International Conference on

Impact of Artificial Intelligence in Health care

(IAIHC-2020)

(February 21st-22nd, 2020)

Sponsored by

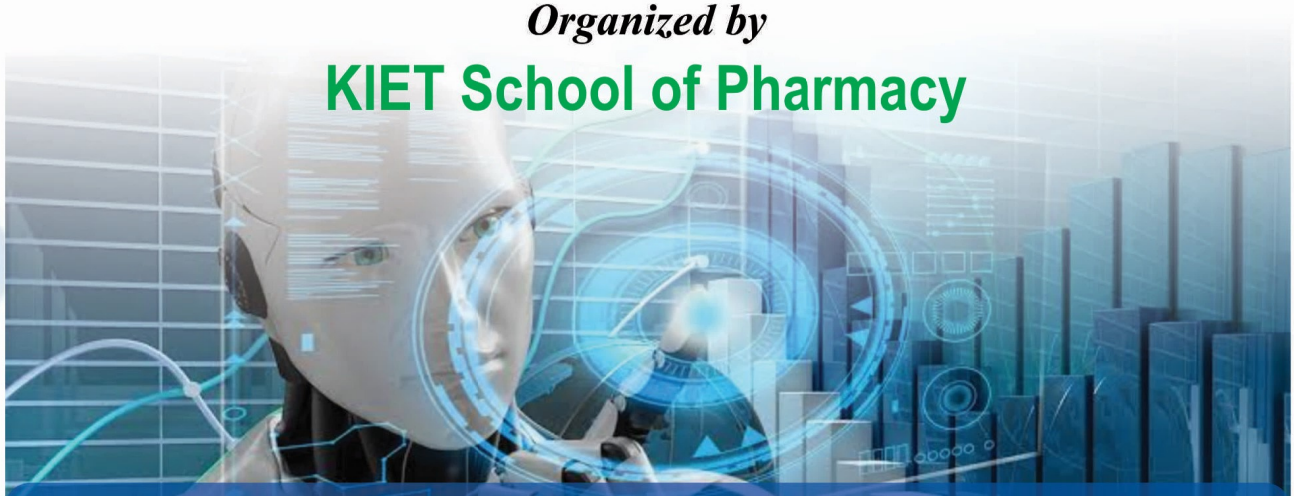
Dr. APJ Abdul Kalam Technical University, Lucknow

Department of Science & Technology Govt. of India

SERB-Department of Science and Technology (DST) Govt. of India

Organized by

KIET School of Pharmacy



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International Conference

On

Impact of Artificial Intelligence in Health care

(IAIHC-2020)

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Organized by

KIET School of Pharmacy, KIET Group of Institutions,

Delhi-NCR, Ghaziabad, India

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In association with

Indian Pharmacopoeia Commission

Indian Pharmacy Graduates' Association

Association of Pharmacy Teachers of India

UniversitiSains Malaysia

Indian Pharmaceutical Association

प्रो० विनय कुमार पाठक
कुलपति
Prof. Vinay Kumar Pathak
Vice-Chancellor

डॉ० ए०पी०जे० अब्दुल कलाम प्राविधिक विश्वविद्यालय
उत्तर प्रदेश, लखनऊ
Dr. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY
Uttar Pradesh, Lucknow

Dated: 14.02.2020

MESSAGE

It is the matter of great pleasure and happiness to see that KIET Group of Institutions, Delhi-NCR, India is organizing two days International Conference on "Impact of Artificial Intelligence in Health Care (IAIHC-2020)" on 21st and 22nd February 2020. Researchers from various countries are presenting their research on various aspects of application of Artificial Intelligence in health care. The conference will also touch upon recent developments and collaborative opportunities in the field of health care. The International Conference IAIHC-2020 is a platform for knowledge sharing, learning and plan future research projects. I feel KIET IAIHC-2020 will prove to be a milestone on this track.

At the end, I would like to wish you all a great success of IAIHC-2020.

(Prof. Vinay Kumar Pathak)
Vice Chancellor

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January 27, 2020

MESSAGE

I am pleased to note that the International Conference on Impact of Artificial Intelligence in Health Care (IAIHC - 2020) in association with IPC, IPGA, University Sains Malaysia, IPA and APTI sponsored by Science & Engineering Research Board-DST, and Dr. A. P.J. Abdul Kalam Technical University, Lucknow is being organized at KIET School of Pharmacy, Ghaziabad on 21st and 22nd February 2020.

I am sure that the IAIHC International Conference will provide a platform to create awareness and exposure, in the context of AI/ML, to the students/researchers and faculty members in healthcare sector from across the country and abroad. I would also like to take this opportunity to congratulate the organizers for taking such a great initiative to create awareness about Impact of Artificial Intelligence in Health Care.

I wish the Conference a great success.

Prof. Seyed E Hasnain

Message and Blessings

It is a moment of Pride for me to write for the Souvenir of International Conference on "**Impact of Artificial Intelligence in Health Care"** (IAIHC-2020) at KIET School of Pharmacy, Ghaziabad, India on 21st and 22nd February 2020. The Theme is so apt and relates to all the issues of Health Care.

The LOC is leaving no stone unturned and doing a commendable job headed by **Prof. (Dr.) Jagannath Sahoo.** Ghaziabad is situated enroute to the Holy City Haridwar with so many Dhams and Places of worship. The Delegates can visit many places of their interest.

KIET has a wonderful campus and can hold even bigger International Conferences.

Wishing the entire LOC Good Luck and Best Wishes

The APTI National front has being doing tremendously well for the Teachers welfare. It is standing on all fronts to make and job conditions for Teachers Comfortable. APTI with its awards motivate teachers, the Journals bring insight to their research instinct. Women Forum gives platform to the women to express better. There have been numerous Teachers Training Programme, Journal upgradations and sighting. New Insurance scheme for the benefit of teachers in need. Hosting of Indian Pharmaceutical Congress at Chitkara, near Chandigarh.

Let us join hands to unite further and make teachers a still bigger healthy family so that none can harm any of our family members who are contributing extensively as role models for various students.

Kudos and Appreciations to the LOC

Thanking you and Regards,

Dr. Raman Dang,
Secretary
Association of Pharmacy Teachers of India

It is indeed a Red Letter Day for us here at KIET Group of Institutions when KIET School of Pharmacy is organizing International Conference on **"Impact of Artificial Intelligence on Health Care"** on 21st and 22nd Feb, 2020 in association with SERB-DST, Indian Pharmacopoeia Commission, IPA, APTI, IPGA and AKTU, Lucknow which is one of the emergent needs of the world and needs to be addressed comprehensively.

The future lies in the multidisciplinary research and development and thus, I firmly believe that this conference will propel the contributors and attendees towards meaningful insights in the realms of pharmacy and Artificial Intelligence which are the two of the major thrust areas of the world.

We at KIET Group of Institutions always strive to produce quality research and provide a strong base for the generations to come, whatever we do is just a drop in the ocean for us and we believe in the gospel ***"the best is yet to come"***.

Without any second thought the organizing committee of this event deserves commendation and I take pride in vouching the fact that KIET Group of Institutions is a very strong pool of skilled academicians and dexterous researchers.

I once again eulogize all the key members and offer a warm welcome to all the delegates to KIET Group of Institutions for this two day International Conference.

Good luck to you all!

Dr. (Col.) A Garg
Director
KIET Group of Institutions,
Delhi-NCR, Ghaziabad
India

Conferences help attendees to do better research, to find and understand new ideas effectively, and to disseminate their own research in an innovative manner because alone we survive and together we grow. That are what conferences can provide, and I must say it's an initiative of great significance by the KIET School of Pharmacy holding International Conference on "Impact of Artificial Intelligence in Health Care (IAIHC-2020)" sponsored by SERB-DST and Dr. A. P. J. Abdul Kalam Technical University on 21st and 22nd February 2020. The event shall help to knowledge sharing, exchange the ideas, and identify the inadequacies and plan collaborative work.

Artificial Intelligence (AI) has already arrived in healthcare and the pace of development in the commercial sector has outstripped progress by traditional healthcare providers. The only reasonable way to ensure that the benefits are maximized with minimum risks is by active participation in the development of technology. IAIHC-2020 will provide a platform for use of AI to prevent and solve healthcare problems and to improve the health of human race.

I am highly indebted to ever-encouraging KIET Group of Institutions-Management, my diligent faculty and insightful students for their co-operation in creating this opportunity. The International Conference will be helpful to motivate and benefit everyone. I wish all the success for IAIHC-2020.

