International Journal of Science Academic Research
Vol. 07, Issue 02, pp.254-257, February 2026
Available online at http://www.scienceijsar.com

ISSN: 2582-6425

Research Article

PREVENTION OF ALL VIRAL INFECTIONS BY NON- CARCINOGENIC GENOTOXIC DRUGS (NCGDS)

***Gao-De Li**

Chinese Acupuncture, Liverpool, UK

Received 15th December 2025; **Accepted** 24th January 2026; **Published online** 23rd February 2026

Abstract

Comparing 1918 Spanish influenza pandemic with 2019 COVID-19 pandemic, people in the both pandemics had no prophylactic drugs for preventing viral infections that contributed to the death toll. No prophylactic drugs in1989 was acceptable because medical science and biotechnology was not good at that time. But in 2019, global biomedical science has advanced to a high level, people still didn't have prophylactic drugs for preventing COVID-19 infections. The deep reason might be because there is no theory that could help people to find prophylactic drugs for preventing viral infections. In 2020, we first proposed the novel antiviral theory: The reason why a virus can specifically infect its target cells is because the gene expression patterns in the target cells are suitable for viral infection. Alteration of 3D genome structure can change the gene expression patterns in the target cells, reducing susceptibility of the target cells to viral infections. We assumed that non-carcinogenic genotoxic drugs (NCGDs) might change gene expression patterns. NCGDs are old or existing drugs that are non- carcinogenic but might regulate expression of many genes through affecting genome structure. With this knowledge, people can easily find drugs for preventing all viral infections. If our antiviral theory is put into medical practice, there will be no future viral pandemics.

Keywords: Non-Carcinogenic Genotoxic Drugs (NCGDs), Antiviral Theory, Alteration of 3D Genome Structure, Gene Expression Patterns, Viral Pandemic.

INTRODUCTION

Ancient Chinese book, Huangdi Neijing, states that the best doctors treat diseases before they occur. To treat viral infections, the methods should be the same, prevention is the best approach to stop the infections before they happen. Several global viral pandemics have killed millions of people, few years ago, COVID-19 pandemic has astonished the world. In winter season, many countries have spent lot of money to order influenza (flu) vaccines for prevention of flu infection. To prevent viral infection, vaccination seems to be the only approach. But if there is an unknow virus that infects people, no vaccines will be available. In 2020, we published a theoretical paper that non-carcinogenic genotoxic drugs (NCGDs) could be used to prevent all viral infections [1]. Unfortunately, no researchers were interested in this theory, and no experimental study had been conducted to validate it, the main reason of which probably is because the paper was published in a low-ranking open access journal. It seems that researchers value more high-ranking journals than article content.

The deadliest pandemic of Spanish flu caused more than 50 million deaths and huge socioeconomic consequence worldwide [2] and recent COVID-19 pandemic caused 3.8 million deaths [3] and its lockdown caused significant death toll and global social, political and economic impact [4][5]. Comparing 1918 Spanish flu pandemic with 2019 COVID-19 pandemic, people in both pandemics had no antiviral prophylactic drugs that contributed to the death toll. Development of vaccines is important but needs proper antigen, and if there are antigen mutations and unknown virus, development of vaccines will be difficult or impossible. Finding a theory that can quickly help people to get prophylactic drugs for preventing all viral infections is of vital importance. In this paper, we theoretically explore the possibility of using our antiviral theory to prevent all viral infections so that future viral pandemics will unlikely occur.

