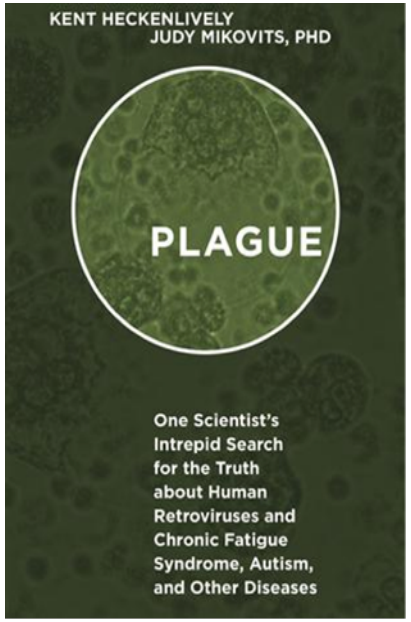
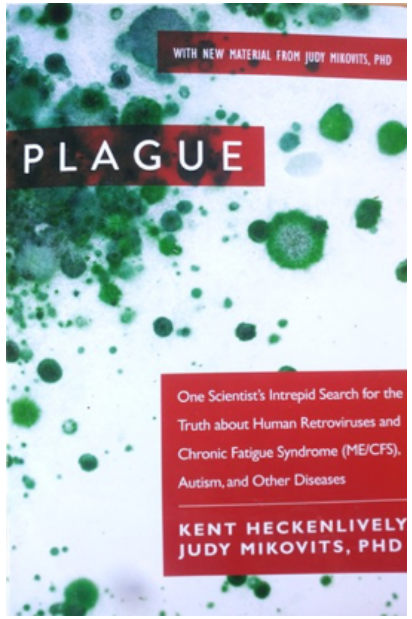
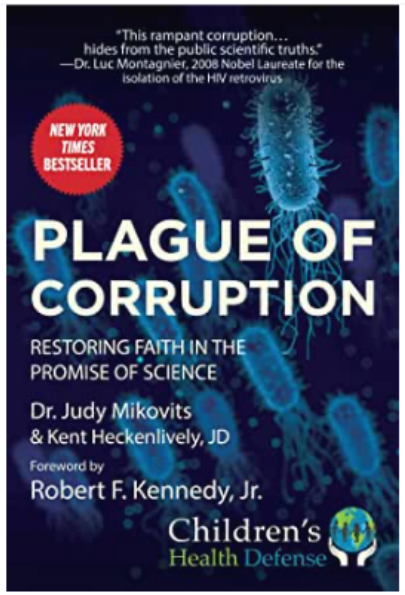
GOD's People are destroyed from lack of Knowledge (Hosea 4:6)
THE FEAR OF THE LORD is the Beginning of Knowledge (PROVERBS 1:7)



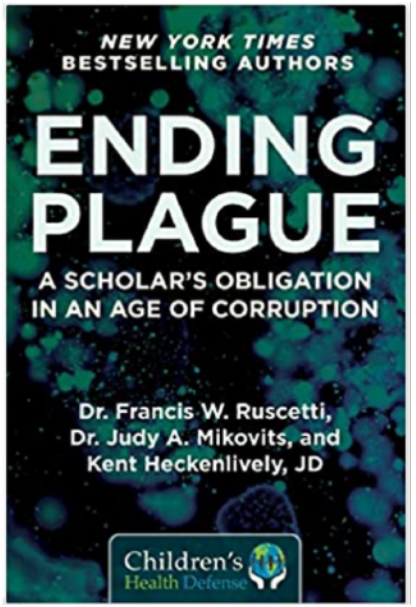
2014 (James 1:19-22)



2017



2020 (Psalm 91)



2021(Ephesians 5:11)

TheRealDrJudy.com

Plaguethebook.com

'The great enemy of truth is very often not the lie – deliberate, contrived and dishonest – but the myth – persistent, persuasive and unrealistic. Too often we hold fast to the cliches of our forebears. We subject all facts to a prefabricated set of interpretations. We enjoy the comfort of opinion without the discomfort of thought'. John F. Kennedy, Commencement Address, Yale University, June 11, 1962

If my people , who are called by my name, will humble themselves,
pray & seek my face & turn from their wicked ways, then I hear from heaven, & I will forgive
their Sin and will heal their land (2 Chronicles 7:14)

AIDS RESEARCH AND HUMAN RETROVIRUSES
Volume 36, Number 7, 2020
Mary Ann Liebert, Inc.
DOI: 10.1089/aid.2020.0095

COMMENTARY

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

Stuart J.D. Neil[1] and Edward M. Campbell[2]

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.

FAITH REQUIRES TRUST
PLANDEMICSERIES.COM

TRUST IN THE LORD WITH ALL YOUR HEART & LEAN NOT ON YOUR ON UNDERSTANDING (PROVERBS 3:5)

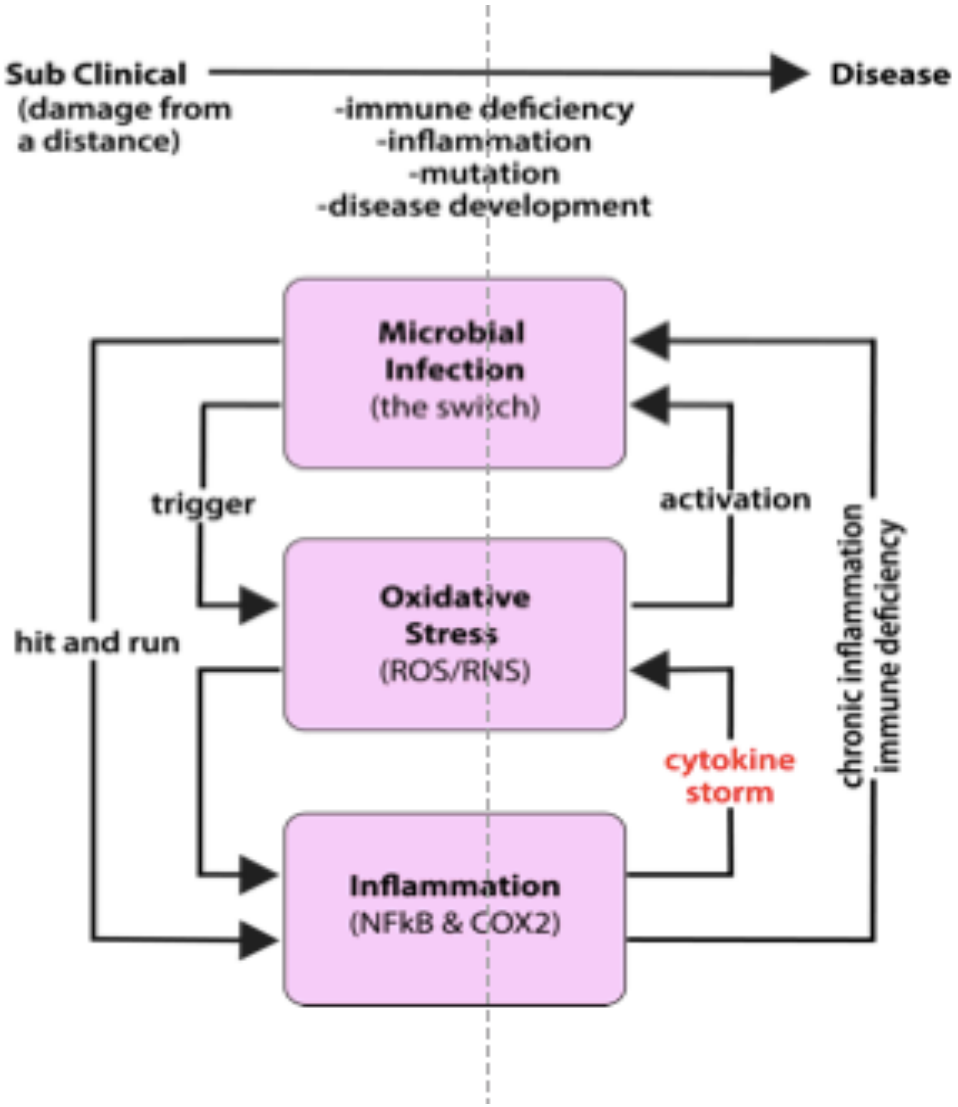
Trends in Parasitology, April 2014, Vol. 30, No. 4

ress Vaccines (Synthetic Virus/Poison: 1/2 day taught Medical School

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

HAZARDS of GMOS: ALL Vaccines are GMO

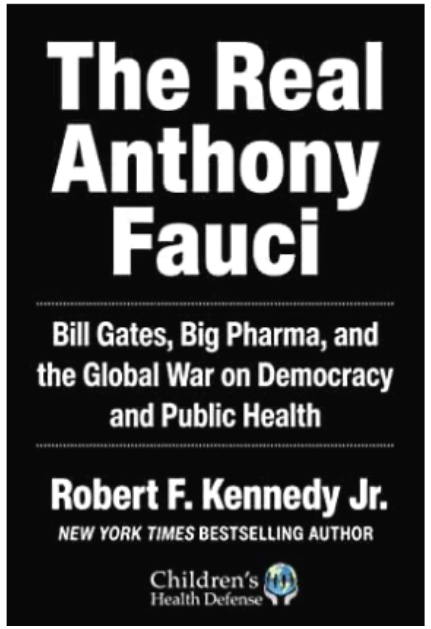
1. Uncontrollable, unpredictable impacts on safety due to the genetic modification process *
Scrambling the host genome *
Widespread mutations *
Inactivating genes *
Activating genes *
Creating new transcripts (RNAs) including those with regulatory functions *
Creating new proteins *
Creating new metabolites 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 *
2. Toxicity of transgene protein(s) introduced (intentionally or otherwise)
Transgene protein toxic *
Transgene protein allergenic or immunogenic *
Trangenic protein becoming allergenic or immunogenic due to processing *
Unintended protein created by sequence inserted may be toxic or immunogenic
3. Effects due to the GM insert and its instability *
Genetic rearrangement with further unpredictable effects *
Horizontal gene transfer and recombination *
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 *
4. Toxicity of herbicides used with herbicide tolerant GM crops *



GMOS cause aberrant expression of animal retroviruses, end up in milk, food!

What are “THEY” Afraid of? COVID VACCINE will crumble the confidence in ALL Vaccines?
We the People will REPENT and turn Back to GOD GIVEN NATURAL IMMUNITY

DANGERS OF USE Of ANIMAL RNA,DNA PROTEIN
All Vaccines are GMO Synthetic viruses



- **Animal**
  - Bovine serum (several forms)
  - Avian serum - chicken
  - Egg protein – ovalbumin
  - VERO cell Line – monkey
  - Dog kidney cell Line (MDCK)
  - Insect cell line
- **Human cell Lines**
  - WI-38
  - MRC-5
  - PER.C6

Fauci

4 DECADES OF GAIN OF FUNCTION STUDIES

CRIMES AGAINST HUMANITY

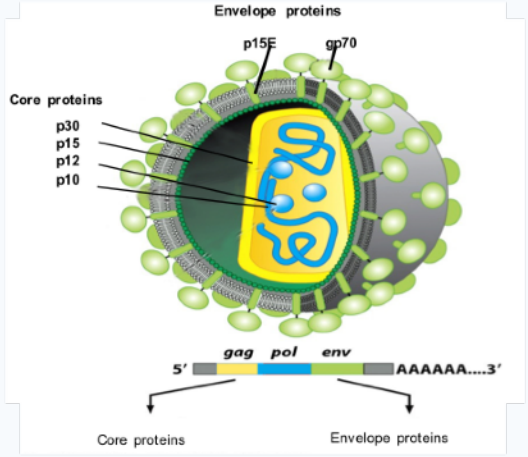
RAND Paul

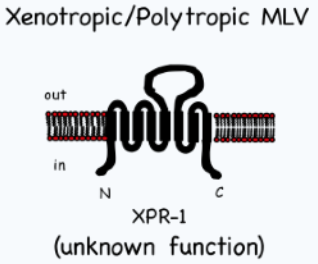
Reiner Fullmeich Citizens Grand Jury

XMRV is pivotal because WE DETECTED VIRAL PROTEINS & ANTIBODY

- Evidence of infection in families with diagnoses: ASD, CFS, Chronic Lyme disease, prostate cancer and EVERY study found antibodies 4-6% in US “healthy controls”.. that is 20 million Americans at risk of Developing Vaccine AIDS = LONG HAUL COVID!!
  - ANTIBODY Test identified XMRV ENV/Spike Syncytin pathology
    - Including infection of brain microglia
    - Infection and dysregulation of gut tight junctions
    - Vasculitis
    - Inflammatory dysfunction: cytokine/chemokine
    - autoimmunity

Xenotropic Murine Leukemia Virus-Related Virus (XMRV)





Like mouse xenotropic MuLV, XMRV uses the Xpr-1 receptor to enter cells (Dong et al., PNAS, 2007)

An infectious clone was constructed and sequenced and found to be a novel gammaretrovirus (Dong et al., PNAS, 2007)

XMRV proviral integration occurs preferentially in CpG islands: gene promoters (Kim et al., JVirol, 2008)

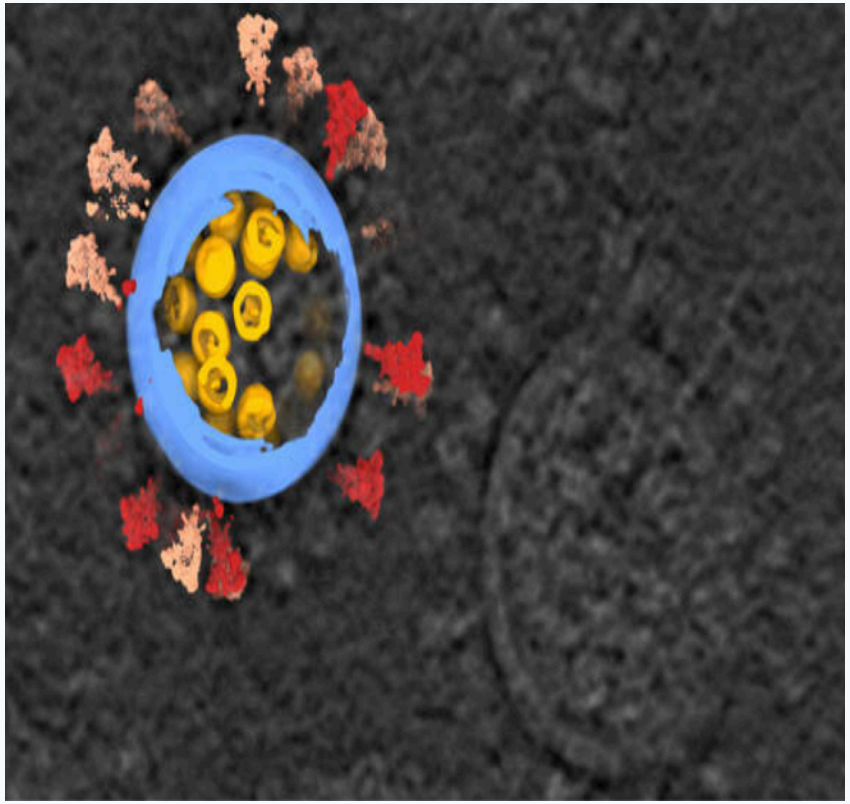
JOURNAL OF VIROLOGY, Oct. 2004, p. 10628–10635 Vol. 78, No.
0022-538X/04/$08.00+0 DOI: 10.1128/JVI.78.19.10628–10635.2004

Retroviruses Pseudotyped with the Severe Acute Respiratory Syndrome Coronavirus Spike Protein Efficiently Infect Cells Expressing Angiotensin-Converting Enzyme 2

Michael J. Moore,[1] Tatyana Dorfman,[1] Wenhui Li,[1] Swee Kee Wong,[1] Yanhan Li,[2] Jens H. Kuhn,[1,3] James Coderre,[4] Natalya Vasilieva,[5] Zhongchao Han,[2] Thomas C. Greenough,[4] Michael Farzan,[1]* and Hyeryun Choe[5]*

Partners AIDS Research Center, Brigham and Women's Hospital, and Department of Medicine (Microbiology and Molecular Genetics),[1] and Perlmutter Laboratory, Children's Hospital, and Department of Pediatrics,[5] Harvard Medical School, Boston, and Program in Molecular Medicine, University of Massachusetts Medical School, Worcester,[4] Massachusetts; State Key Laboratory of Experimental Hematology, Institute of Hematology and Hospital of Blood Diseases, Chinese Academy of Medical Sciences and Peking Union Medical College, Tianjin, China[2]; and Department of Biology, Chemistry, Pharmacy, Freie Universität Berlin, Berlin, Germany[3]

Received 3 February 2004/Accepted 28 May 2004

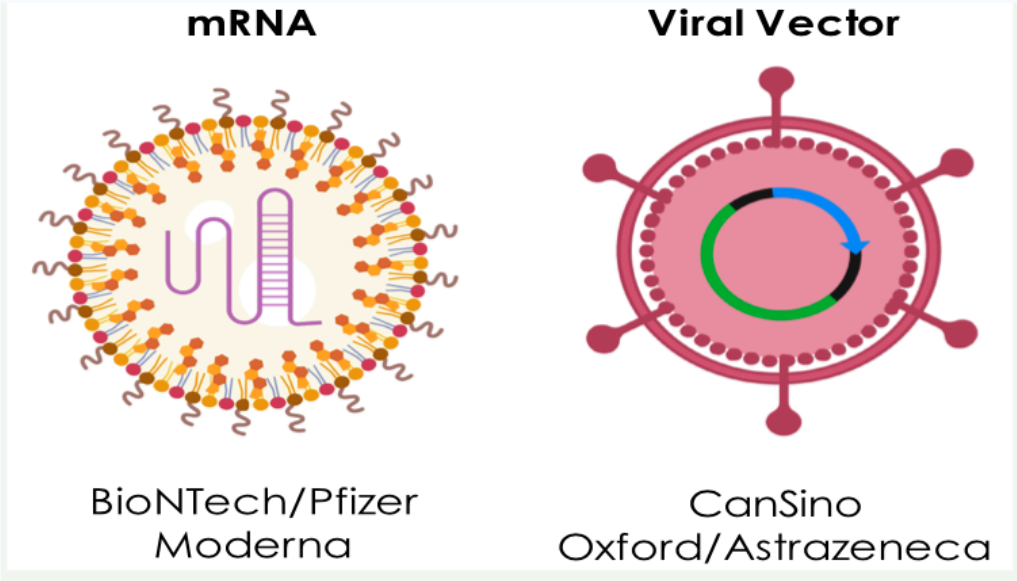


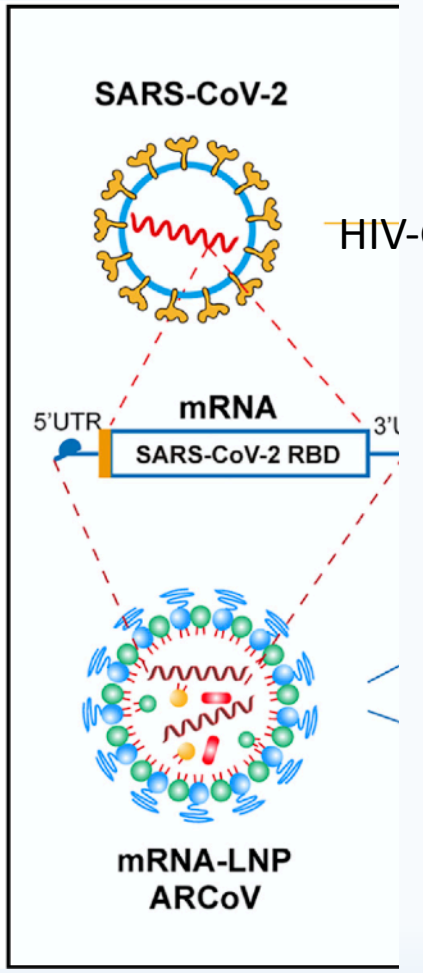
responses to potential vaccines. Here we show that simian immunodeficiency virus (SIV) pseudotyped with several codon-optimized S-protein variants could efficiently infect Vero E6 cells and HEK293T cells transiently or stably expressing ACE2. One such variant, truncated at its cytoplasmic tail and bearing instead a region of the tail of the human immunodeficiency virus type 1 (HIV-1) envelope glycoprotein (17), was especially efficient at mediating infection. Murine leukemia virus (MLV) pseudotyped with this S-protein variant also infected ACE2-expressing cells more efficiently than MLV pseudotyped with other S-protein variants. We used this sys-

NOTHING in CDC Schedule is a “VACCINE” ALL ARE Synthetic Viruses

Bioweapons that activate your own cells to become pathogen

Each spike protein snaps together with two others, forming a structure that has a tulip-like shape. A long stem anchors the proteins to the virus, and their top looks like a three-part flower.

