

COVID-19: A Review in COVID-19 Infections and Treatment through Understanding Viral First Main Steps in Respiratory Cells

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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. Antiviral defense called interferon that produced by sick cells originally from ribosomal functions, which plays a really important role in slowing virus infection. Interferon is considered to be the initiative primary messages started from ribosome in the infected cells to follow the right original biological pathways to reach brain for asking for protection, recoveries and facing the viral infection. When Corona virus started to infect human body started by respiratory system, that to minimize the intake oxygen to infected body, that when viral effects reach the blood stream in arteries & in capillaries will affects on red blood cells to lysis & break their main -ve linkages which original presence in ATP molecules to restore their O₂, phosphate gps, & their attached biological peptides that will bind & connected to viral protein to follow viral metabolism and viral toxic productions. Then the result will be reduction in gas exchanges in lungs that the intake oxygen will be minimized, and the restored CO₂ in tissues & capillaries will be increased, that will leads to increase toxicities in capillaries then in arteries. When virus starts to infect respiratory cells, first will lysis and destroy actin filaments and their isoform including their ATPase which considered being a part of G-actin filaments. So, first Symptom is the Symptoms is the loss of sensations delivers by G-actin and tropomyosin isoforms, then loss of tast of smells which is done & transfered by G-actin and tRNAs directly to brain and then to neuron cells to give their responds & answers to those received messages of sensations and tastes.*

Keywords: ribosomal transferase, G-actin ATPase methylation; tropomyosin, rapamycin; Remdesivir "ATP drug", Methyl-guanosine-5'-(α -fluoro)-monophosphate. CoA phospho_ acetyltransferase, COVID-19

1. Introduction

The viral protein known as ORF3b limits the induction of the type I interferon response, which typically alerts other immune system components to the presence of a virus, in cultured cells.

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.

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Interferon is considered to be the initiative primary messages started from ribosome in the infected cells to follow the right original biological pathways to reach brain for asking for protection, recoveries and facing the viral infection.

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minimized, and the restored CO₂ in tissues & capillaries will be increased, that will leads to increase toxicities in capillaries then in arteries.

When virus starts to infect respiratory cells, first will lysis and destroy actin filaments and their isoform including their ATPase which considered being a part of G-actin filaments. So, first Symptom is the Symptoms is the loss of sensations delivers by G-actin and tropomyosin isoforms, then loss of tast of smells which is done & transfered by G-actin and tRNAs directly to brain and then to neuron cells to give their responds & answers to those received messages of sensations and tastes.

After viral effects on G-actin and tropomyosin will face antigen composition genes which mainly contains Tyr and Leu amino acids as main component of antigens (the imp cells protections for cells & their metabolism) that viral molecules will lysis the antigen compositions completely, (the antigen peptide thread that the main antigen peptides are covering cell but leaving about 20 or some more as a free thread for antigen functions in surrounding cytoplasmic media for performing the main imp antigen functions including protection).

As antigen is lysis & damaged, as cells components will be ready for the virus peptides easy effects, then will destroy the ribosome composition completely leads to damaging phosphorylations loop in ribosomal composition and the full damaging of root of transferase functions in ribosome. As the previous damages done by viral processes as blood coagulation in capillaries will occur, isolation of infected

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cells, and reduction in sensation transferring then reduction in the intake O₂ and increasing in the restored CO₂ in capillaries and in tissue cells.

Using of ATP drug

"Remdesivir" in the presence of CoA phospho_ transferase and thrombin inh or in the presence of retinol molecules will stop Corona virus effects & lysis their peptides, and recover infected cells with their full metabolic functions that related to the reactivate G-actin and tropomyosin isoforms functions, also will increase the molecular polarities effects on ribosomal production due to damaging of phosphorylation tools in cells by viral effects on cells and on actin micro filaments will lead to cleaning and removing accumulated micro molecules from capillaries and cleaning capillaries from micro +ve molecules, from arteries and from plasma, will lead to proper blood fluidity in capillaries and in arteries.

