PHARMA SAGA

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SCHOOL OF PHARMACY

Ahalia Health,Heritage & Knowledge Village, Kozhippara, Palakkad,
Pincode - 678 557, Kerala, India. Telephone: +91- 4923-226777
E-mail: principal.asp@ahalia.edu.in, admin.asp@ahalia.edu.in,
academics@ahalia.edu.in

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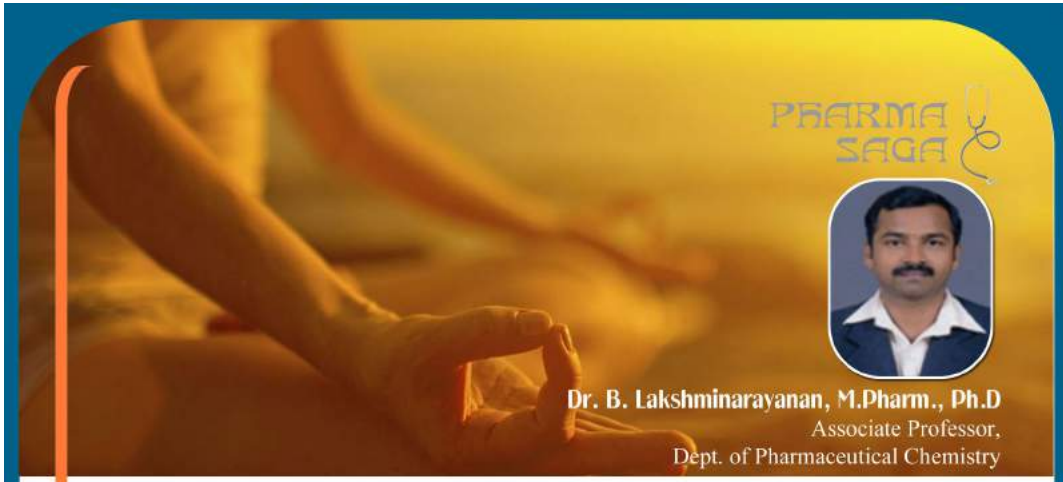
Lets Read Inside . . . . .



Dr. B. Lakshminarayanan, M.Pharm., Ph.D
Associate Professor,
Dept. of Pharmaceutical Chemistry

Happiness Always

How can we increase our prana level?
The following four things are used to increase our prana level:
1. Food
2. Sleep
3. Exercise
4. Breath
Think that, without food how many days we may live? .... Few days……
Without sleep how many days we may live? .... Few days……
Without exercise how many days we may live? .... Life long????????
Without breath how many days we may live? .... Few minutes ??????
From the above truth, we may realize that breathing is most essential to live……
Do you know the relation between the breathing and mind?
When you are anger, observe your breath…. It may be fast …..
When you are sad, observe your breath…. It may be slow ….
When you are happy, observe your breath…. It may be normal….
So if we want to control angry, we should control our breath….
Do you know the relationship between the breathing and the life span?
Life span of Rabbits - 7 to 10 years …..
Life span of Dogs - 10 to 13 years …..
Life span of Tortoises - 100 to 150 years ….. why these difference?
Because of their breathing nature, they have different life span.
Rabbits breath faster than dogs. Dogs breaths faster than tortoises.
Tortoises have longer breathing nature….
Hence if we control our breath, we may control our mind and live long……
How can we control our breath?

Dr. Preetha.S.panicker, M.Pharm.,Ph.D
Associate Professor,
Dept. of Pharmaceutics

SINTERING TECHNOLOGY

INTRODUCTION:

Sintering is defined as the thermal treatment of a powder or compact at a temperature below the melting point of the main constituent ,for the purpose of increasing its strength by bonding together of the particles .

TYPES OF SINTERING :

1. Solid state sintering
   Only solid phases are present at the sinter temperature.
2. Liquid phase sintering
   Small amounts of liquid phase are present during sintering.
3. Reactive sintering
   Particles react with each other to new product phases.

IMPORTANT PARAMETERS IN SINTERING

We can divide these parameters into four broad categories.

Powder preparation
- Particle size
- Shape
- Size distribution

Distribution of
- Dopants
- Second phases

Powder consolidation
- Density
- Pore size distribution

Firing
- Heating rate
- Temperature
- Applied pressure
- Atmosphere

IMPORTANT PARAMETRES IN SINTERING

- Some parameter's such as sintering temperature, applied pressure ,average particle size and atmosphere can be controlled with sufficient accuracy .
- Others ,such as the powder characteristics and particle packing are more difficult to control but have a significant effect on sintering .

WHAT HAPPENS DURING SINTERING

- Atomic diffusion takes place and the welded areas formed during compaction grow until eventually they may be lost completely.
- Recrystallization and grain growth may follow ,and the pores tend to become rounded and the total porosity ,as a percentage of the whole volume tends to decrease .
- In the pressing operation the powder particles are brought together and deformed at the points of contact .
- At elevated temperature –the sintering temperature –the atoms can move more easily and quickly migrate along the particle surfaces (the technical term is diffusion)

Metal consist of crystallites

At the sintering temperature new crystallites form at the points of contact so that the original inter particle boundaries disappear ,or become recognizable merely as grain boundaries (This position is called Recrystallization)

The total internal surface area of the pressed body is reduced by sintering.

