



RKGIT
(Pharmacy)



Pharmaware

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VISION

To be recognized as a foremost institution imparting quality pharmacy education to aspiring pharmacists with right competencies, attitude, skills and knowledge, for the greater benefit of mankind.

MISSION

To produce highly qualified and motivated graduates possessing fundamental knowledge and soft skills, who can provide sustainable solutions to health care problems.

To develop partnerships with industries, eminent institutes and government agencies in the field of pharmaceutical sciences.

To serve the community, at local, national and international levels, with a deep awareness of our ethical responsibilities towards profession and society.

PROGRAM EDUCATIONAL OBJECTIVES

OUR GRADUATES SHOULD HAVE:-

1. Have quality theoretical knowledge and practical skills on all core and allied fields of pharmaceutical sciences, so that they can face the challenges of the globalized scenario and contribute to the progress of the nation.
2. Enjoy successful careers in all settings of Pharma sector, by engaging themselves in professional development through leadership, communication, skills, teamwork and entrepreneurship.
3. Function ethically and lawfully in professional environment and exhibit good competency in their work culture.
4. Act as a link between healthcare system and community, so as to serve the society by the transmitting their knowledge, with a sense of social responsibility.
5. Participate in lifelong learning through advanced degrees, continuing education and/or professional activities.

ALL INDIA 29TH RANK IN NIRF-2016

AKTU APPROVED PHD RESEARCH CENTRE

NBA ACCREDITED (B.PHARM)

A VIEW ON COVID-19 VACCINE

COVAXIN®

India's first indigenous COVID-19 vaccine by Bharat Biotech is developed in collaboration with the Indian Council of Medical Research (ICMR) - National Institute of Virology (NIV). The indigenous, inactivated vaccine is developed and manufactured in Bharat Biotech's BSL-3 (Bio-Safety Level 3) high containment facility. The vaccine is developed using Whole-Virion Inactivated Vero Cell derived platform technology. Inactivated vaccines do not replicate and are therefore unlikely to revert and cause pathological effects. They contain dead virus, incapable of infecting people but still able to instruct the immune system to mount a defensive reaction against an infection. **COVAXIN®** is included along with immune-potentiators, also known as vaccine adjuvant, which are added to the vaccine to increase and boost its immunogenicity. It is a 2-dose vaccination regimen given 28 days apart. It is a vaccine with no sub-zero storage, no reconstitution requirement, and ready to use liquid presentation in multi-dose vials, stable at 2-8°C.

Pre-clinical studies: Demonstrated strong immunogenicity and protective efficacy in animal challenge studies conducted in hamsters & non-human primates. For more information about our animal study, please visit our blog page on Non-Human Primates.



COVISHEILD VACCINE

The Oxford-AstraZeneca vaccine is being manufactured locally by the Serum Institute of India, the world's largest vaccine manufacturer. It says it is producing more than 50 million doses a month. The vaccine is made from a weakened version of a common cold virus (known as an adenovirus) from chimpanzees. It has been modified to look more like corona-virus, although it can't cause illness.

When the vaccine is injected into a patient, it prompts the immune system to start making antibodies and primes it to attack any corona-virus infection.

The jab is administered in two doses given between four and 12 weeks apart. It can be safely stored at temperatures of 20 °C to 80 °C, about the same as a domestic refrigerator, and can be delivered in existing health care settings such as doctors' surgeries.

This makes it easier to distribute than some of the other vaccines.

The jab developed by Pfizer-BioNTech, which is currently being administered in several countries, must be stored at -70 °C and can only be moved a limited number of times - a particular challenge in India, where summer temperatures can reach 50 °C.

Reference: <https://www.bbc.com/news/world-asia-india-55748124>

HERBAL INFORMATION

KACHNAR

Botanical name: *Bauhinia Variegata*

Family: Fabaceae

Kingdom: Plantae



KACHNAR IS ALSO KNOWN AS MOUNTAIN EBONY OR RAKTA KANCHAN IS AN ORNAMENTAL PLANT PLANTED IN GARDENS, PARKS, AND ROADSIDES IN MANY WARM TEMPERATE AND SUBTROPICAL REGIONS. ALL PARTS OF THE PLANT (LEAVES, FLOWER BUDS, FLOWER, STEM, STEM BARK, SEEDS, AND ROOTS) POSSESS MEDICINAL BENEFITS. KACHNAR LEAVES ARE BENEFICIAL IN MANAGING DIABETES BY REDUCING BLOOD GLUCOSE LEVELS AND IMPROVING LIPID PROFILE DUE TO THE PRESENCE OF ANTIOXIDANTS. KACHNAR STEM MIGHT HELP MANAGE WEIGHT BY IMPROVING METABOLISM.

