigen and NK cell activating ligand expression in malignant cells: a story of loss or acquisition.
HLA expression in uveal melanoma: there is no rule without some exception.
Clinical significance of expression of cancer/testis antigen and down-regulation of HLA class-I in patients with stage I non-small cell lung cancer.
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Revisiting immune escape in colorectal cancer in the era of immunotherapy.

Down-regulation of HLA class I antigen-processing machinery components in esophageal squamous cell carcinomas: association with disease progression.
Adenovirus expressing β2-microglobulin recovers HLA class I expression and antitumor immunity by increasing T-cell recognition.
Down-regulation of HLA class I antigen processing molecules: an immune escape mechanism of renal cell carcinoma?
Distribution of HLA class I altered phenotypes in colorectal carcinomas: high frequency of HLA haplotype loss associated with loss of heterozygosity in chromosome region 6p21.
Targeting HLA class I expression to increase tumor immunogenicity.
LOH at 6p21.3 region and HLA class I altered phenotypes in bladder carcinomas.
Multiple mechanisms underlie HLA dysregulation in cervical cancer.
Mechanisms of loss of HLA class I expression on colorectal tumor cells.
Molecular mechanisms of HLA class I-mediated immune evasion of human tumors and their role in resistance to immunotherapies.
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MHC/HLA Class I Loss in Cancer Cells.
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HLA class I alterations in breast carcinoma are associated with a high frequency of the loss of heterozygosity at chromosomes 6 and 15.
Genome-wide differential genetic profiling characterizes colorectal cancers with genetic instability and specific routes to HLA class I loss and immune escape.
Copy Neutral LOH Affecting the Entire Chromosome 6 Is a Frequent Mechanism of HLA Class I Alterations in Cancer.
HLA Class I Downregulation in Progressing Metastases of Melanoma Patients Treated With Ipilimumab.
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Comparison of surface HLA class I levels in squamous cell carcinoma cell lines of the head and neck.

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Role of Human Leukocyte Antigen System as A Predictive Biomarker for Checkpoint-Based Immunotherapy in Cancer Patients.
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Down-regulation of locus-specific human lymphocyte antigen class I expression in Epstein-Barr virus-associated gastric cancer: implication for viral-induced immune evasion.
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The SPPL3-Defined Glycosphingolipid Repertoire Orchestrates HLA Class I-Mediated Immune Responses.
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Identification of a lung cancer antigen evading CTL attack due to loss of human leukocyte antigen (HLA) class I expression.
Human leukocyte antigen class II expression is a good prognostic factor in adult T-cell leukemia/lymphoma.
Immune escape associated with functional defects in antigen-processing machinery in head and neck cancer.
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Immunological and clinical significance of HLA class I antigen processing machinery component defects in malignant cells.
The low rate of HLA class I molecules on the human embryonic stem cell line HS293 is associated with the APM components' expression level.
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c-Myc and EBV-LMP1: two opposing regulators of the HLA class I antigen presentation machinery in epithelial cells.
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Tumor Escape Phenotype in Bladder Cancer Is Associated with Loss of HLA Class I Expression, T-Cell Exclusion and Stromal Changes.
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Table A2-13, Cluster 12

Cluster 12 focuses on immune escape of the SARS-CoV-2 Omicron variant (510)
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Vaccination deep into a pandemic wave potential mechanisms for a "third wave" and the impact of vaccination.

Table A2-14, Cluster 13

Cluster 13 focuses on hepatocellular carcinoma, emphasizing the potential role of immunotherapies in countering tumor microenvironment-mediated immune system evasion (222)
From bench to bed: the tumor immune microenvironment and current immunotherapeutic strategies for hepatocellular carcinoma.
Current immunotherapeutic strategies in hepatocellular carcinoma: recent advances and future directions.
Immunotherapy for hepatocellular carcinoma.
Immunotherapy of hepatocellular carcinoma.
Immunotherapeutic Approaches for Treating Hepatocellular Carcinoma.
Tumor microenvironment-mediated immune evasion in hepatocellular carcinoma.
New Therapeutics for HCC: Does Tumor Immune Microenvironment Matter?
Targeting Immune Cells in the Tumor Microenvironment of HCC: New Opportunities and Challenges.
Immunological Microenvironment of Hepatocellular Carcinoma and Its Clinical Implication.
Immunotherapy in hepatocellular carcinoma: Primed to make a difference?
[Research progress of AFP in the diagnosis and therapy of hepatocellular carcinoma].
Recent progress in understanding mitokines as diagnostic and therapeutic targets in hepatocellular carcinoma.
The Mechanism and Clinical Significance of Circular RNAs in Hepatocellular Carcinoma.
Epigenetic mechanisms of liver tumor resistance to immunotherapy.
Hepatocellular Carcinoma Immune Landscape and the Potential of Immunotherapies.
PIGU promotes hepatocellular carcinoma progression through activating NF-κB pathway and increasing immune escape.
Immune responses in hepatocellular carcinoma.
Immunotherapy for Hepatocellular Carcinoma: Current Status and Future Prospects.
Integrated bioinformatics analyses of key genes involved in hepatocellular carcinoma immunosuppression.
Elevated MPP6 expression correlates with an unfavorable prognosis, angiogenesis and immune evasion in hepatocellular carcinoma.

Immunological landscape and immunotherapy of hepatocellular carcinoma.
SEPHS1 promotes SMAD2/3/4 expression and hepatocellular carcinoma cells invasion.
Circular RNA circTRIM33-12 acts as the sponge of MicroRNA-191 to suppress hepatocellular carcinoma progression.
HERC2 promotes inflammation-driven cancer stemness and immune evasion in hepatocellular carcinoma by activating STAT3 pathway.
Six-Transmembrane Epithelial Antigen of Prostate 4: An Indicator of Prognosis and Tumor Immunity in Hepatocellular Carcinoma.
Dual role of ANGPTL8 in promoting tumor cell proliferation and immune escape during hepatocarcinogenesis.
Annexin A2 promotion of hepatocellular carcinoma tumorigenesis via the immune microenvironment.
Immunomodulatory TGF-β Signaling in Hepatocellular Carcinoma.
Immunotherapy for Hepatocellular Carcinoma: New Prospects for the Cancer Therapy.
Glycolysis-related gene dihydrolipoamide acetyltransferase promotes poor prognosis in hepatocellular carcinoma through the Wnt/β-catenin and PI3K/Akt signaling pathways.
Role of Noncoding RNAs in the Tumor Immune Microenvironment of Hepatocellular Carcinoma.
Highly expressed carbohydrate sulfotransferase 11 correlates with unfavorable prognosis and immune evasion of hepatocellular carcinoma.
Immune checkpoint blockade in hepatocellular carcinoma: current progress and future directions.
Long non-coding RNA LINC00992 promotes hepatocellular carcinoma cell proliferation, metastasis, and invasiveness by downregulating MicroRNA miR-361-5p expression to increase levels of the transcription factor twist1.
Xanthine dehydrogenase as a prognostic biomarker related to tumor immunology in hepatocellular carcinoma.
Elevated FBXL6 expression in hepatocytes activates VRK2-transketolase-ROS-mTOR-mediated immune evasion and liver cancer metastasis in mice.
The Role of Immunotherapy in a Tolerogenic Environment: Current and Future Perspectives for Hepatocellular Carcinoma.
Radiation therapy in the era of immune treatment for hepatocellular carcinoma.
Immunotherapy and the Combination with Targeted Therapies for Advanced Hepatocellular Carcinoma.
TKIs in combination with immunotherapy for hepatocellular carcinoma.
Immunotherapy in hepatocellular carcinoma.
Mitochondrial TSPO Promotes Hepatocellular Carcinoma Progression through Ferroptosis Inhibition and Immune Evasion.
Combinatorial targeting of immune checkpoints and epigenetic regulators for hepatocellular carcinoma therapy.
An Integrated Analysis of the Identified PRPF19 as an Onco-immunological Biomarker Encompassing the Tumor Microenvironment, Disease Progression, and Prognoses in Hepatocellular Carcinoma.
A comprehensive study based on exosome-related immunosuppression genes and tumor microenvironment in hepatocellular carcinoma.
Insights into an Immunotherapeutic Approach to Combat Multidrug Resistance in Hepatocellular Carcinoma.
Immunotherapies for hepatocellular carcinoma.
Novel risk model based on angiogenesis-related lncRNAs for prognosis prediction of hepatocellular carcinoma.

The unique characteristic in peripheral immune cells in patients with advanced hepatocellular carcinoma.
Loss of SIRT5 promotes bile acid-induced immunosuppressive microenvironment and hepatocarcinogenesis.
Cooperation Between Distinct Cancer Driver Genes Underlies Intertumor Heterogeneity in Hepatocellular Carcinoma.
Functional long non-coding RNAs in hepatocellular carcinoma.
Upregulation of B7-H1 expression is associated with macrophage infiltration in hepatocellular carcinomas.
Epigenetic modification-related mechanisms of hepatocellular carcinoma resistance to immune checkpoint inhibition.
Development of Prognostic Evaluation Model to Predict the Overall Survival and Early Recurrence of Hepatocellular Carcinoma.
Indoleamine 2,3-dioxygenase: As a potential prognostic marker and immunotherapeutic target for hepatocellular carcinoma.
Immunotherapy for targeting cancer stem cells in hepatocellular carcinoma.
Sorafenib combined with STAT3 knockdown triggers ER stress-induced HCC apoptosis and cGAS-STING-mediated anti-tumor immunity.
Liver immunotolerance and hepatocellular carcinoma: Patho-physiological mechanisms and therapeutic perspectives.
Significant correlation between HSPA4 and prognosis and immune regulation in hepatocellular carcinoma.
The yin and yang of evasion and immune activation in HCC.
The clinical and prognostic significance of CD14(+)HLA-DR(-/low) myeloid-derived suppressor cells in hepatocellular carcinoma patients receiving radiotherapy.
HSP70-eIF4G Interaction Promotes Protein Synthesis and Cell Proliferation in Hepatocellular Carcinoma.
Large scale identification of human hepatocellular carcinoma-associated antigens by autoantibodies.
Recent advances in immunotherapy for hepatocellular carcinoma.
Emerging roles and the regulation of aerobic glycolysis in hepatocellular carcinoma.
DCK is a promising prognostic biomarker and correlated with immune infiltrates in hepatocellular carcinoma.
Clinical Significance of Glycolytic Metabolic Activity in Hepatocellular Carcinoma.
Prognostic stratification based on m(5)C regulators acts as a novel biomarker for immunotherapy in hepatocellular carcinoma.
HIF inhibitor 32-134D eradicates murine hepatocellular carcinoma in combination with anti-PD1 therapy.
ERRFI1 induces apoptosis of hepatocellular carcinoma cells in response to tryptophan deficiency.
Immunogenic landscape and risk score prediction based on unfolded protein response (UPR)-related molecular subtypes in hepatocellular carcinoma.
Prognostic and Immunological Significance of FUNDC1 in Hepatocellular Carcinoma: A Study on TCGA Mining.
Novel hypoxia features with appealing implications in discriminating the prognosis, immune escape and drug responses of 947 hepatocellular carcinoma patients.
Immune checkpoint inhibitors for hepatocellular carcinoma.
Tumor-Intrinsic Mechanisms Regulating Immune Exclusion in Liver Cancers.
Immunomodulation in hepatocellular cancer.

SLC7A2 deficiency promotes hepatocellular carcinoma progression by enhancing recruitment of myeloid-derived suppressors cells.
Next Generation of Preclinical Liver Cancer Models.
Evaluation of the possible association of PDCD-1 and LAG3 gene polymorphisms with hepatocellular carcinoma risk.
MicroRNAs: Regulators of immunological reactions in hepatocellular carcinoma.
Comprehensive analysis of the tumor-promoting effect and immune infiltration correlation MAZ from pan-cancer to hepatocellular carcinoma.
MAT1A Suppression by the CTBP1/HDAC1/HDAC2 Transcriptional Complex Induces Immune Escape and Reduces Ferroptosis in Hepatocellular Carcinoma.
LOXL2 serves as a prognostic biomarker for hepatocellular carcinoma by mediating immune infiltration and vasculogenic mimicry.
Clinico-histological and molecular features of hepatocellular carcinoma from nonalcoholic fatty liver disease.
M7G methylated core genes (METTL1 and WDR4) and associated RNA risk signatures are associated with prognosis and immune escape in HCC.
Construction and Validation of an Epigenetic Regulator Signature as A Novel Biomarker For Prognosis, Immunotherapy, And Chemotherapy In Hepatocellular Carcinoma.
Construction of a novel immune-related lncRNA signature and its potential to predict the immune status of patients with hepatocellular carcinoma.
4Mu Decreases CD47 Expression on Hepatic Cancer Stem Cells and Primes a Potent Antitumor T Cell Response Induced by Interleukin-12.
Immunotherapy for hepatocellular carcinoma.
A new perspective on the immune escape mechanism in HCC: onco-foetal reprogramming.
Non-coding RNA-associated competitive endogenous RNA regulatory networks: Novel diagnostic and therapeutic opportunities for hepatocellular carcinoma.
Current Strategies for the Treatment of Hepatocellular Carcinoma by Modulating the Tumor Microenvironment via Nano-Delivery Systems: A Review.
Signature construction and molecular subtype identification based on immune-related genes for better prediction of prognosis in hepatocellular carcinoma.
Role of Virus-Related Chronic Inflammation and Mechanisms of Cancer Immune-Suppression in Pathogenesis and Progression of Hepatocellular Carcinoma.
Histone deacetylase 2 regulates STAT1-dependent upregulation of atypical chemokine receptor 3 to induce M2 macrophage migration and immune escape in hepatocellular carcinoma.
Interferon Gamma-Induced Interferon Regulatory Factor 1 Activates Transcription of HHLA2 and Induces Immune Escape of Hepatocellular Carcinoma Cells.
Prospect of the use of checkpoint inhibitors in hepatocellular cancer treatments.
Hepatocellular Carcinoma: Current Therapeutic Algorithm for Localized and Advanced Disease.
The Significance of Circulating Tumor Cells in Patients with Hepatocellular Carcinoma: Real-Time Monitoring and Moving Targets for Cancer Therapy.
Identification of m6A- and ferroptosis-related lncRNA signature for predicting immune efficacy in hepatocellular carcinoma.
Immunotherapy in hepatocellular carcinoma: the complex interface between inflammation, fibrosis, and the immune response.
High numbers of myeloid derived suppressor cells in peripheral blood and ascitic fluid of cirrhotic and HCC patients.
Prognostic Implication of a Novel Metabolism-Related Gene Signature in Hepatocellular Carcinoma.

Hepatocellular carcinoma: Prospects for natural killer cell immunotherapy.
Crosstalk between 5-methylcytosine and N(6)-methyladenosine machinery defines disease progression, therapeutic response and pharmacogenomic landscape in hepatocellular carcinoma.
Angiogenic inflammation and formation of necrosis in the tumor microenvironment influence patient survival after radical surgery for de novo hepatocellular carcinoma in non-cirrhosis.
Biology, Significance and Immune Signaling of Mucin 1 in Hepatocellular Carcinoma.
CCL15 Recruits Suppressive Monocytes to Facilitate Immune Escape and Disease Progression in Hepatocellular Carcinoma.
Protein glycosylation alterations in hepatocellular carcinoma: function and clinical implications.
Hepatic stellate cells: central modulators of hepatic carcinogenesis.
Immunotherapies for hepatocellular carcinoma and intrahepatic cholangiocarcinoma: Current and developing strategies.
Establishment of a lncRNA-Based Prognostic Gene Signature Associated With Altered Immune Responses in HCC.
A Novel hepatocellular carcinoma specific hypoxic related signature for predicting prognosis and therapeutic responses.
Elevated FBXW10 drives hepatocellular carcinoma tumorigenesis via AR-VRK2 phosphorylation-dependent GAPDH ubiquitination in male transgenic mice.
Metabolic Reprogramming of HCC: A New Microenvironment for Immune Responses.
MARCKS on Tumor-Associated Macrophages is Correlated with Immune Infiltrates and Poor Prognosis in Hepatocellular Carcinoma.
Role of TGFβ3-Smads-Sp1 axis in DcR3-mediated immune escape of hepatocellular carcinoma.
Emerging Role of Cancer-Associated Fibroblasts in Progression and Treatment of Hepatocellular Carcinoma.
Molecular subtype identification and signature construction based on Golgi apparatus-related genes for better prediction prognosis and immunotherapy response in hepatocellular carcinoma.
Targeting HNRNPM Inhibits Cancer Stemness and Enhances Antitumor Immunity in Wnt-activated Hepatocellular Carcinoma.
The TGF-β Pathway: A Pharmacological Target in Hepatocellular Carcinoma?
Intrinsic activation of β-catenin signaling by CRISPR/Cas9-mediated exon skipping contributes to immune evasion in hepatocellular carcinoma.
Down-regulation of beta-centractin might be involved in dendritic cells dysfunction and subsequent hepatocellular carcinoma immune escape: a proteomic study.
A bispecific antibody targeting GPC3 and CD47 induced enhanced antitumor efficacy against dual antigen-expressing HCC.
An Immune Gene Expression Signature Associated With Development of Human Hepatocellular Carcinoma Identifies Mice That Respond to Chemopreventive Agents.
B7-H1 up-regulated expression in human hepatocellular carcinoma tissue: correlation with tumor interleukin-10 levels.
An Immunogram for an Individualized Assessment of the Antitumor Immune Response in Patients With Hepatocellular Carcinoma.
Identification of prognostic markers for hepatocellular carcinoma based on the epithelial-mesenchymal transition-related gene BIRC5.
A novel risk score based on immune-related genes for hepatocellular carcinoma as a reliable prognostic biomarker and correlated with immune infiltration.
[Changes in the immune function of dendritic cells (DC) derived from HBV-related hepatocellular carcinoma (HCC) patient's peripheral blood monocytes (PBMC) pulsed with tumor antigen].

HERC5 is a prognostic biomarker for post-liver transplant recurrent human hepatocellular carcinoma.
A novel immune classification reveals distinct immune escape mechanism and genomic alterations: implications for immunotherapy in hepatocellular carcinoma.
The dual checkpoint blockade in unresectable hepatocellular carcinoma: opportunities emerging in clinical trials.
High Indoleamine 2,3-Dioxygenase Expression along with Low Bridging Integrator-1 Expression in Hepatocellular Carcinoma Patients.
Inflamed and non-inflamed classes of HCC: a revised immunogenomic classification.
Nonalcoholic steatohepatitis-related hepatocellular carcinoma: pathogenesis and treatment.
M2-like tumor-associated macrophage-related biomarkers to construct a novel prognostic signature, reveal the immune landscape, and screen drugs in hepatocellular carcinoma.
Glucose metabolism reprogramming promotes immune escape of hepatocellular carcinoma cells.
Spatial transcriptomics analysis of neoadjuvant cabozantinib and nivolumab in advanced hepatocellular carcinoma identifies independent mechanisms of resistance and recurrence.
Heterogeneous immunogenomic features and distinct escape mechanisms in multifocal hepatocellular carcinoma.
Link of sorafenib resistance with the tumor microenvironment in hepatocellular carcinoma: Mechanistic insights.
Development and Verification of a Combined Immune- and Metabolism-Related Prognostic Signature for Hepatocellular Carcinoma.
Loss of CD155 expression predicts poor prognosis in hepatocellular carcinoma.
Promotion effects of DEHP on hepatocellular carcinoma models: up-regulation of PD-L1 by activating the JAK2/STAT3 pathway.
Crocetin imparts antiproliferative activity via inhibiting STAT3 signaling in hepatocellular carcinoma.
Intrahepatic metastases may be specific to hepatocellular carcinoma due to the coagulation and fibrinolytic systems (Review).
Therapeutic modulators of hepatic stellate cells for hepatocellular carcinoma.
PKCα/ZFP64/CSF1 axis resets the tumor microenvironment and fuels anti-PD1 resistance in hepatocellular carcinoma.
Overcoming resistance to immune checkpoint inhibitors in hepatocellular carcinoma: Challenges and opportunities.
Possible mechanisms associated with immune escape and apoptosis on anti-hepatocellular carcinoma effect of Mu Ji Fang granules.
Liver Cancer Cell of Origin, Molecular Class, and Effects on Patient Prognosis.
Early Hepatic Lesions Display Immature Tertiary Lymphoid Structures and Show Elevated Expression of Immune Inhibitory and Immunosuppressive Molecules.
Dual Targeting of Sorafenib-Resistant HCC-Derived Cancer Stem Cells.
Molecular biology of liver cancer stem cells.
Blocking siglec-10(hi) tumor-associated macrophages improves anti-tumor immunity and enhances immunotherapy for hepatocellular carcinoma.
Noninvasive evaluation of neutrophil extracellular traps signature predicts clinical outcomes and immunotherapy response in hepatocellular carcinoma.
TNF-α-mediated epithelial-to-mesenchymal transition regulates expression of immune checkpoint molecules in hepatocellular carcinoma.
Genes responsible for the characteristics of primary cultured invasive phenotype hepatocellular carcinoma cells.

Oncogenic miR-93-5p/Gal-9 axis drives CD8 (+) T-cell inactivation and is a therapeutic target for hepatocellular carcinoma immunotherapy.
A cuproptosis random forest cox score model-based evaluation of prognosis, mutation characterization, immune infiltration, and drug sensitivity in hepatocellular carcinoma.
Identification of a novel signature based on macrophage-related marker genes to predict prognosis and immunotherapeutic effects in hepatocellular carcinoma.
Receptor-Interacting Protein Kinase 3 Deficiency Recruits Myeloid-Derived Suppressor Cells to Hepatocellular Carcinoma Through the Chemokine (C-X-C Motif) Ligand 1-Chemokine (C-X-C Motif) Receptor 2 Axis.
Progress in clinical oncolytic virus-based therapy for hepatocellular carcinoma.
DNASE1L3 as a Prognostic Biomarker Associated with Immune Cell Infiltration in Cancer.
Modulation of chemotactic and pro-inflammatory activities of endothelial progenitor cells by hepatocellular carcinoma.
A novel hepatocellular carcinoma-specific mTORC1-related signature for anticipating prognosis and immunotherapy.
CCL23 in Balancing the Act of Endoplasmic Reticulum Stress and Antitumor Immunity in Hepatocellular Carcinoma.
Gut Microbiota Promotes Obesity-Associated Liver Cancer through PGE(2)-Mediated Suppression of Antitumor Immunity.
Role of 5-methylcytosine in determining the prognosis, tumor microenvironment, and applicability of precision medicine in patients with hepatocellular carcinoma.
Comprehensive Analysis of HHLA2 as a Prognostic Biomarker and Its Association With Immune Infiltrates in Hepatocellular Carcinoma.
A cellular senescence-related classifier based on a tumorigenesis- and immune infiltration-guided strategy can predict prognosis, immunotherapy response, and candidate drugs in hepatocellular carcinoma.
Development of a Costimulatory Molecule Signature to Predict Prognosis, Immune Landscape, and Response to Immune Therapy for Hepatocellular Carcinoma.
Insights on the CXCL12-CXCR4 axis in hepatocellular carcinoma carcinogenesis.
Profiling of hepatocellular carcinoma neoantigens reveals immune microenvironment and clonal evolution related patterns.
High expression of B7-H2 or B7-H3 is associated with poor prognosis in hepatocellular carcinoma.
Retinoblastoma protein potentiates the innate immune response in hepatocytes: significance for hepatocellular carcinoma.
Deregulated bile acids may drive hepatocellular carcinoma metastasis by inducing an immunosuppressive microenvironment.
Research on Predicting the Occurrence of Hepatocellular Carcinoma Based on Notch Signal-Related Genes Using Machine Learning Algorithms.
Role of β-Catenin Activation in the Tumor Immune Microenvironment and Immunotherapy of Hepatocellular Carcinoma.
Hepatic Stellate Cell Modulates the Immune Microenvironment in the Progression of Hepatocellular Carcinoma.
Cystathionine β-synthase mediated PRRX2/IL-6/STAT3 inactivation suppresses Tregs infiltration and induces apoptosis to inhibit HCC carcinogenesis.
Over-expression of MiR-122 promotes apoptosis of hepatocellular carcinoma via targeting TLR4.
Overexpression of proteinase inhibitor 9 is associated with poor prognosis in human hepatocellular carcinoma and with proliferation and apoptosis in HepG2 cells in vitro.

Homotypic Cell Membrane-Cloaked Biomimetic Nanocarrier for the Targeted Chemotherapy of Hepatocellular Carcinoma.
Hepatitis B-Induced IL8 Promotes Hepatocellular Carcinoma Venous Metastasis and Intrahepatic Treg Accumulation.
Analysis of gene expression profiles as a tool to uncover tumor markers of liver cancer progression in a rat model.
The Role of Cancer-Associated Fibroblasts in Hepatocellular Carcinoma and the Value of Traditional Chinese Medicine Treatment.
Unique molecular characteristics of NAFLD-associated liver cancer accentuate β-catenin/TNFRSF19-mediated immune evasion.
Alpha fetoprotein promotes polarization of macrophages towards M2-like phenotype and inhibits macrophages to phagocytize hepatoma cells.
A RIPK3-independent role of MLKL in suppressing parthanatos promotes immune evasion in hepatocellular carcinoma.
Alpha-fetoprotein impairs APC function and induces their apoptosis.
The Identification and Validation of Two Heterogenous Subtypes and a Risk Signature Based on Ferroptosis in Hepatocellular Carcinoma.
Extracellular Vesicle-Based Therapeutic Targeting of β-Catenin to Modulate Anticancer Immune Responses in Hepatocellular Cancer.
3,5,3'-Triiodothyronine-Loaded Liposomes Inhibit Hepatocarcinogenesis Via Inflammation-Associated Macrophages.
Phase I study of MRX34, a liposomal miR-34a mimic, administered twice weekly in patients with advanced solid tumors.
Long non-coding RNA cox-2 prevents immune evasion and metastasis of hepatocellular carcinoma by altering M1/M2 macrophage polarization.
MET Inhibitors Promote Liver Tumor Evasion of the Immune Response by Stabilizing PDL1.
Chemical and genetic inhibition of STAT3 sensitizes hepatocellular carcinoma cells to sorafenib induced cell death.
Expression of TNF-related apoptosis-inducing ligand in human hepatocellular carcinoma.
Multi-omics Analysis of Microenvironment Characteristics and Immune Escape Mechanisms of Hepatocellular Carcinoma.
Dissecting spatial heterogeneity and the immune-evasion mechanism of CTCs by single-cell RNA-seq in hepatocellular carcinoma.
Suppression of toll-like receptor 2 expression inhibits the bioactivity of human hepatocellular carcinoma.
Intratumoral CD45(+)CD71(+) erythroid cells induce immune tolerance and predict tumor recurrence in hepatocellular carcinoma.
The portrait of liver cancer is shaped by mitochondrial genetics.
H(2)S suppresses indoleamine 2, 3-dioxygenase 1 and exhibits immunotherapeutic efficacy in murine hepatocellular carcinoma.
Granulin-epithelin precursor interacts with 78-kDa glucose-regulated protein in hepatocellular carcinoma.
In vivo assessment of angioarchitecture and microcirculation in experimental liver cancer: a new model in rats.
Loss of CD95 expression is linked to most but not all p53 mutants in European hepatocellular carcinoma.

Regulation of alpha-fetoprotein by nuclear factor-kappaB protects hepatocytes from tumor necrosis factor-alpha cytotoxicity during fetal liver development and hepatic oncogenesis.
Increased levels of interleukin-10 in serum from patients with hepatocellular carcinoma correlate with profound numerical deficiencies and immature phenotype of circulating dendritic cell subsets.
[Relation between changes of dendritic cell function and down-regulation of beta-centractin in hepatocellular carcinoma].
Alcohol reshapes a liver premetastatic niche for cancer by extra- and intrahepatic crosstalk-mediated immune evasion.
The role of miR-155 on liver diseases by modulating immunity, inflammation and tumorigenesis.
Multi-pathway network analysis of mammalian epithelial cell responses in inflammatory environments.
The Roles of circRNAs in Liver Cancer Immunity.
CCL23 suppresses liver cancer progression through the CCR1/AKT/ESR1 feedback loop.
Salvage therapy for hepatocellular carcinoma with thalidomide.
C-C chemokine receptor type 2 promotes epithelial-to-mesenchymal transition by upregulating matrix metalloproteinase-2 in human liver cancer.
WITHDRAWN:PPARα Suppresses PD-L1-Mediated Immune Escape by Down-regulating SPP1 in Human Hepatocellular Carcinoma.
Glycolysis in Chronic Liver Diseases: Mechanistic Insights and Therapeutic Opportunities.
ALDH2 Hampers Immune Escape in Liver Hepatocellular Carcinoma through ROS/Nrf2-mediated Autophagy.

Table A2-15, Cluster 14

Cluster 14 focuses on Non-Small-Cell Lung Cancer, emphasizing regulation of PD-L1 expression on tumor cells to minimize tumor immune evasion which occurs by inhibiting functional activity of cytotoxic lymphocytes (350)
Potential Role of Tumor-Derived Exosomes in Non-Small-Cell Lung Cancer in the Era of Immunotherapy (350)
Development of PD-1/PD-L1 Pathway in Tumor Immune Microenvironment and Treatment for Non-Small Cell Lung Cancer.
Mechanisms of immune evasion and current status of checkpoint inhibitors in non-small cell lung cancer.
Targeting the PD-1/PD-L1 axis for the treatment of non-small-cell lung cancer.
Non-small cell lung cancer in China.
An Update on Predictive Biomarkers for Treatment Selection in Non-Small Cell Lung Cancer.
Lung cancer: potential targets for immunotherapy.
Implementation of immunotherapy in the treatment of advanced non-small cell lung cancer (NSCLC).
Emerging immunotherapies in the treatment of non-small cell lung cancer (NSCLC): the role of immune checkpoint inhibitors.
Current immune therapeutic strategies in advanced or metastatic non-small cell lung cancer.
[Recent Advances in Immunotherapy for Non-Small Cell Lung Cancer].
Immunotherapy in non-small-cell lung cancer: a bridge between research and clinical practice.
PD-1/PD-L1 immune checkpoint blockade in non-small cell lung cancer.
PD-1 and PD-L1 as immunotherapy targets and biomarkers in non-small cell lung cancer.
SNF5 promotes cell proliferation and immune evasion in non-small cell lung cancer.

Immune checkpoint inhibitors: the new frontier in non-small-cell lung cancer treatment.
SChLAP1 contributes to non-small cell lung cancer cell progression and immune evasion through regulating the AUF1/PD-L1 axis.
The progress and confusion of anti-PD1/PD-L1 immunotherapy for patients with advanced non-small cell lung cancer.
Expression landscapes in non-small cell lung cancer shaped by the thyroid transcription factor 1.
The B7-H4 gene induces immune escape partly via upregulating the PD-1/Stat3 pathway in non-small cell lung cancer.
LINC00665 knockdown confers sensitivity in irradiated non-small cell lung cancer cells through the miR-582-5p/UCHL3/AhR axis.
Current status of immunotherapy for non-small cell lung cancer.
[Advances of PD-1/PD-L1 signaling pathway in immune escape and treatment for non-small cell lung cancer].
Mechanistic Insights of Anti-Immune Evasion by Nobiletin through Regulating miR-197/STAT3/PD-L1 Signaling in Non-Small Cell Lung Cancer (NSCLC) Cells.
Immunotherapy for ALK-Rearranged Non-Small Cell Lung Cancer: Challenges Inform Promising Approaches.
Elevated circASCC3 limits antitumor immunity by sponging miR-432-5p to upregulate C5a in non-small cell lung cancer.
Biomarkers of resistance to immune checkpoint inhibitors in non-small-cell lung cancer: myth or reality?
Chemotherapy-induced immunomodulation in non-small-cell lung cancer: a rationale for combination chemoimmunotherapy.
The significance of Siglec-15 expression in resectable non-small cell lung cancer.
Estradiol initiates the immune escape of non-small cell lung cancer cells via ERβ/SIRT1/FOXO3a/PD-L1 axis.
MUC3A induces PD-L1 and reduces tyrosine kinase inhibitors effects in EGFR-mutant non-small cell lung cancer.
[Expression of PD-1 and PD-L1 in the peripheral blood of advanced non-small-cell lung cancer patients and its implications].
KLHL18 inhibits the proliferation, migration, and invasion of non-small cell lung cancer by inhibiting PI3K/PD-L1 axis activity.
CDK7 inhibitor THZ1 enhances antiPD-1 therapy efficacy via the p38α/MYC/PD-L1 signaling in non-small cell lung cancer.
Unravelling the Role of miR-20b-5p, CCNB1, HMGA2 and E2F7 in Development and Progression of Non-Small Cell Lung Cancer (NSCLC).
Circ_0092012 knockdown restrains non-small cell lung cancer progression by inhibiting cell malignant phenotype and immune escape through microRNA-635/programmed death ligand 1 axis.
Circular RNA circFGFR1 promotes progression and anti-PD-1 resistance by sponging miR-381-3p in non-small cell lung cancer cells.
CYP4F2-Catalyzed Metabolism of Arachidonic Acid Promotes Stromal Cell-Mediated Immunosuppression in Non-Small Cell Lung Cancer.
Diagnostic and Therapeutic Implications of microRNAs in Non-Small Cell Lung Cancer.
Targeting YAP/TAZ in Combination with PD-L1 Immune Checkpoint Inhibitors in Non-Small Cell Lung Cancer (NSCLC).
Advances in immunotherapy for non-small cell lung cancer.

A Review About Pembrolizumab in First-Line Treatment of Advanced NSCLC: Focus on KEYNOTE Studies.
Programmed Cell Death Protein 1/Programmed Cell Death Protein Ligand 1 Immunosuppressants in Advanced Non-Small Cell Lung Cancer Research Progress in Treatment.
CircDENND2D Inhibits PD-L1-Mediated Non-Small Cell Lung Cancer Metastasis and Immune Escape by Regulating miR-130b-3p/STK11 Axis.
Prospects and feasibility of synergistic therapy with radiotherapy, immunotherapy, and DNA methyltransferase inhibitors in non-small cell lung cancer.
CircFOXK2 enhances tumorigenesis and immune evasion in non-small cell lung cancer by miR-485-5p/PD-L1 axis.
Current Immunotherapeutic Strategies Targeting the PD-1/PD-L1 Axis in Non-Small Cell Lung Cancer with Oncogenic Driver Mutations.
Combination of immunotherapy with chemotherapy and radiotherapy in lung cancer: is this the beginning of the end for cancer?
Effectiveness of immunological agents in non-small cell lung cancer.
Combination immunotherapy strategies in advanced non-small cell lung cancer (NSCLC): Does biological rationale meet clinical needs?
Exploring the potential of immuno-oncology-based treatment for patients with non-small cell lung cancer.
Targeting Immunometabolism Mediated by CD73 Pathway in EGFR-Mutated Non-small Cell Lung Cancer: A New Hope for Overcoming Immune Resistance.
Different biomarkers in non-small cell lung cancer in blood vessel invasion.
[Immunotherapy in non-small cell lung cancer: evolution of knowledge and clinical advances].
Clinical significance of programmed death-1 ligand-1 expression in patients with non-small cell lung cancer: a 5-year-follow-up study.
PD-L1 and epithelial-mesenchymal transition in circulating tumor cells from non-small cell lung cancer patients: A molecular shield to evade immune system?
Immune checkpoint modulation for non-small cell lung cancer.
MicroRNA-138-5p Suppresses Non-small Cell Lung Cancer Cells by Targeting PD-L1/PD-1 to Regulate Tumor Microenvironment.
Therapeutic vaccines in non-small cell lung cancer.
[β-Catenin Expression in Non-Small Cell Lung Cancer and Therapeutic Effect of Immune Checkpoint Inhibitors].
Tumor Immune Microenvironment and Immunotherapy in Non-Small Cell Lung Cancer: Update and New Challenges.
Immunotherapy for Advanced Lung Cancer.
The Combination of New Immunotherapy and Radiotherapy: A N ew Potential Treatment for Locally Advanced Non-Small Cell Lung Cancer.
EGFR-Mutated Non-Small Cell Lung Cancer and Resistance to Immunotherapy: Role of the Tumor Microenvironment.
Immunotherapy in Non-Small Cell Lung Cancer: Biological Principles and Future Opportunities.
Hyperprogressive disease in non-small cell lung cancer after PD-1/PD-L1 inhibitors immunotherapy: underlying killer.
Programmed death-1 upregulation is correlated with dysfunction of tumor-infiltrating CD8+ T lymphocytes in human non-small cell lung cancer.
Immunotherapy in extensive small cell lung cancer.