NECK LIKE junctions are formed between adjacent particles as can be seen on the adjoining scanning electron microscope. Driving Force for Sintering

The main possible driving forces are ,

- The curvature of the particle surfaces
- An externally applied pressure
- A chemical reaction

Stages of sintering

First stage

After burn out of any organic additives ,two things happen to the powder particles when the mobility of the surface atoms has become high enough ,initially rough surface of the paticles is smoothed and neck formation occurs .

Second stage

Densification and pore shrinkage .If grain boundaries are formed after the first stage, these are new sources of atoms for filling up the concave areas which diminishes the outer surface of the particle.

Third stage

Grain growth take place ,the pores break up and form closed spherical bubbles.

SINTERING TECHNOLOGY

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Mechanisms of sintering

Six mechanisms can contribute to the sintering of a consolidated mass of crystalline particles

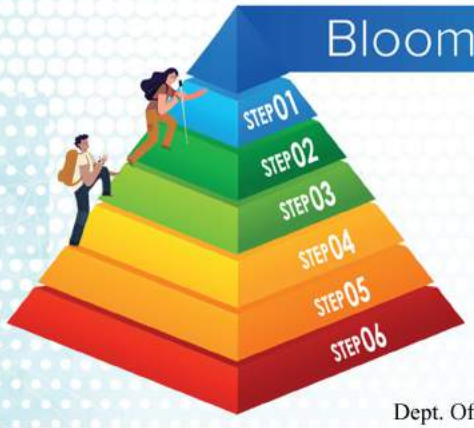
1. Surface diffusion
2. Lattice diffusion from the surface
3. Vapour transport
4. Grain boundary diffusion
5. Lattice diffusion from the grain boundary
6. Plastic flow

Advantages of sintering

Particular advantage of this powder technology include ,

1. The possibility of very high purity for the starting material and their great uniformity .
2. Preservation of purity due to the restricted nature of subsequent fabrication steps .
3. Stabilization of the details of repetitive operations by control of grain size in the input stages .
4. Absence of segregated particles and inclusions (as often occurs in melt processes)
5. No requirement for deformation to produce directional elongation of grains .

Sukritha .M
5th sem. B.Pharm



Mr. Padmaraj C.P
Associate Professor,
Dept. Of Pharmaceutical Chemistry

BLOOM'S TAXONOMY

In 1956, Benjamin Bloom with collaborators Max Englehart, Edward Furst, Walter Hill, and David Krathwohl published a framework for categorizing educational goals: Taxonomy of Educational Objectives. Familiarly known as Bloom's Taxonomy, this framework has been applied by generations of K-12 teachers and college instructors in their teaching.
The framework elaborated by Bloom and his collaborators consisted of six major categories: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. The categories after Knowledge were presented as "skills and abilities," with the understanding that knowledge was the necessary precondition for putting these skills and abilities into practice. Here are the authors' brief explanations of these main categories

• **Knowledge** :Knowledge involves recognizing or remembering facts, terms, basic concepts, or answers without necessarily understanding what they mean.
Example: Name three common varieties of apple.

• **Comprehension** : Comprehension involves demonstrating an understanding of facts and ideas by organizing, summarizing, translating, generalizing, giving descriptions, and stating the main ideas.
Example : Summarize the identifying characteristics of a Golden Delicious apple and a Granny Smith apple.

• **Application :** Application involves using acquired knowledge—solving problems in new situations by applying acquired knowledge, facts, techniques and rules. Learners should be able to use prior knowledge to solve problems, identify connections and relationships and how they apply in new situations.
Example: Would apples prevent scurvy, a disease caused by a deficiency in vitamin C?

• **Analysis :** Analysis involves examining and breaking information into component parts, determining how the parts relate to one another, identifying motives or causes, making inferences, and finding evidence to support generalizations.
Example: Compare and contrast four ways of serving foods made with apples and examine which ones have the highest health benefits.

• **Synthesis :** Synthesis involves building a structure or pattern from diverse elements; it also refers to the act of putting parts together to form a whole.
Example : Convert an "unhealthy" recipe for apple pie to a "healthy" recipe by replacing your choice of ingredients. Argue for the health benefits of using the ingredients you chose versus the original ones.

• **Evaluation :** Evaluation involves presenting and defending opinions by making judgments about information, the validity of ideas, or quality of work based on a set of criteria. Its characteristics include:
Example : Which kinds of apples are best for baking a pie, and why?

REVISED BLOOM'S TAXONOMY

A group of cognitive psychologists, curriculum theorists and instructional researchers, and testing and assessment specialists published in 2001 a revision of Bloom's Taxonomy with the title A Taxonomy for Teaching, Learning, and Assessment.Revised Bloom's taxonomy emphasizes students' learning outcomes through the use of refined terms. The revised taxonomy is a refreshed take on Bloom's Taxonomy from 1956, which examined cognitive skills and learning behavior. Changes to terminology, structure and emphasis are a part of the revised approach. Nouns such as evaluation or synthesis are now replaced with verbs such as creating or evaluating, respectively. With structure, "creating" now becomes the highest level—the area meant for generating ideas or constructing a new point of view.