Dr. Manoj Goel
Joint Director
KIET Group of Institutions,
Delhi-NCR, Ghaziabad
India

Dear Delegates,

Welcome to the City of Commerce, Finance, Culture, Art, Fashion, Research, Education, Entertainment and Gateway of UP - Ghaziabad. On behalf of KIET School of Pharmacy, KIET Group of Institutions and as Convener of the International Conference on "Impact of Artificial Intelligence on Health Care" on 21st and 22nd Feb 2020 in association with SERB-DST, Indian Pharmacopoeia Commission, IPA, APTI, IPGA and AKTU, Lucknow. I would like to express my sincerest thanks to all guests and delegates in the wonderful and enlightening program.

Delegates, being experts in their fields, shall contribute to debate and discussion along with our impressive array of speakers. This Conference will deal with future perspectives of Artificial Intelligence in Health Care. Every Individual shall be able to understand the contribution towards Family, Society, State, Country and Earth through Science and Technology. I hope new paths will be found out for Industrialist, Teachers, Students and Researchers to contribute more and more to the sustainable development of the Country. The activities are meticulously planned to ensure the practical applications of the shared knowledge.

I congratulate all my Faculty, Staff, Students and Participants from our Institute and other Institutions for making this conference successful and meaningful.

I am very thankful to SERB-DST, Indian Pharmacopoeia Commission, IPA, APTI, IPGA and AKTU for their association with us for making the conference fruitful and meaningful.

"**Impact of Artificial Intelligence on Health Care**" looks more realistic.

I wish the participants a pleasant environment and successful Conference.

Prof. (Dr.) Jagannath Sahoo
Convener

On behalf of organizing committee of International Conference on Impact of Artificial Intelligence in Healthcare Sector (IAIHC 2020), I extend warm welcome to our keynote speakers, delegates, paper presenters and the participants of this conference. It is indeed the dream coming true for many of us to have revered personalities from the field of Artificial Intelligence amongst us and to listen to them for their vision about the ever dynamic world of AI in healthcare sector. The presence of dignitaries on the dais during the two-day international conference will be a testimony to our sincere pursuits to achieve nothing less than the 'best', who have long trails of success behind them.

The conference theme “Impact of Artificial Intelligence in Healthcare Sector” aims to create the platform for discussions that provide insights into the abounding opportunities which the healthcare world can leverage to effect the change that not just ensure technology advancement, but the wellbeing of people, and mankind in whole.

I seek your support and good wishes for this two-day international conference to be a grand success. I thank SERB, AKTU and our sponsors for their financial support in the organizing of this conference.

Warm Regards

Dr. Mandeep Kumar Arora
Organizing Secretary
IAIHC 2020

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We Thank

For the support to the Conference

ABOUT THE CONFERENCE

IAIHC-2020

Our main objective is to create an awareness and exposure on the recent thrust area of Artificial intelligence for various developments in healthcare sector, so as to enable the participants to focus themselves in accelerating the research in our country as par with global trends with reduced cost and benefit for the Indian Society.

The title of two days International Conference is "Impact of Artificial Intelligence in Health care" (IAIHC), which clearly emphasize the impact of message carrying the utility of artificial intelligence in health care sector.

As the Industrial revolution enormously enhances in medical health care sector, the thrust is focused in developing polymeric biomaterials as tissue transplants/ artificial organs, several SVM algorithms and neural networks for designing and discovering new drugs for various diseases, 3D printing for formulation and development of new drugs.

This International Conference aims to really awaken the faculty's mind in creating a spark to carry out their research in this area. Apart from this, they shall learn the recent knowledge of the topic, which will surely make a benefit for their students in understanding the latest advancements taking place in health care sector. Faculty in different disciplines will come to a common platform in making a collaborative research, which will surely bring the new products in market sooner or later. The expected outcome of this conference will be:

1. Gaining of knowledge and exposure in the current thrust area of artificial intelligence in health sector

2. Open a new avenue of research to carry out by the students and faculty who are going to participate in the conference.

3. Wide scope to enter the health care pharmaceutical industry by the participants.

4. Upon successful research work in the area, design patents and core patents are possible by the participants. In addition, publications are also possible.

ABOUT THE HOST

KIET Group of Institutions, Delhi-NCR, Ghaziabad

KIET Group of Institutions was founded and established in the year 1998 by "Krishna Charitable Society" at Ghaziabad. It has been contributing technical knowledge in all the branches of Engineering, Computer Applications, Pharmacy, MBA, MCA and M. Pharm degree since last nineteen years. Witnessing the indelible development, it has been honored with ISO9001-2008 certification and NAAC accreditation with 'A' Grade for five years for its versatile faculty and high placement. Laboratories are recognized as SIRO by Department of Scientific and Industrial Research DSIR.

KIET School of Pharmacy

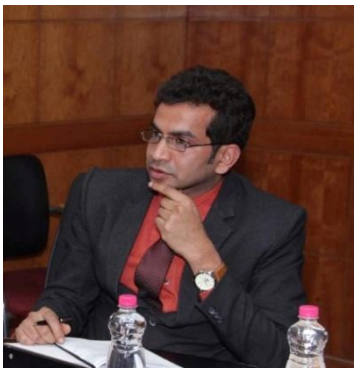
KIET School of Pharmacy (KSOP) Ghaziabad was established by Krishna Charitable Society in 2005, realizing the prospects and potential of the course in the emerging scenario of the Global Pharmaceutical Industry and education. KIET School of Pharmacy is located on Delhi - Meerut Highway NH-58 near Ghaziabad, which is well connected by Air, road and rail. KIET School of Pharmacy is a premier institute in the state of Uttar Pradesh accredited by NAAC with grade "A" and B. Pharm is accredited by NBA. KIET School of Pharmacy is offering B. Pharm, M. Pharm in Pharmaceutics, Pharmacology and Quality Assurance affiliated by Pharmacy Council of India and AICTE.

IAIHC-2020

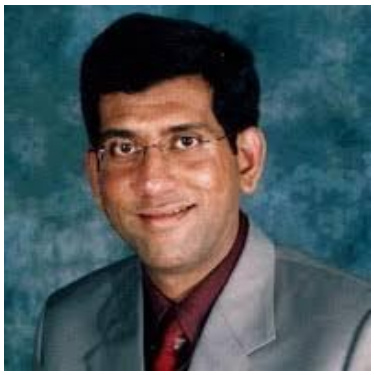
INVITED TALKS

Dr. Atul Nasa
President, Indian Pharmacy Graduates' Association, India

Dr. Mohd. Shahid
Department of Pharmacology, College of Pharmacy Chicago State University, Chicago, U.S.A.



Dr. V. Kalaiselvan
Principal Scientific Officer, Indian Pharmacopoeia Commission, India



Dr.Indranil Nandi
Jubilant Pharma Limited, USA

Dr. Manish Gaur
Medtronic Inc.

Dr. Indu
Council for Scientific and Industrial Research, Kerala, India

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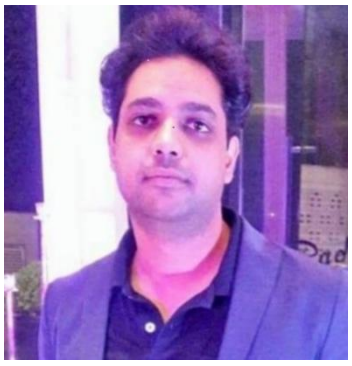
INVITED TALKS

Dr. Aseem Sahu
Deputy Drugs Controller (India)
CDSCO

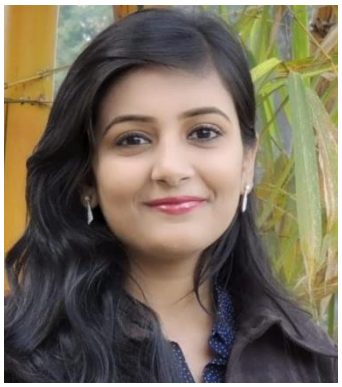
Dr. G.V.R. Joseph
Assistant Director,
Ministry of Ayush,
Government of India

Dr. Anil Deshantri
Sun Pharma, Vadodara,
India



Dr. Ajay Kumar Sharma
Manager, Pharmacovigilance,
Pharmalex India private limited,
New Delhi, India

