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**Review Article**      **Published Date:-2020-12-22 00:00:00**

[Stages in COVID-19 vaccine development: The Nemesis, the Hubris and the Elpis](#)

The nemesis: SARS-CoV-2 pandemic: Leaving in its wake millions of infections, accompanied by an immense magnitude of morbidity and multitude of mortality, and an unfathomable economic toll, the COVID-19 pandemic has led to a global calamity. An effective and safe COVID-19 vaccine is urgently needed to prevent the disease, thwart the complications and avert deaths resulting from unrestrained transmission of the infection.

The hubris: Vaccine development: While most of the platforms of vaccine candidates have focused on the spike (S) protein and its variants as the primary antigen of COVID-19 infection, various techniques involved include nucleic acid technologies (RNA and DNA), non-replicating viral vectors, peptides, recombinant proteins, live attenuated and inactivated viruses. There are novel vaccine technologies being developed using next-generation strategies for precision and flexibility for antigen manipulation relating to SARS-CoV-2 infection mechanisms.

The elpis: Updates and prospects: There were nine different technology platforms under research and development to create an effective vaccine against COVID 19. Although there are no licensed vaccines against COVID-19 yet, there are various potential vaccine candidates under development and advanced clinical trials. Out of them, one having undergone phase III clinical trials, has become available in some countries for use among the high-risk groups following emergency use authorization. Other COVID-19 vaccines may soon follow the suit.

Conclusion: Hopes and concerns: The hope of benefiting from the vaccine to the extent that it may be the only way to tide over and control the COVID-19 pandemic, is accompanied by the likely fear of adverse effects and opposition in public for COVID-19 vaccination, including the vaccine hesitancy. Further, there is concern among scientific circles that vaccine may have opposite of the desired effect by causing antibody-dependent disease enhancement.

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**Research Article**      **Published Date:-2020-10-31 00:00:00**

[Galenic hospital laboratory during COVID-19 emergency: A practical experience in an advanced country](#)

In the actual COVID-19 emergency, as pandemic disease, in many countries at the same time there was the rapid need to use preventive and therapeutic measures to control the diffusion of infection.

In PC AREA (Italy north) in the period between March and May 2020, in fact, were observed about 1000 deaths related to COVID-19 (in march 2020 + 271% death vs 2019). Between all the measure submitted by public international institution like WHO, OMS, CDC and many other, the deeply use of disinfectants product became a crucial fact in safety procedure and protocols. The high amount of this disinfectants and antiseptic was needed especially in hospital settings or assimilates structure (named as COVID-19 hospital) but also for territorial healthcare need. So it was needed to buy from industries this product but also to start an internal production in galenic laboratories. This because pharmaceutical industries not provided in some cases the request amount of this "safe life products. In this work is reported a practical experience in a public hospital, Pc AREA related GALENIC extra -ORDINARY PRODUCTION of disinfectants and antispetics. The result of this local experience experience can be easily translated to other countries in the world (advanced or also not advanced).

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**Letter to Editor**      **Published Date:-2020-10-13 00:00:00**

[COVID-19 and taking care and protection of patients with intellectual disabilities, need special care and equity](#)

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Since December 2019, entire world is facing problem of corona-virus pandemics and its impact on the people and their social life has been phenomenal. Each part of the world is 'almost' hit by COVID-19 infection. Most of the COVID-19 victims were aged people followed by consequence of high death ratios as shown in data [1]. Not only aged people but people with some secondary diseases or disorder were of major concern. A special case comes across which are patients with intellectual disabilities (ID) are the most vulnerable group. They also have extra multiple disorders including respiratory diseases, diabetes, obesity, These individuals face more complications and stand at high risk of because, such people are usually mentally lethargic and have almost no literacy in to follow proper health care and access health facilities

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## **Review Article**

**Published Date:-2020-10-12 00:00:00**

### [COVID-19 pandemic, recurrent outbreaks and prospects for assimilation of hCoV-19 into the human genome](#)

The outbreaks and resurgence: The disease which reportedly began in the Chinese city Wuhan in November-December 2019, soon spread to various parts of the world, and was named and declared a pandemic disease by WHO. While the European countries were recovering from the epidemic, the disease took hold in the USA, the South American countries, Arabian countries, and South Asian countries, predominantly affecting Brazil, Peru, Iran, and India. Presently, many European countries are witnessing a resurgence and recurrent outbreaks of COVID-19.

