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Research Article

NON-CARCINOGENIC GENOTOXIC DRUGS (NCGDS) MIGHT BE VITAL MOLECULES THAT CARE FOR HUMAN HEALTH

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Abstract

Old drugs that have genotoxic side effects but are non-carcinogenic were originally repurposed as non-carcinogenic genotoxic drugs (NCGDs) for preventing and treating COVID-19. Later, NCGDs are defined as old drugs that have genotoxicity but are non-carcinogenic or could modulate expression of many genes in cells through directly or indirectly affecting 3D genome structure. Besides, NCGDs have cure-all effects, and the cure-all feature could be used as the third criterion for identifying NCGDs. Therefore, any drug that is non-carcinogenic but conforms to one of the three criteria including having genotoxicity or modulating expression of many genes or showing cure-all feature belongs to NCGDs. Based on these criteria, NCGDs could be found more or less in medicines, Chinese medicine herbs, plant extracts, cooking spices, coffee, tea, tobacco, fruits, seeds, vegetables and grains. NCGDs are vital molecules that function as double-edged swords, providing either beneficial or destructive effects on human health depending on the dose and course. In this paper, I have proposed that hormones and neurotransmitters produced in human body might belong to NCGDs, which implies that NCGDs might be powerful gene regulatory drugs. But overdose of NCGDs could be harmful for human health. Further investigation of NCGDs is greatly important for understanding their functions in maintenance of normal human health and fighting various types of diseases. The original purpose of exploring NCGDs was for prevention of viral infections. According to 6-year test myself, I believe that vitamin C and berberine combination is the best drug for preventing all viral infections including transmitted viruses like HIV and cancer-causing viruses, and various types of cancer. If a pharmaceutical company could make a tablet containing vitamin C and berberine, which might become a famous cure-all drug and be welcomed by a broad range of consumers.

Keywords: Non-Carcinogenic Genotoxic Drugs (NCGDs), Viral Prevention, Cancer Prevention, Hormones, Neurotransmitters, Vitamin C and Berberine Combination, Vital Molecules, Antioxidants.

INTRODUCTION

In 2020, I published a paper that first proposed using non-carcinogenic genotoxic drugs (NCGDs) for preventing and treating COVID-19 [1]. Currently, NCGDs are defined as old drugs that have genotoxicity but are non-carcinogenic or could modulate expression of many genes in cells through directly or indirectly affecting 3D genome structure[2]-]4]. NCGDs are important molecules that function as double-edged swords, providing either beneficial or destructive effects on human health depending on the dose and time. Discovery of NCGDs has opened a vastly uncultivated land in medicine. However, researchers have never paid attention to this low-level journal article. But I believe that NCGDs could alter gene expression patterns in target cells without needing gene editing, indicating that NCGDs might be used to prevent all viral infections and various types of cancer as well. Besides, NCGDs have cure-all effects [5], and thus might be used to fight many illnesses, such as inflammation, free radicals, diabetes, obesity, cancer, aging, cardiovascular diseases, etc. Of course, every NCGD has different effects on illnesses because alteration of 3D genome structure in different cells is different, leading to different gene expression pattern changes that might be suitable for treating different illnesses. NCGDs' main function is alteration of gene expression patterns for preventing viral infections and treating various types of illnesses. Some researchers think that gene editing skill could be used to modify host or virus genome for preventing viral infection. Clearly, this approach is impracticable, but many researchers support it.

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Lots of people hate NCGD wording because of genotoxic drugs, but many good drugs belong to NCGDs, such as vitamin C, aspirin, paracetamol, chloroquine, metformin, curcumin, artemisinin, metformin, and ivermectin [5][6]. As a lonely fighter for exploring the importance of NCGDs, in this paper, I will present the importance of NCGDs in caring for human health, and vitamin C and berberine combination for preventing all viral infections and various types of cancer.