Revised Bloom's taxonomy refers to the emphasis on two learning domains that make up educational objectives: cognitive (knowledge) and affective (attitude). The revised taxonomy focuses on six levels: remember, understand, apply, analyze, evaluate and create. These verbs refer to the cognitive process that students encounter and the knowledge that they work with. For instance, a verb under the "remember" category may ask students to recall how to perform CPR where a verb under the "create" category may ask students to design an effective project workflow. Six levels of

Revised Bloom's taxonomy as follows

* Remembering
* Understanding
* Applying
* Analyzing
* Evaluating
*Creating

COVID - 19 - A POST PANDEMIC SCENARIO

Dr. A J M. Christina
Professor, H.O.D.,
Dept. of pharmacology

Many spheres of human life took a topsy-turvy turn owing to the pandemic lockdowns and the inevitable social distancing norms forcing the entire humanity to take a sudden shift in various domains of day to day living like trading, shopping, banking, teaching, learning, travelling etc. Almost the entire human life came to a grinding halt in both the developed and the developing nations. Accustomed to the pre-pandemic style of living people were at a loss to get acclimatized to the new normal. Many institutions starting from the share markets to the retail businesses, government offices to cinema houses, political meetings to religious and other festivities came to a stand-still.

Educational institutions are no exception. Parents, students, teachers along with the educational institutions were startled by the all of a sudden change in the social milieu. Education which is one of the most important parameters of developmentcannot be ignored and it took some time to devise strategiesto continue teaching online in order to maintain the tempo of the learning culture among the students.

Of course, there were problems in distance learning like the lack of connectivity, inadequate in frastructure and gadgets, lack of knowledge and exposure to utilize the online facilities for educational purpose compounded for the initial sluggish start in addition to the immense loss of benefits from the face-to-facelearning. However private educational institutions and the students after some struggle could continue somehow. Necessitated by the unforeseen embarrassments,educational institutions and the governing institutions of the government chalked out some strategy to continue online teaching and also the valuation and examinations.

Back to the regular classrooms after more than one year, the students and the staff must be finding it hard to cope with the time stipulations. However, the lesson learnt from this pandemic is that the leaching-learning methodologies have to be taken to the next level, modernand must be ready to adapt to unprecedented situations like this. So, what's future readiness and what's the conclusion? In future, right from kindergarten to postgraduate education learning might be mostly e-learning. So now the educational system is embarking from blended learning to e-learning. Hence parents, teachers and students must update their technical knowledge to use the modern electronic gadgets for this purpose. The institutions must provide the infrastructure facilities. The government should chart out plans to improve the rural connectivity.The parents must educate their children towards the proper use of these gadgets so that our social, cultural and traditional values are preserved. Also, everyone should come forward to support the children and students who cannot afford for these facilities. If every student gets the equal opportunity to these facilities and for their correct usage, there will be a tremendous transformation that will make our country powerful like the developed countries.

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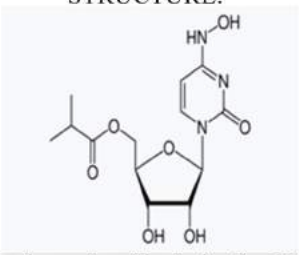
Mrs. Nithya Mol .P
Assi. Professor,
Dept. of Pharmaceutical Chemistry

MOLNUPIRAVIR

Molnupiravir, sold under the brand name Lageviro, is an antiviral medication that inhibits the replication of certain RNA viruses, and is used to treat COVID-19 in those infected by SARS-CoV-2. It is approved in the UK for reducing the risk of hospitalization and death in mild to moderate COVID-19 cases for patients at increased risk of severe disease (eg: with obesity, diabetes mellitus, heart diseases, or are over 60 years old).

STRUCTURE:



It is a prodrug of the synthetic nucleoside derivative N4- hydroxycytidine and exerts its antiviral action through introduction of copying errors during viral RNA replication. Molnupiravir was originally developed to treat influenza at Emory University by the university's drug innovation company, Drug Innovation Ventures at Emory (DRIVE). It was then acquired by Miami-based company Ridgeback Biotherapeutics, which later partnered with Merck & Co. to develop the drug further.

Weight- average 329.309

Mechanism of action - Molnupiravir is hydrolysed in vivo to N4-hydroxycytidine, which is phosphorylated in tissue to the active 5'-triphosphate form, and incorporated into the genome of new virions, resulting in the accumulation of inactivating mutations, known as viral error catastrophe.

BLOOM'S TAXONOMY

PHARMA SAGA

Absorption-After an 800 mg oral dose of Molnupiravir every 12 hours, the active compound (N4-hydroxycytidine) reaches a Cmax of 2970 ng/mL, with a Tmax of 1.5 hours, and an AUC0-12h of 8360 h*ng/mL

Protein binding - Molnupiravir and the active metabolite, N4-hydroxycytidine, are not protein bound in plasma.

Metabolism- Molnupiravir is hydrolysed to N4-hydroxycytidine, which distributes into tissues. Once inside cells, N4-hydroxycytidine is phosphorylated to the 5'-triphosphate form.

Route of elimination - eliminated in the urine as the active metabolite N4-hydroxycytidine
Half-life- 3.3 hours

Affected organism-Influenza Virus, SARS-CoV, SARS-CoV-2.

Will Molnupiravir work on virus variants, including Delta?

The research, which was conducted in the U.S. and other countries, also suggests the drug would be effective against mutations of the virus that the Centers for Disease Control & Prevention (CDC) classifies as "variants of concern," including the Delta, Gamma, and Mu mutations.

Does Molnupiravir prevent infection or severe illness and death?

The goal of the Merck pill is to keep people out of the hospital. The Merck study suggested that Molnupiravir would help patients who have at least one risk factor for severe COVID-19 to avoid hospitalization.

In November 2021, Molnupiravir was approved in the UK by the Medicines and Healthcare products Regulatory Agency (MHRA) for the treatment of established infections of COVID-19.