Immunomodulatory functions of the circ_001678/miRNA-326/ZEB1 axis in non-small cell lung cancer via the regulation of PD-1/PD-L1 pathway.
Pembrolizumab in the treatment of metastatic non-small-cell lung cancer: patient selection and perspectives.
Clinical Characterization of the Expression of Insulin-Like Growth Factor Binding Protein 1 and Tumor Immunosuppression Caused by Ferroptosis of Neutrophils in Non-Small Cell Lung Cancer.
Increased expression of the immunosuppressive interleukin-35 in patients with non-small cell lung cancer.
Molecular basis and rationale for combining immune checkpoint inhibitors with chemotherapy in non-small cell lung cancer.
Circ-HSP90A expedites cell growth, stemness, and immune evasion in non-small cell lung cancer by regulating STAT3 signaling and PD-1/PD-L1 checkpoint.
Hsa_circ_0003528 promotes cell malignant transformation and immune escape via increasing oncogene PDL1 through sponging miR-511-3p in non-small cell lung cancer.
Immuno-targeted combinations in oncogene-addicted non-small cell lung cancer.
Systematic analysis of IL-6 as a predictive biomarker and desensitizer of immunotherapy responses in patients with non-small cell lung cancer.
Immunotherapy: is a minor god yet in the pantheon of treatments for lung cancer?
[Non-small cell lung cancer: news from immunotherapy].
Determinants of immunological evasion and immunocheckpoint inhibition response in non-small cell lung cancer: the genetic front.
The Combination of Immune Checkpoint Blockade and Angiogenesis Inhibitors in the Treatment of Advanced Non-Small Cell Lung Cancer.
LncRNA SOX2-OT/miR-30d-5p/PDK1 Regulates PD-L1 Checkpoint Through the mTOR Signaling Pathway to Promote Non-small Cell Lung Cancer Progression and Immune Escape.
circMET promotes NSCLC cell proliferation, metastasis, and immune evasion by regulating the miR-145-5p/CXCL3 axis.
Immunotherapy for non-small-cell lung cancer.
Synergizing systemic responses by combining immunotherapy with radiotherapy in metastatic non-small cell lung cancer: The potential of the abscopal effect.
Ubiquitin C-terminal hydrolase L1 promotes expression of programmed cell death-ligand 1 in non-small-cell lung cancer cells.
Emerging therapeutic strategies for enhancing sensitivity and countering resistance to programmed cell death protein 1 or programmed death-ligand 1 inhibitors in non-small cell lung cancer.
Heterogeneity of PD-L1 Expression and Relationship with Biology of NSCLC.
Immune checkpoint therapy for non-small-cell lung cancer: an update.
Non-Small-Cell Lung Cancer Signaling Pathways, Metabolism, and PD-1/PD-L1 Antibodies.
Differential miRNA expressions in peripheral blood mononuclear cells for diagnosis of lung cancer.
Atezolizumab: A novel PD-L1 inhibitor in cancer therapy with a focus in bladder and non-small cell lung cancers.
Has programmed cell death ligand-1 MET an accomplice in non-small cell lung cancer?-a narrative review.
EZH2 regulates PD-L1 expression via HIF-1α in non-small cell lung cancer cells.
Prognostic factors in non-small cell lung carcinoma.
Untangling the evolutionary roots of lung cancer.
Inhibition of c-MET upregulates PD-L1 expression in lung adenocarcinoma.

IL-9 Producing Tumor-Infiltrating Lymphocytes and Treg Subsets Drive Immune Escape of Tumor Cells in Non-Small Cell Lung Cancer.
Circular RNA drives resistance to anti-PD-1 immunotherapy by regulating the miR-30a-5p/SOX4 axis in non-small cell lung cancer.
Small molecule TKI inhibitors affect the development of non-small cell carcinoma through HIPPO/YAP/PD-L1.
Proteogenomics of non-small cell lung cancer reveals molecular subtypes associated with specific therapeutic targets and immune evasion mechanisms.
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Table A2-16, Cluster 15

Cluster 15 focuses on cancer immunotherapy using IDO1 inhibitors that will transform the tumor microenvironment from tolerogenic to normal immunogenic by interfering with the IDO1-kynurenine-aryl hydrocarbon receptor pathway (159)
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Table A2-17, Cluster 16

Cluster 16 focuses on the impact of shedding of MICA/B on tumor cell immune evasion, emphasizing treatments that reduce this shedding and augment the cytotoxic function of Natural Killer cells (171)
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Table A2-18, Cluster 17

Cluster 17 focuses on pancreatic cancer/pancreatic ductal adenocarcinoma, and the role of immunotherapies in countering the immune system evasion associated with a tolerogenic tumor microenvironment (199)
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Table A2-19, Cluster 18

Cluster 18 focuses on 1) the role of exosomes in cancer progression (especially their role in tumor microenvironment therapy resistance), and 2) immunotherapies to reduce the tolerance associated with the immunosuppressive tumor microenvironment (297)
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Table A2-20, Cluster 19

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Table A2-21, Cluster 20

Cluster 20 focuses on herpes simplex virus infections (especially hsv-1), emphasizing immune system evasion by hsv-1, and therapies to reduce this immune evasion (198)
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Table A2-22, Cluster 21

Cluster 21 focuses on SARS-CoV-2, its variants and mutations, and the mechanisms of its immune evasion/immune escape (1260)
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Flipped over U: structural basis for dsRNA cleavage by the SARS-CoV-2 endoribonuclease.
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Table A2-23, Cluster 22

Cluster 22 focuses on immune responses to human papillomavirus, especially the evasion of host immune defenses by hpv (135)
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Immune responses against human papillomavirus (HPV) infection and evasion of host defense in cervical cancer.
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The Interplay between Antiviral Signalling and Carcinogenesis in Human Papillomavirus Infections.
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Acquired immune response to oncogenic human papillomavirus associated with prophylactic cervical cancer vaccines.
Suppression of Stromal Interferon Signaling by Human Papillomavirus 16.
Pathogenic Role of Immune Evasion and Integration of Human Papillomavirus in Oropharyngeal Cancer.
[Immune response in cervical cancer. Strategies for the development of therapeutic vaccines].
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Engineering the AAV capsid to evade immune responses.
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A major role for the minor capsid protein of human papillomavirus type 16 in immune escape.
Immune responses to human papilloma viruses.
Host control of human papillomavirus infection and disease.
Association of human papilloma virus with pterygia and ocular-surface squamous neoplasia.
Innate immunity and HPV: friends or foes.
HPV - immune response to infection and vaccination.
The human papillomavirus oncoproteins: a review of the host pathways targeted on the road to transformation.

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Immune response to human papillomavirus after prophylactic vaccination with AS04-adjuvanted HPV-16/18 vaccine: improving upon nature.
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The human Papillomavirus twilight zone - Latency, immune control and subclinical infection.
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The host response to lesions induced by human papillomavirus.
Screening of drugs to counteract human papillomavirus 16 E6 repression of E-cadherin expression.
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HPV infection alters vaginal microbiome through down-regulating host mucosal innate peptides used by Lactobacilli as amino acid sources.
Neutralizing Antibody Evasion and Transduction with Purified Extracellular Vesicle-Enveloped Adeno-Associated Virus Vectors.
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Can genes transduced by adeno-associated virus vectors elicit or evade an immune response?

AAV as an immunogen.
Modulation of apoptosis by human papillomavirus (HPV) oncoproteins.
IL-18 E42A mutant is resistant to the inhibitory effects of HPV-16 E6 and E7 oncogenes on the IL-18-mediated immune response.
The structure of adeno-associated virus serotype 3B (AAV-3B): insights into receptor binding and immune evasion.
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AAV's anatomy: roadmap for optimizing vectors for translational success.
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CD1d, a sentinel molecule bridging innate and adaptive immunity, is downregulated by the human papillomavirus (HPV) E5 protein: a possible mechanism for immune evasion by HPV.
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BRD4S interacts with viral E2 protein to limit human papillomavirus late transcription.
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Mechanisms of persistence by small DNA tumor viruses.
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Current status and future directions of gene and cell therapy for cystic fibrosis.
Evolutionary and functional implications of hypervariable loci within the skin virome.
Contrasting effects of human, canine, and hybrid adenovirus vectors on the phenotypical and functional maturation of human dendritic cells: implications for clinical efficacy.
Vaccines: engineering immune evasion.
Modification of adenovirus gene transfer vectors with synthetic polymers: a scientific review and technical guide.
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Immune evasion by muscle-specific gene expression in dystrophic muscle.
The E5 proteins.
Extensive cross-reactivity of adenovirus-specific cytotoxic T cells.
Hexon hypervariable region-modified adenovirus type 5 (Ad5) vectors display reduced hepatotoxicity but induce T lymphocyte phenotypes similar to Ad5 vectors.
Human Papillomavirus Downregulates the Expression of IFITM1 and RIPK3 to Escape from IFNγ- and TNFα-Mediated Antiproliferative Effects and Necroptosis.
The infectivity of progeny adenovirus in the presence of neutralizing antibody.
Linearized oncolytic adenoviral plasmid DNA delivered by bioreducible polymers.
Application of gene therapy in diabetes care.
The effect of surface modification of adenovirus with an arginine-grafted bioreducible polymer on transduction efficiency and immunogenicity in cancer gene therapy.

Table A2-24, Cluster 23

Cluster 23 focuses on pathogenicity and virulence of Staphylococcus aureus, emphasizing the immune system evasion of this gram-positive bacterium (637)
Pathogenicity and virulence of Staphylococcus aureus.
Messing with the Sentinels-The Interaction of Staphylococcus aureus with Dendritic Cells.
Making the Most of the Host; Targeting the Autophagy Pathway Facilitates Staphylococcus aureus Intracellular Survival in Neutrophils.
Methicillin-Resistant Staphylococcus aureus from Peninsular Malaysian Animal Handlers: Molecular Profile, Antimicrobial Resistance, Immune Evasion Cluster and Genotypic Categorization.

Staphylococcus aureus host interactions and adaptation.
Colonization and infection of the skin by S. aureus: immune system evasion and the response to cationic antimicrobial peptides.
Molecular Assessment of Staphylococcus Aureus Strains in STAT3 Hyper-IgE Syndrome Patients.
Functional Insights of MraZ on the Pathogenicity of Staphylococcus aureus.
Neutrophils in innate host defense against Staphylococcus aureus infections.
Staphylococcus aureus Host Tropism and Its Implications for Murine Infection Models.
Absence of Staphylococcus aureus in Wild Populations of Fish Supports a Spillover Hypothesis.
Laboratory Mice Are Frequently Colonized with Staphylococcus aureus and Mount a Systemic Immune Response-Note of Caution for In vivo Infection Experiments.
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Methicillin-resistant Staphylococcus aureus: a pervasive pathogen highlights the need for new antimicrobial development.
Staphylococcus aureus strategies to evade the host acquired immune response.
The Role of Macrophages in Staphylococcus aureus Infection.
Staphylococcus aureus virulence factors in evasion from innate immune defenses in human and animal diseases.
Role of protein A in the evasion of host adaptive immune responses by Staphylococcus aureus.
Complement Inactivation Strategy of Staphylococcus aureus Using Decay-Accelerating Factor and the Response of Infected HaCaT Cells.
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Murine Models for Staphylococcal Infection.
Clinical Impact of Staphylococcus aureus Skin and Soft Tissue Infections.
Staphylococcus aureus adaptive evolution: Recent insights on how immune evasion, immunometabolic subversion and host genetics impact vaccine development.
Master mechanisms of Staphylococcus aureus: consider its excellent protective mechanisms hindering vaccine development!
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Covering all the Bases: Preclinical Development of an Effective Staphylococcus aureus Vaccine.
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Evasion of host defenses by intracellular Staphylococcus aureus.
Molecular mechanisms of Staphylococcus aureus nasopharyngeal colonization.
Staphylococcus aureus protein A promotes immune suppression.
Mouse models for infectious diseases caused by Staphylococcus aureus.
Antimicrobial Resistance and Genetic Lineages of Staphylococcus aureus from Wild Rodents: First Report of mecC-Positive Methicillin-Resistant S. aureus (MRSA) in Portugal.
Host-pathogen interactions between the skin and Staphylococcus aureus.
Inside job: Staphylococcus aureus host-pathogen interactions.
High prevalence of multidrug resistant S. aureus-CC398 and frequent detection of enterotoxin genes among non-CC398 S. aureus from pig-derived food in Spain.
Staphylococcal trafficking and infection-from 'nose to gut' and back.

Immune Evasion by Staphylococcus aureus.
Differential expression and roles of Staphylococcus aureus virulence determinants during colonization and disease.
How methicillin-resistant Staphylococcus aureus evade neutrophil killing.
Genetic and Phenotypic Characteristics of Staphylococcus aureus Isolates from Cystic Fibrosis Patients in Austria.
Staphylococcus aureus induces cell-surface expression of immune stimulatory NKG2D ligands on human monocytes.
Potential Relationship between Phenotypic and Molecular Characteristics in Revealing Livestock-Associated Staphylococcus aureus in Chinese Humans without Occupational Livestock Contact.
The therapeutic effect of chlorogenic acid against Staphylococcus aureus infection through sortase A inhibition.
Epic Immune Battles of History: Neutrophils vs. Staphylococcus aureus.
Association of virulence genes with mecA gene in Staphylococcus aureus isolates from Tertiary Hospitals in Nigeria.
Molecular characterization of Staphylococcus aureus isolated from humans related to a livestock farm in Spain, with detection of MRSA-CC130 carrying mecC gene: A zoonotic case?
Antimicrobial Mechanisms of Macrophages and the Immune Evasion Strategies of Staphylococcus aureus.
Staphylococcus aureus Impairs the Function of and Kills Human Dendritic Cells via the LukAB Toxin.
Wild rodents and shrews are natural hosts of Staphylococcus aureus.
Influence of transcription regulator SAUSA300_1968 on the virulence protein secretion and immune evasion by Staphylococcus aureus.
Staphylococcus aureus uses the ArlRS and MgrA cascade to regulate immune evasion during skin infection.
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Microbiology of fracture related infections.

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Table A2-25, Cluster 24

Cluster 24 focuses on Kaposi's sarcoma-associated herpesvirus, emphasizing its immune evasion strategies (233)
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Modulation of Immune System by Kaposi's Sarcoma-Associated Herpesvirus: Lessons from Viral Evasion Strategies.
KSHV: pathways to tumorigenesis and persistent infection.
Mechanisms of Kaposi's Sarcoma-Associated Herpesvirus Latency and Reactivation.
Immune evasion in Kaposi's sarcoma-associated herpes virus associated oncogenesis.
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Immune evasion by Kaposi's sarcoma-associated herpesvirus.
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Towards Better Understanding of KSHV Life Cycle: from Transcription and Posttranscriptional Regulations to Pathogenesis.
Immune evasion strategies of Kaposi's sarcoma-associated herpesvirus.
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Signal Transduction Pathways Associated with KSHV-Related Tumors.
Regulation of KSHV Latency and Lytic Reactivation.
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Kaposi's sarcoma-associated herpesvirus immunoevasion and tumorigenesis: two sides of the same coin?
Kaposi's sarcoma-associated herpesvirus and extracellular vesicles.
Major Histocompatibility Complex Class II HLA-DRα Is Downregulated by Kaposi's Sarcoma-Associated Herpesvirus-Encoded Lytic Transactivator RTA and MARCH8.
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Cellular and viral oncogenes: the key to unlocking unknowns of Kaposi's sarcoma-associated herpesvirus pathogenesis.
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The viral interferon regulatory factors of KSHV: immunosuppressors or oncogenes?
Immunological and inflammatory features of Kaposi's sarcoma and other Kaposi's sarcoma-associated herpesvirus/human herpesvirus 8-associated neoplasias.
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Characteristics of circulating KSHV-infected viroblasts during active KSHV+ multicentric Castleman disease.
Noncoding RNAs produced by oncogenic human herpesviruses.
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Primary B Lymphocytes Infected with Kaposi's Sarcoma-Associated Herpesvirus Can Be Expanded In Vitro and Are Recognized by LANA-Specific CD4+ T Cells.
Nuclear Innate Immune DNA Sensor IFI16 Is Degraded during Lytic Reactivation of Kaposi's Sarcoma-Associated Herpesvirus (KSHV): Role of IFI16 in Maintenance of KSHV Latency.
Human herpesvirus 8-encoded cytokines.
Kaposi sarcoma-associated herpesvirus latency-associated nuclear antigen: more than a key mediator of viral persistence.
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Kaposi's sarcoma associated herpesvirus immune evasion strategies.
Beyond Viral Interferon Regulatory Factors: Immune Evasion Strategies.
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Kaposi's-sarcoma-associated-herpesvirus-activated dendritic cells promote HIV-1 trans-infection and suppress CD4(+) T cell proliferation.
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Prospects of a novel vaccination strategy for human gamma-herpesviruses.
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Immune control of oncogenic γ-herpesviruses.
Kaposi's Sarcoma-Associated Herpesvirus Inhibitor of cGAS (KicGAS), Encoded by ORF52, Is an Abundant Tegument Protein and Is Required for Production of Infectious Progeny Viruses.
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Immune escape of γ-herpesviruses from adaptive immunity.
Subversion of autophagy by Kaposi's sarcoma-associated herpesvirus impairs oncogene-induced senescence.
Inhibition of RIG-I-mediated signaling by Kaposi's sarcoma-associated herpesvirus-encoded deubiquitinase ORF64.
Ago HITS-CLIP expands understanding of Kaposi's sarcoma-associated herpesvirus miRNA function in primary effusion lymphomas.
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Phase-dependent immune evasion of herpesviruses.
Immunobiology and host response to KSHV infection.
Evasion of oncogene-induced senescence by gammaherpesviruses.
Immune evasion strategies of the human gamma-herpesviruses: implications for viral tumorigenesis.
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ORF45, a multifunctional immediate early and tegument protein of KSHV.
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Regulation of herpesvirus lifecycle by viral microRNAs.
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KSHV strategies for host dsDNA sensing machinery.
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Kaposi's sarcoma-associated herpesvirus-encoded viral IRF3 modulates major histocompatibility complex class II (MHC-II) antigen presentation through MHC-II transactivator-dependent and -independent mechanisms: implications for oncogenesis.
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Discovery of a viral NLR homolog that inhibits the inflammasome.
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Herpesviral microRNAs in Cellular Metabolism and Immune Responses.
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Herpesvirus latency confers symbiotic protection from bacterial infection.
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Long Non-Coding RNAs: Novel Players in Regulation of Immune Response Upon Herpesvirus Infection.
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Chemokine Subversion by Human Herpesviruses.
Natural history of murine gamma-herpesvirus infection.
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Modulation of cellular signaling by herpesvirus-encoded G protein-coupled receptors.
Regulation of telomerase and telomeres: human tumor viruses take control.
Marek's disease: Genetic regulation of gallid herpesvirus 2 infection and latency.
Intrinsic and Innate Defenses of Neurons: Détente with the Herpesviruses.
MHV-68 producing mIFNα1 is severely attenuated in vivo and effectively protects mice against challenge with wt MHV-68.
The Critical Role of Genome Maintenance Proteins in Immune Evasion During Gammaherpesvirus Latency.
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A viral conspiracy: hijacking the chemokine system through virally encoded pirated chemokine receptors.
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Identification of a gammaherpesvirus selective chemokine binding protein that inhibits chemokine action.
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Immune modulation by virus-encoded secreted chemokine binding proteins.
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Human Herpesvirus 6B Downregulates Expression of Activating Ligands during Lytic Infection To Escape Elimination by Natural Killer Cells.
Viral Encoded miRNAs in Tumorigenesis: Theranostic Opportunities in Precision Oncology.
The DNA sequence of human herpesvirus-6: structure, coding content, and genome evolution.
Kinetics of murine gammaherpesvirus 68 gene expression following infection of murine cells in culture and in mice.
Viral miRNAs: tools for immune evasion.
Partial genome sequence of murine gammaherpesvirus 72 and its analysis.
Biology and host response to Cyprinid herpesvirus 3 infection in common carp.
A Murine Herpesvirus Closely Related to Ubiquitous Human Herpesviruses Causes T-Cell Depletion.
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Inhibition of interleukin-2 gene expression by human herpesvirus 6B U54 tegument protein.
Koala and Wombat Gammaherpesviruses Encode the First Known Viral NTPDase Homologs and Are Phylogenetically Divergent from All Known Gammaherpesviruses.
Possible role of human herpesvirus 6 as a trigger of autoimmune disease.
Partial genome analysis of murine gammaherpesvirus 4556.
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Interactions between herpesvirus entry mediator (TNFRSF14) and latency-associated transcript during herpes simplex virus 1 latency.
Identification and characterization of U83A viral chemokine, a broad and potent beta-chemokine agonist for human CCRs with unique selectivity and inhibition by spliced isoform.
Macavirus latency-associated protein evades immune detection through regulation of protein synthesis in cis depending upon its glycin/glutamate-rich domain.
A novel highly potent therapeutic antibody neutralizes multiple human chemokines and mimics viral immune modulation.
HHV-8 reduces dendritic cell migration through down-regulation of cell-surface CCR6 and CCR7 and cytoskeleton reorganization.
Human and viral membrane-associated E3 ubiquitin ligases MARCH1 and MIR2 recognize different features of CD86 to downregulate surface expression.
Mechanism of action of the viral chemokine-binding protein E163 from ectromelia virus.
Immunomodulation by herpesvirus U51A chemokine receptor via CCL5 and FOG-2 down-regulation plus XCR1 and CCR7 mimicry in human leukocytes.
Selective recruitment of Th2-type cells and evasion from a cytotoxic immune response mediated by viral macrophage inhibitory protein-II.
MicroRNA based immunoevasion mechanism of human polyomaviruses.
Establishment of HSV1 latency in immunodeficient mice facilitates efficient in vivo reactivation.
Molecular characterization of Cyprinid herpesvirus 3 encoded viral interleukin10.
Lentiviral latency in peripheral CD4+ T cells isolated from feline immunodeficiency virus-infected cats during the asymptomatic phase is not associated with hypermethylation of the proviral promoter.

Table A2-26, Cluster 25

Cluster 25 focuses on the role of immunosuppressive regulatory T cells in cancer immunology (which augment tumor development and progression by inhibiting antitumor immunity), emphasizing strategies to deplete Treg cells and control Treg cell functions to increase antitumor immune responses (472)

Regulatory T cells in gastrointestinal tumors.
T regulatory cells in cancer: recent advances and therapeutic potential.
The role of regulatory T cells in cancer immunology.
Regulatory T Cells in Ovarian Carcinogenesis and Future Therapeutic Opportunities.
Regulatory T cells as adjuvant target for enhancing the viral disease vaccine efficacy.
FOXP3+ regulatory T cells: Current controversies and future perspectives.
Regulatory T cells and potential inmmunotherapeutic targets in lung cancer.
Regulatory T cells in breast cancer as a potent anti-cancer therapeutic target.
Monitoring regulatory T cells in clinical samples: consensus on an essential marker set and gating strategy for regulatory T cell analysis by flow cytometry.
The role of regulatory T cells in malignant glioma.
Regulatory T Cells in Autoimmunity and Cancer: A Duplicitous Lifestyle.
Immunotherapy approaches targeting regulatory T-cells.
FOXP3+ Tregs: heterogeneous phenotypes and conflicting impacts on survival outcomes in patients with colorectal cancer.
Role of heterogeneous regulatory T cells in the tumor microenvironment.
Increased intratumoral regulatory T cells are related to intratumoral macrophages and poor prognosis in hepatocellular carcinoma patients.
Immunosuppressive effect of regulatory T lymphocytes in lung cancer, with special reference to their effects on the induction of autologous tumor-specific cytotoxic T lymphocytes.
Immunotherapy of Cancer by Targeting Regulatory T cells.
Different subpopulations of regulatory T cells in human autoimmune disease, transplantation, and tumor immunity.
Molecular Signatures of Human Regulatory T Cells in Colorectal Cancer and Polyps.
Intranuclear interactomic inhibition of FoxP3 suppresses functions of Treg cells.
Roles of regulatory T cells in cancer immunity.
Targeting CD4+CD25+FoxP3+ regulatory T-cells for the augmentation of cancer immunotherapy.
Regulatory T Cells in Gynecologic Cancer.
Requirement of Treg-intrinsic CTLA4/PKCη signaling pathway for suppressing tumor immunity.
The Dual Role of Treg in Cancer.
Modulating Treg stability to improve cancer immunotherapy.
Regulatory T Cells in an Endogenous Mouse Lymphoma Recognize Specific Antigen Peptides and Contribute to Immune Escape.
Treg Fragility: A Prerequisite for Effective Antitumor Immunity?
Regulatory T cells in the immunotherapy of melanoma.
Local and systemic induction of CD4+CD25+ regulatory T-cell population by non-Hodgkin lymphoma.
TNFR2-expressing CD4(+)Foxp3(+) regulatory T cells in cancer immunology and immunotherapy.
Tumor-infiltrating T-regulatory cells adapt to altered metabolism to promote tumor-immune escape.
Unlocking the Complexities of Tumor-Associated Regulatory T Cells.
Intratumoral regulatory T cells: markers, subsets and their impact on anti-tumor immunity.
Regulatory T cells as therapeutic targets and mediators.
Neoadjuvant chemo-immunotherapy modifies CD4(+)CD25(+) regulatory T cells (Treg) in non-small cell lung cancer (NSCLC) patients.
CD4+CD25hiCD127low regulatory T cells are increased in oral squamous cell carcinoma patients.
Crosstalk of Microorganisms and Immune Responses in Autoimmune Neuroinflammation: A Focus on Regulatory T Cells.

Induced regulatory T cells in inhibitory microenvironments created by cancer.
T-regulatory cells: key players in tumor immune escape and angiogenesis.
Regulatory T cell depletion enhances tumor specific CD8 T-cell responses, elicited by tumor antigen NY-ESO-1b in hepatocellular carcinoma patients, in vitro.
Regulatory T cells in melanoma: the final hurdle towards effective immunotherapy?
Hyperfunction of CD4 CD25 regulatory T cells in de novo acute myeloid leukemia.
Transcriptional regulation of FOXP3 requires integrated activation of both promoter and CNS regions in tumor-induced CD8(+) Treg cells.
Metabolic Regulation of Tregs in Cancer: Opportunities for Immunotherapy.
Treg(s) in Cancer: Friends or Foe?
PD-L1 Is Expressed and Promotes the Expansion of Regulatory T Cells in Acute Myeloid Leukemia.
Presence of regulatory T-cells in endometrial cancer predicts poorer overall survival and promotes progression of tumor cells.
Mechanisms of regulatory T cell infiltration in tumors: implications for innovative immune precision therapies.
Antibody-based cancer immunotherapy by targeting regulatory T cells.
Intratumoral regulatory T cells with higher prevalence and more suppressive activity in hepatocellular carcinoma patients.
Distepharinamide, a novel dimeric proaporphine alkaloid from Diploclisia glaucescens, inhibits the differentiation and proliferative expansion of CD4(+)Foxp3(+) regulatory T cells.
Role of Regulatory T Cells (Treg) and the Treg Effector Molecule Fibrinogen-like Protein 2 in Alloimmunity and Autoimmunity.
Isolation and Analysis of Tumor-Infiltrating Treg.
Regulation of regulatory T cells in cancer.
Heat Shock Protein 60 in Eggs Specifically Induces Tregs and Reduces Liver Immunopathology in Mice with Schistosomiasis Japonica.
Regulatory T cell: a protection for tumour cells.
Treg programming and therapeutic reprogramming in cancer.
Colorectal Cancer-Infiltrating Regulatory T Cells: Functional Heterogeneity, Metabolic Adaptation, and Therapeutic Targeting.
Searching for Peptide Inhibitors of T Regulatory Cell Activity by Targeting Specific Domains of FOXP3 Transcription Factor.
T Regulatory Cells and Priming the Suppressive Tumor Microenvironment.
Tumor-infiltrating FoxP3(+) Tregs predict favorable outcome in colorectal cancer patients: A meta-analysis.
Immune checkpoint inhibitors in cancer therapy: a focus on T-regulatory cells.
Manipulation of regulatory T cells and antigen-specific cytotoxic T lymphocyte-based tumour immunotherapy.
Modulation of regulatory T cells by natural products in cancer.
CD4+FoxP3+ regulatory T cells gradually accumulate in gliomas during tumor growth and efficiently suppress antiglioma immune responses in vivo.
Regulatory T cells in cancer: an overview and perspectives on cyclooxygenase-2 and Foxp3 DNA methylation.
Targeting of Cdc42 GTPase in regulatory T cells unleashes antitumor T-cell immunity.
Lkb1 aggravates diffuse large B-cell lymphoma by promoting the function of Treg cells and immune escape.
Targeting regulatory T cells for anticancer therapy.

Activated tumor-infiltrating CD4+ regulatory T cells restrain antitumor immunity in patients with primary or metastatic liver cancer.
Hepatitis C Virus Improves Human Tregs Suppressive Function and Promotes Their Recruitment to the Liver.
[Correlation analysis of the Epstein-Barr virus recruited regulatory T cells in nasopharyngeal carcinoma of immune escape].
IL-8 in bone marrow and peripheral blood of patients with B-cell acute lymphoblastic leukemia is associated with high regulatory T cell counts, degree of tumor infiltration and expression of CXCR1 in blasts.
[Anti-CCR4 mAb and regulatory T cells].
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Table A2-27, Cluster 26

Cluster 26 focuses on human cytomegalovirus disease, with emphasis on countering HCMV immune system evasion and immune escape (309)
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Table A2-28, Cluster 27

Cluster 27 focuses on Mycobacterium tuberculosis, especially its mechanisms for evading the host immune response (450)
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Table A2-29, Cluster 28

Cluster 28 focuses on myeloid-derived suppressor cells in the tumor microenvironment, especially immunotherapy that targets these cells and reduces their suppression of T-cell activity (471)
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Table A2-30, Cluster 29

Cluster 29 focuses on 1) tumor MHC Class 1 downregulation, 2) the consequent reduction in tumor cell immunosurveillance, and 3) immunotherapies that can reverse downregulation of MHC-I to aid in anti-tumor immunity (360)
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Table A2-31, Cluster 30

Cluster 30 focuses on variant surface glycoprotein coat density in African trypanosomes, emphasizing the mechanisms responsible for this parasite's evasion of its host's immune response (305)
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Table A2-32, Cluster 31

Cluster 31 focuses on the malaria parasite Plasmodium falciparum, emphasizing pathogenicity and immune evasion (509)
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Table A2-33, Cluster 32

Cluster 32 focuses on breast cancer, emphasizing mechanisms of immune evasion and immunotherapy resistance (425)
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Table A2-34, Cluster 33

Cluster 33 focuses on MHC class 1, especially the viral interference with the MHC Class I antigen processing and presentation pathway and the subsequent viral immune system evasion (297)
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Table A2-35, Cluster 34

Cluster 34 focuses on B-cell lymphoma, emphasizing mechanisms of immune evasion by lymphoma cells (271)
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Table A2-36, Cluster 35

Cluster 35 focuses on HIV-1, emphasizing 1) generation of vaccine-based broadly neutralizing antibodies against HIV-1 and 2) HIV-1 mutations and escape (456)
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Table A2-37, Cluster 36

Cluster 36 focuses on metabolic impacts on the immune system, especially on the contribution of metabolic dysfunction to the immunosuppressive tumor microenvironment (256)
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Efficient Reprogramming of Human Fibroblasts and Blood-Derived Endothelial Progenitor Cells Using Nonmodified RNA for Reprogramming and Immune Evasion.
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MYCN Drives a Tumor Immunosuppressive Environment Which Impacts Survival in Neuroblastoma.

Table A2-38, Cluster 37

Cluster 36 focuses on metabolic impacts on the immune system, especially on the contribution of metabolic dysfunction to the immunosuppressive tumor microenvironment (256)
Metabolic Hallmarks of Tumor and Immune Cells in the Tumor Microenvironment.
Immunometabolism: A new target for improving cancer immunotherapy.
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From tumor cell metabolism to tumor immune escape.
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Table A2-39, Cluster 38

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Nonstructural Proteins Are Preferential Positive Selection Targets in Zika Virus and Related Flaviviruses.
Immune Response to Dengue and Zika.
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Table A2-40, Cluster 39

Cluster 39 focuses on nanoparticles (especially cell membrane-coated biomimetic) for tumor drug delivery, emphasizing increased immune escape/evasion and enhanced circulation time (224)
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A bionic "Trojan horse"-like gene delivery system hybridized with tumor and macrophage cell membrane for cancer therapy.
Bone-targeted erythrocyte-cancer hybrid membrane-camouflaged nanoparticles for enhancing photothermal and hypoxia-activated chemotherapy of bone invasion by OSCC.
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Nanoparticles disguised as red blood cells to evade the immune system.
Light/pH-Triggered Biomimetic Red Blood Cell Membranes Camouflaged Small Molecular Drug Assemblies for Imaging-Guided Combinational Chemo-Photothermal Therapy.
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Table A2-41, Cluster 40

Cluster 40 focuses on tumors, especially their escape and evasion from immune system control (402)
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Table A2-42, Cluster 41

Cluster 41 focuses on immune checkpoint inhibitors for cancer immunotherapy, including mechanisms of resistance to immune checkpoint blockade (273)
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Table A2-43, Cluster 42

Cluster 42 focuses on Porphyromonas gingivalis primarily and Pseudomonas aeruginosa secondarily, emphasizing their immune escape and evasion mechanisms (233)
Porphyromonas gingivalis survival skills: Immune evasion.
Roles of Porphyromonas gingivalis and its virulence factors in periodontitis.
Molecular Strategies Underlying Porphyromonas gingivalis Virulence.
Intracellular localization of Porphyromonas gingivalis thiol proteinase in periodontal tissues of chronic periodontitis patients.
Genetic diversity in the oral pathogen Porphyromonas gingivalis: molecular mechanisms and biological consequences.
Macrophages: A communication network linking Porphyromonas gingivalis infection and associated systemic diseases.
Porphyromonas gingivalis regulates atherosclerosis through an immune pathway.
Possible mechanisms of Pseudomonas aeruginosa-associated lung disease.
Persistent Exposure to Porphyromonas gingivalis Promotes Proliferative and Invasion Capabilities, and Tumorigenic Properties of Human Immortalized Oral Epithelial Cells.
Porphyromonas gingivalis Stimulates TLR2-PI3K Signaling to Escape Immune Clearance and Induce Bone Resorption Independently of MyD88.
Pseudomonas aeruginosa: acute lung injury or ventilator-associated pneumonia?
Porphyromonas gingivalis suppresses adaptive immunity in periodontitis, atherosclerosis, and Alzheimer's disease.
Virulence Factors of Pseudomonas Aeruginosa and Antivirulence Strategies to Combat Its Drug Resistance.
Porphyromonas gingivalis adopts intricate and unique molecular mechanisms to survive and persist within the host: a critical update.
Synthetic host defense peptide IDR-1002 reduces inflammation in Pseudomonas aeruginosa lung infection.
Dampening Host Sensing and Avoiding Recognition in Pseudomonas aeruginosa Pneumonia.
Local and Systemic Effects of Porphyromonas gingivalis Infection.
Serratiopeptidase Affects the Physiology of Pseudomonas aeruginosa Isolates from Cystic Fibrosis Patients.
A Macrophage Subversion Factor Is Shared by Intracellular and Extracellular Pathogens.
The salicylidene acylhydrazide INP0341 attenuates Pseudomonas aeruginosa virulence in vitro and in vivo.
Differential capacity for complement receptor-mediated immune evasion by Porphyromonas gingivalis depending on the type of innate leukocyte.
Natural competence is a major mechanism for horizontal DNA transfer in the oral pathogen Porphyromonas gingivalis.
Porphyromonas gingivalis Outer Membrane Vesicles Induce Selective Tumor Necrosis Factor Tolerance in a Toll-Like Receptor 4- and mTOR-Dependent Manner.
Subversion of innate immunity by periodontopathic bacteria via exploitation of complement receptor-3.