Corresponding Author:** ***Gao-De Li,
Email: gaode_li@yahoo.co.uk

NCGDS FOR PREVENTION OF ALL VIRAL INFECTIONS

NCGDs from the novel antiviral theory

In 2020, we published a novel antiviral theory [1], the idea of which sounds simple but is groundbreaking: viral infection is cell-type specific, and the reason why a virus can specifically infect its target cells is because the gene expression patterns in the target cells are suitable for viral infection. The 3D genome structure is closely associated with the gene expression patterns and alteration of 3D genome structure will change the gene expression patterns. We assumed that non-carcinogenic genotoxic drugs (NCGDs) might change gene expression patterns through affecting 3D genome architecture. Nowadays, some researchers think that gene editing can be used to change the gene expression patterns, but we think that using gene editing skills for modifying virus or host genome is impracticable and can't discover prophylactic drugs for preventing viral infection. We believe that only NCGDs could be used to change the gene expression patterns, which is a talented idea in this antiviral theory.

NCGDs are new concept of old or existing drugs with genotoxic side effects, any drugs that are non-carcinogenic but can regulate expression of many genes through affecting 3D genome structure are named as NCGDs [6]. There is a big medicine storage for screening NCGDs. Based on recent AI review, the US Food and Drug Administration (FDA) has showed there are over 20,000 different prescription drugs and over 100,000 different over the counter (OTC) drug products available in the United States and Canada. To find prophylactic drugs for preventing viral infection, it is better to screen NCGDs from existing OTC drugs because they are easily available and cheaper. We believe that researchers can find NCGDs to prevent all sorts of viral infections such as cold or flu viral infection, COVID-19 infection, liver viral infection, gut viral infection, brain viral infection and human immunodeficiency virus (HIV). In winter season, people can take NCGDs to

prevent cold or flu infections and they don't need the injection of mRNA vaccines that have worried many people.

Preventing pandemic by NCGDs

If a viral infection may have potential for epidemic or pandemic, people can take proper NCGDs to prevent the viral infection**.** To avoid epidemic or pandemic, herd immunity should be mentioned. Herd immunity is an expected time when the spreading of contagious disease could be stopped, indicating that a large portion of the population needs to be immune to the disease, making the spread of the disease unlikely occur and the epidemic or pandemic may end gradually. Generally, the herd immunity threshold for contagious diseases ranges from 70-90% [3][7][8], which suggests that to stop the spreading of contagious disease, every 100 people should have 70 to 90 people who are immune to the disease. Interestingly, till now, herd immunity is acquired through vaccination or natural infection, which is slow and painful. Now we propose that prophylactic drugs, NCGDs, can quickly make a population reach herd immunity, which will stop the spreading of the diseases, making epidemic or pandemic unlikely occur. We think that using NCGDs to prevent viral infection is a safe and quick method to acquire herd immunity.

Besides, NCGDs have cure-all characteristic [1] [9], enabling them to prevent viral infections and treat non-viral infected diseases such as cancers and neurodegenerative disorders that have abnormalities of gene expression patterns. We can only use NCGDs to prevent not treat viral infections because once viral infection is formed, the host environment will be changed, which might obstruct NCGD's ability for alerting genome structure and eventually fail in the treatment of viral infections. During COVID-19 pandemic, clinical trials using NCGD drugs including chloroquine, ivermectin and metformin, the drugs are used to treat patients with COVID-19 infection and not to prevent viral infection. The results have suggested that no evidence supports the use of the trial drugs for the treatment or prevention of COVID-19 [10][11][12]. These clinical trials are not validating the ability of NCGDs for prevention of viral infections. This is the way to promote the vaccination and antiviral drugs. To test a drug to be a prophylactic drug, the trial should first find a group of non-infected people (healthy individuals), and then randomly divide them into two groups, one group receiving the drug, the control receiving placebo. The successful group should have a lower morbidity rate. We believe that chloroquine, ivermectin and metformin have ability for preventing viral infections because they belong to NCGDs. But because of toxicity of these drugs, they can't be used to prevent viral infections. Picking out OTC medicines such as vitamin C, paracetamol and berberine to prevent COVID-!9 is a good idea because these drugs are easily available, cheaper, reliable and with low toxicity.