Er. Abhishek Pathak
Artificial Intelligence, Cananda



Dr. Shipra Shukla
Amity University,
Noida, India

IAIHC-2020

ORAL PAPER PRESENTATIONS

S.No.	AUTHOR	TITLE OF PAPER	Abstract no.
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2	Akash Sharma	*Adiantum caudatum*: A Detailed Review to Propose Anticancer Activity	IAIHC-002
3	Alankar Shrivastava	Various Types of Quality Audits in Pharmaceutical Industry	IAIHC-003
4	Amit Ojha	Artificial Intelligence: Emerging Technology in Healthcare	IAIHC-004
5	Amrita Mathur	Comparative Study Between Natural Super Disintegrant And Synthetic Super Disintegrant in the Formulation of Immediate Release Tablet of Fenofibrate	IAIHC-005
6	Anchal Garg	Emerging Role of Artificial Intelligence in Alzhiemer's Disease	IAIHC-006
7	Anisha Ratra	Plumbagin Alleviates Intracerebroventricular-Quinolinic Acid Induced Depression-Like Behaviour and Memory Deficits in Wistar Rats	IAIHC-007
8	Anjali	Anti-Inflammatory and Anti-Arthritic Activity of Chloroform and Ethanolic Extract of *Punicagranatum*	IAIHC-008
9	Anuj Sharma	Artificial Intelligence-Healthcare, Current Trends and Future	IAIHC-009
10	Arun Kumar	Synthesis and Biological Evaluation of Some alkyl amino Acid Ester Derivatives of Gallic Acid	IAIHC-010
11	Ashish	Assessment of Anti-Inflammatory and Anti-Arthritic Potential of *Justicia gendarussa* Leaf and Stem in FCA Induced Arthritis in Wistar Rats	IAIHC-011
12	Deepak Kumar	Forecast in Pharmaceutical Industry Using Artificial Intelligence, Current & Future Aspects	IAIHC-012
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14	Deepti Seth	Modeling And Analysis of Drug Transport in The Posterior Segment in The Eye	IAIHC-014
15	DevleenaTiglani	Medicines & AI: Advancement in Drug Discovery	IAIHC-015
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17	Harshit Takru	Antioxidant Effect of Alcoholic and Hydro-Alcoholic Extract of *Terminalia arjuna*&*Syzygiumcumini.*	IAIHC-017
18	Kajal Panchal	*Matricaria chamomilla* (Chamomile) As an Antidepressant Agent: A Reveiw	IAIHC-018
19	Kajol Verma	RP-HPLC Method Development and Validation of Anti-Hypertensive Drugs	IAIHC-019
20	Kapil Kumar	Antioxidant Effect of Alcoholic and Hydro-Alcoholic Extract of *Tinosporacordifolia*&*Juglans regia*	IAIHC-020
21	Kartik Sharma	Excipient Functionality: Regulatory Aspects and Pharmacopoeial Disharmony	IAIHC-021
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23	Khalil Khan	Artificial Intelligence in Health Care System	IAIHC-023
24	Kiran Sharma	Development and Method Validation of Orlistat By UV-Visible Spectrophotometric Method for Its Quantitative Determination In Bulk Drug And Pharmaceutical Formulations	IAIHC-024
25	Km. Vaishali Rastogi	Reinforcement Learning Instructions and Algorithm: A Survey and Classification	IAIHC-025
26	Krishan Kumar Bhardwaj	Perspective, Perceptions and Promulgation of Biosimilars: A Questionnaire Based Study to Assess and Understand The Current Challenges Of Biosimilars To The Potential And Intended Users	IAIHC-026
27	Krishan Kumar Bhardwaj	Terror Of 10 Mb, A Cross Sectional Study Investigate the Regulation Versus the Prospective of Medical Device	IAIHC-027
28	Lucy Mohapatra	Is Artificial Intelligence Renovating Pharmacovigilance?	IAIHC-028
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39	Neha	Evaluation of Reproductive Outcomes After Exposure to Light and Traffic Noise In Rats	IAIHC-039
40	Pallavi Pal	Review on Management of Gout Using *Boswellaserratia* Gel	IAIHC-040
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IAIHC-001

Current Status of Artificial Intelligence in Eye Care

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Abstract

While population ageing has become a huge demographic phenomenon all over the globe, patients with eye problems are expected to rise drastically. Early treatment and effective eye disease care are of great importance to avoid vision loss and improve the quality of life. Traditional methods of diagnosis rely heavily on the clinical experience and expertise of physician's resulting in high error rates. An important area in computer science is Artificial intelligence (AI).AI has an extensive implementation across many medical sectors and is useful especially in ophthalmology and therapy for several eye defects such as Corneal ectasias ,Glaucoma, Macular degeneration related to age, Diabetic retinopathy ,Cataract surgery, prediction of future high myopia and estimation of lens strength or intraocular disease. Therefore, the AI has the ability to radically change the current pattern of diagnosis of disease and generate a substantial clinical impact. U.S. Food and Drug Administration had approved the first advanced A.I diagnostic tool "IDX-DR" to diagnose Diabetic Macular Oedema and in the meantime, low-cost fundus camera based on smartphones such as DIYretcam, T3retcam was also created for imaging analysis. The article discusses how A.I approaches can deal with these complications and illnesses.

Keywords: Cataract surgery; Diabetic retinopathy; Diagnostic methods; Fundus camera; Glaucoma

IAIHC-002

Adiantum caudatum: A Detailed Review to Propose Anticancer Activity

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Abstract

Cancer is an upshot chain of molecular episodes which changes the basal properties of cells. In these types ofcells, the central regulating systems that avert the overgrowth of cellsas well as disable the onslaught of other tissues. One of the preponderance human malignancies across the world is Hepatocellular carcinoma. It obeys low prognostication due to this diagnosis isgenerally performedat advanced stage.Utilization of natural product as anticancer agent has a long history and oncologists suggest that in modern era the compounds derived from natural sources may have remarkable therapeutic activity. The Polypodiopsida plants which are flowerless, seedless and duplication, takes place through spores are referred as Ferns. From the Genus of fern, Adiantum comes out with the great therapeutic useas per traditional systems to modern scientific researches.Adiantum caudatum is located mainly in the moist hilly areas of south-east countries. As classical medicine, it is used in treatment of cold and cough,jaundice, natural antibiotic, diarrhea, diabetes. The Methanolic and hexanoic extracts of A.caudatum consist of mostly phenolics,8α-hydroxyfernan-25, 7β-olide, 3α-hydroxy-4α-methoxyfilicaneand 19α-hydroxyferna-7, 9 (11)-diene are the three terpenoids, β-Sitosterol which is a steroid, Saponin and flavonoids which are the essential for reducing the free radicals generated. Researchers concluded that A. Caudatum possess anti-inflammatory, analgesic, antinociceptive activityand are cytotoxic to cancer cells.Future aspects for this genus of fern are to propose the mechanism at the molecular level with respect to the other therapeutic properties related to oncology.

Keywords: Hepatocellular carcinoma; Fern; *Adiantum caudatum*.

IAIHC-003

Various Types of Quality Audits in Pharmaceutical Industry

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Abstract

Auditing is one of the essential function in pharmaceutical industries. It is one of the essential part of Quality Management System. Quality audits are generally executed by external or independent experts or any team designated by management. Audits can also be performed for suppliers and contractors also. A well-executed quality audit results in overall improvement of the process and ultimate beneficial for the organization in many ways. The weakness and strengths of the process and quality assurance of any procedure can be easily understood by quality audits. This may be the reason that quality audits comprise important part of GMP system not only for the improvement of the internal procedure but also to comply with regulatory authorities. This article includes principle, objectives, various types of quality audits and preparation of audit reports in pharmaceutical industry. The presented review is not only beneficial for academicians but also to the personnel involved directly or indirectly related to audits in pharmaceutical industry.

Keywords: Quality audits; Pharmaceutical industry; Types of Quality audits; GMP; Quality assurance; Quality defects

IAIHC-004

Artificial Intelligence: Emerging Technology in Healthcare

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Abstract
Artificial intelligence (AI) is defined as the intelligence of machines, as opposed to the intelligence of humans or other living species. AI can also be defined as the study of "intelligent agents"- that is, any agent or device that can perceive and understand its surroundings and accordingly take appropriate action to maximize its chances of achieving its objectives.Neural networks and genetic algorithms are two of the technologies associated with the rapidly emerging field of knowledge discovery in databases (KDD) and data mining. Whereas knowledge discovery is defined as: 'The non-trivial process of identifying valid, novel, potentially useful and ultimately understandable patterns in data'18, data mining, on the other hand, refers to the application of algorithms for extracting patterns from data. Today's approaches to machine learning are near to real world conditions. Due to the rapid technological advancements, tasks previously limited to humans will be taken on by algorithms. The ability of machine learning to transform data into insight will affect the field of medicine, displacing much of the work of radiologists and anatomical pathologists. Artificial intelligence (AI) increases learning capacity and provides decision support system at scales that are transforming the future of health care. Artificial intelligence has been implemented in disease diagnosis and prognosis, treatment optimization and outcome prediction, drug development, and public health. Technological advances require collecting and sharing the massive amount of data and thus generate concerns about privacy.