Pseudomonas aeruginosa in Chronic Lung Infections: How to Adapt Within the Host?
Pseudomonas aeruginosa hijacks the murine nitric oxide metabolic pathway to evade killing by neutrophils in the lung.
Immune evasion strategies of Porphyromonas gingivalis.
Porphyromonas gingivalis downregulates the immune response of fibroblasts.
Sialidase facilitates Porphyromonas gingivalis immune evasion by reducing M1 polarization, antigen presentation, and phagocytosis of infected macrophages.
Epstein-Barr Virus-Oral Bacterial Link in the Development of Oral Squamous Cell Carcinoma.
Hyperlipidemia impaired innate immune response to periodontal pathogen porphyromonas gingivalis in apolipoprotein E knockout mice.
Genetic characteristics and pathogenic mechanisms of periodontal pathogens.
Immune escape strategies of Pseudomonas aeruginosa to establish chronic infection.
Role of Porphyromonas gingivalis HmuY in Immunopathogenesis of Chronic Periodontitis.
Porphyromonas gingivalis and the autophagic pathway: an innate immune interaction?
Porphyromonas gingivalis induction of TLR2 association with Vinculin enables PI3K activation and immune evasion.
Flagellar motility is a key determinant of the magnitude of the inflammasome response to Pseudomonas aeruginosa.
OmpA-like proteins of Porphyromonas gingivalis contribute to serum resistance and prevent Toll-like receptor 4-mediated host cell activation.
Pseudomonas aeruginosa exploits lipid A and muropeptides modification as a strategy to lower innate immunity during cystic fibrosis lung infection.
Proteolytic activity of Porphyromonas gingivalis attenuates MCP-1 mRNA expression in LPS-stimulated THP-1 cells.
Role of nucleotide-binding oligomerization domain-like receptor family pyrin domain containing 6 in activation of inflammation in human umbilical vein endothelial cells stimulated by Porphyromonas gingivalis-an in vitro study.
Porphyromonas gingivalis interactions with complement receptor 3 (CR3): innate immunity or immune evasion?
Microbiota, Immune Subversion, and Chronic Inflammation.
Identification of PGN_1123 as the Gene Encoding Lipid A Deacylase, an Enzyme Required for Toll-Like Receptor 4 Evasion, in Porphyromonas gingivalis.
Virulence Factors of the Periodontal Pathogens: Tools to Evade the Host Immune Response and Promote Carcinogenesis.
Pouring salt on a wound: Pseudomonas aeruginosa virulence factors alter Na+ and Cl- flux in the lung.
The C5a receptor impairs IL-12-dependent clearance of Porphyromonas gingivalis and is required for induction of periodontal bone loss.
Mechanism and implications of CXCR4-mediated integrin activation by Porphyromonas gingivalis.
Fimbrial proteins of porphyromonas gingivalis mediate in vivo virulence and exploit TLR2 and complement receptor 3 to persist in macrophages.
Pseudomonas aeruginosa evasion of phagocytosis is mediated by loss of swimming motility and is independent of flagellum expression.
Loss of lipopolysaccharide receptor CD14 from the surface of human macrophage-like cells mediated by Porphyromonas gingivalis outer membrane vesicles.
Extracellular Vesicles from Pseudomonas aeruginosa Suppress MHC-Related Molecules in Human Lung Macrophages.
Pseudomonas aeruginosa invades corneal epithelial cells during experimental infection.

Pseudomonas aeruginosa: the potential to immunise against infection.
Recognition of the carbohydrate modifications to the RgpA protease of Porphyromonas gingivalis by periodontal patient serum IgG.
P. aeruginosa type III and type VI secretion systems modulate early response gene expression in type II pneumocytes in vitro.
Metapopulation Structure of CRISPR-Cas Immunity in Pseudomonas aeruginosa and Its Viruses.
The capsule of Porphyromonas gingivalis reduces the immune response of human gingival fibroblasts.
The capsule of Porphyromonas gingivalis leads to a reduction in the host inflammatory response, evasion of phagocytosis, and increase in virulence.
Pseudomonas aeruginosa Airway Infection Recruits and Modulates Neutrophilic Myeloid-Derived Suppressor Cells.
Purinergic signaling during Porphyromonas gingivalis infection.
Pseudomonas aeruginosa biofilms: mechanisms of immune evasion.
Exposure to Bile Leads to the Emergence of Adaptive Signaling Variants in the Opportunistic Pathogen Pseudomonas aeruginosa.
Human Toll-like receptor 4 responses to P. gingivalis are regulated by lipid A 1- and 4'-phosphatase activities.
Internalization of Pseudomonas aeruginosa Strain PAO1 into Epithelial Cells Is Promoted by Interaction of a T6SS Effector with the Microtubule Network.
Comparative Analysis of Peptidoglycans From Pseudomonas aeruginosa Isolates Recovered From Chronic and Acute Infections.
Porphyromonas gingivalis evasion of autophagy and intracellular killing by human myeloid dendritic cells involves DC-SIGN-TLR2 crosstalk.
The subversion of the immune system by francisella tularensis.
The Pseudomonas aeruginosa Type III secretion system plays a dual role in the regulation of caspase-1 mediated IL-1beta maturation.
The Microbial Endocrinology of Pseudomonas aeruginosa: Inflammatory and Immune Perspectives.
Pseudomonas aeruginosa ExoT inhibits in vitro lung epithelial wound repair.
Pseudomonas aeruginosa Infections in Cancer Patients.
The Pseudomonas aeruginosa Lectin LecB Causes Integrin Internalization and Inhibits Epithelial Wound Healing.
Inactivation of tumor necrosis factor-alpha by proteinases (gingipains) from the periodontal pathogen, Porphyromonas gingivalis. Implications of immune evasion.
Granulocytic Myeloid-Derived Suppressor Cells in Cystic Fibrosis.
A Library of Promoter-gfp Fusion Reporters for Studying Systematic Expression Pattern of Cyclic-di-GMP Metabolism-Related Genes in Pseudomonas aeruginosa.
Pseudomonas aeruginosa proteolytically alters the interleukin 22-dependent lung mucosal defense.
Uncovering the components of the Francisella tularensis virulence stealth strategy.
Genome-Wide Survey of Pseudomonas aeruginosa PA14 Reveals a Role for the Glyoxylate Pathway and Extracellular Proteases in the Utilization of Mucin.
NOD1 and NOD2 mediate sensing of periodontal pathogens.
Modulation of inflammasome activity by Porphyromonas gingivalis in periodontitis and associated systemic diseases.
Biology and pathogenesis of cytomegalovirus in periodontal disease.
Type III Secretion Protein, PcrV, Impairs Pseudomonas aeruginosa Biofilm Formation by Increasing M1 Macrophage-Mediated Anti-bacterial Activities.

Porphyromonas gingivalis attenuates ATP-mediated inflammasome activation and HMGB1 release through expression of a nucleoside-diphosphate kinase.
Evaluating Bacterial Pathogenesis Using a Model of Human Airway Organoids Infected with Pseudomonas aeruginosa Biofilms.
Host-pathogen interactions and immune evasion strategies in Francisella tularensis pathogenicity.
Type IV pilus glycosylation mediates resistance of Pseudomonas aeruginosa to opsonic activities of the pulmonary surfactant protein A.
Identification of Small Molecules Blocking the Pseudomonas aeruginosa type III Secretion System Protein PcrV.
The human pathogen Pseudomonas aeruginosa utilizes conserved virulence pathways to infect the social amoeba Dictyostelium discoideum.
Kdo hydrolase is required for Francisella tularensis virulence and evasion of TLR2-mediated innate immunity.
Structure-Based Design of α-Substituted Mercaptoacetamides as Inhibitors of the Virulence Factor LasB from Pseudomonas aeruginosa.
From the Outside-In: The Francisella tularensis Envelope and Virulence.
Cutting edge: mutation of Francisella tularensis mviN leads to increased macrophage absent in melanoma 2 inflammasome activation and a loss of virulence.
The lipid A phosphate position determines differential host Toll-like receptor 4 responses to phylogenetically related symbiotic and pathogenic bacteria.
Tripartite interactions between filamentous Pf4 bacteriophage, Pseudomonas aeruginosa, and bacterivorous nematodes.
Cyclic-di-GMP regulates lipopolysaccharide modification and contributes to Pseudomonas aeruginosa immune evasion.
Pathogen induction of CXCR4/TLR2 cross-talk impairs host defense function.
Genome-wide patterns of recombination in the opportunistic human pathogen Pseudomonas aeruginosa.
Spheres of influence: Porphyromonas gingivalis outer membrane vesicles.
O-Specific Antigen-Dependent Surface Hydrophobicity Mediates Aggregate Assembly Type in Pseudomonas aeruginosa.
Antioxidant Defenses of Francisella tularensis Modulate Macrophage Function and Production of Proinflammatory Cytokines.
Opportunistic infections in lung disease: Pseudomonas infections in cystic fibrosis.
Multifaceted effects of Francisella tularensis on human neutrophil function and lifespan.
Gene Loss and Acquisition in Lineages of Pseudomonas aeruginosa Evolving in Cystic Fibrosis Patient Airways.
[Immune evasion of Pseudomonas aeruginosa].
The LasB Elastase of Pseudomonas aeruginosa Acts in Concert with Alkaline Protease AprA To Prevent Flagellin-Mediated Immune Recognition.
Pseudomonas aeruginosa invasion of and multiplication within corneal epithelial cells in vitro.
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A Secreted Bacterial Peptidylarginine Deiminase Can Neutralize Human Innate Immune Defenses.
Identification of a novel Francisella tularensis factor required for intramacrophage survival and subversion of innate immune response.
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Pseudomonas aeruginosa quorum sensing modulates immune responses: An updated review article.
How has neutrophil research improved our understanding of periodontal pathogenesis?
Scavenging of reactive oxygen species by tryptophan metabolites helps Pseudomonas aeruginosa escape neutrophil killing.
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Pseudomonas aeruginosa MucD protease mediates keratitis by inhibiting neutrophil recruitment and promoting bacterial survival.
Complement Receptor 3-Mediated Inhibition of Inflammasome Priming by Ras GTPase-Activating Protein During Francisella tularensis Phagocytosis by Human Mononuclear Phagocytes.
Persistent infection with Pseudomonas aeruginosa in ventilator-associated pneumonia.
Identification of a potent inhibitor of type II secretion system from Pseudomonas aeruginosa.
The Mechanistic Pathways of Periodontal Pathogens Entering the Brain: The Potential Role of Treponema denticola in Tracing Alzheimer's Disease Pathology.
Diguanylate Cyclases and Phosphodiesterases Required for Basal-Level c-di-GMP in Pseudomonas aeruginosa as Revealed by Systematic Phylogenetic and Transcriptomic Analyses.
The orange spotted cockroach (Blaptica dubia, Serville 1839) is a permissive experimental host for Francisella tularensis.
Innate immune response to oral bacteria and the immune evasive characteristics of periodontal pathogens.
Francisella tularensis SchuS4 and SchuS4 lipids inhibit IL-12p40 in primary human dendritic cells by inhibition of IRF1 and IRF8.
The link between periodontal disease and rheumatoid arthritis: an updated review.
Proteome-wide mapping and reverse vaccinology-based B and T cell multi-epitope subunit vaccine designing for immune response reinforcement against Porphyromonas gingivalis.
Pseudomonas aeruginosa quorum-sensing metabolite induces host immune cell death through cell surface lipid domain dissolution.
Lipids derived from virulent Francisella tularensis broadly inhibit pulmonary inflammation via toll-like receptor 2 and peroxisome proliferator-activated receptor α.
A Francisella tularensis locus required for spermine responsiveness is necessary for virulence.
Specific interactions between the alkaline protease of P. aeruginosa and its natural peptide inhibitor: ab initio molecular simulations.
Bacterial degradation of immunoglobulin A1 in relation to periodontal diseases.
The presence of CD14 overcomes evasion of innate immune responses by virulent Francisella tularensis in human dendritic cells in vitro and pulmonary cells in vivo.
Roles of extracellular vesicles in periodontal homeostasis and their therapeutic potential.
Deletion of ripA alleviates suppression of the inflammasome and MAPK by Francisella tularensis.
Qualitative and Quantitative Determination of Quorum Sensing Inhibition In Vitro.
Soluble lytic transglycosylase SLT of Francisella novicida is involved in intracellular growth and immune suppression.
Janus kinase 3 activity is necessary for phosphorylation of cytosolic phospholipase A2 and prostaglandin E2 synthesis by macrophages infected with Francisella tularensis live vaccine strain.
Fine tuning inflammation at the front door: macrophage complement receptor 3-mediates phagocytosis and immune suppression for Francisella tularensis.

Temporal Manipulation of Mitochondrial Function by Virulent Francisella tularensis To Limit Inflammation and Control Cell Death.
Characterization of Francisella tularensis outer membrane proteins.
Pseudomonas aeruginosa and Klebsiella pneumoniae Adaptation to Innate Immune Clearance Mechanisms in the Lung.
N-alkylimidazole derivatives as potential inhibitors of quorum sensing in Pseudomonas aeruginosa.
Neutrophils in the periodontium: Interactions with pathogens and roles in tissue homeostasis and inflammation.
HigB of Pseudomonas aeruginosa Enhances Killing of Phagocytes by Up-Regulating the Type III Secretion System in Ciprofloxacin Induced Persister Cells.
Human neutrophils and oral microbiota: a constant tug-of-war between a harmonious and a discordant coexistence.
Clonal Clusters, Molecular Resistance Mechanisms and Virulence Factors of Gram-Negative Bacteria Isolated from Chronic Wounds in Ghana.
Virulence mechanism of bacteria in mixed infection: attenuation of cytokine levels and evasion of polymorphonuclear leukocyte phagocytosis.
Indoleamine 2,3-dioxygenase 1 is a lung-specific innate immune defense mechanism that inhibits growth of Francisella tularensis tryptophan auxotrophs.
Virulent Francisella tularensis destabilize host mRNA to rapidly suppress inflammation.
Francisella tularensis-infected macrophages release prostaglandin E2 that blocks T cell proliferation and promotes a Th2-like response.
Neutrophils: potential therapeutic targets in tularemia?
Virulence factors of the oral spirochete Treponema denticola.
The Cyclic AMP-Vfr Signaling Pathway in Pseudomonas aeruginosa Is Inhibited by Cyclic Di-GMP.
MyD88-dependent signaling prolongs survival and reduces bacterial burden during pulmonary infection with virulent Francisella tularensis.
Francisella tularensis antioxidants harness reactive oxygen species to restrict macrophage signaling and cytokine production.
Effective, broad spectrum control of virulent bacterial infections using cationic DNA liposome complexes combined with bacterial antigens.
Development and bioanalytical method validation of an LC-MS/MS assay for simultaneous quantitation of 2-alkyl-4(1H)-quinolones for application in bacterial cell culture and lung tissue.
Correlation of phenotypic and genotypic virulence markers, antimicrobial susceptibility pattern, and outcome of Pseudomonas aeruginosa sepsis infection.
Rapid and efficient inactivation of IL-6 gingipains, lysine- and arginine-specific proteinases from Porphyromonas gingivalis.
O-Polysaccharide Plays a Major Role on the Virulence and Immunostimulatory Potential of Aggregatibacter actinomycetemcomitans During Periodontal Infection.
Proteolysis of CD14 on human gingival fibroblasts by arginine-specific cysteine proteinases from Porphyromonas gingivalis leading to down-regulation of lipopolysaccharide-induced interleukin-8 production.
Exposure to extracellular vesicles from Pseudomonas aeruginosa result in loss of DNA methylation at enhancer and DNase hypersensitive site regions in lung macrophages.
Evasion of IFN-γ signaling by Francisella novicida is dependent upon Francisella outer membrane protein C.
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Extracellular Bacterial Proteases in Chronic Wounds: A Potential Therapeutic Target?

Host cell-surface proteins as substrates of gingipains, the main proteases of Porphyromonas gingivalis.
Pseudomonas expression of an oxygen sensing prolyl hydroxylase homologue regulates neutrophil host responses in vitro and in vivo.
Method for the isolation of Francisella tularensis outer membranes.
Aggregatibacter actinomycetemcomitans and Filifactor alocis: Two exotoxin-producing oral pathogens.
Garlic as an inhibitor of Pseudomonas aeruginosa quorum sensing in cystic fibrosis--a pilot randomized controlled trial.
Oral infection of mice with Fusobacterium nucleatum results in macrophage recruitment to the dental pulp and bone resorption.
Calcium Regulates the Activity and Structural Stability of Tpr, a Bacterial Calpain-like Peptidase.
Characterization of the Treponema denticola Virulence Factor Dentilisin.
In-silico structural characterization and phylogenetic analysis of Nucleoside diphosphate kinase: A novel antiapoptotic protein of Porphyromonas gingivalis.
Insights into the Evolution of P. aeruginosa Antimicrobial Resistance in a Patient Undergoing Intensive Therapy.
The intracellular pathogen Francisella tularensis escapes from adaptive immunity by metabolic adaptation.
Infection with Francisella tularensis LVS clpB leads to an altered yet protective immune response.
New insights into the emerging role of oral spirochaetes in periodontal disease.
Extracellular deoxyribonuclease production by periodontal bacteria.
A novel role for plasmin-mediated degradation of opsonizing antibody in the evasion of host immunity by virulent, but not attenuated, Francisella tularensis.
Proteolysis of ICAM-1 on human oral epithelial cells by gingipains.
Immune Response Modulation by Pseudomonas aeruginosa Persister Cells.
The role of the Pseudomonas aeruginosa hypermutator phenotype on the shift from acute to chronic virulence during respiratory infection.
Human Single-Chain Antibodies That Neutralize Elastolytic Activity of Pseudomonas aeruginosa LasB.
Intracellular localisation and innate immune responses following Francisella noatunensis infection of Atlantic cod (Gadus morhua) macrophages.
Comparison of the virulence of exopolysaccharide-producing Prevotella intermedia to exopolysaccharide non-producing periodontopathic organisms.
Remodeling of Lipid A in Pseudomonas syringae pv. phaseolicola In Vitro.
Pseudomonas aeruginosa promotes autophagy to suppress macrophage-mediated bacterial eradication.
Aggregatibacter actinomycetemcomitans leukotoxin: from threat to therapy.
Exploring structural features and potential lipid interactions of Pseudomonas aeruginosa type three secretion effector PemB by spectroscopic and calorimetric experiments.
A Pseudomonas aeruginosa TIR effector mediates immune evasion by targeting UBAP1 and TLR adaptors.
Subversion of innate immune responses by Francisella involves the disruption of TRAF3 and TRAF6 signalling complexes.
Therapeutic possibilities of ceftazidime nanoparticles in devastating pseudomonas ophthalmic infections; keratitis and endophthalmitis.
Self-assembled hybrid supraparticles that proteolytically degrade tumor necrosis factor-α.
Unique Francisella Phosphatidylethanolamine Acts as a Potent Anti-Inflammatory Lipid.

Metabolic labeling to characterize the overall composition of Francisella lipid A and LPS grown in broth and in human phagocytes.
Intracellular survival and innate immune evasion of Burkholderia cepacia: Improved understanding of quorum sensing-controlled virulence factors, biofilm, and inhibitors.
Adaptation by Ancient Horizontal Acquisition of Butyrate Metabolism Genes in Aggregatibacter actinomycetemcomitans.
Proteomics of Aggregatibacter actinomycetemcomitans Outer Membrane Vesicles.
The bacterial pigment pyocyanin inhibits the NLRP3 inflammasome through intracellular reactive oxygen and nitrogen species.
Infection of human gingival fibroblasts with Aggregatibacter actinomycetemcomitans: An in vitro study.
Insecticidal activity of the metalloprotease AprA occurs through suppression of host cellular and humoral immunity.
Transcriptome Profiling of Wild-Type and pga-Knockout Mutant Strains Reveal the Role of Exopolysaccharide in Aggregatibacter actinomycetemcomitans.
A galU mutant of Francisella tularensis is attenuated for virulence in a murine pulmonary model of tularemia.
The role of NLRP3 in regulating gingival epithelial cell responses evoked by Aggregatibacter actinomycetemcomitans.
Repression of aerobic leukotoxin transcription by integration host factor in Aggregatibacter actinomycetemcomitans.
The Msp Protein of Treponema denticola Interrupts Activity of Phosphoinositide Processing in Neutrophils.
Pf Filamentous Phage Requires UvrD for Replication in Pseudomonas aeruginosa.
Expression, purification and crystallization of the phosphate-binding PstS protein from Pseudomonas aeruginosa.
Proteolytic inactivation of LL-37 by karilysin, a novel virulence mechanism of Tannerella forsythia.
Sialic Acid-Siglec-E Interactions During Pseudomonas aeruginosa Infection of Macrophages Interferes With Phagosome Maturation by Altering Intracellular Calcium Concentrations.
Aryl hydrocarbon receptor is required for immune response in Epinephelus coioides and Danio rerio infected by Pseudomonas plecoglossicida.
Proteolytic cleavage of the long pentraxin PTX3 in the airways of cystic fibrosis patients.
Anti-inflammatory potential of pyocyanin in LPS-stimulated murine macrophages.
Francisella tularensis elicits IL-10 via a PGE_2-inducible factor, to drive macrophage MARCH1 expression and class II down-regulation.
Identification of a Fusobacterium nucleatum 65 kDa serine protease.
Anaerobic regulation of Actinobacillus actinomycetemcomitans leukotoxin transcription is ArcA/FnrA-independent and requires a novel promoter element.
Systematic investigation on the turning point of over-inflammation to immunosuppression in CLP mice model and their characteristics.
The regulation of leukotoxin production in Actinobacillus actinomycetemcomitans strain JP2.
The Zinc Nutritional Immunity of Epinephelus coioides Contributes to the Importance of znuC During Pseudomonas plecoglossicida Infection.
Filifactor alocis modulates human neutrophil antimicrobial functional responses.
Aggregatibacter actinomycetemcomitans Outer Membrane Proteins 29 and 29 Paralogue Induce Evasion of Immune Response.

Mlc is a transcriptional activator with a key role in integrating cyclic AMP receptor protein and integration host factor regulation of leukotoxin RNA synthesis in Aggregatibacter actinomycetemcomitans.
An unbroken network of interactions connecting flagellin domains is required for motility in viscous environments.
Sialoglycoproteins adsorbed by Pseudomonas aeruginosa facilitate their survival by impeding neutrophil extracellular trap through siglec-9.
Pseudomonas syringae evades host immunity by degrading flagellin monomers with alkaline protease AprA.
Potential of the Tannerella forsythia S-layer to delay the immune response.
Exploiting type 3 complement receptor for TNF-alpha suppression, immune evasion, and progressive pulmonary fungal infection.
Gangliosides block Aggregatibacter Actinomycetemcomitans leukotoxin (LtxA)-mediated hemolysis.
ATP Induces IL-1β Secretion in Neisseria gonorrhoeae-Infected Human Macrophages by a Mechanism Not Related to the NLRP3/ASC/Caspase-1 Axis.
Albumin grafted coaxial electrosparyed polycaprolactone-zinc oxide nanoparticle for sustained release and activity enhanced antibacterial drug delivery.
Gonococcal nitric oxide reductase is encoded by a single gene, norB, which is required for anaerobic growth and is induced by nitric oxide.

Table A2-44, Cluster 43

Cluster 43 focuses on HIV escape mutations, emphasizing the role of the HIV-1 accessory protein Nef in viral pathogenesis, viral replication, and immune escape of HIV-infected cells (553)
Consequences of HLA-B*13-Associated Escape Mutations on HIV-1 Replication and Nef Function.
Adaptation of HIV-1 to human leukocyte antigen class I.
HIV-specific CD8+ T cells: serial killers condemned to die?
Translation of HLA-HIV associations to the cellular level: HIV adapts to inflate CD8 T cell responses against Nef and HLA-adapted variant epitopes.
Modelling the spread of HIV immune escape mutants in a vaccinated population.
Role of HIV-specific CD8(+) T cells in pediatric HIV cure strategies after widespread early viral escape.
Virological and immunological correlates of HIV post-treatment control after temporal antiretroviral therapy during acute HIV infection.
Relative Resistance of HLA-B to Downregulation by Naturally Occurring HIV-1 Nef Sequences.
Temporal loss of Nef-epitope CTL recognition following macaque lipopeptide immunization and SIV challenge.
Microdevices for examining immunological responses of single cells to HIV.
Anti-HIV potency of T-cell responses elicited by dendritic cell therapeutic vaccination.
Nef: a pleiotropic modulator of primate lentivirus infectivity and pathogenesis.
HIV: current opinion in escapology.
Evolution of human immunodeficiency virus type 1 cytotoxic T-lymphocyte epitopes: fitness-balanced escape.
Clustering patterns of cytotoxic T-lymphocyte epitopes in human immunodeficiency virus type 1 (HIV-1) proteins reveal imprints of immune evasion on HIV-1 global variation.
Identification of SIV Nef CD8(+) T cell epitopes restricted by a MHC class I haplotype associated with lower viral loads in a macaque AIDS model.

CTL Escape and Viral Fitness in HIV/SIV Infection.
Differential escape patterns within the dominant HLA-B*57:03-restricted HIV Gag epitope reflect distinct clade-specific functional constraints.
Effects of naturally-arising HIV Nef mutations on cytotoxic T lymphocyte recognition and Nef's functionality in primary macrophages.
CTL response to HIV type 1 subtype C is poorly predicted by known epitope motifs.
Trivalent live attenuated influenza-simian immunodeficiency virus vaccines: efficacy and evolution of cytotoxic T lymphocyte escape in macaques.
CD8+ T cell epitope-flanking mutations disrupt proteasomal processing of HIV-1 Nef.
Fitness costs and diversity of the cytotoxic T lymphocyte (CTL) response determine the rate of CTL escape during acute and chronic phases of HIV infection.
HIV-specific T cell responses reflect substantive in vivo interactions with antigen despite long-term therapy.
HLA-associated clinical progression correlates with epitope reversion rates in early human immunodeficiency virus infection.
Precise identification of a human immunodeficiency virus type 1 antigen processing mutant.
Escape is a more common mechanism than avidity reduction for evasion of CD8+ T cell responses in primary human immunodeficiency virus type 1 infection.
HIV escape mutations occur preferentially at HLA-binding sites of CD8 T-cell epitopes.
Cytotoxic T lymphocytes and viral adaptation in HIV infection.
Selection of escape mutation by Pol154-162-specific cytotoxic T cells among chronically HIV-1-infected HLA-B*5401-positive individuals.
HIV evolution: CTL escape mutation and reversion after transmission.
Impact of vaccination on cytotoxic T lymphocyte immunodominance and cooperation against simian immunodeficiency virus replication in rhesus macaques.
Switching and emergence of CTL epitopes in HIV-1 infection.
The HIV hide and seek game: an immunogenomic analysis of the HIV epitope repertoire.
Fitness-Balanced Escape Determines Resolution of Dynamic Founder Virus Escape Processes in HIV-1 Infection.
Molecular Basis for the Recognition of HIV Nef138-8 Epitope by a Pair of Human Public T Cell Receptors.
Evidence of differential HLA class I-mediated viral evolution in functional and accessory/regulatory genes of HIV-1.
HIV reservoir: antiviral immune responses and immune interventions for curing HIV infection.
Escape mutations in HIV infection and its impact on CD8+ T cell responses.
Nef Is Dispensable for Resistance of Simian Immunodeficiency Virus-Infected Macrophages to CD8+ T Cell Killing.
The effects of natural altered peptide ligands on the whole blood cytotoxic T lymphocyte response to human immunodeficiency virus.
Evasion of adaptive immunity by HIV through the action of host APOBEC3G/F enzymes.
Clinical and evolutionary consequences of HIV adaptation to HLA: implications for vaccine and cure.
Maintenance of AP-2-Dependent Functional Activities of Nef Restricts Pathways of Immune Escape from CD8 T Lymphocyte Responses.
Nef-mediated resistance of human immunodeficiency virus type 1 to antiviral cytotoxic T lymphocytes.
Determinant of HIV-1 mutational escape from cytotoxic T lymphocytes.
HIV molecular epidemiology: transmission and adaptation to human populations.

Bioorganic approaches towards HIV vaccine design.
Immune responses induced in HHD mice by multiepitope HIV vaccine based on cryptic epitope modification.
Genotypic and Mechanistic Characterization of Subtype-Specific HIV Adaptation to Host Cellular Immunity.
Potential immune escape mutations under inferred selection pressure in HIV-1 strains circulating in Medellín, Colombia.
Genotypic and functional impact of HIV-1 adaptation to its host population during the North American epidemic.
Variable fitness impact of HIV-1 escape mutations to cytotoxic T lymphocyte (CTL) response.
B-cell responses to HIV infection.
Accumulation of Pol Mutations Selected by HLA-B*52:01-C*12:02 Protective Haplotype-Restricted Cytotoxic T Lymphocytes Causes Low Plasma Viral Load Due to Low Viral Fitness of Mutant Viruses.
Dynamics of viral evolution and CTL responses in HIV-1 infection.
HLA Class-II Associated HIV Polymorphisms Predict Escape from CD4+ T Cell Responses.
HLA class I-driven evolution of human immunodeficiency virus type 1 subtype c proteome: immune escape and viral load.
Antigen specificities of HIV-infected cells: A role in infection and persistence?
Multiple T-cell responses are associated with better control of acute HIV-1 infection: An observational study.
The flexibility of the TCR allows recognition of a large set of naturally occurring epitope variants by HIV-specific cytotoxic T lymphocytes.
Conditional CD8+ T cell escape during acute simian immunodeficiency virus infection.
Adaptation of CD8 T cell responses to changing HIV-1 sequences in a cohort of HIV-1 infected individuals not selected for a certain HLA allele.
HIV-1 Nef blocks transport of MHC class I molecules to the cell surface via a PI 3-kinase-dependent pathway.
Paediatric non-progression following grandmother-to-child HIV transmission.
HIV immune escape at an immunodominant epitope in HLA-B*27-positive individuals predicts viral load outcome.
HIV antibodies for treatment of HIV infection.
Immunology of pediatric HIV infection.
Computational inference methods for selective sweeps arising in acute HIV infection.
HIV control through a single nucleotide on the HLA-B locus.
Longitudinal within-host evolution of HIV Nef-mediated CD4, HLA and SERINC5 downregulation activity: a case study.
Physiological relevance of ACOT8-Nef interaction in HIV infection.
HIV immune evasion disruption of antigen presentation by the HIV Nef protein.
High-avidity, high-IFNγ-producing CD8 T-cell responses following immune selection during HIV-1 infection.
Transmission of HIV-1 Gag immune escape mutations is associated with reduced viral load in linked recipients.
Two Distinct Mechanisms Leading to Loss of Virological Control in the Rare Group of Antiretroviral Therapy-Naive, Transiently Aviremic Children Living with HIV.
Transmission of human immunodeficiency virus type 1 from a patient who developed AIDS to an elite suppressor.
Structured observations reveal slow HIV-1 CTL escape.

A longitudinal analysis of immune escapes from HLA-B*13-restricted T-cell responses at early stage of CRF01_AE subtype HIV-1 infection and implications for vaccine design.
Epitope-specific CD8+ T cell kinetics rather than viral variability determine the timing of immune escape in simian immunodeficiency virus infection.
Biphasic CD8+ T-Cell Defense in Simian Immunodeficiency Virus Control by Acute-Phase Passive Neutralizing Antibody Immunization.
Impact of HLA-B*52:01-Driven Escape Mutations on Viral Replicative Capacity.
Selection, transmission, and reversion of an antigen-processing cytotoxic T-lymphocyte escape mutation in human immunodeficiency virus type 1 infection.
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Table A2-45, Cluster 44

Cluster 44 focuses on cancer stem cells, and methods for targeting of cancer stem cells within the tumor microenvironment (318)
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Table A2-46, Cluster 45

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Table A2-47, Cluster 46

Cluster 46 focuses on PD-L1 expression in advanced cancers, especially its contribution to immune escape (842)
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Table A2-48, Cluster 47

Cluster 47 focuses on fungal pathogens, especially the interactions of Candida albicans with innate host defense and its escape strategies (359)
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Table A2-49, Cluster 48

Cluster 48 focuses on Type 1 interferon, emphasizing viral pathogen-induced mechanisms to antagonize mammalian interferon signaling pathways (729)
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Table A2-50, Cluster 49

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Table A2-51, Cluster 50

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Table A2-52, Cluster 51

Cluster 51 focuses on parasites (especially Trypanosoma cruzi, Leishmania, and Toxoplasma gondii), emphasizing their immune system evasion strategies (495)
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Table A2-53, Cluster 52

Cluster 52 focuses on Streptococcus pneumoniae, emphasizing pathogenicity, virulence, and immune system evasion (366)
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Table A2-54, Cluster 53

Cluster 53 focuses on Salmonella typhimurium and other bacteria, emphasizing their pathogenicity, virulence, and the molecular mechanisms they use to evade the immune system (375)
Salmonella enterica serovar typhimurium exploits Toll-like receptor signaling during the host-pathogen interaction.
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Salmonella Virulence and Immune Escape.
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Cellular aspects of immunity to intracellular Salmonella enterica.
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Salmonella persistence and transmission strategies.
Typhoidal Salmonella: Distinctive virulence factors and pathogenesis.
Salmonella AvrA Coordinates Suppression of Host Immune and Apoptotic Defenses via JNK Pathway Blockade.
Salmonella Suppresses the TRIF-Dependent Type I Interferon Response in Macrophages.
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Salmonella Persistence and Host Immunity Are Dictated by the Anatomical Microenvironment.
Shigella IpaH Family Effectors as a Versatile Model for Studying Pathogenic Bacteria.