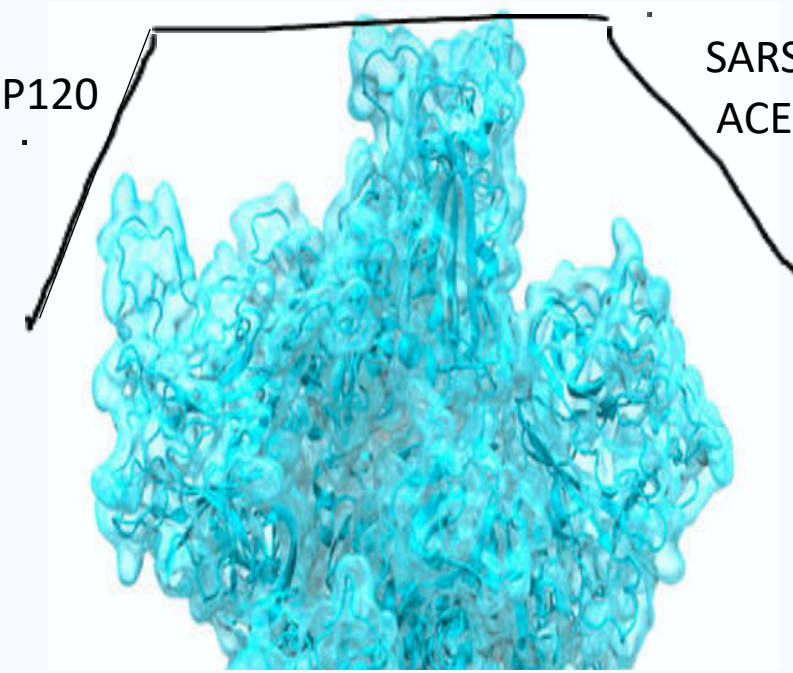




HIV-GP120

XMRV-Syncytin

SARS-ACE2RBD



SARS-CoV2 a Synthetic : HIV ?XMRV/SARS

NEITHER Pararetrovirus SARS-COV2Monkey Virus or synthetic Virus CALLED COVID VACCINE CAN CAUSE COVID if NOT Injected

4630 jvi.asm.org
Journal of Virology

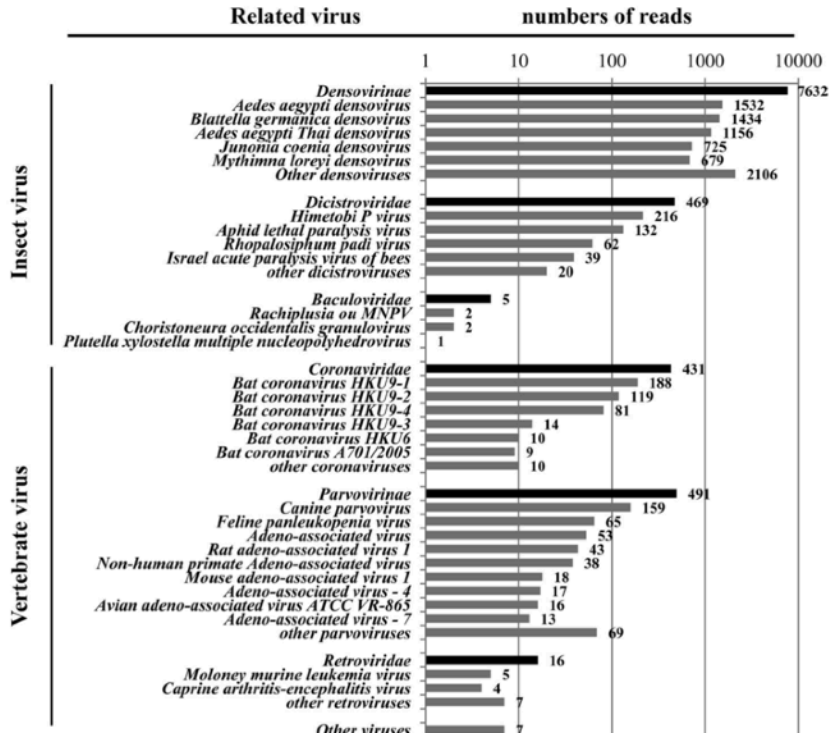
Received 31 October 2011 Accepted 31 January 2012
Published ahead of print 15 February 2012
Address correspondence to Zhengli Shi, zlshi@wh.iov.cn.
Supplemental material for this article may be found at http://jvi.asm.org/.

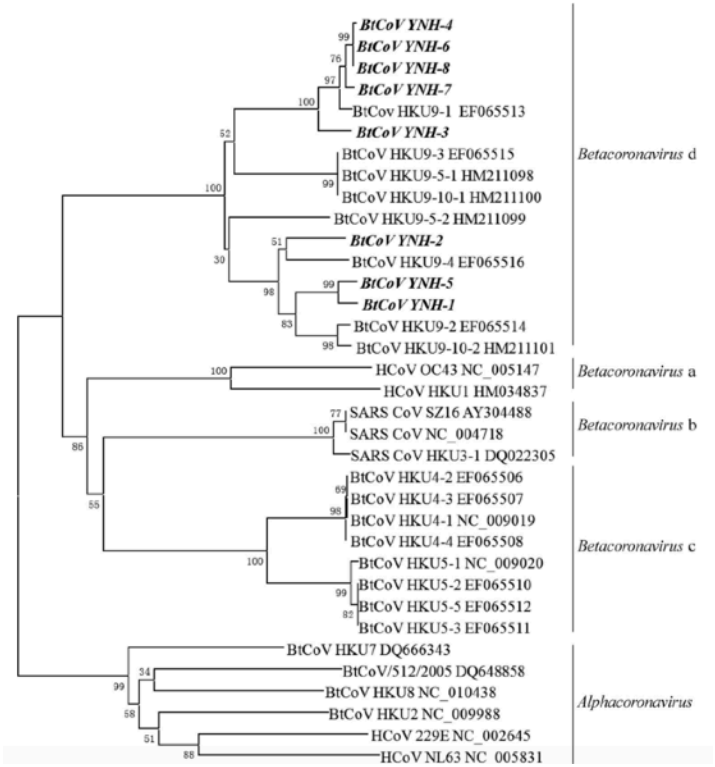
doi:10.1128/JVI.06671-11

Metagenomic Analysis of Viruses from Bat Fecal Samples Reveals Many Novel Viruses in Insectivorous Bats in China

Xingyi Ge,[a] Yan Li,[a] Xinglou Yang,[a] Huajun Zhang,[a] Peng Zhou,[a] Yunzhi Zhang,[b] and Zhengli Shi[a]

State Key Laboratory of Virology, Wuhan Institute of Virology, Chinese Academy of Sciences, Wuhan, China,[a] and Yunnan Institute of Endemic Diseases Control and Prevention, Dali, China[b]





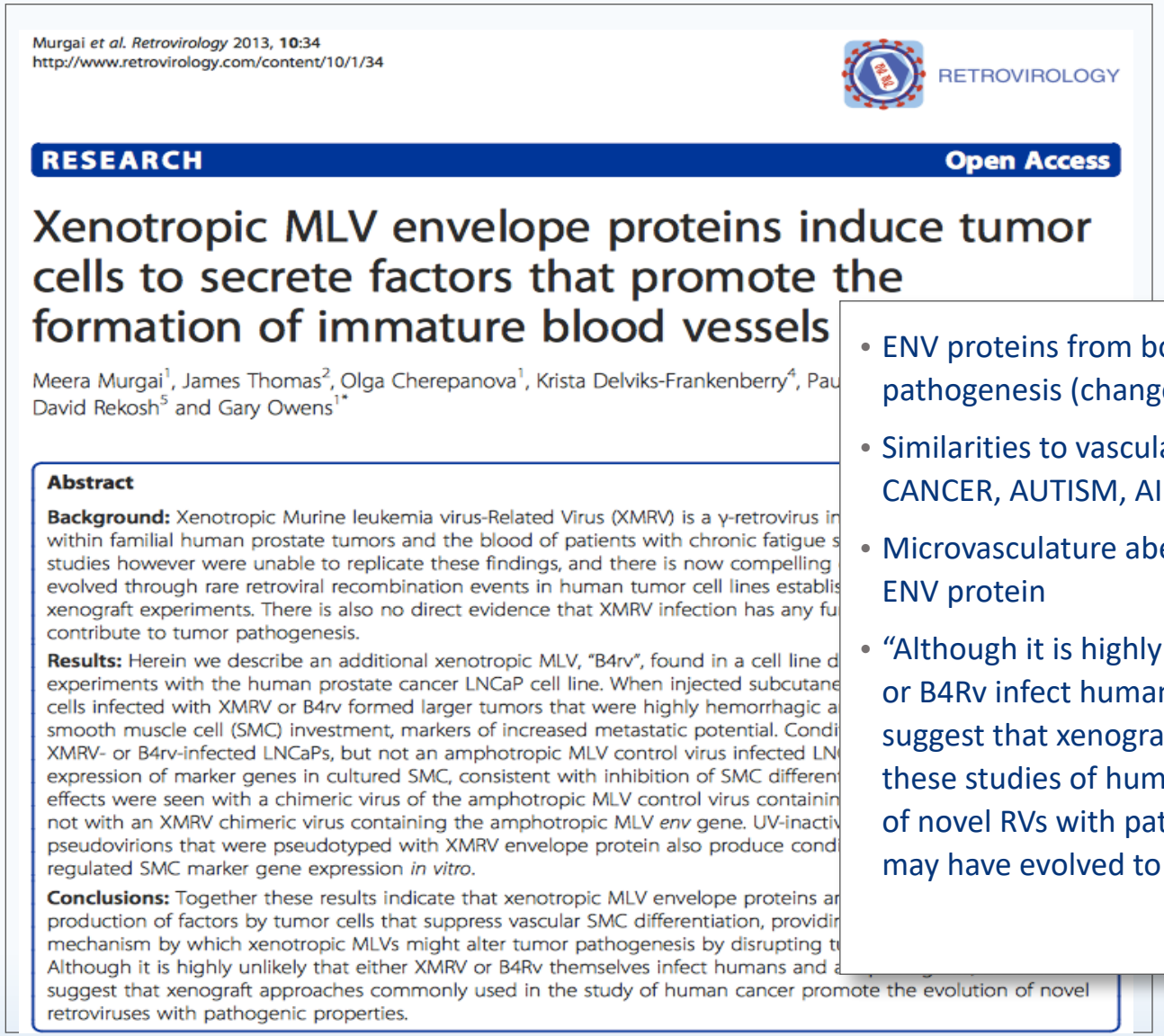
SUPPLEMENTAL.PDF

Metagenomic Analysis of Viruses from the Bat Fecal Samples Reveals Many Novel Viruses in Insectivorous Bats in China

Xingyi Ge[1], Yan Li[1], Xinglou Yang[1], Huajun Zhang[1], Peng Zhou[1], Yunzhi Zhang[2], Zhengli Shi[1*]

Retro-transcribing viruses		
HERV-H/env60	1	*Retroviridae;* unclassified Retroviridae; *Human endogenous retrovirus*
Amphotropic murine leukemia virus	1	
Moloney murine sarcoma virus	1	*Retroviridae; Orthoretrovirinae; Gammaretrovirus*
Xenotropic MuLV-related virus VP62	1	
Moloney murine leukemia virus	5	
Friend murine leukemia virus	1	

Infectious Virus is not Necessary to *Cause* Disease when it is INJECTED!



Murgai *et al. Retrovirology* 2013, **10**:34
http://www.retrovirology.com/content/10/1/34

RETROVIROLOGY

RESEARCH **Open Access**

Xenotropic MLV envelope proteins induce tumor cells to secrete factors that promote the formation of immature blood vessels

Meera Murgai[1], James Thomas[2], Olga Cherepanova[1], Krista Delviks-Frankenberry[4], Pau
David Rekosh[5] and Gary Owens[1*]

Abstract

Background: Xenotropic Murine leukemia virus-Related Virus (XMRV) is a γ-retrovirus in
within familial human prostate tumors and the blood of patients with chronic fatigue s
studies however were unable to replicate these findings, and there is now compelling
evolved through rare retroviral recombination events in human tumor cell lines establis
xenograft experiments. There is also no direct evidence that XMRV infection has any fu
contribute to tumor pathogenesis.

Results: Herein we describe an additional xenotropic MLV, "B4rv", found in a cell line d
experiments with the human prostate cancer LNCaP cell line. When injected subcutane
cells infected with XMRV or B4rv formed larger tumors that were highly hemorrhagic a
smooth muscle cell (SMC) investment, markers of increased metastatic potential. Condi
XMRV- or B4rv-infected LNCaPs, but not an amphotropic MLV control virus infected LN
expression of marker genes in cultured SMC, consistent with inhibition of SMC differen
effects were seen with a chimeric virus of the amphotropic MLV control virus containin
not with an XMRV chimeric virus containing the amphotropic MLV *env* gene. UV-inactiv
pseudovirions that were pseudotyped with XMRV envelope protein also produce condi
regulated SMC marker gene expression *in vitro*.

Conclusions: Together these results indicate that xenotropic MLV envelope proteins ar
production of factors by tumor cells that suppress vascular SMC differentiation, providir
mechanism by which xenotropic MLVs might alter tumor pathogenesis by disrupting t
Although it is highly unlikely that either XMRV or B4Rv themselves infect humans and a
suggest that xenograft approaches commonly used in the study of human cancer promote the evolution of novel
retroviruses with pathogenic properties.

- ENV proteins from both viruses impact tumor pathogenesis (change microvasculature)
- Similarities to vascular pathologies seen in ME/CFS, CANCER, AUTISM, AIDS & Vaccine injuries
- Microvasculature aberrations caused solely by XMRV ENV protein
- "Although it is highly unlikely that either XMRV, VP62 or B4Rv infect humans and are pathogenic, the results suggest that xenograft approaches commonly used in these studies of human cancer promote the evolution of novel RVs with pathogenic properties. Similar RVs may have evolved to infect humans!"

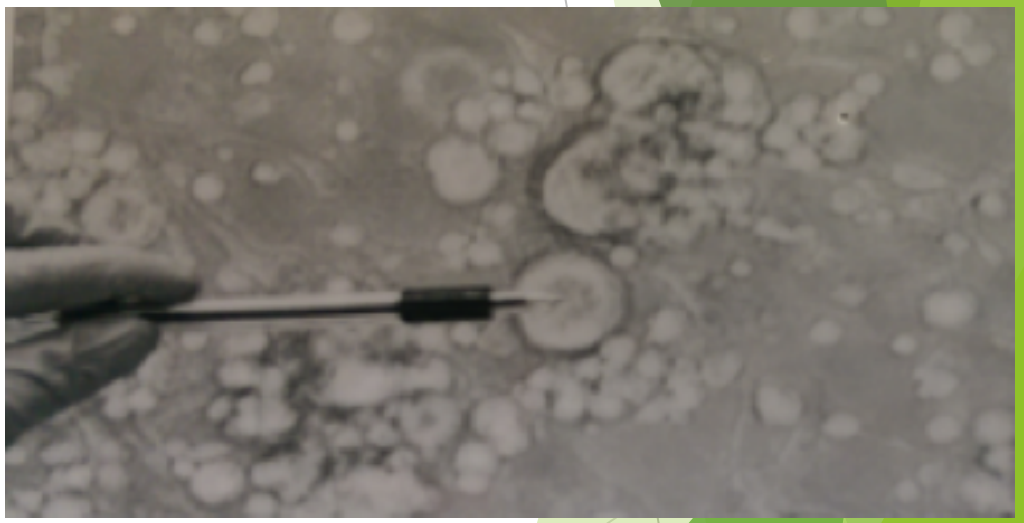
Article

Keywords fusion; interferon; SARS-CoV-2; syncytia
Subject Category Immunology
DOI 10.15252/embj.2020106267 | Received 17 July 2020 | Revised 6 October 2020 | Accepted 8 October 2020 | Published online 4 November 2020
The EMBO Journal (2020) 39: e106267

THE EMBO JOURNAL

Syncytia formation by SARS-CoV-2-infected cells

Expression of S without any other viral proteins triggers syncytia formation. Interferon-induced transmembrane proteins (IFITMs), a family of restriction factors that block the entry of many viruses, inhibit S-mediated fusion, with IFITM1 being more active than IFITM2 and IFITM3. On the contrary, the TMPRSS2 serine protease, which is known to enhance infectivity of cell-free virions, processes both S and ACE2 and increases syncytia formation by accelerating the fusion process. TMPRSS2 thwarts the antiviral effect of IFITMs. Our results show that SARS-CoV-2 pathological effects are modulated by cellular proteins that either inhibit or facilitate syncytia formation.



SARS-CoV-2 infection and persistence throughout the human body and brain

frontiers in Public Health

PERSPECTIVE
published: 22 May 2017
doi: 10.3389/fpubh.2017.00108

Check for updates

XMRV and Public Health: The Retroviral Genome Is Not a Suitable Template for Diagnostic PCR, and Its Association with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome Appears Unreliable

(i) specific, spurious annealing of the available primers in multiple homologous sites of the human genome;
(ii) strict homologies between whole XMRV genome and interspersed repetitive elements widespread in mammalian genomes.

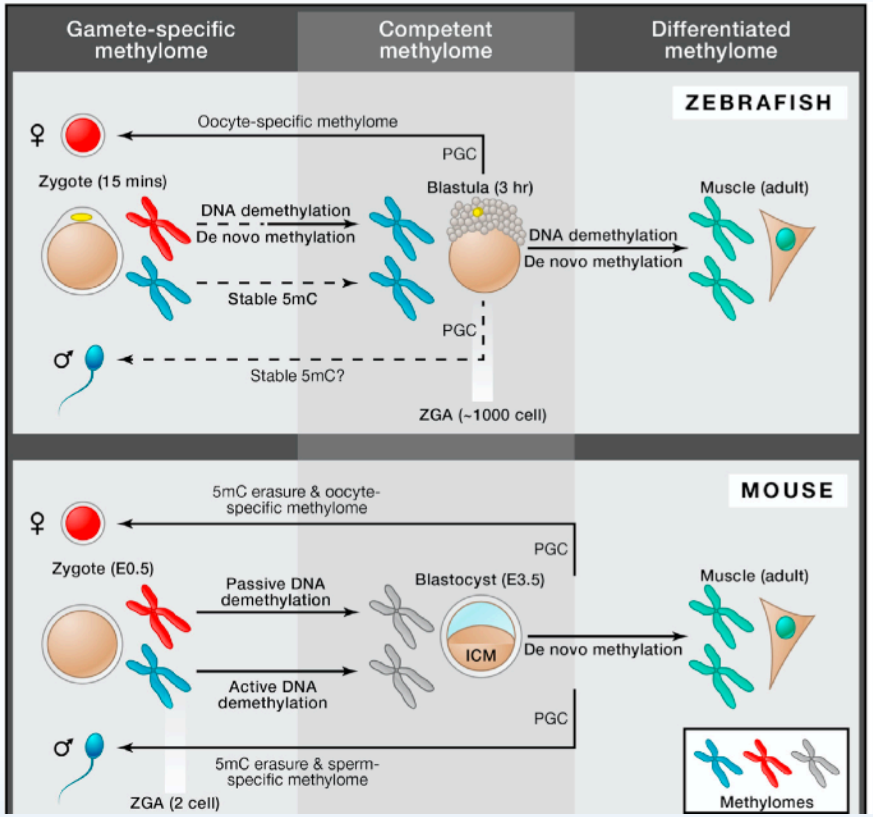
In conclusion, the occurrence of highly conserved, repeated DNA sequences in the XMRV genome
deeply undermines the reliability of diagnostic PCRs by leading to artifactual and spurious amplifications.
Together with all the other evidences, this makes the association between the XMRV retrovirus and CFS totally unreliable.

Leading Edge
Previews

*Correspondence:
a.surani@gurdon.cam.ac.uk
http://dx.doi.org/10.1016/j.cell.2013.04.044

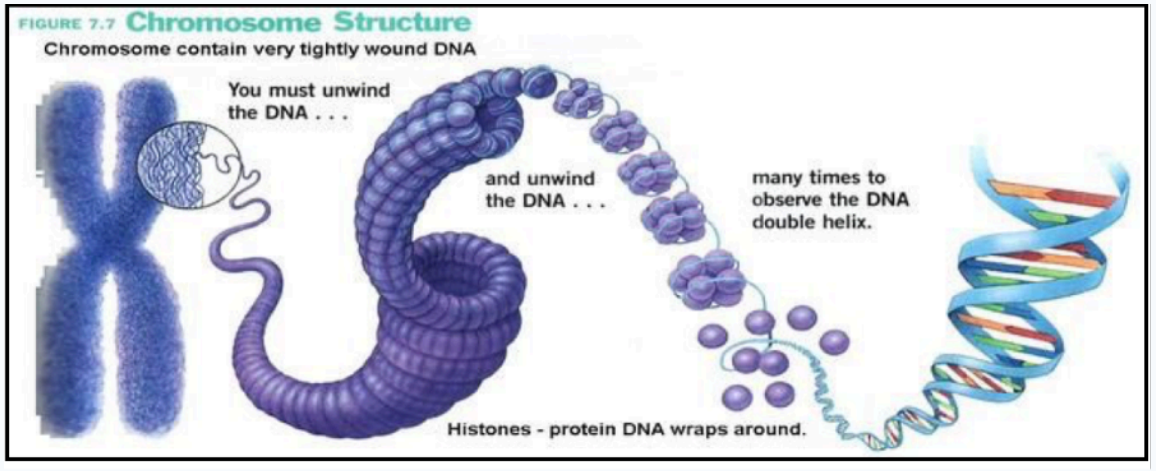
Cell

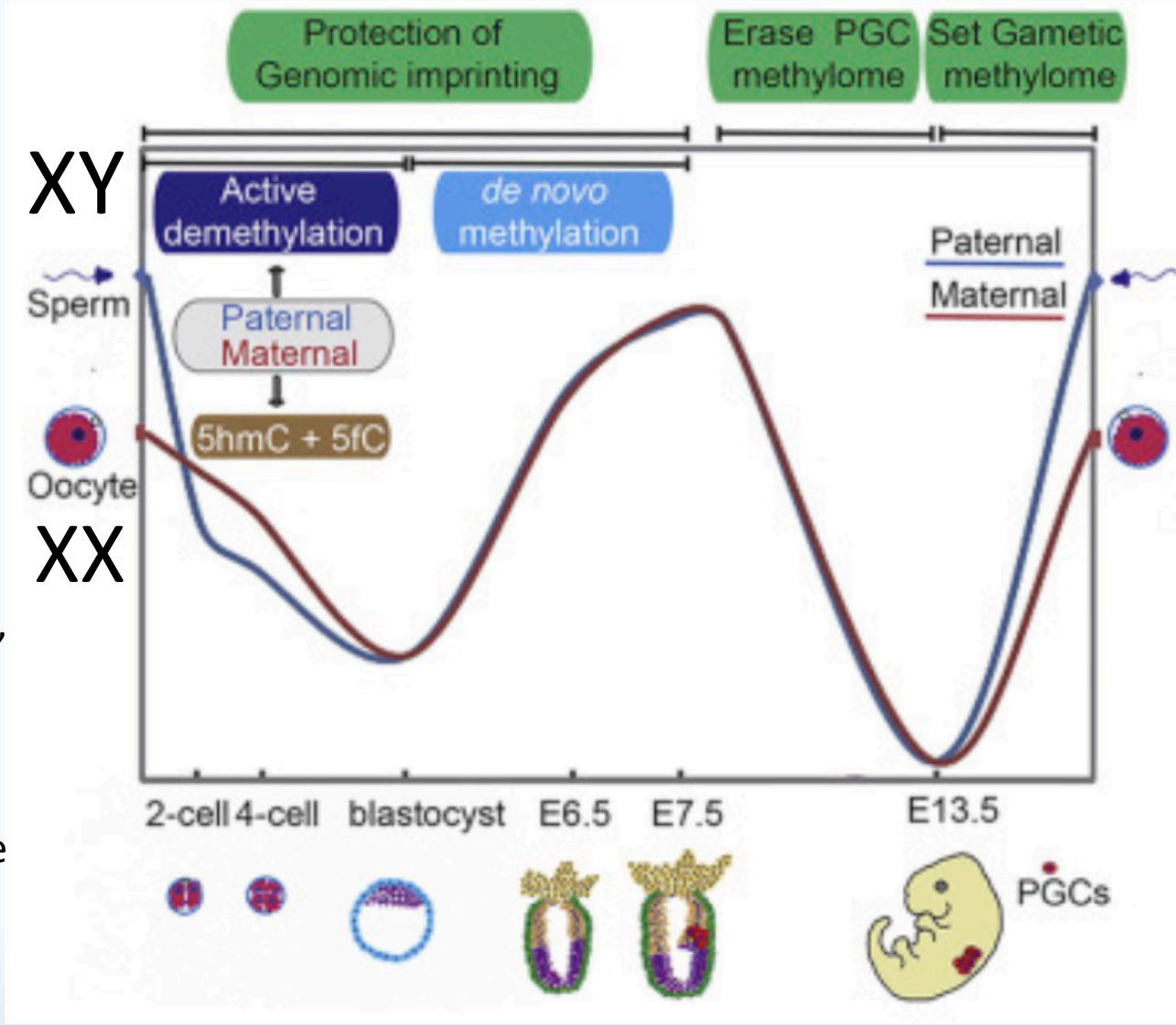
Beyond DNA: Programming and Inheritance of Parental Methylomes



Epigenetic reprogramming of parental genomes following fertilization is important to ensure compatibility for totipotency and development thereafter. New studies by Jiang et al. and Potok et al. now demonstrate how the parental DNA methylomes are reset in zebrafish and reveal striking differences from events in mammals.

