

Who is mankind permanent adversary?

Editorial

We review those fatal adversaries in the Century and call for much more effort to combat against the permanent one, namely deadly Covid-19 pandemic to prevent potentially their 2nd wave in the near future.

Background

flashing back began adversary war research the United States (US) had developed atom bomb, which killed hundreds of thousands in the Hiroshima 140K on August 1945 and Nagasaki 80K on August 9, in order to terminate Japan warlords and the WWII. The US continued the Manhattan Project in charge by Edward Taylor to develop the hydrogen bomb circa 1950s. Notably exception may be cruise missiles launcher the Federal-Aid Highway Act of 1956 signed by President Ike Eisenhower, which generated the vibrant Interstate Commerce. Then the Star War came competing against the Soviet Union which has helped NASA developed Apollo 11 carried Neil Armstrong to step onto the surface of the Moon on 21 July 1969. As a consequence of the success Intercontinental Ballistic Missiles (ICBM) program, President Ronald Reagan asked the Soviet Union President Mikhail Gorbachev which target his ICBM is aiming at Capital Washington DC. Soon, Gorbachev realized the US had all Seven Fleet equipped likewise the ICBM capability all over the globe. Under severe financial stress, Gorbachev decided to sign the disarmament with Reagan in 1987 and eventually by signed off the Soviet Union on Dec. 26, 1991 and terminated the cold war. As this Century went by, most of our ancestors have forgotten the days of Spanish Influenza (Flu) pandemic attack, beginning in January 1918 ended in December 1920, and 1/3 world population suffered with 1% 50M mortalities. Thus, some of us have forgotten our common adversaries are these micro-organisms viruses.

The virus was much smaller than the parasites and bacterial that can be filtered through and still able to grow in the Petri dish. Now

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we know that the virus is a submicroscopic infectious agent that can replicate themselves inside the living cells of an organism. We now can examine them under a high-power electronic microscope, as depicted schematic Figure 1 microorganism pandemic; (b) Spanish Flu and; (c) Crown Sphere Corona-virus initiated in 2019 (in short: Covid-19) Exactly a Century ago, the world population have suffered the deadliest Influenza (Flu) Type A which are further divided into subclass: H1 (Riboviria subtype antigens for Haemagglutinin clumping blood cells); and V1 (Neuraminidase enzyme moving the virus particles). Now we know those Flu H1N1 properties should not be treated daily by overly dose 30 grams of Aspirin, which are acid and toxic fatal. World War One (WWI) US Soldiers carried the Flu H1V1 to Europe. It has a misnomer----- Hispanic Influenza, for it has been originated in New York from birds, and appeared at the U. S. Army recruits training Camp at Funston, Fort Riley, Kansas. According to the Epidemiology, "at its worse time, the Spanish flu infected 500 million people worldwide, which at the time was about a third of the Earth's population. More than 50 million people 1% died of the disease, (among which 675K were killed in the U.S.).

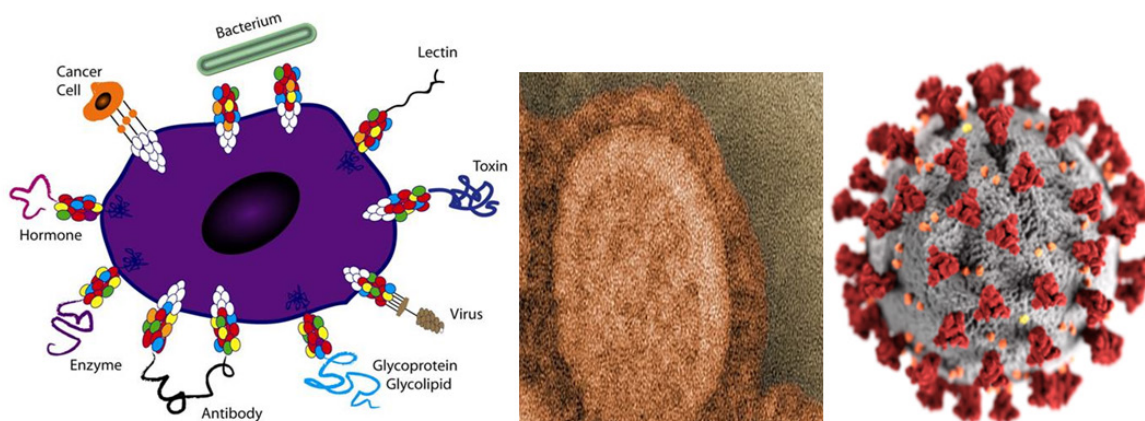


Figure 1 Micro-organisms: (a) Left Hand Side (LHS) size comparison with an animal individual cell with all microscopic world entities indicated from the right most corner toward the left corner in a counter-clockwise direction: *Toxin, Lectin, Bacterium, Cancer cells, Hormone, Enzyme, Antibody, Glycoprotein Glycolipid, Virus*; (b) Spanish Flu (Wikipedia) from Jan. 1918 to Dec. 1920. It infected 500 million people 1/3 world's population. The death toll is 50M estimated to be 1% and making it one of the deadliest pandemics in human history; (c) The current virus is schematically shown in RHS "Crown jewelry" injectors in red color distributed over the bi-layer membrane, enclosed inside the genetic material from easily adaptable single-fold RNA (RiboNucleic Acid, a nucleic acid present in all living cells. Its principal role is to act as a messenger carrying instructions from our genetic DNA for controlling the synthesis of proteins, although in some viruses RNA carries itself the genetic information.