Spread and evolving new insights: Whereas there is workplace-related infection rise as people are returning to their offices, in other places the outbreaks are related to the people crowding and meeting care-freely and trying to resort back to their earlier way of life. The reopening of the educational facilities across the continents may make matters worse.

Impact on health and healthcare: Most cases of COVID-19 infections go unnoticed and are followed by self-recovery. But what may appear good from the clinical perspective, appears to complicate epidemiological efforts to contain the outbreak. With the evolving information about the disease, there seem to be certain possible outcomes such as control and containment, or the persistence of the disease as global endemic accompanied with outbreaks and resurgent episodes.

Genetic factors linked to disease severity: With the COVID-19 pandemic, not all infected patients develop a severe respiratory illness. Further, there is a large variation in disease severity, which may be due to the genetic factors underlying the variable response to the virus. It is becoming clear that apart from the advanced age and pre-existing conditions, certain genetic constituent factors render some patients more vulnerable to the more severe forms of the diseases.

Integration of virus into human genome: A significant part of the human genome is derived from viruses especially the RNA viruses. In fact, about 8 percent of the human genome is made up of endogenous retroviruses (ERVs), which are viral gene sequences that have become a permanent part of the human lineage after they infected our ancient ancestors. With this background, a novel concept emerging that if COVID-19 persists for several generations, its genetic material is projected to be integrated or assimilated into human genome. The involved mechanisms are conceptualized through the transposons or transposable elements of the SARS-CoV-2.

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## **Letter to Editor**

**Published Date:-2020-09-03 00:00:00**

### [The expected second wave of COVID-19](#)

The pandemic of Coronavirus Disease (COVID-19) caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) continues to rise around the globe. As per 15th July 2020, the World Health Organization (WHO) reported 13,119,239 confirmed COVID-19 cases along with 573,752 confirmed deaths globally.

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## **Research Article**

**Published Date:-2020-08-26 00:00:00**

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Introduction: HIV infection leads to metabolic disorders. The objective of this work was to study the lipid profile of HIV + patients followed at the University Teaching Hospital of Kinshasa (UTHK).

Methods: This study analyzes the lipid profile of HIV + patients, aged at least 18 years, followed at the UTHK from January 1, 2008 to December 31, 2014. The medians of different types of lipids, the frequency of lipid disorders, the general clinical characteristics of patients and factors associated with dyslipidaemia were studied. Haemoglobin (Hb), White Blood Cells (WBC), Leukocyte Formula (LF), Blood Sugar, Urea, Creatinine, Transaminases, Uric Acid, CD4s+ count were analyzed.

Results: The lipid balance was performed in 38.8% of patients; 38.1% of them had dyslipidaemia. Total hypercholesterolaemia (28.6%), elevated LDL-C (19%), hypertriglyceridemia (23.8%) and HDL hypocholesterolaemia (42.9%) were observed. The medians of TG (128 mg / dL), HDL-C (51 mg/dL) and LDL-C (78 mg/dL) were high. Risk factors associated with dyslipidaemia were represented by WHO stage 4, tuberculosis (TB) and hyperglycaemia. The highest levels of LDL-C and TG and the lowest HDL-C were seen when CD4s+ were below 200 elements/ $\mu$ L.

Conclusion: The HIV/AIDS dyslipidaemia characterized in this study by HDL-C hypocholesterolaemia, hypertriglyceridemia and total and LDL hypercholesterolemia can be considered as an indicator of the progression of HIV infection.

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**Research Article**      **Published Date:-2020-07-24 00:00:00**

[Serological and virological profile of patients with chronic hepatitis B infection in Eritrea](#)

Background: Hepatitis B virus infection is a major cause of liver associated morbidity and mortality with diverse spectrum of disease. It is estimated about 15% to 40% of patients with hepatitis B virus infection progress to chronic hepatitis and about 15% to 25% die from disease complications. The main aim of this study was to evaluate the serological and virological markers of patients with chronic hepatitis B virus infection to determine the natural history of chronic hepatitis B infection in the Eritrean setting.

Methods: A laboratory-based cross-sectional study was conducted on 305 patients with HBsAg positive who presented to Orotta National Referral Hospital, Halibet Hospital, Sembel Hospital and National Health Laboratory in Asmara, Eritrea from January 2017 to February 2019. Enzyme-linked immunosorbent assay was performed to detect hepatitis B serological markers (anti-HBc, HBsAg, anti-HBsAb, HBeAg and anti-HBeAg). Hepatitis B DNA viral loads and liver transaminase levels were determined. Data analysis was conducted using SPSS version 25.0.