Molecular Mechanisms of Salmonella Effector Proteins: A Comprehensive Review.
Salmonella downregulates Nod-like receptor family CARD domain containing protein 4 expression to promote its survival in B cells by preventing inflammasome activation and cell death.
Attaching and effacing pathogens: the effector ABC of immune subversion.
A Yersinia effector protein promotes virulence by preventing inflammasome recognition of the type III secretion system.
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Mechanisms used by virulent Salmonella to impair dendritic cell function and evade adaptive immunity.
Modulation of innate immune responses by Yersinia type III secretion system translocators and effectors.
[Outer membrane remodeling of Salmonella typhimurium and host innate immunity].
Salmonella-regulated lipopolysaccharide modifications.
Exploiting host immunity: the Salmonella paradigm.
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BopC is a type III secreted effector protein of Burkholderia pseudomallei.
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Table A2-55, Cluster 54

Cluster 54 focuses on influenza viruses, emphasizing the role of mutations in immune escape variants (643)
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Table A2-56, Cluster 55

Cluster 55 focuses on Schistosoma mansoni and other helminth parasites, emphasizing evasion of host immunity during infection (537)
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Table A2-57, Cluster 56

Cluster 56 focuses on construction of a cancer-associated long non-coding RNA signature to predict prognosis and immune landscape in myriad cancers (794)
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Table A2-58, Cluster 57

Cluster 57 focuses on bacteria (especially Neisseria meningitidis), emphasizing their pathogenesis and immune suppressive mechanisms (394)
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Table A2-59, Cluster 58

Cluster 58 focuses on T cells (especially CD8+), emphasizing the role of T cell response suppression (in the tumor microenvironment) in immune system evasion (1478)

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Table A2-60, Cluster 59

Cluster 59 focuses on cancer immunotherapy, emphasizing the targeting of cancer immune evasion (1368)
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Table A2-61, Cluster 60

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Table A2-62, Cluster 61

Cluster 61 focuses on the tumor microenvironment, especially immune suppression in the tumor microenvironment, and its role in promoting tumor growth (1086)
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Table A2-63, Cluster 62

Cluster 62 focuses on cancer, especially the mechanisms of cancer progression and metastasis and their relation to epithelial-mesenchymal plasticity and immune evasion (869)
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Table A2-64, Cluster 63

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Appendix 3 – Contributing Factors to Immune System Dysfunction

This appendix contains the methodology for retrieving dysfunctional immune system CFs from our 2020 monograph (https://repository.gatech.edu/entities/publication/a5c9c8e9-8cc9-4588-a065-2be90b43b8dc), as well as a listing of these CFs.

METHODOLOGY

The methodology, reproduced from Chapter 2 of the monograph, is as follows:

"The main analytical objective of this study is to identify factors that contribute to weakening of the immune system. Toward this end, a query was generated that would retrieve records with high probability of containing such factors. The query retrieved 10,733 records from Medline. Some additional records (identified from those records retrieved with the query) were also used for the analysis. The retrieved records were inspected visually, and contributing factors were extracted manually…..The query used to retrieve these records from SCI-Medline is shown boxed below."

FINAL QUERY USED FOR STUDY SCI-MEDLINE

MESH--- (/adverse effects OR /toxicity OR /poisoning) AND TITLE--- (immun* AND (expos* OR induc* OR exacerbat* OR aggravat* OR trigger* OR disrupt* OR impair* OR dysfunction* OR suppress*))

OR

MESH--- (/adverse effects OR /toxicity OR /poisoning)

AND

TITLE--- immun*

AND

TOPIC--- IMMUNOTOXIC*

OR

TITLE--- IMMUNOTOXIC* OR IMMUN* NEAR/3 IMPAIR*

"Initially, a much broader query was developed, and it retrieved tens of thousands of records. However, given that the projected analysis would be labor intensive, with visual inspection of the retrieved records and manual extraction of contributing factors, it was decided to generate a more focused query that would retrieve fewer records, but with higher probability of relevance (precision). The boxed query achieved that goal."

SUMMARY RESULTS

The following is a reproduction of Chapter 3 of the 2020 monograph, which contains the summary results. The numbering of tables is that used in the monograph.

"Approximately 65% of the retrieved records were evaluated. The extracted contributing factors were assigned to one of five categories (Lifestyle, Iatrogenic, Biotoxin/Biomaterial, Occupational/Environmental, Psychosocial/Socioeconomic), even though many of the contributing factors could have been assigned to multiple categories. Table 3-1 contains contributing factors that have been shown repeatedly to weaken the immune system. They include:

TABLE 3-1

HIGH-FREQUENCY CONTRIBUTING FACTORS TO WEAKENED IMMUNE SYSTEM

CATEGORY	**CONTRIBUTING FACTOR**
LIFESTYLE	smoking, excess alcohol, substance abuse, high-fat diet, protein-deficient diet, high-cholesterol diet, Western-style diets, chronic sleep restriction, etc.
IATROGENIC	immunosuppressive drugs, gamma radiation treatments, nanomedicinal products, adjuvanted vaccines, acetaminophen, non-steroidal antiinflammatory drugs (NSAIDs), surgical stress, serotonin reuptake inhibitors, selected anasthetics, selected antibiotics, highly active antiretroviral therapy drugs, etc.
BIOTOXIN/ BIOMATERIAL	aflatoxin, ochratoxin, T-2 toxin, anatoxin-A, mycotoxins, microcystin-LR, dietary toxic cyanobacteria, yessotoxin, scorpion venom; Streptomyces californicus; Pseudomonas aeruginosa; Rhinovirus, respiratory syncytial virus, etc.
OCCUPATIONAL/ ENVIRONMENTAL	microplastics, endocrine-disrupting chemicals, heavy metals, pesticides/insecticides/herbicides, nanoparticles, perfluorooctanoic acid (PFOA), polychlorinated biphenyls (PCBs), polyaromatic hydrocarbons (PAHs), perfluorooctanesulfonate (PFOS), fine particulate matter, air pollution, acrylamide, aromatic halogenated disinfection byproducts, benzene, benzo(a)pyrene, crude oil, corexit, ultraviolet (UV) radiation, wireless radiation-cell phones/cell towers/WiFi, sodium fluoride, etc.
PSYCHOSOCIAL/ SOCIOECONOMIC	depression, chronic stress, restraint stress, social isolation, stressful life events, childhood adversity, etc.

Eliminating/ameliorating these toxic exposures/behaviors will require a combination of individual motivations/efforts and government efforts, especially at the regulatory level. The factors in the Lifestyle category mainly require motivation and willpower to eliminate, although government regulation would be beneficial for controlling food additives and labelling contents of processed foods. For the Iatrogenic category, government regulation is necessary for ensuring treatment safety. There is room for individual motivation in eliminating excessive or unnecessary use of painkillers, such as NSAIDs or opioids, and unnecessary/elective surgeries.

Members of the Biotoxin/Biomaterial category (especially the Biotoxin component) are more difficult for individuals to eliminate. As we are seeing with COVID-19, virus exposure is difficult to control (as is bacterial exposure). There are many mycotoxins listed in Table 3-1. Those found in food may result from improper storage and insufficient processing to eliminate mycotoxins. Those in indoor environments may result from insufficient moisture/humidity control. Some of these problems can be addressed by stricter government regulations.

The Occupational/Environmental category could benefit substantially from more rigorous government regulation. Most of the exposures are beyond the control of the individual; in fact, the individual most probably doesn't know he/she is being exposed to these substances.

For example, the Occupational Safety and Health Administration (OSHA) has responsibility for regulating most workplace toxic exposures. Out of the more than 85,000 chemicals registered with the EPA, OSHA issues Federally-enforceable Permissible Exposure Limits (PELs) for about 500 of these chemicals. In 2018, the first author published a study of the adequacy of OSHA's PELs [20], using a sampling technique. Of those substances that were sampled, their PELs were one-four orders of magnitude higher than exposures shown in the biomedical literature to cause damage.

As another example, the radiation exposure limits for wireless radiation (cell phone/cell towers/WiFi, etc.) approved by the FCC are from three-six orders of magnitude higher than exposures shown in the biomedical literature to cause damage, the discrepancy varying with the level of damage [21].

But, even in this category, individual choice and motivation play a role. People who want to strengthen their immune systems can choose (especially in the home environment, and partly in the work environment) to reduce exposure to wireless radiation, water with sodium fluoride, strong pesticides, strong disinfectants, etc.

The PsychoSocial/SocioEconomic category could benefit from some government interventions that reduce stressful situations for the individual (e.g., providing economic/health/occupational security, providing more protections for the most vulnerable (very young, elderly, disabled), etc.). Some of the types of adverse events and stresses are beyond the control of government or the individual, but here again, the individual can take steps to improve their responses to many of these types of stress.

Most of the studies, especially the laboratory studies, that gathered the data reported in Table 3-1 and the more extensive Table A4-1 (shown in Appendix 4) focused on the effects of one stressor/toxic stimulus in isolation. In real-life, people are exposed to myriad toxic stimuli, both in parallel and over different time periods. Typically, when toxic stimuli are combined, less of each constituent of the combination is required to cause damage compared to the amount determined from single stressor

experiments [22]. Thus, real-life weakening of the immune system from myriad exposures to the toxic stimuli in Table 3-1 (and Table A4-1) is far greater than that reported in the single toxic stimulus studies.

To summarize, repurposed (mainly) antiviral treatments can only be expected to have very limited results in controlling SARS-CoV-2 viral load of the most severely impacted, based on trials conducted so far. Further, based on the findings of Appendix 3, it is difficult to see how safe COVID-19 vaccines can be developed and fully tested on time scales of one or two years, as proposed presently.

Finally, the only real protection against a future COVID-19 pandemic or any other viral pandemic is the one that was demonstrated to work in the SARS, MERS, COVID-19 and annual influenza pandemics: a healthy immune system capable of neutralizing incoming viruses as nature intended. We need an Operation Warp Speed (the Federal Administration Program currently targeted to produce a vaccine in a record short time period in the USA) to identify and eliminate those factors that weaken the immune system as thoroughly, comprehensively, and rapidly as possible!"

DETAILED RESULTS

Appendix 4 of the 2020 monograph is reproduced in the following section. The numbering is that used in the 2020 monograph. A4-A lists the CFs to a dysfunctional immune system, and A4-B lists the titles of the records from which the CFs were derived.

"A4-A. Contributing Factors to Weakened Immune System

This section presents the complete list of factors that contribute to weakening of the immune system based on our analysis of the retrieved data base. About 10,800 records were retrieved using the query shown in Chapter 2 (and other records identified in the course of the analysis), about 7,000 of these records were analyzed, and about 4,700 (of the 7,000) records identified factors that contributed to weakening of the immune system. The contributing factors from these ~4,700 records were aggregated, and slightly over 2,200 contributing factors were entered into the table below. Not all redundancies were eliminated, but if even on the order of 30% redundancy exists, this means that about 1,500 contributing factors to weakening the immune system have been identified.

This is a very conservative estimate. The query in Chapter 2 was written to retrieve those articles most relevant to immune-weakening factors, given the labor-intensive approach taken to identify these factors from the retrieved articles. A much more expansive query, albeit with less precision, would have retrieved tens of thousands of articles, and produced many more contributing factors.

But, the 1,500 constitute a large number, are far more than we have seen in any one article, and probably cover all the major contributing factors. Any measures that an individual or government regulator can take for protecting the health of the immune system will only be able to deal with a small fraction of the 1,500 already identified, at least initially.

Commented [MA1]: Make a reference to the Table in this section, and also qualify that though comprehensive it is unlikely to include all all factors

TABLE A4-1

CONTRIBUTING FACTORS TO WEAKENED IMMUNE SYSTEM

LIFESTYLE	
advanced glycation end products	high-cholesterol diet
age	high-fat-diet
alcohol abuse	hygiene hypothesis
aniline-adulterated rapeseed oil	ice cream
Argemone oil	isobutyl nitrite
Biomass smoke exposure	isoflavones
Caesarian delivery	linoleic acid
cannabinoid	linolenic acid
cheese	Low dietary n − 3 fatty acid
chronic Sleep Restriction	Low prenatal-neonatal animal bacterial exposures
cigarette smoking	Maize prolamins
cinnamaldehyde	Malnutrition
cocaine	Maternal separation in early life
cow's milk insulin	Maternal smoking
crack	Maternal undernutrition
dietary biotin deficiency	medication use
dietary excess lipids	methamphetamine
dietary fatty acid intake	methylenedioxymethamphetamine
dietary Iron Deficiency	Microbial depletion in early environment
dietary iron excess	minced pork
dietary low lipids	minced turkey
dietary niacin deficiency	mobile phone
dietary oxidized lipids	morphine dependence
dietary phosphorus deficiency	n-propyl gallate
dietary protein restriction	Obese pregnancy
dietary pyridoxine deficiency	opioid
dietary thiamin deficiency	paracetamol
dietary valine deficiency	peanuts
Dietary zinc deficiency	peppermint oil
diet-induced obesity	phencyclidine
drug abuse	phloretin-contained fruits
Early antibiotic use	Prenatal nutrient energy overload
Early life diet	Prenatal nutrient-insufficiency
Early weaning stress	Protein malnutrition
E-cigarette	protein-deficient diet
Ecstasy	recreational drugs
ethanol consumption	rectal insemination
ethanol intoxication	Red meat consumption
excess dietary cholesterol	Reduced neonatal microbial environment
excessive Se	sedentary

extended contact lens wearing	Selenium deficiency
fast-food burger	snuff
fatty acid anilides	Sodium nitrite
fetal alcohol exposure	synthetic food additive antioxidants
fish extracts	Tetrahydrocannabinol
fish oil supplementation	tobacco smoking
Flavored e-cigarette liquids	traffic pollution
folic acid deficiency	vitamin A deficiency
formula feeding	vitamin B-12 deficiency
genistein	vitamin B-6 deficiency
Glue solvent	vitamin C deficiency
gluten	vitamin D deficiency
heavy competition	Western-style diets
heavy training	Wheat Gluten
high fat diet	yoghurt
high glucose exposure	zinc deficiency
high n − 6 fatty acid-trans fat	
IATROGENIC	
([2-fluoro-2',5'-dimethyl-4'-[6-(3-methyl-2-butenyloxy) pyridin-3-yl] biphenyl-4-yl]-(3-methyl-2-butenyl) amine)	indomethacin
(S)-1-(3-hydroxy-2-phosphonylmethoxy propyl) cytosine	Infliximab
145-2C11	influenza vaccination
17alpha-ethinyl estradiol	influenza vaccine
17beta-estradiol	Inteferon alpha/beta
18beta-Glycyrrhetinic acid	Interferon alfacon-1
1-chloro-2,4-dinitrobenzene	Interferon alfa-n3
2,2'-dichlorodiethyl sulfide	interferon alpha
2,4-Dichlorophenoxybutyric acid	interferon alpha therapy
2-[bis(2-chloroethyl)amino]tetrahydro-2H-1,3,2-oxazophosphorine 2-oxide	Interferon beta-1a
2'3'-Dideoxyinosine	interferon type 1
2-amino-2-(2-[4-octylphenyl]ethyl)-1,3-propanediol hydrochloride	Interferon-alpha
2-aryl carbapenem	interleukin 2 receptor antibody
2'-deoxycoformycin	intravenous gammaglobulin
3,3'-Diindolylmethane	Intravenous immunoglobulin
3'-Azido-2',3'-dideoxythymidine	Intravenous immunoglobulin G
3-methyl-2-quinoxalin benzenevinylketo-1, 4-dioxide	ipilimumab
4AZA1378	iproniazid
5 alpha-dihydrotestosterone	iproniazide
5-azacytidine	irinotecan
5'-deoxy-5-fluorouridine	isoflurane
5'-DFUR	Isoniazid

5'-dFUrd	isoproterenol
5-fluorouracil	ivermectin
6-fluoro-8-nitro-4-oxo-1,4-dihydroquinoline-3-carboxylate	Ixabepilone
9-(N-methyl-L-isoleucine)-cyclosporin A	ixazomib
abacavir	JAK-inhibitors
abatacept	ketorolac
abciximab	Keyhole limpet haemocyanin
Abeta immunization	L. acidophilus
Abetimus	lamivudine
acetaminophen	Lamotrigine
Acetylsalicylate	L-arginine
acetylsalicylic-acid	L-canaline
Acteoside	L-canavanine
Actinomycin D	Leflunomide
acyclic retinoid	left ventricular assist device
acyclovir	Lenalidomide
Adalimumab	leuprolide acetate
adenosine 5'-monophosphate (AMP) Quantum dots (QDs) (AMP-QD)	levamisole
Adjuvanted vaccines	Linezolid
adjuvants	lipidated TN-ApoA-I
Adriamycin	liposomal drugs
ADTP vaccine	liquamycin 200
Advagraf	Lomustine
Afelimomab	lopinavir
Aldesleukin	Lorabid
Aldosterone	loracarbef
Alefacept	lorazepam
alemtuzumab	L-tryptophan
alendronate	lymphocyte immune globulin
alfathesin	M344
alkylating chemotherapy	mAbs
allogeneic bone marrow transplantation	major surgery
allogeneic hematopoietic stem cell transplant	mammary silicone implants
allopurinol	m-carboxy-cinnamicacidbis-hydroxamide
Alloxan	measles, mumps, and rubella vaccine
Alovudine	Mechlorethamine
alpha-ethinylestradiol	medical devices in contact with the blood stream
alpha-methyldopa	medroxyprogesterone
alpha-momorcharin	medroxyprogesterone acetate
Altretamine	mefenamic acid
Ambisome	meglumine antimoniate
amiodarone	Melphalan
Amlodipine	Mepolizumab
Amoxicillin	Mercaptopurine

amphenicols	Meropenem
Amphotericin	methadone
Amprenavir	methimazole
Amsacrine	Methotrexate
anabolic androgenic steroid	Methylprednisolone
Anakinra	Midazolam
anesthesia	minocycline
antibiotics	mirtazapine
anticalcineurin	Misoprostol
Anti-CD20	mitoxantron
anti-CD3 monoclonal antibody	Mitoxantrone
anticonvulsants	mizoribine
anti-CTLA-4 antibody	Mometasone
Anti-D immunoglobulin	Mometasone furoate
anti-d(beta)h-saporin	monoclonal anti-16/6 Id antibody
antilymphocyte globulin	monoclonal antibodies
anti-programmed death 1	Monoclonal antilymphocyte antibodies
antiretroviral agents	Monomethyl fumarate
antithymocyte globulin	Morphine
anti-thymocyte globulin treatment	morphine sulfate
Antituberculosis drug	moxifloxacin
antiviral treatment	murine-derived monoclonal CD3 antibody
antiviral vaccines	muromonab
Apicidin	Mycophenolate Mofetil
Apremilast	mycophenolate sodium
Arctigenin	Mycophenolic acid
Aripiprazole	Mycophenolic acid
artemisinin	N4-Trimethoxybenzoyl-5'-deoxy-5-fluorocytidine
aspirin	N-acylhydrazone
Atgam	nanomedicinal products
ATG-Fresenius S	nanoparticle-formulated drugs
atropine	naproxen
AZA	Natalizumab
Azacitidine	N-desmethylclozapine
Azathioprine	Nelarabine
azidothymidine	neomycin
azithromycin	nevirapine
bacille Calmette-Guerin vaccine	N-hydroxy-7-(-4-dimethylaminobenzol)aminoheptanamide
Bariatric Surgery	nifedipine
basiliximab	Nilotinib
Begelomab	nitrofurantoin
Belatacept	nitrogen mustard
Belimumab	Nivolumab
Belinostat	nomifensine
Bendamustine	non-steroidal anti-inflammatory drugs

benzocaine	norfloxacin
Berberine	Norfloxacin nicotinate
Beta-diketone antibiotics	novobiocin
beta-lactam antibiotics	NSAIDs
betalactams	nucleic acid-based therapeutics (NATs) by a nanocarrier
Betamethasone	Obinutuzumab
Bevacizumab	Ocrelizumab
Bexarotene	ofatumumab
bezafibrate	Ofloxacin eyedrops
Biopin	Olaparib
Bisphosphonates	omega interferon
Bleomycin	open-heart surgery
Blinatumomab	operation
Blood transfusion	oral antibiotic treatment
bone marrow transplantation	Oryza sativa
Bortezomib	oseltamivir
Bosutinib	Oxaliplatin
BR96 sFv-PE40	Oxcarbazepine
breast implant	oxytetracycline
Brentuximab vedotin	Ozanimod
Briakinumab	Paclitaxel
Brodalumab	Palbociclib
Bucillamine	Panitumumab
Budesonide	Panobinostat
buprenorphine	Paramethasone
Busulfan	Paroxetine
butalbital	Pazopanib
Cabazitaxel	Peficitinib
calcineurin inhibitors	Pefloxacin
Calcium folinate	Pegaspargase
calcium hydroxylapatite	Peginterferon alfa-2a
Canakinumab	Peginterferon alfa-2b
Capecitabine	Peginterferon beta-1a
Carbamazepine	pembrolizumab
Carbendazim	Pemetrexed
Carboplatin	Penicillamine
carboxyphosphamide	penicillin
cardiac surgery	penicillin G
cardiopulmonary bypass	pentamidine
carfilzomib	Pentamidine isethionate
Carmofur	Pentosan
Carmustine	Pentostatin
Castanospermine	pentylenetetrazole
catecholamine	peplomycin
cecal ligation and puncture	peritoneal dialysis

cefotetan	permethrin
Ceftazidime	Phenprocoumon
ceftriaxone	Phenylalanine
Cefuroxime	phenytoin
Celecoxib	Phospholipid-based phase separation gel
cephalosporin	photodynamic therapy
Certolizumab pegol	Photoimmunotherapy
Cervus korean TEMMINCK var. mantchuricus Swinhoe	pimecrolimus
chemoradiation therapy	Piperacillin
chemotherapeutics	piperine
chemotherapy	Piracetam
Chinese medicine injection	Pirarubicin
chlorambucil	Pirfenidone
chloramphenicol	Plasma-derived Human serum albumin p
chlordecone	pneumococcal 13-valent/23-valent polysaccharide vaccine
Chlorhexidine	Pneumococcal vaccine
chloroquine	poliomyelitis vaccine
chlorpromazine	polivalent immunoglobulins
cholinotropic preparations	polyclonal antilymphocyte antibodies
cidofovir	polyclonal antithymocyte antibody
Cimetidine	Polylactic-co-glycolic acid nanoparticle
ciprofloxacin	polymerized porcine hemoglobin
cisplatin	pomalidomide
Cis-platinum	Ponatinib
citalopram	Poppers
Cladribine	post-bone marrow transplant
clavulanic acid	Pralatrexate
Clemastine	Prednicarbate
Clofarabine	prednisolone
clometacin	prednisone
Clonazepam	Prednylidene
clozapine	Preoperative Chemoradiotherapy
colchicine	previcur
combination antiretroviral therapy	procainamide
Complete Freund's adjuvant	Procarbazine
congenital heart disease surgery	progesterone
cord blood transplantation	Prograf
Coriandrum sativum	propranolol
corticoid	Propylthiouracil
corticosteroids	propyphenazone
corticosterone	Protamine
Corticotropin	psoralen
cortisol implants	PUVA treatment
Cortisone acetate	PYCNOGENOL

cotrimoxazole	Pyrazinamide
cranial radiotherapy	pyrimethamine
Cremophor-EL	Qingkailing
CsA	quinine
CT20126	rAAV gene medicine
cupravit	rabbit antithymocyte globulin
cuprizone	radio-immunotherapy
Cyclophosphamide	radioiodine therapy
Cyclophosphamide	radiotherapy
cyclosporin	Raltitrexed
cyclosporine	rapamycin
cyclosporine G	Ravulizumab
Cytarabine	recombinant 19-kDa antigen
cytokine gene therapy	Recombinant human granulocyte-macrophage colony-stimulating factor
cytostatic drugs	renal allografts
cytotoxic drug therapy	rhGM-CSF
cytoxan	Rhododenol
Dacarbazine	rHuIFN-alpha
daclizumab	ribavirin
Dactinomycin	Rifabutin
daptomycin	Rilonacept
Dasatinib	rimantadine
Daunorubicin	Rimexolone
DaunoXome	Risankizumab
death-ligand 1 antibodies	Risperidone
Decitabine	ritonavir
Deflazacort	Rituximab
Delta(9)-tetrahydrocannabinol	RN6G
Deoxyspergualin	Ro 09-1390
derivative of gamma-aminobutyric acid	romidepsin
dexamethasone	Rosuvastatin
Dexrazoxane	Rozanolixizumab
DHPG	rubella vaccine
diazepam	Ruxolitinib
diclofenac	S-2678
didanosine	Sanguinarine
diethylstilbestrol	Sarilumab
Digoxin	Secukinumab
dihydralazine	Seocalcitol
dilantin	serotonin reuptake inhibitors
Dimethyl fumarate	sevoflurane
Dinutuximab	silicon breast implant
diphenylhydantoin	Siltuximab
diphtheria-tetanus-poliomyelitis vaccine	Siponimod
Docetaxel	Sirolimus

dolutegravir	Sirukumab
Dow2	SK&F 95654
Doxifluridine	Sorafenib
Doxil	splenectomy
Doxorubicin	statins
d-penicillamine	stavudine
drospirenone	stem cell transplantation
drug G1	Stepronin
Eculizumab	steroids
Efalizumab	Streptozocin
efavirenz	SU5416
enemas	suberoylanilide hydroxamic acid
enfuvirtide	sulfamethazole
Epirubicin	sulfamethoxazole
equine antithymocyte globulin	sulfapyridine
Eribulin	Sulfasalazine
erythromycin	sulfisoxazole
Estradiol	sulfur mustard
Estramustine	sulindac
etanercept	sulphadiazine
ETC-216	sulphamethoxazole
ethinylestradiol	Sulphonylurea
Ethyl 4-isothiocyanatobutanoate	Sunitinib
etoposide	Supplemental oxygen
Everolimus	Surgery
fenofibrate	Surgical damage
fenofibric acid	surgical stress
Feraheme	surgical trauma
fibrates	Synthetic human chorionic gonadotropin-related oligopeptides
Fingolimod	tabalumab
FK 506	Tacrolimus
FK-50	Tamoxifen
flavivirus vaccination	tazobactam
Florfenicol	Tedizolid phosphate
Floxuridine	tegafur
Fluazuron	teicoplanin
flucloxacillin	Temozolomide
fluconazole	Temsirolimus
Flucytosine	Teniposide
fludarabine	tenofovir
Fludrocortisone	Tepoxalin
fluocinolone acetonide	teriflunomide
Fluoroquinolones	Tetracyclines
Fluorouracil	Tetrandrine
Fluoxetine	TGN1412

foscarnet	thalidomide
FTY720	thiamphenicol
Fusidic acid	thiazolidinedione
Gadobutrol	thiopental
Gallium nitrate	Thiopronine
ganciclovir	Thiopurine agents
gastrectomy	Thiotepa
gemcitabine	thoracic transplantation
gemfibrozil	thymectomy
Gemtuzumab ozogamicin	thymoglobulin
gentamycin	ticlopidine
Glatiramer	tienilic acid
Glimepiride	Tioguanine
Glivec	tirofiban
glucocorticoids	Tixocortol
GM-CSF vaccine	tobramycin
Golimumab	Tocilizumab
gosereline acetate	Tofacitinib
Granulocyte colony stimulating factor	Topotecan
Gusperimus	Tositumomab
HAART	total-body gamma radiation
haloperidol	total-body irradiation
halothane	Trabectedin
hCG-related oligopeptides	Trastuzumab emtansine
HDAC inhibitors	tremelimumab
hematopoietic stem cell transplantation	trenbolone acetate
hemodialysis	Treponema spp.
Heparin	Tretinoin
Hepatectomy	Triamcinolone
Hepatitis B immunoglobulin	triamterene
hepatitis B vaccine	triazene compounds
hgd40	trichosanthin
highly active antiretroviral therapy	Trichostatin A
Histone deacetylase inhibitors	Trifluridine
Human immunodeficiency virus protease inhibitors	Trilostane
human papilloma virus vaccine	trimethoprim
Hydantoin	Triptolide
hydralazine	Trofosfamide
hydrochlorothiazide	troglitazone
hydrocortisone	Trovafloxacin
Hydroxychloroquine	tumor necrosis factor alpha antagonists
hydroxyethyl starch	Tyrosine kinase inhibitors
hydroxylamine	Ulobetasol
hydroxyurea	Umbilical cord blood transplantation
Hypericin	Umirolimus

Ibritumomab tiuxetan	ustekinumab
Ibrutinib	vaccinations
ibuprofen	vaccines
icotinib	valproic acid
ID35	vancomycin
Idarubicin	Vedolizumab
Idelalisib	Venlafaxine
IFN-alpha	Venocuran
IFN-beta	verapamil
Ifosfamide	Verapamil hydrochloride
IgG immune complex	vesnarinone
IK blockers	vigabatrin
IL-15 superagonist	Vilanterol
Imatinib	Vinblastine
Imiquimod	Vincristine
immune checkpoint inhibitors	Vindesine
immunoglobulin G immune-complex	Vinorelbine
immunoglobulins	Voclosporin
immunomodulatory monoclonal antibodies	Vorinostat
immunostimulatory oligodeoxynucleotide	Warfarin
immunosuppressants	Wortmannin
Immunosuppressive acid protein	YF vaccine
immunosuppressive agents	Zalcitabine
immunosuppressive drugs	zanamivir
immunosuppressive induction therapy	zidovudine
Indinavir	
BIOTOXINS/BIOMATERIALS	
09 LPS	Human immunodeficiency virus
192 IgG-saporin	Human leucocyte antigen G
ATCC 25285	Human Pappilomavirus
A.actinomycetemcomitans	Human respiratory syncytial virus
AahI	Human Rhinovirus
AahII	Indoxacarb
Abscisic acid	Influenza A virus protein PB1-F2
aerosolized porcine brain	influenza virus
aflatoxin	Interleukin-10
Aflatoxin B	kainic acid
Aflatoxin B1	kaliotoxin
aflatoxin M1	Kaposi's sarcoma-associated herpesvirus
aflatoxins	ketones
Airborne fungus	lacto-N-fucopentaose3
alcohols	Lichen planus
Amylosin	Lipopolysaccharides
Anatoxin-a	lymphocytic choriomeningitis virus
Androctonus australis hector scorpion venom	M. tuberculosis
Anthrax lethal toxin	malondialdehyde

Anti-dopamine beta-hydroxylase immunotoxin	Marek's disease virus
antigenic peptide P815E	measles virus infection
Antx-a	microcystin-LR
Asobara japonica venom	microcystins
Aspergillus fumigatus spores	milky sap of F. carica
Aspergillus versicolor	Mitomycin
Ataxin-1 oligomers	mitomycin C
atranone A	Mixed mold mycotoxicosis
atranone C	moisture-damaged buildings
B. forsythus	moniliformin
Bacillus Calmette-Guerin	Monocrotaline
Bacillus thuringiensis israelensis	Moraxella catarrhalis
bacterial	mould
bacterial infections during pregnancy	Murine gammaherpes-virus-68
Bacteroides fragilis	Mus m 1
beauvericin	Mycobacteria tuberculosa adjuvant
Berthellina citrina	Mycobacterium marinum
beta-(1,3)-glucan	Mycobacterium tuberculosis
bilirubin	Mycobacterium xenopi
Bordetella pertussis	Mycolactone
Borrelia burgdorferi	Mycotoxicoses
Bovine viral diarrhea virus	mycotoxins
brevetoxin	Neonatal infections
brown recluse spider venom	nivalenol
Brucella melitensis	Nodularin
bursal disease virus	Nomuraea rileyi
butylated hydroxytoluene	NTHI
C. albicans	ochratoxin A
C. perfringens	ochratoxin B
C. rectus	okadaic acid
Candida albicans water soluble fraction	oleic acid
Capnocytophaga	opportunistic infections
cardiac glycoside	organic dusts
carrageenan	ovalbumin
catalase	P. gingivalis
chitosan	P. intermedia
Chlamydia pneumoniae	Pam3Cys
cholera toxin	Pasteurella haemolytica A1 lipopolysaccharide
Chronic Viral Infection	pathogen-associated molecular patterns
Chrysaora quinquecirrha venom	Patulin
Cis-urocanic acid	peptidoglycan
citrinin	peptidoglycan-polysaccharide
clade B human immunodeficiency virus	pertussis toxin
Clostridium perfringens	phorbol ester
CMV	phytoestrogen
cobra venom factor	Plasmodium

Coinfection with an intestinal helminth	pollen
collagen	Polymethoxylated flavone extract
concanavalin A	Polyomavirus BK
Contact allergens	porcine serum
Cotesia chilonis venom	Porphyromonas gingivalis
coxsackievirus B3	Premolis semirufa
cryopreserved mesenchymal stromal cells	Prevotella intermedia
cyanobacteria	Prolactin-induced protein
cyanobacterial metabolites	Proteoglycan
cyanotoxin	protozoan parasites
Cyclopiazonic acid	Pseudomonas aeruginosa
Cylindrospermopsin	Pseudomonas exotoxin A
Cytomegalovirus	Pteridium aquilinum
daphnane diterpene esters	Pteromalus puparum venom
Demodex mites	ragweed
Dengue Infection	Recombinant interleukin-2
deoxynivalenol	respiratory pathogens
Dermatophagoides pteronyssinus group 5	Rhein
D-galactosamine	Rhinovirus
D-galactose	ribosome inhibiting protein
dinoflagellate genus Alexandrium	ricin toxin A
domoic acid	Rotavirus
dust	Royal jelly
dust mite	rubella
E. coli endotoxin	rubratoxin B
E. nodatum	S. intermedius
EBV	S. mutans
Echinacea	S.aureus
echinococcal	saporin
endotoxin	Schistosoma mansoni
enniatin B	Scleroderma guani venom
Epstein-Barr virus	sepsis
Escherichia coli 0:14 lipopolysaccharide	settled dust
Escherichia coli lipopolysaccharide	Shiga toxin
estrogen	Simian immunodeficiency virus
estrogenic xenobiotics	SIVcpz
excess Growth hormone	soybean dust
extractable organic matter	spores of basidiomycete fungi
Fasciola hepatica	squalene
flour dust	Stachybotrys chartarum
Francisella tularensis	staphylococcal enterotoxin B
	Staphylococcus aureus
Friend leukemia virus	Staphylococcus epidermidis
FtoxG50	Streptococcus pneumoniae
fumonisin B1	Streptococcus pyogenes
fungal bioaerosols	Streptomyces californicus

fusarenon-X	sulfur-fumigated polysaccharides from Smilax glabra Roxb
Fusaric Acid	Superantigens
fusariotoxins	Swainsonine
fusarium T-2 toxin	T-2 toxin
Fusobacterium nucleatum	Taenia solium metacestode
galactosamine	Tat 1-72
Gibberellic acid	tetanus toxin
Ginkgo leaf extracts	Thalassophryne nattereri fish venom
gliadin	thermophilic actinomycete
gliotoxin	Tityustoxin
glucose-6-phosphate isomerase	TLR ligands lipopolysaccharide
Glutamate	toxic cyanobacteria
grain dust	Toxoplasma gondii
gram-negative bacteria	tree pollen
grass pollen	Trichothecenes
Group-A beta-Haemolytic Streptococcus	Tripterygium wilfordii Hook f
H1N1	Tulipalin A
HBV	type II collagen
HCV	Umbelliferae
heat shock protein 65	Ureaplasma parvum
Hepatitis B virus	vaccinia virus
Hepatitis C Virus	viral infections during pregnancy
Histamine	virus-associated hematologic malignancies
HIV	vomitoxin
HIV-1	wheat alpha-amylase inhibitor
house dust mite	xanthine oxidase
HPV-16 E7	yessotoxins
HT-2	zanthoxylamide protoalkaloids
human cytomegalovirus	zearalenone
Human herpesvirus 8	zymosan A
OCCUPATIONAL/ENVIRONMENTAL	
(90)Sr	hypoxanthine
(Z)-cis-bifenthrin	hypoxia
1,1,1-trichloro-2,2-bis(4-methoxyphenyl)ethane	Imidacloprid
1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane	imiprothrin
1,1,1-trichloroethane	indeno[1,2,3,c,d]pyrene
1,1-dichloro-2,2-bis(p-chlorophenyl)ethane	indium
1,1-dichloro-2,2-bis(p-chlorophenyl)ethene	Indole-3-butyric acid
1,1-dichloroethylene	Indoxyl sulfate
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	industrial aerosols
1,2,3,4,7-pentachlorodibenzofuran	industrial noise
1,2,3,7,8-pentabromodibenzo-p-dioxin	Industrial organic solvents
1,2,3,7,8-pentachlorodibenzo-p-dioxin	Inhaled particles
1,2,3,7,9-PeCDF	intense sound
1,2,4-benzenetriol	iodine excess