Keywords: Artificial intelligence (AI); Integrated health care systems; Machine learning; Medical informatics; Precision medicine

IAIHC-005

Comparative Study between Natural Super Disintegrant&Synthetic Super Disintegrant in the Formulation of Immediate Release Tablet of Fenofibrate

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Abstract
Several dosage forms had been developed so as to release the drug immediately after administration and drug will slowly or incompletely dissolve in gastrointestinal tract. BCS classify, Fenofibrate under Class II (Solubility low and Permeability high). Fenofibrate is a drug used to lower the lipids which is difficult to solubilize in water. It is found that the rate of dissolution and bioavailability is less. Hence, the drug is formulated using different Super disintegrant such as Locust Bean Gum (Natural), Croscarmellose Sodium and Sodium Starch Glycolate (Synthetic) in addition to increase the release rate of drug from dosage so as to raise thesolubility, oral usage rate and dissolution. The evaluation based on physiochemical substances and invitro dissolution examination was operated for the planned granules and tablets. It was observed that using the Locust Bean Gum, immediate release tablets with proper hardness, disintegration time and increased dissolution percentage can be formulated.

Keywords: Anti-hyperlipidaemic; Croscarmellose Sodium; Locust bean gum; Fenofibrate

IAIHC-006

Emerging Role of Artificial Intelligence in Alzheimer's Disease

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Abstract
Alzheimer's Disease a neurodegenerative disorder refers to a particular onset and course of cognitive and functional declineassociated with alteration in particular neuropathology. Among all causes of dementia, AD is the considered as most common cause of dementia. Pathophysiology of AD seems to be very complex. But, abnormality in amyloid precursor protein (APP) cleavage and over production of the APP fragment beta-amyloid (Aβ) along with hyperphosphorylated tau protein aggregation are majorly responsible to induce reduction in synaptic strength, synaptic loss, and neurodegeneration.
Earlier diagnosis plays a crucial role in ensuring the effective treatment of an individuals in a timely manner to halt the further disease progression. However, major challenge in diagnosis is that cognitive symptoms are absent in the preclinical or earlier stage and progressive amyloid deposition could drive the patient toward prodromal AD stage.
Artificial intelligence using machine learning based algorithms has been introduced for diagnosis, prevention, monitoring, developing of new protocols for AD as well as associated risk factors. AIinvolves computer systems that perform tasks that require particular inputs. AI is an emerging field not only in developing the complex software's/data storage in the field of engineering but also play a crucial role in the management of complex disorders by providing the facility to early diagnosis, patient database for effective management of AD. It's an utmost necessity to understand the basic and allied concept of AI in health care. Thereby, purpose of this paper is to provide information about the relevant aspects of AI, i.e., machine learning, and deep learning, in order to elucidate how machine learning can revolutionize the management of AD.

Keywords: Alzheimer's disease; Artificial intelligence;Diagnostic procedure; Machine learning

IAIHC-007

Plumbagin Alleviates Intracerebroventricular-Quinolinic Acid Induced Depression-Like Behavior and Memory Deficits in Wistar Rats

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Abstract
Plumbagin (5-hydroxy-2-methyl-1,4-naphthoquinone) is a natural yellow pigment extracted from plants belonging to the family Plumbaginaceae. The compound has been found to demonstrate immunological, anti-microbial, anti-carcinogenic and anti-microbial activities. The purpose of this study is to examine the impact of plumbagin on quinolinic acid-induced Neurobehavioral changes. Intracerebroventricular (ICV) quinolinic acid (300nM/4µlin Normal saline) was administered on day 0 to induce depression like behavior and memory deficits in Wistar rats weighing 200-250g. Plumbagin (10 and 20 mg/kg; p.o.) was administered for a period of 21 days in order to evaluate the results. Plumbagin ameliorated depression-like behavior in rats as evident from the result of forced swim test (decreased immobility time) and tail suspension tests (reduced immobility time). Additionally, Plumbagin improved the anxiety-like behavior as revealed by the open field test and elevated plus maze results. As shown by sucrose preference test,Plumbagin also found toreduceanhedonia behavior.In conclusion, our finding shows that plumbagin is a potent anti-depressant and anti-anxiety agentagainst ICV quinolinic acid. Plumbagin could be a possible therapeutic implication for anxiety and depressiveillness.

Keywords: Plumbagin; Quinolinic acid; Neurobehavioral changes; Forced swim test; Intracerebroventricular

IAIHC-008

Anti-Inflammatory and Anti-Arthritic Activity ofChloroform and Ethanolic Extract of *Punicagranatum* Linn

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Abstract
The study was performed to determine the anti-inflammatory and anti-arthritic action of Punicagranatum's seed extract using in vitro models as well as their phytochemical analysis. Punicagranatum's seeds were extracted with ethanol and chloroform solvent and by using HRBC membrane stabilization method and protein denaturation inhibition test in-vitro anti-inflammatory potential was evaluated significantly. The results of the study demonstrate that the Punicagranatumextracts contain various active constituents having anti-inflammatory activity and HRBC (Human red blood cell) membrane stabilization. Thus, the protein denaturation inhibition method and HRBC membrane stabilization assay showed the significant concentration/dose dependent activity. The result is compared with the reference drug Diclofenac sodium. The present study examined that the ethanolic and chloroform extract of Punicagranatum seed as anti-inflammatory potential due to presence of alkaloids, gallic and ellagic acids, steroids, tannins, terpenoid etc. and has given a pharmacological evidence for the use of *Punicagranatum*as an anti-inflammatory agent.

Keywords: *Punicagranatum*; Anti-inflammatory activity; HRBC membrane stabilization method; Protein denaturation inhibition method

IAIHC-009

Artificial Intelligence-Healthcare, Current Trends and Future

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Abstract
AI the term broadly refers to computing technologies that resemble processes associated with human intelligence, such as reasoning, learning and adaptation, sensory understanding, and interaction. There is no universally agreed definition of AI. AI address to imitate the human intellectual functions. It is bringing a standard to healthcare sector, co-powered by increasing availability of healthcare data and momentum of analytics techniques. We present the current situation of AI applications in public healthcare and discuss its future. AI can be applied to various types of healthcare data for both analytical and non-analytical areas. AI is being trialled for a range of healthcare research purposes, such as detection of disease, management of chronic conditions, delivery of health services, and drug discovery. AI include the various techniques such as machine learning methods used for structured data, modern deep learning, and the classical support vector machine and neural network, and the as well as natural language processing for unstructured data. Cancer, cardiology, and nerve system they are major disease areas where AI tools are used. This full paper presents a review on details of the AI application in early detection and diagnosis, treatment, as well as conclusion prediction and evaluation. We wind up with the correlationof AI systems, such as IBM Watson, and hurdles for real-life deployment of AI.

Key words: Artificial Intelligence, analytics techniques, healthcare- research, Prediction- prognosis evaluation, sensory understanding.

IAIHC-010

Synthesis&Biological Evaluation of someAlkylAmino Acid Ester derivatives of Gallic Acid

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Abstract
Gallic acid (3,4,5- trihydroxy benzoicacid) is a natural product with versatile therapeutic potential. This phenolic acid is found in the gull nuts, oakbark, tealeave, sumac and other plants. Numerous gallic acid derivatives have been known to possess anti-carcinogenic, anti-oxidant, anti-microbial, anti-mutagenic, anti-angiogenic and anti-inflammatory properties. The present study is an attempt to exploit the therapeutic potential of gallic acid by synthesizing substituted gallic acid alkyl amino acid ester derivatives and subsequent evaluation of their biological activity employing established methods. Alkyl (methyl, ethyl, propyl, isopropyl, butyl) esters of phenylalanine, glycine and leucin have been attempted. Spectro-analytical techniques have been employed to establish the purity and the structural features of the synthesized compounds. Results have been discussed to indicated the antimicrobial potential of gallic acid and its derivatives and to highlight the obvious advantages of incorporating alkyl amino acid esters.