Based on our antiviral theory, we can explain many things. For example, the bat carries many viruses, but it is not infected by the virus because the gene expression patterns of the bat's target cells is not suitable for viral infection; a very small percentage of individuals are naturally resistant to SARS-CoV-2 infection [13], the reason is that 3D genome architecture in their cells might be a bit different from other individuals, leading to different gene expression patterns that are resistant to viral infection; it seems that NCGDs can prevent viral infections but not prevent bacterial infection, however, a report showed that Xenopus exhibits natural tolerance to infection of several bacteria and transcriptional profiling has identified a 20-gene signature that discriminates between tolerant and susceptible isolates [14], which suggests that NCGDs might help host to become tolerance to bacterial infections through altering gene expression patterns; long-time usage of a NCGD might make host cells become drug resistance to the NCGD because drug resistance in cancer cells is caused by alteration of 3D genome architecture that changes the gene expression patterns in host cells, which is named as genome-modulated intracellular acquired immunity [15], once host drug resistance to the NCGD is formed, the prevention of viral infection might last a long time even without taking the NCGD, which is better than use of mRNA vaccines.

THE REASON WHY I RECOMAND PEOPLE TO USE VITAMIN C AND PARACETAMOL FOR PREVENTING VIRAL INFECTIONS

Development of treatment drugs is different from discovery of prophylactic drugs. Treatment drugs could be expensive and have more toxicity, but prophylactic drugs must be cheaper，reliable，easily available and have low toxicity. This is why we select OTC medicines, vitamin C and paracetamol or vitamin C and berberine for viral prevention [16]. Recently, Nipah Viral Infection has been reported in India, showing that Nipah virus has a high mortality and pandemic potential [17][18]. To protect healthy individuals from infecting Nipah Viral Infection, we still propose that in the absence of infections, a daily tablet of vitamin C (500 mg) and a tablet of paracetamol (500mg) or berberine (500mg) in adults can be taken to prevent all respiratory viral infections including Nipah viral Infection. If there are 100 types of viruses that can infect a target cell, simply changing the gene expression patterns of the target cell can prevent infections by any of 100 types of viruses. If this novel antiviral theory is put into medical practice, there will be no future viral pandemics that we are worried. The reason why I always want healthy individuals to use vitamin C and paracetamol or berberine to prevent all respiratory viral infections is because I experienced two things that impressed me a lot. First, I am 70 years old this year, I have used vitamin C and paracetamol and later vitamin C and berberine for five years till now. I have never received COVID-!9 and flu vaccinations but have never got COVID-!9 or flu or cold infections. Second, when UK lockdown just started, a patient came to my clinic, she asked me how to use drugs to prevent COVID-!9 because in her medical centre there are nearly 20 nurses who didn't want to receive mRNA vaccine for preventing COVID-!9. I told her using one tablet of vitamin C (500 or 1000 mg) and one tablet of paracetamol (500mg) every day. After one year, she companied her son to come to my clinic for treatment. When she saw me, she said "Doctor Li, tell you the good news, we nearly 20 nurses followed what you said, no anyone got COVID-!9 infection. I also told my family members to follow what you said, no adults got COVID-!9 infection, but my grandson suffered COVID-!9 infection because he didn't use the drugs". Of course, this is not a clinical trial because of small sample size. But based on this evidence, we are able to conclude that our antiviral theory is really workable.

If pharmaceutical company can create a single tablet containing two drugs, vitamin C and paracetamol or vitamin C and berberine. In winter season, people can take one tablet to prevent all respiratory viral infections. The tablet of vitamin C

and berberine might not only prevent all respiratory viral infections, but also prevent gut virus infections such as norovirus infection. We can use these drugs to compete with vaccination, in winter season, many people receive few vaccinations. We can ask one group of people to take NCGD tablet every day to check if NCGDs are better to prevent viral infection and have less side effects compared to mRNA vaccines. Besides, using NCGDs for preventing viral infections might save lot of money, which will benefit government. Taking a single tablet containing two drugs every day for few months or a year is possible because the doses are low. In addition, prevention of viral infections does not completely expel viruses from our body, some virus might enter our body, though not causing infection, but can induce immune response. As mentioned above, long-time usage of a NCGD can make host cells become drug resistance to the NCGD, indicating that prevention of viral infection might last longer than we predicted even without taking the NCGD.