Results: A total of 305 patients presented with HBsAg positive serology with a mean age of 41.3 ( $\pm$  13.7) years ranging from 16 to 78 years. Males were 218 (71.5%) and females 87 (28.5%). Anti-HBc was positive in 300 (98.4%), of which 293 (97.5%) were positive for HBsAg and 7 (2.3%) positive for anti-HBs. Among these 293 patients, 20 (6.8%) were HBeAg positive/anti-HBe positive, 242 (82.6%) HBeAg-negative/anti-HBe-positive and 31 (10.6%) were HBeAg negative/anti-HBe-positive. Detectable HBV DNA was found in 122(41.6%) of the 293 cases. Alanine transaminase was normal in 90% of HBeAg-positive and in 91.2% of HBeAg-negative patients. Hepatitis B DNA viral load was  $>2,000$  IU/mL in 67 (22.86%) and  $>200,000$  IU/mL level was more frequently detected in HBeAg positive (20.0%) compared to HBeAg negative (1.8%) subjects ( $p < 0.001$ ).

Conclusion: This study shows predominance of HBeAg-negative and low replication phase of HBV infection among patients in Eritrea. It also documented that most patients had chronic infection with normal liver transaminase levels in the absence of biochemical signs of hepatitis. This study will provide a basis for therapeutic evaluation of patients and planning national treatment guidelines in the Eritrean setting.

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**Research Article**      **Published Date:-2020-07-22 00:00:00**

[A Comprehensive review on genomic diversity and epidemiology of COVID-19](#)

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A respiratory outbreak of COVID-19 started from Wuhan, China and on 30 January 2020, WHO declared this infection to be epidemic, implementing public health emergency worldwide. On 11th March 2020, observing its prevalence in the whole world and WHO declared as a pandemic. Many countries completely collapse in the grip of this pandemic, as there are no effective treatments available, the precaution is the sole remedy to minimize this infection. The emergence and pandemic of SARS-CoV-2 (since the SARS-CoV in 2002 and MERS-CoV in 2012) manifest the third time outline of highly contagious and pathogenic infection with infect-ability to spread globally in the twentieth-first century. The SARS CoV-2 genome is highly identical to bat coronavirus which is considered to be the perfect natural host. This coronavirus even utilizes the same ACE2 receptor as SARS-CoV and mainly spread the infection to the respiratory tract, which evidently showed that transmission of this virus through interactions and exposures. The death toll of these infected patients is increasing day by day especially when they have prehistory fatal diseases like cardiovascular, diabetics, and respiratory diseases. In this review, we summarized and explained the research progressed and available data on epidemiology, COVID-19 phylogenetic relation and its impact of different fatal disease and their relation and discuss the precautionary methods to combat this pandemic. Moreover, the pieces of evidence of spreading the virus through pets and prevention of being spreading by copper metal endorsement.

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**Review Article**                      **Published Date:-2020-06-12 00:00:00**

[Inhaled statins to combat COVID-19 – prophylactic and treatment approach](#)

The coronavirus disease 19 (COVID-19) is a highly transmittable and pathogenic viral infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which emerged in Wuhan, China and spread around the world (WHO, 2020). The genome of the SARS-CoV-2 has been reported over 80% identical to the previous human coronavirus (SARS-like bat CoV) [1]. As of May 2020, more than 5 million people have been affected worldwide with deaths amounting to 333000, the numbers increasing at an alarming rate day by day.

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**Mini Review**                      **Published Date:-2020-06-11 00:00:00**

[Can house flies mechanically carry and/or transport sars-cov-2?](#)

The new coronavirus SARS-CoV-2 that causes different infections in humans has become a challenge for humanity because it has caused many deaths worldwide. This new virus is considered as a zoonotic infectious particle, the clear mechanisms of the pathogenicity and transmissibility of this virus are not exactly known. Therefore, here some characteristics of a possible transmission are analyzed for house flies.

