

Fake Science: XMRV, COVID-19, and the Toxic Legacy of Dr. Judy Mikovits

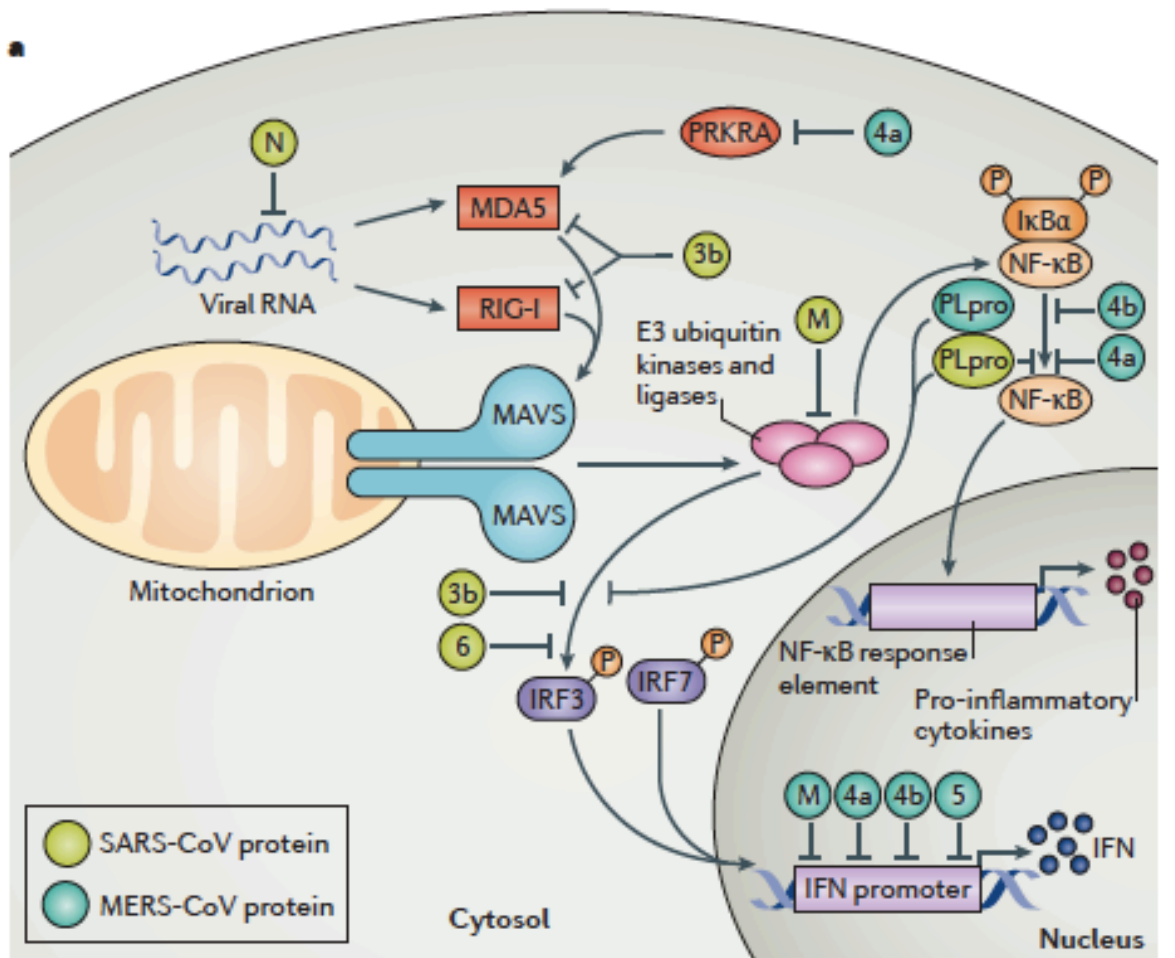
Stuart J.D. Neil¹ and Edward M. Campbell²

Abstract

One cannot spend >5 min on social media at the moment without finding a link to some conspiracy theory or other regarding the origin of SARS-CoV2, the coronavirus responsible for the COVID-19 pandemic. From the virus being deliberately released as a bioweapon to pharmaceutical companies blocking the trials of natural remedies to boost their dangerous drugs and vaccines, the Internet is rife with far-fetched rumors. And predictably, now that the first immunization trials have started, the antivaccine lobby has latched on to most of them. In the last week, the trailer for a new “bombshell documentary” *Plandemic* has been doing the rounds, gaining notoriety for being repeatedly removed from YouTube and Facebook. We usually would not pay much heed to such things, but for retrovirologists like us, the name associated with these claims is unfortunately too familiar: Dr. Judy Mikovits.

Keywords: XMRV, endogenous retroviruses, epidemiology, SARS-CoV2, COVID-19

Infection with SARS-CoV2 DOES NOT CAUSE COVID 19



It is the over reaction of our OWN weakened and dysfunctional immune system attacking tissues and cells of our own body that harms and kills, versus the virus – be it SARSCov2 or any other virus.... In healthy individuals, the immune system processes pathogens with a natural immune response that is mild and non-lethal; however, in those who are immune-compromised – elderly and those with pre-existing conditions—their own immune systems may overreact; and in the case of COVID-19, attacking lung epithelial cells and tissues leading to hospitalization and mortality

COVID19 Is an Acquired Endocannabinoid Immune Deficiency: Non HIV-AEIDS

Coronavirus outbreak raises question: Why are bat viruses so deadly?

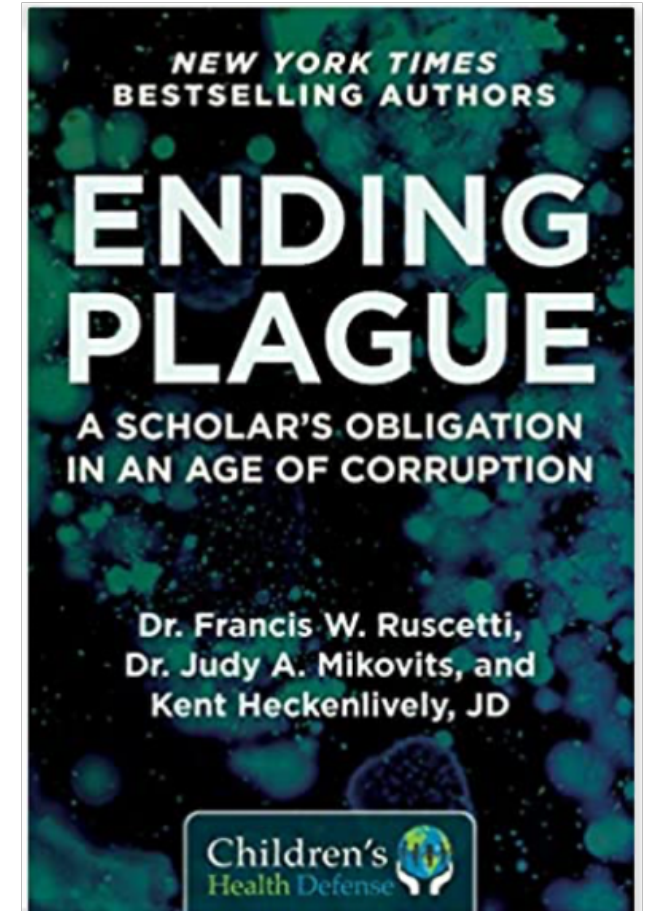
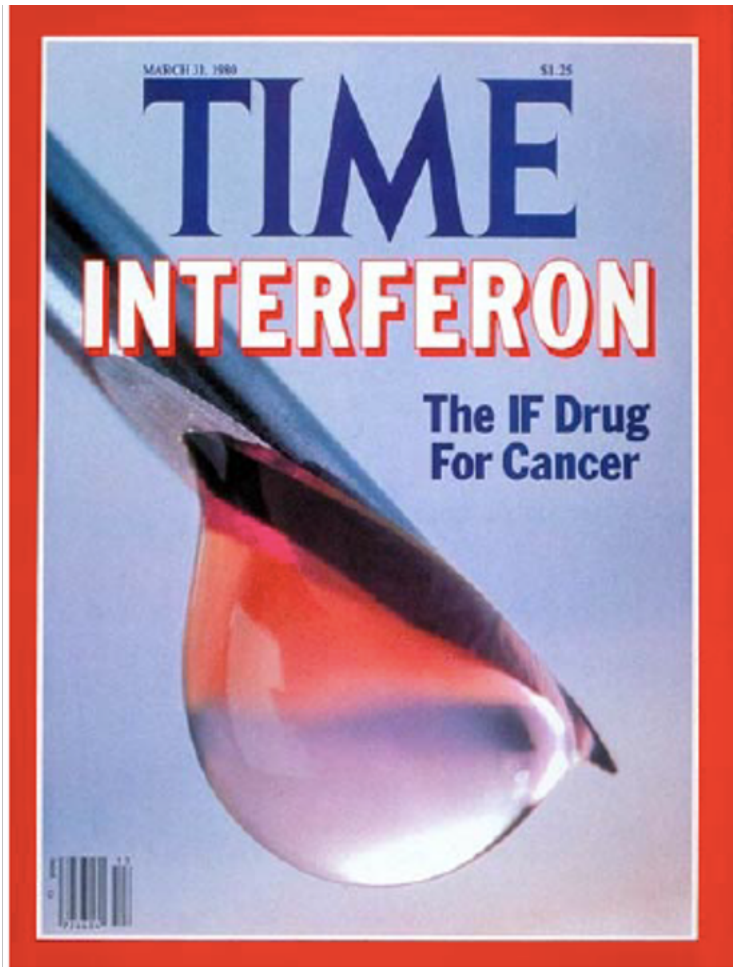


The Australian black flying fox is a reservoir of Hendra virus, which can be transmitted to horses and sometimes humans.

It's no coincidence that some of the worst viral disease outbreaks in recent years — SARS, MERS, Ebola, Marburg and likely the newly arrived COVID-19 virus — originated in bats.

- Generally, vigorous physical activity high metabolic rates lead to higher tissue damage due to an accumulation of reactive molecules, primarily free radicals.
- key trick of many bats' immune systems is the hair-trigger release of a signaling molecule called interferon-alpha, which tells other cells to “man the battle stations” before a virus invades

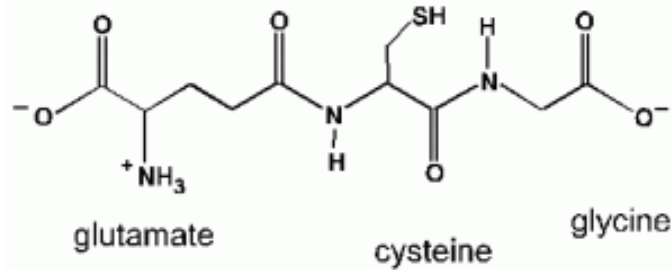
“Why did the FDA stop the sale of a product doing so much good?
Then I realized that FDA did not need a reason”
Dr. Joseph Cummins



Glyphosate: Damages Key Intracellular antioxidant Glutathione

Produced by the liver, glutathione is made up of three amino acids: [Lcysteine](#), [glycine](#), and L-glutamate

glutathione (GSH)



[ACS Infect Dis.](#) 2020 May 28 : acsinfecdis.0c00288.

