Research Article

Treating Corona and respiratory viral effects through repair mitochondrial membrane by acylglycerophosphocholine O-acyltransferase, and by ATP drug “Remdesivir”, and by -Methyl-guanosine-5’-(α-fluoro)- monophosphate as antiviral molecules in the presence of CoA phospho_ transferase and in presence of thrombin inhibitor "or retinol active molecules.

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Abstract

COVID-19 pandemic induces a viral protein called open reading frame 3b (ORF3b) actively blocks the induction of type I interferon which are polypeptides that are secreted by infected cells. The antiviral defense called interferon, produced by sick cells originally from ribosomal functions and mitochondria activities, which plays a really important role in slowing virus infections and remove viral inflammation. Interferon is considered to be the initial primary message that started from the ribosome in the infected cells to follow the right original biological pathways to reach the brain for asking for protection, recoveries, and facing the viral infection.

Covid-19 viral infections damage actin isoforms activities and blockage blood capillaries and nasal microfilaments compositions. That Nasal passages, olfactory epithelial, and olfactory Nasal nerve are lined with mucous membranes which contain lines of micro actin filaments that composed of G-actin isoforms and ATPase in their loops structures. At normal conditions, All incoming breath air streams through nose compositions will be filtered & started to be polarized through the effects of ATPase, then delivered to neuron cells.

Viral effects started by nasal epithelial tissue that destroy G-actin compositions and functions, then affect blood Platelet that will increase platelet aggregations and activation, that precipitation and blockage in capillaries will increase.

The Viral effects will cause increasing in TGF_B1 which is a multifunctional cytokine released from blood platelets by the effects of aggregation (and missing the controller TNF-Alpha) in blood where TGF_B1 controls many biologic and pathologic functions, including cell proliferation and differentiation, the immune response, and tissue fibrosis [1,2].

The increase in the expression of tyrosine hydroxylase or corresponding hydroxylase will increase NGF production from TGF-β1, which will increase inflammation and precipitation in vessels lead to failing in producing TXA2 subunits which through feedback will produce VEGF-A subunits for reproductions endothelin-1 and reactivate G_actin functions to stimulate the ET_1 productions and functions.

The production of Thymine hydroxylase due to viral effects will lead to inhibition in pyrimidine synthesis from purines by mitochondrial synthetase and lead to decreasing in sestrin synthesis and their Leu activities. acylglycerophosphocholine O-acyltransferase is necessary for mitochondrial membrane repairs. Where mitochondria repair and reactivation is necessary for synthetase enzyme protection for reconverting pyrimidine from purines in a limited control by a mitochondrial membrane, and mitochondria necessary for increasing anti inflammations by productions of synthase, phospholipase, and Cox2 enzymes which due to their acting on

inflammations will produce Thromboxane-A2 (TXA2) subunits which through feedback will produce vascular endothelial growth factor (VEGF-A) subunits for reactivate endothelin_1 synthesis and G-actin functions.

The treatment by Remdesivir "ATP drug ", or by Methyl-guanosine-5'-(α-fluoro)-monophosphate. In the presence of CoA phospho_ acetyltransferase will minimize the viral effect, will increase immune efficiency through increasing TXA2 and VEGF-A production and increasing the synthesis of pyrimidines in regulation limits of mitochondrial functions and ribosomal ATPase.

The presence of CoA phospho_ transferase is so Imp for repair mitochondrial membrane and then for regulating synthase, phospholipase, and synthetase enzymes productions consequently will increase anti-inflammatory cycles where TXA2 and VEGF-A subunits productions will be regulated, where the presence of CoA phosphotransferase will activate the availability of acyl-CoA:l-acyl-sn-glycerol-3-phosphocholine O-acyltransferase (imp for repair mitochondrial membranes) for promoting mitochondria and acetylcholine activities, consequently will activate enkephalin leu pentapeptides cycles which controlled and regulated by Leu amino acid functions activities. Also, the presence of thrombin inhibitors or the presence of retinol molecules, for breaking down any Blockage in capillaries and will promote rora gene activities.

Treating viral effect by Methyl-guanosine-5'-(α-fluoro)-monophosphate (_MG5FmP) as antiviral molecules for treating the Covid-19 effects, in the presence of thrombin inhibitor or retinol molecules will stop viral effects & will perform the original metabolic processes & help for regulating many other metabolic cycles including signals, sensations to all neuron cells, also will help reconstruct nerve fibers functions, and remove blood clotting from capillaries during treatment respiratory cells from the viral effects.