USES

- AS PER AYURVEDA, CONSUMING KACHNAR POWDER ALONG WITH HONEY OR LUKEWARM WATER HELPS MANAGE THE THYROID DUE TO ITS TRIDOSHA BALANCING AND DEEPAN (**Appetizer**) PROPERTIES.
- KACHNAR HELPS IN WOUND-HEALING BY INDUCING THE FORMATION OF NEW SKIN CELLS DUE TO ITS **Anti-Inflammatory** AND **Antioxidant** PROPERTIES.
- IN AYURVEDA, APPLYING KACHNAR POWDER MIXED WITH HONEY HELPS MANAGE SKIN PROBLEMS SUCH AS ACNE, PIMPLES DUE TO ITS SITA (COLD) AND KASHAYA (ASTRINGENT) PROPERTIES.
- IN THE TREATMENT OF **HYPOTHYROIDISM, PILES, MENORRHAGIA, DIARRHOEA**

HERBAL PRODUCTS

KACHNAR DRY EXTRACT

KACHNAR ARK

KACHNAR GUGGUL

KACHNAR POWDER



COVID-19 AND POTENTIAL DRUGS USED IN TREATMENT

INTRODUCTION:

On 30 January 2020 the WHO declared global PHEIC about the epidemic problem of a new coronavirus called 2019 novel coronavirus (2019-nCoV), which was first appeared in Wuhan wet market, Hubei province. This virus genetically is very similar to a bat coronavirus in the subgenus Sarbecovirus. The WHO named the disease as COVID-19 and it spread all over the world rapidly less than 3 months. Coronaviruses can be classified into four genera (α , β , γ , and δ) and they are detected in a very wide selection of animal species. The virus that causes the COVID19 infection belongs to the β coronaviruses family. Since the beginning of the twenty-first century, three coronaviruses crossed the species barrier and causes deadly pneumonia in humans: severe acute respiratory syndrome coronavirus (SARS-CoV), Middle-East respiratory syndrome coronavirus, and SARS-CoV-2.

CORONAVIRUS HISTORY

The Nidovirales order, includes Coronaviridae, Roniviridae and Arteriviridae families and Coronaviruses (CoVs) are the greatest group of viruses that relate to this order and Coronaviridae family. Coronaviruses have a single-strand RNA genome with 26 to 32 kilobases in length. There are different hosts for coronaviruses but their special hosts are different types of avian hosts. However, they have also other hosts like different kinds of mammals, including mice, bats, masked palm civets, camels, cats, and dogs. New mammalian hosts are identified for coronaviruses these days and they are rapidly growing up. In November 2002 and the first time when the Middle East respiratory syndrome (MERS) coronavirus (MERS-CoV) emerged, it was in 2012 in Saudi Arabia. During 2002–03, more than 8000 infected cases by SARS-CoV and more than 774 deaths in 37 countries were confirmed, and MERSCoV outbreak in September 2012, caused 2494 confirmed cases of infection and 858 mortalities, including 38 fatalities in South Korea. In late December 2019, many infected patients with viral pneumonia were reported, but the point was that all of them were associated with the Huanan seafood wholesale market. So, a new virus which was associated with infecting human was confirmed and provisionally named 2019 novel coronavirus (2019-nCoV), and this virus was detected with the use of next-generation sequencing. Reported cases with SARS-CoV-2 are now more prevalent, on 28 April 2020, 3,121,118 cases have been reported in 210 countries, and the number of death stands at 216,508 in the world. At present, available data shows that 2019-nCoV spread the infection to the human population from a bat source, but it is unknown if other animal species are associated with this virus and acting as an intermediate host between humans and bat or not.

FAVIPIRAVIR:

Favipiravir Is a drug approved for the treatment of in flu-enza in China. The action mechanism of Favipiravir is to inhibit RNA-dependent RNA polymerase. In addition to the action against the influenza virus, this antiviral drug can inhibit the replication of flavi, alpha, filo, bunya, and other RNA viruses.