PMCID: PMC7263077

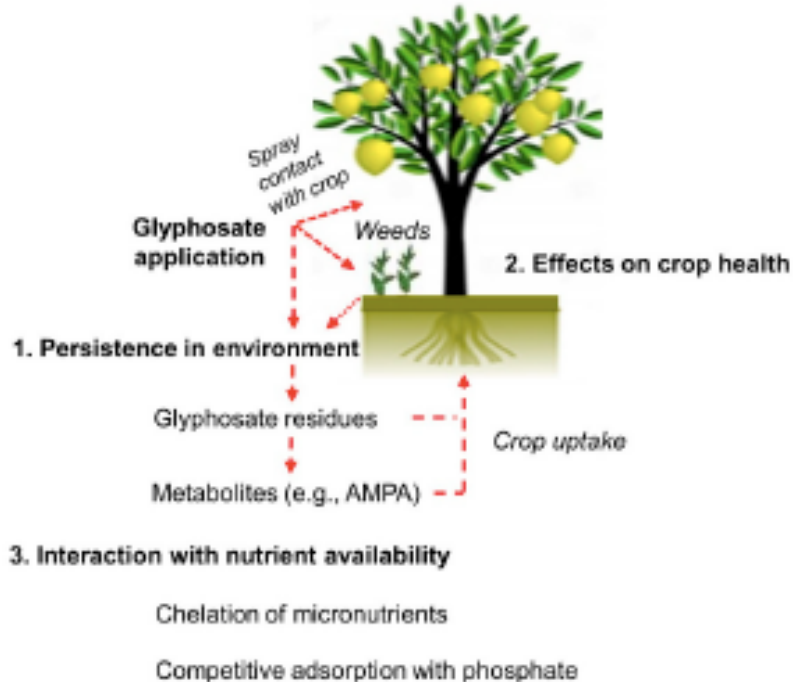
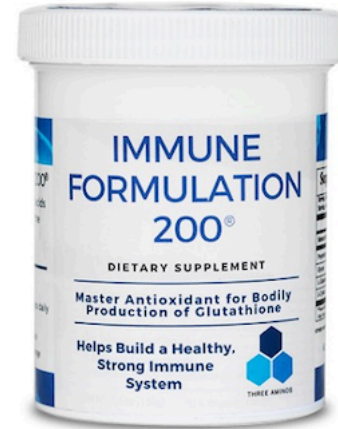
Published online 2020 May 28. doi: [10.1021/acsinfecdis.0c00288](https://doi.org/10.1021/acsinfecdis.0c00288)

PMID: [32463221](https://pubmed.ncbi.nlm.nih.gov/32463221/)

Endogenous Deficiency of Glutathione as the Most Likely Cause of Serious Manifestations and Death in COVID-19 Patients

[Alexey Polonikov^{PhD}](#)

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Endogenous glutathione deficiency appears to be a crucial factor enhancing SARS-CoV-2-induced oxidative damage of the lung and, as a result, leads to serious manifestations, such as acute respiratory distress syndrome, multiorgan failure, and death in COVID-19 patients. When the antiviral activity of GSH is taken into account, individuals with glutathione deficiency seem to have a higher susceptibility for uncontrolled replication of SARS-CoV-2 virus and thereby suffer from an increasing viral load. The severity of clinical manifestations in COVID-19 patients is apparently determined by the degree of impaired redox homeostasis attributable to the deficiency of reduced glutathione and increased ROS production. This assumption can be supported by our findings. In particular, COVID-19 patients with moderate and severe illness had lower levels of glutathione, higher ROS levels, and greater redox status (ROS/GSH ratio) than COVID-19 patients with a mild illness. Long-term and severe manifestations of COVID-19 infection in one of our patients with marked glutathione deficiency suggest that the degree of glutathione decrease correlates negatively with viral replication rate and that an increasing viral load exacerbates oxidative damage of the lung. This finding suggests that the virus cannot actively replicate at higher levels of cellular glutathione, and therefore, milder clinical symptoms are observed with lower viral loads.

SUPPLEMENT FACTS			
Servings Per Container			62
Serving Size			1 Scoop (1.6g)
Amount per serving			
Calories			0
		Standard DV	% Daily Value*
Selenium (from selenomethionine)	4.5 mcg	75 mcg	6%
Proprietary Amino Acid Blend	1450 mg		
Glycine L-Glutamine L-Cystine			

Effects of environmental change on zoonotic disease risk: an ecological primer

HAZARDS of GMOS: ALL Vaccines are GMO

<p>1. Uncontrollable, unpredictable impacts on safety due to the genetic modification process *</p> <ul style="list-style-type: none"> Scrambling the host genome * Widespread mutations * Inactivating genes * Activating genes * Creating new transcripts (RNAs) including those with regulatory functions * Creating new proteins * Creating new metabolites or increasing metabolite to toxic levels * Activating dormant viruses * Creating new viruses by recombination of viral genes in GM insert with those in the host genome *
<p>2. Toxicity of transgene protein(s) introduced (intentionally or otherwise)</p> <ul style="list-style-type: none"> Transgene protein toxic * Transgene protein allergenic or immunogenic * Transgenic protein becoming allergenic or immunogenic due to processing * Unintended protein created by sequence inserted may be toxic or immunogenic
<p>3. Effects due to the GM insert and its instability *</p> <ul style="list-style-type: none"> Genetic rearrangement with further unpredictable effects * Horizontal gene transfer and recombination * <ul style="list-style-type: none"> Spreading antibiotic and drug resistance * Creating new viruses and bacteria that cause diseases Creating mutations in genomes of cells to which the GM insert integrate including those associated with cancer *
<p>4. Toxicity of herbicides used with herbicide tolerant GM crops *</p>

Infectious Virus is not Necessary to *Cause* Disease when Viral proteins and nucleic acids are Injected into the body!



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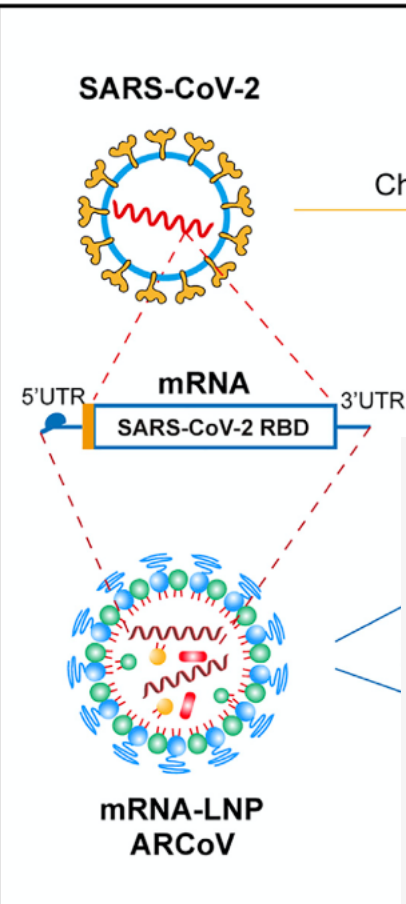


Safety and efficacy of ozone therapy in mild to moderate COVID-19 patients: A phase 1/11 randomized control trial (SEOT study) ☆

Mili Shah ^a, Jignasha Captain ^b, Vidyadhar Vaidya ^c, Arvind Kulkarni ^d, Kedar Valsangkar ^e, Pradeep M.K. Nair ^f, Gayatri Ganu ^g

Highlights

- Ozone therapy as an adjuvant care can shorten hospitalization and need for intensive care.
- Ozone therapy enhances the quality of care in COVID-19 by exhibiting immune-modulatory effects.
- Ozone therapy as an adjuvant therapy is safe and effective in COVID-19 care .
- Ozone therapy relieves cardinal symptoms of SARS-CoV-2 like breathlessness, cough etc.



- Ozone therapies
- Specialized Pro resolving mediators
- Chlorine Dioxide, MMS, CDS

It's NOT a Vaccine! Its a synthetic virus containing the deadly spike protein mRNA or protein of SARS-CoV2

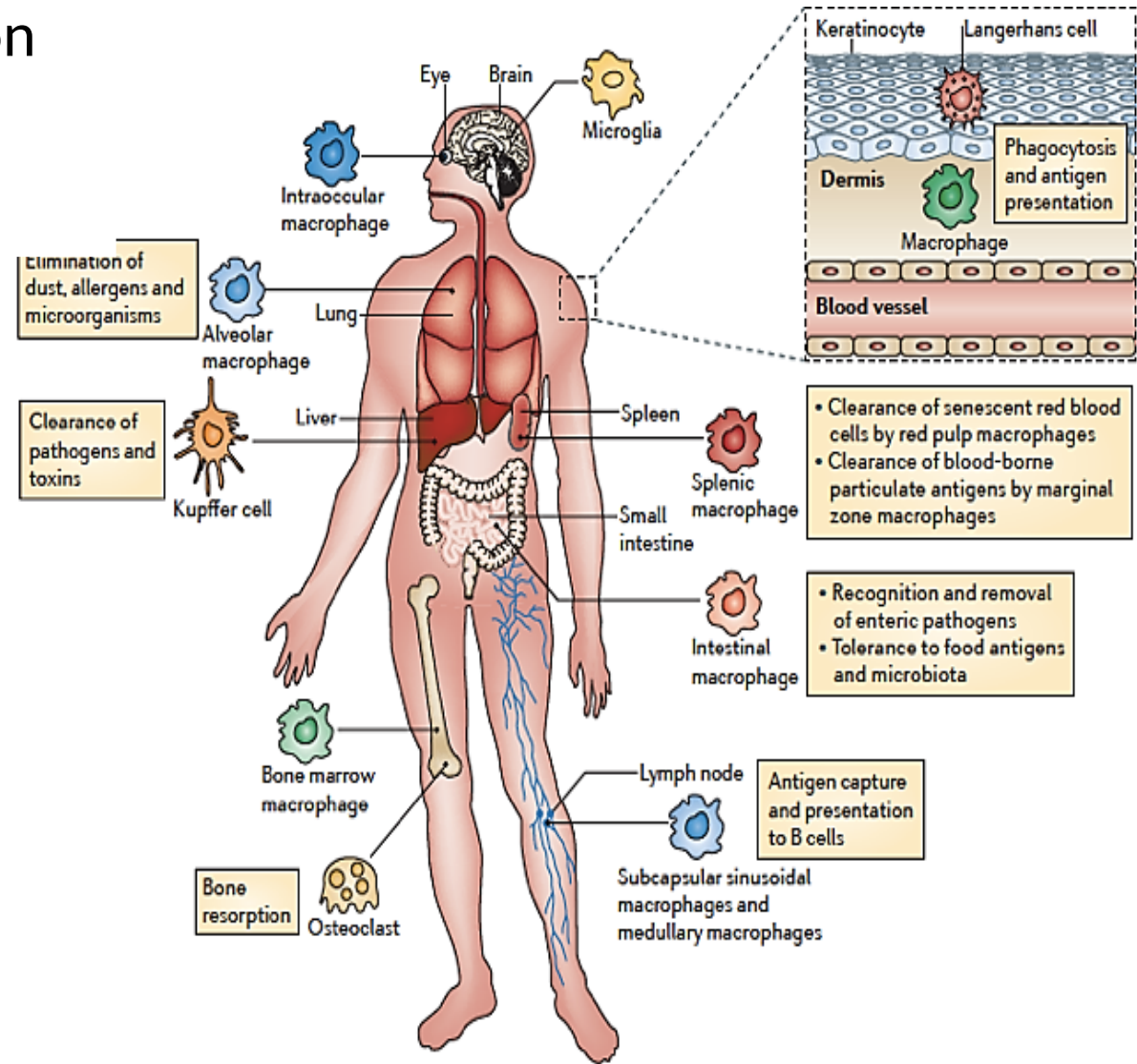
The VACCINATED shed the VLP infecting the vulnerable

Monocyte/Macrophage Dysfunction as a Driver of AIDS/CANCER

- Express Purinergic Receptors:
- P2XR and P2YR.
- Express Cannabinoid Receptors
- CB1 & CB2

Tissue Macrophages perform Key Homeostatic Functions Modulated by

- Cannabinoids
- GcMAF
- Suramin
- Ivermectin
- Vitamin C
- DMG
- Decitibine (Vidaza)



Viruses cause Disease by Dysregulating Key Immune molecules modulated by the eCS The Dimmer switch of Inflammation: Putting out the Fire

Comparison of cellular gene expression in Ebola-Zaire and Ebola-Reston virus-infected primary human monocytes

C. Xiang¹, H. Young², H. Alterson¹, D. Reynolds², M. Bittner³, Y. Chen², G. Gooden², Y. Jiang², P. Meltzer², J. Trent², J. Mikovits² & K. Anderson¹

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³Laboratory of Cancer Genetics, NHGRI-NIH, Bethesda, Maryland 20892, USA

Ebola viruses are filamentous, enveloped, nonsegmented RNA viruses. Although most Ebola viruses, notably Ebola-Zaire virus, are highly infectious for primates and can cause severe haemorrhagic diseases, Ebola-Reston virus does not cause serious disease in humans. Microarray technology was employed to compare cellular gene responses to Ebola-Zaire and Ebola-Reston virus infection of primary human monocytes, the early targets of Ebola-Zaire virus infection. We found that approximately 200 of 1,400 human genes on the array exhibited changes in expression in response to Ebola-Zaire virus infection after 24 hours. Most affected genes were upregulated in their level of expression, including cytokine and chemokine genes (IL-1, IL-1, IL-6, IL-8, IL-15, MIP-1, MIP-1 and TNF), genes involved in regulation of cell cycle or apoptosis and other genes involved in signal transduction. The gene expression profile from Ebola-Reston-infected monocytes was totally different from that observed with Ebola-Zaire virus. The results from northern-blot or ribonuclease protection assays confirmed the array data. The possible influence of differences in cellular gene expression observed between Ebola-Zaire and Ebola-Reston viruses on the ability of these viruses to cause diseases will be discussed.

