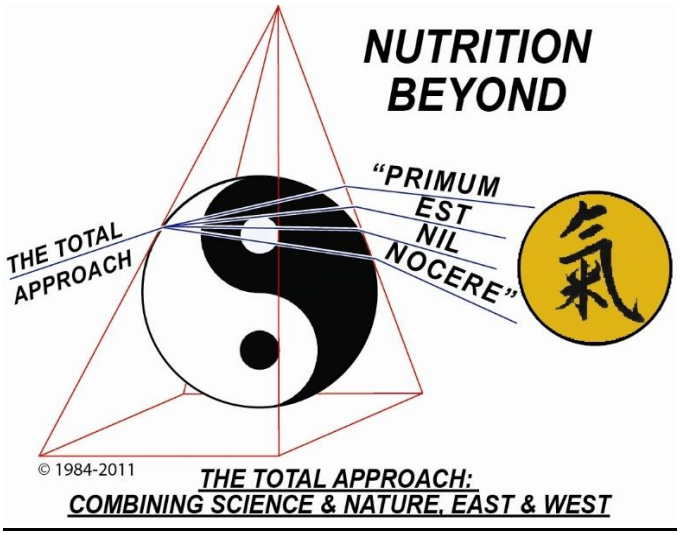
COVID-19: CONTAGION to Pathological/Lethal MORBIDITY to MORTALITY

THE Road to Perdition...and HOW to Avoid It:

The LAST WORD



Pt.1: The Mechanics of Infection

With the "Preliminary" posting 3 days ago, I gave you a little forward-view of what to expect in the days to come... I'm NOT quite "winging it" as there's some planning (of the Presentation to you) I have to do to ensure I **don't** inadvertently forget or miss out on any important, crucial, relevant or critical aspects With a Crisis of this magnitude, SO much is "thrown into the mix", even just from the medical standpoint. So, as still part of the "Preliminaries", I want to touch on the strategic issue of "**Testing**" before I begin this Series....

Before I begin, I need to stress to one & all that here, we have a "mixed audience", consisting not only of, firstly, our own signed-up patients. In fact , most of this "audience" are others, including: personal friends, colleagues, Lab technicians & scientists, Medical Doctors & Specialists, university lecturers, university Professors (in: Chemistry, Biology, Bio-Chemistry, Medicine, Public Health), research scientists both here in Australia, USA & the European continent (THIS is a global Newsletter). SO, we have a "mix" of both laymen, scientists & medical personnel. The subject matter that I have to expound here is often not easy to delve into in lay-language (it's often way more difficult for me to "paper over" in general lay terms because that then impacts on the exactitude & precision of the subject-matter. Here, I'm trying to please AND cater to "*both sides of the aisle*" .... So, I do implore "both sides" to be patient as I try to "negotiate" this somewhat "narrow, precarious straits". Thank you for your patience.

<u>Acknowledgements</u>: This is currently a ***world in crisis***... THIS is when we tend to think more of our loved ones & close friends. Instead of just a routine newsletter, we now open this for comments & any insight from any member of this small "community". I also invite in some members of the scientific "Illuminati" from the U.S., some old friends of mine. They are free to also post their comments which I will replicate here. After a long hiatus, I would like to invite some old friends to the fold here:

From the West Coast: from the Univ. of California, San Francisco:

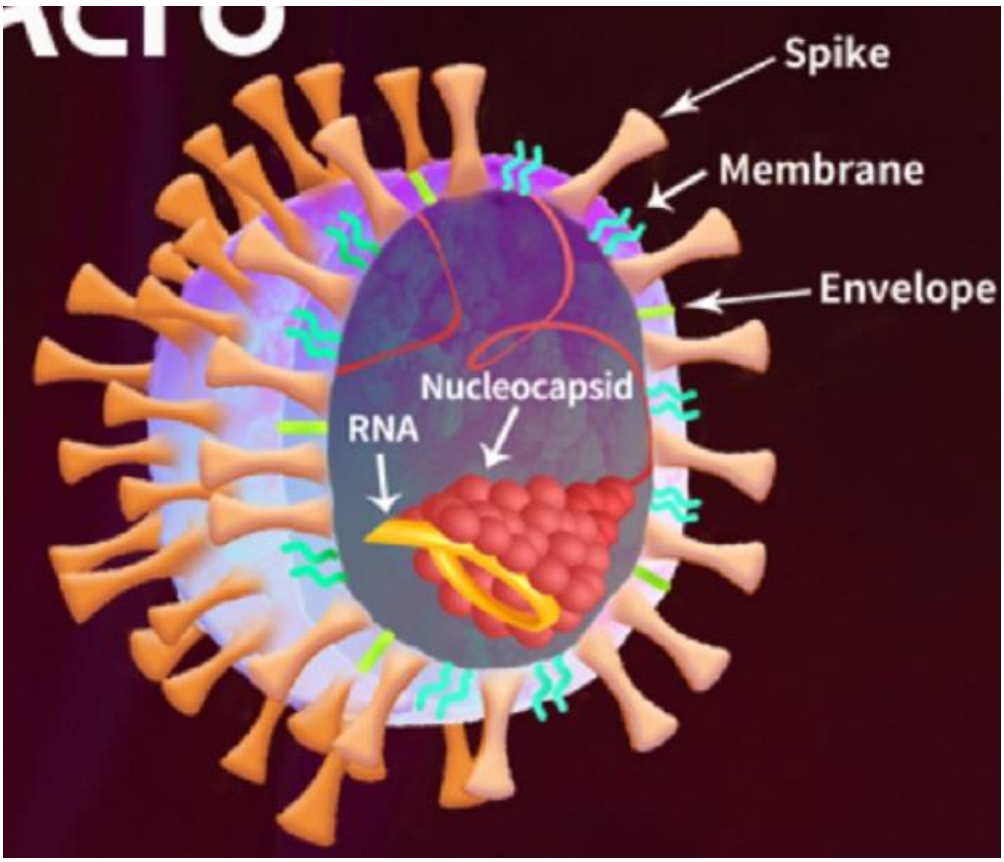
My old friend, the Legend, **Leonard Hayflick**, whom I have featured many, many a time here; Prof. of Micro-Biology. Founder of the "***Hayflick Limit***" [Sorry for the long period of "quiet", but I've had too much on my plate. Please contact me & let me know if you're OK, buddy!].

Also from the same campus, but different Dept.: **Rob Lustig**, Prof. of Paediatric Endocrinology; also the world's leading expert on carbohydrates & Glycemic dynamics.

From the East Coast:

Mike Holick, Prof. of Medicine, Boston Univ.

From the mid-West, our post-humous acknowledgement: Emeritus Prof. of Medicine of Nebraska State Univ.: the legendary **Denham Harman**, grand-father of the Free-Radical Medicine. Even though you're no longer with us, we haven't forgotten you. *Thank you for your Friendship & your Guidance*....RIP.



A few more Preliminaries:

TESTING

This is, obviously, one of a genetic nature. Some of you might have come across the mention, in the media (very likely from one of Pres.Trump's CDC or NIH medical doctors) of the term "RT-PCR". (Reverse Transcriptase Polymerase Chain Reaction). This is simply the nature of the Lab test of a patient's muccal secretion for the determination of any gene sequence (in the test subject's collected specimen) `resembling the established gene-sequence of the COVID-19, whether in the very 1st configuration or latest mutation of the virus.

Now, I've also had LOTS of enquiries (thankfully, this time mostly e-mails!) about ***how*** you could get tested here. My simple answer to you is: NO you can't. Unless you're symptomatic, you CANNOT get tested. When there's a dire shortage of test kits in America, with the overwhelming majority of Americans ***not*** being able to be tested, IF you're asymptomatic, you've got "buckleys" chance here! IF America is that short of test kits, it's even far, far worse here! One positive thing, though, in America: after the CDC got startted, private industry "got into the act" to also make test kits, thereby alleviating the burden a little on the CDC (Fed.Govt.-run) to do it alone (ie. make the test kits). Notwithstanding, they STILL cannot produce enough simply because of their sheer population size.

One of the American companies that got into the act was Thermo Fisher, a long-standing established manufacturer of medical equipment. Now, we do DO business with Thermo Fisher in Sydney, but of-course they DON'T have testing kits in Australia. What about getting testing kits from the private companies in America (like Quest)? NO can do. ALL test kits are ferried thro' official Govt. channels, from U.S. to here. Yes, a number of private U.S. companies [eg. Everlywell (Austin, TX), Nurx, etc.] are rushing to make home-test kits, but those are quite a long way off because they, too, like the vaccine candidates, have to go thro' quite a long period of official FDA testing, validation & approval.