Mrs. Visakha Rajan
Assi. Professor,
Dept. of Pharmaceutical Chemistry

GREEN CHEMISTRY SYNTHESIS OF HYDRAZONES AND EVALUATE THEIR PHARMACOLOGICAL ACTIVITIES

ABSTRACT

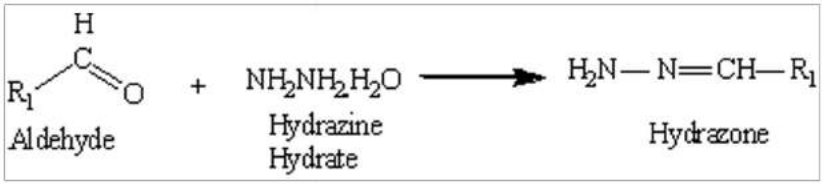
Hydrazone derivatives have attracted a great deal of interest in synthetic chemistry and considerable research on them in relation to their synthetic utility has been accomplished. Hydrazones are extensively studied as reactants or reaction intermediates since they can readily undergo various ring closure reactions. Hydrazones possess wide variety of biological activities such as anticonvulsant, antidepressant, analgesic, anti-inflammatory, antiarthritic antiplatelet, antimicrobial, anticancer, antihypertensive, anthelmintic, antidiabetic, antiparasitic, and other anticipated activities. This created an interest for researchers towards synthesized variety of hydrazone derivatives for different biological activities.

INTRODUCTION

Hydrazone are class of organic compounds with the structure R1R2C=NNH2. They related to ketones and aldehydes by the replacement of the oxygen with the NNH2 functional group. They are formed usually by the action of hydrazine on ketone or aldehydes. Hydrazone based coupling methods are used in medical biotechnology to couple drugs to targeted antibodies. The combination of hydrazones with other functional group leads to compounds with unique physical and chemical character. The introduction of functional groups in the hydrazone molecules expands the scope of use of the latter in organic synthesis.

SYNTHESIS

Aldehydes (0.01mol) were taken in a pestle and mortar. To it hydrazine hydrate (0.03mol) was added drop wise and triturated at room temperature in a solvent free condition. As the content was solidified, it was monitored by TLC. When the reaction was completed as indicated by TLC, the solidified product was washed with water and recrystallized by using suitable solvent.



CONCLUSION

It has been found that hydrazones can be synthesized by green chemistry method. And from the literature reviews it was reported that they possess pharmacological activities, such as anticonvulsant, antidepressant, analgesic, anti-inflammatory, antiarthritic antiplatelet, antimicrobial, anticancer, antihypertensive, anthelmintic, antidiabetic, antiparasitic, and other anticipated activities.

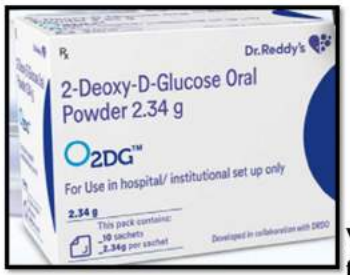
"Let food be thy medicine and medicine be thy food."

— Hippocrates

Neema K. Ramesh
Lecturer,
Dept. of Pharmaceutics

What is 2 - deoxy - D - glucose (2 - DG) and is it effective against Covid 19?

Antiviral and anti-inflammatory drug. On May 8, 2021 the Drugs Controller General of India approved an oral formulation of 2-deoxy-D-glucose for emergency use as adjunct therapy in moderate to severe coronavirus patients. Discovered by the Institute of Nuclear Medicine & Allied Sciences of India's Defence Research and Development Organisation (DRDO), 2-DG has been codeveloped by Dr. Reddy's Laboratories as an adjunct therapy for Covid-19.



What is 2-DG?

2-DG stands for 2-Deoxy-D-Glucose. Structurally, it is a glucose molecule, which has the 2-hydroxyl group replaced by hydrogen.

What is the dose, route and method of administration for 2-DG?

2-DG can be administered orally at 45mg/kg per dose twice daily on empty stomach. To prepare one dose, the entire contents of one or two sachets of 2-DG should be completely dissolved in 100ml drinking water. Based on a patient's body weight, the required quantity of the 2-DG solution should be measured out and administered. The clinical trials showed that the drug helps in faster recovery of those who have been hospitalised and also reduces need for supplemental oxygen.

PHARMA
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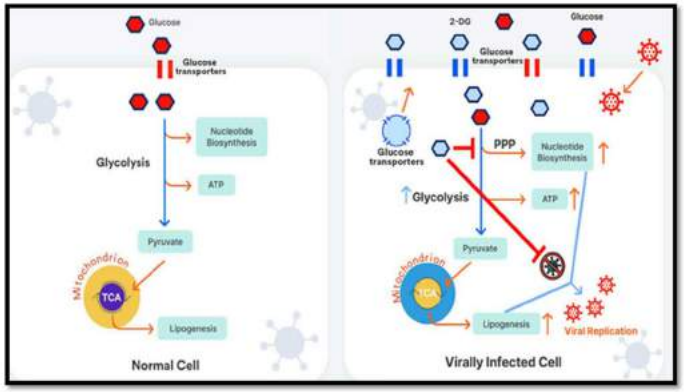
How long can 2-DG be administered?

2-DG should be taken twice daily for 10 consecutive days or until discharge, whichever is earlier.

2-DG has been approved for use only in a hospital setting. There is currently no clinical data to support its use in an out-patient setting.

