

Shree Naranjibhai Lalbhai Patel College of Pharmacy, Umrakh

Date: 25/09/2020

World Pharmacist Day Competitions

World Pharmacist Day is celebrated every year on 25th September 2020. To mark this day, various Competitions were held in Shree Naranjibhai Lalbhai Patel College of Pharmacy, during 23rd -25th September 2020. This year, the celebrations were visualized by online competitions of students due to the Corona Pandemic. The activity was successful with an exuberant number of online student participations. The students were asked to send the high quality images and a short videoshoot of their activities. The Competitions were organized based on the Pharma Theme.

Students were encouraged to participate in following events: Pharma Rangoli, Drawing, Pharma Nail Art, Pharma Poster and Pharma Short Film. These events bring out the creativity and hidden potentials among the students. These extracurricular activities not only boost their confidence but also develop an inclination towards the academics. The prizes given away were as under:

Pharma Short Film (available on college website – www.snlpcp.ac.in)

1st Prize: Featured on “**Towards Covid-19 Patients**” Directed By 5th Sem Students Mistry Arpit k Maisuriya Kevin, Khushwaha Jayesh, Desai Rucha

Link:<https://drive.google.com/file/d/1mGQBpMrZLgQGtbTWFIBpwRBYxB7RAxI4/view?usp=drivesdk>

2nd Prize: Feature Film “**Avoid Self Medication**” by 3rd sem students Jay lad, Nil prajapati, Utsav Prajapati, Kevin Patel

Link: <https://drive.google.com/file/d/190z7E2Wzcli2GeE-wlhxbvUj8IDPg8E/view?usp=drivesdk>

Both the films have been uploaded on the college website ‘video section’

Shree Naranjibhai Lalbhai Patel College of Pharmacy, Umrah

Pharma Nail Art



1st Prize- Aabha Patel (5th Sem)



2nd Sem- Anjali Patel (7th Sem)

3rd Prize- Priya Shailesh Patel(5th Sem)

Pharma Rangoli



1st Prize- Dharmi Mandani (5th Sem)



2nd Prize- Heli V Patel (7th Sem) 3rd Prize- Tulsi Desai (3rd Sem)

Pharma Poster

1st Prize: Brijesh Parikh (7th Sem)



PATENTS - AN IMPORTANT TOOL FOR PHARMACEUTICAL INDUSTRY.

SHREE NARANJIBHAI LALBHAI PATEL COLLEGE OF PHARMACY, UMRACH

BRIJESH PAREKH*

ABSTRACT

THE INTELLECTUAL PROPERTY PROTECTION IN THE DEVELOPMENT OF NEW PRODUCT FOR PHARMACEUTICAL IS THE MOST IMPORTANT ASPECTS TILL THE APPROVAL OF THE NEW DRUG. THE IMPORTANCE OF THE PATENTS TO PHARMACY INNOVATION HAS BEEN REPORTED IN SEVERAL CROSS-INDUSTRY STUDY BY ECONOMIST. PRIOR STUDIES HAVE FOUND THAT INVENTION THROUGH PATENTS PLAY A MORE CRITICAL ROLE IN APPROPRIATELY THE BENEFITS OF INNOVATION IN THE PHARMACEUTICAL COMPARED TO OTHER INDUSTRIES OF THE PATENTS EXPIRY OF THE THE BLOCKBASTER DRUG AND IT'S REDUCTION IN SALES.

A PATENT IS A KIND OF INTELLECTUAL PROPERTY. THE TERM PATENT CAN BE DEFINED AS "A MONOPOLY RIGHT CONFERRED TO THE INVENTOR WHO HAS INVENTED A NEW PRODUCT OR PROCESS THROUGH HIS/HER INTELLECTUAL EFFORTS CAPABLE OF INDUSTRIAL APPLICATION". 10. PATENTS ARE EXCLUSIVE PROPERTY RIGHTS IN INTANGIBLE CREATIONS OF THE HUMAN MIND AND IT IS AWARDED IN RECOGNITION OF INNOVATION AND MORE PARTICULARLY THE INVESTMENT REQUIRED TO FOSTER TECHNICAL ADVANCE AND THE DEVELOPMENT OF NEW IDEAS.