Alright, let's cut to the chase: WHAT can you do, in the meantime, IF you are asymptomatic, but are anxious to know IF you might have the virus? There IS something you ***can*** do, in the way of *another* test, a blood test (serum), IF you don't have any symptoms:

A Full **white-blood count** (ie. **Full Leucocyte count**)

IF it shows up a good 30% above the upper limit, ie. 14,300/ml., then there IS an ongoing infection.....

Better still, ask for a more encompassing test that will "flush out" valuable info on other components of the White-Cell system: the **T-cell (Lymphoid) Subsets.** The panel looks like this:

White cell count (total) [RF: 4 - 11 b/L]

Lymphocytes	**(RF: 1 - 4 b/L]**
CD3 T cell	**[0.7 - 2.1 b/L]**
CD4 T Helper cell	**[0.4 - 1.4 b/L]**
CD8 Cytotoxic cell	**[0.2 - 0.9 b/L]**
CD4/CD8 ratio	**[1 - 3]**
CD16/56 NK Cells	**[RF: RF: 0.05 - 0.6]**
CD19 B Cells	**[0.05 - 0.5]**

These are all separate lymphocytic (white-cell) markers, assayed by flow-cytometry. They indicate different components of your critical white-cell system, more specifically the 2 systems I had previously referred to as A & B. This will give us a "snapshot" of the state of the 2 immune systems I've thus far mentioned & which I will discuss in much greater detail in the next Instalment.

IF you're lucky enough to have a "co-operative" GP who would be willing to "bulk-bill" you for this Test, you could save yourself $200 for this extended test. [Your GP may not feel "comfortable" bulk-billing you for this test IF he cannot justify to the HIC for bulk-billing this test (like "the Patient is concerned about being infected by a virus", and you're **not** showing any symptoms at all!]. For those of our patients who don't mind paying for the test [or the cheaper singular 'Total White Cell Count' Test], we can e-mail you our test script. Both Douglas Hanly Moir (DHM) & Laverty Labs do this test.

The Vaccine: One more word about the world-wide efforts (including here in Australia) to produce a "workable" vaccine: trials [obviously small animal (ie. rats, mice) trials] have started. President Trump ordered the FDA to "trim right down" the normally monumental "red tape" on many pre-requirements before any Trial phase can even commence (our Regulatory expert here, Dr.Allis, can explain to you, fully, how extremely involved this can be!). A vaccine development is a multi-stage, extremely complex process. It has to go thro' 6 stages of R & D, including a 3-Phase Clinical Development Stage]. It normally takes more than a year ***before*** the initial Phase 1 of the Trial can commence. And yet, they've just started now, barely weeks after their initial submission to the FDA. My concern is that IF they rush thro' this process, they could overlook some **critical** safety aspect. Let me quote the '**Science Journal'**:

"To move too FAST is to risk making mistakes", March 13, 2020.

What are these "mistakes"? I ***have*** already alluded to them before, as well as very explicitly warned about this: people HAVE died from vaccine shots. I personally know a lot of people (including many of my own patients – **before** they became my patients) who became **very** sick straight after they had vaccine shots.

Pt.1 (24/03/2020): The Mechanics of Infection

Today, we will examine HOW the COVID-19 virus infects you & tries to take you down:

I'm going to try to "break" this down into several parts so that you can understand better ***WHY & HOW*** this deadly virus is DIFFERENT from all the other corona viruses (H5NI, H1N1, the original SARS, Zika, MERS, Ebola, in that chronology)

Let's get our nomenclature right: this will show up a slight similarity with the 1st strain of SARS that surfaced in 2002. So, ***this one*** is called SARS-CoV-2

Covid-19 (SARS-CoV-2): the unprecedentedly, virulently contagious virus, much more so than ANY of the previous viruses like Zika ('16 – '17), Ebola ('14 – '16, in W.Africa & the Congo ('18 – '19). THIS one is especially "***aggressive***" in its spread & medically morbid & lethal in its end-effect.