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**Review Article**                      **Published Date:-2020-06-09 00:00:00**

[COVID-19: The possible medical strategies](#)

In late 2019, a pandemic crisis started in Wuhan, China, swept the whole world. The disease is caused by the SARS-CoV-19 virus that belongs to the corona family of viruses. The virus mainly caused failure of respiration, and led to many deaths worldwide. The main focus of research and medicine is to find more about the virus, as well as the development of effective preventive and therapeutic measures. While many trials and opinions have been published, which might support or contradict each other, this article tries to provide a simplified viewpoint about the disease. We highly recommend the therapeutic strategies to include drug combinations that can target the pathogenesis at many levels. For example, a combination of an effective anti-viral Remdesivir, soluble ACE2, and an immune modulator.

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**Review Article**                      **Published Date:-2020-05-27 00:00:00**

[Role of nanotechnology in diagnosing and treating COVID-19 during the Pandemic](#)

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The coronavirus disease 2019 (COVID-19) pandemic, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), began in December 2019 in Wuhan, China. To date, the virus has infected roughly 5,000,000 people and caused approximately 345,000 deaths worldwide, and these numbers are increasing rapidly. Because of the rapid spread and the rising disease burden, several antiviral drugs and immunomodulators are in clinical trials, but no drugs or vaccines have yet been approved against this deadly pandemic. At present, computed tomography scanning and reverse transcription (RT)-PCR are used to diagnose COVID-19, and nanotechnology is being used to develop drugs against COVID-19. Nanotechnology also plays a role in diagnosing COVID-19. In this article, we discuss the role of nanotechnology in diagnosing and potentially treating COVID-19.

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**Review Article**

**Published Date:-2020-05-25 05:00:00**

[Identifying patterns in COVID-19: Morbidity, recovery and the aftermath](#)

The infectivity and pathogenesis: SARS-CoV-2, the causative agent of Covid-19, involves Angiotensin-converting enzyme 2 (ACE2) receptors on type II alveolar type 2 (AT2) cells in lungs. Apart from, the upper and lower respiratory tracts, the disease affects the gastrointestinal system prominently, as evidenced by the significant GI symptoms, early in the course of the disease. In addition, the virus infects ACE2-bearing cells in other organs including the heart and blood vessels, brain, and kidneys.

Clinical features and morbidity: The clinical spectrum of COVID-19 varies from asymptomatic or pauci-symptomatic presentation to moderate to severe states characterized by respiratory failure necessitating mechanical ventilation and ICU support and those manifesting critical clinical condition with complications like sepsis, septic shock, and multiple organ dysfunction failure. The CT chest is an important tool for early identification of COVID-19 pneumonia as well as for prognostic purposes.

The recovery and residual damage: The recovery and other outcomes vary depending on age and other aspects including sex, comorbidities, and genetic factors. The outlook for older adults, who account for a disproportionate share of critical disease, is unfavorable, and most of those who survive are unlikely to return to their previous level of functioning. The disease affects their long-term health and quality of life as well as brings in propensity for truncated post-disease survival.

COVID-19 aftermath and follow up: The patients discharged from hospital following severe COVID-19, continue to suffer with lingering impact of the disease as well as that of the emergency treatments that saved their life. The post-infection reduced exercise tolerance and other subtle factors, like post viral fatigue syndrome, post-traumatic stress disorder, impaired concentration, delirium, and disturbed sleep-wake cycle often underly the functional impairment. In fact, there is need of step-down care and later a multidisciplinary support involving regular clinical assessment, respiratory review, physiotherapy, nutritional advice, and psychiatric support.

Conclusion: The life after COVID-19: After recovery from the disease, the virus SARS-CoV-2, may persist for uncertain period. In addition, the chance of reinfection cannot be ruled out. The vitamin D supplementation may be helpful. In general, the quality of life (QOL) in ICU survivors improves but remains lower than general population levels, but most of the patients adapt well to their level of self-sufficiency and QOL. Also, the debility due to co-morbidities may further compromise the activity of daily living and QOL issues. The Age and severity of illness appear to be the major predictors of post-discharge physical functioning.

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**Research Article**

**Published Date:-2020-05-25 00:00:00**

[Risk taking sexual behaviors among young adults – findings from a cross sectional population based survey in Barbados](#)

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**Background:** The National Strategic Plan for HIV Prevention and Control 2014-2018 recognized the need for the utilization of research findings to guide the development of HIV policies, programs and interventions for the general population and key population groups and to inform the allocation of government resources to the areas of greatest impact and need. To this end, a Knowledge, Attitudes, Beliefs and Sexual Practices Survey (KABP) was conducted among adults' ages 15 to 49 years.