Research [\(/tags/106\)](#) In-Press Preview [\(/tags/113\)](#) Cell biology [\(/tags/16\)](#)

Immunology [\(/tags/25\)](#) Free access | [10.1172/JCI122462](https://doi.org/10.1172/JCI122462)

<https://doi.org/10.1172/JCI122462>

TGFβ-induced epigenetic deregulation of SOCS3 facilitates STAT3-signaling to promote fibrosis

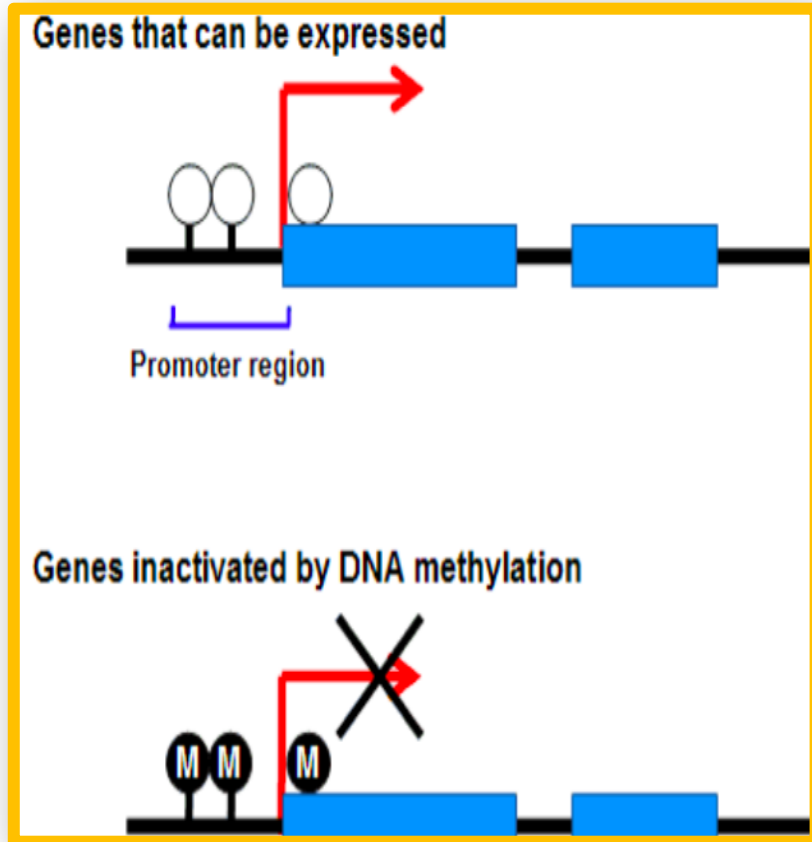
Clara Dees, Sebastian Pötter, Yun Zhang, Christina Bergmann, Xiang Zhou, Markus Luber, Thomas Wohlfahrt, Emmanuel Karouzakis, Andreas Ramming, Kolja Gelse, Akihiko Yoshimura, Rudolf Jaenisch, Oliver Distler, Georg Schett, and Jörg H.W. Distler

First published January 28, 2020 - [More info](#)

^ Abstract

Fibroblasts are key-effector cells in tissue remodeling. They remain persistently activated in fibrotic diseases, resulting in progressive deposition of extracellular matrix. Although fibroblast activation maybe initiated by external factors, prolonged activation can induce an “autonomous”, self-maintaining pro-fibrotic phenotype in fibroblasts. Accumulating evidence suggests that epigenetic alterations play a central role to establish this persistently activated pathologic phenotype of fibroblasts. We demonstrated that in fibrotic skin of patients with systemic sclerosis (SSc), a prototypical idiopathic fibrotic disease, transforming growth factor-β (TGFβ) induced the expression of DNA-

Retroviruses, heavy metals, GMOs, and environmental toxins: Drivers of Accelerated Disease Evolution via altered balance between Endogenous (HERVS) and Exogenous Viruses?



Molecular and Cellular Biology

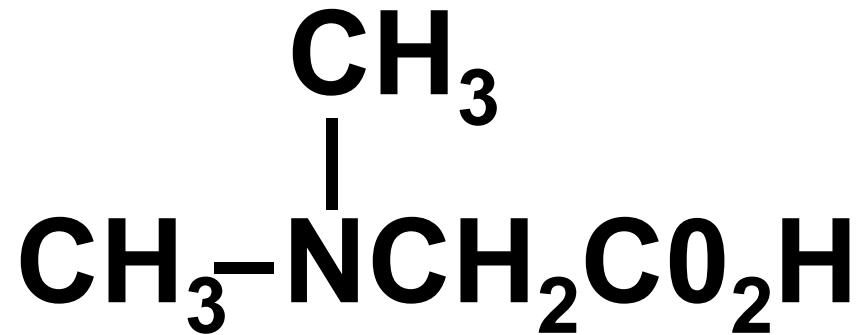
Infection with Human Immunodeficiency Virus Type 1 Upregulates DNA Methyltransferase, Resulting in De Novo Methylation of the Gamma Interferon (IFN- γ) Promoter and Subsequent Downregulation of IFN- γ Production

Judy A. Mikovits, Howard A. Young, Paula Vertino, Jean-Pierre J. Issa, Paula M. Pitha, Susan Turcoski-Corrales, Dennis D. Taub, Cari L. Petrow, Stephen B. Baylin and Francis W. Ruscetti
Mol. Cell. Biol. 1998, 18(9):5166.

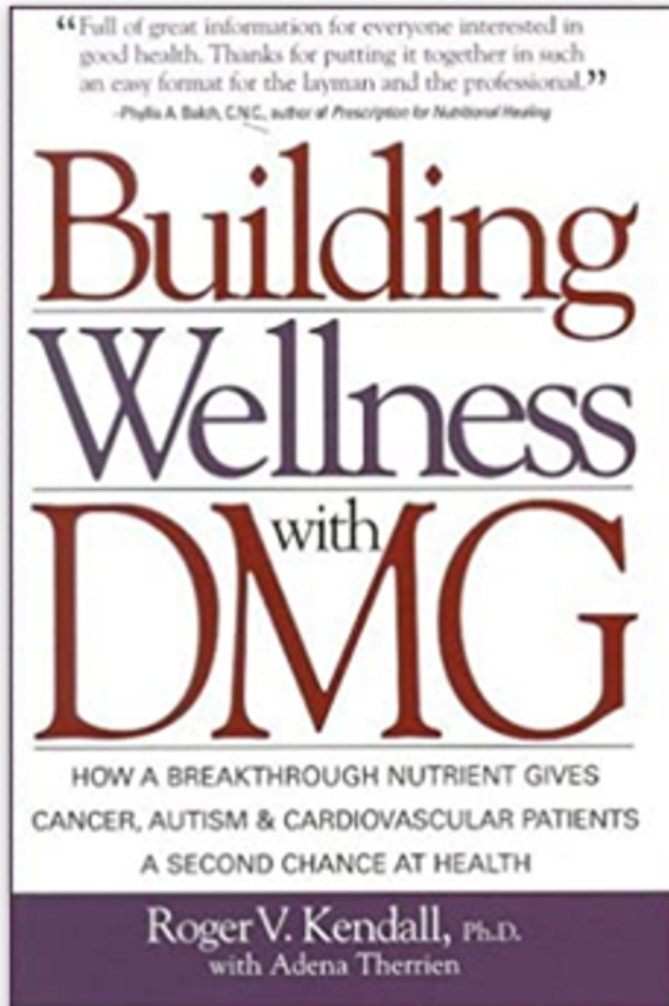
DiMethylGlycine

Nutrition's Best Kept secret for strengthening Genomic Pathways and Preventing Disease

- Amino Acid – Intermediary metabolite of the human body



- Important nutrient that is found in low levels in our food
- As a nutritional supplement DMG can produce incredible health benefits.



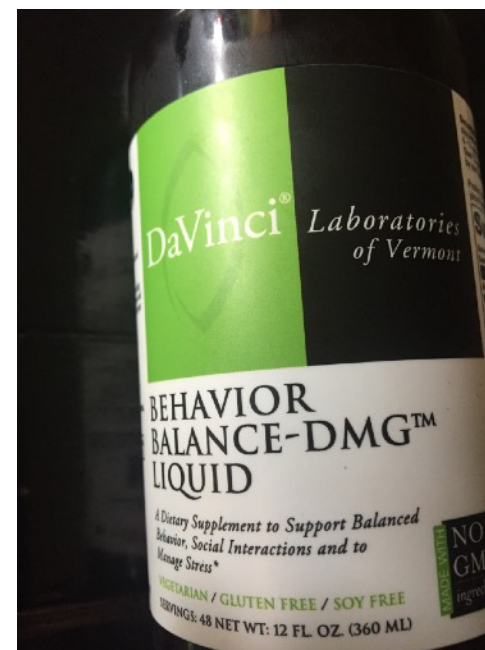
DMG calms Neuroinflammation

DMG falls apart...So you don't have too! ~ Roger V. Kendall, PhD

EnerDMG

DMG BENEFITS TO THOSE WITH AUTISM

- DMG improves verbal communication.
- DMG improves social interaction.
- DMG enhances energy production.
- DMG improves focus and eye contact.
- DMG reduces seizures.
- DMG helps cope with stress.
- DMG improves sleep patterns.





Functions and Health Benefits of DMG

- Improves Oxygen Utilization
- Enhances Immune Response
- Aids Cardiovascular Function
- Antioxidant
- Anti-Inflammatory Agent
- Aids Detoxification
- Improves Liver Function
- Provides Neurological Support
- Anti-Cancer Properties



Summary of DMG and Immune Response

- DMG has been shown to impact the Immune Response in the following areas:
 - Enhances cell-mediated response of:
 - B-cells
 - T-cells
 - Macrophages
 - Enhances antibody production-humoral response
 - Modulates cytokine production
 - Interferon (IFN)
 - Tumor Necrosis Factor-alpha (TNF-alpha)
 - Leukocyte Inhibitory Factor (LIF)
 - Interleukins (IL-1, IL-2, and IL-6)

Lupus/SLE an example of restoring antibody responses

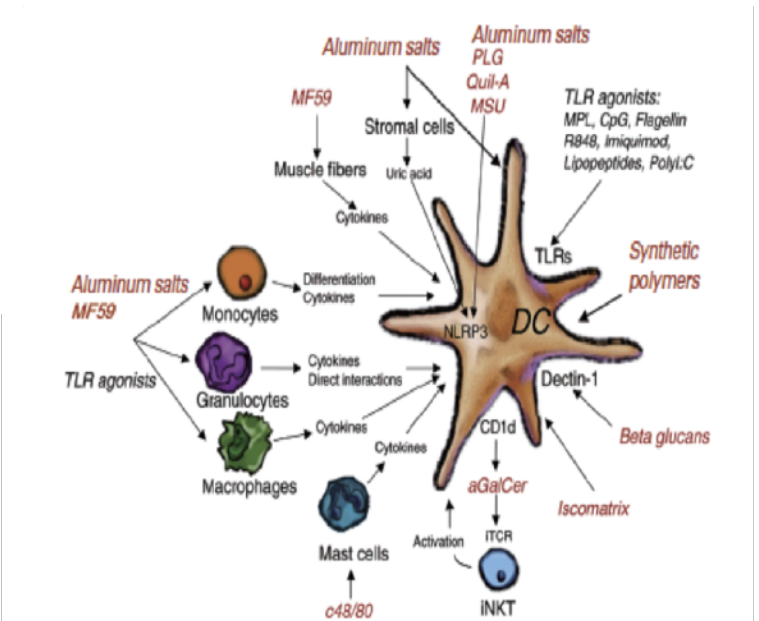
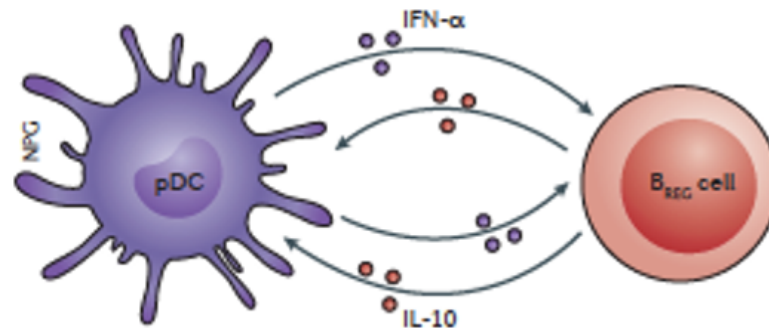
Lupus is an autoimmune inflammatory disease in which the body produces antibodies causing the immune system to affect the skin, joints, blood and kidneys.