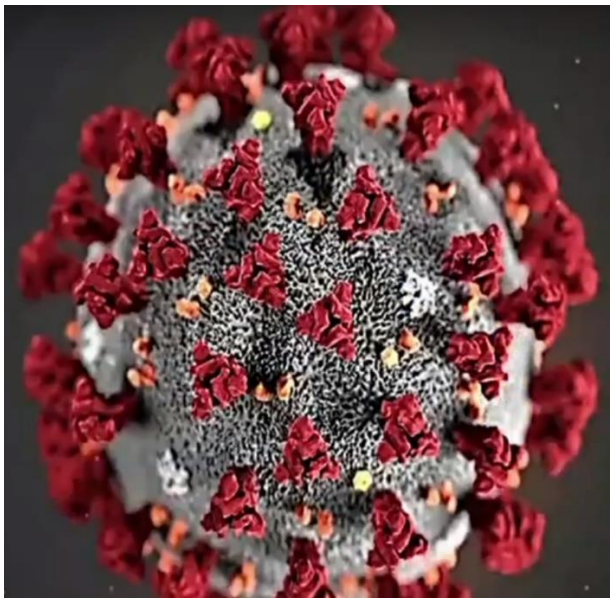
WHY is that so??

THIS question CANNOT possibly be answered in 1 sentence, 2 or even 3....it's way too complex a situation....

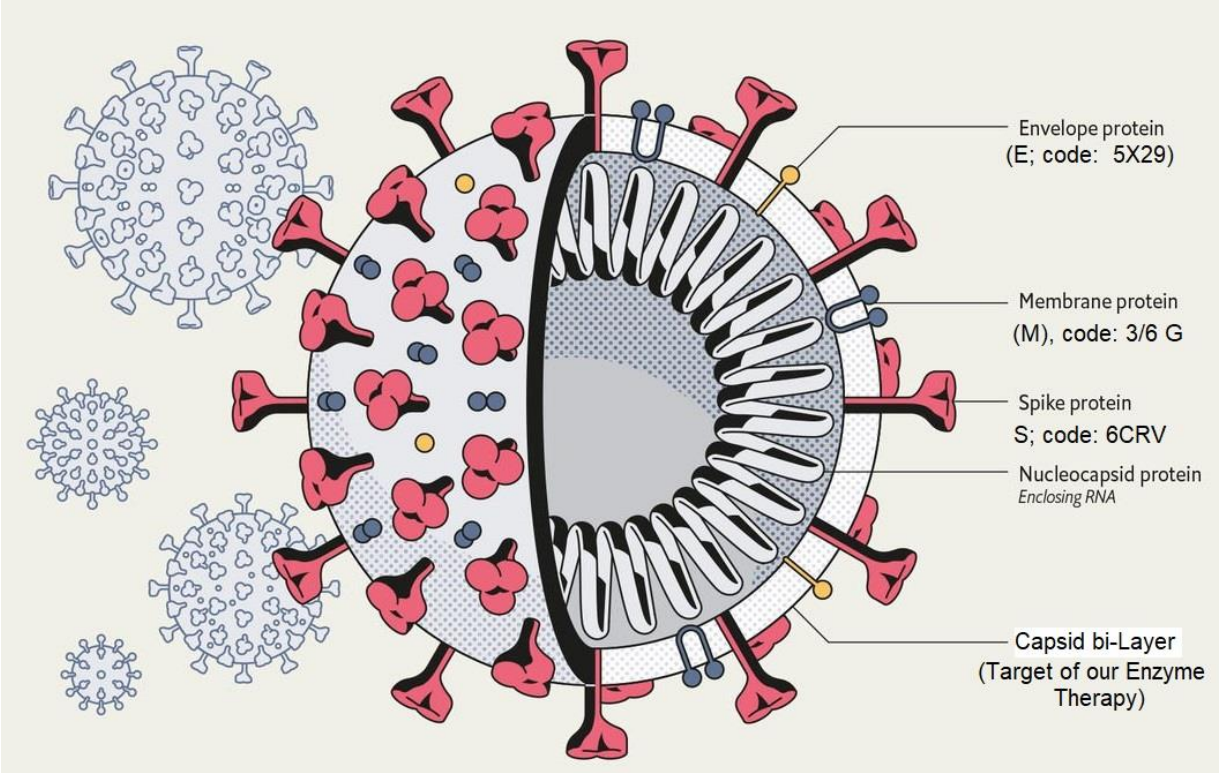
The COVID-19 Viral Structure

Before we see how a SARS-CoV-2 (aka COVID-19) enters a human cell, let's have a close-up look at the outer structure of a COVID-19 viron (singular).