Parental Methylomes protect Chromosomes





Sperm and oocytes are highly distinct and specialized cell types, yet together they generate the totipotent state following fertilization. Significantly, although they make an equivalent genetic contribution to the zygote, their epigenetic states are highly asymmetric due to their diverse origins and are therefore reset soon after fertilization

Journal of Developmental Biology

THEY PLAN to INOCULATE as Many as Possible Knowing Four Generations of God's People will be Enslaved

MDPI

Dr Neu: Autoimmune antibodies From Mom Pass to Fetus: 4 Generations

Review

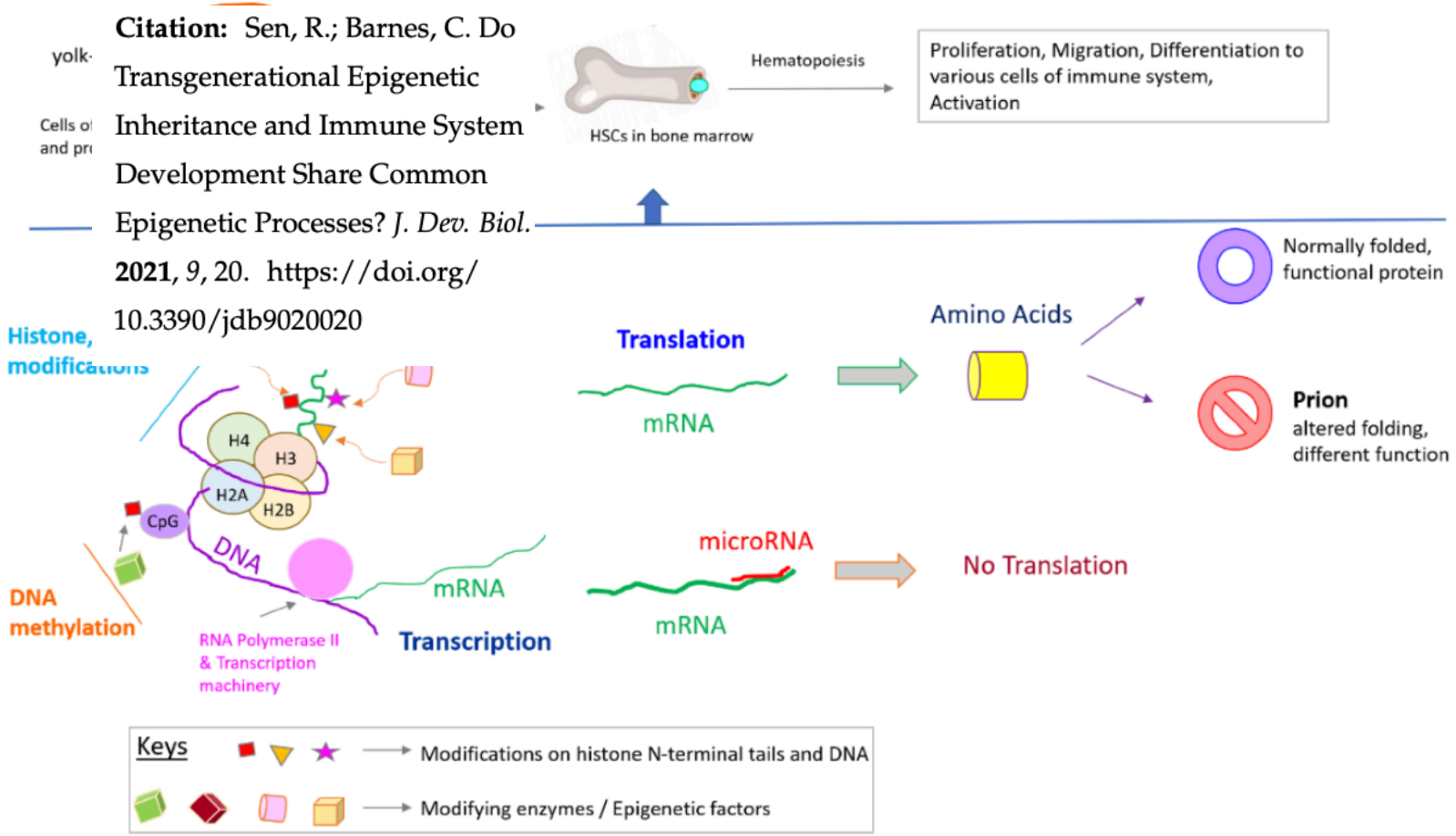
Do Transgenerational Epigenetic Inheritance and Immune System Development Share Common Epigenetic Processes?

Rwik Sen * and Christopher Barnes

Citation: Sen, R.; Barnes, C. Do Transgenerational Epigenetic Inheritance and Immune System Development Share Common Epigenetic Processes? *J. Dev. Biol.* **2021**, *9*, 20. https://doi.org/10.3390/jdb9020020

Received: 1 April 2021
Accepted: 6 May 2021
Published: 12 May 2021

Citation: Sen, R.; Barnes, C. Do Transgenerational Epigenetic Inheritance and Immune System Development Share Common Epigenetic Processes? *J. Dev. Biol.* **2021**, *9*, 20. https://doi.org/10.3390/jdb9020020



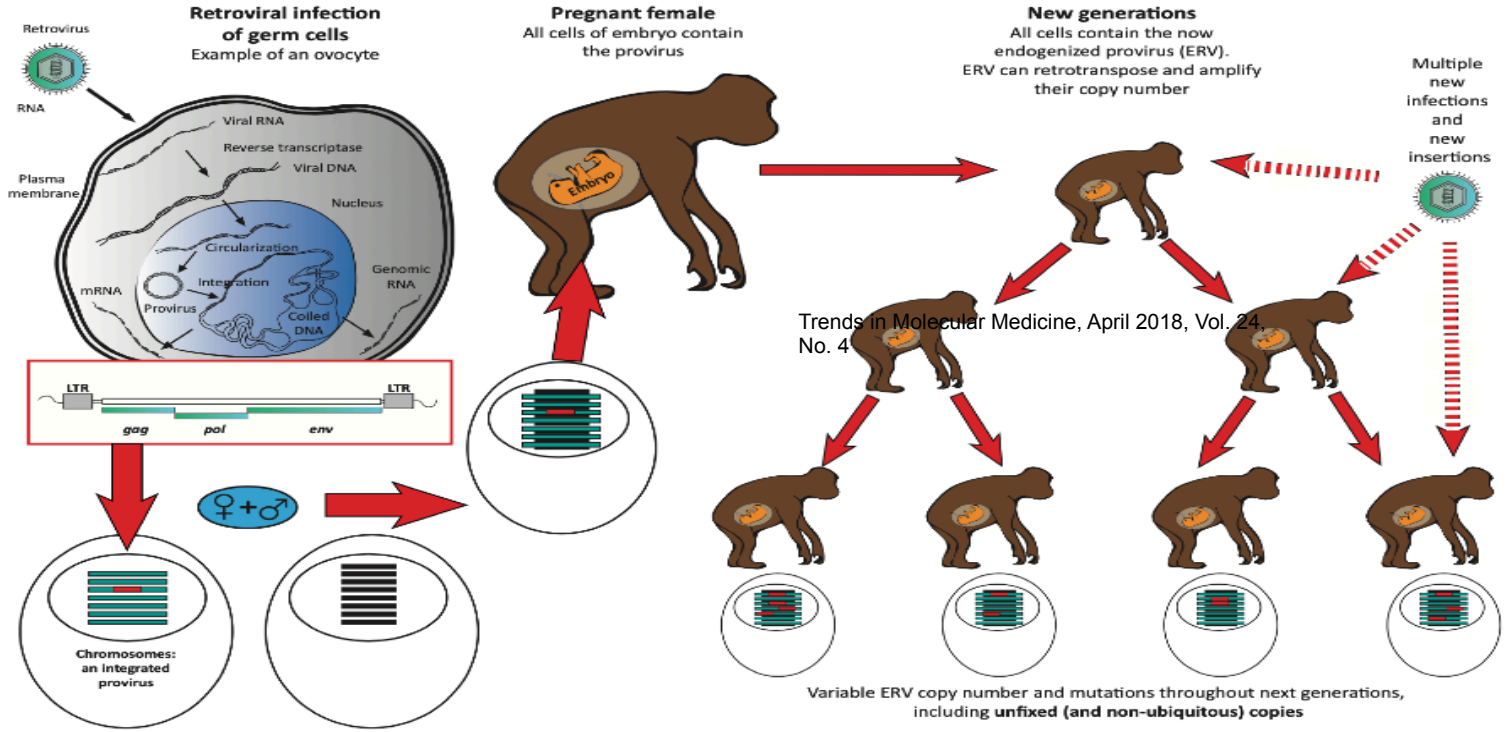
Trends in Molecular Medicine

CellPress REVIEWS

Trends in Molecular Medicine, April 2018, Vol. 24, No. 4

Review

Human Endogenous Retroviruses in Neurological Diseases



Trends in Molecular Medicine, April 2018, Vol. 24, No. 4

HUMANS DID NOT EVOLVE From MONKEY OUR GOD GIVEN VIROME DOES NOT MAKE US SICK
INJECTIONS OF Animal Viromes (VACCINES) BYPASS our ENDOGENOUS/GOD GIVEN INNATE Immunity MAKES US SICK

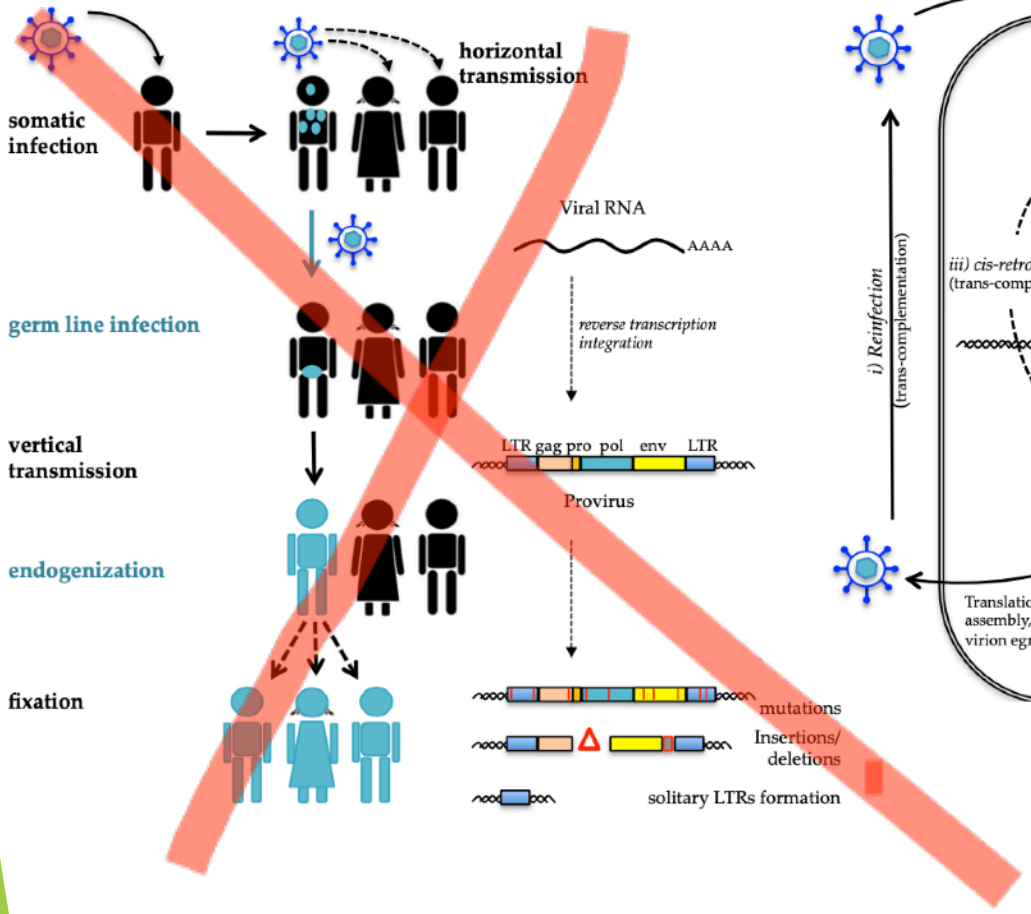
EVERY CHROMOSOME HAS HERVW TO PRTOECT OUR GENOME FROM FOREIGN SYNCYTIN (SNAKE VENOM)

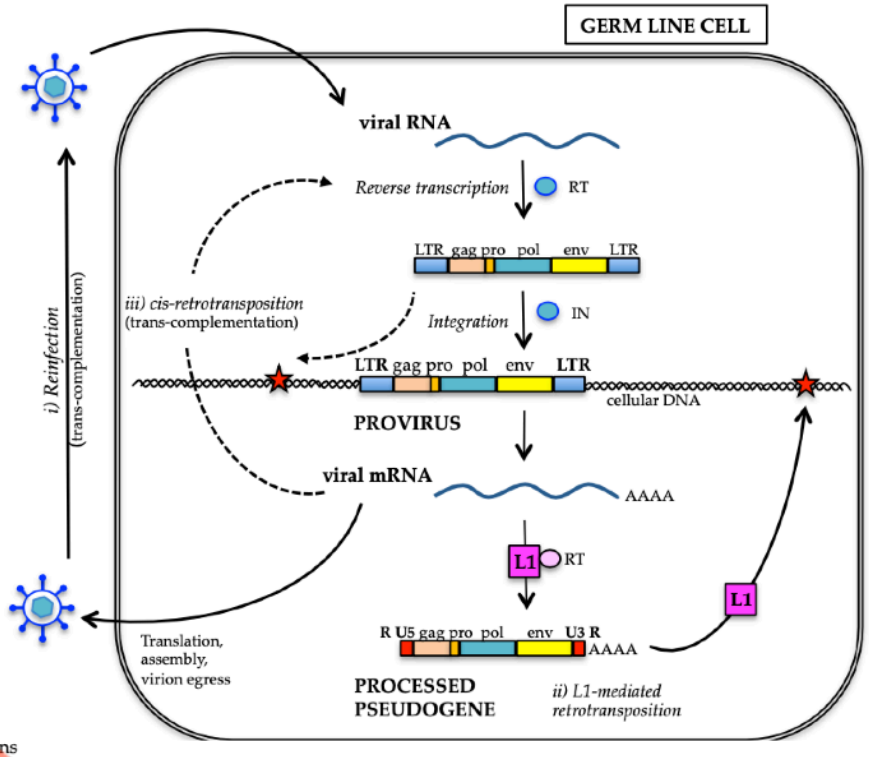
viruses

Viruses **2017**, *9*, 162; doi:10.3390/v9070162

Review

Type W Human Endogenous Retrovirus (HERV-W) Integrations and Their Mobilization by L1 Machinery: Contribution to the Human Transcriptome and Impact on the Host Physiopathology



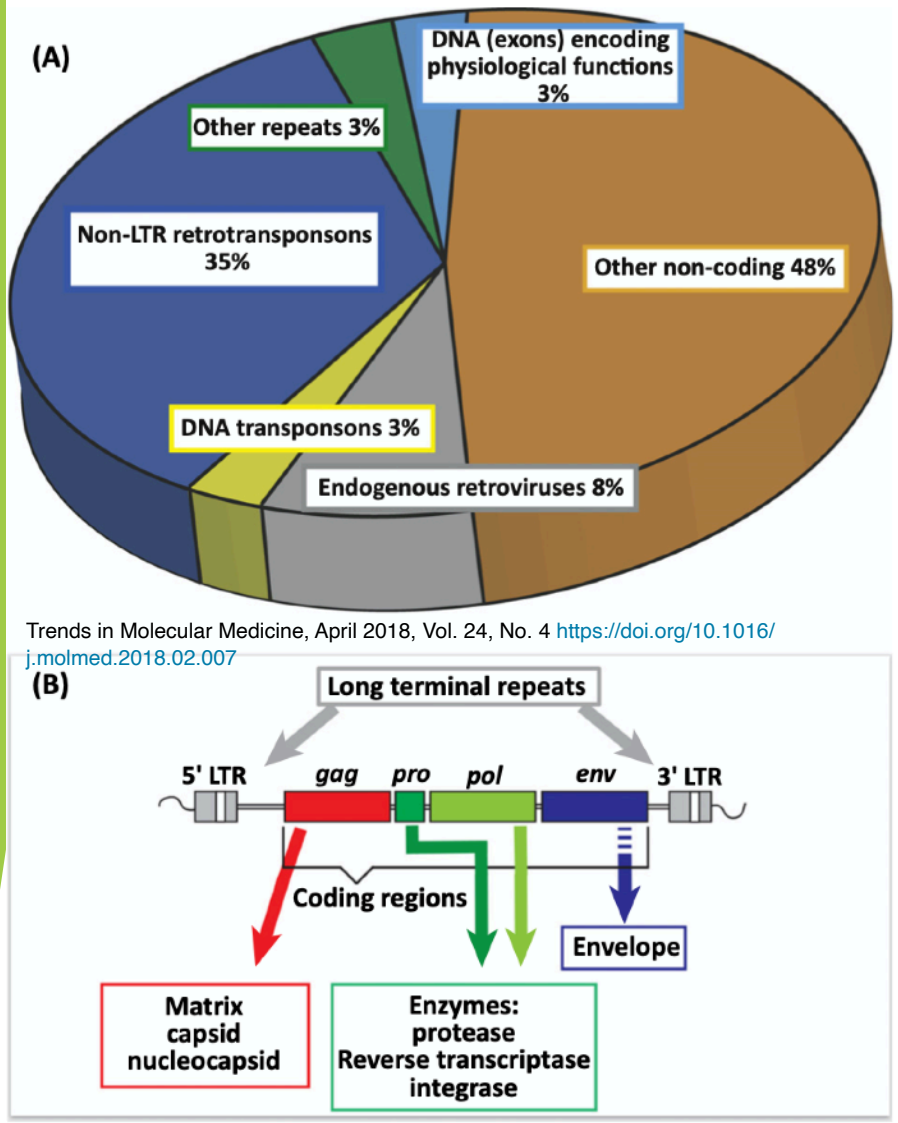


Chr	HERV-W*	Chr	HERV-W*
1	16 (4, 10)	13	6 (2, 3)
2	23 (6, 16)	14	6 (3, 3)
3	22 (4, 16)	15	3 (0, 3)
4	19 (8, 10)	16	0
5	9 (5, 3)	17	4 (1, 3)
6	18 (4, 12)	18	4 (1, 3)
7	12 (7, 5)	19	6 (2, 4)
8	9 (1, 8)	20	2 (0, 2)
9	7 (1, 5)	21	3 (2, 1)
10	7 (2, 5)	22	1 (0, 1)
11	9 (4, 5)	X	12 (1, 10)
12	13 (5, 7)	Y	2 (2, 0)

* *Total number of HERV-W insertions.* Numbers into round brackets specify the amount of proviruses and pseudogenes, respectively, with respect to the total. The rest of the sequences can not be classified due to the absence of LTRs distinctive signatures (data from Grandi et al. 2016)

Human Endogenous (God GIVEN) VIROME: Protection against Viral Infections

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



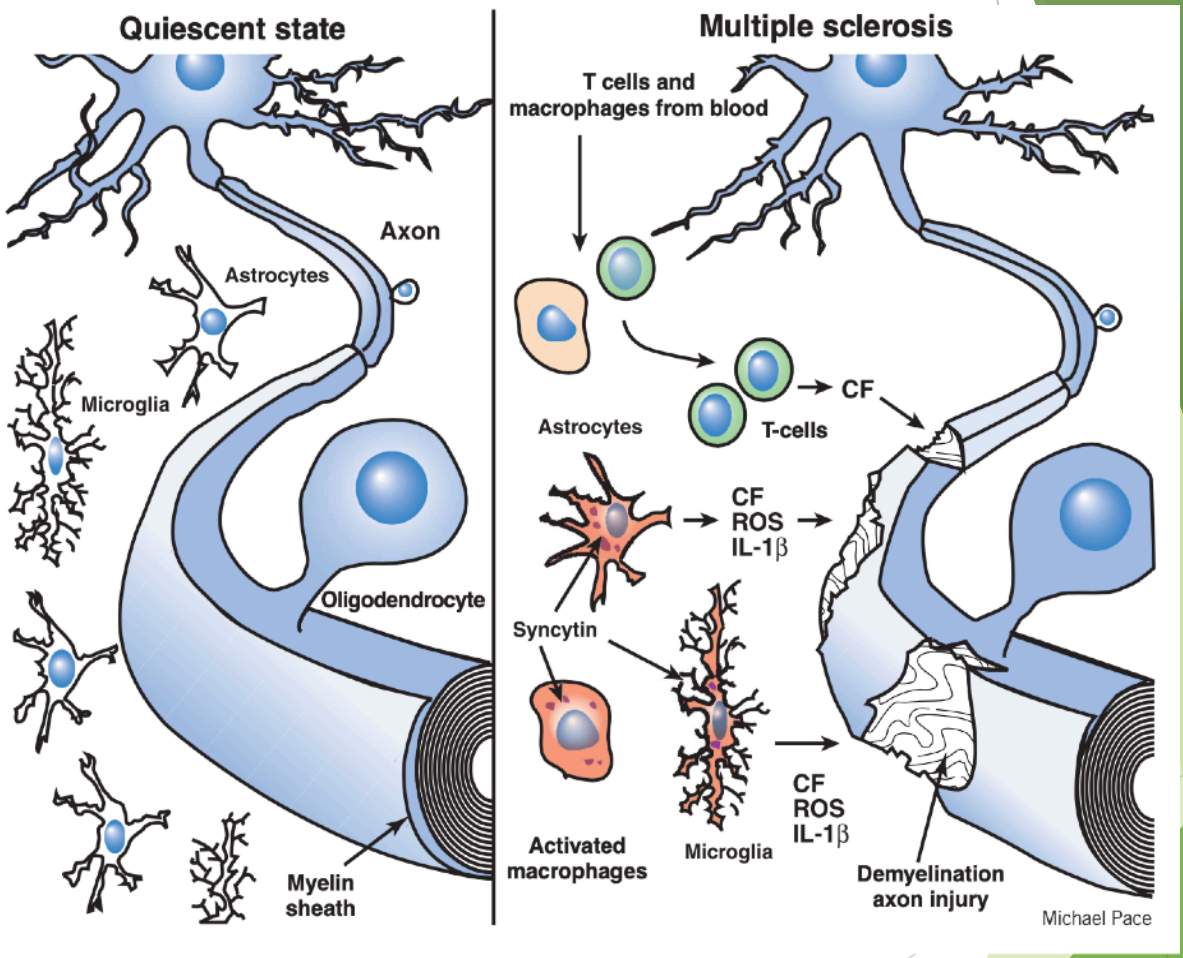
Trends in Molecular Medicine, April 2018, Vol. 24, No. 4 https://doi.org/10.1016/j.molmed.2018.02.007