Background

Corona viral protein expresses eight such accessory genes (ORF3a, -3b, -6, -7a, -7b, -8a, -8b, and -9b) [1], the most of any known coronavirus known as ORF3b protein limits or inhibits the inductions of the cellular type I interferon response, that ORF3b [3], typically alerts and inhibit more of immune system composition functions, and inhibit most of imp biological processes as G-actin filaments functions, MPAK pathways, and PPARs genes functions.

The antiviral defense called interferon type I interferon (IFN-I) plays a critical role in the innate immune response against viral infections. They actively participate in antiviral immunity by inducing molecular mechanisms of viral restriction and by limiting the spread of the infection [4], are normally produced by infected cells originally from ribosomal functions then will follow actin functions to be migrated and delivered across filaments and blood capillaries to neuron cells, that interferon_1 plays a really important role in slowing virus infection through its effective mechanism across filaments and stimulation to imp effective process as endothelin_1 functions, MPAK pathways functions, and PPARs pathways transcription functions.

Interferon is considered to be the initial primary messages started from the ribosome in the infected cells to follow the endosomal activities and tetraspanins activities [4], for acting on viral genes (which considered as foreign inflammatory molecules) for producing TXA2 subunits which supposed to reproduce VEGF-A subunits through feedback for re-stimulate G_actin and resynthesis endothelin-1 and reactivate PPARs proliferator genes and MAPK pathways.

Interferon activities are so necessary for sending messages to the brain and reactivate Leu function pathways through activating enkephalin Leu pentapeptides.

Coronavirus infection will minimize immune efficiency by reducing intake oxygen to infected lungs, where will increase inflammation molecules and will cause blockage in capillaries then will increase platelet aggregation that will increase inflammation molecules and increases the risk of capillaries blockages.

Due to capillary blockage, the reduction in gas exchanges in the lungs will decrease that the CO2 will be increased in tissues that will produce toxic molecules and will increase toxicities in capillaries and arteries.

Covid-19 viral infections, the first effect on actin filaments and blockage in capillaries and effect on nasal tissue, Where Nasal passages, olfactory epithelial, and olfactory Nasal nerve are lined with mucous membranes which contain lines of microfilaments actin that represent G-actin and tropomyosin isoforms and their ATPase in its structures.

When the virus starts to infect starting by respiratory cells, first will on blood platelets that will increase platelets aggregation due to destroying the cells contents activities including mitochondrial activities and at the same time destroying actin filaments and endothelin-1 productions and activities including ATPase enzyme production which considered to be a main in the G-actin compositions and activities.

The viral effects will increase the loss of sensations which are supposed to be delivered by G-actin isoforms functions. Also, the loss of smells which is done & delivered by nasal microfilaments.

During viral effects on nasal microfilaments (G-actin isoforms), will break down antigen compositions and endosomal activities, where The Tyr, and Leu "pyrimidine nucleotides" amino acids are the most imp components in antigens and endosomes compositions and in anti-inflammation activities.

As antigen damaged as inner cell components will be damaged leads to damaging phosphorylations loops which are involved in ribosomal compositions and will damage the transferase enzymes that will lead to dysfunction in mitochondrial membranes functions.

As mitochondria damaged as platelet aggregation will increase and inflammation will increase and will reduce endothelin-1and VEGF-A productions, then the precipitations in interstitium fluid and capillaries will increase, then the isolation of the infected cells from other tissues will increase, and blood supply will be reduced, and the gas exchange will decrease.

Keywords

(TXA2) Thromboxane-A2, vascular endothelial growth factor VEGF-A, tumor necrosis factor-alpha TNF-α subunits, mitochondrial enzymes, acylglycerophosphocholine, O-acyltransferase, G-actin ATPase methylation, Remdesivir “ATP drug”, Methyl-guanosine-5’-(α-fluoro)-monophosphate. CoA phospho_ acetyltransferase.

Methods

Covid-19 viral infections, first cause damage in nasal microfilaments "actin filaments" and blockage in capillaries.

That Nasal passages, olfactory epithelial, and olfactory Nasal nerve are lined with mucous membranes and that mucous contains lines of microfilaments that represent G-actin isoforms and their ATPase contents and surrounded by interstitium fluid containing G_actin isoforms and containing endothelin_1 with PPARs genes.

Nasal cells containing microfilaments with G-actin isoforms where transmitted signals directly to brain and neuron tissue cells, and to optical nerves, where signals genes will be translated & transferred by tRNAs with the help of ATPase-loop for increasing their polarities to brain & neurons cells.

The polarity's effects have a great utility for activating transmitted signals to all immune cells. Lipocalin (LC) is necessary for serum amyloid which is necessary for binding protein and transport retinol during infections [5].

Lipocalin (LC)necessary for binding to various ligands ranging from lipids protein and retinoids, and their membrane receptors (LIMR) appeared to controlled & functioned by endocytosis, and it's clear that lipocalins are necessary for retinol-binding and important for removing blood clotting and imp for RORA genes synthesis and functions.