Keywords: Alkyl amino acid esters; Therapeutic potential; Anti-carcinogenic; Anti-microbial Anti-oxidant; Anti-cancer

IAIHC-011

Assessment of Anti-Inflammatory&Anti-Arthritic Potential of*Justicia gendarussa* Leaf&stem in FCA Induced Arthritis in Wistar Rats

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Abstract
Justicia gendarussa Burm f. (family Acanthaceae) is also known as willow-leaves in English and commonly also known as Nili-Nirgundi, it is native to china and also very commonly found throughout the vastly part of India and Andaman Islands. It is traditionally used to treat various diseases such as wound healing, anti-inflammatory, anti-oxidant, anti-proliferative, anti-arthritic etc.The basic focus of this study is to find-out the anti-inflammatory potential of ethanolic and chloroform extract of leaf and stem part of Justicia gendarussa by using protein denaturation method and (HRBC) human red blood cell membrane stabilization method.

Keywords: Anti-inflammatory; Justicia gendarussa; Acanthaceae; HRBC; Protein denaturation

IAIHC-012

Forecast in Pharmaceutical Industry Using Artificial Intelligence, Current and Future Aspects

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Abstract
"Forecasting" The term broadly refers to the process of prediction as per the customer's demand based on the huge historical sales data in the pharmaceutics industry. The aim of forecasting help to understand the market value and enable to predict the optimum level of customer demands. There by business management facilitate to augment the future requirements from the previous sales quantity documents by considering both major and minor factors in broad spectrum. This full-length Paper discuss the details of marketing, new product launch and specialized aspects such as orphans and bio-similar drugs. Artificial intelligence (AI) plays a strategic role to forecast the probable market requirements in advance for the industry and prepares to face future challenges. Forecasting could be multi directional, application based on various approaches of pharmaceutical industry such as Artificial neural network topology (ANN), Adaptive Network Based Fuzzy Inference System (ANFIS) which can be applied as a neuro fuzzy approach and proposed model approaches. This paper presents a detailed account on the key role of AI pertaining to the techniques that help pharmaceutical industry supported by applications, illustrates, effectiveness and approach.

Keywords: Artificial intelligence; Artificial neural network topology; Business management; Forecasting techniques; Pharmaceutical industry

IAIHC-013

Herbal Approach Towards the Treatment of Amyotrophic Lateral Sclerosis (ALS)

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Abstract
Amyotrophic Lateral Sclerosis (ALS) is a neurodegenerative state that affects the motor neurons of a person. The clinical symptoms of this condition include weakness, muscle wasting and spasticity. As claimed by National Institute of Neurological Disorders and Stroke (NINDS), patients suffering from ALS slowly feel paralysis which frequently leads to death from respiratory failure within 3-5 years. Numerous studies have indicated that ALS is correlated to oxidative stress, autoimmune response, neuroinflammation, chronic viral infections, calcium toxicity and excitotoxicity. Till date, Riluzole is the only US Food and Drug Administration approved therapeutic preparation which is slightly beneficial for ALS. However, there are no evidences to prove that the formulation can improve the muscular force, motor function or alter the patient's pulmonary capacity. Above all, the treatment through this product is very expensive.Thus, the researchers are no opting for phytomedicines which encourage the body to restore by itself and maintain its internal balance. Several phytoconstituents like madecassoside (*Centella asiatica*), diallyl trisulphide (*Allium sativum*), epigallocatechin gallate (Green tea), picroside-II (*Picrrorhiae rhizoma*), ampelopsin (*Ampelopsis grossedenteta*), astagaloside IV (*Radix astrgali*) and Morroniside (*Cronus officinalis*) are useful against oxidative stress. B-asarone (*Acorus tatarinowii*), selaginellin (*Saussurea pulvinata*), catalpol (*Rehmannia glutinosa*), huperzine-A (*Huperia serrata*) and cryptotanshinone (*Salvia miltiorrhiza*) are few of the phytomedicines which are effective against excitatory amino acid toxicity. Others such as resveratrol (*Veratrum nigrum*), curcumin (*Curcuma longa*), celastrol (*Tripteryguine wilfordii*), isorhychnophylline (*Uncaria rhynchophylla*) and obovatol (*Magnolia officinalis*) are beneficial against neuroinflammation. Few of the herbal compounds which are effective against calcium cytotoxicity are

lingustrazine (*Rhioma chuanxiong*), paeniflorin (*Paeoniae radix*) and gastrodin (*Gastrodia elata*).The above phytoconstituents individually or in combination can be explored for their use in treatment of ALS.

Keywords: Amyotrophic Lateral Sclerosis (ALS); Neurodegenerative; Phytomedicine

IAIHC-014
Modelingand Analysis of Drug Transport in The Posterior Segment in The Eye

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Abstract
Several vitroretinal diseases such as cytomegalovirus retinitis, age- related macular degeneration (AMD), retinitis pigmentosa (R.P), diabetic retinopathy and a combination of similar retinal diseases are currently being treated by using drug intravitreal injection or control release implant of drugs. The diffusion of drug, convection of vitreous outflow, enzymatic reaction (metabolism),drug binding and efficacy of delivery system mainly control the bioavailability of drug afterits intravitreal injection and controlled release implant. Many drugs used to treat vitreoretinal diseases have a narrow concentration range in which they are effective and may be toxic at higher concentrations. Therefore, it is critical to know the drug distribution within the vitreous following delivery by intravitreal injection or controlled release implant. The ability to predict drug distribution can maximize the therapeutic benefits and minimize potential adverse effect such as possible tissue damage caused by excessively high concentrations of drug. A mathematical analysis of the drug concentration and theoretical investigation of the effects of physiological parameters on the concentration may elucidate the mechanism of drug transport in the vitreous and may contribute to the improvement of present understanding of the bioavailability of drugs required for the treatment of vitroretinal diseases.

IAIHC-015
Medicines & AI:Advancement in Drug Discovery

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Abstract
Artificial intelligence (AI) is the term used to describe the use of computers and technology to simulate intelligent behavior and critical thinking comparable to a human being. Artificial intelligence (AI), deep learning, machine learning and neural networks represent incredibly exciting and powerful machine learning-based techniques used to solve many real-world problems. AI has the potential to significantly transform the role of the doctor and revolutionise the practice of medicine. The healthcare industry is evolving rapidly with large volumes of data and increasing challenges in cost and patient outcomes. With the repeated evolution in medical field with different techniques like genetic engineering, nanotechnology, regenerative medicines, immunotherapy etc.AI in medicine can be dichotomized into two subtypes: Virtual (Computerized) and physical (Operating). In recent days, this artificial intelligence is very applicable in many fields like diagnosis of diseases with their severity in the patients, personalize treatment, drug discovery and gene editing. In this presentation, we are trying to learn about the recent advancement in AI along with the detailed description of their involvement in the drug research activities.

Keywords: AI; Drug research; Virtual

IAIHC-016
Quality by Design (QBD) And Multifunctional Excipients: A Novel Head-Bridge for the Research &Formulation Development

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Abstract
The pharmaceutical industry demands innovation in short period of time so as to gain access to new products in market and has undergone a paradigm shift from traditional quality by testing (QbT) to the systematic quality by design (QbD) approach for attaining efficient development of drug products with enhanced quality and resource economics. Pharmaceutical formulators are demanding more performance and functionality from pharmaceutical excipients. Basically, formulation development is nothing but playing with different additives of formulation. QbD and multifunctional excipients give patients a more effective and safe formulation. We play a critical role in ensuring reliability, efficacy, cost reduction, increasing production performance and helping to deliver a stable dosage type that is unaffected by process parameter variations or other ingredients. The need of the day is to improve drug formulations by reducing the investment in number of excipients. Implementing QbD and using multifunctional excipients have become a widely applicable production technique and go far beyond the pharmaceutical industry. This work approaches to give a insight to researchers that how working with multifunctional excipients and following QbD methodology beneficial, safe and effective formulation

Keywords: Quality by Design (QbD); Multifunctionality of excipients

IAIHC-017

Antioxidant Effect of Alcoholic and Hydro-Alcoholic Extract of *Terminalia arjuna* &*Syzygiumcumini*

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Abstract
The objective of the present analysis was to evaluate the antioxidant effect of Alcoholic and Hydro-Alcoholicextract to*Terminalia arjuna*&*Syzygiumcumini*. An Ash value of the drug gave the organic composition or the earthy matter and other impurities with the drug. Both *Terminalia arjuna* and *Syzygiumcumini* plants extracts showed the presence tannins, phenolics, alkaloids, amino acids & proteins, saponins and flavonoids. The maximal activity of Standard (Ascorbic acid) against DPPH is 95.94% as shown in Table 4. IC50 has found to be 1.56 µg/ml in Figure 1. The maximal activity of Alcoholic extract of *Terminalia arjuna* against DPPH is 85.96% and IC50 has found to be 20.05 µg/ml in Figure 2. The maximal activity of Hydroalcoholic extract of *Terminalia arjuna* against DPPH is 90.63% and IC50 value has found to be 55.39 µg/ml in Figure 3. The maximal activity of Alcoholic extract of *Syzygiumcumini* against DPPH is 88.86% and IC50 values has found to be 24.39 µ/ml in Figure 4. The maximal activity of Hydroalcoholic extract of *Syzygiumcumini* against DPPH is 90.37% and IC50 value has found to be 33.05 µg/ml in Figure 5 respectively.From the above study it can be evaluated that the high content of phytochemicals which are known to exhibit medicinal as well as physiological activities in *Terminalia arjuna* and *Syzygium cumini* (Alcoholic and Hydro-alcoholic) can explain its antioxidant activity.