HORMONES AND NEUROTRANSMITTERS MIGHT BELONG TO NCGDS

Two criteria for identifying NCGDs include having genotoxicity or modulating expression of many genes. Since NCGDs have cure-all effects, and the cure-all feature could be used as third criterion for identifying NCGDs. Any drug that is non-carcinogenic but conforms to one of the three criteria including having genotoxicity or modulating expression of many genes or showing cure-all feature belongs to NCGDs. Many Chinese medicine herbs conform to these criteria because the bioactive molecules isolated from Chinese medicine herbs are NCGDs, such as polysaccharides, saponins, alkaloids, flavonoids, terpenoids [7]. Now, I further assume that hormones and neurotransmitters might belong to NCGDs. First, let us talk about hormones that are produced by endocrine glands, and are travelling through the bloodstream to tissues and organs, regulating essential functions of human body. Adrenaline has genotoxicity [8], and thus belongs to NCGDs; melatonin can modulate expression of many genes [9], indicating it belongs to NCGDs; thyroid hormone has genotoxicity [10], and thus belongs to NCGDs; insulin-induced oxidative stress can cause genotoxicity [11], and thus

insulin belongs to NCGDs; estrogens are considered as endogenous genotoxic agents [12], and thus belong to NCGDs; testosterone at high dose is genotoxic [13] and thus belongs to NCGDs. Second, it is time to talk about neurotransmitters that are endogenous chemical molecules which transmit signals across a synapse from one neuron to another neuron, or to muscle, or gland cells. Few examples are given here: acetylcholine is a vital neurotransmitter that has a wide variety of functions in the brain and other organ of the human body, acetylcholine also act as a signalling molecule that modulates expression of many genes [14] and thus belongs to NCGDs; dopamine has genotoxicity [15], and thus belongs to NCGDs; serotonin has genotoxic effects [16], and thus belongs to NCGDs; gamma-aminobutyric acid (GABA) has genotoxicity [17] and thus belongs to NCGDs.

Collectively, hormones and neurotransmitters are vitally impotent molecules produced in human body, which maintains the functions of virous organs of human body with a small dose. Hormones and neurotransmitters might belong to NCGDs, which might imply that NCGDs are powerful gene regulatory drugs and indicate that hormones and neurotransmitters function like NCGDs, regulating gene expression through affecting 3D genome structure. NCGDs are various and more or less found in medicine, Chinese medicine herbs, plant extracts, cooking spices， coffee, tea, tobacco, fruits, seeds, vegetables and grains, indicating NCGDs are vital molecules that are widely present and care for human body. But overdose of NCGDs could be harmful for human health. Further investigation of NCGDs' functions is greatly important in understanding effects of internal vital molecules like hormones and neurotransmitters on various organs of human body, and effects of external vital molecules like NCGDs on prevention and treatment of various types of diseases.

A STORY ABOUT ORIGIN OF THE NOVEL ANTIVIRAL THEORY

COVID-19 pandemic started from December of 2019 and became worse in 2020. I clearly remembered that the World Health Organization (WHO) originally opposed wearing face mask and I posted a question poster in ResearchGate against it, asking why WHO was against wearing face mask because a new medical graduate might understand to prevent transmitted viral infection, wearing face mask is a basic knowledge. At that time, many drugs were reported to prevent COVID-19 infection, such as chloroquine, hydroxychloroquine, metformin, and ivermectin. WHO and government's COVID-19 advisers had a unified promotion that no prophylactic drugs were found to prevent COVID-19 infection. Some researchers published paper to support this promotion. It was lockdown time in UK, I was restricted at home and couldn't go out for work. I was interested in these drugs because I found all these drugs have genotoxic side effects. Therefore, I searched Google website to see whether other drugs with genotoxic side effects could prevent or treat COVID-19 infection. The results were exciting: all the drugs with genotoxic side effects could prevent or treat COVID-19 infection, for example, all antimalarial drugs have genotoxic side effects, and they all have antiviral effects [18]. It was the time to figure out an antiviral theory. Why genotoxic drugs could prevent or treat COVID-19? My thinking process was this : genotoxic drugs could affect DNA by causing physical damage or epigenetic changes and affected DNA would affect 3D genome structure. Affected 3D genome structure might change what? Forty years ago, I published a paper suggesting that 3D genome structure was closely linked to gene expression patterns [19], which suggested that genotoxic drugs might alter gene expression patterns through affecting 3D genome structure. Then I asked myself why altered gene expression patterns in cells could prevent or treat COVID-19 infection? After about 3 days' thinking, the answer appeared in my mind: viral infection is cell-type specific, and the reason why a virus can infect its target cells is because the target cell's gene expression patterns are suitable for the viral infection. Changing gene expression patterns in target cells with genotoxic drugs or NCGDs could reduce cells' susceptibility to all viral infection [1] [20].