To prevent the spread of so-called novel virus in the sense none of us have the immune-capability “Corona-virus” (in a Crown-shape membrane with jaws injecting to life forms the genetic RNA material Figure 1 (c)). During the current Pandemic, we called the adversaries Covid-19 began in 2019. Realizing the danger to already weaker immunity human beings, we have closed commercial retail business, closed all schools from K-12 to College, Churches, & Research Institutes. We kept the social distances and leashed the dogs in hiking (cat has been contaminated). We have rapidly established more than 100 clinical trials worldwide using experimental approved drugs repurposed and inefficiently to fight against Covid-19. For example, one would have enlisted those companies developing the early vaccines with clinical trials against the SARS-Covid-2 virus to Covid-19. Many experts believe a second (group) wave of some variant of Covid-19 might be possible in this fall of 2020.

Now, the global fatality rate for Covid-19 pandemic as of April 1 2020 is about 5%, although in the U.S. it is about 2.16%. The fatality rate will be about 1% (which is still about 10 times the fatality rate of a typical seasonal influenza of 0.1%). Experts concluded “To date, about 1.25 million people have been confirmed to have Covid-19 worldwide, with about more than 66,000 deaths. Of course, the world

population in 1918 was about 1.8 billion. The higher estimate of 50 million deaths would suggest the Spanish flu killed 2.7% of the world population, while the 17.4 million figures suggest about 1%.”

In this past Centuries, we have been attacked by so many other micro-organism; namely HIV/AIDS(1981-now; 25~35M); SARS(2002-2003; 770K); MERS(2012-now; 50K); Ebola(2014-2016; 11.3K(cf. Encyclopedia)

Homo sapiens Mankind seem to follow Darwinian with a slow “punctuated evolution” based on both (1) the precise digital information on those double-strand DNA: A-T & C-G sequence, as well as (2) the analog information to wind up from 3 meter long to few millimeter size Chromosome, based on the epigenetic in terms of Histone spooling and CH₃-tag Methylation, cf. Figure 2. All the micro-organism, including Influenza (flu) virus reveals themselves mostly as a single strand RNA. Not all pandemic are caused by virus. “Typhoid fever is caused by bacterium Salmonella, originated in India during late 1980s and spreading through the world carrying multidrug resistance In 2015, it resulted in about 149,000 deaths worldwide – down from 181,000 in 1990 (about 0.3% of the global total)” (cf. Development of Vi conjugate - a new generation of typhoid vaccine. Szu SC).

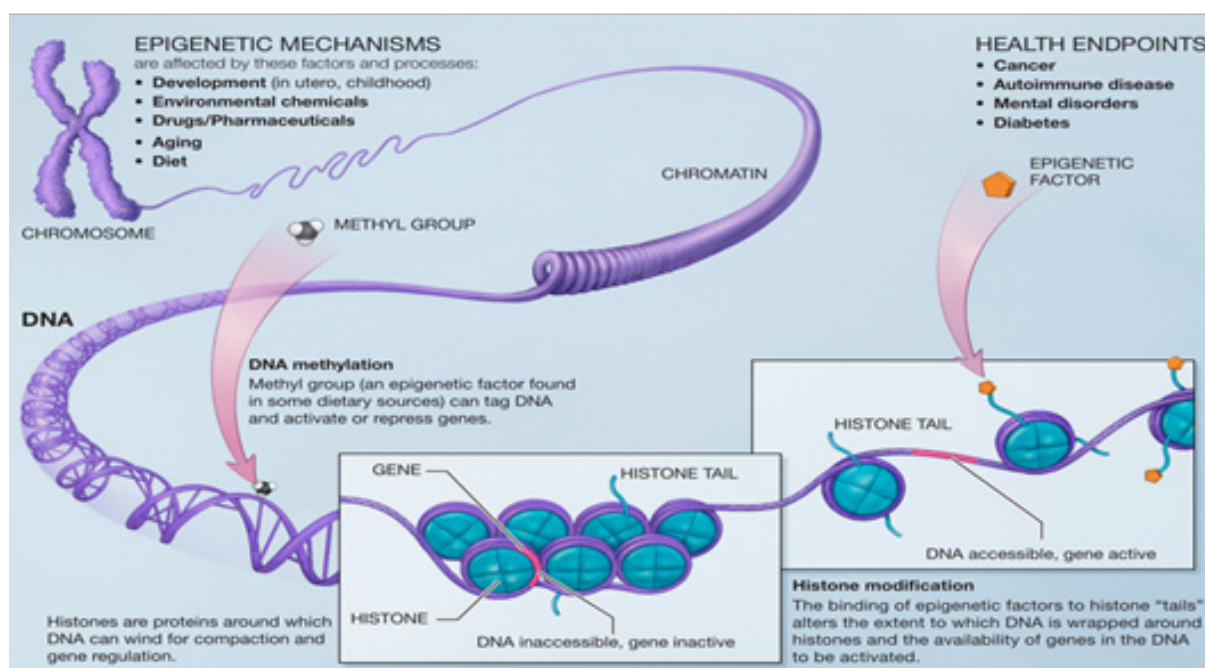


Figure 2 Epigenetics (Greek: Outside) The winding 3 meter long into millimeter size chromosome(Wikipedia).

Conclusion

What a coincidence it was also the Spanish philosopher George Santayana said well in 1863: “Those who cannot remember the past are condemned to repeat it.” We did repeat the calamity a Century later! How can we do better? We shall never forget mankind common adversary.

- A. We need to strengthen of researcher’s capability and industry to develop the personal protection equipments (PEP) as well as a reliable test methodology. The optimistic projections are that we might have a vaccine available later in 2021

- B. We shall transfer the resource used in cold war to accelerate the vaccine and drug development.

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Conflicts of interest

The authors declare, that there is no conflict of interest.

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