The using of -Methyl-guanosine-5'-(α -fluoro)-monophosphate (@_MG5FmP) as antiviral molecules for treating the Covid-19 effects, in the presence of thrombin inh or retinol molecules will stop the full viral effects & will perform many metabolic functions at the same time as recover the damaged metabolic cycles, and damaging of cells contents & help for controlling many other metabolic cycles including signals and sensations & their transmission at the same time to brain and neuron, also is helpful for removing blood clotting while recovering respiratory cells & from the antiviral effects.

2. Methods

I would like to concern a little on the symptoms of losing smells due to Covid-19 viral infections, that the smells effects in nose is happened & occurred due to fast processes in nose tissue compositions, that nose contain Nasal passages, olfactory epithelial, and olfactory nasal nerve, that are lined with mucous membranes and that mucous contains lines of micro filaments actin that represent G-actin and tropomyosin isoforms and their ATPase content in their micro filaments structures.

All incoming air breath through nose compositions will be translated, & also polarized due to the presence of ATPase in actin and then transferred to brain, then to some imp sites in neuron for recognitions and for re_answers to any abnormal including molecules accompanied with incoming breath.

Nasal cells containing micro filaments G-actin with tropomyosin isoforms, that are directly connected to brain and to eyes specifically to optic nerve, where the smells effects will be translated & transferred by tRNAs with the help of P-loop in ribosomal composition & the function of actin ATPase to brain & to neurons cells through G-actin and tropomyosin isoforms normal functions. Smells transferred to brain by the G-actin & tropomyosin isoforms effects and functions, that I mentioned before that G-actin filaments have to act on incoming breath smells molecules & odors to change their physical molecular status through changing & increasing their polarities & molecular wts by actions & functions of ATPase.

The polarities effects has a great utilities to all immune that immune first is acting through nose cells ATPase to break any incoming molecules for increasing their polarities & molarities to be ready for joining tRNAs for reaching brain cells, and for transferring their imp hydroxyl short molecules for phospholipase synthesis & functions, for small peptides molecules metabolic cycles, & for lipocalin synthesis and other necessary functions, and for hormones & antibodies synthesis and functions.

Tear lipocaline (TLC) has a variety of functions in tears, including regulations of tear viscosity, binding and release of lipids, endonuclease inactivation of viral DNA, serving as a biomarker for dry eye, and possessing anti-inflammatory activity. □

Lipocalines (LC) can bind to various ligands ranging from lipids and retinoids, and their membrane receptors (LIMR) appeared to controlled & functioned by endocytosis and it's clear that lipocalines are imp for retinol binding, therefore imp for cleanings capillaries from blood clotting & from micromolecules blockages, and imp for antiviral processes.

The necessity of LC processes is involved in & with ATPase & GTPase functions & synthesis, and for most of brain functions. □

The nasal leakage due to the damage effects by viral infections on olfactory Epithelial cells & on olfactory nerves cells & on nasal septum mucous. Both olfactory nerves (OLF_n) & epithelial Cells (OLF_{ep}) structure are containing G-actin micro filaments with their ATPase that acting on upcoming breath to change first its polarities, then will Itch and touch some of upcoming breath air to bonded with G-actin isoforms then transferred across actin filaments to brain and may immune cells, and that odor can affect on optical nerve that both OLF_n & OLF_{ep} are connected to optical nerve and brain.

OLF_n & OLF_{ep} contain actin and frontal sinus are contain actin isoforms, and surrounding their cells, for transferring smells that include sensations. When viral effects are strong active more than ATPase which involved with actin filaments, will lysis ATPase & will damage most of actin isoforms, result of losing smells and sensation "depending on the value of bonding energy involved in viral peptide". Then viral effects will continue damaging OLF_n & epithelium cells, till stopping & lysis ribosomal compositions.