What are the contraindications for 2-DG use?

Patients with known hypersensitivity to 2-DG or any of its analogs such as fluorodeoxyglucose should not take 2-DG. Other contraindications include pregnancy and lactation. Based on the results of Phase II and Phase III trials, 2-DG has received Emergency Use Authorisation to be used as an adjunct therapy in moderate to severe COVID-19 patients in a hospital setting.

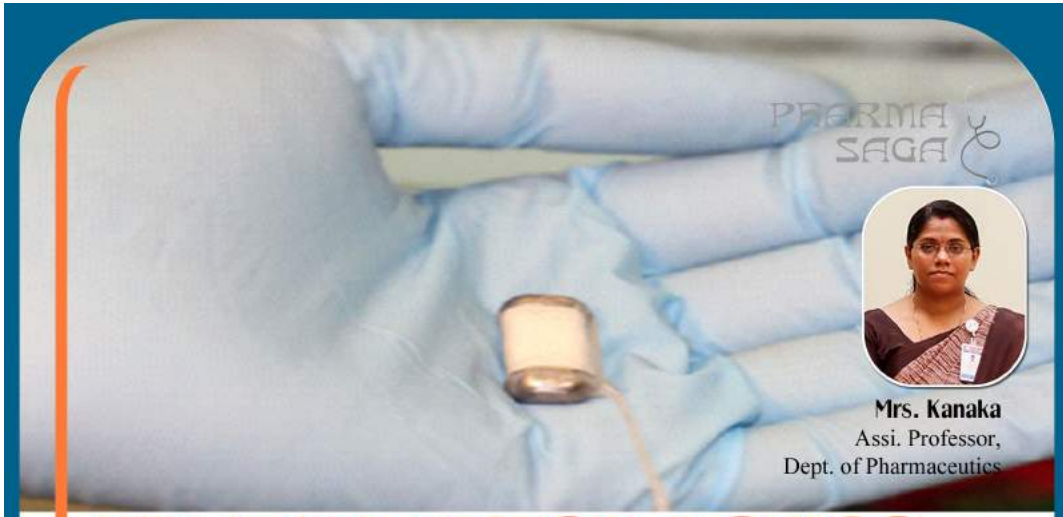


In normal cells

- 2-DG selectively accumulates in virally infected cells because of higher glucose demand
- 2-DG inhibits the energy production required for viral multiplication.

In virally infected cells

- 2-DG alters glycosylation of viral glycoprotein, rendering new virions incapable of infecting human cells
- It inhibits aerobic glycolysis in the virally infected host cell.



Mrs. Kanaka
Assi. Professor,
Dept. of Pharmaceutics

AN IMPLANTED DEVICE CONTROLS RHEUMATOID ARTHRITIS

Rheumatoid Arthritis is a disorder in which the body's own immune system starts to attack body tissues. The attack is not only directed at the joints but to many other parts of the body. In Rheumatoid Arthritis, most damage occurs to the joint lining and cartilage which eventually results in erosion of two opposing bones. It occurs mostly in people aged 20 and above. In children, the disorder can present with a skin rash, fever, pain and disability.

Rheumatoid Arthritis is a chronic disease and therefore requires lifelong treatments. This may include medication, exercise, physical therapy and possibly surgery.

The drugs to treat Rheumatoid Arthritis range from corticosteroids to monoclonal antibodies given intravenously. DMARDs are a group of drugs used to treat moderate to severe Rheumatoid Arthritis.The latest drugs like Remicade can significantly improve quality of life in the short term.

The last year or so has been many important advances in Rheumatology, many of which will likely have a growing influence on the field in 2015. Researchers are testing out a possible new treatment for Rheumatoid Arthritis that doesn't require taking any pills. On 23 December, a new treatment for Arthritis involving the use of implanted bioelectronics is announced.

The arthritis regulating device is implanted in the patient's neck and wraps around the vagus nerve, a bundle of nerve fibers that communicate sensory information from internal organs and controls involuntary body functions. The device stimulate the nerve at regular intervals in a particular pattern that regulate the immune system, which is overactive in Rheumatoid Arthritis.

The implant basically sends electrical signals to the electrodes that have been inserted into the necks surgically.The implant could be switched off and on at will by stimulating the vagus nerve which was done by moving a magnet over the implant. The patient turn the device on for 3 minutes each day using the magnet. It sends the electrical impulses that reduce the number of immune cells that travel to joints causing painful inflammation.

Researchers in Netherland with Glaxosmithkline observed 20 patients who took part in the research and inserted the pacemaker like electronic implants in their neck. And the vagus nerve is pivotal in monitoring the immune system's activity via the spleen. Near half the patients in the study group revealed that they experienced less symptoms of joint pain during the experiment and reported that they were pain free. The study which has been conducted on Amsterdam's Academic Medical Center, was based on the pilot that was carried out on 8 volunteers. These subjects agreed to take part in the research due to the absence of side effects as well as the benefits of the process.

Glaxosmithkline is hopeful that the electronic implant can be developed further so that it can be deployed for a wide range of chronic ailments that could profit from nerve stimulation electricity. Researchers say the main advantage of the electrical device over drug treatment is that they may not causes as many side effects. The companies will soon launch another approaches in bio electronics for patients with Chron's disease.

"Patience is the best medicine."