1,2:5,6-dibenzanthracene	iodine gadital
1,2-dibromopropane	ionizing radiation
1,2-dichloroethane	iron
1,2-dimethylhydrazine	iron nanoparticles
1,3,6,8-TCDF	iron oxide nanoparticles
1,3-butadiene	iron-containing compounds
1,3-dibromopropane	irradiation
1,4-bis [(2-aminoethyl)amino]-5,8-dihydroxy-9,10-anthracenedione dihydrochloride	Isocyanates
1.8 GHz electromagnetic fields	Isophorone diisocyanate
12-methylbenz[a]anthracene	jet fuel
17alpha-ethynylestradiol	Jet-A
17alpha-Methyltestosterone	JP-8
1-Bromobutane	lactic acid
1-bromopropane	lambda-cyhalothrin
1-Chloro-4-(Trifluoromethyl)Benzene	lanthanoids
1-methyl-3-octylimidazolium bromide	lead
1-methyl-4-phenyl pyridinium	lead acetate
1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine	lead nitrate
2,2',4,4'-tetra-bromodiphenyl ether	leptophos
2,2',4,6,6'-Pentachlorobiphenyl	lewisite
2,3',4,4',5-pentachlrorbiphenyl	lindane
2,3,4,7,8-PeCDF	Lipid-based nanoparticles
2,3,4,7,8-pentachlorodibenzofuran	lithium
2,3,5,6-tetrachloro-4-(metylsulphonyl)pyridine	Lithium carbonate
2,3,7,8-tetrabromodibenzo-p-dioxin	lithium chloride
2,3,7,8-tetrachlorinated dibenzo-p-dioxin	long-haul flight
2,3,7,8-tetrachlorodibenzodioxin	low-frequency high-intensity magnetic field
2,3,7,8-tetrachlorodibenzofuran	low-frequency noise
2,3,7,8-tetrachlorodibenzo-p-dioxin	Magnesium sulfate
2,3-dichloro-1-propanol	Malathion
2',3'-dideoxyinosine	mancozeb
2,3-dihydro-2,2-dimethyl-7-benzo-furanol N-methylcarbamate	manganese
2,4,6-tribromophenol	matacil
2,4,6-trichlorophenol	Mechanical ventilation
2,4,6-triiodophenol	Mecoprop
2,4,6-trinitrobenzene sulfonic acid	Melamine
2,4,6-trinitrophenyl-N-methyl-nitramine	Mercuric chloride
2,4,6-trinitrotoluene	mercury
2,4,6-triphenyl-4H-selenopyrane	Meso-2,3-dimercaptosuccinic acid
2,4-Diaminotoluene	Mesoporous silica nanoparticles
2,4-dichlorophenol	metal nanoparticles
2,4-dichlorophenoxyacetic acid	metallic mercury vapor
2,4-dinitrofluorobenzene	metal-oxide nanoparticles
2,5-hexanedione	metals

2,6,10,14-tetramethylpentadecane	metalworking fluid
2,7-dichlorodibenzo-p-dioxin	meta-nitrotoluene
2100-MHz radiofrequency radiation	methacrylate
2450-MHz microwave	methamidophos
2-acetyl-4(5)-(1,2,3,4-tetrahydroxybutyl)-imidazole	Methanol
2-Acetylaminofluorene	methoxychlor
2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine	methyl bromide
2-Aminoanthracene	methyl chloride
2-bromopropane	methyl ethyl ketone
2-Mercaptobenzothiazole	Methyl eugenol
2-methoxyacetic acid	methyl isocyanate
2-methoxyethanol	methyl methanesulfonate
2-methoxyethyl acetate	methyl tertiary-butyl ether
2-octynoic acid	methylmercury
3-(2-chloroethyl)-2(2-mesyloxyethylamino)-tetrahydro-2H-1,3,2-oxazaphosphorine-2-oxide	methylmercury chloride
3-(3,4-diclorophenyl)-1,1-dimethylurea	methylmercury sulfide
3,3',4,4',5,5'-hexabromobiphenyl	methylnitrosourea
3,3',4,4',5,5'-hexaCB	methyl-N-nitrosurea
3,3',4,4',5-pentaCB	methylparathion
3,3',4,4',5-pentachlorobiphenyl	methyltetrahydrophthalic anhydride
3,3',4,4'-tetraCB	metribuzin
3,3',4,4'-tetrachloroazobenzene	Microcrystalline cellulose
3,3',4,4'-tetrachloroazoxybenzene	microgravity
3,4,3',4'-tetrachlorobiphenyl	Microparticles
3,4,5,3',4',5'-hexabromobiphenyl	microplastics
3,4,5,3',4',5'-hexachlorobiphenyl	microwaves
3,4-dichloroaniline	millimeter-wave
3,4-dichloropropionanilide	mineral dust
3,4-dichloropropionaniline	mineral oil distillate D-11
3-methyl-4-nitrophenol	mineral oils
3-methylcholanthrene	mining
3-Monochloro-1,2-propanediol	mirex
3-phenoxybenzoic acid	m-nitrotoluene
4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone	moisture-damage
4,4'-thiobis-(6-t-butyl-m-cresol)	mono-2-ethylhexyl phthalate
460-MHz microwaves	mono-iso-decyl phthalate
4-dimethylamino-3-methyl-N-carbamate	mono-iso-nonyl phthalate
4-hydroxy-2-nonenal	Monomethoxy(polyethyleneglycol)-poly (D,L-lactic-co-glycolic acid)-monomethoxy (PELGE) nanoparticles
4-hydroxydiclofenac	monomethylarsonous acid
4-Methylanisole	mono-n-octyl phthalate
4-nitroquinoline-1-oxide	monophthalates

4-nonylphenol	monosodium urate monohydrate crystal
4-pentylphenol	multiwalled carbon nanotubes
5-(3-3-dimethyl-1-triazeno)imidazole-4-carboxamide	Municipal wastewaters
50 Hz amplitude-modulated 2.45 GHz microwaves	mustard oil
6:2 fluorotelomer sulfonamide alkylbetaine	N,N,-diethyl-m-toluamide
6:2 FTAB	N,N1-bis(dichloroacetyl)-1,8-octamethylene diamine
60Cogamma radiation	N,N-diethylaniline
6-hydroxydopamine	N,N-diethyl-m-toluamide
6-mercaptopurine	N-acetylneuraminic acid
6-propyl-2-thiouracil	Nanoceria nanoparticles
7,12-dimethylbenz(a)anthracene	nanomaterials
8:2 Fluorotelomer alcohol	Nanoparticle protein corona (NP-PC)
835 MHz radiofrequency	nanoparticles
9-(2-hydroxyethoxymethyl)guanine	nanoparticulate TiO2
9,10-dimethylanthracene	nanoplastic particles
900 MHz radiofrequency radiation	Nanoshells
915-MHz microwave radiation	nanosilicas
abamectin	nanosilver
abandoned oil refinery	naphthalenes
abestos	naphthenic acids
acephate	N-bis (2-hydroxypropyl) nitrosamine
Acer3 deficiency	N-Butylbenzene sulfonamide
Acetaldehyde	N-butyl-N-(4-hydroxybutyl) nitrosamine
acetamiprid	NdCl3
Acetochlor	Neb-colloostatin
acetofenate	negatively charged-particle dominant indoor air-conditions
acetone	neonicotinoids
acetoxydimethylnitrosamine	N-ethyl, N-nitrosourea
acetyldinaline	neutron irradiation
acid water	NH4VO3
acrolein	n-hexane
acrylamides	nickel
acrylonitrile	nickel aerosols
activated carbon	Nickel nanoparticles
activated-sludge	nickel oxide
Adamsite	nickel subsulfide
Agent Orange	nickel sulfate hexahydrate
agrochemicals	NiCl2
air pollutants	Nicotinamide
air pollution	nicotine
airborne particles	niridazole
airborne particulate matter	nitenpyram

airborne suspended matter	nitrite
Al citrate	Nitrobenzene
alachlor	Nitrofurazone
aldicarb	nitrogen dioxide
alkylphenol polyethoxylates	nitrogen oxides
alkylphenols	nitrosamines
alpha3(IV) collagen	nitrosomethylurea
alpha-cypermethrin	nitrous oxide
alpha-naphthyl-AS-acetate esterase	N-methyl-D-aspartate
alpha-naphthyl-butyrate esterase	N-methyl-N'-nitro-N-nitrosoguanidine
altered oxygen supply	N-methyl-N-nitrosourea
Alumina nanoparticles	N-nitrosodibutylamine
aluminium	N-nitrosodiethylamine
Aluminium chloride	N-nitrosodimethylamine
Aluminum	N-nitrosodipropylamine
aluminum chloride	N-nitrosomethylbutylamine
aluminum hydroxide	N-nitrosomethylethylamine
aluminum sulfate	N-nitrosomethylpropylamine
aluminum trichloride	N-nitroso-N-methylurea
aluminum-based nanoparticles	noise
ambient particulate matter	non-halogenated p-benzo-1,4-quinone
Aminocarb	nonoxynol-9
amitraz	nonylphenol
ammonia	O,O,S-trimethyl phosphorothioate
Ammonium hexachloroplatinate	O,O-diethyl-O-4-nitro-phenylthiophosphate
ammonium metavanadate	O,O-dimethyl, S-ethyl phosphorothioate
amyl nitrite	o,p-dichlorodiphenyldichloroethylene
anhydride	O,S-dimethyl-acetylphosphoramidothioate
anthracene	O3-degraded AA
antigravitary posture	ocean acidification
antimony	oil exposure
aqueous fraction of PW	oil fly ash
Arabian crude oil	Oil mist
arc welding fume	oil sands process water
arecoline	Oil Sands tailings water
Aroclor 1254	oil sands-derived naphthenic acids
Aroclor 1260	oil spills
Aroclor-1242	O-isopropyl methylphosphonofluoridate
Aroclor-1248	Oleic acid anilide
Aroclors	omethoate
aromatic amino compounds	o-Nitroanisole
aromatic halogenated disinfection byproducts	Orange II
aromatic hydrocarbon receptor agonists	ordnance
aromatic hydrocarbons	Organic acid anhydrides
aromatic nitro compounds	organic hydrocarbons
arsenate	organic pollutants

arsenic	organic solvents
arsenic trioxide	Organochlorine compounds
Arsenite	organochlorine contaminants
arsenobetaine	organochlorine insecticide
aryl-triazene derivatives	Organochlorine pesticides
asbestos	organohalogen flame retardant
atmospheric pollution	organophosphate flame retardants
atrazine	organophosphorous pesticides
aurothiopropanol-sulfonate	Organophosphorus Compounds
aurothiopropanolsulfonate sodium salt	organosilicon compounds
Avermectin	organotin compounds
BDE-99	Ortho-phenylphenol salt
Be aluminum	ortho-phthalaldehyde
Be oxide	OS leachate
bendiocarbamate	otrganic perfluorochemicals
Bentazon TP	ouabain
bentazone	Oxazolone
benz(a)anthracene	oxidant gases
benz(a)pyrene	ozone
benzalkonium chloride	p,p'-dichlorodiphenyldichloroethylene
Benzanthrone	paints
benzene	palladium
benzenes	palmitoleic acid
Benzethonium chloride	palmyrah
benzo [a]pyrene	PAMAM dendrimers
benzo[a]pyrene-7,8-dihydrodiol	pancreatic enzymes
benzo[b]fluoranthene	Paper and pulp mill effluent
benzo[k]fluoranthene	parabens
benzo-1,4-quinones	para-Nitrotoluene
benzodiazepines	paraquat
Benzothiazole	parathion
benzyl 3-quinuclidylate	particulate matter
benzyl alcohol	passive smoking
beryllium	Pb-acetate
Beta-chlorolactic acid	PBDE-209 exposure during pregnancy
beta-cypermethrin	p-bromophenylacetylurea
beta-N-Methylamino-l-alanine	PCB118
Bi2Se3 nanoparticles	PCB126
Bifenthrin	PCB153
biological	PCB169
biomass smoke	PCBs
BioProtein nucleic acid reduced variant	p-chloroaniline
biphenyls	p-chloronitrobenzene
bis(2-chloroethyl) sulfide (HD)	P-dichlorobenzene
bis(tri-n-butyltin)oxide	pendimethalin
bismuth selenide	pentabromodiphenyl ether

bisphenol A	pentaCB
Bisphenol F	pentachlorophenol
bisphenol S	perchloroethylene
bivalent ionic mercury	Perfluorinated alkylated substances
bleached kraft pulp mill effluent	Perfluorinated compounds
Boric acid	per-fluoroalkyl
boron nitride nanoflakes	perfluoroalkyl acids
branched polyethylenimine nanoparticles	perfluoroalkyl carboxylates
Brominated diphenyl ethers	perfluoroalkyl substances
Brominated Tetra-BDE	perfluoro-n-decanoic acid
bromodichloromethane	perfluorononanoic acid
burn	perfluorooctane sulfate
butachlor	perfluorooctane sulfonate
butyltins	Perfluorooctane sulfonic acid
C60 nanoparticles	perfluorooctanoate
cadmium	Perfluorooctanoic acid
cadmium acetate	perfluorooctanoic sulfonic acid
cadmium chloride	perinatal chemical exposures
Cadmium nanoparticles	Permanone
cadmium oxide	permethrin exposure
cadmium telluride quantum dots	persistent organic pollutants
Caramel Colour III	persistent organochlorine compounds
carbamate pesticides	pesticides
carbaryl	petrochemical waste sites
Carbendazim	petrochemical wastes
carbofuran	petrochemicals
carbon black nanoparticles	petroleum
carbon disulfide	PFAS
Carbon fullerenes	PFOA
carbon ion radiation	PFOS
carbon monoxide	PHAHs
Carbon nanoparticles	pharmaceuticals
carbon nanotubes	Phenanthrene
carbon tetrachloride	phenol
carbosulfan	phenols
carboxylic acid-coated QDs	phenoxyphenols
carpet shampoo	phenyl arsenic compounds
cathelicidin	phosgene
caustic soda	phosphamidon
CdS/CdTe quantum dots	phthalates
CdSe/ZnS quantum dots	physical fatigue
CdTe quantum dots	physiological factors
CeCl3	physiological stress
Cellphone electromagnetic radiation	picoxystrobin
Cement kiln dusts	piperonyl butoxide
chemical pollutants	pirimicarb

chemical stress	Pirimiphos-methyl (O-2-diethylamino-6-methylpyrimidin-4-yl O,O-dimethyl phosphorothioate)
chemical warfare agents	Platinum nanoparticles
chemical weapon	Plutonium
chemically dispersed oil	PM2.5
Chiral organophosphorus pesticides	p-Nitroaniline
Chit	p-nitrotoluene
chlordanes	pollutants
chlorfenvinphos	poly (lactic-co-glycolic acid) nanoparticles
chloridazone	poly(carboxybetaine) nanoparticles
Chlorinated aromatic hydrocarbons	Poly(D,L-Lactic Acid) Nanoparticle
chlorinated carbohydrates	poly(ethylene glycol) nanoparticles
chlorinated dibenzodioxins	polyamidoamine dendrimers
chlorinated dibenzofurans	polyaromatic hydrocarbons
chlorinated dibenzo-p-dioxins	polybrominated biphenyls
Chlorinated Flame Retardant	polybrominated diphenyl ethers
chlorinated hydrocarbons	Polybrominated flame retardants
Chlorinated pesticides	Polycarbonate
chlorine	polychlorinated biphenyl 153
chloroacetophenone	polychlorinated biphenyl congeners
chlorobenzenes	polychlorinated biphenyl mixtures
chloroform	Polychlorinated biphenyls
Chloronitrobenzenes	polychlorinated dibenzofurans
Chlorophenols	polychlorinated dibenzo-p-dioxins
Chloroplatinic acid	polychlorinated dioxins
chlorothalonil	polychlorinated diphenyl ethers
chlorpyrifos	polychlorinated naphthalenes
chromate (VI)	Polycyclic aromatic hydrocarbons
Chromium	polycyclic aromatics
Chrysene	polycyclic hydrocarbons
CI-994	polyethylene microplastics
cigarette smoke	polyfluorinated compounds
Cis-bifenthrin	polyfluoroalkyl
cis-nonachlor	polyhalogenated aromatic hydrocarbons
Citral	polyhalogenated biphenyls
citral dimethyl acetal	polyhalogenated hydrocarbons
Clark I	polyinosinic:polycytidylic acid
Clethodim	Polymeric nanoparticles
clothianidin	polynuclear aromatic hydrocarbon
CO2	Polyphosphoester-based nanoparticles
coal fly ash	polyriboinosinic-polyribocytidilic acid
coal tar	polystyrene
Cobalt	polyurethane
Cobalt chloride	polyvinyl chloride
cocaethylene	pond sediments

Cold	potassium bromate
cold stress	potassium salt
cold water stress	Potassium sorbate
Constant illumination	potassium tetrachloroplatinate
Constant light	p-phenylenediamine
contact lenses	prallethrin 1.6%
coplanar polychlorinated biphenyls	prenatal arsenic exposure
Copolymer-I	prenatal trichloroethylene
copper	Pretilachlor
copper alginate fibers	produced water
copper carbonate nanoparticles	propanil
copper chloride	Propoxur
Copper nanoparticles	propoxur
Copper oxide nanoparticles	propyl gallate
copper sulfate	Prowl 400
Corexit 9500	pulp mill effluent
Corexit/oil mixture	pulse modulated Radiofrequency
cosmic radiation overexposure	punicalagin
cotton dust	Pyraclofos
crassin acetate	pyraclostrobin
crotonaldehyde	pyrene
crude oil	pyrethroid insecticides
crystalline silica	pyrethroid metabolites
cumene hydroperoxide	pyrethroids
Cyanuric acid	pyridostigmine bromide
cyclosporin A	pyrocatechol
cypermethrin	pyrrolizidine alkaloids
Dapsone	quartz
d-cyphenothrin	Quinocetone
DDT	Quinolinic Acid
DE-71	Quinones
decabrominated diphenyl ether	radio frequencies
Dechlorane 602	radioactive isotopes
decimeter waves	radioactivity
decimeter-band electromagnetic field	radiocontrast media
dehydroabietic acid	radiofrequency radiation
Deltamethrin	radioiodine-131
dental amalgam	radiotelevision broadcasting stations
DEP benzene extracts	radiotherapy
dermal bioimplants	residual oil fly ash
dextran sodium sulfate	Resin glass ionomers
dextran stabilized iron oxide nanoparticles	Respiratory Syncytial Virus
dextran sulfate	Retinal laser burn
di-(2-ethylhexyl) phthalate	Roundup
diazinon	Salinity change
dibenz(a,c)anthracene	salt dust

dibenz(a,h)anthracene	sand dust
Dibenzo[def,p]chrysene	Sarin
dibenzofuranes	scum of waste crankcase oil
dibenzofurans	Secondhand Smoke
dibenzo-p-dioxins	selenium
Dibenzopyrene	Sephadex
dibromoacetic acid	sertraline
Dibutyl phthalate	silesian dust
dibutyltin	silica
dichlofluanid	silica nanoparticles
dichloroacetic acid	silicates
dichlorodiphenyldichloroethylene	Silicon dioxide nanoparticles
dichlorodiphenyltrichloroethane	Silicone
dichloroethane	silver
dichloromethane	silver acetate
dichlorophene	silver nanoparticles
dichloropropanol	simazine
diclofop-methyl	single-walled carbon nanotubes
Dicyclohexylphthalate	SiO2 nanocomposites
dieldrin	sodium acetate
diesel exhaust	Sodium arsenite
Dietary Nickle Chloride	Sodium bromate
Diethanolamine	sodium carbonate
Diethyldithiophosphate	sodium chromate(VI)
dihydroxy-di-n-propylnitrosamine	Sodium dodecyl sulfate
diisononylphthalate	Sodium fluoride
diisopropyl ether	sodium methyldithiocarbamate
dim light at night	sodium Ortho-phenylphenol salt
dimethoate	sodium tungstate
Dimethyl carbonate	solar-simulated radiation
dimethyl dichlorovinyl phosphate	solvents
dimethyl nitrosamine	soman
Dimethyl sulfoxide	space radiation
dimethylbenz(a)anthracene	spinal cord injury
dimethylformamide	spinetoram
dimethylnitrosamine	stack gas condensates from waste incineration plants
dimethylsulphoxide	Stannous chloride
di-n-butyltin dichloride	Stomp
dinocap	strobilurins
di-n-octyltin dichloride	styrene
dinotefuran	styrene-butadiene rubber production
Dioxin-like polychlorinated biphenyls	sulfluramid
dioxins	Sulfoxaflor
diphenols	sulfur dioxide
diphenyl ethers	sulfur yperite

diphenylmethane diisocyanate	sulfuric acid
disinfection byproducts	Sunset yellow FCF
Disperse Red 1	supercypermethrin forte
dithiocarbamates	suspended particulates
Diuron	sweet crude oil
Domestic wastewaters	tannery effluent
d-phenothrin	tannins
electromagnetic field	tartrazine
electromagnetic radiation	TCMS pyridine
electromagnetic waves	tebuconazole
electronic waste	Terahertz radiation
Endocrine disrupting compounds	tert-butylhydroquinone
endosulfan	Tertiary-butyl acetate
endosulfane	tetrabromobisphenol A
endrin	Tetrabromoethylcyclohexane
engine exhausts	tetrachlorodiarylmethanes
engineered nanomaterials	tetrachloroethylene
environmental chemicals	tetrachloromethane
environmental estrogens	tetraethyl lead
environmental pollutants	tetramethoxypropane
epichlorohydrin	tetraphenyl arsonium chloride
Erionite	tetryl
esfenvalerate	thermal injury
Ethanol	thiabendazole
ethephon	thiamethoxam
ethyl benzene	thimerosal
ethyl carbamate	thioacetamide
ethyl t-butyl ether	thymidine dinucleotides
ethylene dibromide	thymol
ethylene glycol	Ti ascorbate
ethylene oxide	Ti oxalate
e-waste disposing areas	tin
exhaust gases	TiO2 composite
extremely high frequency	Titanium
famoxadone-cymoxanil	titanium dioxide
Fenitrothion	titanium dioxide nanoparticles
fenthion	Titanium implants
Fenvalerate	titanocene
ferrocenes	tobacco smoke
fine particulate matter	toluene
fipronil	toluene 2,4-diisocyanate
firefighting overhaul environment	toluene diisocyanate
fluoranthene	total particulate matter
Fluorides	toxic waste sites
fluoro-edenite fibers	traffic-related particles
fluorotelomer	trans-nonachlor

fluvalinate	trauma
fly ash	treated urban wastewaters
footshock	trehalose dimycolate
Forafac1157	triallate
Formaldehyde	triazine Irgarol 1051
FR167653	Tributyltin
fuel oil	Tributyltin chloride
Fullerene nanoparticles	tributyltin oxide
furans	Tributyltin-sulfhydryl
furfurol	trichloroacetic acid
furfuryl alcohol	trichloroethane
furniture dust	Trichloroethylene
furosemide	Triclosan
gallium	Triethanolamine
gallium arsenide	trifloxystrobin
gamma radiation	trimellitic anhydride
gamma-chlordane	Trimethyltin
gamma-hexachlorocyclohexane	tri-n-butyltin chloride
gasoline	tri-n-butyltin oxide
Gasoline exhaust particles	trinitrobenzene sulphonic acid
Geogenic dust	trinitrotoluene
geogenic particulate matter	tri-n-propyltin chloride
global warming	tri-ortho-cresyl phosphate
Glucan Nanoparticles	tri-ortho-tolyl phosphate
glufosinate-ammonium	Triphenylphosphate
Glutaraldehyde	triphenyltin
glycidamide	triphenyltin acetate
glycol ether 2-methoxyethanol	triphenyltin chloride
glyphosate	Triphenyltin derivatives
Gold	Tris(1,3-dichloroisopropyl) phosphate
Gold nanoparticles	tropolone
gold-salt	tungsten
graphene nanoplatelets	Tungsten substances
graphene oxides	Type A trichothecenes
guaiacol	type B trichothecenes
halocarbons	UHF electrical field
halogenated aromatic hydrocarbons	ultrafine particulate matter
halogenated benzo-1,4-quinone	Ultraviolet B
Hapten	ultraviolet light
hardwood smoke	ultraviolet radiation
HCC-230fa (1,1,1,3,3,3-hexachloropropane)	unsymmetrical dimethylhydrazine
head-down tilt bed rest	untreated urban wastewaters
heat	Urban air pollution
heat stress	urban waste water
heavy crude oil	urethane
heavy mechanical trauma	Ustad-10 EC

Heavy Metals	UVA
heavy oil	UVR
hepatotoxic chemicals	Vanadium
Hepatotoxicants	Vanadium pentoxide
heptachlor	vehicle emissions
Hexachlorobenzene	vinclozolin
hexachlorocyclohexanes	vinyl chloride
hexachloroethan	vinylidene chloride
hexahydrophthalic anhydride	volatile organic compounds
High altitude	volcano mud
high frequency electromagnetic radiation	VX
high temperature	washing soda
high water temperature	waterborne selenium
high-dose sunlight	welding aerosols
highly chlorinated biphenyls	welding fumes
Hospital wastewaters	whole-body vibration
hydrazine	whole-smoke conditioned medium
hydrocarbon oil	wide-band modulated electromagnetic field
Hydrogen peroxide	xenobiotics
hydrogen sulfide	xylene
Hydrophobic sodium fluoride-based nanocrystals doped with lanthanide ions	zinc
Hydrophobicity	zinc chloride
hydroquinone	Zinc oxide nanoparticles
Hydroxylated fullerenes	Zinc pyrithione
Hypergravity	ziram
hyperoxia	
PSYCHOSOCIAL/SOCIOECONOMIC	
accumulated life stress	male partner violence
acute psychological stressors	mild stress
adverse life events	negative stressful life
anxiety	Posttraumatic stress
anxious women	psycho-emotional stress
Childhood adversity	psychological stress
Chronic life stress	restraint stress
chronic mild stress	social behaviour deficits
chronic restraint stress	social disruption
Chronic social stress	Social isolation
chronic stress	Social stress
Combined Stress	stress
Depression	Stressful life events
Disaster	stress-related behavior
Distress	traumatic life events
intense intellectual stress	vulnerability
life stress	Work stress

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“A4-B. Bibliography – Contributing Factors to Weakened Immune System – Titles Only

As stated in the previous section, approximately 4,700 records included factors that contributed to weakening the immune system, and these records formed the basis of the analysis. The titles of these records follow. To retrieve the abstract, or in some cases the full-text of these records, insert the title shown below into Pubmed.

18beta-Glycyrrhetinic acid from licorice root impairs dendritic cells maturation and Th1 immune responses

192IgG-saporin-induced immunotoxic lesions of cholinergic basal forebrain system differentially affect glutamatergic and GABAergic markers in cortical rat brain regions

2,2',4,6,6'-Pentachlorobiphenyl-induced apoptosis is limited by cyclooxygenase-2 induction

2,3,7,8-TCDD neurotoxicity in neuroblastoma cells is caused by increased oxidative stress, intracellular calcium levels, and tau phosphorylation

2,3,7,8-Tetrachloodibenzo-p-dioxin affects the differentiation of CD4 helper T cell

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and long term immunologic memory

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) induced suppression of the local immune response

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity

2,3,7,8-Tetrachlorodibenzo-p-dioxin impairs stable establishment of oral tolerance in mice

2,3,7,8-Tetrachlorodibenzo-p-dioxin-mediated impairment of B cell differentiation involves dysregulation of paired box 5 (Pax5) isoform, Pax5a

21 Days head-down bed rest induces weakening of cell-mediated immunity - Some spaceflight findings confirmed in a ground-based analog

2'3'-Dideoxyinosine inhibits the humoral immune response in female B6C3F1 mice by targeting the B lymphocyte

25 years of UV-induced immunosuppression mediated by T cells-from disregarded T suppressor cells to highly respected regulatory T cells

2-Methoxyestradiol protects against IgG immune complex-induced acute lung injury by blocking NF-kappaB and CCAAT/enhancer-binding protein beta activities

3,3'-Diindolylmethane induces immunotoxicity via splenocyte apoptosis in neonatal mice

3,4-Dichloropropionanilide-induced atrophy of the thymus: mechanisms of toxicity and recovery

3-Methylcholanthrene induces lymphocyte and phagocyte apoptosis in common carp (Cyprinus carpio L) in vitro

3-Methylindole-induced splenotoxicity: functional analysis of immune parameters and lymphocyte phenotyping by flow cytometry

51Cr release assay of clozapine-induced cytotoxicity: evidence for immunogenic mechanism

5-azacytidine promotes an inhibitory T-cell phenotype and impairs immune mediated antileukemic activity

6:2 fluorotelomer sulfonamide alkylbetaine (6:2 FTAB), a novel perfluorooctane sulfonate alternative, induced developmental toxicity in zebrafish embryos

6-Methylprednisolone does not impair anti-thymocyte globulin (ATG) immunosuppressive activity in non-human primates

7,12-Dimethylbenz[a]anthracene-induced bone marrow toxicity is p53-dependent

8:2 Fluorotelomer alcohol causes immunotoxicity and liver injury in adult male C57BL/6 mice

954 MHz microwaves enhance the mutagenic properties of mitomycin C.

A 33-year-old patient with human immunodeficiency virus on antiretroviral therapy with efavirenz-induced complex partial seizures: a case report

A case of daptomycin-induced immune thrombocytopenia

A case of drug-induced hypersensitivity syndrome induced by icotinib managed by intravenous immunoglobulin and systemic corticosteroids

A Case of Heparin-Induced Thrombocytopenia with Discrepancy in the Results of Anti-Platelet Factor 4/Heparin Antibodies between Latex-Particle-Enhanced Immunoturbidimetric Assay and Enzyme Immunoassay

A case of inflammatory pseudotumor of the lung with suppressed immune response in the patient with renal cell carcinoma after nephrectomy and administration of interferon

A case of isoniazid-induced thrombocytopenia: recovery with immunoglobulin therapy

A case of linear immunoglobulin A bullous dermatosis in a patient exposed to sun and an analgesic

A case of pembrolizumab-induced type-1 diabetes mellitus and discussion of immune checkpoint inhibitor-induced type 1 diabetes

A case of profound and prolonged tirofiban-induced thrombocytopenia and its correction by intravenous immunoglobulin G

A case of thrombocytopenia induced by digitoxin--antibody immune complex

A clinical and immunologic study of workers with trimellitic-anhydride-induced immunologic lung disease after transfer to low exposure jobs

A commercial sunscreen's protection against ultraviolet radiation-induced immunosuppression is more than 50% lower than protection against sunburn in humans

A comparative evaluation of immunotoxicity of DDT and its metabolites in rats

A comparative evaluation of immunotoxicity of malathion after subchronic exposure in experimental animals

A comparative evaluation of the immunotoxicity and immunomodulatory effects on macrophages exposed to aromatic trihalogenated DBPs

A Comparative Study on the Effects of Different Parts of Panax ginseng on the Immune Activity of Cyclophosphamide-Induced Immunosuppressed Mice

A comparison of immunotoxic effects of nanomedicinal products with regulatory immunotoxicity testing requirements

A Comparison of Two Types of Rabbit Antithymocyte Globulin Induction Therapy in Immunological High-Risk Kidney Recipients: A Prospective Randomized Control Study

A comprehensive review of pesticides and the immune dysregulation: mechanisms, evidence and consequences

A cooperative effect of surgical stress-induced immunomodulation with the cessation of immunosuppression on hepatitis C virus elimination

A critical reappraisal of the current data on drug-induced linear immunoglobulin A bullous dermatosis: a real and separate nosological entity

A critical review of perfluorooctanoate and perfluorooctanesulfonate exposure and immunological health conditions in humans

A cross-sectional study of changes in markers of immunological effects and lung health due to exposure to multi-walled carbon nanotubes

A cytokine cascade including prostaglandin E2, IL-4, and IL-10 is responsible for UV-induced systemic immune suppression

A detailed study of developmental immunotoxicity of imidacloprid in Wistar rats

A dose-response study of the effects of prenatal and lactational exposure to TCDD on the immune response to influenza a virus

A double-edged sword: does highly active antiretroviral therapy contribute to syphilis incidence by impairing immunity to Treponema pallidum

A flow immunoassay for studies of human exposure and toxicity in biological samples

A health food high-peptide meal alleviates immunosuppression induced by hydrocortisone and cyclophosphamide in mice

A high SPF sunscreen's effects on UVB-induced immunosuppression of DNCB contact hypersensitivity

A higher anxiety state in old rats after social isolation is associated to an impairment of the immune response

A high-throughput screening method based on stably transformed human cells was used to determine the immunotoxic effects of fluoranthene and other PAHs

A meta-analysis and morphological review of cyclosporine-induced nephrotoxicity in auto-immune diseases

A method of assessing impairment of immunity after trauma

A model of immune-mediated lung disease in rats sensitized to house dust mite and upregulation of immunity following exposure to nitrogen dioxide

A model of immunologic lung injury induced by trimellitic anhydride inhalation: antibody response

A monoclonal antibody to hippuric acid: an improved enzyme-linked immunosorbent assay for biological monitoring of toluene exposure

A multivariate assessment of innate immune-related gene expressions due to exposure to low concentration individual and mixtures of four kinds of heavy metals on zebrafish (Danio rerio) embryos

A murine model of the effects of inhaled CuO nanoparticles on cells of innate and adaptive immunity - a kinetic study of a continuous three-month exposure

A neurotoxic regimen of methamphetamine exacerbates the febrile and neuroinflammatory response to a subsequent peripheral immune stimulus

A new assay system for evaluation of developmental immunotoxicity of chemical compounds using respiratory syncytial virus infection to offspring mice

A new model for an etiology of rheumatoid arthritis: smoking may trigger HLA-DR (shared epitope)-restricted immune reactions to autoantigens modified by citrullination

A new pathologic pathway for pulmonary fibrosis induced by silica: involvement of immunosuppressive responses

A new side effect of immunosuppression: high incidence of hearing impairment after liver transplantation

A nontoxic Pseudomonas exotoxin A induces active immunity and passive protective antibody against Pseudomonas exotoxin A intoxication

A novel immunochromatographic electrochemical biosensor for highly sensitive and selective detection of trichloropyridinol, a biomarker of exposure to chlorpyrifos

A novel immunosuppressive drug, FTY720, prevents the cancer progression induced by cyclosporine

A novel mouse model of chronic prostatitis/chronic pelvic pain syndrome induced by immunization of special peptide fragment with aluminum hydroxide adjuvant

A novel T(H)17-type cell is rapidly increased in the liver in response to acetaminophen-induced liver injury: T(H)17 cells and the innate immune response

A phase-I study of repeated therapy with radiolabelled antibody to carcinoembryonic antigen using intermittent or continuous administration of cyclosporin A to suppress the immune response

A Potential Mechanism for Immune Suppression by Beta-Adrenergic Receptor Stimulation following Traumatic Injury

A predictive F344 rat immunotoxicology model: cellular parameters combined with humoral response to NP-CgammaG and KLH

A preliminary evaluation of immune stimulation following exposure to metal particles and ions using the mouse popliteal lymph node assay

A prospective, double-blind, randomized study of high-versus low-dose OKT3 induction immunosuppression in cadaveric renal transplantation

A protective effect of vitamin E and selenium in ameliorating the immunotoxicity of malathion in chicks