Symptoms include:

- Skin rashes/ Inflammation
- Arthritis/ Joint Pain
- Extreme Fatigue
- Anemia/ Blood Disorders
- Kidney Damage
- Immune Disorder
- Antinuclear Antibodies

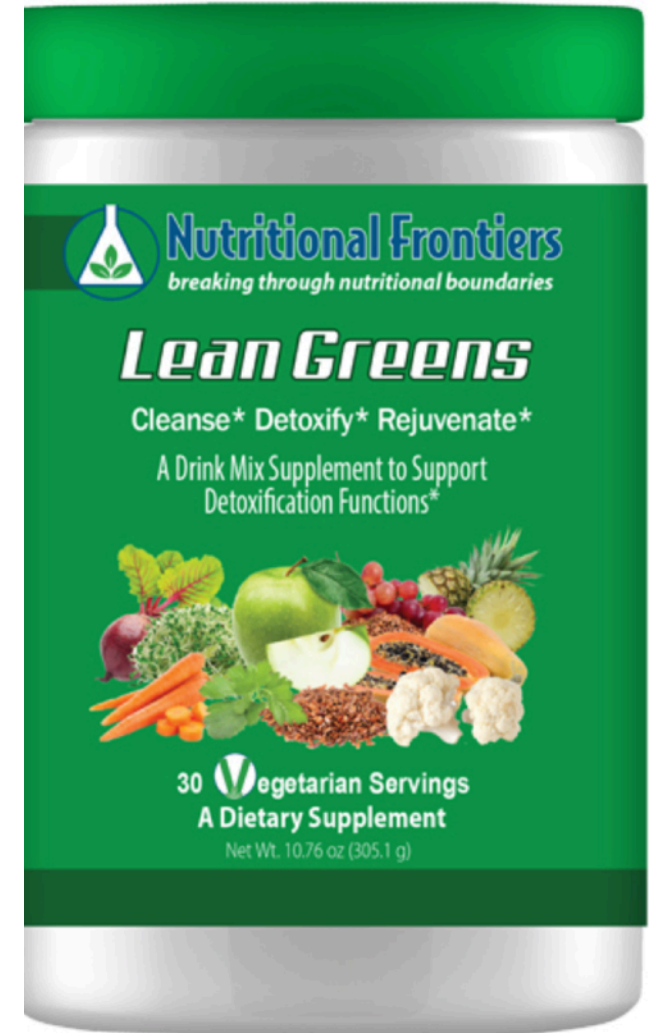
SYSTEMIC LUPUS ERYTHEMATOSUS

Compromised pDC-B_{REG} cell crosstalk



Taking advantage of Synergies: Pathway Crosstalk and DMG

- Detoxification support is provided in **Pro Lean Greens** as N-Acetyl-L-Cysteine, spirulina, chlorella, N,N-Dimethylglycine (DMG), milk thistle, and **Emothion® S-Acetyl-L-Glutathione**. Glutathione is a key part of liver detoxification as it binds toxic chemicals as well as being a free radical scavenger.
- Glutathione is active in Phase II detoxification, helping the body manage carcinogens, toxins, and drugs.
- The **methyl donor DMG** assists in the biosynthesis of vitamins, hormones, neurotransmitters, antibodies & nucleic acids.
- **DMG was patented over three decades ago for treating systemic inflammatory disease**, modulating immune response, and boasts in vitro evidence of antioxidant effects via free radical scavenging activity and enhancement of the endogenous antioxidant defense system.
- Milk thistle (*Silybum marianum*) is used to protect and restore function of the liver with ample research behind its traditional uses.



Front Immunol. 2021; 12: 632238.

PMCID: PMC7943727

Published online 2021 Feb 24. doi: [10.3389/fimmu.2021.632238](https://doi.org/10.3389/fimmu.2021.632238)

PMID: [33717168](https://pubmed.ncbi.nlm.nih.gov/33717168/)

Specialized Pro-Resolving Mediators as Potential Regulators of Inflammatory Macrophage Responses in COVID-19

Maria G. Balta,¹ Evangelos Papathanasiou,^{2,3} and Panagiotis F. Christopoulos^{4,*}

▶ Author information ▶ Article notes ▶ Copyright and License information ▶ Disclaimer

Abstract

Go to: 

The recent outbreak of SARS-CoV2 has emerged as one of the biggest pandemics of our century, with outrageous health, social and economic consequences globally. Macrophages may lay in the center of COVID-19 pathogenesis and lethality and treatment of the macrophage-induced cytokine storm has emerged as essential. Specialized pro-resolving mediators (SPMs) hold strong therapeutic potentials in the management of COVID-19 as they can regulate macrophage infiltration and cytokine production but also promote a pro-resolving macrophage phenotype. In this review, we discuss the homeostatic functions of SPMs acting directly on macrophages on various levels, towards the resolution of inflammation. Moreover, we address the molecular events that link the lipid mediators with COVID-19 severity and discuss the clinical potentials of SPMs in COVID-19 immunotherapeutics.

Keywords: resolution of inflammation, lipid mediators/specialized pro-resolving mediators (SPMs), cytokine storm, macrophage activation syndrome (MAS), severe acute respiratory syndrome corona virus (SARS-CoV2)


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Role of specialized pro-resolving lipid mediators and their receptors in virus infection: a promising th [Arch Pharm Res. 2021]

Parenteral fish oil: An adjuvant pharmacotherapy for coronavirus disease 2019? [Nutrition. 2021]

Coronavirus-19 (SARS-CoV-2) induces acute severe lung inflammation via IL-1 causing c [J Biol Regul Homeost Agents. 2...]

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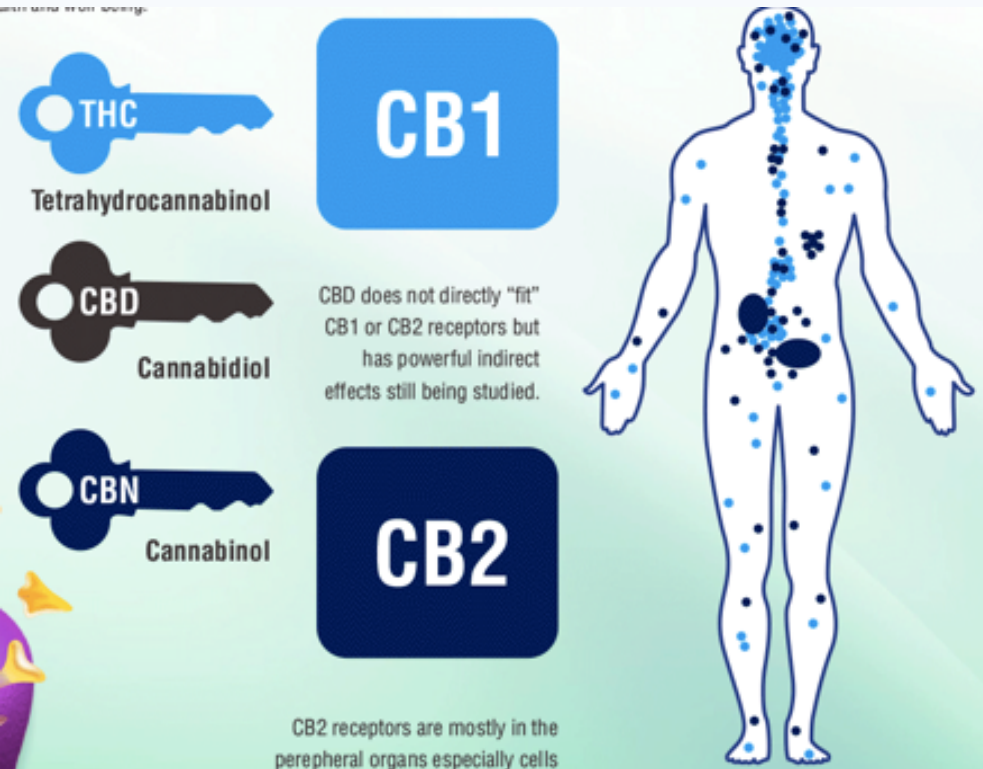


•The resolution of inflammation is now held to be a biosynthetically active process, regulated by biochemical mediators and receptor-signaling pathways governed by SPMs.

The Human Endocannabinoid System (eCS)

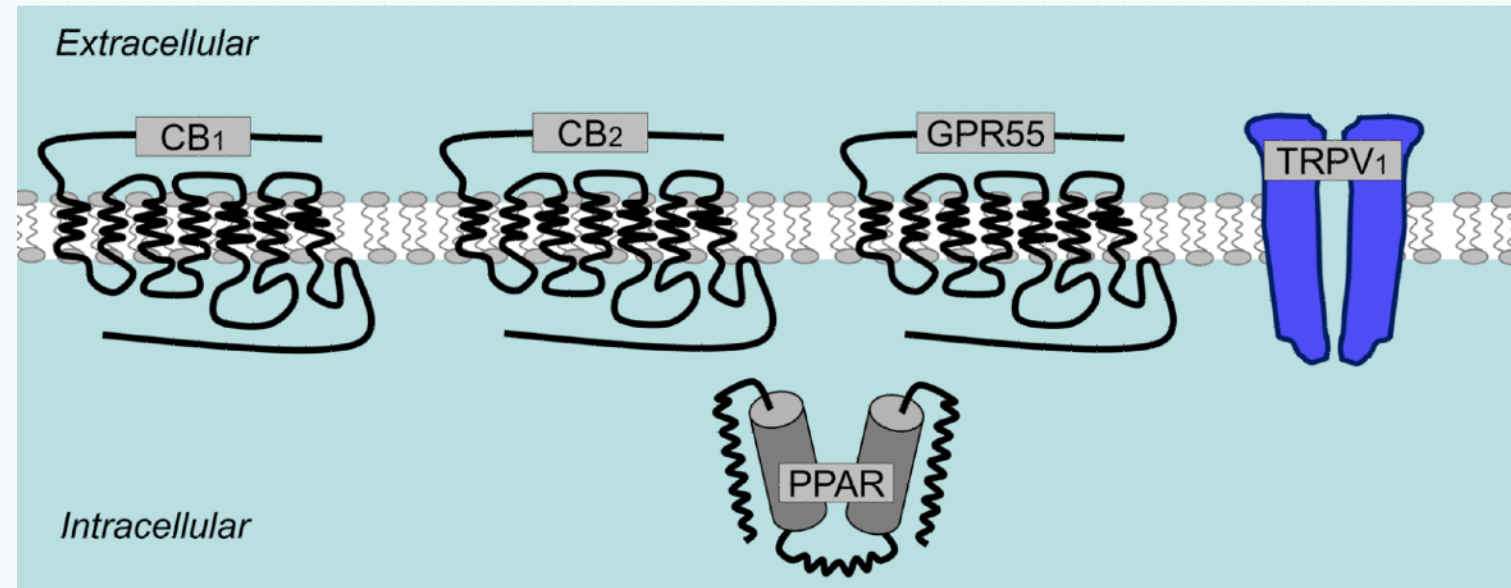
Key Regulator of stem cell development, Immune Homeostasis & Neuroimmune Health

A signaling system that helps to modulate all other physiological, behavioral, and energetic processes in the body.