- John Florio

PHARMA SAGA

Sukritha.M
5th Sem., B.Pharm

ANALYSIS AND EXAMPLES OF ATTENUATED VACCINES

INTRODUCTION

Vaccinations is one of the great public health achievements of human history. Vaccines used in national immunization programmes (NIPS) are considered safe and effective when used correctly. Every year vaccines prevent 2 to 3 million deaths. An additional 1.5 million death could be avoided however it global vaccine coverage improves. The impact of most vaccines on communities and population is almost immediate. There are various types of vaccines are derived ;In here we are just go through about live attenuated vaccines

CONTENT

Live attenuated vaccines contain a version of the living virus. So that it doesn't cause serious disease in people with healthy immune system. An attenuated vaccine is a vaccine developed by reducing the virulence of the pathogen; It remains replication competent after administration. Attenuation takes an infectiousagent and alters it so that it becomes harmless or less virulent. Attenuated vaccines stimulate a strong and effective immune response that is long lasting. In comparison to inactivated vaccines, attenuated vaccines produce a stronger and more durable immune response with a quick community onset. Attenuated vaccines functions by encouraging the body to create antibodies and memory immune cells in response to the specific pathogen which the vaccine against

DEVELOPMENT OF ATTENUATED VACCINE

Viruses may be attenuated using the principle of evolution via serial passage of the virus through a foreign host species such as

* Tissue culture
* Embryonated eggs
* Live animals

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The initial virus population is applied to a foreign host through natural genetics variability or induced mutation, a small percentage of the viral particles should have the capacity to infect the new host and the virus will gradually lose its efficacy in the original host, due to lack of selection pressure: this process is called as "PASSAGE" in which the virus become so well adopted to the foreign host that it is no longer harmful to the subject that is to receive the vaccine this means it easier for the host immune system to eliminate the agent and create the immunological memory cells which will likely protect the patient if they are injected with a similar version of the virus in "The Wild"

ADMINISTRATION

It can be administrated in various of ways

INJECTIONS

* Subcutaneous (Ex: Measles, mumps , rubella varicella and yellow fever vaccines)
* Intradermal (Ex: Tuberculosis vaccine , small pox vaccine)

MUCOSAL

* Nasal (Ex: Live attenuated influenza vaccine)
* Oral (Ex: Oral polio vaccine, recombinant live attenuated cholera vaccine, oral typhoid vaccine)

MECHANISM

VACCINES

↓

Encouraging CD4+, CD8+ AND lymphocytes or molecules such as antibodies that are specific to pathogen

↓

Prevent or reduce infection by killing injected cells or by producing interleukins

↓

Induce the cellular immune response

↓

Stimulate a strong and effective immune response that is long lasting

DISCUSSION AND CONCLUSION

Live vaccines against viral disease are one of the most cost effective health interventions currently available. Their use has eradicated one infectious disease of humans and poliomyelitis is close to becoming the second. Measles has been controlled in the western hemisphere and in much of the developing world by the use of live viral vaccines and rota virus vaccines may be the best way to reduce rota virus mortality in the world at least in the short term until better health care infrastructure are developed successfully by clinical experience and wide spread use with monitoring of adverse event and efficacy as on going process

The understanding of where they came from and why thy are successful is generally poor. The failure of vaccine relate to adverse events such as causing the disease they are meant to be prevent or lack of efficacy and there is no clear way to tell where on the spectrum a given live vaccines lies other than by using it and acting on the results for this reason a live vac cine against HIV or any other virus that causes a lethal disease is problematic, even if it seems possible that it would be the most likely to succeed. Once a live vaccine is used it is out of control so far as patient is concerned and that can be challenge.

"Wherever the art of Medicine is loved, there is also a love of Humanity. "

— Hippocrates

മരതകദ്വീപ്

Aiswarya .P
1st Sem., B.Pharm

ഇന്നലെ ഞാൻ കണ്ട സ്വപ്നം
ഇതു സത്യമോ മിഥ്യയോ എന്നറികീല
ഈ ധരണിതൻ മടിത്തട്ടിൽ
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നിർമ്മലമാം മണൽത്തട്ടിൽ
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ഇതുതന്നെയോ ഞാൻ കണ്ട സ്വപ്നം
ഇതു തന്നെയോ ഭൂമിയിലെ സ്വർഗ്ഗം
വീണ്ടും എൻ സ്മൃതിപദത്തിൽ തെളിയുന്നു
കാലമേറെ ആയാലും
മറക്കാനാകില്ലൊരിക്കലും
നിൻ മടിത്തട്ടിൽ തലചായ്ച്ച്
കിടന്നൊരുകാലം

PHARMA SAGA

Ms. Arathi Nambiar
Librarian

POPULAR ARTICLE

A Popular Article written in simple language by a staff or freelance writer, possibly a scholar to enter or report on information second or third hand. It is usually short and rarely provides footnote or a bibliography. It does not state the qualification of the author and is usually published by commercial enterprises. Popular Article includes pictures or photograph and is side in appearance. Popular Article is written to be understandable to wide audience. The author writes in simple language and assumes that the reader may not know much about the topic.

The main purpose of the article is to be entertain, to report the news or to summarize information. It rarely includes a bibliography but sources may be mentioned by name with in the article.

WHAT MAKE AN ARTICLE POPULAR?

* A popular source is a publication, such as a newspaper or magazine that you could buy in a glossary store.
* It should include paper and articles reporting current events or summarizing general research.
* It is one of the primary methods used to communicate information to the public.
* Articles are short overview of a topic presented in everyday language.
* The information is written by journalist and they are often. Unnamed sources may be quoted, but there is no bibliography.