CONCLUSION

In 2020，when UK nationwide lockdown was just announced, we published our novel antiviral theory and recommended heathy individuals to take paracetamol and vitamin C or ibuprofen and vitamin C every day for preventing COVID-19 infection, but people don't believe this, they may be laughing that using these OTC medicines for preventing COVID-19 is a joke. To today, researchers have never cited my paper or conducted experiments to prove this theory. Recent Google AI review showed "based on current medical evidence and guidance from health authorities, there is no evidence that taking paracetamol and vitamin C or ibuprofen and vitamin C every day prevents COVID-19 infection". AI continued that vitamin C is for immune function and paracetamol or ibuprofen is for treating symptoms. AI has never understood my paper, paracetamol, vitamin C and ibuprofen belong to NCGDs that can change gene expression patterns in epithelial cells of host respiratory system and thus reduced susceptibility of epithelial cells to COVID-19 infection. Moreover, taking paracetamol and vitamin C is not just for preventing COVID-19 infection, but for preventing all respiratory viral infections. NCGDs that prevent viral infections are non-virus-type specific, taking proper NCGDs can prevent all viral infections if target cells are known. If the novel antiviral theory is put into medical practice, people will have prophylactic drugs to prevent viral infections, which was drug shortage in Spanish flu and COVID-19 pandemics. Regardless of negative opinion on this theory, we believe that our idea is groundbreaking, and the antiviral theory will be proved as a milestone in the antiviral strategies of human history [6].

Genotoxic drugs or NCGDs exist in many substances around us, such as many medicines, Chinese herb ingredients， plant extracts, cooking spices， coffee, tea, tobacco and illegal drugs. Without NCGDs, medical care will be affected. NCGDs have cure-all characteristic and play a very important role in treating many difficult illnesses such as cancers, diabetes, neurodegenerative disorders, obesity, anti-aging and prolonging life, though many researchers or doctors don't agree. Spanish flu pandemic in 1918 killed more than 50 million people because of no prophylactic drugs available, and after 100 year, COVID- 19 pandemic caused 3.8 million deaths also because of no prophylactic drugs available. Why after 100-year study, researchers have not developed prophylactic drugs for preventing viral infections? Coincidentally, why after 100-year study, researchers have not realised the importance of NCGDs in treating many diseases? Many papers had been published in high- quality journals since COVID-19 started, but a single of prophylactic drug for preventing viral infection had not been found. Several researchers thought they got a good idea that could discover an antiviral drug with broad-spectrum, no matter what they had said or conducted, the results would be changing host gene expression patterns that are like NCGDs' functions. The advanced biomechanical skills may help to discover viral treatment drugs but have no chance to develop prophylactic drugs for preventing viral infections. To sum up, certain drugs of NCGDs, especially some plant extracts, could become prophylactic drugs for preventing all viral infections. About six years ago, we published the first paper about using NCGDs for preventing COVID-19 infection [1], which has opened a vast expanse of uncultivated land in medicine. But researchers have never cited this paper and thus no scientific consensus has been achieved, which makes me realize I am the lonely fighter for exploring NCGDs, feeling a bit of true grit.

CONFLICTS OF INTEREST

The author declares no conflicts of interest.