The full damaging of G-actin isoforms & ribosomal structure will give the virus the green light to continue to respiratory cells. "that explanation will help us understanding the steps of viral effects & which stage of the degree of seriousness reached by the viral effects and then we can define type of treatment the I'll case need to stop viral then recover its damages. □

At those little steps of viral infection, the % of gas toxicities "CO₂" in lungs & in blood vessels will start to be increased that will lead to a symptom which is a shortness of breath, where the accumulation of some micro molecules particles in the fine capillaries & as a result of the inactivation and

reduction in actin isoforms & tRNAs functions, that later will lead to Blockage in capillaries then weakening in heart muscle and a decreasing in blood pumping rate from heart due to the increasing in CO₂ toxicities with other viral damage effects. □

The decreasing in polarities due to damaging of phosphorylation tools in cells and actin micro filaments will lead to accumulations of short micro molecules and short +ve minerals in blood capillaries, in arteries and in plasma, will lead to Blockage in capillaries & in arteries and if sulfur increased with methionine will leads to stroke & blood coagulation in vains and arteries. □

During those first viral stages that I mentioned, the virus can be addressed by re-establishing the presence of ATP through ATP drugs or other chosen drugs as:

The using of -Methyl-guanosine-5'-(α -fluoro)-monophosphate as antiviral molecules with CoA:phosphate acetyltransferase. □

I would like to give a little mentions that, ATP is involved in the establishment of functional neuronal networks & in some parts of the developing brain, and in all tissues cells, but GTP is involved in imp brain and so necessary neuron metabolic functions, and ATP functions are necessary for receiving and sending proper messages to brain and living cells & vice versa including sensations and smells & taste effects, in addition, is necessary for phospholipid synthesis & functions too. □

That the primary requirement is the primary objective to use ATP drug or other selective proper antiviral drugs to activate tRNAase, to activate ATP cycles, and to reactivate the ribosomal components "transferase with phosphorylations by P-loop" functions, and to reactivate the functions of actin isoforms, that will ré increase polarities functions again & will reactivate tRNAs productions for transfer micro molecules & sensations between cells for re connections between cells that will retransfer tastes including smells again to all neurons & brain cells. □

Any blockage in blood capillaries, means inhibition in actin isoforms functions and lead coagulation in capillaries "that necessary for connections & communications between cells" will be cleaned & removed by rapamycin to reactivate tropomyosin& G-actin isoforms for proper connection & communications between cells. Removing coagulation from capillaries will be done by the presence of thrombin inhibitor or in the presence of proper % of retinol that will perform the same roles of breaking clotting molecules through lysis sulfur bonds which bonded to thrombin molecules, and the activation of transferase will accelerate necessary genes & tRNAs productions & biological peptides for cells and neuron metabolic functions. □

Reducing the CO₂ ratio in blood and tissues, will be automatically done due to activation of ribosomal functions and actin isoforms functions in presence of menthol or retinol molecules or thrombin inh " to lysis clott and to separate the carbons in CO₂ from their oxygen and then will be used for recovering missed nucleotides or in the antigen

reproduction, antibodies, or for other anabolic processes ". □

As we'll start to increase polarités in respiratory system functions through using ATP drugs, as the expectations of gas exchange Possibilities will increase in lungs and in blood too, Consequently will increase inner cells functions & ribosomal transferase and ATP functions. □

Using ATP drug "Remdesivir" for the Treatment of Covid-19 — Preliminary, will be good decision, but have to accompanied with retinol for helping to remove precipitated micro peptides & CO₂ toxicities from blood capillaries and from arterial blood. □

Presence of Retinol in the presence of CoA phospho_ acetyltransferase is so helpful for reactivating acetylcholine in brain consequently activate brain Leu pentapeptides and retinol is necessary for diabetes diseases cases, and directly & indirectly is imp active part for regenerating antiviral molecules, also retinol can bind to several hydrophobic ligands including β -carotin, cholesterol, terpenoids and long chain esters of retinol and retinoic acid.

ATP drug has to associated with retinol and with what is imp to activate GTPase activities, as ppGpp negatively impacts ribosome which assembly affecting the growth of Gram-positive bacteria, and some act as antiviral for several types of diseases cases.