A proteomic approach for the identification of immunotoxic properties of Tulipalin A

A randomized controlled trial of late conversion from calcineurin inhibitor (CNI)-based to sirolimus-based immunosuppression in liver transplant recipients with impaired renal function

A randomized, double-blinded comparison of Thymoglobulin versus Atgam for induction immunosuppressive therapy in adult renal transplant recipients

A rare case report of acyclovir-induced immune thrombocytopenia with tongue hematomas as the first sign, and a literature review

A review of the immunotoxicity of the pesticide 3,4-dichloropropionanalide

A role for associated transition metals in the immunotoxicity of inhaled ambient particulate matter

A role for HO-1 in renal function impairment in animals subjected to ischemic and reperfusion injury and treated with immunosuppressive drugs

A role for neuropeptides in UVB-induced systemic immunosuppression

A role for oxidative stress in suppressing serum immunoglobulin levels in lead-exposed Fisher 344 rats

A role for reactive oxygen species in endotoxin-induced elevation of MOR expression in the nervous and immune systems

A semiquinone glucoside derivative isolated from Bacillus sp. INM-1 provides protection against 5-fluorouracil-induced immunotoxicity

A single dose of trichloroethylene given during development does not substantially alter markers of neuroinflammation in brains of adult mice

A site involving the "hybrid" and PSI homology domains of GPIIIa (beta 3-integrin subunit) is a common target for antibodies associated with quinine-induced immune thrombocytopenia

A soy-derived immunostimulating peptide inhibits etoposide-induced alopecia in neonatal rats

A statement on the developmental immunotoxicity of bisphenol A (BPA): answer to the question from the Dutch Ministry of Health, Welfare and Sport

A study of autoantibodies and circulating immune complexes in mercury-exposed chloralkali workers

A study on behavioral, neurotoxicological, and immunotoxicological effects of subchronic arsenic treatment in rats

A study on geno- and immunotoxicological effects of subacute propoxur and pirimicarb exposure in rats

A study on immunotoxicological effects of subacute amitraz exposure in rats

A study on the effects of exposure to benzene on the activity of immunoglobulin E

A toxicokinetic study of nickel-induced immunosuppression in rats

A UVB wavelength dependency for local suppression of recall immunity in humans demonstrates a peak at 300 nm

Ability of Lactobacillus plantarum MON03 to mitigate aflatoxins (B1 and M1) immunotoxicities in mice

Ability of Lactobacillus rhamnosus GAF01 to remove AFM1 in vitro and to counteract AFM1 immunotoxicity in vivo

Abnormal immunostaining for dystrophin in isoproterenol-induced acute myocardial injury in rats: evidence for change in dystrophin in the absence of genetic defect

Abnormalities of cellular immune response in arthritis induced by rubella vaccination

Absorption of PCB126 by upper airways impairs G protein-coupled receptor-mediated immune response

Accelerated induction of skin cancers by ultraviolet radiation in hairless mice treated with immunosuppressive agents

Accumulation and immunotoxicity of microplastics in the estuarine worm Hediste diversicolor in environmentally relevant conditions of exposure

Accumulation of polychlorinated biphenyls (PCBs) and evaluation of hematological and immunological effects of PCB exposure on turtles

Accumulation, histopathology and immunotoxicological effects of waterborne cadmium on gilthead seabream (Sparus aurata

Acephate immunotoxicity in White Leghorn cockerel chicks upon experimental exposure

Acetaldehyde accelerates HCV-induced impairment of innate immunity by suppressing methylation reactions in liver cells

Acetaldehyde-serum protein adducts inhibit interleukin-2 secretion in concanavalin A-stimulated murine splenocytes: a potential common pathway for ethanol-induced immunomodulation

Acetaminophen toxicity revisited: is drug-induced hepatotoxity immune mediated

Acetaminophen-induced immunosuppression associated with hepatotoxicity in mice

Acetylcholinesterase inhibition as a biomarker of adverse effect. A study of Mytilus edulis exposed to the priority pollutant chlorfenvinphos

Acetylcholinesterase monoclonal antibody-induced sympathectomy: effects on immune status and acute morphine-induced immunomodulation

Acrylamide induced immunosuppression in rats and its modulation by 6-MFA, an interferon inducer

Acrylamide induces immunotoxicity through reactive oxygen species production and caspase-dependent apoptosis in mice splenocytes via the mitochondria-dependent signaling pathways

Actions of alcohol on immunity and neoplasia in fetal alcohol exposed and adult rats

Activating transcription factor 4 underlies the pathogenesis of arsenic trioxide-mediated impairment of macrophage innate immune functions

Activation-induced T-cell death and immune dysfunction after implantation of left-ventricular assist device

Active immunization with amyloid-beta 1-42 impairs memory performance through TLR2/4-dependent activation of the innate immune system

Acute 3,4-methylenedioxymethamphetamine(MDMA) administration produces a rapid and sustained suppression of immune function in the rat

Acute and subchronic immunotoxicity of p-chloronitrobenzene in mice. I. Effect on natural killer, cytotoxic T-lymphocyte activities and mitogen-stimulated lymphocyte proliferation

Acute and subchronic toxic effects of atrazine and chlorpyrifos on common carp (Cyprinus carpio L.): Immunotoxicity assessments

Acute effects of 2-bromopropane and 1,2-dibromopropane on hepatotoxic and immunotoxic parameters in female BALB/c mice

Acute exposure to crotonaldehyde induces dysfunction of immune system in male Wistar rats

Acute exposure to perfluorononanoic acid in prepubertal mice: Effect on germ cell dynamics and an insight into the possible mechanisms of its inhibitory action on testicular functions

Acute exposure to waterborne cadmium induced oxidative stress and immunotoxicity in the brain, ovary and liver of zebrafish (Danio rerio

Acute exposure to ZnO nanoparticles induces autophagic immune cell death

Acute immunoallergic hemolytic anemia induced by sulindac

Acute Immunotoxic Effects of Perfluorononanoic Acid (PFNA) in C57BL/6 Mice

Acute immunotoxicity of gallium to carp (Cyprinus carpio L

Acute immunotoxicity of p-chloronitrobenzene in mice: II. Effect of p-chloronitrobenzene on the immunophenotype of murine splenocytes determined by flow cytometry

Acute infection of mice with highly virulent group B streptococci as a host resistance model for immunotoxicity assessment

Acute inflammation and immunoresponses induced by ortho-phthalaldehyde in mice

Acute kidney injury as the presenting complaint of ceftazidime-induced immune-mediated haemolysis

Acute microplastic exposure raises stress response and suppresses detoxification and immune capacities in the scleractinian coral Pocillopora damicornis

Acute myocardial infarction caused by delayed heparin-induced thrombocytopenia and acute immunoreaction due to re-exposure to heparin in a systemic lupus erythematosus patient with HIT antibodies

Acute rejection risk in kidney transplant recipients on steroid-avoidance immunosuppression receiving induction with either antithymocyte globulin or basiliximab

Acute renal failure induced by intravenous immune globulin

Acute symptomatic hypocalcemia from immune checkpoint therapy-induced hypoparathyroidism

Acute systemic DNA damage in youth does not impair immune defense with aging

Acute toxicity of cypermethrin on the juvenile of red claw crayfish Cherax quadricarinatus

Adaptive immunity is severely impaired by open-heart surgery

Adiponectin ameliorates dyslipidemia induced by the human immunodeficiency virus protease inhibitor ritonavir in mice

Adipose-Derived Mesenchymal Stem Cells Restore Impaired Mucosal Immune Responses in Aged Mice

Adjuvant and immuno-suppressive effect of six monophthalates in a subcutaneous injection model with BALB/c mice

Adjuvant immunization induces high levels of pathogenic antiphospholipid antibodies in genetically prone mice: another facet of the ASIA syndrome

Adrenal suppression in children with the human immunodeficiency virus treated with megestrol acetate

ADTP vaccine induces temporary immunosuppression correctable by using the immunomodulator purified staphylococcal anatoxin

Advances in immunologic mechanisms of lung inflammation induced by airborne particulate matter

Advances in mechanisms and signaling pathways of carbon nanotube toxicity

Advances in non-carcinogenic toxicity of trichloroethylene

Advances on the immunotoxicity of airborne fine particulate matter (PM2.5

Adverse effects and immune dysfunction in response to oral administration of weathered Iranian heavy crude oil in the rockfish Sebastes schlegeli

Adverse experience in childhood as a developmental risk factor for altered immune status in adulthood

Adverse immunological effects and autoimmunity induced by dental amalgam and alloy in mice

Aflatoxin B interferes with the antigen-presenting capacity of porcine dendritic cells

Aflatoxin B1 Induces Immunotoxicity through the DNA Methyltransferase-Mediated JAK2/STAT3 Pathway in 3D4/21 Cells

Aflatoxin B1 invokes apoptosis via death receptor pathway in hepatocytes

Aflatoxin B1 Suppressed T-Cell Response to Anti-pig-CD3 Monoclonal Antibody Stimulation in Primary Porcine Splenocytes: A Role for the Extracellular Regulated Protein Kinase (ERK1/2) MAPK Signaling Pathway

Aflatoxin-related immune dysfunction in health and in human immunodeficiency virus disease

Aflatoxins: characteristics and impact on human health

After TGN1412: recent developments in cytokine release assays

Age and Early Graft Function Relate With Risk-Benefit Ratio of Allogenic Islet Transplantation Under Antithymocyte Globulin-Mycophenolate Mofetil-Tacrolimus Immune Suppression

Age and low levels of circulating vitamin D are associated with impaired innate immune function

Age-associated impairment of antitumor immunity in carcinoma-bearing mice and restoration by oral administration of Lentinula edodes mycelia extract

Age-Dependent Effects of Prenatal Dexamethasone Exposure on Immune Responses in Male Rats

Age-related differences in the sensitivity of the fish immune response to a coplanar PCB

Age-related differences in the toxicity of ochratoxin A in female rats

Age-related susceptibility to immunotoxicants: animal data and human parallels

Age-specific immunocompetence of the earthworm Eisenia andrei: exposure to methylmercury chloride

Aggravating effects of Asian sand dust on lung eosinophilia in mice immunized beforehand by ovalbumin

Aggravating impact of nanoparticles on immune-mediated pulmonary inflammation

AIDS, drugs of abuse and the immune system: a complex immunotoxicological network

Airborne fungus exposure prior to hospitalisation as risk factor for mould infections in immunocompromised patients

Airway inflammatory and immunological events in a rat model exposed to toluene diisocyanate

Alcohol abuse and Streptococcus pneumoniae infections: consideration of virulence factors and impaired immune responses

Alcohol abuse enhances neuroinflammation and impairs immune responses in an animal model of human immunodeficiency virus-1 encephalitis

Alcohol administration during adulthood induces alterations of parvalbumin and glial fibrillary acidic protein immunoreactivity in rat hippocampus and cingulate cortex

Alcohol and hepatitis C virus--interactions in immune dysfunctions and liver damage

Alcohol and HIV decrease proteasome and immunoproteasome function in macrophages: implications for impaired immune function during disease

Alcohol-induced alterations in serum immunoglobulin e (IgE) levels in human subjects

Alcohol-induced changes in the immune response: immunological effects of chronic ethanol intake are genetically regulated

Alcohol-induced suppression of tumor necrosis factor--a potential risk factor for secondary infection in the acquired immunodeficiency syndrome

Alcoholism causes alveolar macrophage zinc deficiency and immune dysfunction

Alemtuzumab induction and sirolimus plus mycophenolate mofetil maintenance for CNI and steroid-free kidney transplant immunosuppression

Alginate oligosaccharide (AOS) improves immuno-metabolic systems by inhibiting STOML2 overexpression in high-fat-diet-induced obese zebrafish

Alkaline ceramidase 3 deficiency aggravates colitis and colitis-associated tumorigenesis in mice by hyperactivating the innate immune system

Allergic disease, immunoglobulins, exposure to mercury and dental amalgam in Swedish adolescents

Allergic Potential and Immunotoxicity Induced by Topical Application of 1-Chloro-4-(Trifluoromethyl)Benzene (PCBTF) in a Murine Model

Allergy and sensitization during childhood associated with prenatal and lactational exposure to marine pollutants

Allergy-Inducing Chromium Compounds Trigger Potent Innate Immune Stimulation Via ROS-Dependent Inflammasome Activation

Alleviation of lead-induced oxidative stress and immune damage by selenium in chicken bursa of Fabricius

Alleviative effect of licorice on copper chloride-induced oxidative stress in the brain: biochemical, histopathological, immunohistochemical, and genotoxic study

Allogeneic compact bone-derived mesenchymal stem cell transplantation increases survival of mice exposed to lethal total body irradiation: a potential immunological mechanism

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alpha-Lipoic acid ameliorates oral mucositis and oxidative stress induced by methotrexate in rats. Histological and immunohistochemical study

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Alteration of adipose tissue immune cell milieu towards the suppression of inflammation in high fat diet fed mice by flaxseed oil supplementation

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Alterations of immunoreactivity in cnemical production workers in dependence on dose exposure to toxicants

Alterations of seizure-induced c-fos immunolabelling and gene expression in the rat cerebral cortex following dexamethasone treatment

Altered cytokine production in mice exposed to lead acetate

Altered epithelial density and expansion of bulbar projections of a discrete HSP70 immunoreactive subpopulation of rat olfactory receptor neurons in reconstituting olfactory epithelium following exposure to methyl bromide

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Ameliorative effect of nanoencapsulated flavonoid against chlorpyrifos-induced hepatic oxidative damage and immunotoxicity in Wistar rats

Ameliorative Effects of Grape Seed Proanthocyanidin Extract on Growth Performance, Immune Function, Antioxidant Capacity, Biochemical Constituents, Liver Histopathology and Aflatoxin Residues in Broilers Exposed to Aflatoxin B

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Assessment of myelotoxicity caused by environmental chemicals

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Author Correction: Immunotoxicological impact and biodistribution assessment of bismuth selenide (Bi2Se3) nanoparticles following intratracheal instillation in mice

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Critical periods for the teratogenicity of immune-suppressant Leflunomide in mice

Critical role for CCAAT/enhancer-binding protein beta in immune complex-induced acute lung injury

Crosstalk Among UV-Induced Inflammatory Mediators, DNA Damage and Epigenetic Regulators Facilitates Suppression of the Immune System

Crotonaldehyde induces apoptosis and immunosuppression in alveolar macrophages

Crude oil impairs immune function and increases susceptibility to pathogenic bacteria in southern flounder

Cryopreserved human whole blood: a human-based in vitro immunotoxicological system

CT20126, a novel immunosuppressant, prevents collagen-induced arthritis through the down-regulation of inflammatory gene expression by inhibiting NF-kappaB activation

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Curcumin modulates the immune response associated with LPS-induced periodontal disease in rats

Curcumin protects against nicotine-induced stress during protein malnutrition in female rat through immunomodulation with cellular amelioration

Current developments in reproductive toxicity testing of pesticides

Current understanding of interactions between nanoparticles and the immune system

Cutaneous and Visceral Chronic Granulomatous Disease Triggered by a Rubella Virus Vaccine Strain in Children With Primary Immunodeficiencies

Cutaneous immunopathology of cyclosporin-A-induced autoimmunity in the rat

Cutaneous manifestations of Paecilomyces lilacinus infection induced by a contaminated skin lotion in patients who are severely immunosuppressed

CXCR3 deficiency exacerbates liver disease and abrogates tolerance in a mouse model of immune-mediated hepatitis

Cyclin D1/cdk4, estrogen receptors alpha and beta, in N-methyl-N'-nitro-N-nitrosoguanidine-induced rat gastric carcinogenesis: immunohistochemical study

Cyclooxygenase-2 mediates interleukin-6 upregulation by vomitoxin (deoxynivalenol) in vitro and in vivo

Cyclophosphamide and the Teratology Society: an awkward marriage

Cyclophosphamide effects on immune function of European starlings

Cyclophosphamide-induced neutrophilic disease in a patient with angioimmunoblastic lymphadenopathy and myelodysplastic syndrome

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Cyclophosphamide-like cellular immunostimulation induced by 6-thioguanine (Lanvis

Cyclosporin A, a powerful immunosuppressant in vivo and in vitro in the dog, fails to induce tolerance

Cyclosporin A: a new immune suppressive agent

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Cyclosporine-induced autoimmunity and immune hyperreactivity

CYP1A2 is not required for 2,3,7,8-tetrachlorodibenzo-p-dioxin-induced immunosuppression

Cypermethrin Formulation (Ustad-10 EC) Induces Genotoxicity via Apoptosis, Affects Nutritional Physiology, and Modulates Immune Response in Silkworm Philosamia ricini (Lepidoptera: Saturniidae

Cytobiochemical characteristics of the function of pulmonary alveolar macrophages during development of immune reactions after exposure to chemical air pollutants

Cytochrome P450 1B1 is required for 7,12-dimethylbenz(a)-anthracene (DMBA) induced spleen cell immunotoxicity

Cytochrome P4501B1 mediates induction of bone marrow cytotoxicity and preleukemia cells in mice treated with 7,12-dimethylbenz[a]anthracene

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Cytokines and cytokine receptors in mouth mucosa of immune suppressed patients

Cytokines as biomarkers of nanoparticle immunotoxicity

Cytokines related to three major types of cell-mediated immunity in short- and long-term exposures to lead compounds

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Cytostatic therapy reduces the immune defense. Children treated for leukemia have impaired immunity against measles and rubella

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Cytotoxic and immunotoxic effects of Fusarium mycotoxins using a rapid colorimetric bioassay

Cytotoxic effects and changes in cytokine gene expression induced by microcystin-containing extract in fish immune cells--an in vitro and in vivo study

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Cytotoxicity of lambda-cyhalothrin on the macrophage cell line RAW 264.7

Cytotoxicity of nitroaromatic explosives and their biodegradation products in mice splenocytes: implications for their immunotoxicity

Cytotoxicity, inhibition of DNA and protein syntheses and oxidative damage in cultured cells exposed to zearalenone

Daclizumab induction and maintenance steroid-free immunosuppression with mycophenolate mofetil and tacrolimus to prevent acute rejection of hepatic allografts

Daclizumab induction, tacrolimus, mycophenolate mofetil and steroids as an immunosuppression regimen for primary kidney transplant recipients

Daily exposure to dust alters innate immunity

Danish bacille Calmette-Guerin vaccine-induced disease in human immunodeficiency virus-infected children

Data sieving analysis as a novel method to asses immunotoxic exposure to dioxins retrospectively

DDT inhibits the functional activation of murine macrophages and decreases resistance to infection by Mycobacterium microti

Decreased blood level of beta 2-microglobulin in the employees of a factory which produced polychlorinated biphenyls

Deep sequencing of blood and gut T-cell receptor beta-chains reveals gluten-induced immune signatures in celiac disease

Deficiency of dietary niacin impaired gill immunity and antioxidant capacity, and changes its tight junction proteins via regulating NF-kappaB, TOR, Nrf2 and MLCK signaling pathways in young grass carp (Ctenopharyngodon idella

Deficiency of dietary niacin impaired intestinal mucosal immune function via regulating intestinal NF-kappaB, Nrf2 and MLCK signaling pathways in young grass carp (Ctenopharyngodon idella

Deficient Th1-type immune responses via impaired CD28 signaling in ultraviolet B-induced systemic immunosuppression and the restorative effect of IL-12

Deficit in selective and divided attention associated with cholinergic basal forebrain immunotoxic lesion produced by 192-saporin; motoric/sensory deficit associated with Purkinje cell immunotoxic lesion produced by OX7-saporin

Defining pollen exposure times for clinical trials of allergen immunotherapy for pollen-induced rhinoconjunctivitis - an EAACI position paper

Deflazacort induced stronger immunosuppression than expected

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DEHP induces immunosuppression through disturbing inflammatory factors and CYPs system homeostasis in common carp neutrophils

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Delayed developmental neuro- and immunotoxicity of benzodiazepines

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Deoxynivalenol impairs the immune functions of neutrophils

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Deoxynivalenol, gut microbiota and immunotoxicity: A potential approach

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Dermal application of JP-8 jet fuel induces immune suppression

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Detection of immunotoxicity of benzo[a]pyrene in a subacute toxicity study after oral exposure in rats

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Detection of the effects of repeated dose combined propoxur and heavy metal exposure by measurement of certain toxicological, haematological and immune function parameters in rats

Detection of the mechanism of immunotoxicity of cyclosporine A in murine in vitro and in vivo models

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Determination of the immunotoxic potential of pesticides on functional activity of sheep leukocytes in vitro

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Development of non-antibiotic macrolide that corrects inflammation-driven immune dysfunction in models of inflammatory bowel diseases and arthritis

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Developmental and reproductive toxicity testing of vaccines

Developmental atrazine exposure suppresses immune function in male, but not female Sprague-Dawley rats

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Developmental immunotoxicity of cyclosporin-A in rats: age-associated differential effects

Developmental immunotoxicity of dexamethasone: comparison of fetal versus adult exposures

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Developmental immunotoxicity of lead: impact on thymic function

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Developmental Immunotoxicology of Di-(2-Ethylhexyl)phthalate (DEHP): Age-Based Assessment in the Female Rat

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Developmental immunotoxicology: emerging issues

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Dietary Iron Deficiency Impaired Peripheral Immunity but Did Not Alter Brain Microglia in PRRSV-Infected Neonatal Piglets

Dietary L-carnitine and vitamin-E; a strategy to combat ochratoxin-A induced immunosuppression

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Early onset of immunological heparin-induced thrombocytopenia in acute myocardial infarction

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Electromagnetic fields may act via calcineurin inhibition to suppress immunity, thereby increasing risk for opportunistic infection: Conceivable mechanisms of action

Electromagnetic fields may act via calcineurin inhibition to suppress immunity, thereby increasing risk for opportunistic infection: Conceivable mechanisms of action.

Elemental diet-induced bacterial translocation associated with systemic and intestinal immune suppression

Elemental diet-induced immune suppression is caused by both bacterial and dietary factors

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Evaluation of the potential immunotoxicity of 3-monochloro-1,2-propanediol in Balb/c mice. I. Effect on antibody forming cell, mitogen-stimulated lymphocyte proliferation, splenic subset, and natural killer cell activity

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Experimental T-2 toxicosis in swine following inhalation exposure: effects on pulmonary and systemic immunity, and morphologic changes

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Exposure to inhibitors of the renin-angiotensin system is a major independent risk factor for acute renal failure induced by sucrose containing intravenous immunoglobulins. A case-control study

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Immunotoxic effects of a new antineoplastic agent S-1 in mice--comparison with S-1, UFT and 5-FU

Immunotoxic effects of an industrial waste incineration site on groundwater in rainbow trout (Oncorhynchus mykiss

Immunotoxic effects of atrazine and its main metabolites at environmental relevant concentrations on larval zebrafish (Danio rerio

Immunotoxic effects of carbon tetrachloride--the effect on morphology and function of the immune system in mice

Immunotoxic effects of chemicals: A matrix for occupational and environmental epidemiological studies

Immunotoxic effects of cis-urocanic acid exposure in C57BL/6N and C3H/HeN mice

Immunotoxic effects of copper and cadmium in the sea bass Dicentrarchus labrax

Immunotoxic effects of cyclophosphamide and cyclosporine in the dog

Immunotoxic effects of dialkyltins used for stabilization of plastics

Immunotoxic effects of diethylstilbestrol (DES) and cadmium chloride (CAD) on host resistance: comparison with cyclophosphamide (CPS

Immunotoxic effects of diethylstilbestrol on host resistance: comparison with cyclophosphamide

Immunotoxic effects of environmental pollutants in marine mammals

Immunotoxic effects of environmental toxicants in fish - how to assess them

Immunotoxic effects of exposure of rats to xenobiotics via maternal lactation. Part I 2,3,7,8-tetrachlorodibenzo-p-dioxin

Immunotoxic effects of gold and silver nanoparticles: Inhibition of mitogen-induced proliferative responses and viability of human and murine lymphocytes in vitro

Immunotoxic effects of hexachlorobenzene on the pathogenesis of systemic, pneumonic and hepatic virus infections in the mouse

Immunotoxic effects of imidacloprid following 28 days of oral exposure in BALB/c mice

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Immunotoxic effects of inorganic lead on host resistance of mice with different circling behavior preferences

Immunotoxic effects of lead on birds

Immunotoxic effects of mercuric compounds on human lymphocytes and monocytes. IV. Alterations in cellular glutathione content

Immunotoxic effects of mercuric compounds on human lymphocytes and monocytes. III. Alterations in B-cell function and viability

Immunotoxic effects of mercuric compounds on human lymphocytes and monocytes. I. Suppression of T-cell activation

Immunotoxic effects of MPT-IP containing 60% methylparathion in mice

Immunotoxic effects of nickel in the mud crab Scylla serrata

Immunotoxic effects of Ochratoxin A in Wistar rats after oral administration

Immunotoxic effects of oil sands-derived naphthenic acids to rainbow trout

Immunotoxic effects of organotin compounds in Tapes philippinarum

Immunotoxic effects of perfluorononanoic acid on BALB/c mice

Immunotoxic effects of perfluorooctane sulfonate and di(2-ethylhexyl) phthalate on the marine fish Oryzias melastigma

Immunotoxic effects of prolonged dietary exposure of male rats to 2,3,7,8-tetrachlorodibenzo-p-dioxin

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Immunotoxic effects of smokeless tobacco on the accessory cell function of rat oral epithelium

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Immunotoxic effects of the color additive caramel color III: immune function studies in rats

Immunotoxic effects of thymus in mice following exposure to nanoparticulate TiO2

Immunotoxic effects of triclosan in the clam Ruditapes philippinarum

Immunotoxic organotins as possible model compounds in studying apoptosis and thymocyte differentiation

Immunotoxic potencies of polychlorinated biphenyl (PCB), dibenzofuran (PCDF) and dibenzo-p-dioxin (PCDD) congeners in C57BL/6 and DBA/2 mice

Immunotoxic potential of aeration lagoon effluents for the treatment of domestic and hospital wastewaters in the freshwater mussel Elliptio complanata

Immunotoxic potential of antiviral drugs: effects of ganciclovir and (S)-1-(3-hydroxy-2-phosphonylmethoxy propyl) cytosine on lymphocyte transformation and delayed-type hypersensitivity responses

Immunotoxic Potential of Bisphenol F Mediated through Lipid Signaling Pathways on Macrophages

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Immunotoxic response of oleic acid anilide and its hydrolysis products in female MRL (+/+) mice

Immunotoxic responses of chronic exposure to cypermethrin in common carp

Immunotoxic responses of cypermethrin, a synthetic pyrethroid insecticide in rats

Immunotoxicities of microplastics and sertraline, alone and in combination, to a bivalve species: size-dependent interaction and potential toxication mechanism

Immunotoxicity activity from the essential oils of coriander (Coriandrum sativum) seeds

Immunotoxicity activity of natural furocoumarins from milky sap of Ficus carica L. against Aedes aegypti L

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Immunotoxicity and allergic potential induced by topical application of dimethyl carbonate (DMC) in a murine model

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Immunotoxicity and environment: immunodysregulation and systemic inflammation in children

Immunotoxicity and genotoxicity of single-walled carbon nanotubes co-exposed with cadmium in the freshwater mussel, Elliptio complanata

Immunotoxicity and genotoxicity testing of PLGA-PEO nanoparticles in human blood cell model

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Immunotoxicity and sensitizing capacity of metal compounds depend on speciation

Immunotoxicity and transcriptome analysis of zebrafish embryos in response to glufosinate-ammonium exposure

Immunotoxicity assessment of CdSe/ZnS quantum dots in macrophages, lymphocytes and BALB/c mice

Immunotoxicity assessment of gentamycin and liquamycin

Immunotoxicity assessment of rice-derived recombinant human serum albumin using human peripheral blood mononuclear cells

Immunotoxicity assessment of sub-chronic oral administration of acetamiprid in Wistar rats

Immunotoxicity Considerations for Next Generation Cancer Nanomedicines

Immunotoxicity derived from manipulating leukocytes with lipid-based nanoparticles

Immunotoxicity effects of carbaryl in vivo and in vitro

Immunotoxicity evaluation by subchronic oral administration of clothianidin in Sprague-Dawley rats

Immunotoxicity evaluation of novel bioactive composites in male mice as promising orthopaedic implants

Immunotoxicity Following Pre- and Post-natal Aluminum Exposure in Rats

Immunotoxicity from checkpoint inhibitor therapy: clinical features and underlying mechanisms

Immunotoxicity in ascidians: antifouling compounds alternative to organotins-IV. The case of zinc pyrithione

Immunotoxicity in ascidians: antifouling compounds alternative to organotins: III--the case of copper(I) and Irgarol 1051

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Immunotoxicity of cocaine and crack

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Immunotoxicity of silicone: implications of oxidant balance towards adjuvant activity

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Impaired immunity in obesity: suppressed but reversible lymphocyte responsiveness

Impaired immunity: risk groups and consequences for general practice

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Impairment of innate immune function by hydroxyethyl starch

Impairment of innate immune killing mechanisms by bacteriostatic antibiotics

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Impairment of non-specific immunity in patients under persistent vegetative state resulting from trauma

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In utero exposure to immunosuppressive drugs

In utero exposure to immunosuppressive drugs: experimental and clinical studies

In utero ultrafine particulate matter exposure causes offspring pulmonary immunosuppression

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In vitro hematological and in vivo immunotoxicity assessment of dextran stabilized iron oxide nanoparticles

In vitro immune toxicity of polybrominated diphenyl ethers on murine peritoneal macrophages: apoptosis and immune cell dysfunction

In vitro immunotoxicity and cytotoxicity of trichosanthin against human normal immunocytes and leukemia-lymphoma cells

In vitro immunotoxicity of bis(tri-n-butyltin)oxide (TBTO) studied by toxicogenomics

In vitro immunotoxicity of untreated and treated urban wastewaters using various treatment processes to rainbow trout leucocytes

In vitro immunotoxicological effects of heavy metals on European sea bass (Dicentrarchus labrax L.) head-kidney leucocytes

In vitro immunotoxicology of quantum dots and comparison with dissolved cadmium and tellurium

In vitro lymphotoxicity and selective T cell immunotoxicity of high doses of acyclovir and its derivatives in mice

In vitro Modulating Activity of aqueous extracts from American Plants on Chlorpyrifos-induced toxicity on Murine Splenocytes

In vitro nanoparticle toxicity to rat alveolar cells and coelomocytes from the earthworm Lumbricus rubellus

In vitro nephrotoxicity induced by chloronitrobenzenes in renal cortical slices from Fischer 344 rats

In vitro nephrotoxicity induced by propanil

In vitro potency of inhibition by antiviral drugs of hematopoietic progenitor colony formation correlates with exposure at hemotoxic levels in human immunodeficiency virus-positive humans

In vitro stimulatory effect of N-acetyl tryptophan-glucopyranoside against gamma radiation induced immunosuppression

In vitro studies on immunotoxic potential of Orange II in splenocytes

In vitro study on the immune effects of the exposure to palladium nanoparticles

In vitro tests to evaluate immunotoxicity: a preliminary study

In vitro toxicity and interactions of environmental contaminants (Arochlor 1254 and mercury) and immunomodulatory agents (lipopolysaccharide and cortisol) on thymocytes from lake trout (Salvelinus namaycush

In vitro VLA-4 blockade results in an impaired NK cell-mediated immune surveillance against melanoma

In vitro" comparative immune effects of different titanium compounds

In vitro" effects of different arsenic compounds on PBMC (preliminary study

In vivo activation of a T helper 2-driven innate immune response in lung fibrosis induced by multi-walled carbon nanotubes

In vivo and in vitro immunosuppressive effects of benzo[k]fluoranthene in female Balb/c mice

In vivo effects of immunostimulating lipopeptides on mouse liver microsomal cytochromes P-450 and on paracetamol-induced toxicity

In vivo immunotoxicity of SiO2@(Y0.5Gd0.45Eu0.05)2O3 as dual-modality nanoprobes

In vivo induction of apoptosis and immune responses in mice by administration of lipopolysaccharide from Porphyromonas gingivalis

In vivo short-term exposure to residual oil fly ash impairs pulmonary innate immune response against environmental mycobacterium infection

In vivo studies on the immunotoxic effects of microcystins on rabbit

In Vivo toxicological assessment of biologically synthesized silver nanoparticles in adult Zebrafish (Danio rerio

Inactivation of cadmium induced immunotoxicological alterations in rats by Tunisian montmorillonite clay

Incidence and etiology of hepatic dysfunction in heart transplant recipients receiving a cyclosporine-based triple immunosuppressive therapy

Incidence and natural history of intravenous immunoglobulin-induced aseptic meningitis: a retrospective review at a single tertiary care center

Incidence of cytomegalovirus in cardiac transplant recipients receiving induction immunosuppression with antithymocyte globulin

Incident stressful and traumatic life events and human immunodeficiency virus sexual transmission risk behaviors in a longitudinal, multisite cohort study

Inconsistently impairment of immune function and structural integrity of head kidney and spleen by vitamin A deficiency in grass carp (Ctenopharyngodon idella

Increase in level of tumor necrosis factor-alpha in 6-hydroxydopamine-lesioned striatum in rats is suppressed by immunosuppressant FK506

Increased affective ultrasonic communication during fear learning in adult male rats exposed to maternal immune activation

Increased expression of immune modulator proteins and decreased expression of apolipoprotein A-1 and haptoglobin in blood plasma of sarin exposed rats

Increased expression of platelet IgG Fc receptors in immune heparin-induced thrombocytopenia

Increased immune and inflammatory responses to dust mite antigen in rats exposed to 5 ppm NO2

Increased immunoreactive rat lung ICAM-1 in oleic acid-induced lung injury

Increased immunoreactivity of POMC-derived neuropeptides and immediate-early gene-derived proteins (c-Fos and Egr-1 proteins) as an early step of acute cocaine-induced stressor effects: comparison with the effects of immobilization stress

Increased levels of glutathione S transferases and appearance of novel alpha class isoenzymes in kidneys of mice exposed to mercuric chloride. I. Biochemical and immunohistochemical studies

Increased levels of numerical chromosome aberrations after in vitro exposure of human peripheral blood lymphocytes to radiofrequency electromagnetic fields for 72 hours.

