PHARMAPEDIA

PSGCP E-News Letter

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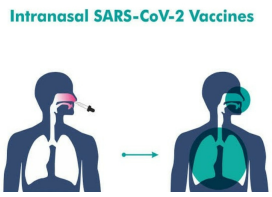
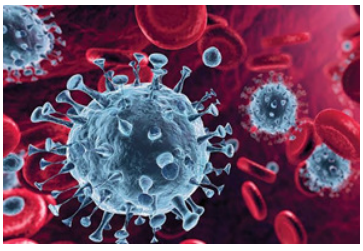
A POTENTIAL GAME CHANGING NASAL VACCINES: PROS AND CONS



According to Dr. Sowmya Swaminathan, the World Health Organization's senior scientist, an intranasal vaccination (BBV154) could be a possible game changer for covid-19, especially for children. Bharath Biotech's BBV154 has successfully completed its phase 1 clinical trial.

The fact that the intranasal vaccine induces a strong immune response at the point of viral entry is substantial advantage. This protects both the virus and reduces its spread. If the virus is prevented from entering this moment, it will not be able to cause damage to lungs. Intranasal vaccines are easier to deliver because they come in the form of nasal spray that is non-invasive and needle-free. Both Ig-A and Ig-G antibodies are produced by intranasal vaccinations. Ig-A mediated mucosal immunity can reduce the virus's ability to cause infection, therefore limiting transmission. The intranasal vaccines, on the other hand, have considerable disadvantages. The mucosal surface contains a variety of pathogenic barriers, including high acidity in the upper respiratory tract, which may prevent the vaccine from reaching and activating the mucosal immune system. This could result in decreased immunogenicity and a faster loss of immunity.

Ref:https://www.businessinsider.in/science/health/news/covid-19-nasal-vaccines-can-be-a-possible-game-changer-but-it-has-its-drawbacks/articleshow/83279302.cms



ADDITIONAL MONOCLONAL ANTIBODY APPROVED BY FDA FOR COVID-19 TREATMENT

The USFDA has granted Sotrovimab, an experimental monoclonal antibody therapy, an Emergency Use Authorisation (EUA) for the treatment of mild to moderate COVID-19 in adults and children who are at high risk of progressing to severe COVID-19,including hospitalisation and death.

Monoclonal antibodies are proteins developed in lab that replicate the immune system's ability to attack dangerous antigens like virus. Sotrovimab is a monoclonal antibody that is directed against the spike protein of SARS-Co-V-2 and is used to prevent the virus from attaching to human cells and infecting them. The EUA permits health-care practitioners to distribute and deliver Sotrovimab as a 500 mg single Intravenous dose. Anaphylaxis, infusion related events, dermatitis and diarrhoea are all possible Sotrovimab side effects. The FDA is closely monitoring viral variants in circulation and their sensitivity to monoclonal antibodies approved to treat COVID-19, such as Sotrovimab.

Ref:https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-authorizes-additional-

UMSOM RESEARCHERS DEVELOPED TWO ACCURATE, RAPID DIAGNOSTIC TEST FOR COVID-19:

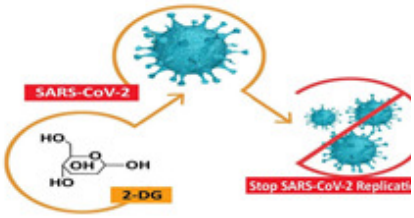
Two quick tests for covid-19 has been developed by researchers at the University of Maryland School of Medicines (UMSOM). The first test is an antisense COVID-19 molecular diagnostic assay. Using a new technology called electrochemical screening; this test detects the virus in the swab sample, within 5 to 10 minutes.

The second test employs a straight forward assay that employs plasmonic gold nanoparticles to detect a colour change in the presence of virus. This assay detects a specific protein by attaching a highly specific molecule to gold nanoparticles. The gold nanoparticles respond by turning the liquid reagent from purple to blue when the biosensor attaches to virus's gene sequence.

Ref:https://www.news-medical.net/news/20210615/UMSOM-researchers-develop-two-accurate-rapid-diagnostic-tests-for-COVID-19.aspx

2DG WILL BE EFFECTIVE AGAINST ALL COVID-19 VARIANTS:

Dr. Reddy's laboratory and DRDO collaborated to produce 2-deoxy-d-glucose(2DG), which was approved by Drug Controller General of India. The findings of clinical trial revealed that 2DG aids in rapid recovery of hospitalised patients and minimises the need for supplemental oxygen. The medication builds up in virus-infected cells and stops viral synthesis and energy production, effectively preventing virus's growth.



D-glucose was used as a starting material for laboratory manufacturing procedure for 2DG. The conversion of D-glucose to 2DG is accomplished through 5 chemical reactions, followed by filtration. It comes in powder form and can only be given to hospitalised patients on prescription as an adjuvant medication to their current care.

Ref:https://www.thehindubusinessline.com/news/national/2dg-will-be-effective-against-all-variants/article34763197.ece

PUZZLES: MISSING LETTERS

1. Agglomeration of particles in emulsion is called
   C _ _ L _ _ C_ _ _ E
2. In tablet coating process, inadequate spreading of colours of coating solution before drying causes
   _ _ A _ _ E P _ _ L E _ _ _ _ T
3. Which method of microencapsulation is used for solid alone?
   P _ _ C _ _ T _ _ _
4. One of the main ingredient of vanishing cream
   S _ _ _R _ _ A _ _ D
5. The filter used for filtration of thermolabile solution is
   S _ _ T _ _ _ D G _ _ _ _

ANSWERS FOR THE PREVIOUS E-NEWSLETTER PUZZLE:

CONNECT THE PICTURES

1. Starlac 2.Medwatch 3.Silver spring 4.Orange book

MISSING LETTERS

1. Magnesium sulphate 2.Kollidon 3.Phthalates 4.William Procter

Send your correct answers to psgcp.ceutics@gmail.com.

The first three participants with correct answers will be acknowledged in the next

PAPERS PRESENTED/PRIZES

Virtual conference held at Bannari Amman Institute of Technology, Sathyamangalam on 26th March 2021.

1. Priyanka S - Design of Diclofenac Transdermal patches using different concentration of plasticizers and polymers.
2. Ilakkiya V A - Comparative study of Diclofenac Matrix tablets using different biodegradable polymers.
3. Rajakumari V - Statistical Approach by DOE software for optimisation of polymers in tablets.

Priyanka S was awarded second place with cash prize award for paper presentation.

THE BEAUTIFUL OLD

The pulverisateur(nebulizer) developed by Jean Sales-Girons in 1858 in France.

JUMBLED LETTERS

1. Sodium carbonate is referred as
   DOASSHA
2. Commonly used diluent
   SLCAOTE
3. HEPA filters are made from
   OTSESASB
4. Sugar coated tables are polished by
   AXEEWBS

CORNER OF APPRECIATION:

Congratulating the participants of previous news letter puzzles

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