IAIHC-018

Matricariachamomilla (Chamomile) as an Antidepressant Agent: A Review

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Abstract
Depression is a serious mood disorder with symptoms that range from mild to debilitating and potentially life threatening. People manage depression with herbal remedies rather than allopathy. Clinical studies investigating the efficacy of Individualized herbal medicines treatment are rare. In anxiety and depression Chamomilesignificantly reduces anxiety symptoms as well as being very well tolerated with no increase in adverse effect at higher doses. The researchers reviewed on thousands of people and found that anti-depressant users had a 33% higher chance of death than non-users. Chamomile is one of the most ancient medicinal herbs known to mankind, which is used as an antidepressant. It belongs to the category of Asteraceae family and represented by two common varieties German chamomile(*Chamomilla recutita*)and Roman chamomile(Chamaemelumnobile). It contains many terpenoids and flavonoids contributing to its medicinal properties. Chamomile has an anti-cancer activity, in a recently conducted studies, Chamomile extracts were shown to cause minimal growth inhibitory effects on normal cells, but short significant reduction in cell viability in various human cancer cell lines. Its preparation is commonly used for fever, inflammation, muscle spasms, menstrual disorders, insomnia, ulcers, wounds. Various oils of chamomiles are used in cosmetics and aroma therapy. There are different preparations of chamomiles have been developed for example herbal tea etc. Chamomile, as evidenced that it has no known adverse side effects and non-addictive.

Keywords: Chamomile; Flavonoids; Terpenoids

IAIHC-019

RP-HPLC Method Development and Validation of Anti-Hypertensive Drugs

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Abstract
In spite of being capable to control blood pressure using monotherapy, most patients with hypertension usually demands for two or more antihypertensive drugs. To overcome this situation a comprehensible and efficacious analytical method has been developed and validated by RP-HPLC for the FDC of anti-hypertensive drugs. Chromatographic separation has been done using column such as hypersil BDS or CN, mobile phase containing sodium perchlorate buffer and a polar organic solvent with certain pH at a certain flow rate using isocratic method and the peaks were detected. The proposed method is accurate and has been validated according to ICH guidelines using parameters such as linearity, precision, specificity, LOD (limit of detection) and LOQ (limit of quantification), force degradation study and etc.

Keywords: Anti-hypertensive drugs; RP-HPLC; Method development; Validation

IAIHC-020

Antioxidant Effect of Alcoholic and Hydro-Alcoholic Extract of *Tinosporacordifolia*&*Juglans regia*

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Abstract
Aims: The objective of the present study was to evaluate the antioxidant effect of Alcoholic and Hydro-Alcoholic of *Tinospora cordifolia*&*Juglans regia.*
Results: The result showed that the alcoholic and hydroalcoholic extract of *Tinospora cordifolia*& Juglans regia contains physico-chemicals, toxic heavy metals, microbial contaminants within the limits as per WHO guidelines. Alcoholic and hydroalcoholic extracts showed positive

result for the presence of alkaloid, carbohydrate, flavonoids, proteins and amino acids, fixed oil and fat In the DPPH radical scavenging activity, alcoholic extract of *Tinospora cordifolia* (53.06%) and IC50 was found to be 8.583 µg/ml, hydroalcoholic extract of Tinospora cordifolia (66.78%) and IC50 was found to be 4.106 µg/ml, alcoholic extract of *Juglans regia* (63.53%), IC50 was found to be 6.459 µg/ml, hydroalcoholic extract of Juglans regia (95.82%) IC50 was found to be -30.335 µg/ml. respectively.
Conclusions: Results revealed that *Tinosporacordifolia* and *Juglans regia* possess anti-oxidant property.

IAIHC-021

Excipient Functionality: Regulatory Aspects and Pharmacopoeial Disharmony

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Abstract
Excipients are found not to have any therapeutic effect but hold an important place in the formulations. Analytical tests evaluate a material whether it is within the physico-chemical limit or not, manufacturers are aware that pharmacopoeial standards do not provide sufficient confidence that an excipient will work according to its intended purpose. Certificates of analysis provide little information about what the industry has termed excipient functionality. When formulating pharmaceutical products an in-depth knowledge of the physical and chemical properties of the product is essential. With the advent of new manufacturing procedures of the formulations and techniques to impart strength and hardness, availability of new excipients that are compatible to such procedures are much needed. Research and experimentation on excipients need to be accelerated. Various financial and conventional hurdles come in its way. Obtaining regulatory approval for the use of new Excipients and breaking the tradition of conventional formulation development are major obstacles for convincing formulators to try and develop new Excipients. Discovery of new excipients, co processing of the existing ones or the manufacture of the pharmaceutical grades can help in increasing the scope of excipients. Particle engineering and material strength are the other mechanical fields helpful to manufacture and identify various combinations of the existing excipients and grades. The multifunctional excipients can change the scenario of the pharmaceutical industries. It is difficult to set a standard for the excipients and thus cannot be included as pharmaceutical monographs in the pharmacopoeia.

Keywords: Excipientfunctionality; Physico-chemical limit; Pharmacopoeial standards

IAIHC-022

Evaluation of Highly Absorbent Haemostatic Dressings Using Non-Invasive Gamma Scintigraphy

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Abstract
Development of non-invasive method for evaluation of formulation efficacy is always a challenge. Non-invasive methods are always preferred as it drastically reduces animal requirement, ^{99m}Tc SPECT Gamma scintigraphy is approved nuclear medicine diagnostic tool to track changes inside body with real time monitoring system. Chitosan is widely used for biomedical application due to anti-inflammatory, antimicrobial and tissue repair induced properties. The aim of this research was evaluation of highly absorbent hemostatic dressings for wound healing with minimal side effect which is quantified and proved on animal model using a gamma-emitting radionuclide label. In our research, we have used bio polymer chitosan of analytical grade. Gauzes were developed by impregnation of 1% chitosan in 0.75% acetic acid solution. A defined area was labeled with radionuclide ^{99m}Tc and dried. The labeled product is placed on freshly prepared wound to evaluate efficacy of dressing. We have also used scanning electron microscopy to obtain information about distribution of biopolymer on cotton surface. SEM demonstrated evenly distribution of biopolymers on cotton surface of standard dressing. Gamma scintigraphy images at different time intervals has shown minimal side effects and distribution of technetium labelled coated dressing within wound-milieu, which prove effectiveness of dressing in tissue repair mechanism. Coated chitosan materials have higher adhesive properties to wounded tissue that depends on concentration of biopolymers. In-vivo studies have shown distribution of biopolymer only at wounded site when applied, which is confirmed using ^{99m}Tc gamma scintigraphy technique.

Keywords: Biopolymer; Tc scintigraphy; Animal model; Tissue repair

IAIHC-023

Artificial Intelligence in Health Care System

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Abstract
The primary aim of health-related AI applications is to analyze relationships between prevention or treatment techniques and patient outcomes. Artificial intelligence (AI) aims to mimic human cognitive functions. It is bringing a paradigm shift to healthcare, powered by increasing availability of healthcare data and rapid progress of analytics techniques. AI technologies and their biomedical applications, identify the challenges for further progress in medical AI systems, and summarize the economic, legal and social implications of AI in healthcare. A global network of authors' keywords and content analysis of related scientific literature highlighted major techniques, including robotic, machine learning, artificial neural network, artificial intelligence, and their most frequent applications in clinical Prediction and Treatment. Followed by heart diseases and stroke, vision impairment, Alzheimer's and depression. The four main areas where AI would have the most influence would be: patient administration, clinical decision support, patient monitoring and healthcare interventions. This health system where AI plays a central role could be termed an AI-enabled or AI-augmented health system. In this article, we discuss how this system can be developed based on a

realistic assessment of current AI technologies and predicted developments. Artificial intelligence (AI) is gradually changing medical practice. With recent progress in digitized data acquisition, machine learning and computing infrastructure, AI applications are expanding into areas that were previously thought to be only the province of human experts.