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Indicators of immunotoxicity in populations of cotton rats (Sigmodon hispidus) inhabiting an abandoned oil refinery

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Induced resistance to Candida albicans in BALB/c mice during short-term immunosuppression with cyclophosphamide

Induced sensitization to nickel in guinea pigs immunized with mycobacteria by injection of purified protein derivative with nickel

Inducible headkidney cytochrome P450 contributes to endosulfan immunotoxicity in walking catfish Clarias gariepinus

Induction and activation of adaptive immune populations during acute and chronic phases of a murine model of experimental colitis

Induction and Amelioration of Methotrexate-Induced Gastrointestinal Toxicity are Related to Immune Response and Gut Microbiota

Induction and modulation of pulmonary inflammation by organic dusts: cytokines, immune complexes and 'all of those things

Induction Immunosuppression in High-risk Kidney Transplant Recipients

Induction immunosuppression in kidney transplant recipients older than 60 years of age : safety and efficacy of ATGAM, OKT3 and Simulect

Induction immunosuppression with interleukin-2 receptor antibodies (basiliximab and daclizumab) in renal transplant recipients

Induction immunosuppression with OKT3 monoclonal antibody in cardiac transplant recipients

Induction immunosuppressive therapy in kidney transplantation

Induction immunosuppressive therapy in renal transplantation: does basiliximab make the difference

Induction immunosuppressive therapy in the elderly kidney transplant recipient in the United States

Induction immunosuppressive therapy stratified according to risk categories in renal transplantation

Induction of a type 1 immune response to a recombinant antigen from Mycobacterium tuberculosis expressed in Mycobacterium vaccae

Induction of alloreactive immunosuppression by 1,4-bis [(2-aminoethyl)amino]-5,8-dihydroxy-9,10-anthracenedione dihydrochloride (CL 232,468

Induction of an autologous immune-complex glomerulonephritis in the rat by intravenous injection of heterologous anti-rat kidney tubular antibody IV: Effect of injection of HgCl2 prior to the antibody

Induction of antiviral cytotoxic T cells by plasmacytoid dendritic cells for adoptive immunotherapy of posttransplant diseases

Induction of apoptotic lesions in liver and lymphoid tissues and modulation of cytokine mRNA expression by acute exposure to deoxynivalenol in piglets

Induction of autoimmunity through bystander effects. Lessons from immunological disorders induced by heavy metals

Induction of cancer, actinic keratosis, and specific p53 mutations by UVB light in human skin maintained in severe combined immunodeficient mice

Induction of colitis in mice with food allergen-specific immune response

Induction of eruptive benign melanocytic naevi by immune suppressive agents, including biologicals

Induction of experimental systemic lupus erythematosus in mice by immunization with a monoclonal anti-La autoantibody

Induction of IDO-1 by immunostimulatory DNA limits severity of experimental colitis

Induction of Immune Reaction in Benign Melanocytic Nevi Without Halo During Nivolumab Therapy in a Patient With Melanoma

Induction of immunomediated diseases by recombinant human granulocyte-macrophage colony-stimulating factor during cancer treatment

Induction of immunosuppression with rabbit antithymocyte globulin: five-year experience in cardiac transplantation

Induction of immunotoxicity by polycyclic hydrocarbons: role of the Ah locus

Induction of immunotoxicity in mice by polyhalogenated biphenyls

Induction of innate immune gene expression following methyl methanesulfonate-induced DNA damage in sea urchins

Induction of Maternal Immune Activation in Mice at Mid-gestation Stage with Viral Mimic Poly(I:C

Induction of multiple melanocytic nevus cell nevi in 2 children with malignant hematologic systemic diseases and chemotherapy-induced immunosuppression

Induction of neutralizing antibodies against Tityus serrulatus toxins by immunization with a recombinant nontoxic protein

Induction of neutralizing antibodies in mice immunized with scorpion toxins detoxified by liposomal entrapment

Induction of oxidative stress by Taxol vehicle Cremophor-EL triggers production of interleukin-8 by peripheral blood mononuclear cells through the mechanism not requiring de novo synthesis of mRNA

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Induction of TGF-beta 1, not regulatory T cells, impairs antiviral immunity in the lung following bone marrow transplant

Induction Therapy With ATG Compared With Anti-IL2 Basiliximab in Low-Immunologic Risk Kidney Transplant Recipients

Induction versus noninduction in renal transplant recipients with tacrolimus-based immunosuppression

Industry experience in the identification of the immunotoxic potential of agrochemicals

Ineffectiveness of folic acid supplementation against phenytoin-induced decrease in salivary immunoglobulin A concentration of epileptic patients

Infection with the Lyme disease pathogen suppresses innate immunity in mice with diet-induced obesity

Infection with Vpr-positive human immunodeficiency virus type 1 impairs NK cell function indirectly through cytokine dysregulation of infected target cells

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Influence of environmental and industrial immunotoxic hazards on clinical course of HIV-infection

Influence of Human Leukocyte Antigen (HLA) Alleles and Killer Cell Immunoglobulin-Like Receptors (KIR) Types on Heparin-Induced Thrombocytopenia (HIT

Influence of immunization on the pulmonary inflammatory response of rabbits induced by Pasteurella haemolytica A1 lipopolysaccharide

Influence of immunization with non-genotoxic PAH-KLH conjugates on the resistance of organisms exposed to benzo(a)pyrene

Influence of induction therapy, immunosuppressive regimen and anti-viral prophylaxis on development of lymphomas after heart transplantation: data from the Spanish Post-Heart Transplant Tumour Registry

Influence of life stress on immunological reactivity to mild psychological stress

Influence of low-level exposure to Fusarium mycotoxins on selected immunological and hematological parameters in young swine

Influence of melatonin on immunotoxicity of cadmium

Influence of melatonin on immunotoxicity of lead

Influence of perinatal ochratoxin A exposure on the immune system in mice

Influence of stress on DDT-induced humoral immune responsiveness in mice

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Inhibition of immune responses and related proteins in Rhamdia quelen exposed to diclofenac

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Inhibitory effect of Platycodon grandiflorum on T(H)1 and T(H)2 immune responses in a murine model of 2,4-dinitrofluorobenzene-induced atopic dermatitis-like skin lesions

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Initial experience of combined immunosuppressive induction therapy with polyclonal antithymocyte antibody, FK 506 (tacrolimus), and prednisolone in clinical liver transplantation

Initial immunosuppression in liver transplant recipients with impaired renal function

Innate immune parameters and haemolymph protein expression profile to evaluate the immunotoxicity of tributyltin on abalone (Haliotis diversicolor supertexta

Innate immune processes are sufficient for driving cigarette smoke-induced inflammation in mice

Innate immune response of silver catfish (Rhamdia quelen) exposed to atrazine

Innate immunity conferred by Toll-like receptors 2 and 4 and myeloid differentiation factor 88 expression is pivotal to monosodium urate monohydrate crystal-induced inflammation

Innate immunity drives xenobiotic-induced murine autoimmune cholangitis

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Interactions of malnutrition and immune impairment, with specific reference to immunity against parasites

Interactions of nanomaterials with the immune system

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Intrauterine cocaine exposure of rabbits: persistent elevation of GABA-immunoreactive neurons in anterior cingulate cortex but not visual cortex

Intravenous cyclosporine to induce immunosuppression in cardiac allograft recipients

Intravenous Immune Globulin for Statin-Triggered Autoimmune Myopathy

Intravenous immunoglobulin as an adjunct therapy in persisting heparin-induced thrombocytopenia

Intravenous immunoglobulin as prophylaxis of chemotherapy-induced oral mucositis

Intravenous immunoglobulin followed by platelet transfusion in the acute treatment of trimethoprim/sulfamethoxazole-induced immune thrombocytopenia

Intravenous immunoglobulin G use in patients with chronic inflammatory demyelinating polyneuropathy: An uncommon cause of drug-induced discoid lupus erythematosus

Intravenous immunoglobulin in the treatment of severe methotrexate-induced acral erythema

Intravenous immunoglobulin induced meningoencephalitis

Intravenous immunoglobulin induced-nephropathy: a complication of IVIG therapy

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Intravenous immunoglobulin-induced acute thrombocytopenia

Intravenous immunoglobulin-induced haemolysis: a case report and review of the literature

Intravenous immunoglobulin-induced hemolytic anemia after thoracoscopic thymectomy for myasthenia gravis

Intravenous immunoglobulin-induced hemolytic anemia in a patient with juvenile dermatomyositis

Intravenous immunoglobulin-induced lichenoid dermatitis: a unique adverse reaction

Intravenous immunoglobulin-induced neutropenia

Intravenous immunoglobulin-induced neutrophil apoptosis in the lung during murine endotoxemia

Intravenous immunoglobulin-induced osmotic nephrosis

Intravenous Immunoglobulin-Induced Profound Bradycardia in a Patient With Idiopathic Thrombocytopenic Purpura

Intravenous Immunoglobulin-Induced Pulmonary Embolism: It Is Time to Act

Intravenous immunoglobulin-induced reversible neutropenia in a renal transplant patient

Intravenous immunoglobulin-induced, non-eczematous, vesiculobullous eruptions in Stevens-Johnson syndrome

Intravenous immunoglobulins-induced eczematous eruption: a long-term follow-up study

Investigating the Effects of Particulate Matter on House Dust Mite and Ovalbumin Allergic Airway Inflammation in Mice

Investigation of a screening battery for immunotoxicity of pharmaceuticals within a 28-day oral toxicity study using azathioprine and cyclosporin A as model compounds

Investigation of immunotoxicity of supercypermethrin forte in the Wistar rat

Investigation of neurotoxic and immunotoxic effects of some plant growth regulators at subacute and subchronic applications on rats

Investigation of sensitive biomarkers to determine cadmium inducing hepato- and nephro-toxicity in cattle by immunofluorescence method

Investigation of the adjuvant and immuno-suppressive effects of benzyl butyl phthalate, phthalic acid and benzyl alcohol in a murine injection model

Investigation of the preventive effect of Sijunzi decoction on mitomycin C-induced immunotoxicity in rats by 1H NMR and MS-based untargeted metabolomic analysis

Investigations into the Immunotoxicity and Allergic Potential Induced by Topical Application of N-Butylbenzenesulfonamide (NBBS) in a Murine Model

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Ipomoea obscura ameliorates cyclophosphamide-induced toxicity by modulating the immune system and levels of proinflammatory cytokine and GSH

Iron Deficiency Impairs Intra-Hepatic Lymphocyte Mediated Immune Response

Iron oxide particles modulate the ovalbumin-induced Th2 immune response in mice

Is Chronic Exposure to Low-Dose Organochlorine Pesticides a New Risk Factor of T-cell Immunosenescence

Is hydroxylamine-induced cytotoxicity a valid marker for hypersensitivity reactions to sulfamethoxazole in human immunodeficiency virus-infected individuals

Is impaired immunity a consequence of surgery in patients infected by the human immunodeficiency virus

Is murine gammaherpesvirus-68 (MHV-68) a suitable immunotoxicological model for examining immunomodulatory drug-associated viral recrudescence

Is opioid-induced immunosuppression a clinically relevant problem? Innocent until proven guilty

Is there a human health risk associated with indirect exposure to perfluoroalkyl carboxylates (PFCAs

Is there a potential immune dysfunction with anabolic androgenic steroid use?: A review

Is there evidence that environmental noise is immunotoxic

Is type 1 diabetes a disease of the gut immune system triggered by cow's milk insulin

Isocyanate exposure and hypersensitivity pneumonitis--report of a probable case and prevalence of specific immunoglobulin G antibodies among exposed individuals

Isoflavonoid compounds from red clover (Trifolium pratense) protect from inflammation and immune suppression induced by UV radiation

Isoflurane anesthesia impairs the expression of immune neuromodulators in the hippocampus of aged mice

Isolated herpes simplex in the adult larynx as a rare complication of methotrexate-induced immunosuppression

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iTRAQ: a method to elucidate cellular responses to mycotoxin zearalenone

Jeju ground water containing vanadium induced immune activation on splenocytes of low dose gamma-rays-irradiated mice

Jet fuel-induced immunotoxicity

JP-8 induces immune suppression via a reactive oxygen species NF-kappabeta-dependent mechanism

JP-8 jet fuel exposure results in immediate immunotoxicity, which is cumulative over time

JP-8 jet fuel exposure suppresses the immune response to viral infections

Kaposi's sarcoma-associated herpesvirus-encoded replication and transcription activator impairs innate immunity via ubiquitin-mediated degradation of myeloid differentiation factor 88

Kawasaki syndrome. Association with exposure to carpet shampoo and successful therapy with immunoglobulins in the second week of the illness

Keratinocyte-derived cytokines and UVB-induced immunosuppression

Ketoprofen impairs immunosuppression induced by severe sepsis and reveals an important role for prostaglandin E2

Keyhole limpet haemocyanin - a model antigen for human immunotoxicological studies

Keynote lecture in the 13th Japanese Society of Immunotoxicology (JSIT 2006) : -Pathophysiological Development and Immunotoxicology: what we have found from research related to silica and silicate such as asbestos

Kidney disorders induced by non-steroidal anti-inflammatory agents and immunomodulators

Kinetic determination of vitellogenin induction in the epidermis of cyprinid and perciform fishes: Evaluation of sensitive enzyme-linked immunosorbent assays

Kinetic of the CMV-specific T-cell immune response and CMV infection in CMV-seropositive kidney transplant recipients receiving rabbit anti-thymocyte globulin induction therapy: A pilot study

Kinin B1 receptor deficiency attenuates cisplatin-induced acute kidney injury by modulating immune cell migration

Klotho protects human monocytes from LPS-induced immune impairment associated with immunosenescent-like phenotype

Laboratory diagnosis of heparin-associated thrombocytopenia and comparison of platelet aggregation test, heparin-induced platelet activation test, and platelet factor 4/heparin enzyme-linked immunosorbent assay

Laboratory diagnosis of heparin-induced thrombocytopenia in Asian Indians as investigated with functional and immunologic methods

Laboratory diagnosis of immune heparin-induced thrombocytopenia

Lack of autoantibody induction by mercury exposure in artisanal gold mining settings in Colombia: Findings and a review of the epidemiology literature

Lack of effect of Vitamin A on corticosteroid-induced immunosuppression

Lack of immunotoxicity of saquinavir (Ro 31-8959) used alone or in double or triple combination with AZT and ddC

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Lactobacillus casei HY7213 ameliorates cyclophosphamide-induced immunosuppression in mice by activating NK, cytotoxic T cells and macrophages

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Lactobacillus plantarum KLDS1.0318 Ameliorates Impaired Intestinal Immunity and Metabolic Disorders in Cyclophosphamide-Treated Mice

Lactobacillus plantarum NCU116 Attenuates Cyclophosphamide-Induced Immunosuppression and Regulates Th17/Treg Cell Immune Responses in Mice

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Lamotrigine-induced common variable immune deficiency

Lamotrigine-induced toxic epidermal necrolysis treated with intravenous cyclosporin: a discussion of pathogenesis and immunosuppressive management

L-arginine and L-glutamine as immunonutrients and modulating agents for oxidative stress and toxicity induced by sodium nitrite in rats

L-Arginine reverses radiation-induced immune dysfunction: the need for optimum treatment window

Lasting effects of an impairment of Th1-like immune response in gamma-irradiated mice: A resemblance between irradiated mice and aged mice

Late conversion from tacrolimus to a belatacept-based immuno-suppression regime in kidney transplant recipients improves renal function, acid-base derangement and mineral-bone metabolism

Late onset neutropenia and immunoglobulin suppression of the patients with malignant lymphoma following autologous stem cell transplantation with rituximab

Late-onset pericardial tamponade, bilateral pleural effusions and recurrent immune monoarthritis induced by ipilimumab use for metastatic melanoma

Lead alters the immunogenicity of two neural proteins: a potential mechanism for the progression of lead-induced neurotoxicity

Lead and immune function

Lead exposure reduces carotenoid-based coloration and constitutive immunity in wild mallards

Lead induced modulation of splenic macrophage responses on humoral and cell mediated immunity

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Lead toxicity: from overt to subclinical to subtle health effects

Leakage of mitochondrial and cytosolic GOT in isolated rat hepatocytes exposed to halothane: an immunohistochemical study

Lethal and sub-lethal evaluation of Indigo Carmine dye and byproducts after TiO2 photocatalysis in the immune system of Eisenia andrei earthworms

Letter: Tinea faciei exacerbated by topical immunomodulation: Two case reports

Leukopenia and altered hematopoietic activity in mice exposed to the abused inhalant, isobutyl nitrite

Levels of serum oxidoreductases (LD, MD, ICD), blood proteins, immunoglobulins, and ceruloplasmin in a group of workers exposed to carbon disulfide

Levocarnitine administration in multiple sclerosis patients with immunosuppressive therapy-induced fatigue

Lichen planus and lichenoid drug-induced eruption: a histological and immunohistochemical study

Life events, frontal electroencephalogram laterality, and functional immune status after acute psychological stressors in adolescents

Life stress and cervical squamous intraepithelial lesions in women with human papillomavirus and human immunodeficiency virus

Lifelong persistent viral infection alters the naive T cell pool, impairing CD8 T cell immunity in late life

Lifespan-extending caloric restriction or mTOR inhibition impair adaptive immunity of old mice by distinct mechanisms

Life-threatening piperacillin-induced immune haemolysis in a patient with cystic fibrosis

Life-threatening rituximab-induced pyoderma gangrenosum successfully treated with intravenous immunoglobulin

Life-threatenting ceftriaxone-induced immune hemolytic anemia in a child with Crohn's disease

Limited immunotoxic potential of technical formulation of the herbicide atrazine (AAtrex) in mice

Lindane-induced immunological alterations in human poisoning cases

Linear immunoglobulin A bullous dermatosis induced by gemcitabine

Linear immunoglobulin A bullous dermatosis possibly induced by mefenamic acid

Links between prolonged exposure to xenobiotics, increased incidence of hepatopathies, immunological disturbances and exacerbation of latent Epstein-Barr virus infections

Lipoic acid attenuates high fat diet-induced chronic oxidative stress and immunosuppression in mice jejunum: a microarray analysis

Lipopolysaccharide (LPS) induced activation of the immune system in control rats and rats chronically exposed to a low level of the organothiophosphate insecticide, acephate

Lipopolysaccharide impairs mucin secretion and stimulated mucosal immune stress response in respiratory tract of neonatal chicks

Lipopolysaccharide induces paired immunoglobulin-like receptor B (PirB) expression, synaptic alteration, and learning-memory deficit in rats

Lipopolysaccharide levels adherent to PM2.5 play an important role in particulate matter induced-immunosuppressive effects in mouse splenocytes

Lipopolysaccharide-induced immune activation impairs attention but has little effect on short-term working memory

Liposome-mediated combinatorial cytokine gene therapy induces localized synergistic immunosuppression and promotes long-term survival of cardiac allografts

Liver antioxidant and plasma immune responses in juvenile golden grey mullet (Liza aurata) exposed to dispersed crude oil

Liver enzyme function and humoral immunity in workers exposed to vinyl chloride

Local immunity and methods for its assessment upon exposure to ambient air-polluting biologicals

Local versus systemic immunotoxicity of isobutyl nitrite following subchronic inhalation exposure of female B6C3F1 mice

Localization and composition of renal immunodeposits in mice developing HgCl2-induced autoimmune process

Long term effects of carbaryl exposure on antiviral immune responses in Xenopus laevis

Long-term effect of Spirulina platensis extract on DMBA-induced hamster buccal pouch carcinogenesis (immunohistochemical study

Long-term effects of immunotoxic cholinergic lesions in the septum on acquisition of the cone-field task and noncognitive measures in rats

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Long-term exposure to PCB in broiler chickens--metabolic and immunotoxic effects

Long-term immune dysfunction after radiotherapy to the head and neck area

Long-term immune dysfunction in rainbow trout (Oncorhynchus mykiss) exposed as embryos to aflatoxin B1

Long-term Immunotoxic Effects of Oral Prenatal and Neonatal Atrazine Exposure

Long-term moderate calorie restriction inhibits inflammation without impairing cell-mediated immunity: a randomized controlled trial in non-obese humans

Long-term sun exposure alters the collagen of the papillary dermis. Comparison of sun-protected and photoaged skin by northern analysis, immunohistochemical staining, and confocal laser scanning microscopy

Long-term toxicity of immune suppression in juvenile rheumatic diseases

Long-Time Instead of Short-Time Exposure in Vitro and Administration in Vivo of Ochratoxin A Is Consistent in Immunosuppression

Long-wave UVA offers partial protection against UVB-induced immune suppression in human skin

Loperamide-induced expression of immune and inflammatory genes in Collies associated with ivermectin sensitivity

Low dose exposure to cadmium and its health effects. (3) Toxicity in laboratory animals and cultured cells

Low dose TBT exposure decreases amphipod immunocompetence and reproductive fitness

Low doses of monocrotaline in rats cause diminished bone marrow cellularity and compromised nitric oxide production by peritoneal macrophages

Low level exposure to chemicals and immune system

Low levels of residual oil fly ash (ROFA) impair innate immune response against environmental mycobacteria infection in vitro

Low or excess levels of dietary cholesterol impaired immunity and aggravated inflammation response in young grass carp (Ctenopharyngodon idella

Low-dose azathioprine effectively suppresses clinical and immunological manifestations of generalized myasthenia

Low-dose exposure to inorganic mercury accelerates disease and mortality in acquired murine lupus

Low-dose inorganic mercury increases severity and frequency of chronic coxsackievirus-induced autoimmune myocarditis in mice

Low-dose interleukin-2 impairs host anti-tumor immunity and inhibits therapeutic responses in a mouse model of melanoma

Low-dose synergistic immunosuppression of T-dependent antibody responses by polycyclic aromatic hydrocarbons and arsenic in C57BL/6J murine spleen cells

Lower endotoxin immunity predicts increased cognitive dysfunction in elderly patients after cardiac surgery

Low-level dietary deoxynivalenol and acute exercise stress result in immunotoxicity in BALB/c mice

Low-level methylmercury exposure causes human T-cells to undergo apoptosis: evidence of mitochondrial dysfunction

LPS regulation of the immune response: Bacteroides endotoxin induces mitogenic, polyclonal, and antibody responses in classical LPS responsive but not C3H/HeJ mice

LPS-induced systemic inflammation reveals an immunomodulatory role for the prion protein at the blood-brain interface

Lycopene alleviates AFB1-induced immunosuppression by inhibiting oxidative stress and apoptosis in the spleen of mice

Lymphocyte dysfunction after DNA damage by toxic oxygen species. A model of immunodeficiency

Lymphocyte loss and immunosuppression following acetaminophen-induced hepatotoxicity in mice as a potential mechanism of tolerance

Lymphocyte proliferative response and tissue distribution of methylmercury sulfide and chloride in exposed rats

Lymphocyte subsets and Langerhans cells in sun-protected and sun-exposed skin of immunosuppressed renal allograft recipients

Macrophages are involved in hexachlorobenzene-induced adverse immune effects

Mafosfamide induces DNA fragmentation and apoptosis in human T-lymphocytes. A possible mechanism of its immunosuppressive action

Maintenance rituximab following induction chemo-immunotherapy for mantle cell lymphoma: long-term follow-up of a pilot study from the Wisconsin Oncology Network

MAIT cells launch a rapid, robust and distinct hyperinflammatory response to bacterial superantigens and quickly acquire an anergic phenotype that impedes their cognate antimicrobial function: Defining a novel mechanism of superantigen-induced immunopathology and immunosuppression

Maize prolamins could induce a gluten-like cellular immune response in some celiac disease patients

Malathion immunotoxicity in the American lobster (Homarus americanus) upon experimental exposure

Malathion, lindane, and piperonyl butoxide, individually or in combined mixtures, induce immunotoxicity via apoptosis in murine splenocytes in vitro

Malnutrition and impaired immune response to infection

Malnutrition, urocanic acid, and sun may interact to suppress immunity in sojourners to high altitude

Mammalian immunoassays for predicting the toxicity of malathion in a laboratory fish model

Management of adverse events induced by next-generation immunomodulatory drug and proteasome inhibitors in multiple myeloma

Management of immune dysfunction after adult cardiac surgery

Managing immune checkpoint-inhibitor-induced severe autoimmune-like hepatitis by liver-directed topical steroids

Manganese tissue accumulation and tyrosine hydroxylase immunostaining response in the Neotropical freshwater crab, Dilocarcinus pagei, exposed to manganese

Manifestations of cellular immunity in the rat after prolonged asbestos inhalation. II. Alveolar macrophage-induced splenic lymphocyte proliferation

Markers for immunotoxic effects in rodents and man

Mast cells in the intestine and gills of the sea bream, Sparus aurata, exposed to a polychlorinated biphenyl, PCB 126

Mast cells mediate the immune suppression induced by dermal exposure to JP-8 jet fuel

Maternal adrenalectomy alters the immune and endocrine functions of fetal alcohol-exposed male offspring

Maternal and early postnatal polychlorinated biphenyl exposure in relation to total serum immunoglobulin concentrations in 6-month-old infants

Maternal exposure to airborne particulate matter causes postnatal immunological dysfunction in mice offspring

Maternal exposure to fish oil primes offspring to harbor intestinal pathobionts associated with altered immune cell balance

Maternal exposure to particulate matter alters early post-natal lung function and immune cell development

Maternal exposure to silver nanoparticles are associated with behavioral abnormalities in adulthood: Role of mitochondria and innate immunity in developmental toxicity

Maternal Immune Activation Causes Behavioral Impairments and Altered Cerebellar Cytokine and Synaptic Protein Expression

Maternal Lipopolysaccharide Exposure Promotes Immunological Functional Changes in Adult Offspring CD4+ T Cells

Maternal lipopolysaccharide-induced inflammation during pregnancy programs impaired offspring innate immune responses

Maternal obesity programs offspring nonalcoholic fatty liver disease by innate immune dysfunction in mice

Maternal separation in early life impairs tumor immunity in adulthood in the F344 rat

Maternal smoking is associated with impaired neonatal toll-like-receptor-mediated immune responses

Maternal transfer and sublethal immune system effects of brevetoxin exposure in nesting loggerhead sea turtles (Caretta caretta) from western Florida

Maternal undernutrition induces neuroendocrine immune dysfunction in male pups at weaning

Maternal-Fetal Cancer Risk Assessment of Ochratoxin A during Pregnancy

MDCO-216 Does Not Induce Adverse Immunostimulation, in Contrast to Its Predecessor ETC-216

Measurement of airborne flour exposure with a monoclonal antibody-based immunoassay

Measures of resting immune function and related physiology in juvenile rainbow trout exposed to a pulp mill effluent

Mechanical ventilation of healthy rats suppresses peripheral immune function

Mechanism of 7,12-dimethylbenz[a]anthracene-induced immunotoxicity: role of metabolic activation at the target organ

Mechanism of deoxynivalenol effects on the reproductive system and fetus malformation: Current status and future challenges

Mechanism of immunosuppression in zebrafish (Danio rerio) spleen induced by environmentally relevant concentrations of perfluorooctanoic acid

Mechanism of immunotoxicological effects of tributyltin chloride on murine thymocytes

Mechanism of perfluorooctanesulfonate (PFOS)-induced apoptosis in the immunocyte

Mechanism of systemic immune suppression by UV irradiation in vivo. II. The UV effects on number and morphology of epidermal Langerhans cells and the UV-induced suppression of contact hypersensitivity have different wavelength dependencies

Mechanism of TCDD-induced suppression of antibody production: effect on T cell-derived cytokine production in the primary immune reaction of mice

Mechanism of UVB-induced suppression of the immune response to Mycobacterium bovis bacillus Calmette-Guerin: role of cytokines on macrophage function

Mechanisms for how inhaled multiwalled carbon nanotubes suppress systemic immune function in mice

Mechanisms involved in the immunotoxicity induced by dermal application of JP-8 jet fuel

Mechanisms of 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin (HpCDD)-induced humoral immune suppression: evidence of primary defect in T-cell regulation

Mechanisms of dimethylbenzanthracene-induced immunotoxicity

Mechanisms of ethanol-induced immunosuppression

Mechanisms of immune dysfunction in stem cell transplantation

Mechanisms of immunotoxic effects of acrylonitrile

Mechanisms of organophosphorus pesticide toxicity in the context of airway hyperreactivity and asthma

Mechanisms underlying the suppression of established immune responses by ultraviolet radiation

Mechanisms underlying UV-induced immune suppression: implications for sunscreen design

Medical management and sublingual immunotherapy practices in patients with house dust mite-induced respiratory allergy: a retrospective, observational study

Melatonin alleviates aluminium chloride-induced immunotoxicity by inhibiting oxidative stress and apoptosis associated with the activation of Nrf2 signaling pathway

Melatonin ameliorates ochratoxin A-induced oxidative stress and apoptosis in porcine oocytes

Mercuric chloride induces a strong immune activation, but does not accelerate the development of dermal fibrosis in tight skin 1 mice

Mercury Accumulation, Structural Damages, and Antioxidant and Immune Status Changes in the Gilthead Seabream (Sparus aurata L.) Exposed to Methylmercury

Mercury and autoimmunity: implications for occupational and environmental health

Mercury compounds and the immune system: a review

Mercury exposure and children's health

Mercury Exposure and Heart Diseases

Mercury exposure in protein A immunoadsorption

Mercury exposure, serum antinuclear/antinucleolar antibodies, and serum cytokine levels in mining populations in Amazonian Brazil: a cross-sectional study

Mercury impairment of mouse thymocyte survival in vitro: involvement of cellular thiols

Mercury-induced autoimmune glomerulonephritis in inbred rats. II. Immunohistopathology, histopathology and effects of prostaglandin administration

Meropenem-induced immune thrombocytopenia and the diagnostic process of laboratory testing

Mesenteric lymph node Tgammadelta cells induced by gastrectomy in mice suppress cell-mediated immune response in vitro via released TGF-beta

Metabolic and immune impairments induced by the endocrine disruptors benzo[a]pyrene and triclosan in Xenopus tropicalis

Metabolic and immunological disorders induced by long-term treatment with phenytoin

Metabolic pathways of ochratoxin A

Metabolic profiling study on potential toxicity and immunotoxicity-biomarker discovery in rats treated with cyclophosphamide using HPLC-ESI-IT-TOF-MS

Metabolic requirements for induction of contact hypersensitivity to immunotoxic polyaromatic hydrocarbons

Metabolic Syndrome after Hematopoietic Cell Transplantation: At the Intersection of Treatment Toxicity and Immune Dysfunction

Metabolism and toxicity of aflatoxins M1 and B1 in human-derived in vitro systems

Metabolite-specific (IgG) and drug-specific antibodies (IgG, IgM) in two cases of trimethoprim-sulfamethoxazole-induced immune thrombocytopenia

Metal allergens of growing significance: epidemiology, immunotoxicology, strategies for testing and prevention

Metal-induced impairment of the cellular immunity of newborn harbor seals (Phoca vitulina

Metallothionein-null mice are highly susceptible to the hematotoxic and immunotoxic effects of chronic CdCl2 exposure

Methamphetamine activates nuclear factor kappa-light-chain-enhancer of activated B cells (NF-kappaB) and induces human immunodeficiency virus (HIV) transcription in human microglial cells

Methamphetamine induces trace amine-associated receptor 1 (TAAR1) expression in human T lymphocytes: role in immunomodulation

Method for evaluation of immunotoxicity of dioxin compounds using human T-lymphoblastic cell line, L-MAT

Methods for Analysis of Nanoparticle Immunosuppressive Properties In Vitro and In Vivo

Methods for Assessing Mast Cell Responses to Engineered Nanomaterial Exposure

Methotrexate-induced iatrogenic immunodeficiency-associated lymphoproliferative disorder causing hypercalcaemia

Methylenedioxymethamphetamine ('Ecstasy')-induced immunosuppression: a cause for concern

Methylmercury/copper effects on hemosiderin: possible mechanism of immune suppression in fish

Methylmercury-induced movement and postural disorders in developing rat: loss of somatostatin-immunoreactive interneurons in the striatum

Methylprednisolone-induced immune thrombocytopenia

Methylprednisolone-Induced Lymphocytosis in Patients with Immune-Mediated Inflammatory Disorders

Mice repeatedly exposed to Group-A beta-Haemolytic Streptococcus show perseverative behaviors, impaired sensorimotor gating, and immune activation in rostral diencephalon

Mice with genetically determined high susceptibility to ultraviolet (UV)-induced immunosuppression show enhanced UV carcinogenesis

Microbial Degradation of Cellular Kinases Impairs Innate Immune Signaling and Paracrine TNFalpha Responses

Microcystin-LR exposure to adult zebrafish (Danio rerio) leads to growth inhibition and immune dysfunction in F1 offspring, a parental transmission effect of toxicity

Microcystin-LR Induced Immunotoxicity in Mammals

Microcystin-LR induces cytotoxicity and affects carp immune cells by impairment of their phagocytosis and the organization of the cytoskeleton

Microcystin-LR modulates selected immune parameters and induces necrosis/apoptosis of carp leucocytes

Microcystin-LR toxicodynamics, induced pathology, and immunohistochemical localization in livers of blue-green algae exposed rainbow trout (oncorhynchus mykiss

Microgravity inhibits resting T cell immunity in an exposure time-dependent manner

Micronized, Heat-Treated Lactobacillus plantarum LM1004 Alleviates Cyclophosphamide-Induced Immune Suppression

Micronutrient deficiencies are associated with impaired immune response and higher burden of respiratory infections in elderly Ecuadorians

MicroRNA-155 and microRNA-181a, via HO-1, participate in regulating the immunotoxicity of cadmium in the kidneys of exposed Cyprinus carpio

Microsomal expoxide hydrolase is required for 7,12-dimethylbenz[a]anthracene (DMBA)-induced immunotoxicity in mice

Midazolam impairs immune functions: it's time to take care of dendritic cells

Miliary Mycobacterium bovis induced by intravesical bacille Calmette-Guerin immunotherapy

Minimal immunological changes in structurally malformed rats after prenatal exposure to cyclophosphamide

Minimal immunological effects on workers with prolonged low exposure to inorganic mercury

Minimum doses of ultraviolet radiation required to induce murine skin edema and immunosuppression are different and depend on the ultraviolet emission spectrum of the source

Minocycline-induced immune thrombocytopenia presenting as Schamberg's disease

Minor effects of low exposure to inorganic mercury on the human immune system

MiR-122 partly mediates the ochratoxin A-induced GC-2 cell apoptosis

MiR-582-5p/miR-590-5p targeted CREB1/CREB5-NF-kappaB signaling and caused opioid-induced immunosuppression in human monocytes

Misoprostol impairs female reproductive tract innate immunity against Clostridium sordellii

Mitigation of Hydrophobicity-Induced Immunotoxicity by Sugar Poly(orthoesters

Mitochondrial functions of THP-1 monocytes following the exposure to selected natural compounds

Mitochondrial peroxiredoxin 3 (Prx3) from rock bream (Oplegnathus fasciatus): immune responses and role of recombinant Prx3 in protecting cells from hydrogen peroxide induced oxidative stress

Mitotic activity of keratinocytes in nifedipine- and immunosuppressive medication-induced gingival overgrowth

Mixed mold mycotoxicosis: immunological changes in humans following exposure in water-damaged buildings

MNU-induced rat mammary carcinomas: immunohistology and estrogen receptor expression

Modeling and predicting immunological effects of chemical stressors: characterization of a quantitative biomarker for immunological changes caused by atrazine and ethanol

Modeling the Function of TATA Box Binding Protein in Transcriptional Changes Induced by HIV-1 Tat in Innate Immune Cells and the Effect of Methamphetamine Exposure

Modeling toxicodynamic effects of trichloroethylene on liver in mouse model of autoimmune hepatitis

Modelling the immunopathophysiology of Brucella melitensis and its lipopolysaccharide in mice infected via oral route of exposure

Moderate prenatal alcohol exposure suppresses the TLR4-mediated innate immune response in the hippocampus of young rats

Modification of immunoreactive EGF and EGF receptor after acute tubular necrosis induced by tobramycin or cisplatin

Modification of primary amines to higher order amines reduces in vivo hematological and immunotoxicity of cationic nanocarriers through TLR4 and complement pathways

Modifications of immunological and neuro-endocrine parameters induced by antiorthostatic bed-rest in human healthy volunteers

Modifications of neuronal phosphorylated tau immunoreactivity induced by NMDA toxicity

Modulating effect of MgO-SiO2 nanoparticles on immunological and histopathological alterations induced by aflatoxicosis in rats

Modulation of benzo[a]pyrene induced immunotoxicity in mice actively immunized with a B[a]P-diphtheria toxoid conjugate

Modulation of benzo[a]pyrene induced neurotoxicity in female mice actively immunized with a B[a]P-diphtheria toxoid conjugate

Modulation of biochemical parameters by Hemidesmus indicus in cumene hydroperoxide-induced murine skin: possible role in protection against free radicals-induced cutaneous oxidative stress and tumor promotion

Modulation of immune and antioxidant responses by azinphos-methyl in the freshwater mussel Diplodon chilensis challenged with Escherichia coli

Modulation of immune response by organophosphorus pesticides: fishes as a potential model in immunotoxicology

Modulation of immune responses with nanoparticles and reduction of their immunotoxicity

Modulation of immune-associated parameters and antioxidant responses in the crab (Scylla serrata) exposed to mercury

Modulation of macrophage activation by ammonium metavanadate

Modulation of murine peritoneal macrophage function by chronic exposure to arsenate in drinking water

Modulation of N-methyl-N-nitrosourea-induced crypt restricted metallothionein immunopositivity in mouse colon by a non-genotoxic diet-related chemical

Modulation of signal transduction pathways in lymphocytes due to sub-lethal toxicity of chlorinated phenol

Modulation of T-helper cell populations: potential mechanisms of respiratory hypersensitivity and immune suppression

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Modulatory role of dietary Thymus vulgaris essential oil and Bacillus subtilis against thiamethoxam-induced hepatorenal damage, oxidative stress, and immunotoxicity in African catfish (Clarias garipenus

Modulatory role of L-carnitine against microcystin-LR-induced immunotoxicity and oxidative stress in common carp

Molecular and immune toxicity of CoCr nanoparticles in MoM hip arthroplasty

Molecular and immunological toxic effects of nanoparticles

Molecular cloning, immunohistochemical localization, characterization and expression analysis of caspase-8 from the blunt snout bream (Megalobrama amblycephala) exposed to ammonia

Molecular determinants of UV-induced immunosuppression

Molecular insight of arsenic-induced carcinogenesis and its prevention

Molecular mechanisms of amitraz mammalian toxicity: a comprehensive review of existing data

Molecular mechanisms underlying mancozeb-induced inhibition of TNF-alpha production

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Monoclonal gammopathy after intense induction immunosuppression in renal transplant patients

Morphine impairs host innate immune response and increases susceptibility to Streptococcus pneumoniae lung infection

Morphine induced, behavioural, biochemical and immunological correlations

Morphine or U-50,488 suppresses Fos protein-like immunoreactivity in the spinal cord and nucleus tractus solitarii evoked by a noxious visceral stimulus in the rat

Morphological alteration, lysosomal membrane fragility and apoptosis of the cells of Indian freshwater sponge exposed to washing soda (sodium carbonate

Morphological analysis of glomerular lesions in renal transplants immunosuppressed with cyclosporine A (CYA): has CYA induced a new transplant glomerular lesion

Morphological and immunobiochemical analysis of the liver in L-arginine induced experimental chronic pancreatitis

Morphological and immunohistochemical changes on rat skin exposed to nitrogen mustard

Morphological and immunohistochemical characteristics of the thymus during chemical carcinogenesis induced by 1,2-dimethylhydrazine administration

Morphological and immunohistochemical studies on porcine serum-induced rat liver fibrosis

Morphological changes in the thyroid and adrenals under the bitemporal action of a UHF electrical field and decimeter waves (experimental research).