- 8% of our genome composed of sequences of viral origin
- stable elements at the interface between self and foreign DNA.
- HERV envelope Syncytin “Velcro” Fertilized embryo
- LTR participate in the transcriptional regulation of cellular genes
- HERV basal expression in healthy tissues
- HERV RNA, DNA, Proteins shape & expand the interferon network
- HERVs play a central role in the evolution and functioning of human innate immunity

Expression of HERV, XMRV SARS-COV2 COVID 19 Vaccine protein SYNCYTIN DRIVES Multiple Sclerosis

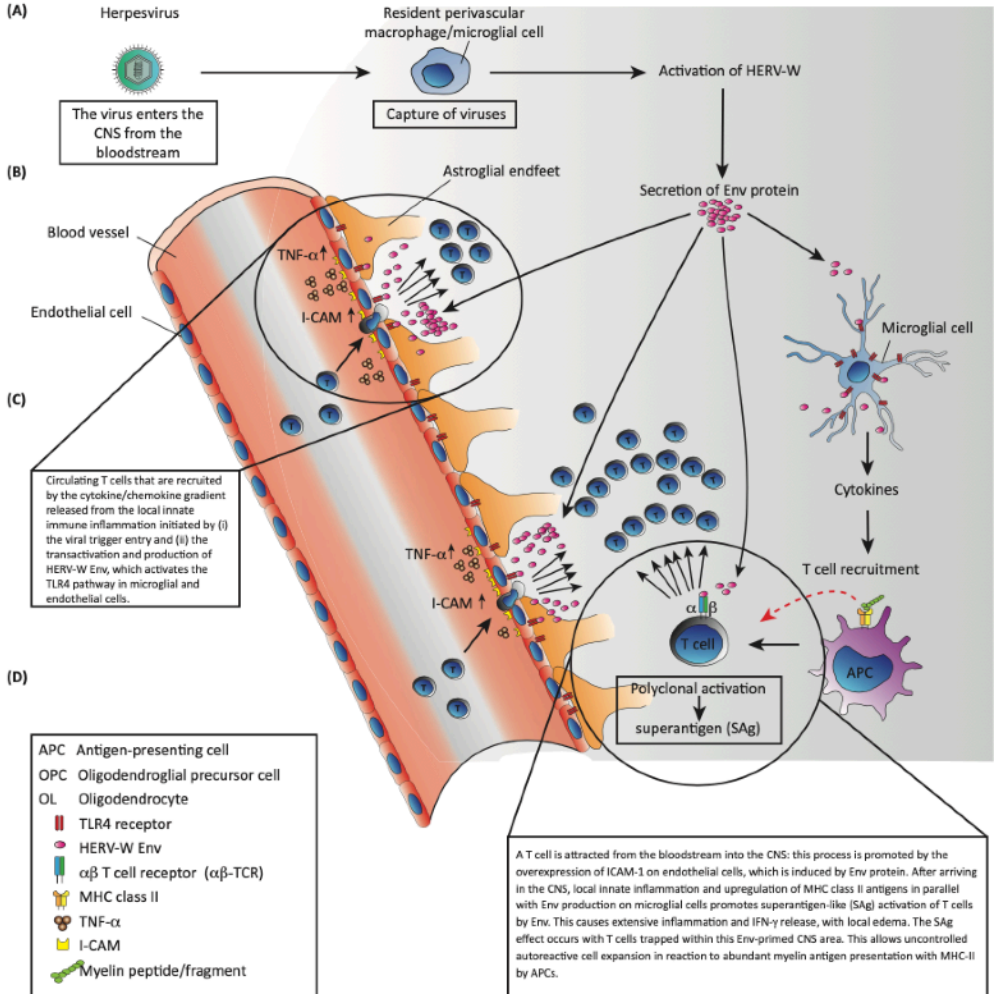
- **Syncytin is a viral envelope protein encoded in the human genome.**
- **Syncytin activated in multiple sclerosis astrocytes and microglia, contributing to the inflammation-induced myelin destruction that causes disease symptoms.**

Nature Journal 2004



The best-studied diseases where consistent scientific data support an involvement of HERV genetic elements in their pathogenesis are MS and amyotrophic lateral sclerosis (ALS),

"We also introduce chronic inflammatory demyelinating polyradiculoneuropathy (CIDP)"
Moreover, HERVs have also been associated with other diseases such as schizophrenia and bipolar disorder, type 1 diabetes



Chronic inflammatory demyelinating polyneuropathy (CIDP): a peripheral nervous system disease and the commonest chronic immune-mediated peripheral neuropathy that takes either a relapsing or progressive course. Clinically it manifests by the development of weakness and sensory disturbance that lead to marked disability. Multifocal inflammation and stripping of myelin sheaths by macrophages are thought to result from aberrant immune responses, mediated by T and/or B lymphocytes, against peripheral nerve antigens.

Expression of SYNCYTIN in Non placental Tissues Drives Cancer!

Tissue	Method	Ref.	Possible Biases [a]
Blood	Search of Syncytin query in EST data	[11]	Low total HERV EST counts, could not detect HERV-Ws divergent from Syncytin, no information on LTR activity, number of cDNA/EST libraries great variability across tissues, under-representation of poorly expressed genes in small libraries (1)
Brain	Search of Syncytin query in EST data	[11]	(1)
	RT-PCR (*gag*+, *pol*+, *env*+)	[55]	Primers specific for single expressed sequences (placental Syncytin (*gag:* AF072500, *env:* AF072506), MSRV clones (*pol:* AF009668)) could not detect divergent HERV-Ws, no information on full-length HERVs expression and LTR activity, samples amount is poorly representative (2)
ain (cortex and pons)	*env* real time qRT-PCR	[56]	Primers specific for placental Syncytin (NM_014590.3) can could not detect *env* defective or highly divergent HERV-Ws, no information on full-length HERVs expression and LTR activity, samples amount is poorly representative (3)
Breast	Search of Syncytin query in EST data	[11]	(1)
	env real time qRT-PCR	[56]	(3)
Colon	*env* real time qRT-PCR	[56]	(3)
Heart	RT-PCR (*gag*−, *pol*−, *env*+)	[55]	(2)

VACCINE AIDS = COVID19: Autoimmune, Autoinflammatory Disease & Cancer *Unintended* Consequences of 3 DECADES LIABILITY FREE VACCINES

Prostate Cancer*	Crohn's Disease*	Gulf War Syndrome*
Breast Cancer *	Hashimoto's Thyroiditis*	Autism / ASD*
Multiple Myeloma*	Polymyositis*	Multiple Sclerosis*
Non-Hodgkins Lymphoma*	Sjogren's Syndrome *	Parkinson's*
Chronic Lymphocytic Leukemia*	Bechet's Disease*	ALS*
Mantle Cell Lymphoma*	Primary Biliary Cirrhosis*	Fibromyalgia*
Hairy Cell Leukemia*	Inflammatory Bowel Disease*	Chronic Lyme Disease*
Bladder Cancer *	Psoriasis, Dermatitis	OCD*
Colorectal Cancer*	Diabetes*	ADHD*
Kidney Cancer *	Cardiovascular Disease*	PTSD*
Ovarian Cancer*	ME / CFS*	Psychosis*
	Lupus/SLE*	Rheumatoid Arthritis*

**Neuroendocrine Tumors*

KEY to IMMUNITY is do not defile the TEMPLE of GOD

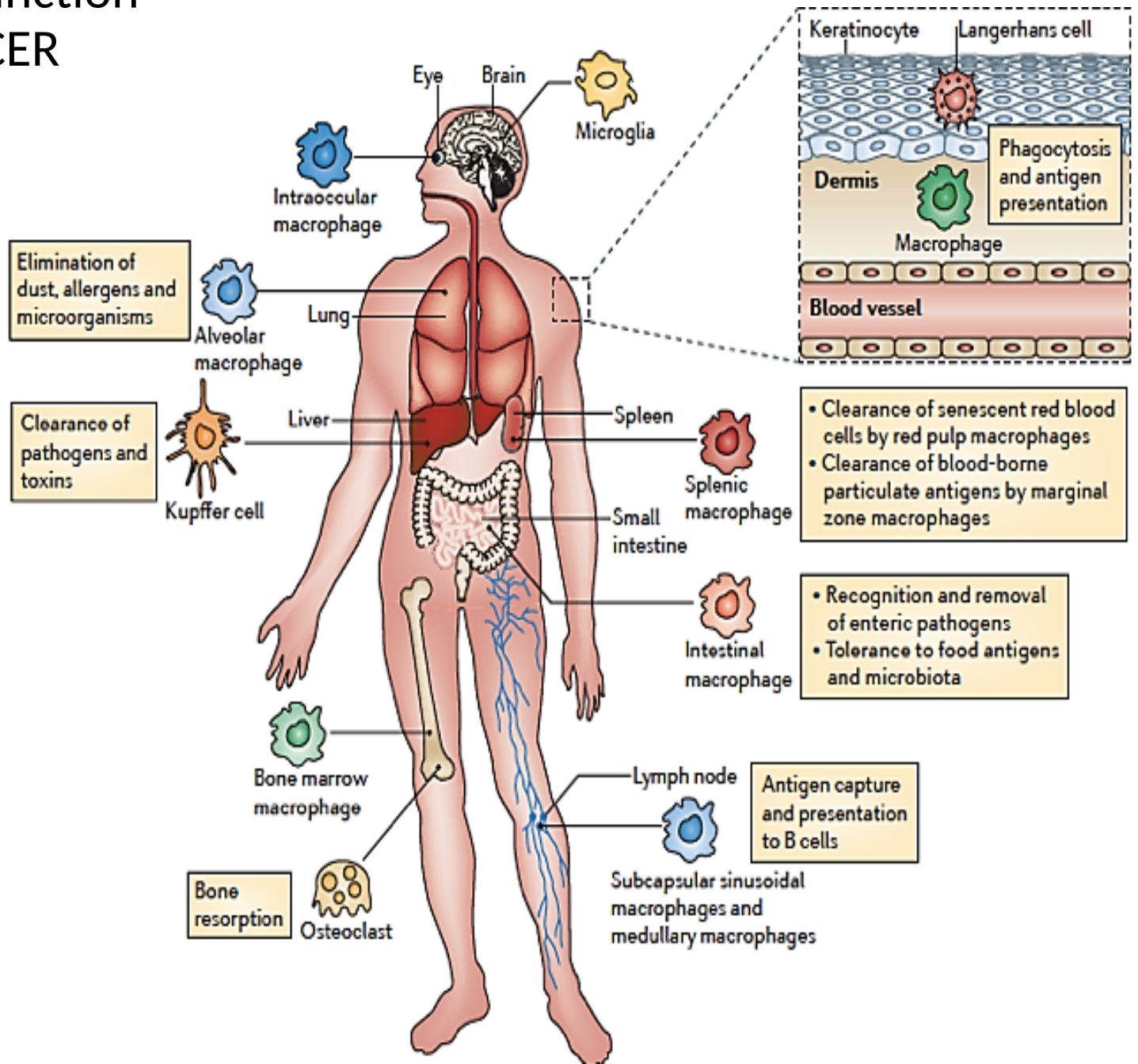
NEVER GET ANOTHER VACCINE

Monocyte/Macrophage Dysfunction as a Driver of AEIDS/CANCER

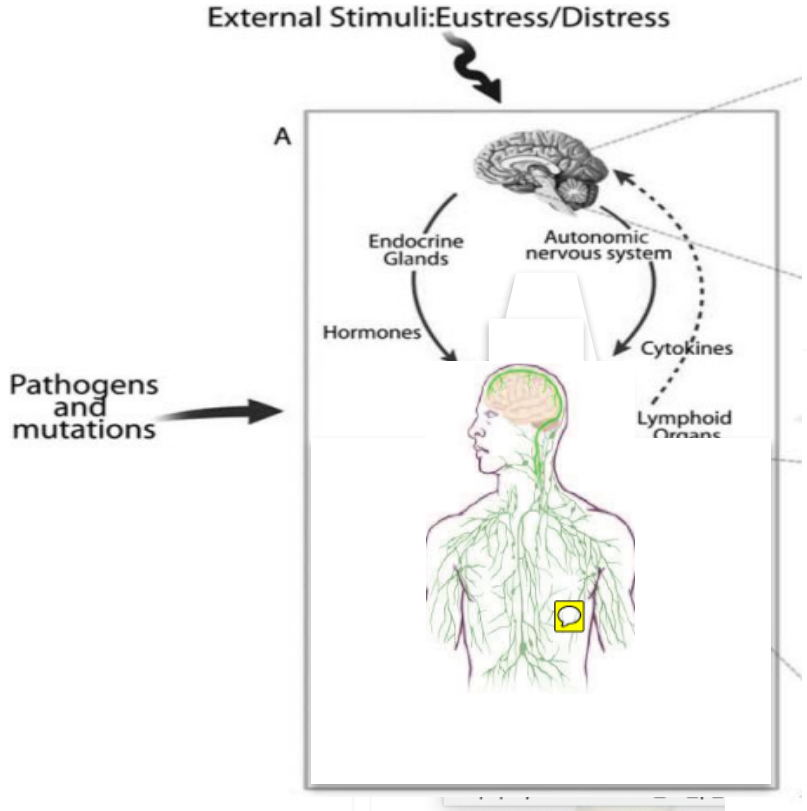
- **Express Purinergic Receptors**:
- **P2XR and P2YR**.
- **Express Cannabinoid Receptors**
- **CB1 & CB2**

Tissue Macrophages perform Key Homeostatic Functions Modulated by

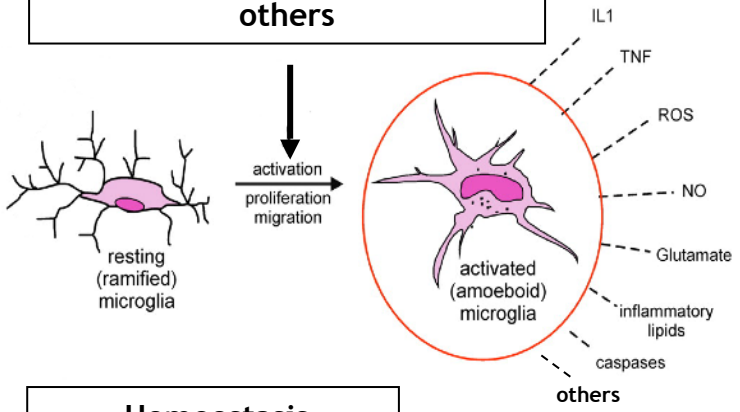
- **Cannabinoids**
- **GcMAF**
- **Suramin**
- **Ivermectin**
- **Vitamin C**
- **DMG**
- **Decitibine (Vidaza)**
- **Peptide T**

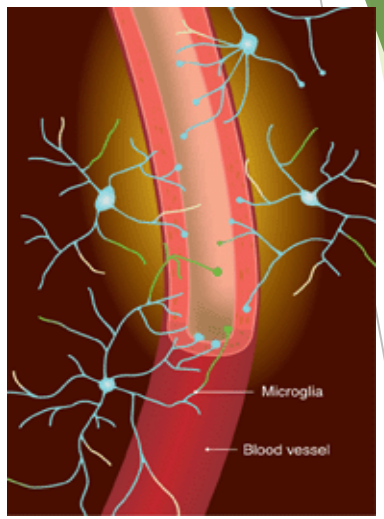


Chronic Disease involves every aspect of Human Biology.
From birth the developing: Brain and Immune system are Inextricably linked



Stimuli
Loss of cell: cell communication, matrix breakdown, infections, vascular damage, others





Fetler, L and S Amigorena, Science 2005, 309:392

Homeostasis
Phagocytosis of debris, neurotrophis

Damage
Neurotoxins, phagocytosis of normal neurons, apoptosis

Parkinson's Disease
ALS, Alzheimers
ME/CFS, Cancer

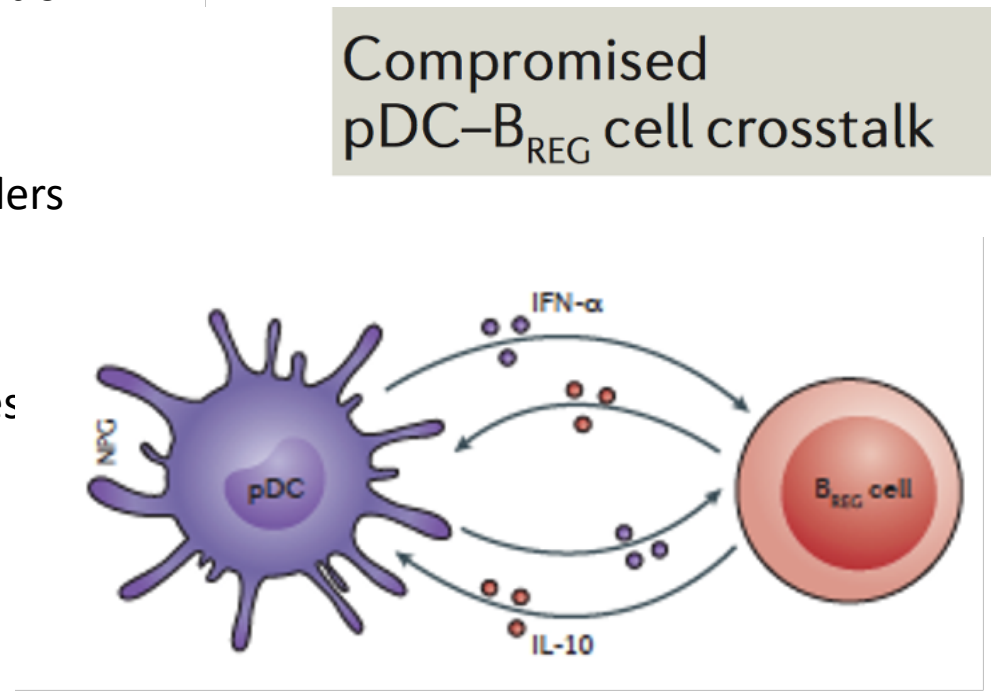
Poisons (ADJUVANTS): Aluminum, LPS (ENDOTOXIN), Xenoestrogens, Arsenic in Vaccines food & water target Innate Immune responses

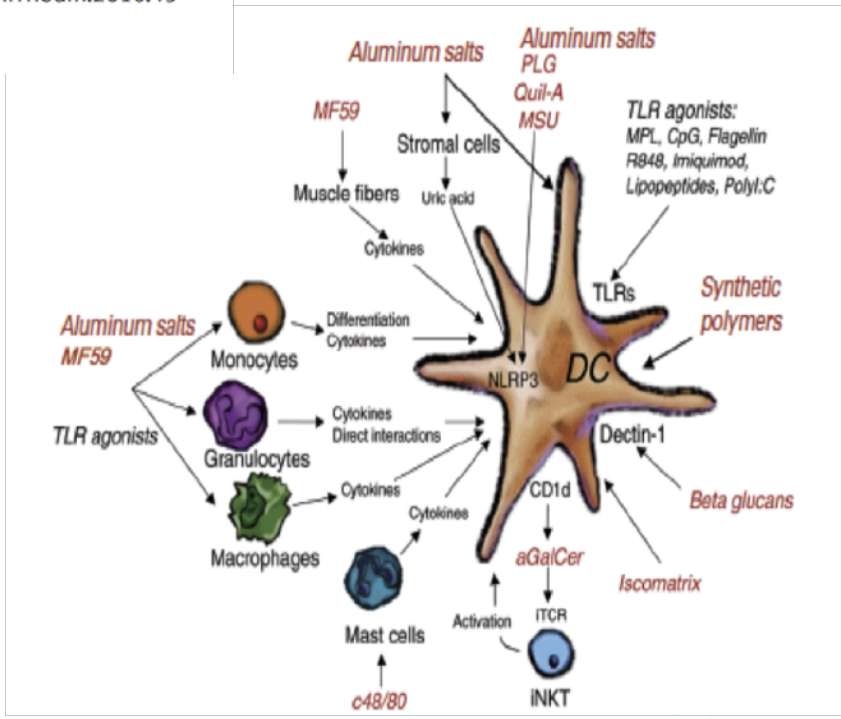
Lupus is an autoimmune inflammatory disease in which the body produces antibodies causing the immune system to affect the skin, joints, blood and kidneys.