**Objectives:** To identify the sexual behaviors among adolescents and young adults that exposed them to the risks of HIV/STIs and to identify factors that may have to be addressed, in order to achieve further reduction in the spread of HIV in this population.

**Methods:** This is a population based cross-sectional survey undertaken in 2016. Sample was taken from among persons' ages 15 – 49 years using a multistage sampling methodology. The survey questionnaire was developed from Family Health International's guidelines for repeated behavioral surveys in populations at risk of HIV. It was interviewer-administered and consisted of ninety-nine (99) closed-ended questions. The topics covered by the survey included sexual history; use of and access to condoms; and HIV testing. Participants were asked about their sexual behaviors over the last 12 months, and about their experience with their most recent partner.

**Results:** Overall, 87.8% described themselves as heterosexual, 1.2% as bisexual and 0.5% as homosexual. By the age 16, 17 and 19 years 25%, 50% and 75% of respondents have had sex respectively. Among the 763 respondents reporting vaginal or anal sex over the past 12 months, 80.6 and 19.4% had a single and multiple sex partner respectively. Also, 94.4%, 13.3% and 1.6% reported to have regular, non-regular and commercial sex partners respectively. Overall, 54.6% used condom at the last sex, the corresponding figure for the regular and non-regular partners were 41.2% 80.8% respectively. Only 40.9% reported to have had a HIV test done over the past 12 months and of those who did not, 42.8% had never been tested for HIV.

**Conclusion:** Inconsistent and infrequent condom use and low HIV testing especially among the adolescents and younger adults, in the setting of young ages at sexual debut and multiple sexual partners. Findings from this study strongly recommends for a much greater effort from the public health at promoting condom use and HIV testing especially targeting the younger persons who risk their own protection and that of their partners.

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**Review Article**      **Published Date:-2020-05-21 00:00:00**

[COVID-19: Targeting the cytokine storm via cholinergic anti-inflammatory \(Pyridostigmine\)](#)

**Background:** The development of COVID-19 having been set apart as the third presentation of an exceptionally pathogenic coronavirus into the human populace after the extreme intense SARS-COV and MERS-COV in the twenty-first century. The infection itself doesn't make a crucial commitment to mortality, anyway "cytokine storm" created by the unreasonable invulnerable reaction activated by the virus can result in a hyperinflammatory response of lung tissues and deadly lung injury, and in this way increment death rate. In this manner, immunomodulatory medications ought to likewise be remembered for treatment of COVID-19.

**Presentation of the hypothesis:** the virus particles invade the respiratory mucosa firstly and infect other cells, triggering a series of immune responses and the production of cytokine storm in the body, which may be associated with the critical condition of COVID-19 patients. Once a cytokine storm is formed, the immune system may not be able to kill the virus, but it will certainly kill many normal cells in the lung, which will seriously damage the of lung function. Patients will have respiratory failure until they die of hypoxia. It is not yet clear what the death rate of Covid-19 will be, though the best estimate right now is that it is around 1 percent, 10 times more lethal than seasonal flu due to cytokines storm which trigger a violent attack by the immune system to the body, cause acute respiratory distress syndrome (ARDS) and multiple organ failure, and finally lead to death in severe cases of COVID-19 infection. Therefore, inhibiting cytokine storm can significantly reduce inflammatory injury in lung tissues.

Pyridostigmine (PDG), cholinergic anti-inflammatory pathway (CAP) is a neural mechanism that modulates inflammation through the release of acetylcholine (ACh), resulting in decreased synthesis of inflammatory cytokines such as TNF- $\alpha$  and IL-1. This finding emphasis, the nervous and immune systems work collaboratively during infection and inflammation.

**Implications of the hypothesis:** Administrations of Pyridostigmine (PDG) as cholinergic agonist inhibits the inflammatory response and lower the mortality of COVID-19 patients. Likewise, activation of the CAP during systemic inflammation down-regulates the production and release of inflammatory cytokines.

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[Exploring pathophysiology of COVID-19 infection: Faux espoir and dormant therapeutic options](#)

COVID-19 virus structural components: The 2019-nCoV, also called SARS-CoV-2, was first reported in Wuhan, China in December 2019. The disease was named Coronavirus Disease 2019 (COVID-19) and the virus responsible for it as the COVID-19 virus, respectively, by WHO. The 2019-nCoV has a round, elliptic or pleomorphic form with a diameter of 60–140 nm. It has single-stranded RNA genome containing 29891 nucleotides, a lipid shell, and spike, envelope, membrane and hemagglutinin-esterase (HE) proteins.