A SHORT COMPARISON OF PRODUCTS THAT LOSE PATENT PROTECTION: THIRTEEN US BLOCKBUSTERS WILL LOSE PATENT PROTECTION OVER THE NEXT TWO YEARS. THE BELOW DATA SHOW THE CHALLENGES FACING THE PHARMACEUTICAL INDUSTRY. DRUGS WORTH \$15.3BN FACED GENERIC COMPETITION IN YEAR 2011-12. \$133BN OF BRANDED DRUGS FACE PATENT EXPIRY IN NEXT SIX YEARS IN THE US ALONE. TO HIGHLIGHT PRIOR TO BEAR BRUNT OF PATENT CLIFF WITH \$1.1BN LIQUID EXPIRY IN YEAR 2011.

CRITERIA FOR PATENTABILITY
FOR ANY PATENT TO BE GRANTED IN ANY GEOGRAPHY IT SHOULD FOLLOW THE FOLLOWING CRITERIA:

- INVENTION SHOULD BE A PATENTABLE SUBJECT MATTER IN THE US GEOGRAPHY
- IT SHOULD HAVE UNITY OF INVENTION.
- HAVE INVENTIVE STEP OR NON-OBVIOUS TO A PERSON SKILLED IN THE ART.
- BE CAPABLE OF INDUSTRIAL APPLICATION I.E. UTILITY.









PHARMACEUTICAL PRODUCTS TAKE A VERY LONG TIME TO DEVELOP AND ENTER MARKET FOR HUMAN USE. IT TAKES 10-15 YEARS ON AVERAGE TO DEVELOP A NEW DOSAGE FORM WHICH IS CLINICALLY PROVED SAFETY AND EFFICACY FROM THE EARLIEST STAGES OF COMPOUND DISCOVERY THROUGH APPROVAL. AS A RESULT, SIGNIFICANT PORTIONS OF THE PATENT TERM FOR A NEW DRUG ARE LOST BEFORE A PRODUCT ENTERS THE MARKET. IN FACT, THE AVERAGE EFFECTIVE PATENT LIFE FOR MEDICINES IS 11.5 YEARS. 9. THE SAME IS ILLUSTRATED IN THE BELOW FIGURE:

HOWEVER, WHEN A MAJOR BLOCKBUSTER LOSES PATENT PROTECTION, GENERIC COMPETITION LEAVES A GAPING HOLE IN THE TOP LINE, ABRUPTLY CHANGING A COMPANY'S GREATEST STRENGTH INTO ITS GREATEST LIABILITY. LET'S TAKE A CLOSER LOOK AT THREE BLOCKBUSTER DRUGS THAT WILL LOSE PATENT PROTECTION IN 2014.

BY 2016, MEDICINES THAT GENERATE SALES OF \$133BN FOR THEIR MANUFACTURERS IN THE US ALONE WILL BE EXPOSED TO GENERICS.