- Anxiety
- Depression
- Sleep Disorders
- Pain
- Itch
- Wound healing

Glia. 2010 July ; 58(9): 1017–1030



- *neuroprotection & plasticity*
- *immunity & inflammation*
- *apoptosis & carcinogenesis*
- *pain and emotional memory*
- *Supports detoxification:*
 - *repairs Fibrosis*
 - *fatty Liver disease*

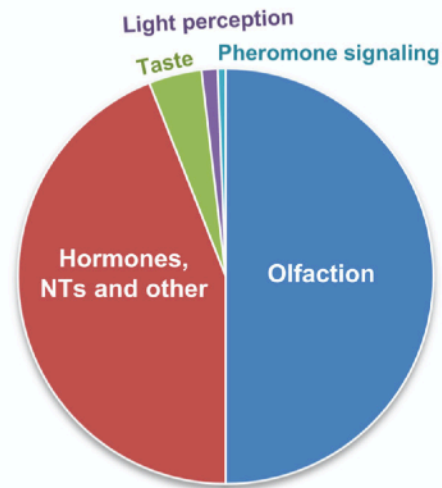


$G_{i/o}$ -Protein Coupled Receptors in the Aging Brain

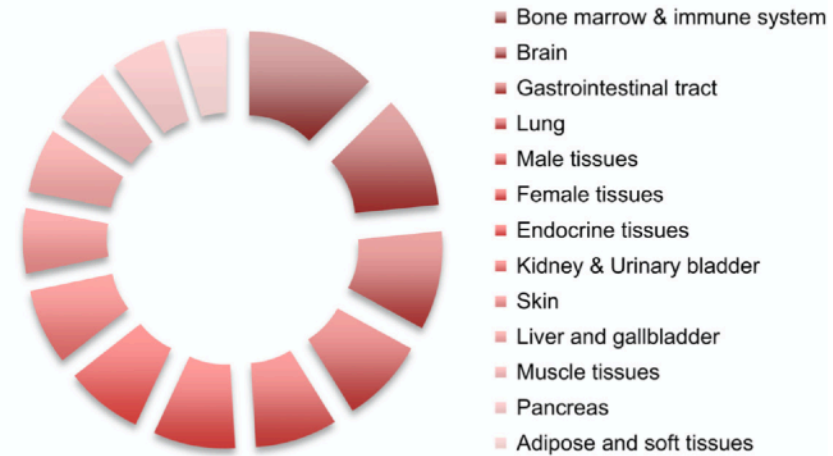
Patrícia G. de Oliveira^{1†}, Marta L. S. Ramos^{1†}, António J. Amaro², Roberto A. Dias^{1†*} and Sandra I. Vieira^{1†*}

¹ Department of Medical Sciences, Institute of Biomedicine (iBIMED) and The Discovery CTR, Universidade de Aveiro, Aveiro, Portugal; ² School of Health Sciences (ESB) Universidade de Aveiro, Aveiro, Portugal

A GPCRs main functions



B Tissue distribution of $G_{i/o}$ -coupled GPCRs



Divalent cation signaling in immune cells

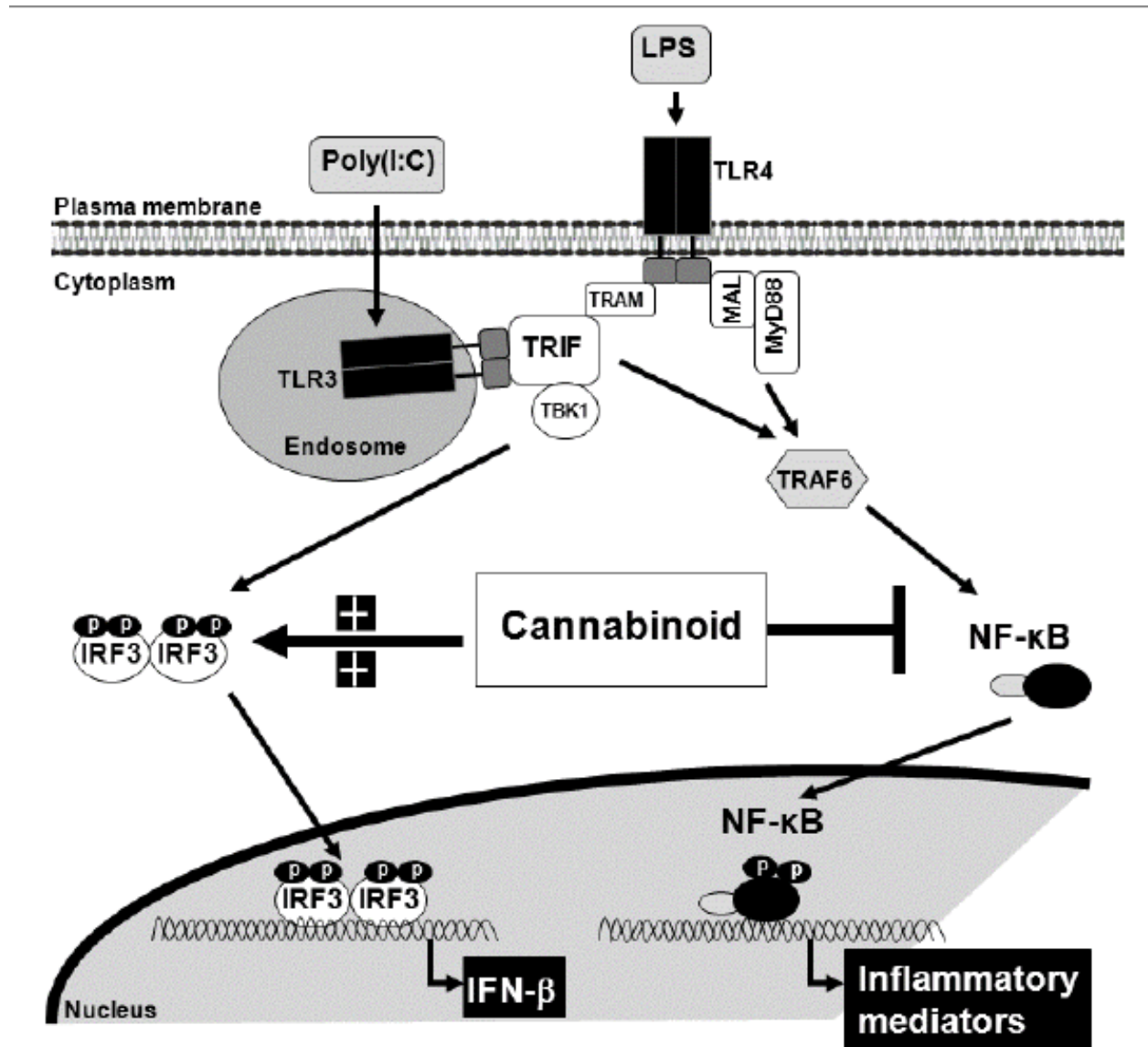
Benjamin Chaigne-Delalande and Michael J. Lenardo

TRPV1/2	Ca ²⁺ /Na ⁺	PM	Heat (fever?), low pH, mechanical stress		Mono, macro	Degranulation, phagocytosis, cytokine production
TRPC3/6	Ca ²⁺ /Na ⁺	PM	PLC activation (DAG), PIP ₂		T, B, NK cells, neutro	Chemotaxis, degranulation
TRPM2	Ca ²⁺ /Na ⁺	PM, lys	H ₂ O ₂ , NAADP, cADPR		T, B, neutro, mast cells, DC	Cytokine production, degranulation
Magnesium						
TRPM6	Mg ²⁺ >Ca ²⁺	PM		Inhibited by [Mg ²⁺] _i	Gut, kidney, hematopoietic (not T cells)	Unknown in immune cells
TRPM7	Mg ²⁺ >Ca ²⁺	PM	Unknown (BCR, TCR?) PIP ₂ (?)	Inhibited by [Mg ²⁺] _i	Ubiquitous	T cell development, T and B cell proliferation, cytokine production

Cannabinoids regulate divalent Cations in Immune Cells via eCSR

- A downside of activation of divalent cations is you can activate/dysregulate endogenous microbes

Cannabinoids are Anti-Viral and Reduce Neuroinflammation



Cannabidiol Inhibits SARS-CoV-2 Replication and Promotes the Host Innate Immune Response

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7987002/>

ABSTRACT

The rapid spread of COVID-19 underscores the need for new treatments. Here we report that cannabidiol (CBD), a compound produced by the cannabis plant, inhibits SARS-CoV-2 infection. CBD and its metabolite, 7-OH-CBD, but not congeneric cannabinoids, potently block SARS-CoV-2 replication in lung epithelial cells. CBD acts after cellular infection, inhibiting viral gene expression and reversing many effects of SARS-CoV-2 on host gene transcription. CBD induces interferon expression and up-regulates its antiviral signaling pathway. A cohort of human patients previously taking CBD had significantly lower SARS-CoV-2 infection incidence of up to an order of magnitude relative to matched pairs or the general population. This study highlights CBD, and its active metabolite, 7-OH-CBD, as potential preventative agents and therapeutic treatments for SARS-CoV-2 at early stages of infection.

Oregon State research shows hemp compounds prevent coronavirus from entering human cells

<https://today.oregonstate.edu/news/oregon-state-research-shows-hemp-compounds-prevent-coronavirus-entering-human-cells>

“Any part of the infection and replication cycle is a potential target for antiviral intervention, and the connection of the spike protein’s receptor binding domain to the human cell surface receptor ACE2 is a critical step in that cycle,” he said.

“That means cell entry inhibitors, like the acids from hemp, could be used to prevent SARS-CoV-2 infection and also to shorten infections by preventing virus particles from infecting human cells. They bind to the spike proteins so those proteins can’t bind to the ACE2 enzyme, which is abundant on the outer membrane of endothelial cells in the lungs and other organs.”

REVIEW

Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects

Ethan B Russo

GW Pharmaceuticals, Salisbury, Wiltshire, UK

Correspondence

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Keywords

cannabinoids; terpenoids; essential oils; THC; CBD; limonene; pinene; linalool; caryophyllene; phytotherapy

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12 January 2011



Article

Terpenoids and Phytocannabinoids Co-Produced in *Cannabis Sativa* Strains Show Specific Interaction for Cell Cytotoxic Activity

Dvora Namdar^{1,*}, Hillary Voet¹, Vinayaka Ajjampura¹, Stalin Nadarajan¹, Einav Mayzlish-Gati², Moran Mazuz¹, Nurit Shalev¹ and Hinanit Koltai¹

¹ Institute of Plant Sciences, Agricultural Research Organization, Volcani Center, Bet Dagan 7505101, Israel

² Israeli Gene Bank, Volcani Center, Bet Dagan 7505101, Israel

* Correspondence: dvoran@volcani.agri.gov.il

Terpenoid	Structure	Commonly encountered in	Pharmacological activity (Reference)	Synergistic cannabinoid
Limonene		Lemon	Potent AD/immunostimulant via inhalation (Komori et al., 1995) Acidolytic (Carvalho-Freitas and Costa, 2002; Patrino Ade et al., 2006) via 5-HT _{1A} (Korniya et al., 2004) Apoptosis of breast cancer cells (Vigushin et al., 1998) Active against acne bacteria (Kim et al., 2008) Dermatophytes (Sanguinetti et al., 2007; Singh et al., 2010) Gastro-oesophageal reflux (Hertz, 2010)	CBD CBD CBD, CBG CBD CBG THC
α-Pinene		Pine	Anti-inflammatory via PGE-1 (Gil et al., 1989) Bronchodilatory in humans (Falk et al., 1990) Acetylcholinesterase inhibitor, aiding memory (Ferry et al., 2000)	CBD THC THC, CBD
β-Myrcene		Hops	Blocks inflammation via PGE-2 (Lorenzetti et al., 1991) Analgesic, antagonized by naloxone (Rao et al., 1990) Sedating, muscle relaxant, hypnotic (de Vile et al., 2002) Blocks hepatic carcinogenesis by aflatoxin (de Oliveira et al., 1997)	CBD CBD, THC THC CBD, CBG
Linalool		Lavender	Anti-anxiety (Russo, 2001) Sedative on inhalation in mice (Buchbauer et al., 1993) Local anesthetic (Re et al., 2000) Analgesic via adenosine A _{2A} (Peters et al., 2004) Anticonvulsant/anti-glutamato (Silabebdy et al., 1995)	CBD, CBG THC THC CBD CBD, THC, CBG
			Potent anti-leishmanial (do Socorro et al., 2003)	?