CHARACTERISTICS OF POPULAR ARTICLE

- Are often written by journalist or professional writers for a general audience.
- Use language easily understood by general reader.
- Rarely give full citations for sources.
- Tend to be shorter than journal article.

SCHOLARLY ARTICLE

A Scholarly Article or book generally based on original research or experimentation. It is written by a researchers or experts in the field who is often affiliated with colleges or institutions.

PHARMA SAGA

DIFFERENCE BETWEEN SCHOLARLY ARTICLE & POPULAR ARTICLE

Criteria	Popular Article	Scholarly Article
Purpose	Inform the general public	Report research findings and promote scholarly communication
Authors	Magazine's staff or freelance writers	Scholars or researchers in the field
Language	Non-technical language, understandable to most readers	Specialized terminology or jargon in field
References	Rarely include bibliographies	Always include extensive footnotes or bibliographies
Audience	Basic reading level for a general audience	Advanced reading level may have specialized vocabulary
Review Policy	Editor or editorial boards are members of the Magazine's staff	Articles are reviewed by peers, experts in the field

STEPS IN THE PREPARATION OF POPULAR ARTICLE

1. Get to know the audience
2. Identify needs of your readership
3. Be unique
4. Learn more ideas
5. Find reliable sources
6. Decide the length
7. Outline the article
8. Pay attention to style, structures and voice
9. Edit the work

M.Sangami Bharathi
Assi. Professor,
Dept. of pharmacognosy

Pharma News

Cabinet Okays Production Linked Incentive Scheme for Pharmaceuticals

The Union Cabinet, chaired by the Prime Minister, Narendra Modi has approved the Production Linked Incentive (PLI) Scheme for Pharmaceuticals over a period of Financial Year 2020-21 to 2028-29. The Scheme will benefit domestic manufacturers, help in creating employment and is expected to contribute to the availability of a wider range of affordable medicines for consumers.

The scheme is expected to promote the production of high-value products in the country and increase the value addition in exports. Total incremental sales of Rs.2,94,000 crore and total incremental exports of Rs.1,96,000 crore are estimated during six years from 2022-23 to 2027-28.

The scheme is expected to generate employment for both skilled and unskilled personnel, estimated at 20,000 direct and 80,000 indirect jobs as a result of growth in the sector.

It is expected to promote innovation for the development of complex and high-tech products including products of emerging therapies and in-vitro Diagnostic Devices as also self-reliance in important drugs. It is also expected to improve the accessibility andaffordability of medical products including orphan drugs to the Indian population. The Scheme is also expected to bring in investment of Rs.15,000 crore in the pharmaceutical sector.

UK recognizes Covaxin as valid COVID-19 vaccine for travel

Travellers vaccinated with Bharat Biotech's Covaxin will now be able to enter the UK, as the vaccine has been added to the approved list. This means that those inoculated with Covaxin, one of the two major COVID-19 vaccines in India, will not have to self-isolate following their arrival in England. China's Sinovac and Sinopharm vaccines have also been added to the UK's list of approved vaccines, which is advantageous for people from the UAE and Malaysia.

The approval of Covaxin follows the WHO Emergency Use Listing for the vaccine, in which it was found to have 78% efficacy against COVID-19 of any severity, 14 or more days after the second dose. It has also been approved by the US, as all FDA and WHO-approved vaccines are to be recognised by US authorities.

Covaxin and Covishield have now been recognised by as many as 110 countries, including New Zealand and Australia, according to reports. Both vaccines are extremely suitable for low- and middle -income countries due to their simple storage requirements.

These were the first two vaccines to receive emergency use authorisation (EUA) from the Drugs Controller General of India (DCGI) for the nationwide vaccination drive earlier this year. Covaxin is the first COVID-19 vaccine to be made in India, and it was developed by Hyderabad-based Bharat Biotech International Limited. The latter is an Indian make of the Astra Zeneca vaccine and is produced locally by the Pune-based Serum Institute of India (SII).

EMA supports molnupiravir prior to formal authorisation

The European Medicines Agency (EMA) has issued emergency use advice (EUA) supporting a decision by national authorities for the possible early use of Merck's molnupiravir, the oral antiviral drug for the treatment of patients with COVID-19.

The EU regulator has not yet formally authorised the drug.

The EMA advised that the experimental drug can be used to treat adults with the virus who do not require supplemental oxygen and are at a higher risk of developing severe COVID-19.

The EMA stated that it offered the advice 'to support national authorities who may decide on a possible early use of the medicine prior to marketing authorisation, for example in emergency use settings, in light of rising rates of infection and deaths due to COVID-19 across the EU'. Data from clinical trials suggests that the drug, given at a dose of 800mg twice a day, reduced the risk of hospitalisation and death when treatment started within five days of the onset of symptoms.

The most common side effects of the treatment included diarrhoea, nausea, dizziness and headaches. All of these were reported as either mild or moderate.

The recent advice issued by the EMA states that molnupiravir should be administered as soon as possible following a positive diagnosis for SARS-CoV-2. Clinical trial data revealed that 7.3% of patients taking the antiviral drug were hospitalised or died due to COVID-19 related complications, compared to 14.1% taking a placebo. None of the patients taking molnupiravir, also known as Lagevrio, died from COVID-19-related causes, compared with eight patients in the placebo group.

The UK became the first nation to approve Merck's COVID-19 drug in November. It is hoped that the antiviral oral drug will minimise symptoms and accelerate recovery, thereby reducing the burden on hospitals in anticipation of the winter and assisting in the management of the pandemic in poorer nations with reduced healthcare services.

