

EDITORIAL

# Air Pollution COVID-19 and Forensic Implications

Luisetto M<sup>1\*</sup> and Naseer Al-Mukthar<sup>2</sup>

<sup>1</sup>Professorship Environmental toxicology, Applied Pharmacologist, IMA Academy Chemical Technology and Chemical Industry Branch, Italy

<sup>2</sup>Professor, Department of Physiology, College of Medicine, University of Babylon, Iraq

## ABSTRACT

COVID-19 and the new variant are a classic example of viral and environmental toxicology link. Observing literature related spread velocity and diffusion of this respiratory virus it is clear the role played by air pollution. The high rate of this environmental pollutant produced a worsening factors that increased mortality rate also.

Two major effect was observed: a proinflammatory effect on the lungs of patient due by the air pollutants like NO<sub>2</sub>, Particulate matter and many other typical substance.

A chronic exposition to this toxic produce an inflammatory status as seen in other respiratory classic disease as ASTMA, BCPO and other. Another great contribute is played by the role of CARRIER that PM produces: This particulate matter carry on respiratory tract bioaerosols with viral particle (it seem in a level not able to produce a clinical infection) but also other dangerous substance like BENZO-A-PYRENE.

This substance contribute IL proinflammatory effect and also are able to provide a MUTANT AGENT environment involved also in VARIANT production. (See literature reported).

Many world zone with air pollution was involved in first wave of COVID-19 like Wu-Han but also in north Italy and also involved in VARIANT explosion (MANAUS and other). So we can consider this pathology not only an infectious disease but also an environmental toxicological problem.

Climate change, humidity level, air pollution, UV irradiation, PM, high industrialized regions and other environmental factor are involved in this pathology.

Now are produced vaccines but the emerging of the new variant can be a real problem. But what it is relevant is to recognize also in international world organization that air pollution play a non-secondary role.

## \*Corresponding author

**Luisetto M**, Professorship Environmental toxicology, Applied Pharmacologist, IMA Academy Chemical Technology and Chemical Industry Branch, Italy

**Tel:** +39-340-247-9620

**E-mail:** mauro65@gmail.com

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## Keywords

- COVID-19 diffusion
- Air pollution
- Environmental toxicology
- Mortality rate
- Worsening factors
- Carriers
- Mutant agent
- Variant
- Social responsibility
- Climate change

## INTRODUCTION

Aim of this work is to search relevant literature [1-11] involved in the topics as in keywords.

## MATERIAL AND METHODS

With an observational approach some relevant literature related COVID-19, spread, diffusion, air pollution, climate condition, variant and other are analyzed to produce a global conclusion.

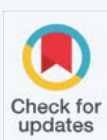
## RESULTS

After this review it is clear the role played by air pollution in the spread and severity of COVID-19 disease.

## BIOLOGY GROUP

VIROLOGY ANTI-ROLOGY BIOLOGY MICROBIOLOGY

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The reported literature from 1 to 11 are a collection of reviews about this topics and it must to be read with great attention by the researchers for the implication also in forensic field.

## DISCUSSION AND CONCLUSION

Because it is clear the link between air pollution and COVID-19 pathology and the global effect on the world population it is needed also to act with an international movement in reducing the global air pollution.

The new variant can come from a natural mutation, or a selection due by various factors (specific immunity measure?) but the presence in PM of mutant agent like Benzo-a pyrene not make we very safety.

The bioaerosols properties, the electrical charger of some respiratory virus, the rapidity of diffusion seem to recognize an airborne properties (especially for some new variant).

This work in the meaning of the author have also a forensic implication because mortality rate was according literature related also parameter like air pollution.

Another fact to be take in consideration is the responsibility of international organization to have considered not airborne a respiratory virus or instead to recognize this properties: For the preventive measure necessary.

Observing the velocity in diffusion of the second wave of COVID-19 it seem not only due by direct contact or by droplets, the same many article was involved in observing the effect of transmission of the virus in indoor places.

The author of this work not think in an individual responsibility but a wider circle: Every reader will produce their opinion and conclusion.

## CLARIFICATION

This work is produced under an environmental toxicology point of view not for any diagnostic or therapeutic intent.

This results was presented in 2 international conferences CBCRN Babylon University 2020 and in Liyang-20202nd International Conference on Unlocking Challenges, Innovations and Global Opportunities in Research amidst COVID-19 Pandemic.

## ETHICAL CONSIDERATION

This work is produced in respect of all international rules.

## References

- Luisetto M, Rafa AY, Edbey K, Mashori GR, Ahmad F, Latyshev OY. Epidemiology and diffusion of some relevant virus: latitude, air pollutants and humidity role, hypothesis of work: COVID-19 Effect on the Air Pollution in Some World Region: What Implications?. *J Toxicol Risk Assess.* 2020;6:031. doi: 10.23937/2572-4061.1510031.
- Luisetto M, Naseer A, Giulio T, Ghulam RM, Gamal AH. COVID-19 and other corona-virus: Air-borne indoor and outdoor transmission? State of evidence intern. *J Current research.* 2020.
- Luisetto M, Almkhthar N, Rafa AY, Jangdey MS, Fiazza C, Ferraiuolo A, Latishev O Yu. On distance respiratory virus transmission: Sate of evidence. *J Infect Dis Epidemiol.* 2020;6:150. doi: 10.23937/2474-3658/1510150.
- Luisetto M, Almkhthar N, Mashori GR, Rafa AY, Latyshev OY. Pianura padana geomorphology, climate condition and diffusion of COVID-19 hypotheses of work. *J Infect Dis Prev Med.* 2020;8:195. doi:10.35248/2329-8731.20.08.195.
- Luisetto M. Analysis of some worsening factor involved with Covid-19 and other respiratory virus diffusion, how some preventive measure and therapeutic strategy can improve clinical outcome. *EC Pulmonology and Respiratory Medicine.* 2020;27-34.
- Luisetto M, Almkhthar N. Respiratory virus pattern of diffusion: Size influence JHS Science. 2020.
- Luisetto M. Chemico-physicals properties of coronavirus affecting airborne transmissibility. *International Inventionof ScientificJournal.* 2021.
- Luisetto M, Nili BA, Edbey K, Mashori GR, Rafa AY, Latishev OY. Bioaerosols and corona-virus diffusion, transmission, carriers, viral size, surfaces properties and other factor involved. *Clinical Cases in Medicine.* 2021.
- Luisetto M, Tarro G, Edbey K, Khan FA, Ilman A, Yesvi AR, Nili BA, Fiazza C, Mashori GR, Latyshev OY. Coronavirus COVID-19 surface properties: Electrical charges status. *Int J Clin Microbiol Biochem Technol.* 2024;4:16-27. doi: 10.29328/journal.ijcv.1001031.
- Luisetto M, Almkhthar N, Hamid GA, Tarro G, Edbey K, Nili BA, Ghulam RM, Ahmed YR, Latyshev OY. COVID-19 new variant and air pollution relationship: How airborne mutagens agent can act on genome viruses expression: Hypothesis of work. *Int J Clin Virol.* 2021;5:22-31. doi: 10.29328/journal.ijcv.1001031.
- Luisetto M, Ilman A, Khan FA, Edbey K, Hamid GA, Mashori GR, Nili BA, Fiazza C, Yesvi R, Latishev OY. COVID-19 immunologic and toxicological implication: Innate immune sensor and immune escape. *Arch Pharm Pharma Sci.* 2021;5:1-17. doi: 10.29328/journal.apps.1001025.

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