Where, RORA alpha genes and lysosome functions are so necessary for regulating cholesterol through Converting cholesterol to bile acids and protecting the liver from fibrosis and inflammation thus RORA genes have strong roles in anti-inflammatory cycles, and are so imp for VEGF-A production indicating the necessity of serum amyloid in retinol-binding and its transport during infection, the necessity of the presence of RORA genes in the increasing of VEGF-A production and resynthesis endothelin-1 and stimulated its full anti-inflammation cycles.

Where LC, serum amyloid, and RORA genes functions are controlled by and connected to ATPase & GTPase functions. The nasal leakage due to the damage in olfactory Epithelial cells activities & damage in nasal septum mucous. Both olfactory nerves (OLFn) & epithelial Cells (OLFep) structure are containing G-actin microfilaments which are the main tools for transmitting signal genes.

As G-actin in nasal microfilaments damaged as the signal transmission will be inhibited, and as retinol and RORA genes and VEGF-A subunits productions and functions reduced, and as anti-inflammatory processes will be reduced, leads to increasing toxicities of "CO2" in lungs & blood. As mitochondrial membrane activities decreased as the productions of synthase and phospholipase with synthetase enzymes will be decreased lead to decreasing in TXA2 subunits productions, and decreasing in the feedback for VEGF-A production lead to decreasing in anti-inflammation processes. And as polarities decreased due to damaging in phosphorylation loops "ATPase" tools in the ribosome and actin microfilaments will lead to accumulations of micro molecules and +ve molecules in blood capillaries, in arteries, and in plasma, will lead to Blockage in capillaries & isolation to the infected tissue.

The acylglycerophosphocholine O-acyltransferase is designed for mitochondrial membrane repair, where asymmetry and diversity of membrane glycerophospholipids are generated in the remodeling pathway (Lands' cycle), which are conducted by concerted actions of phospholipases A2 and lysophospholipid acyltransferase which contribute to membrane asymmetry and diversity [6].

I would like to give a little mention that, ATP is involved in the establishment of functional neuronal networks & in some parts of the developing brain activities, but GTP is so necessary for functioning mitochondrial and endosomal activities with neuron metabolic functions.

The using of -Methyl-guanosine-5'-(α-fluoro)-monophosphate as antiviral molecules in the presence of CoA: phosphate acetyltransferase will activate the repairing the mitochondrial membrane, and consequently will promote the regulations of synthase and phospholipase enzymes productions from mitochondrial membrane for acting and removing inflammations molecules from tissues, and consequently will promote the TXA2 subunits productions and its feedback for VEGF-A subunits productions, and then will increase anti inflammations processes.

The Methyl-guanosine-5'-(α-fluoro)-monophosphate will promote the ATPase and GTPase productions and activities and will promote the lysis of blood clotting in capillaries and interstitium fluid between cells.

Removing coagulation from capillaries can be done by the presence of thrombin inhibitor (which is characterized by Fluorine in its composition) or in the presence of proper percentage of retinol that will promote breaking clotted molecules and aggregated molecules through lysis their sulfur bonds, and will activate transferase for tRNAs productions.

The ATP drug "Remdesivir" and Methyl-guanosine-5'-(α-fluoro)-monophosphate can promote angiogenesis which mediated by the coordinated action of a variety of growth factors, metabolites, and cell adhesion molecules in endothelial cells [7,8] and promote the Vascular endothelial growth factor-alpha (VEGF-A) subunits production, which is the principal angiogenic growth factor modulating neovascularization.

Also acylglycerophosphocholine O-acyltransferase will promote metabolites and cell adhesion and growth factors molecules in endothelial cells for Vascular endothelial growth factor VEGF-A production and will increase endosomal activities through increasing mitochondrial activities.

Removing toxicity "inflammation " from blood and tissue will start after repairing mitochondria activities by CoA phospho-transferase, and the activation of ribosomal ATPase, G-actin functions, and reactivations of the VEGF-A subunits productions from TXA2 subunits and endothelial cells.

Using ATP drug “Remdesivir” for the Treatment of Coronavirus with effective antiviral in presence of retinol and CoA phospho-transferase will promote the removing precipitated micro peptides, CO2 toxicities and viral effects from blood capillaries and tissues and will increase anti-inflammatory processes as described before.

The presence of Acyl-CoA, lysophosphatidylcholine acyltransferase (LPCAT) converts LPC to PC, which rapidly gets recycled by the Lands cycle [16], Where the Presence of Retinol in the presence of CoA phospho_ acetyltransferase is an activator for reactivating ROR-a genes synthesis and will activate acetylcholine function in the brain, consequently will be the helpful source for activating enkephalin Leu pentapeptides.

