

Current Pharma News

1. Nasal spray, developed by Bangladesh, promises to 'kill' coronavirus

Date: January 13, 2021

Source: www.bdnews24.com

Summary: The Bangasafe Oro-Nasal Spray, developed by Bangladesh Reference Institute for Chemical Measurements or BRICM, has proven safe, effective and helpful in reducing the viral load in a small trial, according to the government institute. It reported that a trial on 200 COVID-19 patients at the Dhaka Medical College Hospital was conducted and they will do more clinical trials and get approvals from Bangladesh Medical Research Council and Health Services Division very soon.

2. Globe Biotech gets permission to manufacture Covid-19 vaccine for trial

Date: January 13, 2021

Source: www.dhakatribune.com

Summary: Directorate General of Drug Administration (DGDA) has given permission to Globe Biotech Limited to manufacture their Covid-19 vaccine, Bongavax, for clinical trial. The permission was given on December 28, 2020. Within a week, they will apply at Bangladesh Medical Research Council (BMRC) for ethical permission and hopefully by next month they can go for clinical trial. On December 1, 2020, Globe Biotech, the only Bangladeshi company that has claimed progress in developing a Covid-19 vaccine

3. COVID-19 Survival Declines When Brain Affected: Study

Date: December 28, 2020

Source: www.drugs.com

Summary: Hospitalized COVID-19 patients with brain complications such as stroke and confusion have an increased risk of death, a new study shows.

4. Loss of taste and smell may be most reliable COVID-19 symptoms for digital surveillance

Date: December 24, 2020

Source: www.news-medical.net

Summary: Caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), as the coronavirus disease 2019 (COVID19) pandemic has evolved, diagnostic testing capacity expanded and guidelines also changed from testing for just fever and respiratory symptoms to testing for a wider range of symptoms. Several large scale, participatory digital surveillance platforms were also developed worldwide to complement the information obtained from laboratories and some clinical studies.

5. Mental disorders highly prevalent during coronavirus pandemics

Date: December 24, 2020

Source: www.news-medical.net

Summary: Researchers in the United States have conducted an analysis showing the high prevalence of mental disorders across populations impacted by coronavirus pandemics.

6. Researchers find correlation between consistent mask-wearing and improved well-being

Date: December 24, 2020

Source: www.news-medical.net

Summary: Since the emergence of the coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), universal masking has been implemented in many countries. Wearing face masks or coverings can help reduce the risk of being infected with SARS-CoV-2, as they prevent infectious respiratory droplets' entry. At the same time, it prevents droplets from reaching people when the infected sneeze, cough, talk, or breathe.

7. Higher BMI linked to increased risk of SARS-CoV-2 infection

Date: December 24, 2020

Source: www.news-medical.net

Summary: The coronavirus disease 2019 (COVID-19), caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), causes severe illness

in high-risk populations. These include the elderly and those with underlying health conditions such as diabetes, hypertension, heart disease and obesity.

8. A common compound in mouthwashes found to inhibit SARS-CoV-2 *in vitro*

Date: December 24, 2020

Source: www.news-medical.net

Summary: Researchers found that cetylpyridinium chloride, found in most mouthwashes, lowers infectivity of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) *in vitro*, likely by inhibiting viral fusion with target cells. With more tests to prove validity, mouthwashes could be a simple, cheap way of curbing transmission.

9. SARS-CoV-2 infection shown to reduce the expression of vitamin D pathway components

Date: December 23, 2020

Source: www.news-medical.net

Summary: A recent computational study from India implicated a dysregulated vitamin D pathway in the pathobiology of the infection with the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) – and opened the door for experimental validation of these observations.

10. Frequent and rapid testing may reduce SARS-CoV-2 transmission in care homes

Date: December 23, 2020

Source: www.news-medical.net

Summary: A team of scientists from the Centers for Disease Control and Prevention, United States, recently conducted a study to evaluate the effectiveness of serial testing and isolation of healthcare personnel in nursing homes in preventing the transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative pathogen of coronavirus disease 2019 (COVID-19). The findings reveal that frequent implementation of rapid testing in response to an outbreak is highly effective in reducing COVID-19 spread in nursing homes.

11. SARS-CoV-2 mutations may evade T cell immunity

Date: December 23, 2020

Source: www.news-medical.net

Summary: A potentially disturbing new study published in December 2020 on the *bioRxiv** preprint server suggests that the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that is causing the current coronavirus disease 2019 (COVID-19) pandemic may be undergoing strategic mutations that affect the host immune capacity to recognize and combat the pathogen via T effector cells.

12. Cell-mediated immunity may be more important than neutralizing antibodies in COVID-19 outcome

Date: December 23, 2020

Source: www.news-medical.net

Summary: An interesting new study sheds light on some important differences between asymptomatic and symptomatic patients with coronavirus disease 2019 (COVID-19). The preprint, which appeared on the *medRxiv** preprint server in December 2020, adds important details to the study of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection.