Steps in progression of COVID-19 illness: Once inside the airways, the S protein on the viral surface recognizes and mediates the attachment to host ACE-2 receptors and gains access to endoplasmic reticulum. The HE protein facilitates the S protein-mediated cell entry and virus spread through the mucosa, helping the virus to attack the ACE2-bearing cells lining the airways and infecting upper as well as lower respiratory tracts. With the dying cells sloughing down and filling the airways, the virus is carried deeper into the lungs. In addition, the virus is able to infect ACE2-bearing cells in other organs, including the blood vessels, gut and kidneys. With the viral infestation, the activated immune system leads to inflammation, pyrexia and pulmonary edema. The hyperactivated immune response, called cytokine storm in extreme cases, can damage various organs apart from lungs and increases susceptibility to infectious bacteria especially in those suffering from chronic diseases.

The current therapeutics for COVID-19: At present, there is no specific antiviral treatment available for the disease. The milder cases may need no treatment. In moderate to severe cases, the clinical management includes infection prevention and control measures, and symptomatic and supportive care, including supplementary oxygen therapy. In the critically ill patients, mechanical ventilation is required for respiratory failure and hemodynamic support is imperative for managing circulatory failure and septic shock.

Conclusion: Confusion, despair and hopes: There is no vaccine for preexposure prophylaxis or postexposure management. There are no specific approved drugs for the treatment for the disease. A number of drugs approved for other conditions as well as several investigational drugs are being canned and studied in several clinical trials for their likely role in COVID-19 prophylaxis or treatment. The future seems afflicted with dormant therapeutic options as well as faux Espoir or false hopes. As obvious, not all clinical trials will be successful, but having so many efforts in progress, some may succeed and provide a positive solution. Right now, though, confusion and despair prevail.

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**Short Review****Published Date:-2020-04-29 00:00:00**[Yemen is free of COVID-19](#)

Among all the countries, Yemen is free of corona virus, and no single case has been recorded till today. Yemen is characterized by its mother geographical location on the Red Sea and its population is approximately 30 million people and an area of ??555,000 square kilometers.

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**Short Review****Published Date:-2020-04-20 00:00:00**[The Psychology of the Common Cold and Influenza: Implications for COVID-19](#)

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Research on psychological risk factors for upper respiratory tract illnesses (URTIs) has been conducted for over fifty years. Early studies failed to control for exposure and also often relied on self-report rather than clinical and virological assessment. A universal policy used in the current COVID-19 pandemic has been to restrict exposure by social isolation. This leads to increased stress and removal of social interaction. In addition, information overload about the disease, and incorrect information, can also reduce wellbeing. Studies of experimentally-induced URTIs have shown that stress increases susceptibility to infection. Other research has shown that stress due to job insecurity and few social contacts are key risk factors for infection. This suggests that while social isolation will reduce exposure, it will also lead to an increased risk of illnesses, due to increased stress and reduced social support, should the person become infected with the virus. Other research has shown that infection and illness lead to changes in behaviour. These effects include greater negative affect and impaired attention and slower speed of response. Such effects are not only present when the person is symptomatic but also occur with sub-clinical infections, during the incubation period and after the illness. People with the illness are also more sensitive to other negative influences such as fatigue, and this has implications for safety critical jobs such as those carried out by healthcare professionals treating those with COVID-19.

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## Short Communication

**Published Date:-2020-04-07 00:00:00**

[Vitamin D produce antibodies in pandemic response to gripal viruses? A critical analysis](#)

In the evolutionary journey of humanity, it is possible to verify an analysis of pandemics with high occurrences. This study aims to conduct a critical analysis of the role of Vitamin D as an endogenous vaccine in the main viruses present in humanity over the decades. To construct this text, we used the short review methodology through a critical analysis. This study demonstrated the importance of using Vitamin D as an endogenous vaccine when used frequently in both healthcare professionals and patients. Therefore, it is concluded that Vitamin acts protectively in the innate immune system.

