



UNIVERSIDAD  
TÉCNICA DE AMBATO



## INVESTIGACIÓN Y DESARROLLO (RESEARCH AND DEVELOPMENT) - VOLUME 13

### CALL FOR PAPERS

#### MULTIDISCIPLINARY APPROACH AND IMPLICATIONS OF THE CORONAVIRUS PANDEMIC (COVID- 19)

##### BACKGROUND

On December 31, the World Health Organization (WHO) was notified of a cluster of cases of pneumonia of unknown etiology causing respiratory, digestive and systemic involvement that was rapidly leading to the death of a large number of people in the city of Wuhan in China. This outbreak caused a great shock and quickly became a local public health problem, due to the magnitude of its affectation and the inherent complications. The etiological agent was identified as a single-stranded RNA virus belonging to the family Coronaviridae, which has some atypical characteristics of the already known SARS, for which it was named SARS-CoV-2 or COVID-19, with a high mutagenic capacity that affects pneumocytes 2 and bronchial ciliated epithelial cells (*Bonilla-Aldana et al, 2020*).

It is important to note that these types of epidemics have very important components that are influenced by various elements such as climate change, population density, economic characteristics and number of air travels, which differ from one population to another. A powerful factor in the spread of COVID-19 was the fact that the city of Wuhan has about 11 million inhabitants and one of the largest airports in China. This airport has direct connections to most parts of the world, and in Latin America, connections to the United States, Mexico, Sao Paulo and Bogota, facilitating the spread of the virus quickly (*Rodriguez-Morales et al, 2020*)

Given the exponential increase of cases and the appearance of outbreaks in other countries, mainly due to the mobilization of people who rapidly spread the outbreak specially in Europe, it was not long before the mechanisms of transmission, intermediary hosts and the process of virus replication were understood. On March 11th, the WHO declared the spread of the virus a pandemic, which triggered the alarm towards a global health emergency (*Chawestan et al, 2020*). It is important to note that the International Health Regulations Emergency Committee (*World Health Organization, 2020*) declared a state of public health emergency of international importance.

It is of a great importance to strengthen the public health systems of all countries with a better understanding of the mechanism of action of the virus and the relationships among the host, the susceptible human and the environment through interdisciplinary management, communication and coordination with the health system promoting research and public health policies (*World Health Organization, 2020*). It is in this context, that Ecuador has adopted several public policies aimed at combating the pandemic in order to safeguard the right to health and life of all citizens. To that end, the President of the Republic issued the executive decree No. 1017, which declared a state of emergency throughout the national territory (...) due to the COVID-19 virus on March 16<sup>th</sup>, 2020 in order to control the health emergency and guarantee the rights of individuals (*Moreno, 2020*).



This measure was taken to make effective control, not only by strengthening containment measures, but also by promoting basic research on the disease, trying to anticipate and developing containment measures to prevent new scenarios of widespread contagion (EDC Technical Report, 2020). In addition, it is crucial to acquire the maximum possible knowledge of the SARS-CoV-2 virus, as well as of all possible actions in the public health, social and economic fields (Nikam et al, 2020) that will allow immediate incorporation to protect society and contain the spread of the COVID-19 disease.

The University, a fundamental pillar of society, plays a fundamental role in the health emergency through its resources and the articulation of teaching, research, innovation and social linkage. Currently the institution is making a great contribution not only to the Public Health System, but also to research, by creating multidisciplinary teams and proposals for immediate solutions against this virus and measures that in the future can quickly counteract any situation that affects the health of the general population by emerging infections. Therefore, a special volume of the Revista Investigación y Desarrollo (Research and Development Journal) would represent an open window for different researchers, entrepreneurs, and professionals in general to write articles to make contributions in favor of a better knowledge of the etiological agent, management of the pandemic, prototypes, economic analysis, among others topics raised in this document.

### **PROBLEM LINE OF THE PANDEMIC**

It is important that the scientific community, the National Health System, the production matrix, educational institutions, government agencies and society in general generate proposals to expand the magnitude and implications of this pandemic. It has to be kept in mind that collective health, psychosocial and emotional state of the community are not the only ones to be taken into consideration, but also the chain of production, economy, institutional strengthening scheme, coping strategies and the possible consequences from a multidisciplinary approach that focuses on the following areas:

1. Public health and epidemiology, diagnostic methodology, therapeutic alternatives with the articulation of the health system, agro-food and industrial systems.
2. Strategies that contribute to the reduction of side effects produced by the pandemic, such as containment measures, economic effects, predictive algorithms and solutions from a sustainable point of view.
3. Prediction models with a wide perspective and alternatives that counteract the effects generated by the pandemic

### **AIMS AND SCOPE**

#### **Objective**

The objective of the current volume of this journal will be to encourage the scientific production related to the COVID-19 health emergency through the publication of a special volume of the journal Revista



Investigación y Desarrollo (Research and Development) in order to consolidate the scientific contribution of the university community regarding this public health problem at a global level.

**The current volume of this journal and its contents are intended for:**

Researchers, teachers and students from different universities, as well as for personnel in public and private companies working in food systems, nutrition and public health who are interested in protecting people's health as well as in containing the spread of COVID-19 disease.

**A wide range of topics in the different areas is covered, including:**

- Public Health
- Epidemiology
- Measures to prevent contagion
- Case studies
- Home Confinement
- Pre-existing pathological conditions
- COVID-19 Diagnosis
- Antiviral activity
- Spread
- Risk Factors
- Treatment
- Prognosis
- Geolocation and georeferencing
- Biosafety
- Biosafety in agriculture
- Biosafety in health care settings
- Biosafety in open places
- Biosafety in enclosed and crowded spaces
- Food security
- Study of foods that may help fight the pandemic
- Agricultural production
- Livestock production
- Sustainable food
- Functional foods
- Online Education
- Psychological effects of social isolation
- Economic and social effects of the pandemic
- Legal analysis
- Political Analysis

**EDITORIAL GUIDELINES**



Research papers, literature reviews, opinion papers, reflection papers and case studies will be accepted. For further information on structure and format, please check the instructions for submission on the Journal's website.

ONLY complete, unpublished, original, and full-length articles that are not under review in any other journals and that comply with the scientific rigor based on the guidelines of the journal Revista Investigación y Desarrollo will be received.

The Journal welcomes articles written in Spanish, English and Portuguese.

Articles should be electronically submitted to the email: [revista.dide@uta.edu.ec](mailto:revista.dide@uta.edu.ec), until **November 15<sup>th</sup>, 2020**.

**Note:**

There are no submission or acceptance fees for papers submitted to the volume of this journal. Articles should not have more than four authors each.

**For further information, please visit:**

Revista Investigación y Desarrollo website: <http://revistas.uta.edu.ec/erevista/index.php/dide>

Latindex website: <https://www.latindex.org/latindex/ficha?folio=19682>

ISSN website: <https://portal.issn.org/resource/ISSN/2631-2557>

DIDE-UTA website: <https://investigacion.uta.edu.ec/publicacionesrevistas.html>

Facebook: <https://www.facebook.com/DideOficial/>

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