Symptoms include:

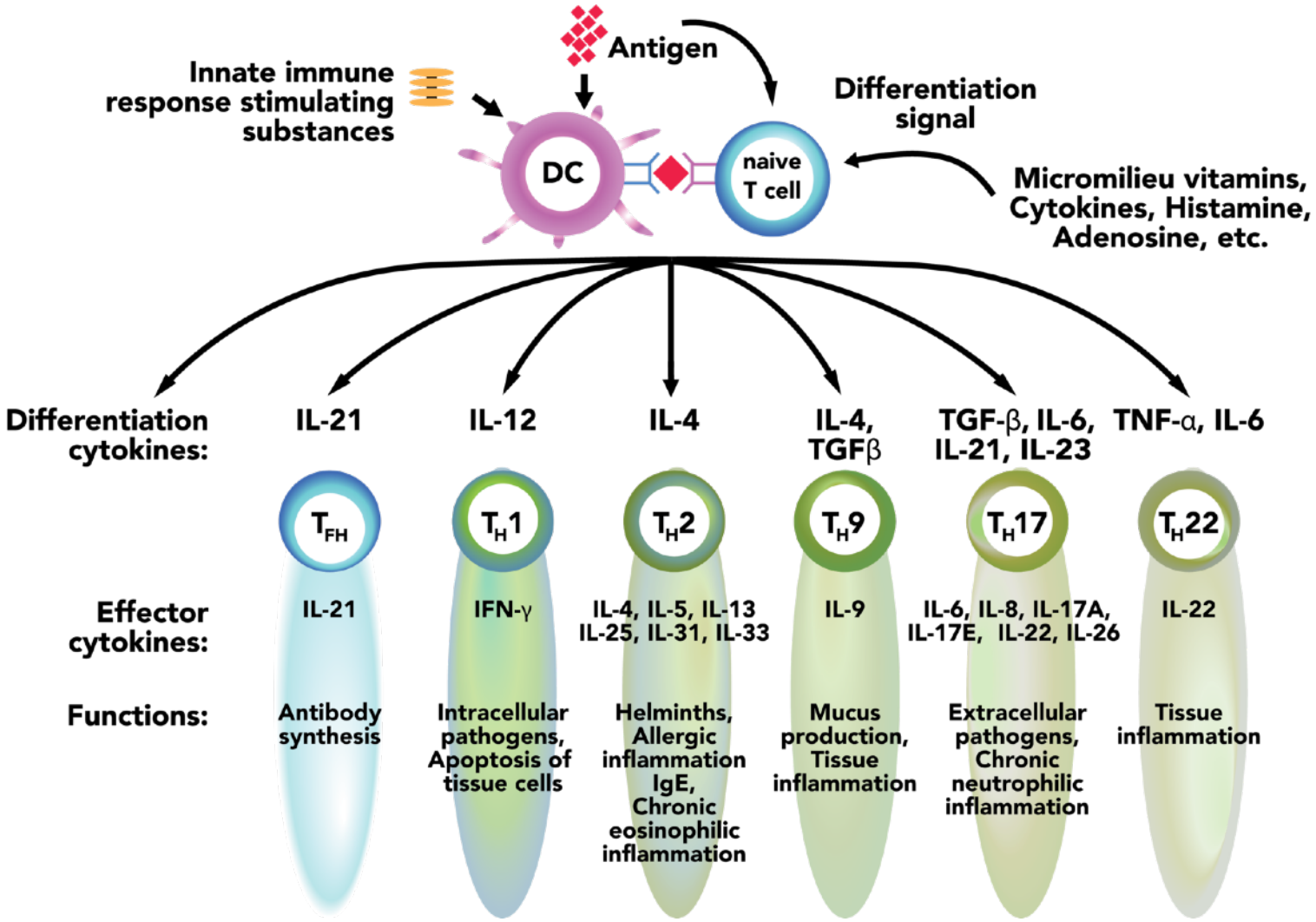
- Skin rashes/ Inflammation
- Arthritis/ Joint Pain
- Extreme Fatigue
- Anemia/ Blood Disorders
- Kidney Damage
- Immune Disorder
- Antinuclear Antibodies

Nature Reviews Rheumatology | Published online 24 Mar 2016; doi:10.1038/nrrheum.2016.43



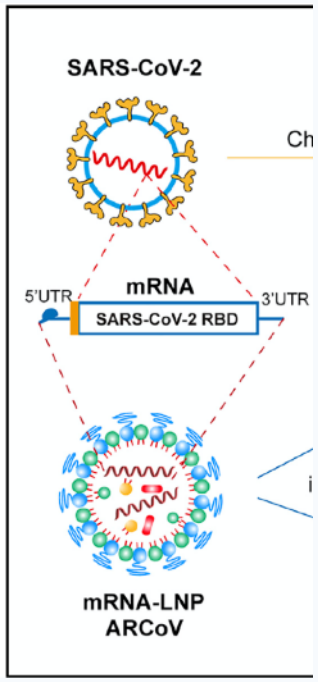


Inappropriate Activation of the cellular Immune system is important in the pathogenesis of human Retrovirus Associated Disease



Every Inoculation Bypasses The Innate Immune System

Breakdown of cell membranes and release of the PLA2…starts inflammation
Damage so severe lungs are filling up…brain is fooled because it happens rapidly!



SCAN ME

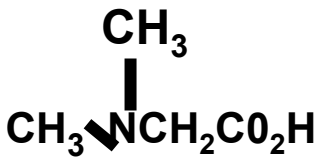
Detoxing that synthetic Lipid Nano Particle
(SARS-CoV2 virus & COVID Vaccine)

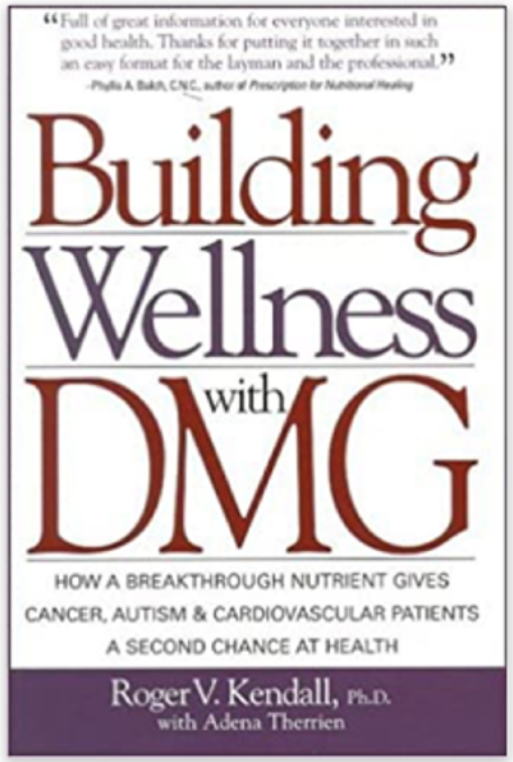
- Ozone therapies
- Specialized Pro resolving mediators
- Chlorine Dioxide, MMS, CDS

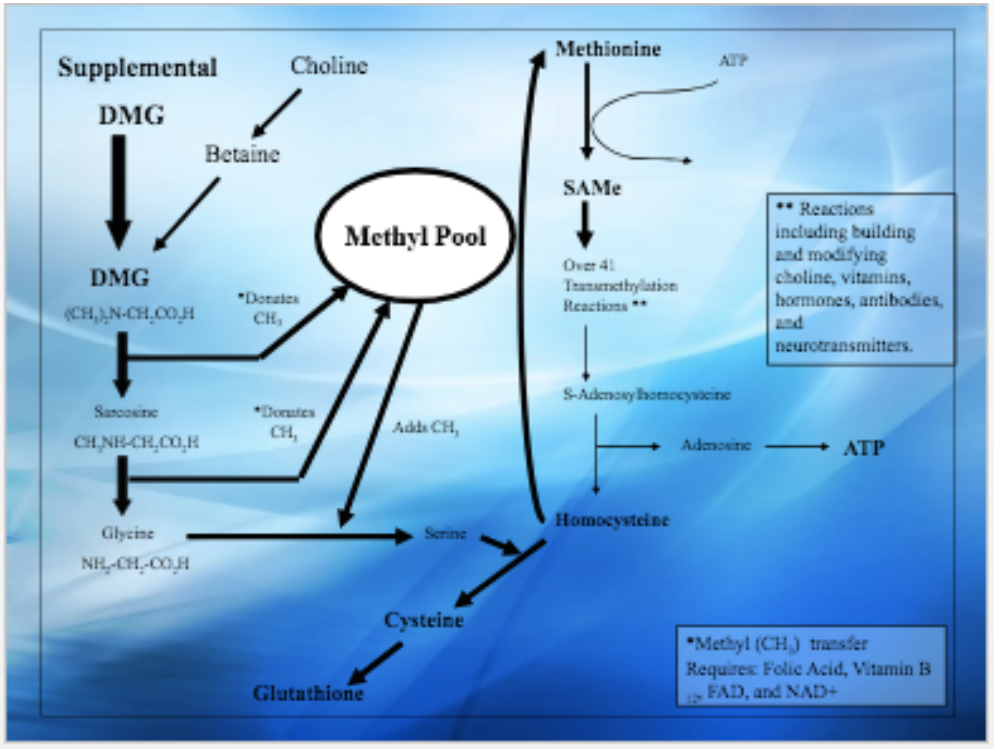
DiMethylGlycine

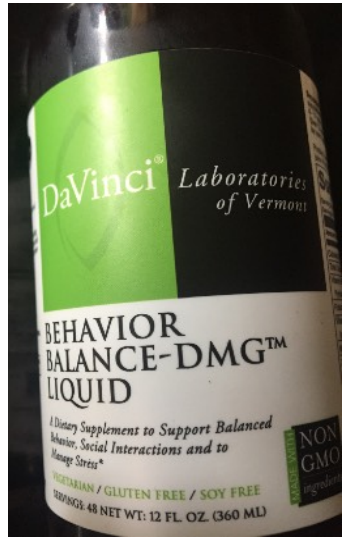
Nutrition's Best Kept secret for strengthening Genomic Pathways and Preventing Disease

•Amino Acid – Intermediary metabolite of the human body







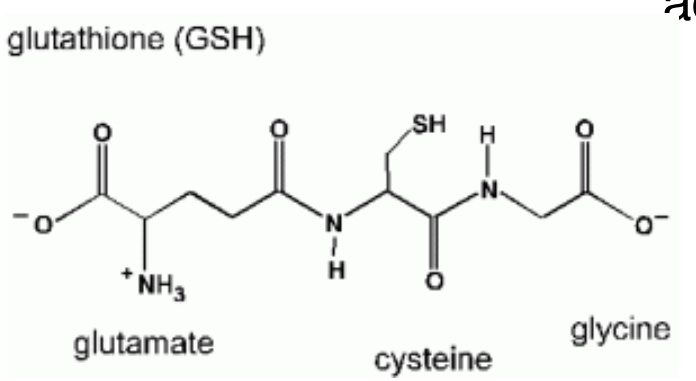


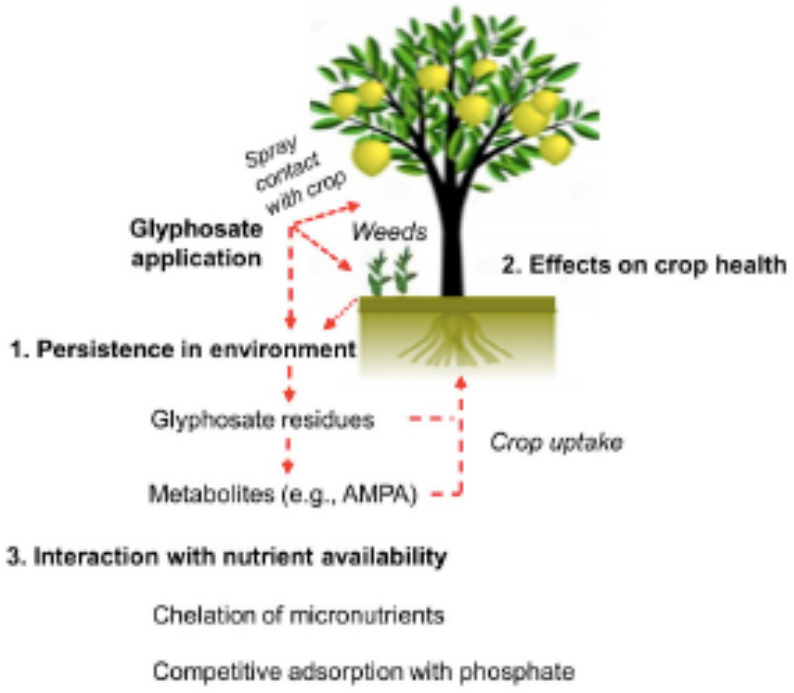
•Important nutrient that is found in low levels in our food

•As a nutritional supplement DMG PROTECTS OUR ENDOGENOUS VIROME

Glyphosate: Damages Key GOD GIVEN antioxidant Glutathione

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





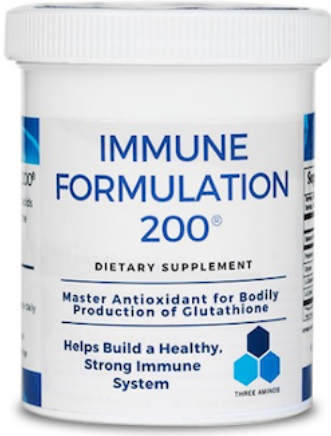
American Chemical Society
Public Health Emergency Collection
Public Health Emergency COVID-19 Initiative

ACS Infect Dis. 2020 May 28 : acsinfecdis.0c00288.
Published online 2020 May 28. doi: 10.1021/acsinfecdis.0c00288
PMCID: PMC7263077
PMID: 32463221

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

Alexey Polonikov*

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			

Glyphosate in our soil -> our plants are SICK -> Does toxic food cause COVID?

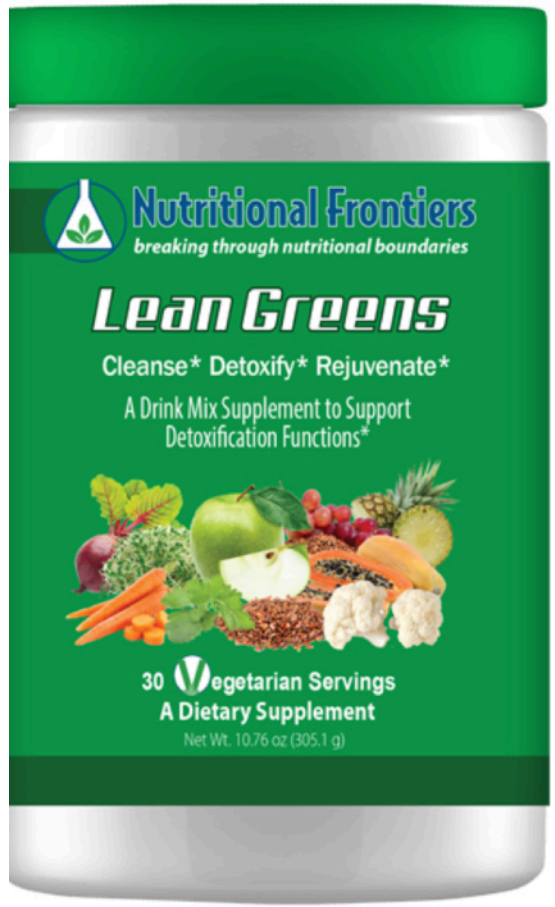
Taking advantage of Synergies: Pathway Crosstalk and DMG

•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.

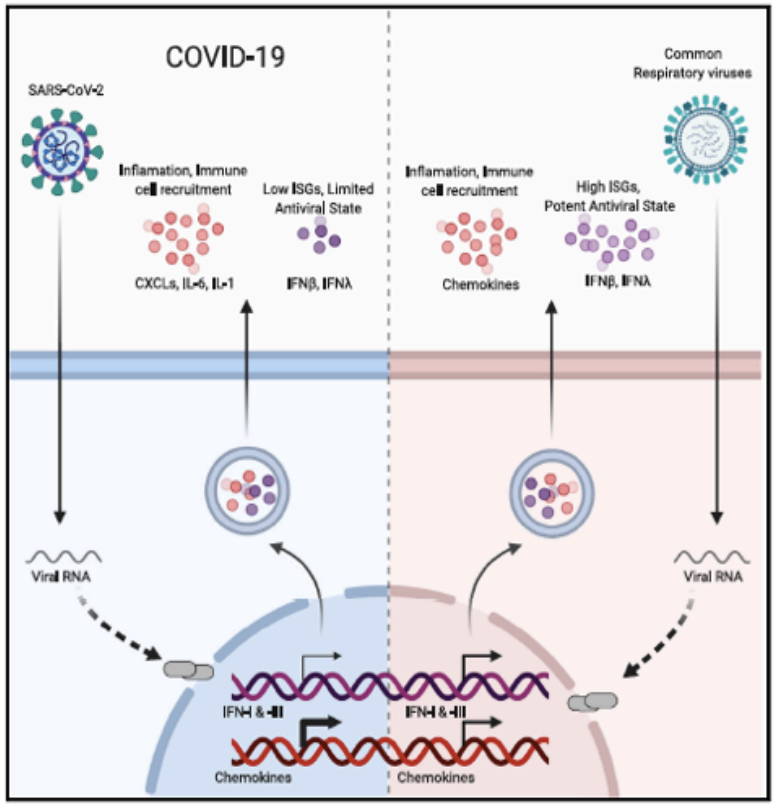
- The **methyl donor DMG** assists in the biosynthesis of vitamins, hormones, neurotransmitters, antibodies & nucleic acids.
- **DMG was patented over three decades ago for treating systemic inflammatory disease**, modulating immune response, and boasts in vitro evidence of antioxidant effects via free 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.

SCAN ME



Imbalanced IFN Response to RNA Viruses Drives Development of Autoimmune, Autoinflammatory Disease & Cancer

Graphical Abstract



Authors

Daniel Blanco-Melo, Benjamin E. Nilsson-Payant, Wen-Chun Liu, ..., Jean K. Lim, Randy A. Albrecht, Benjamin R. tenOever

Correspondence

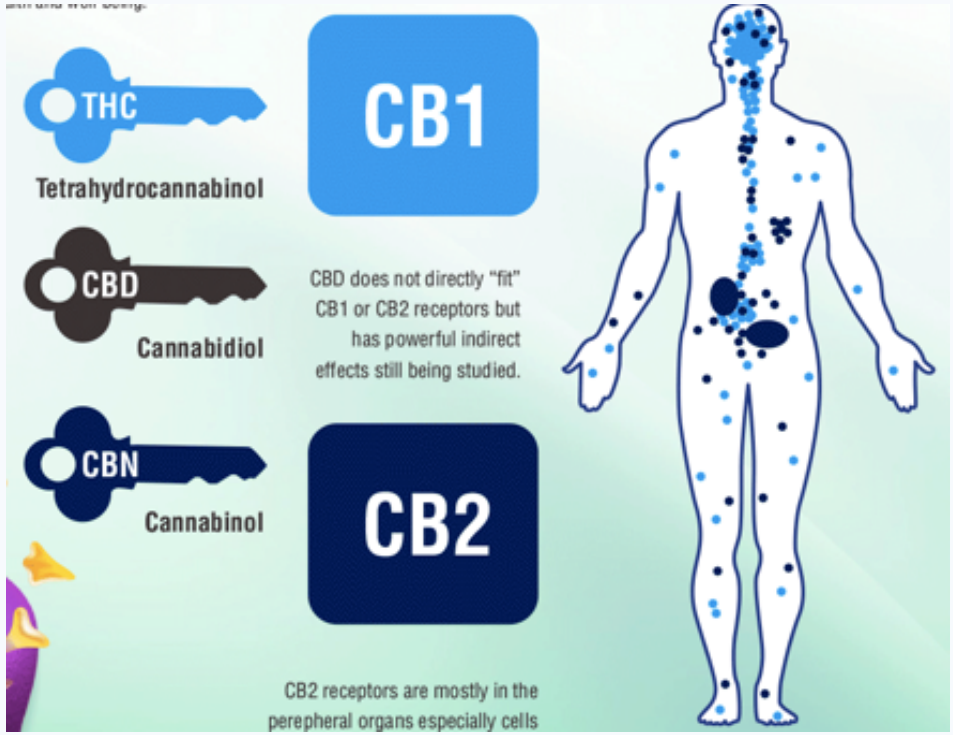
res2025@med.cornell.edu (R.E.S.), jean.lim@mssm.edu (J.K.L.), randy.albrecht@mssm.edu (R.A.A.), benjamin.tenoever@mssm.edu (B.R.t.)

In Brief

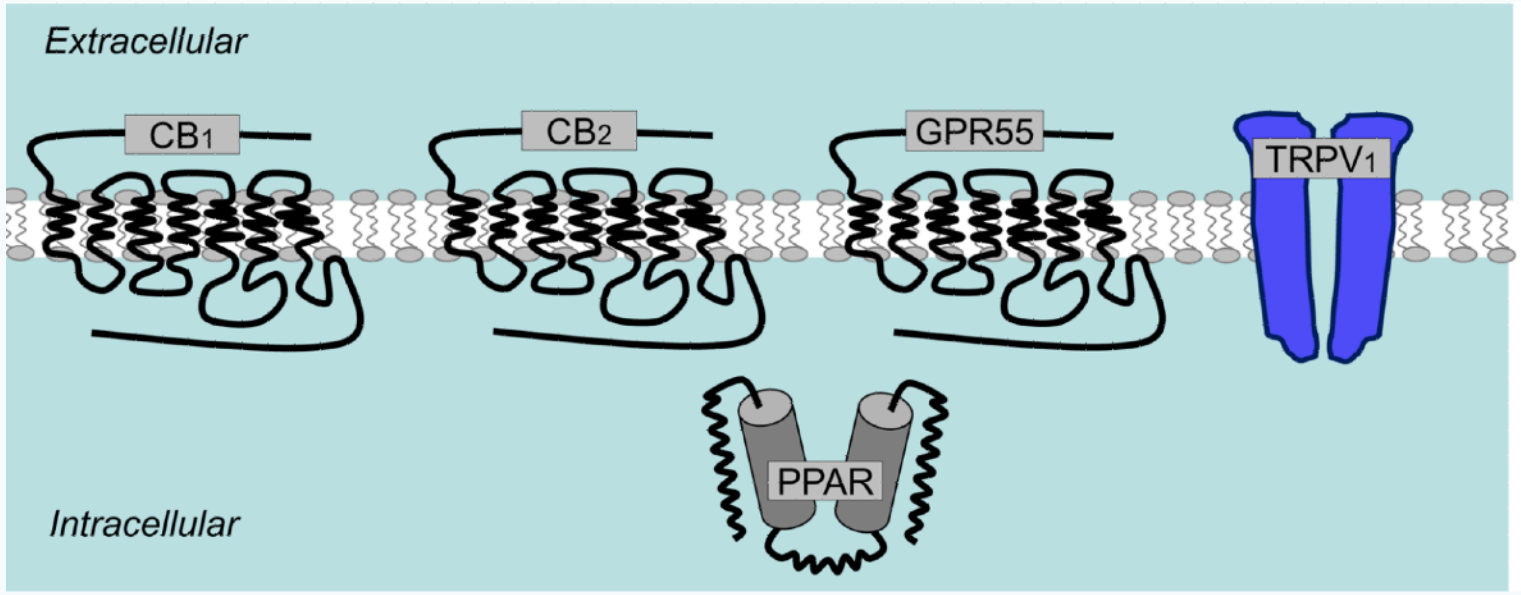
In comparison to other respiratory viruses, SARS-CoV-2 infection drives a lower antiviral transcriptional response that is marked by low IFN-I and IFN-III levels and elevated chemokine expression, which could explain the pro-inflammatory disease state associated with COVID-19.