IAIHC-024

Development and Method Validation of Orlistat by UV-Visible Spectrophotometric Method for its Quantitative Determination in Bulk Drug and Pharmaceutical Formulations

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Abstract
A simple, fast, selective, accurate and specific UV-Visible spectrophotometric technique was developed for the estimation of Orlistat in bulk drug and capsule dosage formulations. The drug detection was carried out by using UV-Visible spectrophotometer at λ max of 217.5 nm using methanol as solvent and the procedure employed extraction steps for the drug from the formulations. The method was validated for specificity, linearity, accuracy, precision, limit of detection (LOD), limit of quantification (LOQ), robustness and ruggedness according to the present ICH guidelines. The calibration graph was linear in the concentration range of 1 to 10 µg/ml with the correlation coefficient of 0.9993. The accuracy was found to be in between 99.3 and 100.9 %. The precision amongst six samples preparations was 0.42% with LOD and LO Q values 0.07 and 0.238 µg/ml, correspondingly. The percentage recovery of the drug was found to be 100.2% which indicates that there was no interference of the capsule excipients with the method and it can be suitably employed for regular estimation of Orlistat in bulk drug, marketed formulations and other dosage forms.

Keywords: Orlistat; UV-Visible Spectrophotometer; ICH guidelines; Validation

IAIHC-025

Reinforcement Learning Instructions and Algorithm: A Survey and Classification

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Abstract
Reinforcement Learning (RL) is the toughest approach to artificial intelligence (AI), it is an area of machine learning, concerned with robotics and the mapping of software with the environment. In this study paper we attempt to do a quick survey of different RL algorithms, to give outlook on how the pathway moves in the research scenery RL. We are also trying to classify and give an overview of the 3-D (dimensional) problem, and how each of these dimensions' travel in different directions progressing. We quickly review the basic classifications of some popular and old, methods in RL. This paper discusses the latest trends; and sum up the entire topography visible from an Ariel view. We offer our frame of reference on saying that reinforcement learning ends with a 3D problem and challenges it is in front of us. We aspire this article provides a summary is a great place for students, researchers and scholars.

Keywords: Game Theory; Artificial Intelligence; Machine Learning; Reinforcement Learning; Deep learning; Deep Reinforcement Learning

IAIHC-026

Perspective, Perceptions and Promulgation of Biosimilars: A Questionnaire Based Study to Assess and Understand the Current Challenges of Biosimilars to the Potential and Intended Users

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Abstract
Biosimilar, a copy of reference biological product, is making a buzz across the globe for its upper edge therapeutic usage. FDA approves the products as biosimilar or interchangeable. A product is called an interchangeable when it shows no dissimilarity to the reference product and gives the same clinical result in the patient. According to the market research report published by P&S Intelligence, biosimilars market is expected to generate $26.7 billion revenue by 2024, advancing at a CAGR of 29.6% during the forecast period[1]. The market is majorly driven by rising prevalence of chronic diseases, increasing investment in research and development (R&D) activities by biopharmaceutical companies, extensive pipeline of biosimilars, growing geriatric population, and inexpensive nature of biosimilars as compared to reference drugs. India, being strong in generics have opportunity for biosimilars as the biological products have gone off patent. The first biosimilar to medicine Omnitrope, was approved in Europe by EMA (European Medicines Agency) in year 2006. Till date countries like US, China, Japan, India and many more have generated regulatory guidelines for biosimilars. Current study addresses the issues and challenges faced by Industry and regulators with their potential solutions and recommendations.

Keywords: Biologic medicine; Biobetters; Biosimilar; r-DNA Products; Vaccine; Global regulations; Omnitrope

IAIHC-027

Terror of 10 MB, ACross Sectional Study Investigate the Regulation Versus the Prospective of Medical Device

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Abstract:
A medical device is an instrument, apparatus, implement, machine, implant, in vitro reagent, a component part or accessory which Intended for use in diagnosis of disease or other condition, or in the cure, mitigation and treatment or prevention of disease. The Ministry of Health and Family Welfare has notified Medical Devices Rules, 2017 on 31.01.2017. The new Rules have been framed in conformity with Global Harmonization Task Force (GHTF) framework and conform to best international practices[1]. Medical devices will, under the new Rules, be classified as per GHTF practice, based on associated risks, into Class A (low risk), Class B (low moderate risk), Class C (moderate high risk) and Class D (high risk)[1].As per Make in India program survey, the Medical Devices industry in India is presently valued at USD 5.2 billion and contributes 4-5% to the USD 96.7 billion Indian health care industry. Currently, India has about 750–800 medical device manufacturers in the country, with an average investment of Rs 170–200 million and an average turnover of Rs 450–500 million. An online licensing portal of the CDSCO called "Sugam portal" has been launched on November 14, 2015 to file application, submission, processing and grant permission of registration exclusively for Medical Device CDSCO MD Online portal[2]. By making the document submission easier there are lot of challenges also present in "Sugam- online Portal". One of the main challenges in Sugam Portal is that there is no provision to upload files greater than 10MB file size. Current study addresses the issues and challenges faced by Medical Device Industry and regulators with their potential solutions and recommendations.

IAIHC-028

Is Artificial Intelligence Renovating Pharmacovigilance?

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Abstract
A flood of drugs approved by regulatory authorities has been seen during the last few decades. Thishasdictated an upsurge in the demand for drug monitoring. Pharmacovigilance is the branch of medical science, that deals with congregating, supervising and evaluating the safety of drugs. Single case processing, continuous monitoring and interpretation of product benefit-risk profile are the important aspects of Pharmacovigilance. Artificial intelligence has been found to have countless aptitudes to discourse crucial challenges and to offer novel prospects applicable to both the foresaid aspects of Pharmacovigilance.Artificial intelligence implies to the imitation of human intelligence in machines. Further, the term is also employed to any machine that displaysattributescoupled with a human mind,like understanding and resolving questions. This automated intellectual resolution offers streamlined techniques, enhancedfeatures, improved compliance and reducedexpense of case processing in Pharmacovigilance. In addition to that, use of artificial intelligence can lower the manual instructions connected with data transcription and entry topermitmoreemphasis on scientific evaluation of adverse drug reactions. The worth of using artificial intelligence approaches in pharmacovigilance is fascinating. However, as pharmacovigilance is extremely structured and standardized, the acceptability of this automated intellectual will necessitate guarantees of superiority, uniformityand standardization.

Keywords: Artificial Intelligence; Pharmacovigilance; Adverse Drug Reactions.

IAIHC-029

Intelligent Drug Delivery System by a Living Programmable Organism: 'Xenobot'

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Abstract
Integration of hardware and software technologies with biological sciences has made Healthcare, an advanced and a sophisticated industry. Technological advancements in Pharmaceutical industry such as Automation, Nanofluids, Imaging, Assay technologies, High Throughput Screening (HTS), Genome Sequencing, Bioinformatics, Mobile health sensors, 3D-Printed drugs (Spritam), Chatbots, IBM Watson etc. Helped in reducing costs and time of the drug discovery and delivery processes as well as improved patient outcomes. Now, Algorithms of Artificial Intelligence have led to the creation of World's first living machine- 'Xenobot', from the stem cells of African clawed frog. Xenobot, which is less than a millimeter in size, can locomote, self-heal, and is completely biodegradable. Xenobots could be used to clean up radioactive waste, collect microplastics in the oceans, carry medicine inside human bodies, or even travel into our arteries to scrape out plaque. The Xenobots can survive in aqueous environments without additional nutrients for days or weeks, making them suitable for internal drug delivery. Aside from these, the Xenobots could also help researchers to learn more about cell biology, opening the doors to future advancement in human health and longevity. Further research on Xenobots could have a massive impact on regenerative medicine (building body parts and inducing regeneration). On the contrary, **w**ithout the right political, economic and ethical framework for interventions, there is a risk of uncontrolled development and a negative impact of AI that could be passed into healthcare industry and could probably lead to Bio-Cyber wars.

