

# C0r0n@ 2 Inspect

Review and analysis of scientific articles related to experimental techniques and methods used in vaccines against c0r0n@v|rus, evidence, damage, hypotheses, opinions and challenges.

**Saturday, July 24, 2021**

## **Graphene Oxide in Physiological Serums: Outreach for Public Health**

### **Reference**

김한식 . (2020). [Patent KR20210028062A]. Physiological Saline Containing Graphene.  
<https://patents.google.com/patent/KR20210028062A/en>

### **Introduction**

1. Physiological serums or saline solutions are solutions of salt in water, usually 0.9% sodium chloride that includes other substances such as glucose to promote healing, intravenous rehydration, among others. There are many types of physiological serums that combine other compounds that favor the recovery of patients for a multitude of clinical pictures. It can be stated that physiological serums are in common and widespread use in any medical center or hospital.

### **Facts**

The screenshot displays the Espacenet patent search interface. The search results for patent KR20210028062A are shown, including bibliographic data, classifications, and a frontpage drawing. The frontpage drawing depicts a spherical structure with various components labeled with numbers, likely representing a graphene-based structure or a saline solution component.

Field	Value
Applicants	KIM HAN SIK [KR] +
Inventors	KIM HAN SIK [KR] +
IPC Classifications	A61K31/04, A61K31/00, A61P29/16, A61P25/08
CPC Classifications	A61K31/04 (CR), A61K31/00 (CR), A61P29/16 (CR), A61P25/08 (CR)
Priorities	KR20190126028A, 2019-09-03; KR20200011888A, 2020-02-24; KR20200024887A, 2020-02-27; KR20200038664A, 2020-03-05
Application	KR20200043684A, 2020-04-16
Publication	KR20210028062A, 2021-03-17
Published as	KR20210028062A

Fig. 1. Screen print of the patent KR20210028062A Physiological Saline Containing Graphene in Espacenet

1. The patent for physiological serum is very relevant since it refers to " *an injectable solution placed in blood vessels and subcutaneous tissues of the human body, physiological saline solution, glucose solution and Ringer's solution for the purpose of curing diseases* " that is composed of its indispensable elements of graphene. This is in deep contradiction with the harmful, toxic and adverse effects that it generates in the human body as demonstrated in previous literature, see <https://corona2inspect.blogspot.com/p/toxicidad-del-oxida-de-grafeno-en-el.html> , [graphene oxide in blood](#) (Palmieri, V .; Perini, G .; De Spirito, M .; Papi, M. 2019), [interaction of graphene oxide with brain cells](#) (Rauti, R .; Lozano, N .; León, V .; Scaini, D .; Musto, M .; Rago, I .; Ballerini, L. 2016), [graphene oxide interrupts mitochondrial homeostasis](#) (Xiaoli, F .; Yaqing, Z .; Ruhui, L .; Xuan, L .; Aijie, C .; Yanli, Z .; Longquan, S. 2021), [nanotoxicity of graphene and graphene oxide](#) (Seabra, AB; Paula, AJ ; de Lima, R .; Alves, OL; Durán, N. 2014), [toxicity of the nanoparticles of the graphene family](#) (Ou, L .; Song, B .; Liang, H .; Liu, J .; Feng, X .; Deng, B .; Shao, L. 2016), among other articles that can be found in the following search " [graphene toxicity](#) " .
2. On the other hand, the author of the patent indicates that " *the physiological saline solution containing dispersed graphene is intended to be used in every disease, including dementia, Parkinson's disease, Lou Gehrig's disease and Huntington's disease* ". This statement is paradoxical and false, if one takes into account that graphene and its derivatives, such as GO (graphene oxide) and rGO (reduced graphene oxide) are responsible for [causing neurodegenerative diseases](#) as indicated (Chen, HT; Wu, HY; Shih, CH; Jan, TR 2015 | Albarzanji, ZN; Mahmood, TA; Sarhat, ER; Abass, KS 2020 | Rizzo, P .; Dalla-Sega, FV; Fortini, F .; Marracino, L. ; Rapezzi, C .; Ferrari, R. 2020).
3. In addition, the author adds in the abstract of the patent the following " *the physiological saline solution containing dispersed graphene, of the present invention, is intended to be used as a therapeutic agent for viruses such as MERS, SARS and corona* ". This is very revealing, since it links the use of a " *toxic serum*" knowing that it causes the harmful effects that are assimilated in the diseases of MERS, SARS and Coronavirus. In fact, the patent does not have any endorsement or reference or biomedical study that supports such claims, or the health benefits, As it tries to claim, this is also very serious and worrying, since it assumes that a patent that directly influences public health has been approved, without proving / testing its benefits, without research to justify its announced results.
4. Regarding the characterization of the compound, it refers that " *graphene powder having a size of 0.2 nm or less is dispersed in a medium used as an injection solution, such as injection solution, Ringer's solution, physiological saline solution and glucose solution used in conventional hospitals and used as a therapeutic agent* ". This statement makes it clear that toxic serum is designed to be injected intravenously, just like c0r0n @ v | rus vaccines. On the other hand, the 0.2 nanometer scale coincides with that analyzed by (Campra, P. 2021) in the RD1 sample.
5. The intentionality of the use is also denoted in the following statement " *Ringer's solution, in which graphene powder is dispersed, is injected into the human body where the virus has penetrated and spreads uniformly throughout the body* ." This indicates that the spread of graphene oxide is generalized through the bloodstream reaching all the organs of the human body, which means that the author has implicit knowledge of the severity of the damage it can cause, taking into account the extensive scientific literature already referred to on the toxicity of graphene and its derivatives.