The "spikes" that you see are on its outside outermost crown, the "corona" are what it uses to "anchor" itself to a human cell. These are actually its "Spike" (S) Proteins [PDB (Protein Data Bank)-coded 6CRV; It takes a Cryogenic Electron Microscope (cryo-EM) to be able to see these "spikes"]



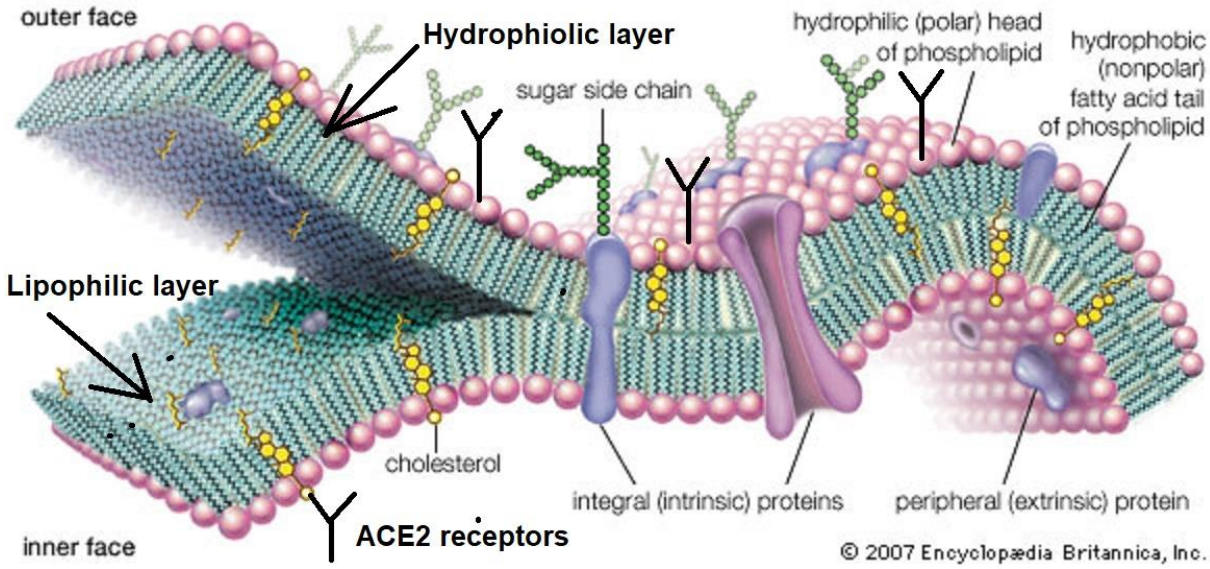
The "capsid" layers I had previously referred to are at the base of these "spikes". They are the outermost bi-layer; starting from the outside, they are the Envelope (E) protein (PDB-coded 5 x 29) & the Membrane (M) protein (coded 3/6 G). Here's an over-simplified graphical representation:



I've labelled the most important parts: the outermost "Spike" proteins (in the crown or "corona") and the 2 capsid layers.

IF you look closely, just behind the 2 capsid layers (bi-layer) are the viron's own encoding genome, its encoding RNA – THIS is what you want to destroy! And I believe a mix of powerful enzymes **can** do the job....

OK, let's have a close look, on the other hand at the surface level of a human cell & look at its potential vulnerabilities:



Now, I've "borrowed" a graphic from Encyclopaedia Britannica (I hope they don't sue me!) & inserted some extra figures & words (in **bold black**) just to show you what a human cell-wall looks like [sorry, there's a spelling mistake (my mistake!) for the outermost layer (at the top): it should read "Hydrophilic layer"].

The most important thing I'm trying to show you here is that embedded in the outermost bi-layer of the human cell is the ACE2 (Angiotensin Converting Enzyme2) receptor, a somewhat "peculiar" protein.... THIS is the "docking (anchor) point" for the COVID-19's corona Spike Protein (S, 6CRV)...this is HOW the virus starts attaching itself to YOU....

Things DO get a bit more complicated here....There is a protein called the **TMPRSS2** in the bi-layer of your cell that the ***smart*** COVID-19 uses to "prime" its Spike (6CRV) protein.... Scientists are also trying to develop an inhibitor of this RNA, **TMPRSS2.**

[by the way, this is also 1 of the 3 genes assayed in our 3-gene test for Prostate Cancer with the Univ. of Michigan's MLabs]

Digression: let's take a few steps back here & reflect, because the facts unravelled above have enormous implications:

Why did I say that ACE2 is rather peculiar? Well, ACE is the ubiquitous enzyme existing all over the body, especially in the tiny layers of muscles behind blood-vessels, especially arteries. It also exists in the lungs (1st target of the COVID-19 virus), heart, kidneys, intestines.