The Human Endocannabinoid System (eCS)
GOD GIVEN Regulator of stem cells Immune Homeostasis & Neuroimmune Health

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



Glia. 2010 July ; 58(9): 1017–1030



Anxiety
Depression
Sleep Disorders
Pain
Itch
Wound healing

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

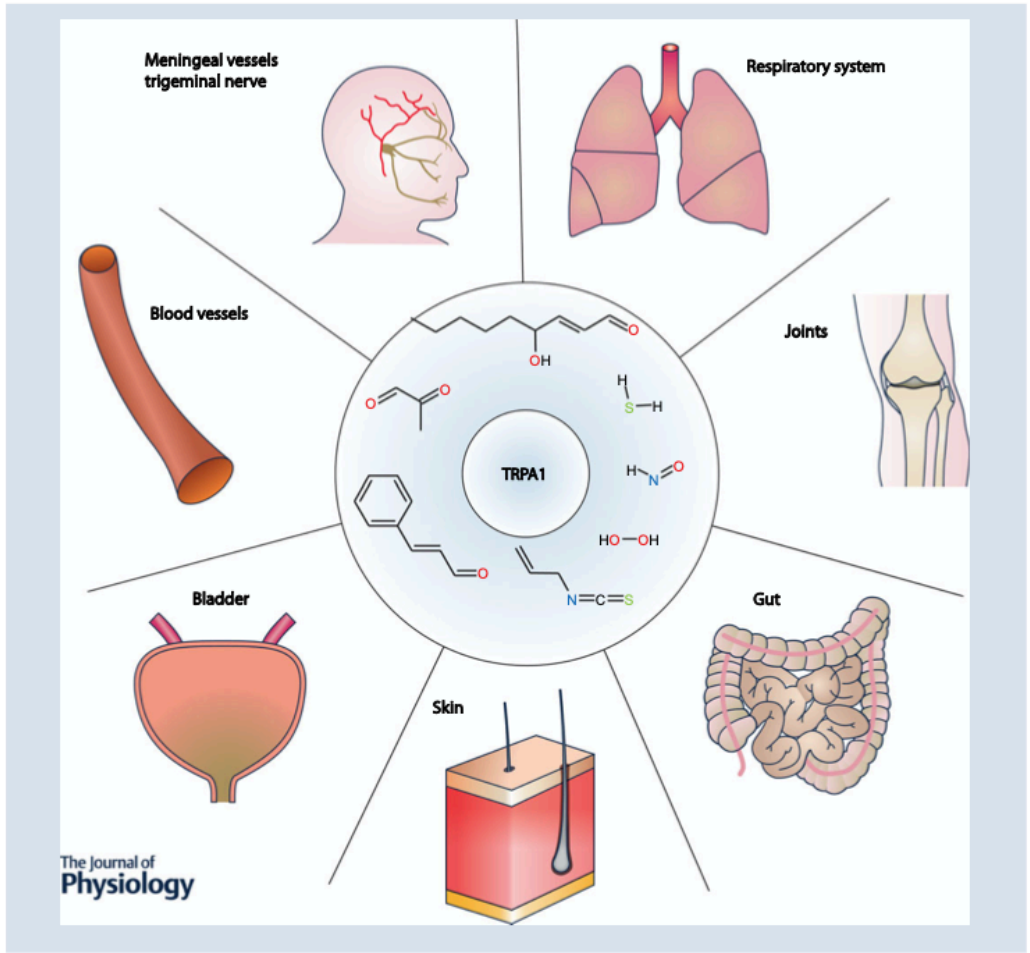
JPn Neuroscience
The Journal of Physiology

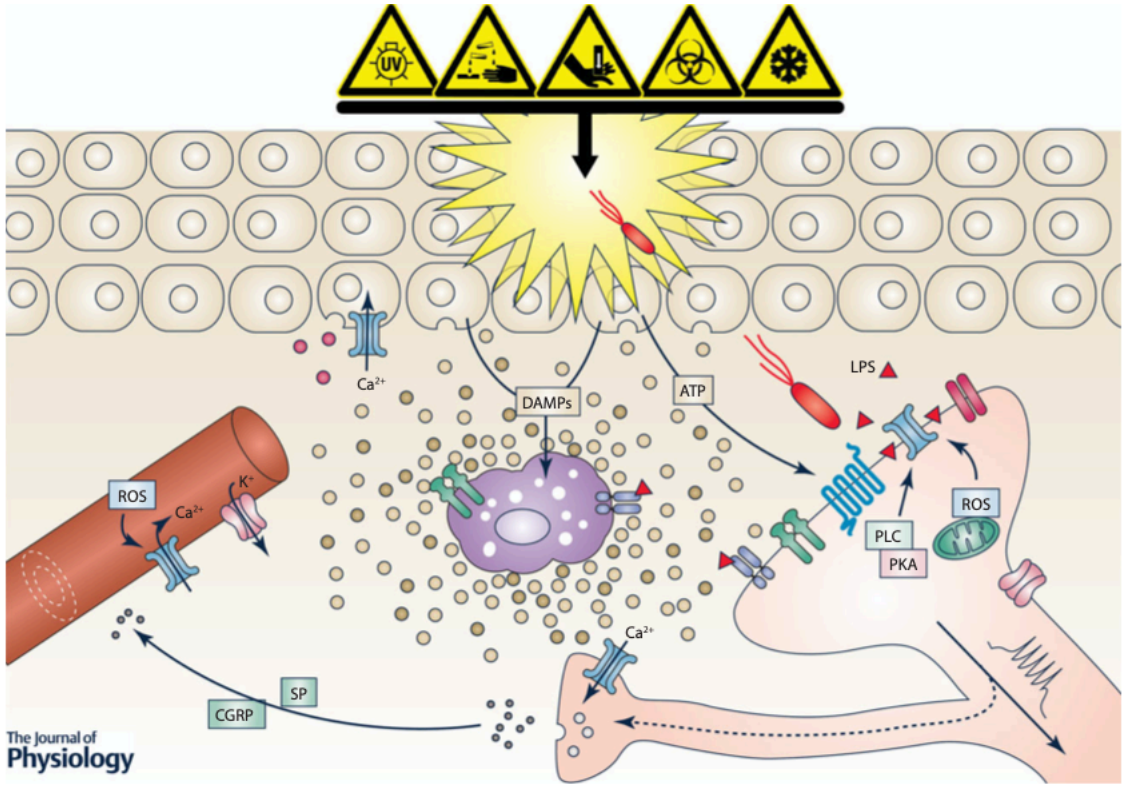
SYMPOSIUM REVIEW

TRPA1 channels: molecular sentinels of cellular stress and tissue damage

Félix Viana

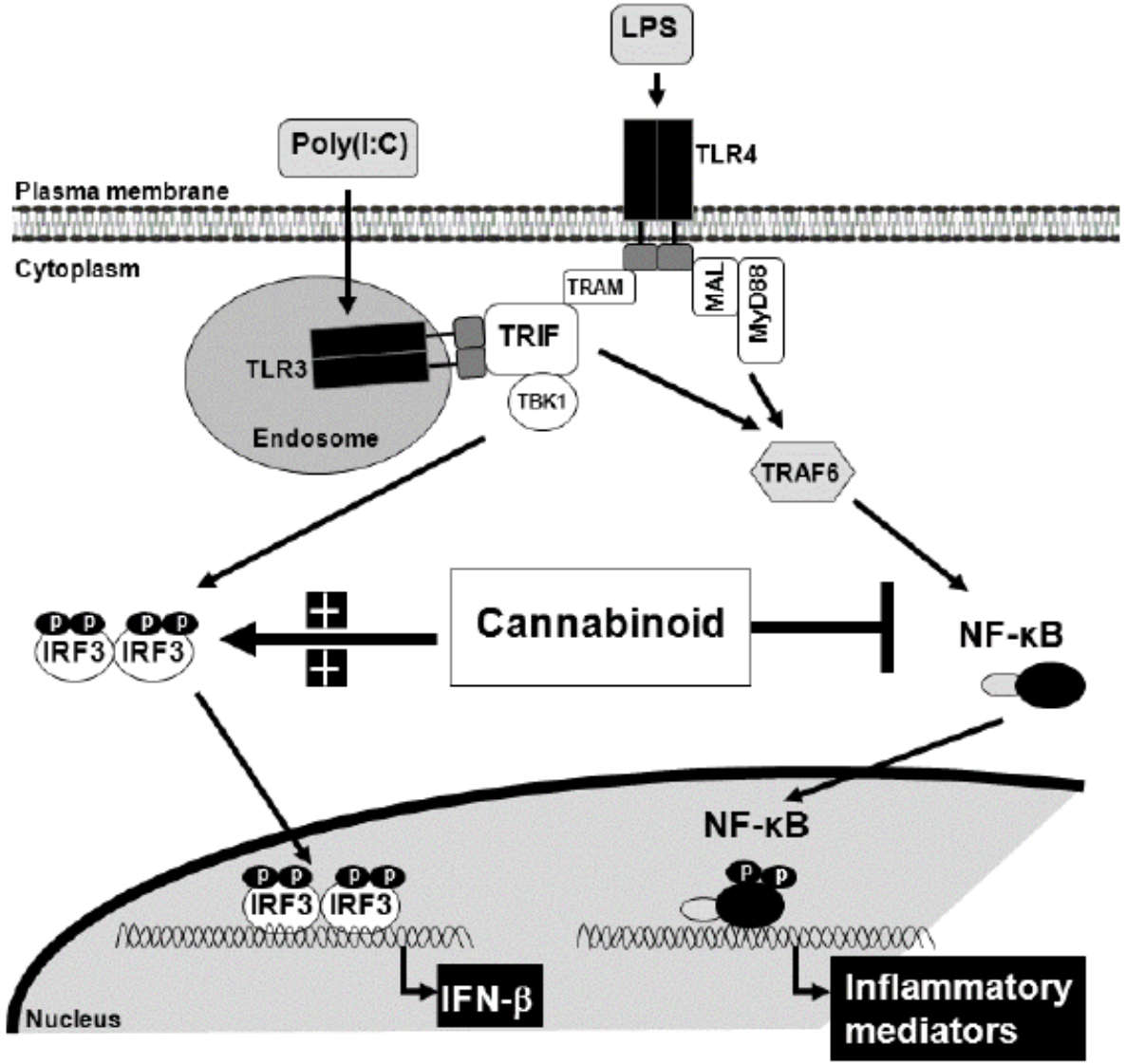
Instituto de Neurociencias de Alicante, Universidad Miguel Hernández-CSIC, Alicante, Spain





Cannabinoids are Anti-Viral and Reduce inflammation

THE DIMMER SWITCH ON THE FLAME



CANNABIS is NOT a DRUG! IT'S Food!! Nourish CELLS
ALL Plants (HEMP & CANNABIS) Removed from US 1938!

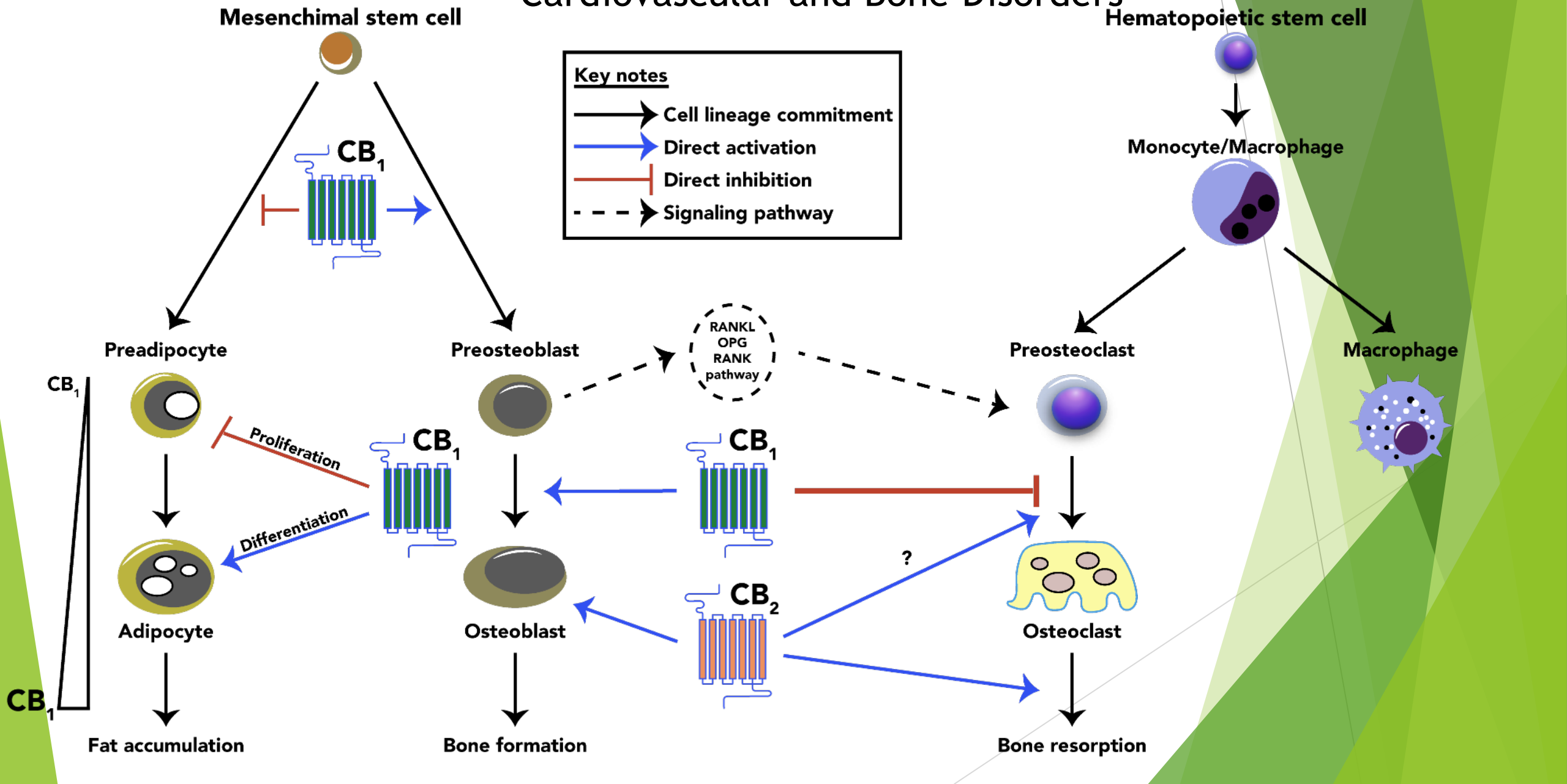
Drug Metabolism Reviews
http://informahealthcare.com/dmr
ISSN: 0360-2532 (print), 1097-9883 (electronic)
Drug Metab Rev, 2014; 46(1): 86–95
© 2014 Informa Healthcare USA, Inc. DOI: 10.3109/03602532.2013.849268
informa healthcare

REVIEW ARTICLE

Exogenous cannabinoids as substrates, inhibitors, and inducers of human drug metabolizing enzymes: a systematic review

GOD GIVEN LIPID/FAT SIGNALING SYSTEM in EVERY Cell MEMBRANE

CB2 Is associated with Chronic inflammation of the nervous system, Cardiovascular and Bone Disorders



BJP British Journal of Pharmacology

DOI:10.1111/j.1476-5381.2011.01238.x
www.brjpharmacol.org

Themed Issue: Cannabinoids in Biology and Medicine, Part I

REVIEW

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

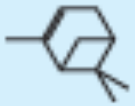
Ethan B Russo

GW Pharmaceuticals, Salisbury, Wiltshire, UK

Correspondence
Ethan Russo, MD, 20402 81st Avenue SW, Vashon, WA 98070, USA. E-mail: ethanrusso@comcast.net

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

Received
19 November 2010
Revised
29 December 2010
Accepted
12 January 2011

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

molecules

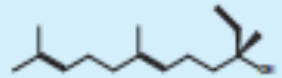
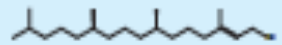
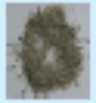
MDPI

Article

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

Dvora Namdar [1,*], Hillary Voet [1], Vinayaka Ajjampura [1], Stalin Nadarajan [1], Einav Mayzlish-Gati [2], Moran Mazuz [1], Nurit Shalev [1] and Hinanit Koltai [1]

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

β-Caryophyllene		 Pepper	Al via PGE-1 comparable phenylbutazone (Basile *et al.*, 1988)	CBD
			Gastric cytoprotective (Tambe *et al.*, 1996)	THC
			Anti-malarial (Campbell *et al.*, 1997)	?
			Selective CB$_2$ agonist (100 nM) (Gertsch *et al.*, 2008)	THC
			Treatment of pruritus? (Kamak *et al.*, 2007)	THC
			Treatment of addiction? (Xi *et al.*, 2010)	CBD
Caryophyllene Oxide		 Lemon balm	Decreases platelet aggregation (Lin *et al.*, 2003)	THC
			Antifungal in onychomycosis comparable to ciclopiroxolamine and salconazole (Yang *et al.*, 1999)	CBC, CBG
			Insecticidal/anti-feedant (Bettarini *et al.*, 1993)	THCA, CBGA
Nerolidol		 Orange	Sedative (Buret *et al.*, 1972)	THC, CBN
			Skin penetrant (Cornwell and Barry, 1994)	–
			Potent antimalarial (Lopes *et al.*, 1999, Rodrigues Goulart *et al.*, 2004)	?
			Anti-leishmanial activity (Amuda *et al.*, 2005)	?
Phytol		 Green tea	Breakdown product of chlorophyll	–
			Prevents Vitamin A teratogenesis (Arnhold *et al.*, 2002)	–
			TGABA via SSADH inhibition (Bang *et al.*, 2002)	CBG

Beta-caryophyllene is a dietary cannabinoid

Jürg Gertsch*†, Marco Leonti‡§, Stefan Raduner*§, Ildiko Racz¶, Jian-Zhong Chen‖, Xiang-Qun Xie‖, Karl-Heinz Altmann*, Meliha Karsak¶, and Andreas Zimmer¶

*Institute of Pharmaceutical Sciences, Department of Chemistry and Applied Biosciences, Eidgenössische Technische Hochschule (ETH) Zurich, 8092 Zürich, Switzerland; ‡Dipartimento Farmaco Chimico Tecnologico, University of Cagliari, 01924 Cagliari, Italy; ¶Department of Molecular Psychiatry, University of Bonn, 53115 Bonn Germany; and ‖Department of Pharmaceutical Sciences, University of Pittsburgh, Pittsburgh, PA 15260

β-Caryophyllene, A Natural Dietary CB2 Receptor Selective Cannabinoid can be a Candidate to Target the Trinity of Infection, Immunity, and Inflammation in COVID-19

Niraj Kumar Jha[1†], Charu Sharma[2†], Hebaallah Mamdouh Hashiesh[3], Seenipandi Arunachalam[3], MF Nagoor Meeran[3], Hayate Javed[4], Chandragouda R. Patil[5], Sameer N. Goyal[6] and Shreesh Ojha[3*]

Beta-caryophyllene enhances wound healing through multiple routes

Sachiko Koyama, Anna Purk, Manpreet Kaur, Helena A. Soini, Milos V. Novotny, Keith Davis, C. Cheng Kao, Hiroaki Matsunami, Anthony Mescher

Published: December 16, 2019 • https://doi.org/10.1371/journal.pone.0216104

CYTOGEN™

VIRUSES/POSIONS
its from lack of Minerals, Essential Amino acids, Phytocannabinoids

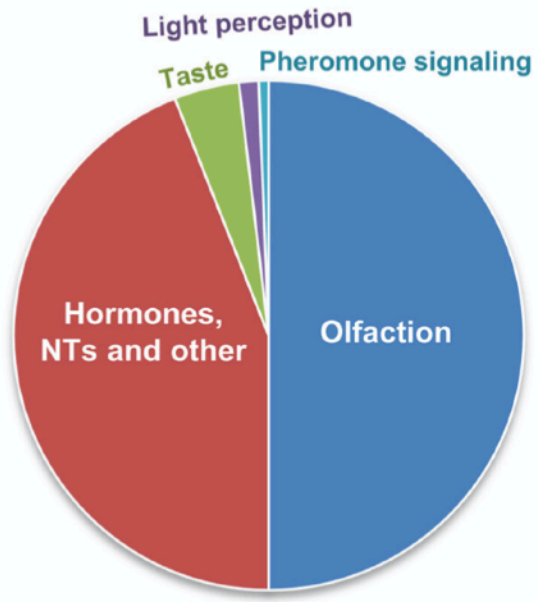
frontiers in Aging Neuroscience

REVIEW
published: 24 April 2019
doi: 10.3389/fnagi.2019.00089

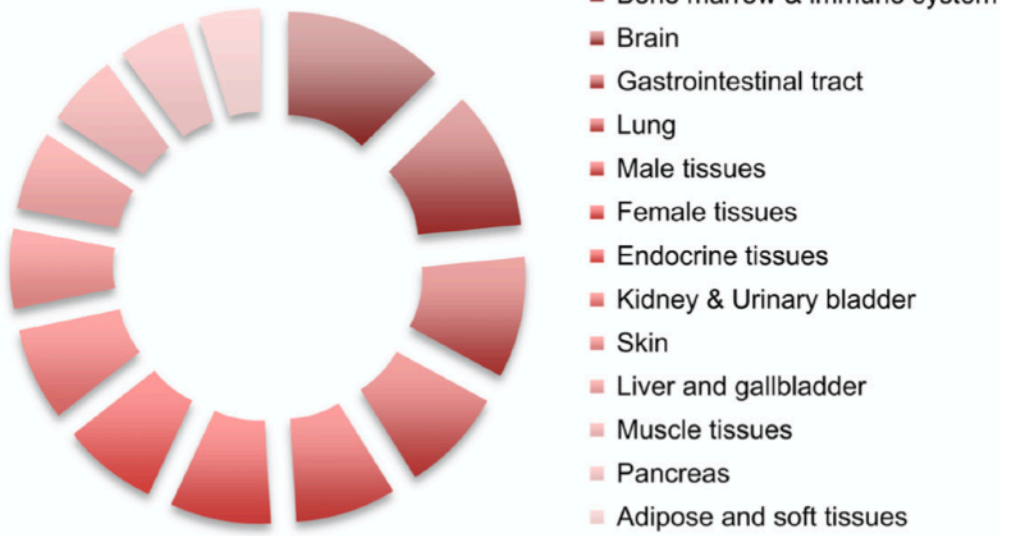
$G_{i/o}$-Protein Coupled Receptors in the Aging Brain

Patrícia G. de Oliveira[1†], Marta L. S. Ramos[1†], António J. Amaro[2], Roberto A. Dias[1†‡] and Sandra I. Vieira[1†]*