These micro phospho nucleotides short chain function by binding to target proteins, leading to shutting down viral active growth. And will stimulate GTP activities for brain functions. GTPases and that their activities is promoted by transferase in ribosomes. GTPase is enhanced & stimulated by represence of Cytosine in tRNAs that involved in:

- Cardiac muscle cell development
- Brain activities.

Also, many sever viral infections cases will need to be treated by thrombin inhibitor or retinol molecules accompanied with ATP drug "Remdesivir" for helping the cleaning capillaries from blockage and from blood clotting in lungs and in brain, that I mentioned that first steps in viral infections is causing blockage in the fine capillaries in lungs then heart then brain, and imp for several necessary metabolic processes. □

It's necessary to remember that thrombin inhibitor "th. Inh" needed for removal the precipitations and blockage associated with blood clotting from the fine capillaries & arteries, that those both molecules "th. inh & retinol" can recover proper blood fluidity or retinol will perform more functions rules in metabolism in the vavor of immune cells.

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 include Tyr, Leu, Gly as are necessary for activating antigen re_synthesis and for Leu pentapeptides brain reactivities and for T-cells resynthesis,.

It's necessary that we have also to be careful of increasing methionine amino acid with old ages and with who has

heart problems, that is helpful for increasing blood coagulations, short peptides precipitation in capillaries, and increasing the probabilities of Atherosclerosis and arteries occlusion. □

The using of -Methyl-guanosine-5'-(α -fluoro)-monophosphate (@_MG5FmP) as antiviral molecules for treating the Covid-19 effects, will stop the full viral effects & will perform many metabolic functions at the same time as recover the damaged metabolic cycles, and damaging of cells contents & help for controlling many other metabolic cycles including signals and sensations & their transmission at the same time to brain and neuron, also is helpful for removing blood clotting while recovering respiratory cells & from the antiviral effects, but still need to be conjugated with thrombin inh or retinol molecules. □

That(@MG5FmP) will stimulate the GTP functions & resynthesis, that controlled by ATPase "that ADP is GTP off & ATP is GTP on" & functions, and also will protect blood from coagulation due to presence of Fluorine which considered as anticoagulant agent, (that thrombin inhibitor is due to the presence of Fluorine atoms in active structures), plus is imp for hormone synthesis. □

3. Results

Using ATP drug "Remdesivir" for the Treatment of Covid-19 — Preliminary, as antiviral drugs will be good decision, but have to accompanied with retinol or thrombin inh for helping to remove precipitated micro peptides & CO2 toxicities from blood capillaries and from arterial blood, and should be associated with.

imp that Remdesivir drug has to be associated with ppGpp negatively impacts ribosome which assembly affecting the growth of Corona virus and will activate GTPase activities for brain and for neuron cells in the favor of infected cells.

The using of -Methyl-guanosine-5'-(α -fluoro)-monophosphate (@_MG5FmP) as antiviral molecules for treating the Covid-19 effects, will stop the full viral effects & will perform many metabolic functions at the same time as recover the damaged metabolic cycles, and damaging of cells contents.

The presence of CoA:phosphate acetyltransferase with Methyl-guanosine-5'-(α -fluoro)-monophosphate antiviral molecule, will be helpful for recovering ribosomal transferase, and helps to recover brain acetylcholine functions with helping for ATP & GTP functions & resynthesis too. □

Also transferase activities in ribosome will increase, and will stimulate 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 cascade of further signaling events that results in reactivation in cell functions in the favor of immune cells & infected cells. □

I would like to give a little notes about the importance of the availability of GTPase that will be activated by the presence of "Methyl-guanosine-5'-(α -fluoro)-monophosphate antiviral molecules:

G protein-coupled receptor and G proteins are imp to each others for transmit signals from many hormones.& act as neurotransmitters, and other signaling factors.

G proteins regulate metabolic enzymes, ion channels, transporter proteins, controlling transcription, motility & contractility, .