13. Researchers use fruit fly model to understand COVID-19-related neurological complications

Date: December 23, 2020

Source: www.news-medical.net

Summary: An interesting preprint by researchers from Washington University School of Medicine and the National Cancer Institute, USA, claims to have reproduced disease mechanisms due to coronavirus disease 2019 (COVID-19) in the fruit fly, *Drosophila*, while also providing proof of the efficacy of one drug against these disease processes. If validated, these findings represent a new understanding of how the virus causes neurological symptoms that could help develop more effective therapies.

14. COVID-19 patients retain immunity against the virus for at least 8 months

Date: December 22, 2020

Source: www.news-medical.net

Summary: Australian researchers have revealed - for the first time - that people who have been infected with the COVID-19 virus have immune memory to protect against reinfection for at least eight months.

15. SARS-CoV-2 antibody levels and types differ by disease severity, study finds

Date: December 22, 2020

Source: www.news-medical.net

Summary: Researchers have measured the antibody levels and types in hospitalized coronavirus disease 2019 (COVID-19) patients with different disease severity. Their results suggest gut immune pathways could play a role in reducing virus-based inflammation and recovery.

16. Scientists isolate anti-COVID-19 nanobodies produced by a llama

Date: December 22, 2020

Source: www.news-medical.net

Summary: National Institutes of Health researchers have isolated a set of promising, tiny antibodies, or "nanobodies," against SARS-CoV-2 that were produced by a llama named Cormac. Preliminary results published in *Scientific Reports* suggest that at least one of these nanobodies, called NIH-CoVnb-112, could prevent infections and detect virus particles by grabbing hold of SARS-CoV-2 spike proteins. In addition, the nanobody appeared to work equally well in either liquid or aerosol form, suggesting it could remain effective after inhalation. SARS-CoV-2 is the virus that causes COVID-19.

17. What are the potential benefits of SARS-CoV-2 antigen-based rapid diagnostic tests?

Date: December 22, 2020

Source: www.news-medical.net

Summary: Accurate coronavirus disease 2019 (COVID-19) diagnosis can interrupt transmission, aid clinical management, and help proper allocation of

resources to isolation, contact tracing, and therapy. In many low- and middle-income settings with huge outbreaks, COVID-19 diagnosis efforts using highly sensitive molecular tests have exceeded laboratory capacity. Antigen-detection rapid diagnostic tests (Ag-RDTs) do not need centralized laboratory processing and can be performed in under an hour at a lower cost compared to nucleic acid amplification testing (NAAT). Thus, Ag-RDTs can facilitate higher-volume testing and offer rapid results. However, the lower sensitivity of Ag-RDT has limited their applications in the clinical setting.

18. A hand-held device that measures aerosols could help prevent spread of COVID-19

Date: December 22, 2020

Source: www.news-medical.net

Summary: Researchers have confirmed the efficacy of a portable particle detector at calculating the concentration of aerosols in public spaces. Hand-held devices may be vital in the fight against the COVID-19 pandemic, given the important role that aerosols play in the transmission of the virus.

19. Pregnant women in third trimester unlikely to pass SARS-CoV-2 infection to newborns

Date: December 22, 2020

Source: www.news-medical.net

Summary: A new study demonstrates that women in their third trimester are unlikely to pass a SARS-CoV-2 infection onto their babies. The research also shows that the rates that maternal SARS-CoV-2 antibodies are transferred via the placenta are lower than expected.

20. Researchers have a promising lead on COVID-19 treatment

Date: December 21, 2020

Source: www.news-medical.net

Summary: By taking a lesson from prostate cancer, researchers now have a promising lead on treatment for COVID-19. Two proteins, ACE2 and TMPRSS2, help the coronavirus gain entry and replicate within cells. TMPRSS2 is well-known to Arul Chinnaiyan,

M.D., Ph.D. His lab discovered that Tmprss2 fuses with the ETS gene to drive more than half of all prostate cancers. They also knew that Tmprss2 was regulated by the androgen receptor.

21. COVID-19 contact tracing ineffective without timely testing and isolation, study says

Date: December 21, 2020

Source: www.news-medical.net

Summary: A new study by Canada-based researchers has showed that contact tracing is not effective if testing and isolation are delayed.

22. Study hints that supplements may reduce COVID-19 risk in females

Date: December 11, 2020

Source: www.medicalnewstoday.com

Summary: A recent study found small but significant decreases in the risk of SARS-CoV-2 infection among females who took multivitamins, vitamin D, omega-3 fatty acids, or probiotics. The study has not yet been through the peer review process and appears on the preprint server *MedRxiv*

23. Smartphone-based device could detect SARS-CoV-2

Date: December 10, 2020

Source: www.medicalnewstoday.com

Summary: Scientists are developing a portable device that gives rapid, accurate test results with the help of a regular smartphone camera. By estimating the number of virus particles in samples, the device could also determine an infection's progress.

24. Adapted yellow fever vaccine may protect against COVID-19

Date: December 07, 2020

Source: www.medicalnewstoday.com

Summary: A recent study concludes that a genetically altered yellow fever vaccine is highly effective in preventing SARS-CoV-2 infection in animals. If it passes clinical trials, the new vaccine would have some advantages over other SARS-CoV-2 vaccines.

Information collected and compiled by:

Md. Akbar Hossain

Department of Pharmacy

ASA University of Science and Technology Bangladesh