A GPCRs main functions



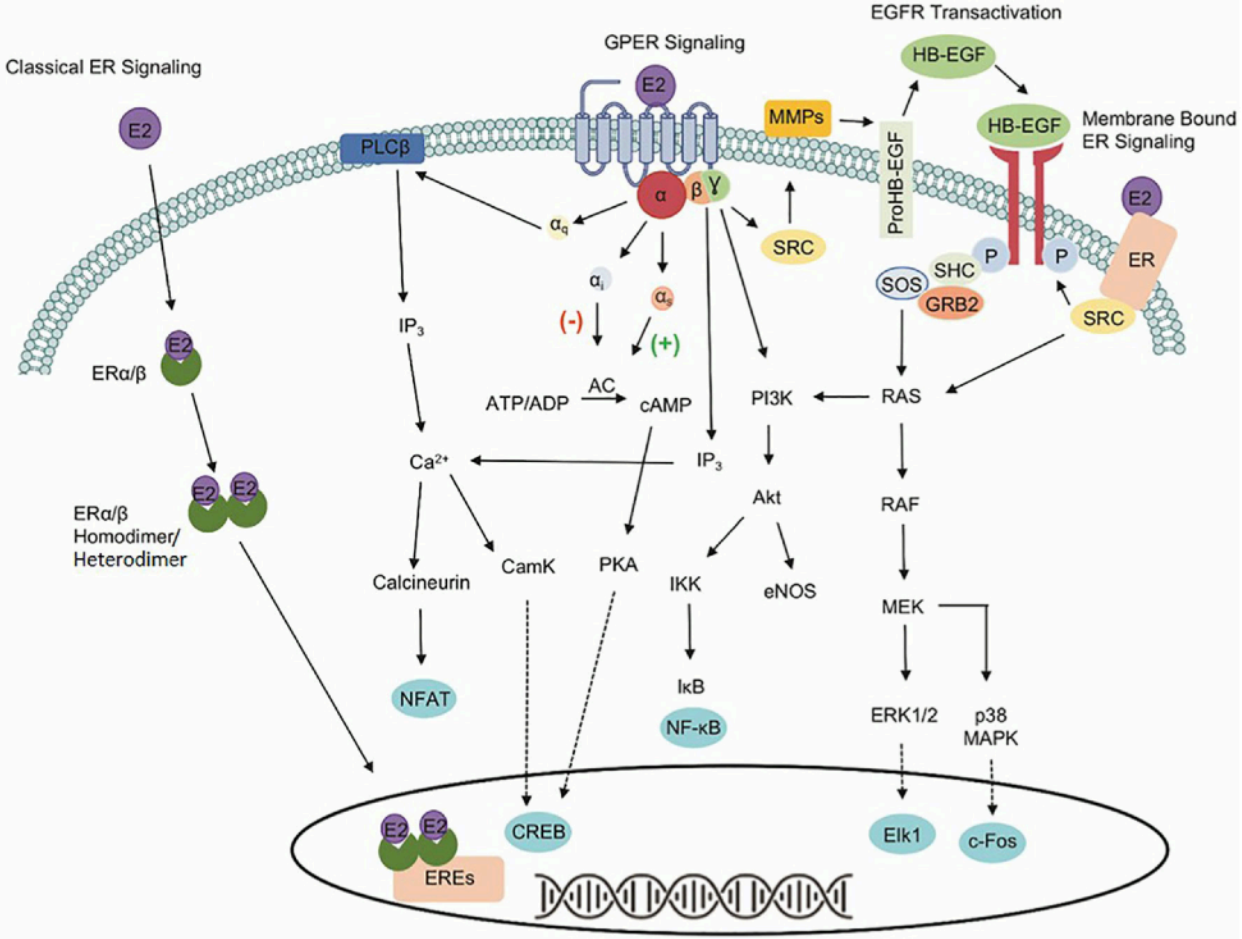
B Tissue distribution of $G_{i/o}$-coupled GPCRs

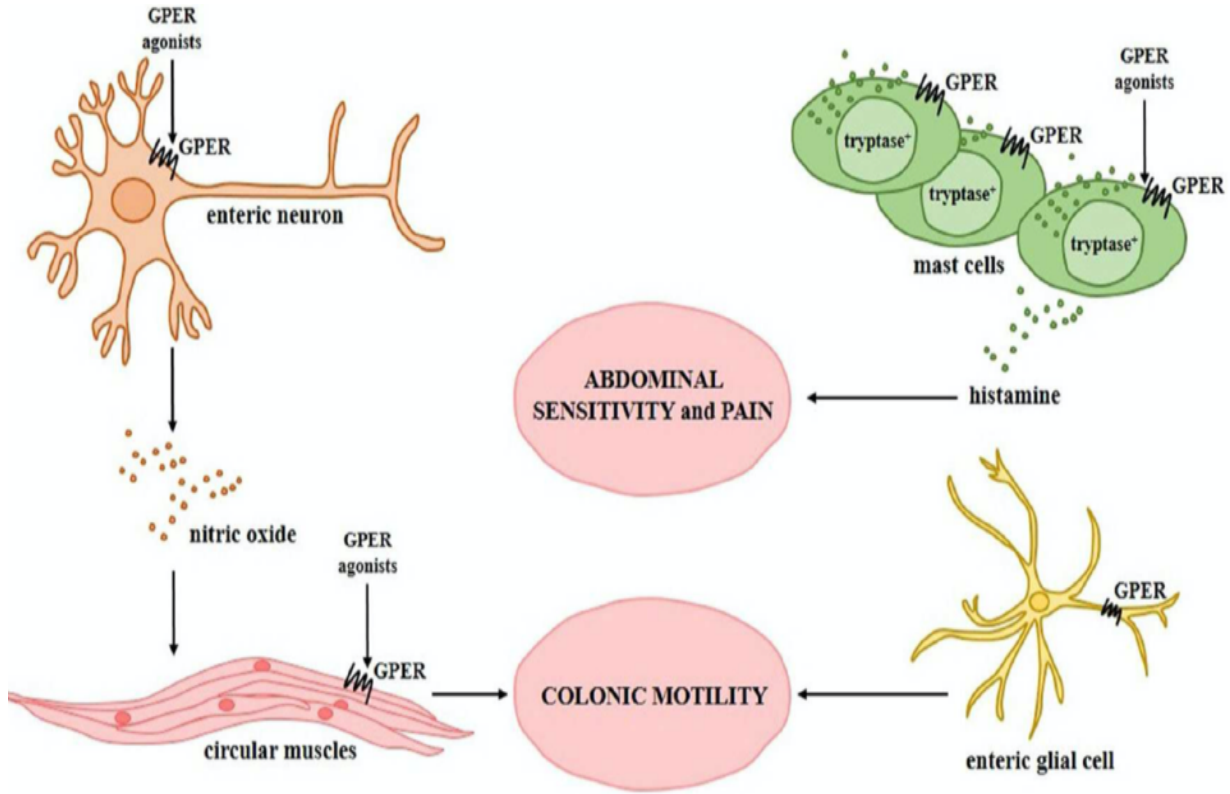


frontiers in Endocrinology

G Protein-Coupled Estrogen Receptor, GPER1, Offers a Novel Target for the Treatment of Digestive Diseases

PERSPECTIVE
published: 12 November 2020
doi: 10.3389/fendo.2020.578536





Cannabinoids regulate MINERALS in Immune Cells via endocannabinoid System Receptors

- A downside of activation of MINERALS is the dysregulation endogenous microbes
- OUR SOILS ARE DEPLETED OF MINERALS

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_2O_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

Review

CellPress

Divalent cation signaling in immune cells

Benjamin Chaigne-Delalande and Michael J. Lenardo

Molecular Development of the Immune System Section, Lymphocyte Molecular Genetics Unit, Laboratory of Immunology, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, MD 20892, USA

Nutritional Support

provide the building blocks to support nitric oxide formation which may enhance overall circulation, including heart health and erectile dysfunction.

SUPPLEMENT FACTS

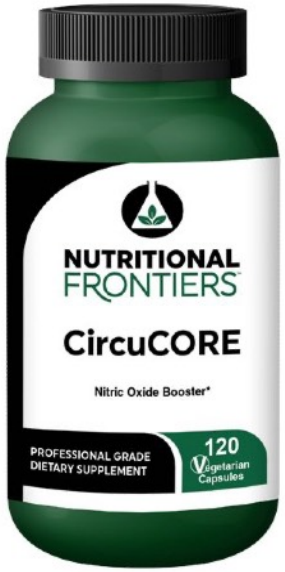
Serving Size: 2 Capsules
Servings Per Container: 60
Amount Per Serving

Vitamin C (as Ascorbic Acid)	100 mg
Vitamin B12 (Methylcobalamin)	100 mcg
Folate	100 mcg
(as Quatrefolic® (equivalent to 200 mcg of [6S]-5-Methyltetrahydrofolic acid, glucosamine salt))	
Beet Root Powder	200 mg
Activin® Grape Seed Extract (vitis vinifera) 100:1	120 mg
Hawthorne	100 mg
L-Citrulline	100 mg
L-Arginine	100 mg

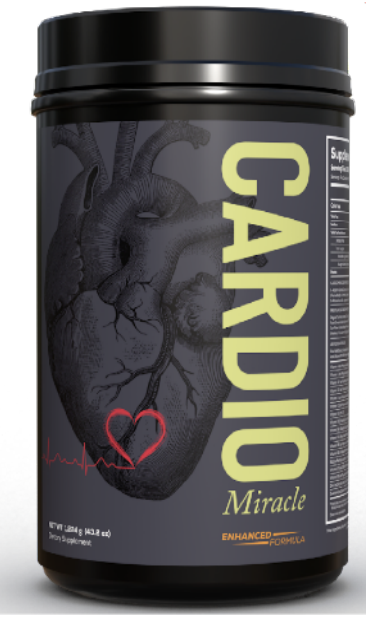
Other Ingredients: Vegetable Cellulose (Capsule), Microcrystalline Cellulose, Silicon Dioxide, Magnesium Stearate

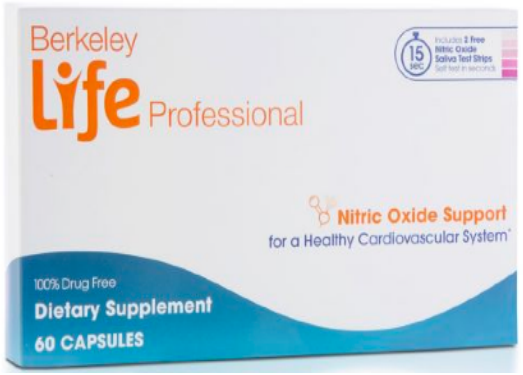
Suggested Use: As a dietary supplement, take two capsules daily, or as directed by your healthcare practitioner.

Warning: If you are pregnant or nursing, consult your health care practitioner before taking this product.



SCAN ME





SCAN ME

Nitric oxide is a soluble gas that is continually being made from arginine in endothelial cells. Endothelial cells comprise a layer of cells inside the lining of our blood vessels.

Taking advantage of synergies/cross talk in Pathways enhances Efficacy and Safety profiles of Pharmaceutical Drugs

Review

Targeting the CB_2 receptor for immune modulation

Charles A Lunn, Eva-Pia Reich & Loretta Bober

Pages 653-663 | Published online: 18 Sep 2006

Download citation https://doi.org/10.1517/14728222.10.5.653

teraction between Cannabinoid System and Toll-Like ceptors Controls Inflammation

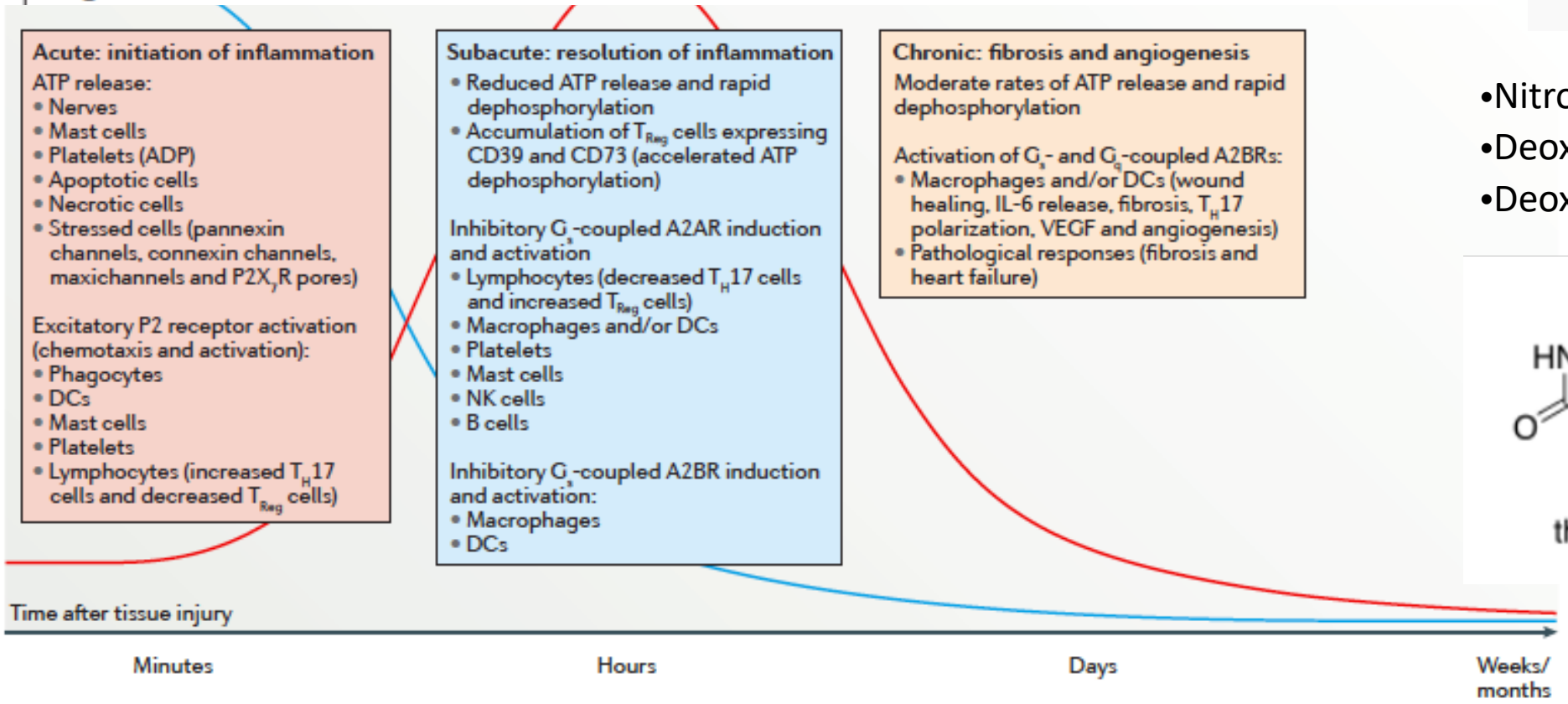
Kathleen L. McCoy

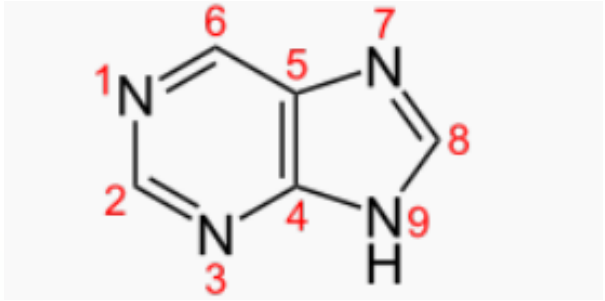
Department of Microbiology and Immunology, Virginia Commonwealth University, P.O. Box 980678, Richmond, VA 2329

Dr. Zelenko's Zstack + CBD

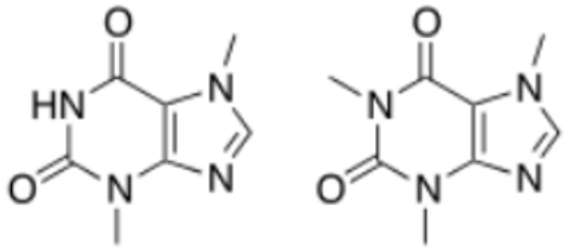
Purinergic regulation of the immune system

Caglar Cekic[1] and Joel Linden[2]





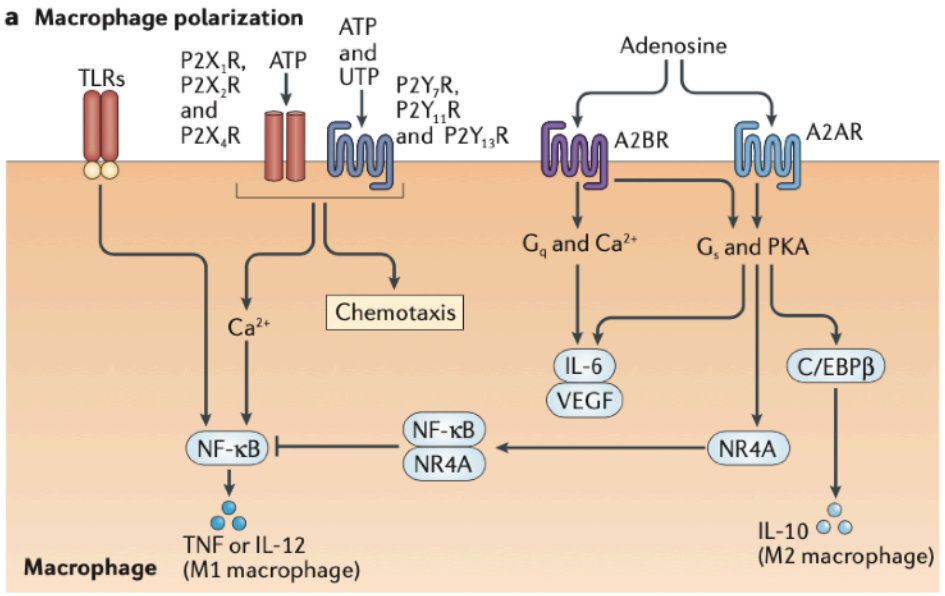
- Nitrogenous bases of DNA
- Deoxyadenosine
- Deoxyguanine