In a "normal" situation, the body secretes ACE all the time to keep the blood (in ALL vessels, large & small) pumping & flowing. [In lay terms, ACE "tensions" blood vessels by causing the layers of muscles behind these vessels to contract, thus causing them to squeeze the blood-vessels].

While ACE raises your BP generally, ACE2 lowers it [it is vaso-dilative, via its cleavage of Angiotensin2 (vaso-constrictive) into Angiotensins 1-7 (vaso-dilative)]. There IS some talk about scientists wanting to develop a drug to block ACE2. THIS is a "no brainer": IF ACE2 is hypo-tensive, which would, generally, be beneficial, WHY would you want to block its action?? Indeed, inhibition of the normal ACE enzyme leads to a drop in BP in the hypertensive (via the mechanism of raising ACE2), and raising the ACE2 would only ramp up the COVID-19 activity....SO, IF you are hypertensive: you might have to choose between an ongoing state of hyper-tension & being "taken" by the COVID-19 virus....Frankly, I wouldn't go down that road at all..... DON'T use the drug-based ACE-inhibitors (that can raise ACE2) for your hypertension – there's lots of natural ACE-inhibitors in the natural nutraceutical world, eg. Bonito peptides (we can help you with that) that can do the job without affecting ACE2.

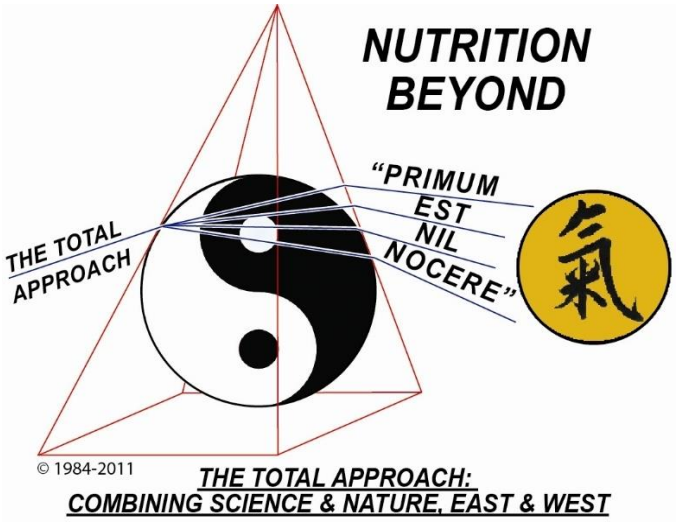
The 2 outer capsid layers (refer to my "Preliminary" 3 days ago) each contain the following individual proteins:

"Envelope (E) protein" (coded 5X29) & a Membrane (M) protein (coded 3/6 G). One of these 2 guys [the 'M' protein] complexes (bonds) with a target (an antigen) in a white cell, the HLA-A *02 human Leucocyte antigen serotype. This means that this COVID virus will also invade your white-blood cell system [YOUR primary defenders!].

THIS means that this COVID-19 virus will attempt to take over ***your*** PRIMARY defence system in the body: the rather complex Leucocyte (white-cell) system in your body. It's a little like HIV: it wants to "disable" your most fundamental defensive system you have....."Take it out", then invade your whole body without any resistance (from you)....**Chilling**. *Just like the spiralling daily death rate in Italy*....

SO, this "hidden enemy" (moniker used by el Presidente` Trump!) is "*nothing to sneeze at*", to say the least...

What does that tell you about what you need to do to fight it? "***Hammer & tongs***" in the ole' Aussie lingo: ***The Total Approach***:



Those who are un-infected AND wish to remain un-infected, understand that the paramount *Principle of Defence* is to "prime" your system by ramping up several levels of contingencies to a heightened state of ....***offensive capability.*** As I've said many times before in our very extensive newsletter series on Cancer, to borrow a fundamental tenet of Shaolin kung fu:

The best form of Defence is....Offence

NEXT: we go right into the 3 members of your Immune system. I roughly alluded to the first 2 in my introductory "Preliminary" newsletter 3 days ago. The 3rd one: **Passive Antibody Therapy:** "harvesting" antibodies from the bodies of people who had successfully recovered from the COVID-19 vital attacks. THIS can have some serious limitations which I will discuss later.

[Dr.L.S. Macloud, Ph.D. (Cambridge Univ.)]

(Chief Scientific Officer, NUTRITION BEYOND)