CONCLUSION

IT IS KNOWN FACT THAT PATENTS ARE TERRITORIAL RIGHTS AND PATENT REGIMES ARE GENERALLY PART OF NATIONAL TECHNOLOGICAL AND INDUSTRIAL STRATEGIES, BUT IS ALSO CRUCIAL TO DESIGN THEM CONSISTENTLY WITH PUBLIC HEALTH STRATEGIES. PATENTS OVER PHARMACEUTICALS MAY BE EFFECTIVELY USED TO DISCOURAGE OR ELIMINATE COMPETITION, AS GENERIC PRODUCERS, PHARMASIA AGENCIES AND CONSUMERS, ESPECIALLY IN DEVELOPING COUNTRIES, GENERALLY LACK THE SUBSTANTIAL TECHNICAL AND FINANCIAL RESOURCES NEEDED TO CHALLENGE WHOLLY GRANTED PATENTS OR DEFEND AGAINST INFRINGEMENT CLAIMS. IT IS VERY IMPORTANT FOR BRANDED PHARMA COMPANIES TO OBTAIN PATENT PROTECTION FOR THEIR PRODUCTS IN ORDER TO GAIN THE INVESTMENTS. THEREFORE IT IS WIDELY ACKNOWLEDGED THAT PATENTS ARE A FUNDAMENTAL INCENTIVE TO INNOVATIVE ACTIVITIES IN PHARMACEUTICALS AND BIOTECHNOLOGY INDUSTRY, HENCE IT NEEDS TO BE SAFEGUARDED.



2nd Prize- Parmar Nidhi and Mistry Arpit (5th Sem)

Plasma therapy in treatment of covid-19

What is plasma?

- Plasma' is the liquid component in the blood that carries antibodies, hormones and various nutrients across the body.
- Plasma is the plasma collected from people who were infected and have made a complete recovery; these people develop antibodies which are of vital importance.

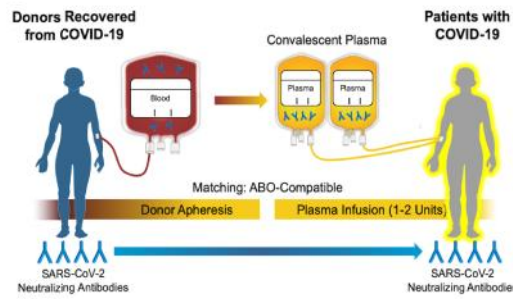


Illustration: David H. Sznach, MD

PLASMA COLLECTION STILL BEHIND DEMAND		
Many coronavirus survivors are coming forward to donate plasma	But plasma collection is still far below what is required	A Covid-19 survivor can donate around 600ml of plasma at a time
The person cannot give more than 1,200ML in a month	Plasma collected in the 5th week after recovery is the most effective	Taking advantage of the growing demand for plasma, an unscrupulous quarter is collecting convalescent and selling it for money
Experts say procedure charge for collecting plasma can be around Tk3,000, but many institutions are charging up to TK30,000		

How can you become a plasma donor?

- A donor must wait up to 14-28 days after full recovery before being approved to donate, the person must.
- Not have fever.
- Not have any respiratory difficulties.
- Have normal oxygen levels i.e. between 95 percent and 100 percent.
- Have overall good health.
- At the time of infection, a valid and official diagnostic test must be done to confirm SARS-COVID




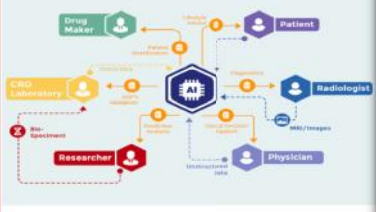
What are function of blood plasma?

- Antibodies once bound to the virus neutralize it.
- The antibodies activate the pathways and help to prevent further damage to cell.
- Plasma transfused from at least two donors provides diverse antibodies, thus delivering greater protection to the immune system

Interesting Facts About Plasma Therapy?

- In Therapy1918: It was used to treat HIN1 and influenza virus pandemic, popularly known as the Spanish flu.
- The World Health Organization (WHO) recommended the use of plasma therapy to treat Ebola patients in 2015.
- It was also recommended to treat the Middle East Respiratory Syndrome (MERS)

3rd Prize: Gaurav Patel and Raj Patel (3rd Sem)