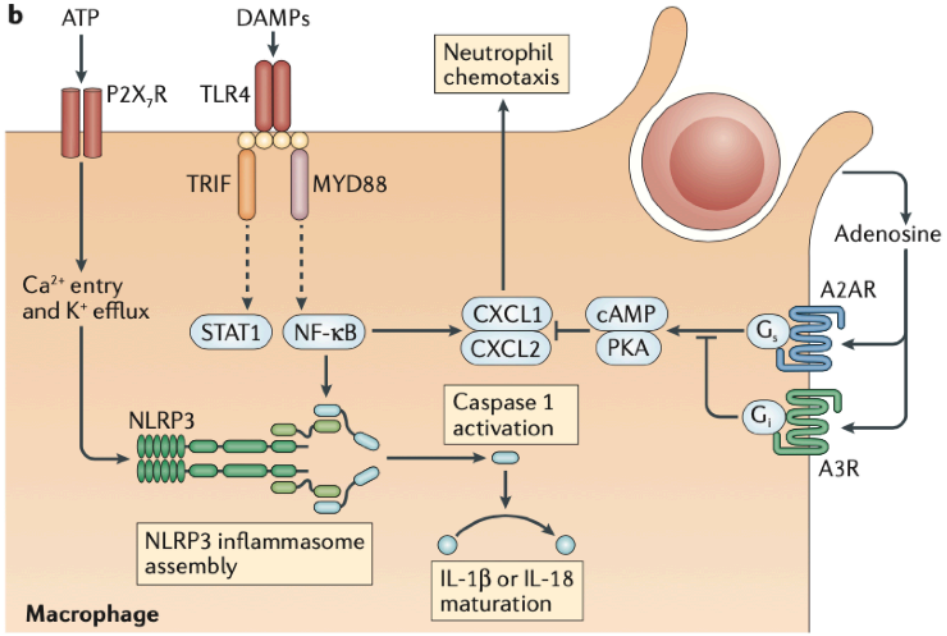


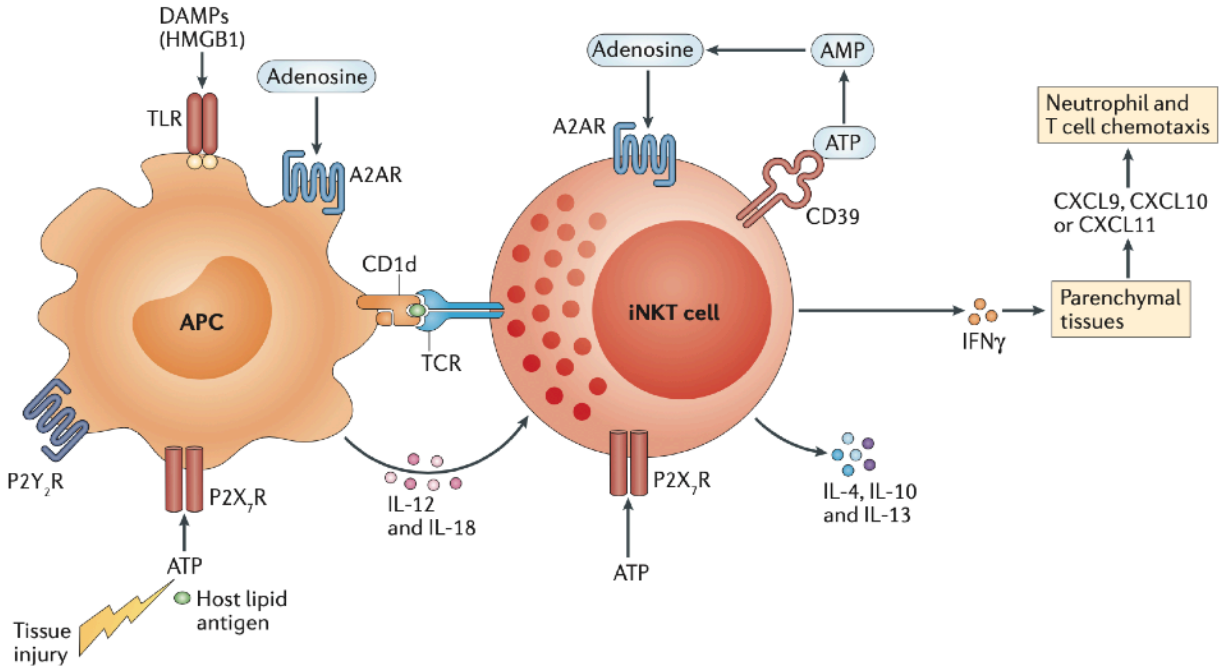
theobromine **6**

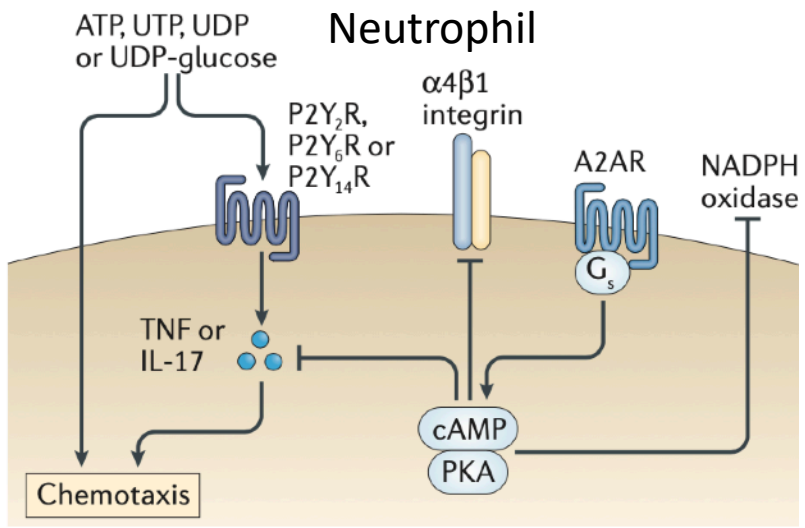
caffeine **7**

Purinergic Signaling in Monocyte/ Macrophages, Natural Killer Cells, Neutrophils

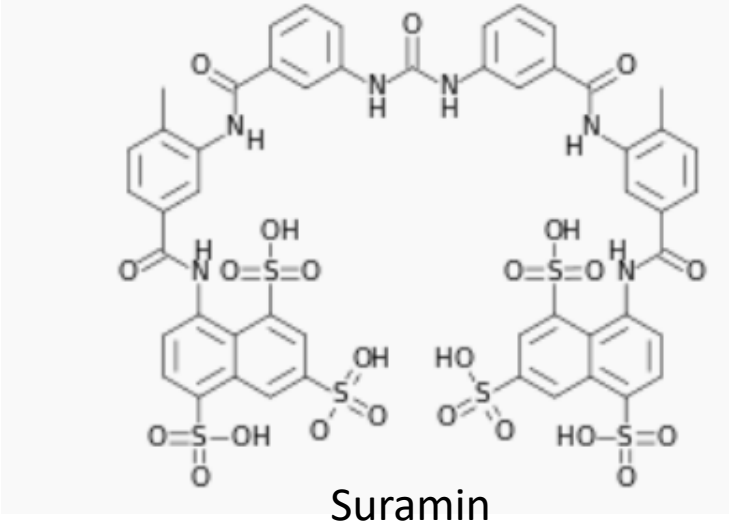






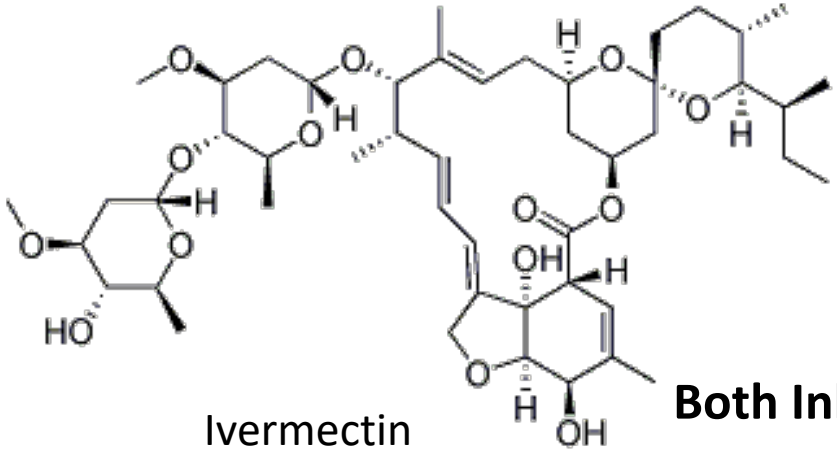


Suramin & Ivermectin: Purinergic Modulators important for restoring balance of Innate and adaptive Immunity



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

AMERICAN SOCIETY FOR MICROBIOLOGY | Antimicrobial Agents and Chemotherapy®

Citation Wiedemar N, Hauser DA, Mäser P. 2020. 100 years of suramin. Antimicrob Agents Chemother 64:e01168-19. https://doi.org/10.1128/AAC.01168-19.

Address correspondence to Pascal Mäser, pascal.maeser@unibas.ch.

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Published 21 February 2020

MINIREVIEW

100 Years of Suramin

Natalie Wiedemar,[a,b] Dennis A. Hauser,[a,b] Pascal Mäser[a,b]

SURAMIN, THE FRUIT OF EARLY MEDICINAL CHEMISTRY

SURAMIN AS AN ANTIPARASITIC DRUG

SURAMIN AS AN ANTIVIRAL AGENT

SURAMIN AGAINST CANCER

SURAMIN AS AN ANTIDOTE

Three of the many biological activities of suramin support its potential use as a protective agent: the inhibition of thrombin, the inhibition of phospholipase A2, and the inhibition of purinergic signaling

FURTHER POTENTIAL USES OF SURAMIN

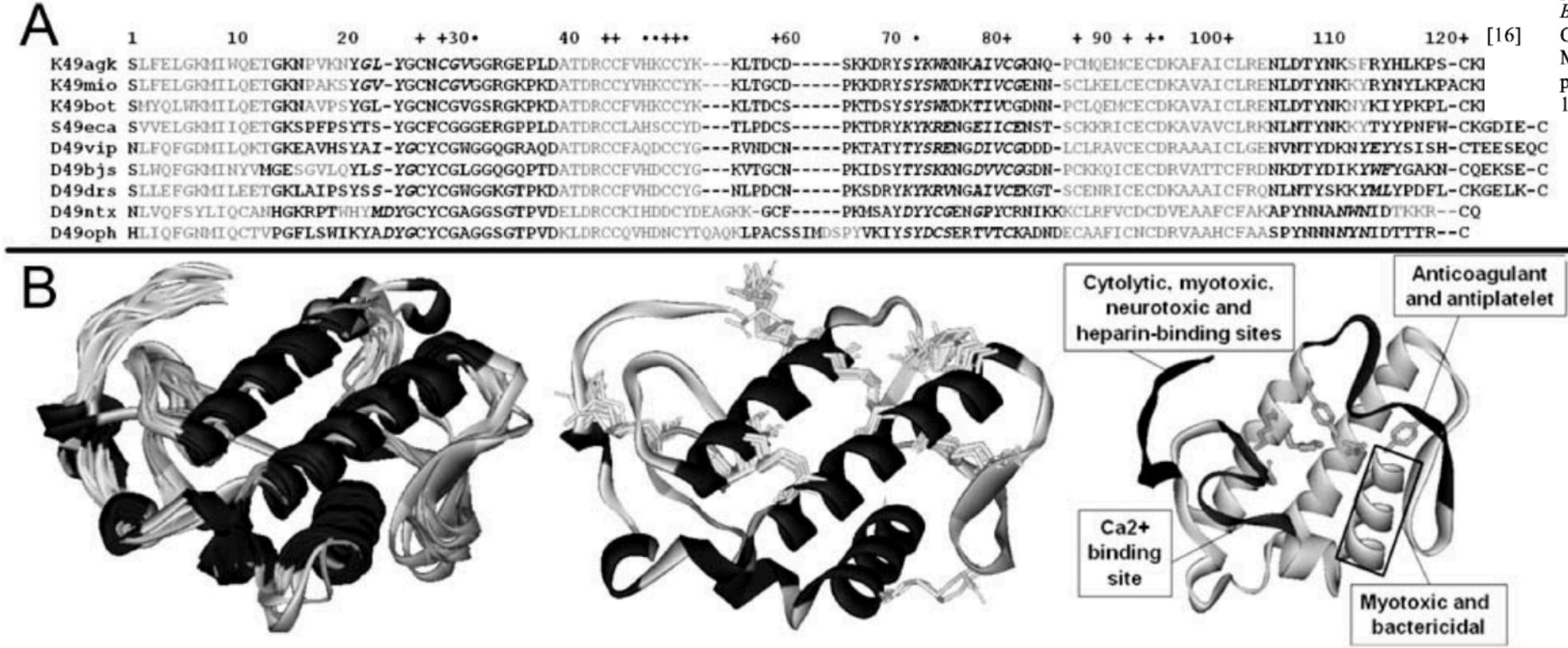
TABLE 1 Diseases and pathogens susceptible to suramin

Disease and/or pathogen	Activity in[a]: Cell culture	Animal model	Patient
Parasitic infections			
T. b. rhodesiense HAT	X	X	X
T. brucei gambiense HAT	X	X	X
Surra, *T. evansi*	X	X	NA
River blindness, *O. volvulus*	X	X	X
T. cruzi	X		
Leishmania spp.	X		
P. falciparum	X		
Viral infections			
Hepatitis virus	X	X	X
AIDS, HIV	X		X
Herpes simplex virus	X	X	
Chikungunya virus	X	X	
Enterovirus 71	X	X	
Dengue virus	X		
Zika virus	X		
Ebola virus	X		
Neoplastic diseases			
Non-small cell lung cancer	X	X	
Breast cancer	X	X	
Bladder cancer	X	X	
Brain tumors	X	X	
Prostate cancer	X	X	X
Other			
Snakebite	X	X	
Arthritis	X	X	
Autism	NA	X	X

Structural and Pharmacological Features of Phospholipases A_2 from Snake Venoms

INTRODUCTION

Snake venoms are a complex mixture of active molecules including proteins and non-protein fractions [1-3]. Importantly the most of the biological properties of snake venoms are related to enzymes, such as phospholipases, metalloproteases, serine proteases, L-aminoacid oxidases, and to other proteins such as disintegrins, neurotoxins and myotoxins [4-



[12] Chacur, M.; Milligan, E.D.; Sloan, E.M.; Wieseler-Frank, J.; Barrientos, R.M.; Martin, D.; Poole, S.; Lomonte, B.; Gutiérrez, J.M.; Maier, S.F.; Cury, Y.; Watkins, L.R. Snake venom phospholipase A_2s (Asp49 and Lys49) induce mechanical allodynia upon perisciatic administration: involvement of spinal cord glia, proinflammatory cytokines and nitric oxide. *Pain,* **2004**, *108*(1-2), 180-191.

[13] Soares, A.M.; Giglio, J.R. Chemical modifications of phospholipases A_2 from snake venoms: effects on catalytic and pharmacological properties. *Toxicon,* **2003**, *42*(8), 855-868.

[14] Gutiérrez, J.M.; Lomonte, B.J. Phospholipase A_2 myotoxins from Bothrops snake venoms. *Toxicon,* **1995**, *33*(11), 1405-1424.

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FEBS Letters 436 (1998) 256–258

FEBS 20902

Enhancement and inhibition of snake venom phosphodiesterase activity by lysophospholipids

Abstract Lysophospholipids are liberated during venomous action. In this study we demonstrated that lysophosphatidyl choline (LPC) of various acyl chains enhances considerably the activity of snake venom phosphodiesterase (PDE). Lysophosphatidic acid (LPA) and its cyclic form (cLPA), on the other hand, were found to inhibit this enzyme in a non-competitive (LPA) or competitive (cLPA) manner. Both of these activities may contribute to the progression and subsidence of the poisoning profile. PDE from cellular origin was not substantially affected by any of the above lysophospholipids.

Key words: Phosphodiesterase; Cyclic lysophosphatidic acid; Snake venom; Cyclic AMP

BIOLOGICAL REVIEWS
Cambridge Philosophical Society
Biol. Rev. (2018), pp. 000–000.
doi: 10.1111/brv.12407

No effects without causes: the Iron Dysregulation and Dormant Microbes hypothesis for chronic, inflammatory diseases

Douglas B. Kell[1,2,3,*] and Etheresia Pretorius[3]

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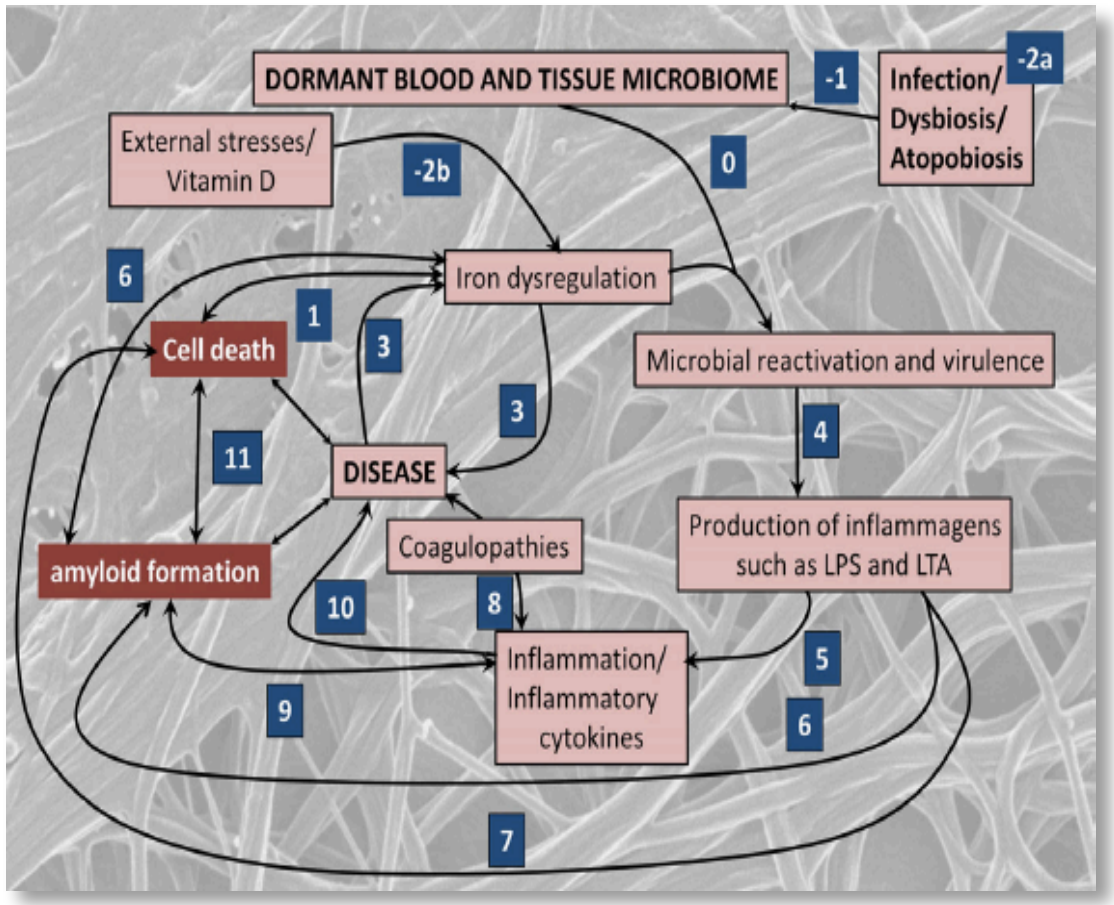
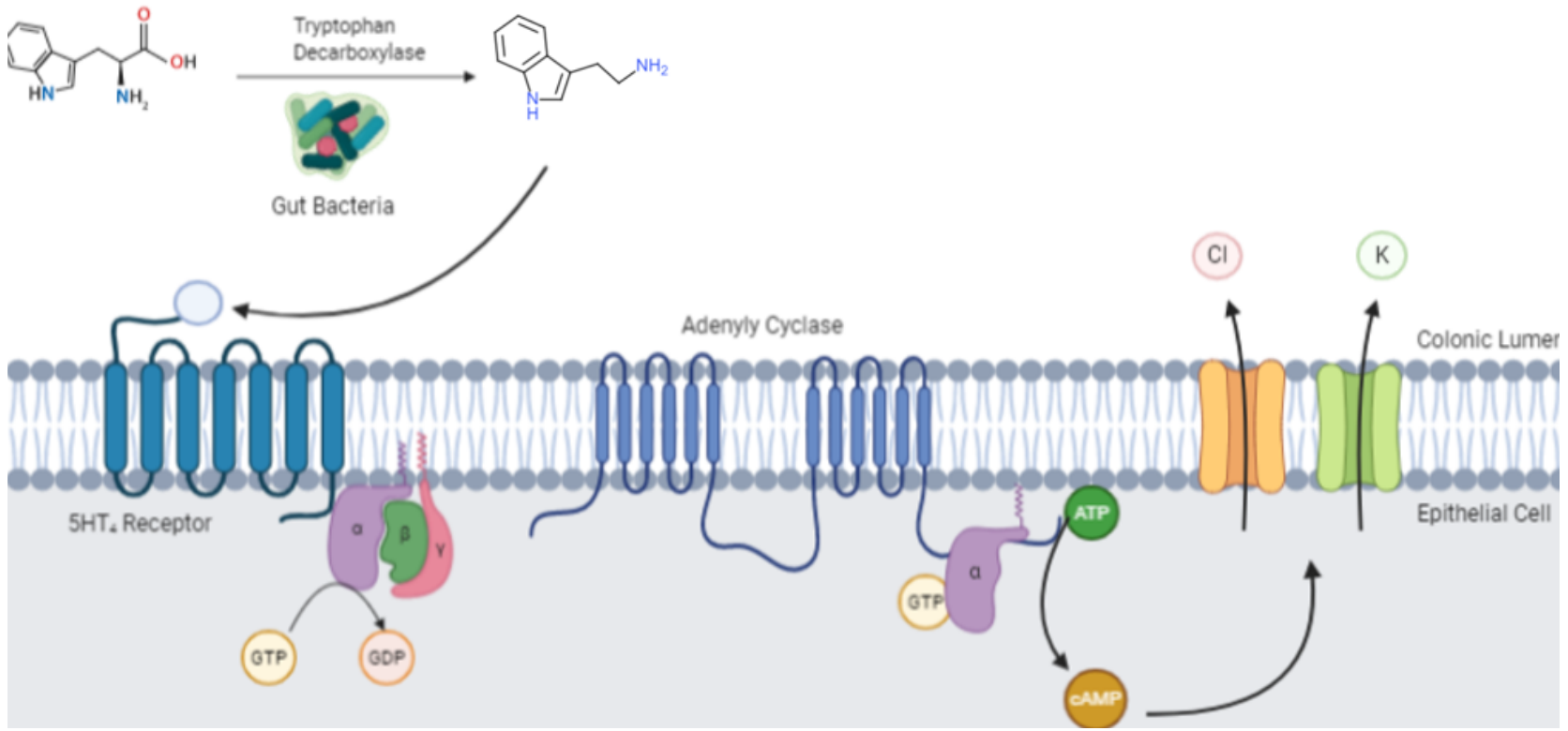
[2] *The Manchester Institute of Biotechnology, The University of Manchester, 131 Princess Street, Manchester, Lancs M1 7DN, U.K.*
[3] *Department of Physiological Sciences, Stellenbosch University, Stellenbosch Private Bag X1, Matieland, 7602, South Africa*

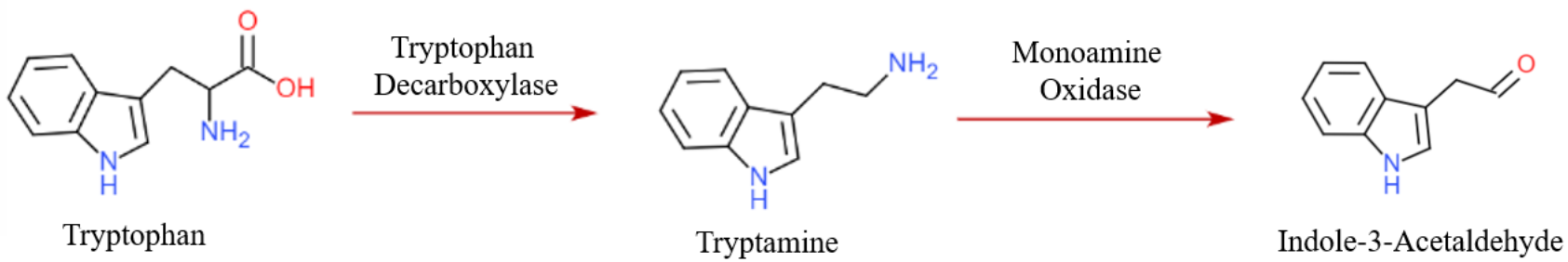
ABSTRACT

Since the successful conquest of many acute, communicable (infectious) diseases through the use of vaccines and antibiotics, the currently most prevalent diseases are chronic and progressive in nature, and are all accompanied by inflammation. These diseases include neurodegenerative (e.g. Alzheimer's, Parkinson's), vascular (e.g. atherosclerosis, pre-eclampsia, type 2 diabetes) and autoimmune (e.g. rheumatoid arthritis and multiple sclerosis) diseases that may appear to have little in common. In fact they all share significant features, in particular chronic inflammation and its attendant inflammatory cytokines. Such effects do not happen without underlying and initially 'external' causes, and it is of interest to seek these causes. Taking a systems approach, we argue that these causes include (*i*) stress-induced iron dysregulation, and (*ii*) its ability to awaken dormant, non-replicating microbes with which the host has become infected. Other external causes may be dietary. Such microbes are capable of shedding small, but functionally significant amounts of highly inflammagenic molecules such as lipopolysaccharide and lipoteichoic acid. Sequelae include significant coagulopathies, not least the recently discovered amyloidogenic clotting of blood, leading to cell death and the release of further inflammagens. The extensive evidence discussed here implies, as was found with ulcers, that almost all chronic, infectious diseases do in fact harbour a microbial component. What differs is simply the microbes and the anatomical location from and at which they exert damage. This analysis offers novel avenues for diagnosis and treatment.

Key words: amyloid, inflammation, iron dysregulation, blood clotting, LPS, amplification.




Tryptophan
Decarboxylase
Gut Bacteria
Adenyly Cyclase
Cl
K
Colonic Lumer
Epithelial Cell
5HT4 Receptor
α
β
γ
GTP
GDP
ATP
cAMP


Tryptophan
Decarboxylase
Monoamine
Oxidase
Tryptophan
Tryptamine
Indole-3-Acetaldehyde

Phytocannabinoids ARE ORAL NATURAL VACCINES Efficacy and Reduce Neuroinflammation

www.nature.com/scientificreports

SCIENTIFIC REPORTS

OPEN

Transient Cannabinoid Receptor 2 Blockade during Immunization Heightens Intensity and Breadth of Antigen-specific Antibody Responses in Young and Aged mice

Received: 31 August 2016
Accepted: 12 January 2017
Published: 17 February 2017

Emmanuel Dotsey[1], Irina Ushach[1], Egest Pone[2], Rie Nakajima[1], Algis Jasinskas[1], Donovan A. Argueta[3], Andrea Dillon[3], Nicholas DiPatrizio[3], Huw Davies[1], Albert Zlotnik[4], Peter D. Crompton[5] & Philip L. Felgner[1]