Morphological features of the organs of the immune system in conditions of exposure to chromium and benzene

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Mouse lung immune response after acute exposure to flour dust

Moxifloxacin as the likely cause of drug-induced linear immunoglobulin A bullous dermatosis

Mucosal-associated invariant T cells from patients with tuberculosis exhibit impaired immune response

Multilaboratory evaluation of 15 bioassays for (eco)toxicity screening and hazard ranking of engineered nanomaterials: FP7 project NANOVALID

Multiorgan failure induced by intravenous immunoglobulin

Multiparametric immunotoxicity screening in mice during early drug development

Multiple biomarkers of the cytotoxicity induced by BDE-47 in human embryonic kidney cells

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Multiple myeloma: clusters, clues, and dioxins

Murine membranous nephropathy: immunization with alpha3(IV) collagen fragment induces subepithelial immune complexes and FcgammaR-independent nephrotic syndrome

Murine model of ethanol-induced immunosuppression

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Mycolactone-producing Mycobacterium marinum infection in captive Hong Kong warty newts and pathological evidence of impaired host immune function

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Mycophenolate mofetil-based, cyclosporine-free induction and maintenance immunosuppression: first-3-months analysis of efficacy and safety in two cohorts of renal allograft recipients

Mycotoxicoses in children

Mycotoxins, general view, chemistry and structure

Myeloid-derived suppressor cells accumulate in the liver site after sepsis to induce immunosuppression

N,N,-diethyl-m-toluamide (DEET) suppresses humoral immunological function in B6C3F1 mice

Nanomaterial Exposure Induced Neutrophil Extracellular Traps: A New Target in Inflammation and Innate Immunity

Nanomaterial Induced Immune Responses and Cytotoxicity

Nanoparticles of zinc oxide defeat chlorpyrifos-induced immunotoxic effects and histopathological alterations

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Neonatal exposure to mild hyperoxia causes persistent increases in oxidative stress and immune cells in the lungs of mice without altering lung structure

Neonatal exposure to UVR alters skin immune system development, and suppresses immunity in adulthood

Neonatal phytoestrogen exposure alters oviduct mucosal immune response to pregnancy and affects preimplantation embryo development in the mouse

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Nerve growth factor produced by activated human monocytes/macrophages is severely affected by ethanol

Neurodegeneration Triggers Peripheral Immune Cell Recruitment into the Forebrain

Neurodevelopmental disorders: Impaired immune system function linked to social behaviour deficits in mice

Neuroendocrine and Eosinophilic Granule Cells in the Gills of Tilapia, Oreochromis niloticus: Effects of Waterborne Copper Exposure

Neuroendocrine and immunotoxicity of polyaromatic hydrocarbon, chrysene in crustacean post larvae

Neuro-immune interactions in psychopathology with the example of interferon-alpha-induced depression

Neurologic and immunologic effects of exposure to corticosterone, chlorpyrifos, and multiple doses of tri-ortho-tolyl phosphate over a 28-day period in rats

Neuro-Modulation of Immuno-Endocrine Response Induced by Kaliotoxin of Androctonus Scorpion Venom

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Neuron-immune interactions in the sensitized thalamus induced by mustard oil application to rat molar pulp

Neuropathophysiological effect and immuno-inflammatory response induced by kaliotoxin of androctonus scorpion venom

Neurophysiological, histological and immunohistochemical characterization of bortezomib-induced neuropathy in mice

Neurotoxic Anatoxin-a Can Also Exert Immunotoxicity by the Induction of Apoptosis on Carassius auratus Lymphocytes in vitro When Exposed to Environmentally Relevant Concentrations

Neurotoxic and immunotoxic effects of fenthion and omethoate on frogs at acute exposure

Neurotoxic and immunotoxic effects of Indole-3-butyric acid on rats at subacute and subchronic exposure

Neurotoxic effects of ochratoxin A on the subventricular zone of adult mouse brain

Neurotoxicity and immunotoxicity assessment in CBA/J mice with chronic Toxoplasma gondii infection and multiple oral exposures to methylmercury

Neurotoxicity and immunotoxicity assessment in CBA/J mice with chronic Toxoplasma gondii infection and single-dose exposure to methylmercury

Neurotoxicity of toluene

Neutralizing antibodies obtained in a persistent immune response are effective against deleterious effects induced by the Thalassophryne nattereri fish venom

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Neutrophil function after exposure to polychlorinated biphenyls in vitro

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New mechanism of organophosphorus pesticide-induced immunotoxicity

NF-kappaB activation via MyD88-dependent Toll-like receptor signaling is inhibited by trichothecene mycotoxin deoxynivalenol

Nickel - role in human organism and toxic effects

Nicotinamide reduces photodynamic therapy-induced immunosuppression in humans

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Nivolumab-induced acute-onset type 1 diabetes mellitus as an immune-related adverse event: A case report

Nivolumab-Induced Subcutaneous Fat Necrosis: Another FDG-Avid Immune-Related Adverse Event

Nivolumab-induced type 1 diabetes mellitus as an immune-related adverse event

Non-analgesic effects of opioids: mechanisms and potential clinical relevance of opioid-induced immunodepression

Noncardiogenic pulmonary edema triggered by intravenous immunoglobulin in cancer-associated thrombotic thrombocytopenic purpura-hemolytic uremic syndrome

Nonclinical regulatory immunotoxicity testing of nanomedicinal products: Proposed strategy and possible pitfalls

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Normal development of tyrosine hydroxylase and serotonin immunoreactive fibers innervating anterior cingulate cortex and visual cortex in rabbits exposed prenatally to cocaine

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Novel gene markers of immunosuppressive chemicals in mouse lymph node assay

Novel mechanisms of gliadin immunotoxicity

Novel Use of All-Trans-Retinoic Acid in A Model of Lipopolysaccharide-Immunosuppression to Decrease the Generation of Myeloid-Derived Suppressor Cells by Reducing the Proliferation of CD34+ Precursor Cells

Nrf2 Regulates the Risk of a Diesel Exhaust Inhalation-Induced Immune Response during Bleomycin Lung Injury and Fibrosis in Mice

Nrf2-dependent repression of interleukin-12 expression in human dendritic cells exposed to inorganic arsenic

Nutritional aspects of immunosuppression in athletes

O(6)-benzylguanine enhances the in vitro immunotoxic activity of temozolomide on natural or antigen-dependent immunity

Obesity impairs cell-mediated immunity during the second trimester of pregnancy

Obesity is associated with impaired immune response to influenza vaccination in humans

Obesity: influenza immunity impaired in obesity

Obesity-induced tissue free radical generation: an in vivo immuno-spin trapping study

Occupational exposure to formaldehyde and early biomarkers of cancer risk, immunotoxicity and susceptibility

Occurrences and Outcomes of Immune Checkpoint Inhibitors-Induced Vitiligo in Cancer Patients: A Retrospective Cohort Study

Ochratoxin A exerts neurotoxicity in human astrocytes through mitochondria-dependent apoptosis and intracellular calcium overload

Ochratoxin A exposure biomarkers in the Czech Republic and comparison with foreign countries

Ochratoxin A from a toxicological perspective

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Ochratoxin A induces oxidative DNA damage and G1 phase arrest in human peripheral blood mononuclear cells in vitro

Ochratoxin a inhibits mouse embryonic development by activating a mitochondrion-dependent apoptotic signaling pathway

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Ochratoxin A: developmental and reproductive toxicity-an overview

Ochratoxin a: its cancer risk and potential for exposure

Ochratoxin A: previous risk assessments and issues arising

Ochratoxin A: the continuing enigma

Ochratoxin A: Toxicity, oxidative stress and metabolism

Ofloxacin eyedrops-induced toxic epidermal necrolysis treated with intravenous immunoglobulin

Oil mist exposure in industrial health--a review

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Omalizumab pretreatment decreases acute reactions after rush immunotherapy for ragweed-induced seasonal allergic rhinitis

Omics analysis of low dose acetaminophen intake demonstrates novel response pathways in humans

On the long-term effects of methyl isocyanate on cell-mediated immunity in Bhopal gas-exposed long-term survivors and their offspring

O-phenylphenol and its sodium and potassium salts: a toxicological assessment

Opioid-Induced Hyperalgesia Is Associated with Dysregulation of Circadian Rhythm and Adaptive Immune Pathways in the Mouse Trigeminal Ganglia and Nucleus Accumbens

Opioid-induced immunosuppression

Opioid-induced immunosuppression. A clinically relevant problem

Opioid-induced immunosuppression: is it centrally mediated or peripherally mediated

Opposite effects of the maternal immune system activated by interleukin-1beta vs. PSK and OK432 on 5-azacytidine-induced birth defects

Optimal immunosuppressor induces stable gut microbiota after liver transplantation

Options for induction immunosuppression in liver transplant recipients

Oral (gavage), in utero and postnatal exposure of Sprague-Dawley rats to low doses of tributyltin chloride. Part 1: Toxicology, histopathology and clinical chemistry

Oral (gavage), in utero and post-natal exposure of Sprague-Dawley rats to low doses of tributyltin chloride. Part II: effects on the immune system

Oral administration of lipoteichoic acid from Lactobacillus rhamnosus GG overcomes UVB-induced immunosuppression and impairs skin tumor growth in mice

Oral administration of the immunomodulator JBT-3002 induces endogenous interleukin 15 in intestinal macrophages for protection against irinotecan-mediated destruction of intestinal epithelium

Oral benzo[a]pyrene: understanding pharmacokinetics, detoxication, and consequences--Cyp1 knockout mouse lines as a paradigm

Oral Exposure to Atrazine Induces Oxidative Stress and Calcium Homeostasis Disruption in Spleen of Mice

Oral exposure to benzo[a]pyrene in the mouse: detoxication by inducible cytochrome P450 is more important than metabolic activation

Oral exposure to immunostimulating drugs results in early changes in innate immune parameters in the spleen

Oral exposure to inorganic mercury alters T lymphocyte phenotypes and cytokine expression in BALB/c mice

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Quantitative assessment of mesangial immunoglobulin A (IgA) accumulation, elevated circulating IgA immune complexes, and hematuria during vomitoxin-induced IgA nephropathy

Quantitative modeling of suppression of IgG1, IgG2a, IL-2, and IL-4 responses to antigen in mice treated with exogenous corticosterone or restraint stress

Quantitative Proteomic Analysis Reveals That Arctigenin Alleviates Concanavalin A-Induced Hepatitis Through Suppressing Immune System and Regulating Autophagy

Quantitative relationships between the suppression of selected immunological parameters and the area under the corticosterone concentration vs. time curve in B6C3F1 mice subjected to exogenous corticosterone or to restraint stress

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Rapid granulomatosis with polyangiitis induced by immune checkpoint inhibition

Rapid immunoassays for diagnosis of heparin-induced thrombocytopenia: Comparison of diagnostic accuracy, reproducibility, and costs in clinical practice

Rat extracorporeal circulation model for evaluation of systemic immunotoxicity

Re: Biochemical evaluation of immunotoxic effects of cadmium in rats

Re: Nitrofurantoin-induced pulmonary hemorrhage in a renal transplant recipient receiving immunosuppressive therapy: case report and review of the literature

Reaction of the immune system to low-level RF/MW exposures.

Reactions to rubella vaccine and persistence of antibody in virgin-soil populations after vaccination and wild-virus-induced immunization

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Reactive oxygen species sources and biomolecular oxidative damage induced by aflatoxin B1 and fumonisin B1 in rat spleen mononuclear cells

Recent advances in understanding the mechanisms of TCDD immunotoxicity

Recent studies on the effects of fetal alcohol exposure on the endocrine and immune systems

Recent US Food and Drug Administration warnings on hepatitis B reactivation with immune-suppressing and anticancer drugs: just the tip of the iceberg

Recommendations issued by the Spanish Society of Pediatric Infectious Diseases for the follow-up of the child exposed to the human immunodeficiency virus and to antiretroviral drugs during pregnancy and the neonatal period

Reconstitution of cyclophosphamide-induced, impaired function of the immune system in animal models

Recovery from 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone-induced immunosuppression in A/J mice by treatment with nonsteroidal anti-inflammatory drugs

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Release of Danger-Associated Molecular Patterns following Chemotherapy Does Not Induce Immunoparalysis in Leukemia Patients

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Reply to the commentary by Onuigbo on the article "Exposure to inhibitors of the renin-angiotensin system is a major independent risk factor for acute renal failure induced by sucrose-containing intravenous immunoglobulins. A case-control study

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RETRACTED: Composition and immunotoxicity activity of major essential oils from stems of Allium victorialis L. var. platyphyllum Makino against Aedes aegypti L

RETRACTED: Immunotoxicity activity from various organic solvents extract of Allium genus from South Korea against Aedes aegypti L

RETRACTED: Major essential oils composition and immunotoxicity activity from leaves of Foeniculum vulgare against Aedes aegypti L

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Rifabutin-induced uveitis in an immunocompetent subject

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Rifampicin-induced suppression of antitumor immunity

RIP1 and RIP3 contribute to Tributyltin-induced toxicity invitro and invivo

Risk assessment and immunotoxicology

Risk assessment for possible effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and related substances on components and functions of the immune system

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Stress response in Cu2+ and Cd2+ exposed oysters (Crassostrea gigas): an immunohistochemical approach

Stress response, biotransformation effort, and immunotoxicity in captive birds exposed to inhaled benzene, toluene, nitrogen dioxide, and sulfur dioxide

Stress, age, and immune function: toward a lifespan approach

Stressful life events are associated with low secretion rates of immunoglobulin A in saliva in the middle aged and elderly

Stressful life events of dental students and salivary immunoglobulin A

Striatal but not frontal cortical up-regulation of the epidermal growth factor receptor in rats exposed to immune activation in utero and cannabinoid treatment in adolescence

Stronger association of drug-induced progressive multifocal leukoencephalopathy (PML) with biological immunomodulating agents

Structural and immunohistochemical changes of conjunctiva induced by topical glaucoma medication

Structural equation modeling of immunotoxicity associated with exposure to perfluorinated alkylates

Structural skeletal impairment induced by immunosuppressive therapy in rats: cyclosporine A vs tacrolimus

Structure-activity relationship of phenolic compounds (phenol, pyrocatechol and hydroquinone) on natural lymphocytotoxicity of carp (Cyprinus carpio

Studies of congenic lines in the Brown Norway rat model of Th2-mediated immunopathological disorders show that the aurothiopropanol sulfonate-induced immunological disorder (Aiid3) locus on chromosome 9 plays a major role compared to Aiid2 on chromosome 10

Studies on cell-mediated immunotoxicity of dimethylformamide

Study of biomaterial-induced macrophage activation, cell-mediated immune response and molecular oxidative damage in patients with dermal bioimplants

Study of immune reactivity of minocycline-induced chronic active hepatitis

Study of immunoglobulins, proinflammatory cytokines, lymphoproliferation and phagocytosis in peripheral blood of healthy young people exposed to different levels of atmospheric pollution

Study of immunological suppression induced by combined use of cyclophosphamide and immunopotentiator, with special reference to its adverse effects

Study of immunotoxic properties of formaldehyde

Study of low-intensity 2450-MHz microwave exposure enhancing the genotoxic effects of mitomycin C using micronucleus test and comet assay in vitro.

Study of the inflammatory response of immunocytes to polymerized porcine hemoglobin (pPolyHb

Study of tyrosine hydroxylase immunoreactive neurons in neonate rats lactationally exposed to 2,4-dichlorophenoxyacetic Acid

Study on beta-adrenoceptors mechanism of cadmium immunotoxicity

Study on immunocyte proliferation and DNA damage induced by lead in mice

Study on mouse pulmonary acute injury induced by air-borne PM2.5

Study on reproductive and immune toxicity of male rats exposed to As2O3

Study on the effect of Part III from Cynomorium songaricum on immunosuppressive mice induced by cyclophosphamide

Study on the immunotoxicity of ribosome inhibiting protein of Momordica charantia

Study on the impact of lead acetate pollutant on immunotoxicity produced by thiamethoxam pesticide

Study on the relationship between cadmium immunotoxicity and corticotropin-releasing factor

Studying the synergistic damage effects induced by 1.8 GHz radiofrequency field radiation (RFR) with four chemical mutagens on human lymphocyte DNA using comet assay in vitro.

Subacute immunotoxicity of the marine phycotoxin yessotoxin in rats

Subacute immunotoxicity study of formaldehyde in male rats

Subacute oral exposure to dibromoacetic acid induced immunotoxicity and apoptosis in the spleen and thymus of the mice

Subchronic 10 day immunotoxicity of polydimethylsiloxane (silicone) fluid, gel and elastomer and polyurethane disks in female B6C3F1 mice

Subchronic administration of technical pentachlorophenol to lactating dairy cattle: immunotoxicologic evaluation

Subchronic arsenism-induced oxidative stress and inflammation contribute to apoptosis through mitochondrial and death receptor dependent pathways in chicken immune organs

Sub-chronic effect of perfluorooctanesulfonate (PFOS) on the balance of type 1 and type 2 cytokine in adult C57BL6 mice

Subchronic effects of perfluorooctanesulfonate exposure on inflammation in adult male C57BL/6 mice

Subchronic exposures to fungal bioaerosols promotes allergic pulmonary inflammation in naive mice

Subchronic immunotoxicity and screening of reproductive toxicity and developmental immunotoxicity following single instillation of HIPCO-single-walled carbon nanotubes: purity-based comparison

Subchronic inhalation toxicity of isobutyl nitrite in BALB/c mice. II. Immunotoxicity studies

Subchronic inhalation toxicity of the chlorinated propane 1,1,1,3,3,3-hexachloropropane (HCC-230fa

Subchronic lead exposure, immunotoxicology and increased disease resistance in Japanese quail (Corturnix coturnix japonica

Subchronic Oral Cadmium Exposure Exerts both Stimulatory and Suppressive Effects on Pulmonary Inflammation/Immune Reactivity in Rats

Subchronic oral toxicity study of furan in Fischer-344 rats

Subchronic toxicity and immunotoxicity of MeO-PEG-poly(D,L-lactic-co-glycolic acid)-PEG-OMe triblock copolymer nanoparticles delivered intravenously into rats

Sub-chronic toxicity of low concentrations of industrial volatile organic pollutants in vitro

Subchronic treatment with mercuric chloride suppresses immune response, elicits behavioral deficits and increases brain serotonin and dopamine metabolism in rats

Subchronic, reproductive, and maternal toxicity studies with tertiary butyl acetate (TBAC

Subclinical doses of T-2 toxin impair acquired immune response and liver cytochrome P450 in pigs

Subclinical GvHD in non-irradiated F1 hybrids: severe lymphoid-tissue GvHD causing prolonged immune dysfunction

Subclinical Reactivation of Cytomegalovirus Drives CD4+CD28null T-Cell Expansion and Impaired Immune Response to Pneumococcal Vaccination in Antineutrophil Cytoplasmic Antibody-Associated Vasculitis

Sublethal hyperoxia impairs pulmonary innate immunity

Sublingual immunotherapy in children with grass pollen induced allergic rhinoconjunctivitis

Substance P as prophylaxis for JP-8 jet fuel-induced immunotoxicity

Successful combined treatment with rituximab and high dose immunoglobulin in a patient with chronic lymphocytic leukemia with fludarabine-induced severe immune thrombocytopenia

Successful intravenous human immunoglobulin treatment of drug-induced Stevens-Johnson syndrome in a dog

Successful Management by Immunoglobulin for Sunitinib-Induced Thrombocytopenia in a Patient with Advanced Metastatic Renal Cell Carcinoma

Successful management with intravenous immunoglobulins in alemtuzumab-induced acute inflammatory demyelinating neuropathy: clinical report of three patients

Successful treatment by voliconazole for pulmonary and adductor magnus muscle aspergillosis induced by immunosuppressive therapy for hypersensitivity pneumonia

Successful treatment of lymphoma with fludarabine combined with rituximab after immune thrombocytopenia induced by fludarabine

Successful treatment of recalcitrant penicillamine-induced pemphigus foliaceus by low-dose intravenous immunoglobulins

Successful Treatment of Severe Heparin-induced Thrombocytopenia with Intravenous Immunoglobulin, Platelet Transfusion and Rivaroxaban: A Case Report

Successfully treated sulphasalazine-induced fulminant hepatic failure, thrombocytopenia and erythroid hypoplasia with intravenous immunoglobulin

Sudden collapse during haemodialysis due to immune-mediated heparin-induced thrombocytopaenia

Sulfamethoxazole-trimethoprim-induced pneumonitis in a patient with hemophilia B who was infected with the human immunodeficiency virus

Sulfasalazine induced immune thrombocytopenia in a patient with rheumatoid arthritis

Sulfasalazine-induced linear immunoglobulin A bullous dermatosis with DRESS

Sulindac-induced immune hemolytic anemia

Sulphonylurea usage in melioidosis is associated with severe disease and suppressed immune response

Sunlight-induced immunosuppression in humans is initially because of UVB, then UVA, followed by interactive effects

Sunscreen applied at 2 mg cm-2 during a sunny holiday prevents erythema, a biomarker of ultraviolet radiation-induced DNA damage and suppression of acquired immunity

Sunscreen lotions prevent ultraviolet radiation-induced suppression of antitumor immune responses

Sunset yellow FCF, a permitted food dye, alters functional responses of splenocytes at non-cytotoxic dose

Superoxide dismutase 3 controls adaptive immune responses and contributes to the inhibition of ovalbumin-induced allergic airway inflammation in mice

Supplementing an immunomodulatory feed ingredient to modulate thermoregulation, physiologic, and production responses in lactating dairy cows under heat stress conditions

Suppressed T helper 2 immunity and prolonged survival of a nematode parasite in protein-malnourished mice

Suppression by Delta(9)-tetrahydrocannabinol of the primary immunoglobulin M response by human peripheral blood B cells is associated with impaired STAT3 activation

Suppression of allergen-induced airway inflammation and immune response by the peroxisome proliferator-activated receptor-alpha agonist fenofibrate

Suppression of allergic immune responses to house dust mite (HDM) in rats exposed to 2,3,7,8-TCDD

Suppression of allograft immunity by 3,4,5,3',4',5'-hexachlorobiphenyl. I. Effects of exposure on tumor rejection and cytotoxic T cell activity in vivo

Suppression of allograft immunity by 3,4,5,3',4',5'-hexachlorobiphenyl. II. Effects of exposure on mixed lymphocyte reactivity and induction of suppressor cell activity in vitro

Suppression of B-cell mediated immunity in juvenile chinook salmon (Oncorhynchus tshawytscha) after exposure to either a polycyclic aromatic hydrocarbon or to polychlorinated biphenyls

Suppression of cell-mediated immune responses to listeria infection by repeated exposure to diesel exhaust particles in brown Norway rats

Suppression of cell-mediated immunity by a donor-transmitted lymphocytic choriomeningitis virus in a kidney transplant recipient

Suppression of cell-mediated immunity following oral feeding of mice with palmyrah (Borassus flabellifer L) flour

Suppression of cellular immune responses in BALB/c mice following oral exposure to permethrin

Suppression of cellular immunity by anesthesia and operation

Suppression of cellular immunity in men with a past history of posttraumatic stress disorder

Suppression of corneal graft rejection in rabbits by a new immunosuppressive agent, FK-506

Suppression of cyclosporine a nephrotoxicity in vivo by transforming growth factor beta receptor-immunoglobulin G chimeric protein

Suppression of human B cell activation by 2,3,7,8-tetrachlorodibenzo-p-dioxin involves altered regulation of B cell lymphoma-6

Suppression of humoral and cell-mediated immune responses by carbon tetrachloride

Suppression of humoral and cell-mediated immune responses in vitro by benzo(a)pyrene

Suppression of humoral immune responses by 2,3,7,8-tetrachlorodibenzo-p-dioxin intercalated in smectite clay

Suppression of humoral immune responses by dialkylnitrosamines: structure-activity relationships

Suppression of humoral immunity by perfluorooctanoic acid is independent of elevated serum corticosterone concentration in mice

Suppression of humoral immunity following exposure to the perfluorinated insecticide sulfluramid

Suppression of humoral immunity in mice following exposure to perfluorooctane sulfonate

Suppression of immune parameters in animal models of morphine dependence

Suppression of immune response associated with functions of B-cells, Th1- and Th2-lymphocytes and interleukins produced by these cells, and pharmacological correction of these disturbances upon acute intoxication with methanol

Suppression of immune response in the B6C3F1 mouse after dietary exposure to the Fusarium mycotoxins deoxynivalenol (vomitoxin) and zearalenone

Suppression of immunoglobulin production by a novel dihydroorotate dehydrogenase inhibitor, S-2678

Suppression of local gut-associated and splenic mitogen responsiveness of lymphoid cells following oral exposure of B6C3F1 mice to 7,12-dimethylbenz[a]anthracene

Suppression of natural killer cells after acute intoxication with alcohols and cholinotropic preparations and their reactivation with T-activin

Suppression of retrovirus-induced immunodeficiency disease (murine AIDS) by trimidox and didox: novel ribonucleotide reductase inhibitors with less bone marrow toxicity than hydroxyurea

Suppression of splenic lymphocyte function by 7,12-dimethylbenz[a]anthracene (DMBA) in vitro

Suppression of Th1- and Th2-type immune responses in infant mouse spleen after prenatal and postnatal exposure to low-level toluene and peptidoglycan

Suppression of the IgM Response by Aryl Hydrocarbon Receptor Activation in Human Primary B Cells Involves Impairment of Immunoglobulin Secretory Processes

Suppression of the immune system by oral glucocorticoid therapy in bronchial asthma

Suppression of the in vitro humoral immune response by chrysotile asbestos

Suppression of the in vitro humoral immune response of mouse splenocytes by 7,12-dimethylbenz[a]anthracene metabolites and inhibition of immunosuppression by alpha-naphthoflavone

Suppression of the in vitro immune response by 7,12-dimethylbenz[a]anthracene in mouse splenocytes co-cultured with rat hepatocytes

Suppression of the NF-kappaB pathway by diesel exhaust particles impairs human antimycobacterial immunity

Suppressive Effect of 1alpha,25-Dihydroxyvitamin D3 on Th17-Immune Responses in Kidney Transplant Recipients With Tacrolimus-Based Immunosuppression

Suppressive effect of O,O-dimethyl, S-ethyl phosphorothioate on immune response

Suppressive effect of ultraviolet B radiation on contact sensitization in mice. II. Systemic immunosuppression is modulated by ultraviolet irradiation and hapten application

Suppressive effects of benzo[a]pyrene upon fish immune function: evolutionarily conserved cellular mechanisms of immunotoxicity

Suppressive effects of thiopental and halothane on specific arms of the immune response

Suppressor T-cell levels are unreliable indicators of the impaired immune response following thermal injury

Surface charges and shell crosslinks each play significant roles in mediating degradation, biofouling, cytotoxicity and immunotoxicity for polyphosphoester-based nanoparticles

Surface coatings determine cytotoxicity and irritation potential of quantum dot nanoparticles in epidermal keratinocytes

Surface expression of the hRSV nucleoprotein impairs immunological synapse formation with T cells

Surface functionalized mesoporous silica nanoparticles with natural proteins for reduced immunotoxicity

Surgery-induced immunomodulation in breast cancer

Surgery-induced immunosuppression and postoperative pain management

Surgical damage to the lymphatic system promotes tumor growth via impaired adaptive immune response

Susceptibility to secondary bacterial infections in growing pigs as an early response in ochratoxicosis

Sustained 3-year efficacy of pre- and coseasonal 5-grass-pollen sublingual immunotherapy tablets in patients with grass pollen-induced rhinoconjunctivitis

Swainsonine exposure induces impairment of host immune response in pregnant BALB/c mice

Swiss mice CD1 fed on mussels contaminated by okadaic acid and yessotoxins: effects on thymus and spleen

Switching to sirolimus-based immune suppression after liver transplantation is safe and effective: a single-center experience

Symptoms and immunologic markers induced by exposure to methyltetrahydrophthalic anhydride

Symptoms of atopy in persons exposed to chronic immunosuppression of polycyclic aromatic hydrocarbons

Synaptophysin immunoreactive axonal swelling in p-bromophenylacetylurea-induced neuropathy

Syndrome of cocaine-levamisole-induced cutaneous vasculitis and immune-mediated leukopenia

Synergism in immunotoxicological effects due to repeated combined administration of arsenic and lead in mice

Synergistic effect of organic solvents and tobacco smoke on serum immunoglobulin levels in humans

Synthesis and characterization of deoxynivalenol glucuronide: its comparative immunotoxicity with deoxynivalenol

Synthesis of zanthoxylamide protoalkaloids and their in silico ADME-Tox screening and in vivo toxicity assessment in zebrafish embryos

Synthetic human chorionic gonadotropin-related oligopeptides impair early innate immune responses to Listeria monocytogenes in Mice

Synthetic predator cues impair immune function and make the biological pesticide Bti more lethal for vector mosquitoes

Systemic and immunotoxicity of pristine and PEGylated multi-walled carbon nanotubes in an intravenous 28 days repeated dose toxicity study

Systemic and immunotoxicity of silver nanoparticles in an intravenous 28 days repeated dose toxicity study in rats

Systemic immune cell response in rats after pulmonary exposure to manganese-containing particles collected from welding aerosols

Systemic immune challenges trigger and drive Alzheimer-like neuropathology in mice

Systemic immunosuppression following a single pharyngeal aspiration of 1,2:5,6-dibenzanthracene in female B6C3F1 mice

Systemic immunosuppression induced by photodynamic therapy (PDT) is adoptively transferred by macrophages

Systemic immunotoxicity in AJ mice following 6-month whole body inhalation exposure to diesel exhaust

Systemic immunotoxicity reactions induced by adjuvanted vaccines

Systemic toxicity of di-2-ethylhexyl terephthalate (DEHT) in rodents following four weeks of intravenous exposure

T cell immunoglobulin- and mucin-domain-containing molecule-4 attenuates concanavalin A-induced hepatitis by regulating macrophage

T lymphocyte-proliferative responses of harbor seal (Phoca vitulina) peripheral blood mononuclear cells (PBMCs) exposed to pharmaceuticals in vitro

T-2 toxin immunotoxicity on human B and T lymphoid cell lines

T-2 toxin impairment of enteric reovirus clearance in the mouse associated with suppressed immunoglobulin and IFN-gamma responses

T-2 toxin impairs murine immune response to respiratory reovirus and exacerbates viral bronchiolitis

T-2 toxin in the diet suppresses growth and induces immunotoxicity in juvenile Chinese mitten crab (Eriocheir sinensis

T2 Toxin-Induced Changes in Cocaine- and Amphetamine-Regulated Transcript (CART)-Like Immunoreactivity in the Enteric Nervous System Within Selected Fragments of the Porcine Digestive Tract

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Tamoxifen-induced immune-mediated platelet destruction. A case report

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TCDD modulation of gut microbiome correlated with liver and immune toxicity in streptozotocin (STZ)-induced hyperglycemic mice

TCDD: an environmental immunotoxicant reveals a novel pathway of immunoregulation--a 30-year odyssey

Tear immunoglobulins in giant papillary conjunctivitis induced by contact lenses

Temporal clinical, proteomic, histological and cellular immune responses of dextran sulfate sodium-induced acute colitis

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Teratogen-induced apoptosis may be affected by immunopotentiation

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Testosterone-Mediated Endocrine Function and TH1/TH2 Cytokine Balance after Prenatal Exposure to Perfluorooctane Sulfonate: By Sex Status

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The alteration of ultrastructure and immunoreactivity of human embryonic organ of Corti tissue culture after exposure to aminoglycoside (neomycin) ototoxicity

The antibody response and immunity to challenge infection induced by whole, inactivated and tween-ether split influenza vaccines

The antiproliferative and immunotoxic effects of L-canavanine and L-canaline

The ascidian Styela plicata hemocytes as a potential biomarker of marine pollution: In vitro effects of seawater and organic mercury

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The changes of calretinin immunoreactivity in paraquat-induced nephrotoxic rats

The changing spectrum of drug-induced immune hemolytic anemia

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The comparative immunotoxicity of five selected compounds following developmental or adult exposure

The comparative immunotoxicity of mesoporous silica nanoparticles and colloidal silica nanoparticles in mice

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The current understanding of immunotoxicity induced by silica nanoparticles

The dark and the sunny sides of UVR-induced immunosuppression: photoimmunology revisited

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Ziram induces apoptosis and necrosis in human immune cells

ZnO nanoparticles induced inflammatory response and genotoxicity in human blood cells: A mechanistic approach

A4-C. Bibliography – Low-Tech Factors that Strengthen Immune System

In the main text, two types of strategic treatments for a weakened immune system were defined: vaccine-based and non-vaccine-based. The vaccine-based treatments were addressed in Appendix 3. The non-vaccine-based treatments were divided into two categories: identifying and eliminating factors that contribute to weakening the immune system, and adding factors that contribute to strengthing a weak immune system. Many factors of the first category were presented in Table A4-1. In the present section, some factors of the second category (especially low-tech factors that strengthen the immune system) will be presented in the form of a brief bibliography. Many more factors of this nature exist, and could be identified with a much larger study. The bibliography follows.

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