β-Caryophyllene		Pepper	AI via PGE-1 comparable phenylbutazone (Stalle et al., 1988) Gastric cytoprotective (Tambe et al., 1996) Anti-malarial (Carpbell et al., 1997) Selective CB ₂ agonist (100 nM) (Gerlach et al., 2000) Treatment of pruritus? (Karak et al., 2007) Treatment of addiction? (Xi et al., 2010)	CBD THC ? THC THC CBD
Caryophyllene Oxide		Lemon balm	Decreases platelet aggregation (Lin et al., 2003) Antifungal in onychomycosis comparable to ciclopiroxolamine and salicylate (Yang et al., 1999) Insecticidal/anti-feedant (Sattarini et al., 1993)	THC CBG, CBG THCA, CBGA
Nerolidol		Orange	Sedative (Sirel et al., 1972) Skin preservative (Cornwell and Barry, 1994) Potent antimarial (Lopes et al., 1999, Rodrigues Goulart et al., 2004) Anti-leishmanial activity (Amada et al., 2005)	THC, CBN - ? ?
Phytol		Green tea	Breakdown product of chlorophyll Prevents Vitamin A isomerization (Arnhold et al., 2002) TGASA via SSADH inhibition (Rang et al., 2002)	- - CBG



HEMP MIND & BODY

FAMILY OF PRODUCTS



ADAPTOGENIC HERBS

THE NATURAL POWER OF ADAPTOGENIC HERBS

Nature's finest ingredients are infused into CYTOGEN™ proprietary herbal complex formulations. Each formulation contains anti-inflammatory properties plus carry unique healthful attributes.

Adaptogens are noted for having the broadest spectrum healing properties. Collectively, these herbs work harmoniously to heighten their therapeutic properties.

Combining CBD with our proprietary Adaptogenic formulations provide the pathway for better health and wellness.

WHY

CYTOGEN FULL-SPECTRUM CBD

Superior quality and safety are the hallmarks of the CYTOGEN™ line of products. CYTOGEN™ Full-Spectrum Oil provides a broad array of cannabinoids and natural constituents that have been shown in studies to work much better together in what's referred to as the Entourage Effect.

CYTOGEN BROAD-SPECTRUM

Everything the CYTOGEN™ Full-Spectrum CBD has less the THC.

ISO-CANNABINOID CBD

Several products within the CYTOGEN™ family contain zero THC. For those undergoing periodic drug testing, CYTOGEN™ ISO-CANNABINOID CBD powered products are the perfect choice!

SAFETY YOU DESERVE

Ultra High Performance Liquid Gas Chromatography (UHPLC) testing is performed to validate biological activity of the proprietary ingredients, including PCR analysis to eliminate THC.



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DOCTOR FORMULATED



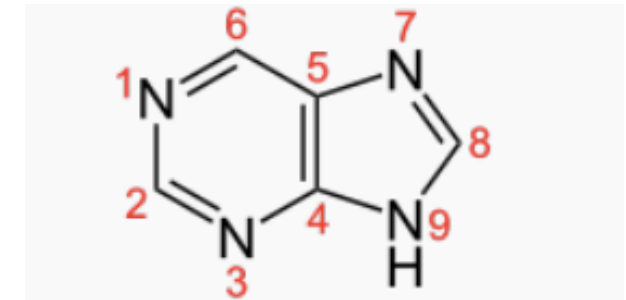
HEALTHCARE PROFESSIONAL LINE

Many healthcare professionals are no longer content to prescribe drugs that merely manage symptoms. Instead, physicians are exploring and targeting root causes. More and more, they are choosing to use science-based dietary supplements that address underlying issues without unwanted side effects.

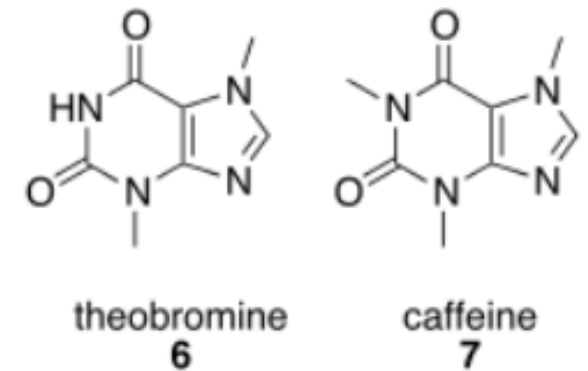
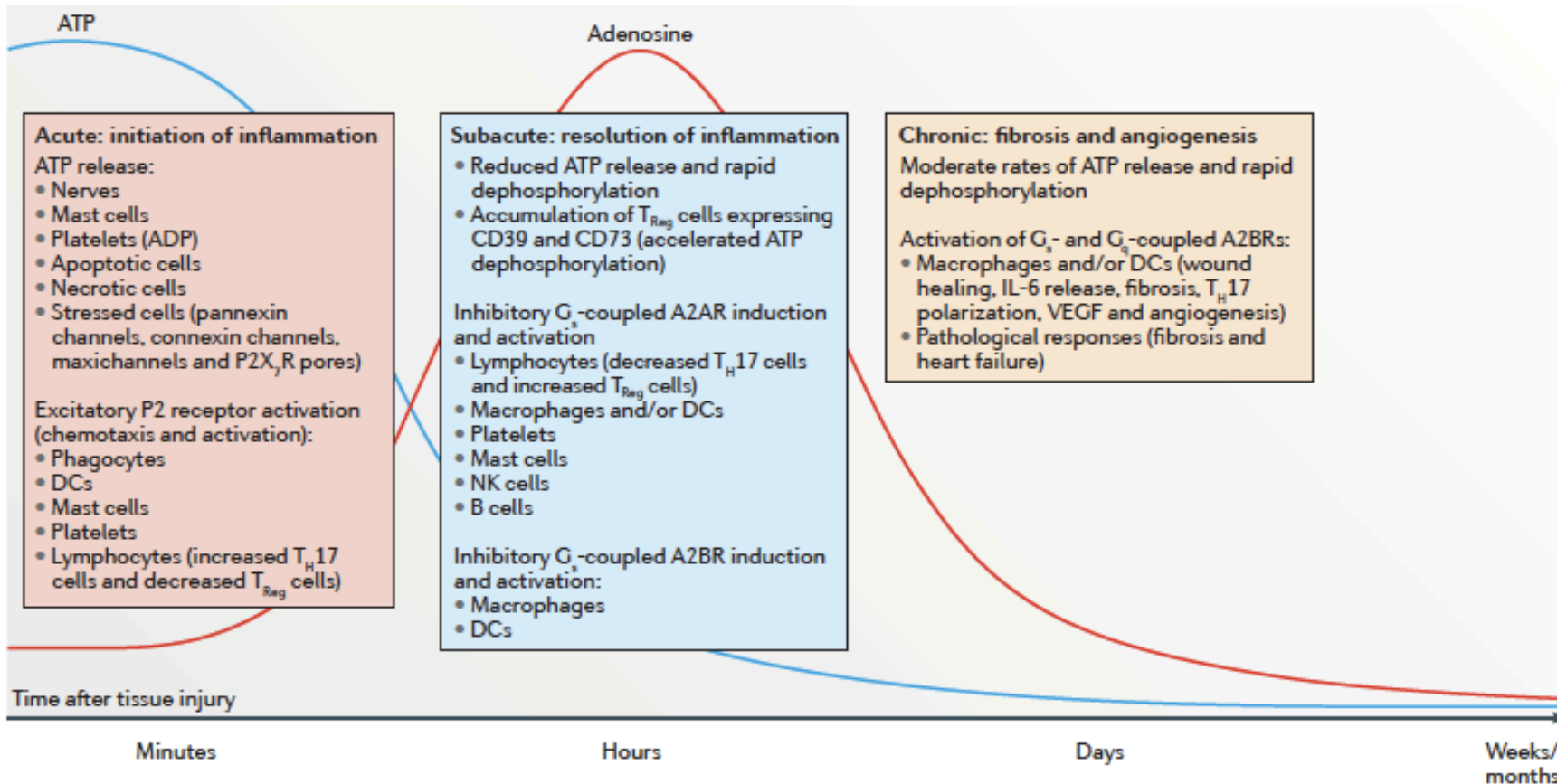
CYTOGEN™ Healthcare Professional Line was developed to support physicians and other professionals who have their patient's best interest at heart and are committed to better health and wellness. It can't be found anywhere else as each formulation utilizes carefully selected ingredients and always manufactured at therapeutic levels and potencies.

THE PROFESSIONAL'S LINE

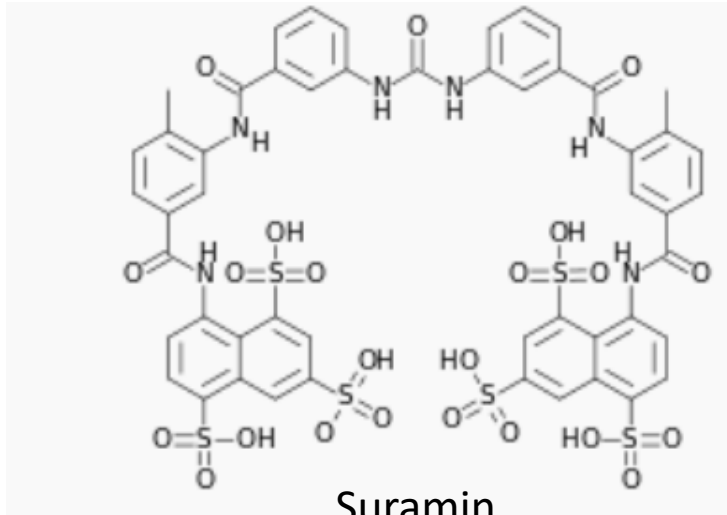
Purinergetic regulation of the immune system



- Nitrogenous bases of DNA
- Deoxyadenosine
- Deoxyguanine

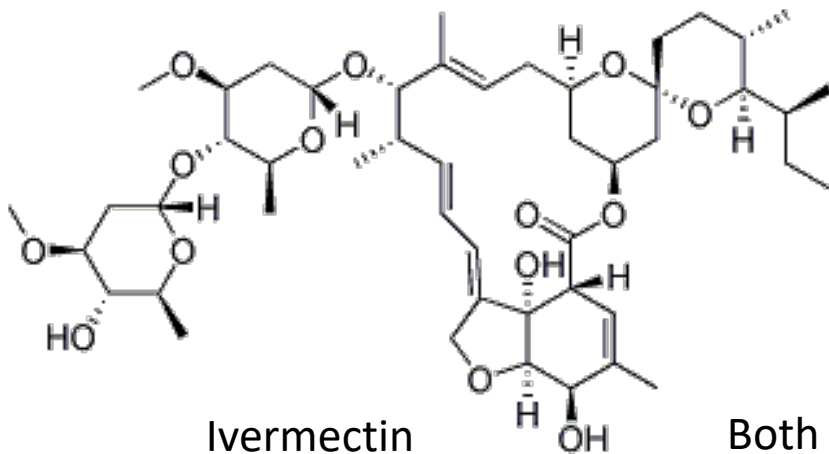


Suramin & Ivermectin: Purinergic Modulators important for restoring balance of Innate and adaptive Immunity



Suramin

- Antiparasitic 1920s
- Potent RT inhibitor 1986
- P2Y Purinergic Receptor inhibitor
- Cancer therapy prostate cancer, HTLV-1 cancer Bladder Cancer
- inhibits the binding of growth factors (TGF-beta, EGF, PDGF to their receptors and thus antagonize the ability of these factors to stimulate growth of tumor cells



Ivermectin

- modulator of the ATP/P2X4/P2X7 axis
- selectively targets immunosuppressive myeloid cells and Tregs
- functions as an RNA helicase
- an activator of chloride channel receptors
- inducer of mitochondrial dysfunction and oxidative stress

Both Inhibit Plasmodium parasite of the blood plasma.
a parasite that affects the oxygen carrying capacity of the red blood cells

- 21st Century AEIDS Epidemic Creating Disease: Vaccines Masquerading as Immunotherapies

Antiviral Research

Volume 7, Issue 1, January 1987, Pages 1–10

Editorial

Suramin in the treatment of AIDS: Mechanism of action

Erik De Clercq

Rega Institute for Medical Research, Katholieke Universiteit Leuven, B-3000 Leuven, Belgium

Received 14 April 1986, Accepted 17 April 1986, Available online 12 November 2002

[Show less](#)

[AIDS](#). 2016 Sep 24;30(15):2289-98. doi: 10.1097/QAD.0000000000001201.