CHLOROQUINE AND HYDROXYCHLOROQUINE:

Chloroquine(CQ) is a drug that widely used against malaria and in 2006 was observed this drug has an anti-viral potential. The function mechanism of Chloroquine is increasing the endosomal pH. With a pH higher than what is required for virus/cell fusion, the infection is blocked. This interferes with glycoproteins of cellular receptors of sars-cov-2 which bind to their targets. Therefore, Chloroquine can inhibit a pre-entry step of the viral cycle via interfering with the binding of viral particles to their cellular cell surface receptor

REMDESIVIR:

Remdesivir is an adenosine nucleotide analog that is similar to tenofovir alafenamide -a nucleotide analog of adenosine 5-monophosphate -with antiviral activity against hepatitis B virus, HIV, filoviruses, paramyxoviruses, and pathogenic coronaviruses, like SARS-CoV and MERS-CoV.

RIBAVIRIN:

Ribavirin is a nucleotides derivative competing with physiological nucleotide for RdRp active site. Through the outbreak of SARS in Hong Kong, ribavirin was widely used for patients with or without the simultaneous use of steroids. The EC50 against COVID19 for Ribavirin determined at 109.5 μ M. Based on previous studies about SARS and MERS, the combination of ribavirin and IFN- β , decreases the viral replication and disease severity in animal models. Due to unfavorable reactions, the proper dose of ribavirin in the clinical application should be given carefully

LOPINAVIR:

Ritonavir Three anti-HIV drugs, ritonavir, lopinavir, and darunavir, might have a therapeutic impact on coronavirus disease 2019 (COVID-19). It is implied that the therapeutic effect of ritonavir and lopinavir on COVID-19 may be largely due to their inhibitory impact on CEP_C30 (coronavirus endopeptidase C30), while ritonavir may have greater ability; the inhibitory impact of darunavir on SARS-CoV-2 and its potential the rapeutic influencemaybelargelyduetoitsinhibitory effect on PLVP (papain-like viral protease).

Neha Gupta,

M. Pharm, 1st year

REFERENCES:

1. Barati F. et al., *Potential Drugs and Remedies for the Treatment of COVID-19: a Critical Review, Biological Procedures Online, 2020, 22:15, Doi: <https://doi.org/10.1186/s12575-020-00129-1>*
2. Dong Liying, Shasha Hu, Jianjun Gao, *Discovering drugs to treat Coronavirus disease 2019 (COVID-19), Drug discoveries & Therapeutics 14 (1), 2020, Page no. 58-60*

STUDENTS ATTENDED WORKSHOP/WEBINAR

- Vasu Chuhan (M.Pharm Ist Yr) Attended Webinars On “Impact Of Covid 19 On Pharmaceutical Education And Research On January 8, 2021, “Nanotechnology And Medical Science Challenges Ahead” On January 16, 2021 And “Aquiring Digital Competencies In Education; The Next Generation Pharmacist” On 7th March 2021, Organized By: Society Of Pharmaceutical Science And Research (SPSR).
- Ms Priti (M.Pharm Ist Yr) enrolled AICTE approved Eight weeks workshop on “Current regulatory requirements for conducting clinical trials in India for investigational new drugs” from 15th Feb to 24th April 2021.

FACULTY ATTENDED FDP

- Ms Rashmi Tripathi (Assistant Professor) attended 5 days AKTU sponsored, FDP program on “Traditional and artificial intelligent based training program on handling and care of laboratory animals” organized by Dept of Pharmaceutical technology, MIET, Meerut on 9TH to 13TH Feb 2021.

PAPER PUBLISHED

- Sunil Khatak et al. title “Solid lipid nanoparticles containing anti-tubercular drugs attenuate the Mycobacterium marinum infection” in Elsevier, Tuberculosis, 125, 2020.
- Ruchi singh, Surya Goel, Pankaj Kumar Sharma, Abhinav Agarwal, Title “Hydrogel as a Novel Drug Delivery system: Recent Advancements and patents” in Current Nanosciences, 17(1), 2021.
- Geetika Mehta, Monika sachdeva, Rashmi Tripathi Title”Prevalence of Anemia in Children of Rural Population of Northern State of India” in Ars Pharmaceutica, 62(2), 182-189, 2021.

WISHING ALL READERS



HAPPY AND PROSPEROUS HOLI

REGARDS

Pharmaware Team

For Views and Suggestions

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