6. The patent also repeats the antiviral effects with the following statement " *When the virus and the graphene powder meet, the graphene powder and the virus attract and adhere to each other with a nanocohesive force .*" The claim that graphene powder and virus attract and adhere as if they have magnetic properties seems very surprising. This is very relevant, since it implicitly attributes the exclusive properties of heavy metals, ferrites and other contaminating compounds that may exist in the human body to the virus.
7. To complete the descriptive section of the patent, the following refers: " *If graphene powder adheres to the body and increases the virus, the virus does not work properly and cannot multiply and eventually dies* ". This statement attributes to the graphene powder adhered to the body, the ability to infer the replication of the c0r0n @ v | rus and kill it. This is completely illogical, irrational and out of place as it is not supported, nor scientifically argued. The patent does not include any reference to support this result. Rather, it could be argued that graphene dust adhered to the human body could prove fatal, that is, just the opposite.
8. The patent claims section has been deepened as it contains keys of interest for the knowledge and understanding of the scope of this patent and its implications for public health. The most important ones will be referred to:
  - a) " *Physiological saline solution is a physiological saline solution that contains dispersed graphene, as a water medium that can be consumed by humans.*" This is a very relevant claim since the application of the patent not only extends to its use in physiological serums, but also in drinking water that people can drink. This seems incredible but it is not unreasonable, since graphene is can dissolve in aqueous solutions and in drinking water (Neklyudov, VV; Khafizov, NR; Sedov, IA; Dimiev, AM 2017 | León, V .; González-Domínguez, JM; Fierro, JLG; Prato, M .; Vázquez, E . 2016 | Bepete, G .; Anglaret, E .; Ortolani, L .; Morandi, V .; Huang, K .; Pénicaud, A .; Drummond, C. 2017), despite the difficulties described in the literature ( Dimiev, AM; Alemany, LB; Tour, JM 2013).
  - b) " *Biological graphene powder is a physiological saline solution containing graphene dispersed in an aggregate of powders having a size of 0.01 nm to 1 nm or less* ". The patent claim further reduces the scale of powdered graphene, specifically, it goes from 0.2 nm (nanometers) to a range of 0.01-1 nm. This means that it is highly soluble in aqueous solutions and potentially breathable because it remains easily in suspension as indicated (Spitz-Steinberg, R .; Cruz, M .; Mahfouz, NG; Qiu, Y. and Hurt, RH 2017) that also point out its toxic property.
  - c) " *the saline solution consists of 1 gram of graphene powder per 1 liter* ". This claim indicates a typical ratio to make up physiological saline or a solution in drinking water. Unfortunately it does not specify it.
  - d) " *Drinking water containing dispersed biograpfen powder* ". The patent calls for the use of drinking water with diluted biographene powder. This means that it could be present in any source of drinking water, thereby threatening public health.
  - e) " *Physiological saline solution containing graphene dispersion, characterized in that selected drinking water containing biographene powder dispersed in it, is atomized with a high pressure device and sent to the lungs through a respiratory process to treat diseases* ". In this claim it is very significant since it refers to the water used in humidifiers / water boxes for oxygen concentrators used in hospitals. Curiously, this material has been used extensively in therapies against c0r0n @ v | rus in cases of respiratory failure and bilateral pneumonia.

## Feedback

1. The patent records the use of graphene oxide in physiological serums, in drinking water and in humidifiers of oxygen concentrators. Taking into consideration the danger and toxicity of graphene oxide, widely referred to in the scientific literature, the development of this type of serum could cause significant damage to the health of the treated persons.
2. On the other hand, the patent does not include bibliography that justifies the beneficial effects and against COVID-19 attributed to graphene oxide GO. In addition to being unscientific, this means that the publication of a patent has been allowed without requiring the mandatory controls and justifying studies of the properties and benefits of the invention. As has been demonstrated, GO graphene oxide is responsible for the pictures and symptoms attributable to COVID-19.
3. Dissolution in physiological serum and water pose a clear and obvious risk of intoxication for people who consume it, given the toxicity and damage that it can cause. It would be highly recommended to carry out intensive and extensive analyzes of all sources of drinking water, physiological serums and the like to detect possible cases of contamination, in order to avoid possible damage to health.
4. Added to the previous point, it is worth highlighting the extensive study and potential use of graphene oxide for the treatment and purification of drinking water (Chen, X .; Qiu, M .; Ding, H .; Fu, K .; Fan, Y. 2016 | You, Y .; Jin, XH; Wen, XY; Sahajwalla, V .; Chen, V .; Bustamante, H .; Joshi, RK 2018 | Sun, XF; Qin, J .; Xia, PF; Guo, BB; Yang, CM; Song, C .; Wang, SG 2015 | Xu, C .; Cui, A .; Xu, Y .; Fu, X. 2013), which together with the dissolution of graphene in drinking water, leaves no doubt that if put into practice, it could affect millions of people around the world. Taking steps to clarify the truth is imperative.

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