Standard vaccines increase HIV-1 transcription during antiretroviral therapy.

Yek C¹, Gianella S, Plana M, Castro P, Scheffler K, Garcia E, Massanella M, Smith DM.

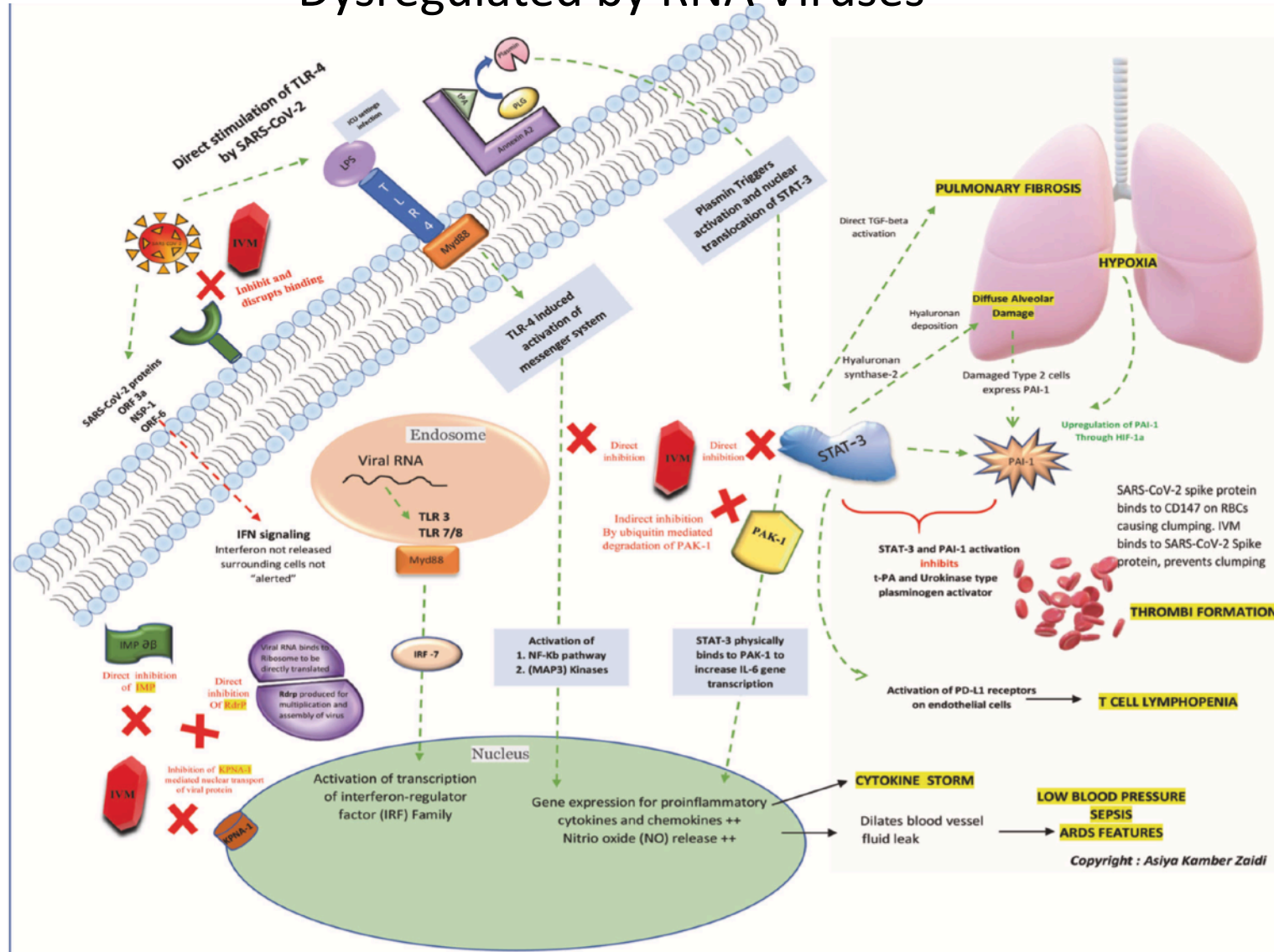
Author information

Abstract

OBJECTIVES: Curative strategies using agents to perturb the HIV reservoir have demonstrated only modest activity, whereas increases in viremia after standard vaccination have been described. We investigated whether vaccination against non-HIV pathogens can induce HIV transcription and thereby play a role in future eradication strategies.



Ivermectin restores the balance of Innate Immune Response Pathways Dysregulated by RNA Viruses



[Am J Ther.](#) 2021 May-Jun; 28(3): e299–e318.

PMCID: PMC8088823

Published online 2021 Apr 22. doi: [10.1097/MJT.0000000000001377](https://doi.org/10.1097/MJT.0000000000001377)

PMID: [34375047](https://pubmed.ncbi.nlm.nih.gov/34375047/)

Review of the Emerging Evidence Demonstrating the Efficacy of Ivermectin in the Prophylaxis and Treatment of COVID-19

[Pierre Kory, MD, ^{1,*}](#) [Gianfranco Umberto Meduri, MD, ²](#) [Joseph Varon, MD, ³](#) [Jose Iglesias, DO, ⁴](#) and [Paul E. Marik, MD ⁵](#)

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Ivermectin for COVID-19

75 studies from 710 scientists
57,457 patients in 26 countries

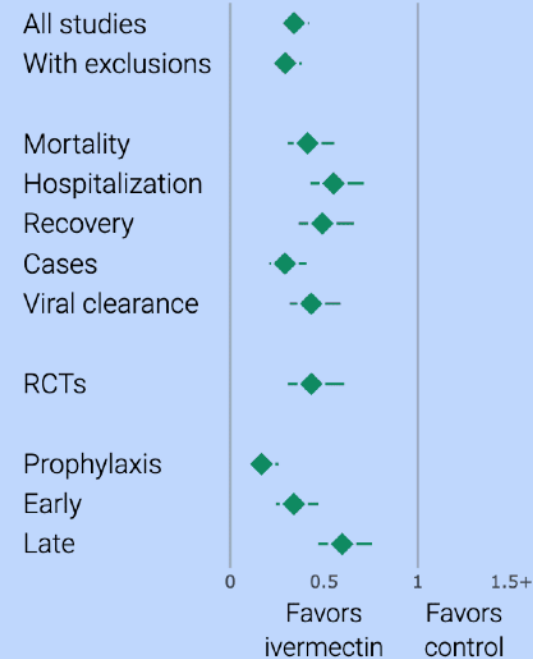
Statistically significant improvement for **mortality, ventilation, ICU, hospitalization, recovery, cases, and viral clearance.**

83%, 66%, 40% improvement for prophylaxis, early, and late treatment CI [74-89%], [53-75%], [24-53%]

57% improvement in **32 RCTs** CI [39-69%]

59% lower **mortality** from **36 studies** CI [44-69%]

COVID-19 IVERMECTIN STUDIES. JAN 14 2022. IVMMETA.COM



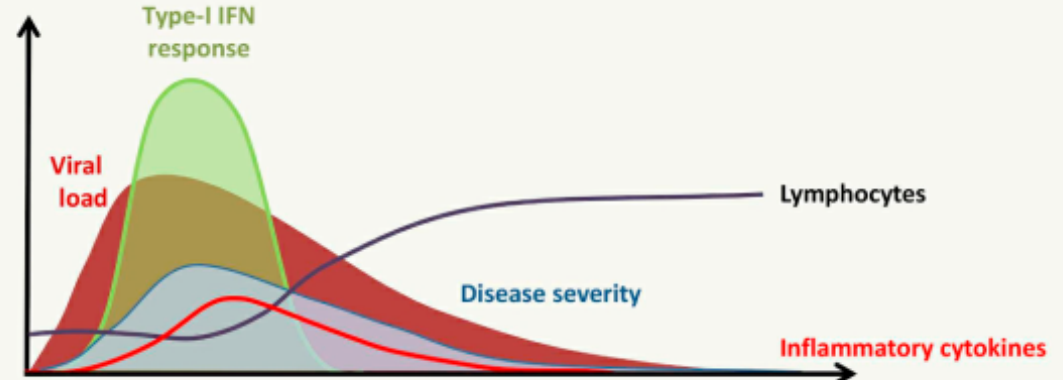
Kinetics and Intensity of Anti-viral Response Holistic Intervention

Prophylaxis

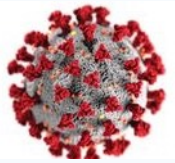
Vitamin C
Vitamin D
CBAs
Melatonin
Curcumin
CBDs



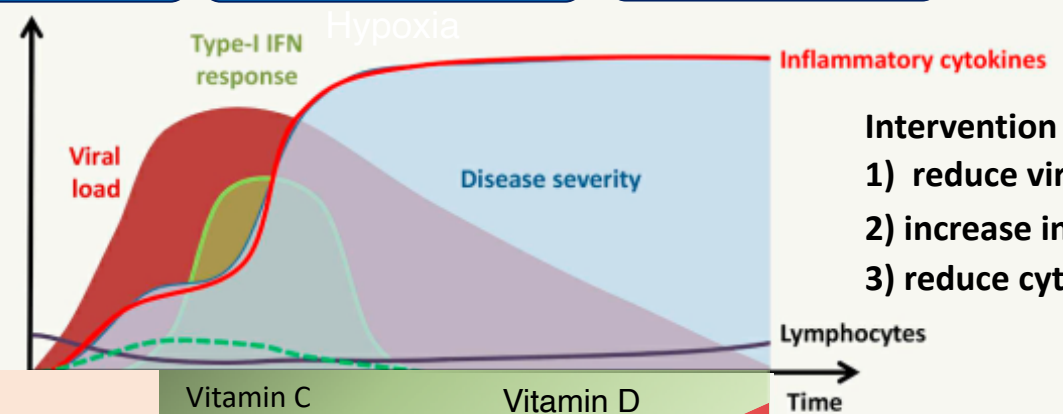
Staged Interventions



Symptoms: Fever, Cough, Headaches; Shortness of Breath; ARDS/ SIRS Cardiac Failure



Start w/ Multiple Interventions



Intervention needs to:
1) reduce viral load
2) increase interferon- α response
3) reduce cytokine storm