Also GTPase imp for controlling & stimulating the activities of multiple effector proteins including adenylyl cyclases, phospholipases, phosphodiesterases, & so imp for Regulation of Phospholipase enzymes.

It indicates the importance of availabilities of GTPase in proper percentage in infected cases. Also, Methyl-guanosine-5'-(α -fluoro)-monophosphate (@_MG5FmP)

Is helpful for stimulating adrenaline functions. Presence of retinol with Methyl-guanosine-5'-(α -fluoro)-monophosphate antiviral molecule will adjust tissues synthesis, blood fluidity and cleaning the fine capillaries in lungs, & in brain.

May in some severe cases, that have blockage in fine capillaries, and have decreasing in the translations & transcriptions for incoming molecules from ribosomal functions will not have enough antibodies to re activate actin isoforms functions, at that time we can activate tropomyosin by rapamycin, (2018 Oct;27(10):1112-1119. doi: 10.1111/exd.13745. Epub 2018 Aug 3.

Authors

Minhong Gao 1, Xiaoqing Si). that rapamycin regulate and activate tropomyosin & G-actin isoforms to reduce cells inflammations due to viral infections and effects. reduction in inflation means increasing in ribosomal functions, increasing in actin isoforms production & activities, increasing in tRNAs productions & activities, increasing in sensation transferring and increasing in blood functions and the start of cleaning fine capillaries in lungs, in heart, and in brain with immune cells.

Rapamycin (mTOR) which regulates cell growth which necessary for cardiac muscle cells development, and needed for actin functions that include sensation transference and signals transmitting including tastes and smells transmitting. Also rapamycin is involved in treating

The rare lung disease called lymphangioliomyomatosis due to its activation to G-actin ant tropomyosin isoforms in lungs and tissues.

Imp notes that, in Corona viruses infections, the intake +ve molecules have to be reduced for helping successful treatments.

□

References

- [1] Clapham DE, Neer EJ (1997). "G protein beta gamma subunits". *Annual Review of Pharmacology and Toxicology*. 37: 167–203. doi:10.1146/annurev.pharmtox.37.1.167. PMID 9131251.
- [2] "Seven Transmembrane Receptors: Robert Lefkowitz". 9 September 2012. Retrieved 11 July 2016.
- [3] Qin K, Dong C, Wu G, Lambert NA (August 2011). "Inactive-state preassembly of G(q)-coupled receptors and G(q) heterotrimers". *Nature Chemical Biology*. 7 (10): 740–7. doi:10.1038/nchembio.642. PMC 3177959. PMID 21873996.
- [4] Reece J, C N (2002). *Biology*. San Francisco: Benjamin Cummings. ISBN 0-8053-6624-5
- [5] Neves SR, Ram PT, Iyengar R (May 2002). "G protein pathways". *Science*. 296 (5573): 1636–9. Bibcode:2002Sci...296.1636N. doi:10.1126/science.1071550. PMID 12040175.
- [6] Cole LA (August 2010). "Biological functions of hCG and hCG-related molecules". *Reproductive Biology and Endocrinology*. 8 (1): 102. doi:10.1186/1477-7827-8-102. PMC 2936313. PMID 20735820.
- [7] Lipid modifications of proteins Anant K. Menon, in *Biochemistry (Fifth Edition)*, 2008.
- [8] TORC-specific Phosphorylation of Mammalian Target of Rapamycin. Jeremy Copp et al. *Cancer Res*. 2009.
- [9] 2018 Oct;27(10):1112-1119. doi: 10.1111/exd.13745. Epub 2018 Aug 3. Minhong Gao 1, Xiaoqing Si
- [10] Coronaviruses. 2015; 1282: 1–23. Published online 2015 Feb 12. doi: 10.1007/978-1-4939-2438-7_1 PMCID: PMC4369385, NIHMSID: NIHMS671207, PMID: 25720466.
- [11] *Microbiol Mol Biol Rev*. 2005 Dec; 69(4): 635–664. doi: 10.1128/MMBR.69.4.635-664.2005, PMCID: PMC1306801, PMID: 16339739.

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