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## Opinion

**Published Date:-2020-03-27 00:00:00**

[Hypothesis about pathogenic action of Sars-COV-2](#)

The Hypothesis born on a simple clinical data noted by some Chinese Reserchers during the starting point of epidemic began in the dicember of the 2019, for the novel member of human coronavirus, officially named as SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) by International Committee on Taxonomy of Viruses (ICTV) is a new strain of RNA viruses that has not been previously identified in humans [1]. Sars-COV and SARS CoV-2 have some clinical differences. First: The Sars, severe acute respiratory sindrome induce a respiratory disease in immunocompetent hosts, although can cause severe infections in infant, young children and elderly individuals; Sars-CoV-2 induce a middle infection into the young children but the mortality is more high in to the adult population. We made a macthing with balst p of these sequences, Sars COV-2, taken on GENE BANK with H1N1 neuraminidase and the not structural protein NS1 and NS2 an interferon antagonist that may also stimulate proinflammatory cytokines in infected cells We can speculate that the mutation is occurred on accessories protein making a different virulence action between the two species Sars Cov and Sars Cov-2, same action we have founded in the H1N1 viral pandemic of the 2019.

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## Review Article

**Published Date:-2020-02-28 00:00:00**

[Pseudoephedrine protects mice from infection of H1N1 virus](#)

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Ephedra, an ancient herb, is applied to treat common cold and influenza for such a long time in China. Pseudoephedrine is a main active ingredient from Ephedra which is used for relieving nasal congestion clinically. We previously reported that pseudoephedrine showed a potent anti-inflammatory effect other than sympathomimetic effects. In the present study, we aimed to investigate whether pseudoephedrine could protect mice from the H1N1 virus infection. The mice were infected with a 20% LD50 influenza A virus (IAV) suspension via intranasal administration to establish a virus infection model. Further, the mice were orally administered pseudoephedrine or oseltamivir for 4 days from one day after infection. Our results showed that pseudoephedrine improved lung pathological damage during the IVA infection period, and it dramatically increased the survival rate and attenuated loss of body weight compared with the virus-infected control group. In addition, pseudoephedrine inhibited the cytokine storms and mRNAs expression of the TLR7 signaling pathway. Surprisingly, pseudoephedrine showed an inhibitory effect on the replication of IAV. These results give clear evidence that pseudoephedrine is a potential anti-influenza drug by blunting cytokine storms and inhibition of replication of IAV, and following these results, we speculate that it should be tested in the novel coronavirus pneumonia (COVID-19, a severe epidemic in China currently) in which the cytokine storms play a key role to damage bronchi and lung in the early stage.

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## Review Article

Published Date:-2020-02-04 00:00:00

[Rubella infection: Advances and challenges in the diagnosis and prevention of Congenital Rubella Syndrome](#)

Rubella remains an important pathogen worldwide, with many cases of congenital rubella syndrome per year. Rubella vaccination is included in the vaccination program of many countries. WHO has set goals for the elimination of measles and rubella and prevention of congenital rubella syndrome by 2020. Worldwide, the rubella vaccine is highly effective and safe, and as a result, endemic rubella transmission has been halted in the Americas since 2009. Incomplete rubella vaccination programs result in continuous disease transmission, as evidenced by major recent outbreaks in some countries around the world. In this review, we present the rubella control, elimination and eradication policies and a brief review of the rubella laboratory diagnosis.

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## Research Article

Published Date:-2020-01-30 00:00:00

[Low sensitivity of the careHPV™ Assay for detection of Oncogenic Human Papillomavirus in cervical samples from HIV-infected and HIV-uninfected Kenyan women](#)

Background: Human papillomavirus (HPV) infection causes cervical cancer (CC), a common malignancy among Kenyan women. New CC screening methods rely on oncogenic HPV ("high-risk", or HR-HPV) detection, but most have not been evaluated in swabs from Kenyan women.

Methods: HPV typing was performed on 155 cervical swabs from Kenyan women using the Roche Linear Array® (LA) and careHPV™ (careHPV) assays. Detection of 14 oncogenic HPV types in careHPV assay was compared to LA results.

Results: Compared to LA, sensitivity and specificity of careHPV assay was 53.0% and 80.9%, respectively. The sensitivity and specificity of careHPV in swabs from women with cervical dysplasia was 74.1% and 65.2%, respectively. The sensitivity and specificity of careHPV in swabs from HIV-infected women was 55.9% and of 96.4%, respectively. Overall agreements of careHPV assay with LA was substantial.

Conclusion: The results for careHPV assay are promising for oncogenic HPV detection in Kenyan women. The low sensitivity of careHPV for detection of HR-HPV could limit its benefit as a screening tool. Thus, a full clinical validation study is highly desirable before the careHPV assay can be accepted for cervical cancer screening.

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