In conclusion the presence of Acyl-CoA, lysophosphatidylcholine acyltransferase can increase the catalyzes of inflammation molecules and activate mitochondria membranes for producing phospholipase, synthase and synthetase enzymes which will act on inflammation molecules for producing TXA2 subunits whereby feedback will increase the VEGF-A production and endothelial cells functions consequently will increase anti-inflammatory processes. Availabilities of retinol can bind to several hydrophobic ligands including β-carotin, cholesterol, terpenoids and long-chain esters of retinol and retinoic acid.

Some amino acids should be provided with ATP drug “Remdesivir” molecules for supporting cells to be recovered from viral damage effects. That may have to be included Tyr, Leu, Gly which are necessary for activating antigen re_synthesis and for Leu pentapeptides brain reactivities and for T-cells resynthesis.

It’s necessary that we have to be careful from increasing sulfur molecules with old ages and with who has heart problems, that helps increase blood coagulation, short peptides precipitations in capillaries, and increasing the probabilities of Atherosclerosis and arteries occlusion.

The using of -Methyl-guanosine-5’-(α-fluoro)-monophosphate as antiviral molecules for treating the viral effects, can minimize or stop the viral effects & will promote many metabolic functions at the same time as recover the damaged G-protein cycles, and will recover anti-inflammatory cycles.

The Methyl-guanosine-5'-(α-fluoro)-monophosphate can stimulate the GTP activities & resynthesis, that controlled by ATPase "that ADP is GTP off & ATP is GTP on" & functions, and also will protect the blood from coagulation due to the presence of Fluorine which considered as an anticoagulant agent, (where successful thrombin inhibitor contain active Fluorine atoms).

Results

The using of -Methyl-guanosine-5'-(α-fluoro)-monophosphate as antiviral molecules. For treating the viral effects, will stop or strongly will minimize the viral effects & will perform many metabolic functions at the same time as recover the damaged metabolic cycles as anti-inflammatory cycles.

The presence of CoA: phosphate acetyltransferase with Methyl-guanosine-5'-(α-fluoro)-monophosphate Antiviral molecule, will repair mitochondrial membrane consequently will increase the acting on inflammations through producing synthase, and phospholipase enzymes where the results will be increasing in TXA2 subunits and then through their feedback will increase VEGF-A subunits productions, where will promote acetylcholine functions...

The Presence of Retinol in the presence of CoA phospho_ acetyltransferase will activate mitochondrial functions for reactivating ROR-a genes synthesis and will activate acetylcholine function in the brain with enkephalin leu pentapeptides activities, consequently will be activated Leu activities and sestrin synthesis and reactivate Leu_sestrin carrier tool for liver activities and anti-inflammation processes.

In conclusion the presence of Acyl-CoA, lysophosphatidylcholine acyltransferase can increase the catalyzes of inflammation molecules through re-activate mitochondria membranes for producing phospholipase, synthase, and synthetase enzymes which will act on inflammation molecules for producing TXA2 subunits whereby feedback will increase the VEGF-A production and endothelial cells functions consequently will increase anti-inflammatory processes. Availabilities of retinol can bind to several hydrophobic ligands including β-carotin, cholesterol, terpenoids, and long-chain esters of retinol and retinoic acid. And CoA phosphotransferase can construct a stronger anti-inflammatory system and promote synthesizing self-vaccine in vivo better than thinking to prepare a vaccine in vitro.

Also, transferase activates ribosomal activities will increase,tRNAs synthesis rather than aminoacyl groups for aa-tRNA synthesis, & polarities will increase in molecules that will accelerate molecules transferring across cell membrane & antigen for the G-actin & tropomyosin

isoforms functions. Treating viral effects using the antiviral "Methyl-guanosine-5'-(α-fluoro)-monophosphate"(®_MG5FmP) Will stimulate the availabilities of G proteins that act as molecular switches, and are involved in the increasing of transmitting signals, and activates a cascade of further signaling events that result in reactivation in cell functions in the favor of immune cells & infected cells.

I would like to give a little note about the importance of the availability of GTPase that will be activated by the presence of "Methyl-guanosine-5'-(α-fluoro)-monophosphate antiviral molecules. Also, Methyl-guanosine-5'-(α-fluoro)-monophosphate helps stimulate adrenaline functions. The presence of retinol with Methyl-guanosine-5'-(α-fluoro)-monophosphate antiviral molecule will adjust tissues synthesis, blood fluidity, and cleaning the fine capillaries in the lungs, & brain.

Imp notes that, during Coronaviruses infections, the intake +ve molecules have to be reduced for helping successful treatments.

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