Dr Reddy's open to making Pfizer COVID pill post deal with Merck

The new drugs, which unlike vaccines can be used to treat patients once they contract corona virus infection, are expected to be a huge market. Dr. Reddy's Laboratories , one of a handful of Indian drug companies licensed to make a new COVID-19 pill developed by Merck, said on Monday it was open to making a similar pill from Pfizer, thought to be even more effective.

The new drugs, which unlike vaccines can be used to treat patients once they contract coronavirus infection, are expected to be a huge market. Merck has given out licenses to manufacturers in developing countries to ensure a swift global supply, and companies are hopeful that Pfizer will do the same.

"Yeah, yeah, absolutely," Dr. Reddy's co-chairman and managing director, G.V. Prasad, told Reuters in an interview, when asked about making rival products from the U.S. companies."Dr. Reddy's remains open to all opportunities," a company spokesperson said separately.

Prasad said Dr Reddy's, one of India's biggest drugmakers, had not yet initiated any talks with Pfizer (PFE.N) before the U.S. company sought regulatory permissions.

Dr. Reddy's expects India's drug regulator to approve Merck's molnupiravir as soon as the United States does. Britain and Bangladesh have already authorised the drug, and India with its 1.35 billion people could be a big market

Thasni .H
3rd Sem., B.Pharm

RAINBOW PAIN

The colours of feeling
Come to me seeing
Knocked at my doorway
While I'm sleeping
Can't hear their noise
Cause I was dreaming.

Rainbows , a beautiful magic
Had born with colourless pain.....
The untold colourless story
Ignored their past , feeling
That slumber deep inside quiet.

I hear the sound of a helicopter
But couldn't find with my eyes
I wait , wait to reach in my sight.
And it just passed me now.
It had been fading inside,
Inside the cloud.
May be he had gone inside,
to call the rainbow .
Clouds are the home
Where rainbow relax.
Try to be a rainbow
In someone's cloud.
I recall to myself.

Did he bring the Rainbow ?
Hey , helicopter tell me.
Where had you gone?
No , it doesn't happen.

Cause even the rainbow
Has a bright and right time
to get shine for others

And I prefer you to see through
Closed eyes , open
you see the rainbow of
your life time.
You never lose or hide them.
They always shinning ,
Before you .

But the pain story of it,
Still recites inside me.
The tale of a rain to rainbow.
Painfull days of them ,
When people bow their head down
when it rains .
They always escaped ,
Neither enjoyed nor loved it.
Even doesn't bow their head up
to see it.

The god , never helped or replied
For the pain in the rain.
As if it is a curse
To live without colours.
Because people always prefer
A colourful life.
A Life in colour.

Its dark for many years,
That the rain suffered
With pain inside.
Rains both on the world
and his deep inside,
Cause he had been doing the same.
Took an unusual step ,that sunny day

It's too hot , the sun
glares at my eyes
Everybody inside the house , safe

Cooling under a fan
It starts raining came his
Friend on the way.
Give him a chance to shine ,
Where the dumb god left
him along.

Sun shines the brightest
And he falls down ,with hopes
Never felt depressed again ,
Cause the people bow their head
above to see the beautiful magic
happening on the sky .
The colourful rainbow.....

Everybody came out , dancing , laughing
Where every time they had their eyes on the sky.
A smile ,the curve in their face
where the rains hope never gone waste

Don't worry ,cause everyone also
Put u helpless and leave dumb will
ones understand your power
Your beauty inside .

The colour spreading on the sky
every nooks and corner of the sphere
The dream of a rain
Finally met with the rainbow
Colourless tears comes from my eyes
when the colourless pain
turned into happiness

Jumped out from my dream
Searched for the knocking sound ,
Opened the door
But they had already
Left my home.....

Cause those colours of feelings
Now shinning on the sky.
In the fullness of time Rainbow gains
And burnt the colourless pains.

News from Alumni

Placement

• *Happy to announce that two alumni of our first batch (2014-18) have cleared "HAAD exam for pharmacist" and posted as Registered Pharmacist in AL AHALIA HOSPITAL, ABUDHABI.*

MAYA MOHINI P S

DHILNA JOHN

GEETHU

• *One of the alumni from the second batch (2015-19) has joined as Lecturer in the Department of Pharmacology, Ahalia School of Pharmacy.*

Achievements

Three of our students from 2016-20 batch have cleared GPAT examination during their final year. Two of them joined M.Pharm.

• *Ms.Krishnameera has joined M.Pharm (Pharmaceutics)in college of Pharmaceutical sceinces, Kannur Government Medical College.*

• *Mr.Mohamed Nishad has joined M.Pharm (Pharmacology)in karavali college of pharmacy, RGUHS.*

KRISHNAMEERA

MOHAMMED NISHAD

PHARMA SAGA

Staff corner

Congratulations to

Dr. Preetha S. Panicker M.Pharm., Ph.D
Associate Professor, Dept. of Pharmaceutics,
Ahalia School of Pharmacy
on successful completion of your Ph.d in pharmacy
from Sunrise University,Rajastan.

Dr. B. Lakshminarayanan *Associate Professor attended AICTE - ATAL sponsored online FDP on Artificial Intelligence in drug design and development : Current and future perspective organized by Acharya B M Reddy College of Pharmacy, Bengaluru from 22/11/2021 to 26/11/2021*