 FASTER AND CHEAPER :ARTIFICIAL INTELLIGENCE IN DRUG RESEARCH AND DEVELOPMENT. 		
Represented And Guided By:-		
Gaurav .S.Patel {B – Pharm 3rd semester}	Raj .D. Patel {B – Pharm 3rd semester}	
<h3>Abstract</h3> <p>➤At present, the pharmaceutical industry is facing challenges in sustaining their drug development programmes because of increased in R & D costs and reduced efficiency.</p> <p>➤So we can have A.I. which uses the machine learning and other technologies like drug interactions, drug therapy monitoring and drug therapy formulary selection with medical diagnosis that are expected to make quicker, cheaper and more effective alternative for new drug approvals with fact of improving efficiency of the drug development process and collaboration of pharmaceutical industry giants with A.I. powered drug discovery firms.</p>	<h3>Proposed Methodology</h3> <p>In this flowchart using data evaluation improvisation is carried out in following ways:-</p> <ul style="list-style-type: none"> ➤ Development of internal handoff process. ➤ Use a combination of human data evaluation add machine learning automation with your data.  <p>Proposed Methodology Chart</p>	<h3>Study Area</h3>  <p>Sectors of Pharmacy where A.I. is being used</p>
<h3>Introduction to A.I. in Drug R & D.</h3> <p>➤A.I. in pharma refers to the use of automated algorithms to perform tasks which traditionally rely on human intelligence.</p> <p>➤The use of artificial intelligence, has redefined How scientist develop new drugs, tackle diseases and more.</p>	<h3>Literature Review</h3> <p>Alex zhavoronkov ,ceo of insilico</p> <p>Where it was decades of time consuming process for drug discovery and development.</p> <p>We can rely on A.I. You can really play pretty much every segment from early state of drug discovery where A.I. can Assist you with a Hypothesis model an essentially pulling out needles from haystack, with a target I.D, with small molecule identification, with virtual screening, with generation of novel molecules with specific properties, with planning your clinical trial design, with enrollment of clinical trial and also predicting the outcomes of clinical trials.</p>	<h3>Advantages</h3> <ul style="list-style-type: none"> ➤ Improving our understanding of diseases and uncovering new targets. ➤ Driving personalized medicine strategies ➤ Speeding the design and delivery of potential new medicine for patient.
<h3>Problem Definition</h3> <p>➤It use to take decades of time for the drugs discoveries and it's development before existence of A.I.</p>	<h3>Conclusion</h3> <p>A.I. technologies are in used today, most commonly in patient selection for studies and in data management. Use is increasing and expected to increase. future research will examine specific use cases and their effect on drug development, performance and efficiency as well as identifying areas of greatest value from the case examples.</p>	<h3>Disadvantages</h3> <ul style="list-style-type: none"> ➤ Any exceptional incompatibility of A.I. can't be predicted earlier.
<h3>Objective Of Study</h3> <p>➤ To find out the precise biological cause of diseases for identification of potential treatment; rather than traditional trials and error approach To find out the identification of hidden pattern in large volumes of data by employing A.I. in previous research of drug discovery. A.I. is going to lead to the optimum understanding of human biology and give us the means to fully address human diseases.</p>	<h3>Summary & Future work</h3> <p>➤ Goal of A.I. is to provide software that can input and output and it will provide human life interaction with software and offer decision, support for specific tasks, helping drug discovery by identifying drug targets find good molecules from data libraries, suggest chemical modifications, identify candidates for repurposing on.</p>	<h3>Reference Pages</h3> <p>Faggella D. [Application of A.I. and M.L. in Pharma And Medicine; 2019 https://emerj.com/ai-sectors-overviews/machine-learning-in-pharma-medicine/. Accessed 5th Feb 19.</p> <p>Cattell J, Chilukuri S, Levy M. https://www.expertsystem.com/A.I. and M.L. definition.</p>
<h3>Scope of Study</h3> <p>➤A.I. can be applied to the following goals and Subjects:-</p> <ul style="list-style-type: none"> •Genomics •Diseases understanding •Drug design and synthesis •Personalize Medicine •Imaging •Clinical Sector 		