Since this antiviral theory has never been found in antiviral research journals and books, therefore, it is a great discovery in the antiviral research field of human history, which was not achieved in the laboratory of a famous university but was born in the private house with the condition of Google searching and thinking. If this novel antiviral theory is put into medical practice, there would be no future viral pandemics. Changing gene expression patterns in target cells could also be done by X-ray that could be used to prevent all viral infections with low-dose irradiation of related body surface location [21], for example, human papillomavirus (HPV) causes various types of cancer in female, if related body surface location is irradiated once with low-dose X-ray, the person could be able to prevent HPV infection for at least one year, which is more convenient and better than vaccination. Hopefully, some researchers could conduct a clinic trial for validation.

VITAMIN C – BERBERINE COMBINATION IS THE BEST PREVENTIVE DRUG

To help people for preventing COVID-19 infection, I rapidly wrote a paper in 3 days and sent it out for publication [1] and In July 2020, the similar poster was first uploaded as a poster to ResearchGate (DOI: 10.13140 / RG.2.2.34686.61769/7) [20]. I have promoted and encouraged people to take vitamin C and paracetamol or vitamin C and berberine for preventing viral infections[18], but people didn't believe them, and researchers were not interested in this novel antiviral theory. From 2020 to today, I have used vitamin C and berberine myself to prevent viral infection. During the 6 years, I have never received vaccination and never got viral infections. Before 2020, I was very susceptible to cold virus or influenza virus, if I met someone who was infected with these viruses, few days later I would be infected for sure. Since 2020, I started to use vitamin C and berberine to prevent COVID-19, later I realised these the two drugs could not only prevent COVID-19, but also prevent cold or influenza infection. I have used my body for 6 years to test the preventive effects of vitamin C and berberine. The results have made me realise that vitamin C and berberine combination is the best drugs for preventing viral infections because few thousands of genes are induced by vitamin C [22], which makes vitamin C become a good drug for enhancing other NCGD's ability in altercation of gene expression patterns, and berberine (a NCGD) has potential in prevention and treatment of more than 20 types of cancer in human [23], indicating that berberine could alter gene expression patterns in nearly all tissue and cell types of human body, leading to prevent all viral infections including transmitted viruses like HIV and cancer- causing viruses, and various types of cancer.

I am now urging pharmaceutical company to make a tablet containing vitamin C (400 mg) and berberine (600 mg), which will prevent all viral infections and various types of cancer and might also be used to treat other difficult illnesses. This combination tablet might become famous cure-all drug and be welcomed by a broad range of consumers. This combination tablet might be better than RNA vaccines because it is safe, cheaper and reliable for preventing all viral infection. Besides, the tablet might not need to take every day because if gene expression patterns in target cells have been altered, the changed gene expression patterns might last longer time even without taking the tablet. I recommend using the tablet for 3 weeks and stopping using the tablet for 1 weeks, which lasts about one month, and individual can repeat this cycle every month depending on infectious disease situation. The advice about using the combination tablet for preventing viral infection is that health individual could use this tablet because if a person is infected with viruses, the viruses can change host gene expression patterns for their use and thus reduce the efficacy of NCGDs.

CONCLUSION

NCGDs were originally used as drugs for preventing viral infections, and lately, I pointed out that all antioxidants might belong to NCGDs. In this paper, I have proposed that hormones and neurotransmitters produced in human body might belong to NCGDs, which implies that NCGDs might be powerful gene regulatory drugs. There are three criteria for identifying NCGDs including having genotoxicity, or modulating expression of many genes or showing cure-all feature. NCGDs are various and found more or less in medicines, Chinese medicine herbs, plant extracts, cooking spices， coffee, tea, tobacco, fruits, seeds, vegetables and grains, indicating NCGDs are vital molecules that are widely present and care for human body. But overdose of NCGDs could be harmful for human health. Further investigation of NCGDs might exceed original purpose of finding drugs for preventing viral infections. More than 100 years have been spent to find antiviral drugs for mass drug administration, but no one drug has been found till present time. In 2020, I proposed that NCGDs could be used for preventing viral infections, and according to 6-year test myself, I believe that vitamin C and berberine combination is the best one, which could be the first and best practical drug for preventing all viral infections including transmitted viruses like HIV and cancer-causing viruses, and various types of cancer. Now I am urging pharmaceutical company to make a tablet containing vitamin C and berberine that might become a famous cure-all drug and be welcomed by a broad range of consumers.

CONFLICTS OF INTEREST

The author declares no conflicts of interest.

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