Prophylaxis

Vitamin C
Vitamin D
Curcumin
CBAs
melatonin
CBDs
Zinc



Holistic Interventions

Xicam/zinc
Paximune
Prolimmune
Pycnogenol

Vitamin C
CBAs (resveratrol)
melatonin
Griffithsin
CBDs

Vitamin D
Thunder God Vine
Extract

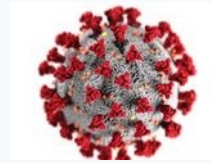
Supportive Care

Time

Kinetics and Intensity of Anti-viral Response Pharmaceutical Intervention

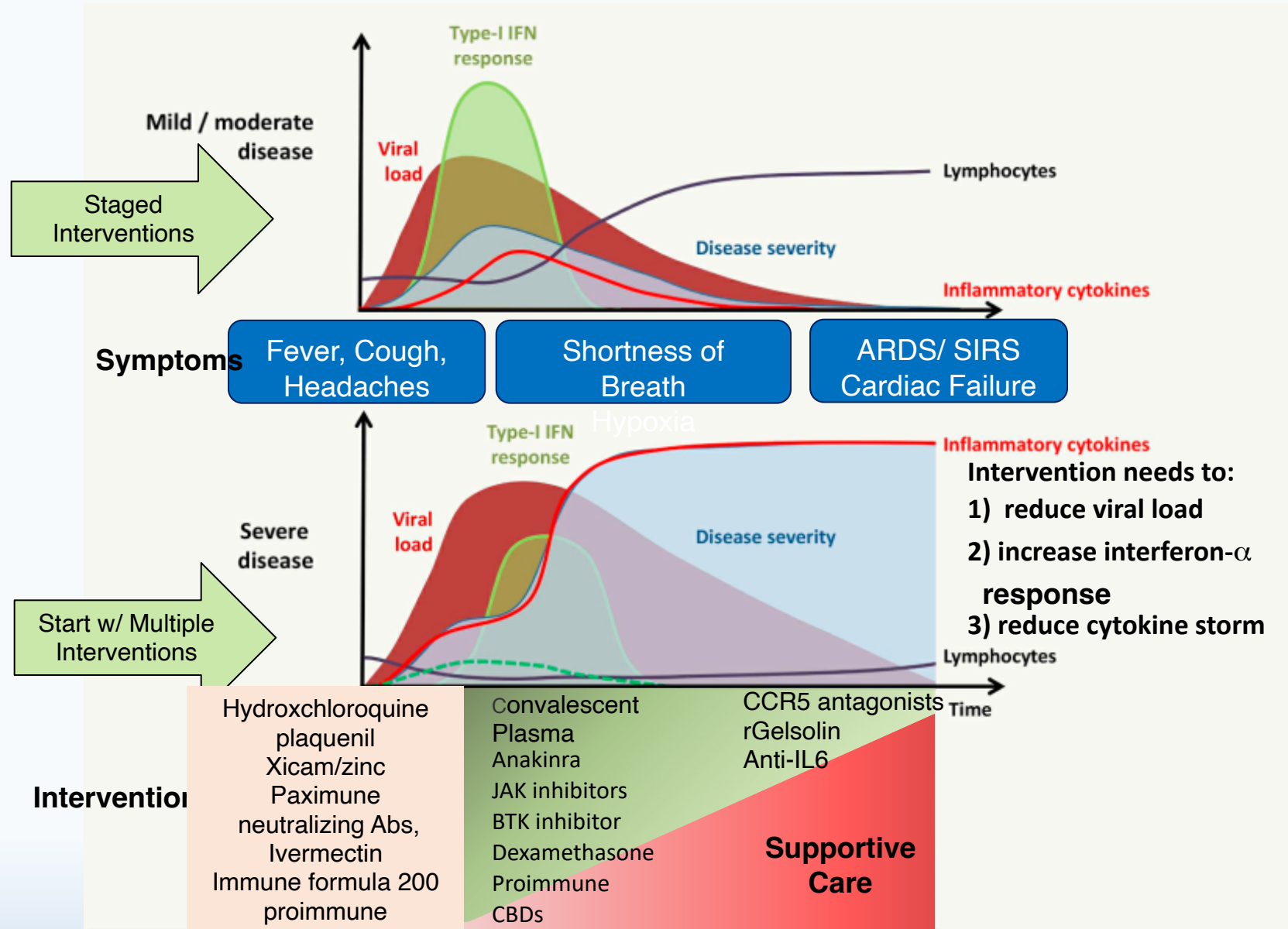
Prophylaxis

Vitamin C
Vitamin D
CBAs
Melatonin
Curcumin



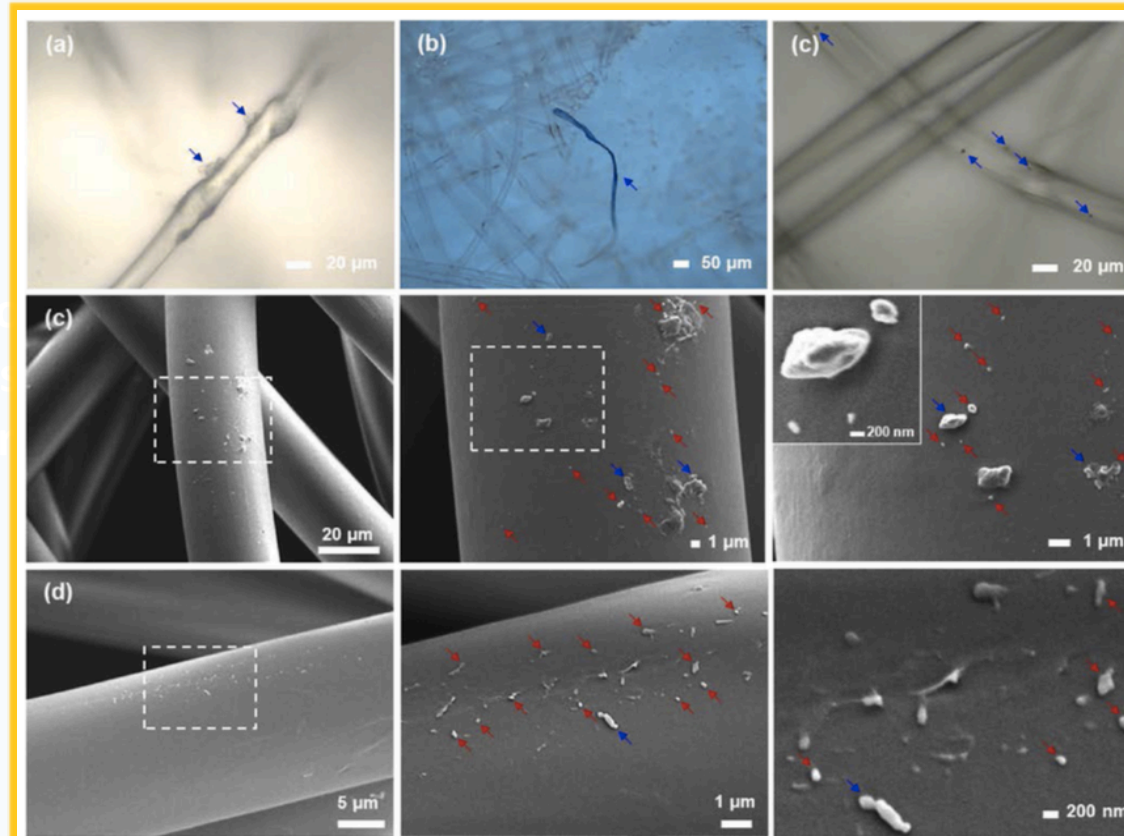
Prophylaxis

Vitamin C
Vitamin D
Curcumin
CBAs
melatonin
CBDs
Zinc



New kinds of nanofibers being made by nanotechnology industries might pose a risk because they have similar shape to asbestos.

- Electron microscopy images of top-selling medical face masks (a) (b) (d) and a particulate respirator (c) in mainland China.
- Fibers, fragments, and particles in micro- and nanosized ranges were abundant and loosely attached on the structural fibers of the products.
- **Blue arrows** denote *microsized* fibers, fragments, and particles. **Red arrows** denote *sub-micron* (<1 μm) and nanosized (<100 nm) range particles and fragments



How (and why) must we change the way we live, eat, and care for ourselves to support immune function throughout life

- We must proactively seek choices that support health & well-being
- We must live a simpler life with lower stress and change our system of rewards (and the meaning attached to those rewards)
- **YOU are what you eat!** Organic, clean, healthy food and water is so important in overall health
- **Prevention** is critical

Quote by Thomas Jefferson

"If people let the government decide what foods they eat and what medicines they take, their bodies will soon be in as sorry a state as are the souls who live under tyranny." -- Thomas Jefferson



Date of Birth: 07/26/1938
Date of Death: 12/01/2021
Date of Autopsy: 12/15/2021
Time of Autopsy: 05:00 a.m.
Place of Autopsy: Autopsy Post Services, 5134 Valley Blvd., Los Angeles, CA 90032

FINAL ANATOMIC DIAGNOSES:

- Complications of Sars CoV-2 (Covid-19) viral pneumonia with interstitial lymphocytic infiltrates (lymphocytic pneumonitis) associated with many hyaline membranes, consistent with persistent diffuse alveolar damage (DAD) and associated acute respiratory distress syndrome (ARDS), bilateral lungs.
- Superimposed acute (bacterial) pneumonia, bilateral lungs with extensive micro-abscess formation, caused by *Pseudomonas aeruginosa* bacteria.

RESPIRATORY SYSTEM:

The right lung weighs 1300 grams and the left lung weighs 1000 grams. The pleural surfaces are geographically covered by gray/green fibrino-purulent exudates in which the lower lobes are worse than the upper lobes. Both lungs are heavy with congestion, edema and extensive purple-colored consolidation with posterior hypostasis. On sectioning, moderate, blood-tinged edema fluid exudes from the tissue with light finger pressure. Tissue parenchyma from all lobes is consolidated in which the parenchyma easily fractures with firm finger pressure. Small mounds of green exudate can be expressed from the cut surfaces with firm finger pressure. All lung sections sink when placed into formalin. Upper lobe tissue (right and left upper lobes are probed for Covid-19 virus and bacteria). Upper lobe tissue also reveals moderate emphysematous changes. No granulomas, infarcts or tumors are present.

Azithromycin

Indications

Azithromycin is a broad-spectrum macrolide antimicrobial and is among the most prescribed antimicrobial drugs in the United States. It is a derivative of erythromycin with greatly enhanced activity against gram-negative bacteria (including Enterobacteriaceae) and provides coverage of many gram-positive organisms.^[1]^[2]

- ▶ As an inhibitor of bacterial protein synthesis (rather than a peptidoglycan cell-wall inhibitor like beta-lactam agents), azithromycin is effective against many “atypical” bacteria such as chlamydiae (e.g., *Chlamydia trachomatis* and *Chlamydophila psittaci*), legionella (i.e., *Legionella pneumophila*), mycoplasma (e.g., *Mycoplasma pneumoniae*), and mycobacteria (e.g., *Mycobacterium avium*).^[3]
- ▶ Together with its activity against *Streptococcus pneumoniae*, *Hemophilus influenzae*, and *Moraxella catarrhalis*, azithromycin is indicated—and FDA approved—for the treatment of community-acquired pneumonia (CAP).^[4]
- ▶ Azithromycin also has approval for use in other upper respiratory infectious processes, including acute otitis media and acute exacerbation of chronic obstructive pulmonary disease (COPD).^[5]
- ▶ Additionally, azithromycin has approval for the treatment of pharyngitis caused by *Streptococcus pyogenes*, as an alternative to a beta-lactam agent; skin or skin structure infection due to *S. pyogenes*, *Streptococcus agalactiae*, or *Staphylococcus aureus*; *M. avium* complex (MAC) infection treatment and prophylaxis for patients with advanced acquired immunodeficiency syndrome (AIDS); and sexually transmitted infections including chlamydia, gonococcal disease, chancroid (caused by *Hemophilus ducreyi*), and *Mycoplasma genitalium*.^[6]^[7]^[8]^[9]^[10]
- ▶ Azithromycin also has efficacy against some protozoal organisms such as *Babesia sp.* (e.g., *B. microti*), *Plasmodium sp.* (i.e., malaria), and *Toxoplasma gondii* and is sometimes used off-label for the treatment of these parasitic diseases in combination with antiprotozoal drugs (e.g., atovaquone).^[11]^[12]^[13]
- ▶ The role of azithromycin in the treatment of viral infections, including the respiratory syncytial virus and novel coronavirus SARS-CoV-2, is indeterminate.^[14]^[15]^[16]^[17]^[18]^[17]
- ▶ Lastly, azithromycin is also used off-label as long-term prophylaxis for bronchiolitis obliterans (BO) in patients who have undergone lung transplantation.^[19]