REFERENCES

1. Li, G. D. (2020) Non-Carcinogenic Genotoxic Drugs Could Be Used to Prevent and Treat COVID-19. *Open Access Library Journal*, 7: e6536.
2. Martini, M., Gazzaniga, V., Bragazzi, N. L., Barberis, I. (2019) The Spanish Influenza Pandemic: A Lesson from History 100 Years After 1918. *J Prev Med* Hyg, 60(1):E64-E67.
3. Wong, R.S.Y. (2021) COVID-19 Vaccines and Herd Immunity: Perspectives, Challenges and Prospects. *Malays J Pathol*, 43(2):203-217.
4. Onyeaka, H., Anumudu, C.K., Al-Sharify, Z.T., Egele-Godswill, E., Mbaegbu, P. (2021) COVID-19 Pandemic: A Review of the Global Lockdown and Its Far- Reaching Effects. *Sci Prog*, 104(2):368504211019854.
5. Liang, S.T., Liang, L.T., Rosen, J.M. (2021) COVID-19: A Comparison to the 1918 Influenza and How We Can Defeat It. *Postgrad Med J*, 97(1147):273-274.
6. Li, G, D. (2025) Non-Carcinogenic Genotoxic Drugs (NCGDS): A New Concept of old Drugs with Genotoxic Side effects. *International Journal of Science Academic Research* Vol. 06, Issue 08, pp.10460-10462,
7. Fontanet, A., Cauchemez, S. （2020）COVID-19 Herd Immunity: Where Are We? *Nat Rev Immunol* 20, 583–584.
8. Rashid, H., Khandaker, G., Booy, R. (2012) Vaccination and Herd Immunity: What More Do We Know? *Curr Opin Infect Dis*, 25(3):243-9.
9. Li, G.D. (2021) A Novel Strategy for Preventing and Treating Cancer: Alteration of Cancer-Associated Chromatin Configuration. *Open Access Library Journal*, 8: e7347.
10. Singh, B., Ryan, H., Kredo, T., Chaplin, M. and Fletcher, T. (2021) Chloroquine or Hydroxychloroquine for Prevention and Treatment of COVID-19. *Cochrane Database of Systematic Reviews*, No. 2, Article No. CD013587.
11. Bignardi, P.R., Vengrus, C.S., Aquino, B.M. and Cerci Neto, A. (2021) Use of Hydroxychloroquine and Chloroquine in Patients with COVID-19: A Meta- Analysis

of Randomized Clinical Trials. *Pathogens and Global Health*, 115, 139- 150.

12. Bramante, C.T., Huling, J.D., Tignanelli, C.J., Buse, J.B., Liebovitz, D.M., Nicklas, J.M., et al. (2022) Randomized Trial of Metformin, Ivermectin, and Fluvoxamine for Covid-19. *New England Journal of Medicine*, 387, 599-610.
13. Andreakos, E., Abel, L., Vinh, D.C. *et al.* （2022）A Global Effort to Dissect the Human Genetic Basis of Resistance to SARS-CoV-2 Infection. *Nat Immunol* 23, 159–164.
14. Sperry, M.M., Novak, R., Keshari, V., Dinis, ALM., Cartwright, M.J., *et al.* (2022) Enhancers of Host Immune Tolerance to Bacterial Infection Discovered Using Linked Computational and Experimental Approaches. Adv Sci (Weinh), 9(26):e2200222.
15. Li, G.D. (2023) The Mechanism of Drug Resistance in Cellular Pathogens: A Hypothesis. *Open Access Library Journal*, 10: e10971.
16. Li, G. D. (2022) Taking Paracetamol and Vitamin C or Ibuprofen and Vitamin C Every Day Could Be a Simple Way to Prevent COVID-19 Infection. *Open Access Library Journal*, 9: e9544.
17. World Health Organization. Disease Outbreak News: Nipah virus infection in India. Available at: https://www.who.int/emergencies/disease-outbreak- news/item/2026-DON593
18. Hassan, M.Z., Ibrahim, S.K., Harriss, E., Horby, P., Olliaro, P., Rojek, A. (2026) Interpreting the Natural History and Pathogenesis of Nipah Virus Disease through Clinical Data, to Inform Clinical Trial Design: A Systematic Review. *Lancet Microbe*, 24:101295.

****