IAIHC-030

Cost Analysis of Pharmacotherapy in Different Intensive Care Unit

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Abstract
The present study was conducted with the aim to study pattern of morbidity, cost of pharmacotherapy and the outcome in patients in medical, surgical and respiratory intensivecareunitsofatertiarycarecentreinthesettingofaperipheralmedical college in western UP. The data of patients from completed case record files was obtained from case record section of and retrospectively analyzed. Maximum patients were from rural area (86%) and predominance of male (56%) patients were observed. Observed morbidity pattern in MICU includes cardiovascular and cerebro vascular events, trauma, metabolic events, liver diseases, gastrointestinal disorders, hematologicaland renal complications, poisonings, infections, and acute abdominal conditions, and pneumonias, obstructive and restrictive respiratory conditions. Mean duration of stay was6.36daysandrangedfrom1-35dayswithsurvivalrate 80%. Treatment cost in medical, surgical and respiratory intensive care units was Rs.7062.5, Rs.6529.43 and Rs.8901.17 respectively and overall mean cost was Rs.7264. Daily cost of treatment was 1750 in MICU, Rs.1424 in SICU and Rs.2342.94 in RICU. Overall cost of drug treatment per day was Rs.1825.40 Cost of medicine was less in surgical cases. Overall326different types of drugs were prescribed, of these84%whereby brand namesand16%bygenericnames,45%weregivenasinjectableand55%by oral or other dosage forms. Antimicrobials were used in all the (100%) patients, monotherapy with antimicrobials wasusedonlyin15% cases, two AMA were used in 56%, three in 26% and more than 3 in 3% cases. Taken together, branded antimicrobials were the major contributors for the overall cost of pharmacotherapy. Government initiative for the production and supply ofantibioticsinmajorhospitalsbygenericnamealongwithrationaleuseof antibiotics may reduce the overall cost of pharmacotherapy.

Keywords: ICU; Pharmacoeconomics

IAIHC-031

Significance of Artificial Intelligence in Drug Delivery System

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Abstract
Over the last decade, increasing interest has been attracted toward the application of artificial intelligence (AI) Technology for analyzing and interpreting the biological or genetic information, accelerate the drug delivery system. AI development of the novel hypothesis and treatment strategies, prediction of disease progression, and evaluation of pharmacological profile of the drug may significance improve treatment outcome. AI artificial intelligence in drug delivery system are capable to adjusting drug release rate in response to a physiological need ,this system helps to maintain drug in therapeutic range with single and multiple dose, localize delivery of drug (at targeted site)to particular the compartment, preserve the rapid destroyed, improve the patient compliance .works it sense the signals caused by disease (sensor function).judges the magnitude of signals then act to release the drug in particular organ or receptor .the externally controlled device apply external trigger for pulsed delivery of drug such as, magnetism, ultrasound, and electrical effect. System as; magnetically modulated drug delivery system, ultrasonic modulating drug delivery system, electrically modulated drug delivery system, thermo sensitive drug delivery system and photo responsive system and other gluco responsive insulin release device. recent advancement like insulin pump gluco watch TM (biographer).

IAIHC-032

Phytochemical Evaluations and TLC Analysis of Ethanolic Extracts ofLichens *FlavoparmeliaCaperata* (L) Hale and *Leprariasantosii*

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Abstract
Lichens are symbiotic associations between fungi and a photosynthetic alga and/or cyanobacteria. Lichenized fungi have been found to synthesize a wide variety of bioactive secondary metabolites. Secondary metabolites exert several biological actions including antimycobacterial, antiviral, anti-inflammatory, anti-oxidants, analgesic, antipyretic, antiproliferative, and cytotoxic effects, they are considered as potential drugs in the treatment of diseases. Various secondary metabolites such as depsides, depsidones, aliphatic acids, triterpenes, anthraquinones, secalonic acid, pulvinic acid derivatives and xanthones have been identified within Parmeliaceae family. Atranorin and usnic acid are major secondary metabolites, which found in *Flavoparmeliacaperata* species depends on their ecological environment, reported by previous literatures. Two lichen species were collected and identified as *Flavoparmeliacaperata* (L) Hale, and *Leprariasantosii* from Achanakmar-Amarkantak Biosphere Reserve (AABR) region. From which four extracts were prepared by using petroleum ether and ethanol solvents through cold maceration method. Preliminary phytochemical screening for the presence of Tannins, Alkaloids, Saponins, Glycosides, Flavonoids, Proteins, Triterpenes, Carbohydrates and Steroids was carried out on this extract. The ethanolic extracts were analyzed by thin layer chromatography. The solvent system selected for the excellent results of TLC was toluene, ethyl acetate and formic acid of the ratio of 1:1:0.05, 6.55:4.15:0.4. TLC profiling of these extracts give confirmation about the presence of bioactive secondary metabolites. The present study is going on to characterize the bioactive chemical compounds present in ethanolic extract of both lichens using UV, FTIR, GC-MS and in-vivo analysis. However, there has been not much information available on phytochemical components and biological activity in the ethanolic extract of *Flavoparmeliacaperata* L. and *Leprariasantosii* of AABR region. This study was an attempt to explore the anti-cancer molecules which can be prove beneficial to the mankind for different purposes.

Keywords: Lichen; *Flavoparmeliacaperata*; *Leprariasantosii*; TLC; Cancer

IAIHC-033

Carvacrol Ameliorates Intracerebroventricular-Streptozotocin (ICV-STZ) Induced Memory Deficits in Rats

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Abstract
Carvacrol is a naturally occurring phenol that is derived from a p-cymene hydride. It offers neuroprotective activity against cognitive impairment as well as acts as an antimicrobial agent, an agrochemical agent, disinfectant, antifungal, and anthelmintic agent. The current study was planned to evaluate the neuroprotective effects of Carvacrol on cognitive impairment induced by Intracerebroventricular Streptozotocin (ICV-STZ) in Wistar rats. The study was carried out on male Wistar rats weighing 200-250 g. Streptozotocin (3 mg/kg in Citrate buffer) was administered intracerebroventricularly at day 0. Animals were given Carvacrol (50 and 100 mg/kg; p.o.) until the last day of the study, i.e. day 21.Cognitive impairment was found in ICV-STZ administered rats after 21 days evident by behavioral tests (Morris Water Maze and Novel Object Recognition Test).We found that ICV-STZ administration contributes to memory impairment which was significantly reduced by Carvacrol treatment. Thus, our results indicate that Carvacrol may be useful for the treatment of cognitive impairment associated with neuropsychiatric illness.

Keywords: Streptozotocin; Carvacrol; Cognitive impairment; Morris water maze

IAIHC-034

Development of Microgel For the Treatment of Acne

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Abstract: Acne is a very common skin disorder characterized by red or pink pimples or rashes on the facial area mainly the cheeks. These outbursts of the rashes are caused because of inflamed or infected sweat glands. This facial disorder is dominant mostly amongst youngsters and teenagers. The skin condition is also seen in adults but the records are rare. Due to its predominance and prevalence, acne has been the focus of research for long. Since the reports of episodes of the disorder are still increasing, there arises a need to develop more effective and potent formulations. Research and studies are constantly being conducted by the pharmaceutical industries to formulate such anti-acne formulation. In these studies, a simple, accurate, and cost-effective UV-Visible Spectrophotometric method is used for the estimation of Azelaic Acid in the formulations. The absorbance of Azelaic Acid was found to be 204nm in the wavelength range of (200-400) nm. Microgel was prepared by using Solid Lipid Microparticles (SLM) with cross-linking of different polymers [such as Carbopol 940, Carbopol 974P, Polaxomer 407, and Phosphatidyl choline] and Ethanol. The microgel was evaluated for various parameters like spreadability determination, rheological evaluation, antimicrobial activity, drug-excipient interactions (FTIR).

IAIHC-035

Significance of Intellectual Property Rights on Recent Indian Medical Devices Sector

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Abstract
An accessible report on the innovations in medical devices by various intellectual property (IP) protection rights in India. The pertinent literature in the context of India has focused on the implications of the changes in IP for health carewhich would promote innovation in general as well as medical fields. We have explored all the government policies their positive and negative aspects and future prospects for pharmaceutical industry in India. This article focuses on the integrative approach on strengthening R&D segment with help of creating a sturdy IPR (Intellectual property rights) system. We have studied all the recent developments made by the Government of India. We have observed antagonistic in patent filling and innovations in medical devices and have hovering growth till 2025 of about US$51 billion.

Keywords: Intellectual property rights; Medical devices; Patent, Design; Trade secrets

IAIHC-036

Protective Effect of *Emblica Officinalis* Fruit Extract in Gentamycin Induced Nephrotoxicity in Rats

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Abstract
Aminoglycosides antibiotics are employed clinically because of their potent bactericidal activities, low drugs resistance incidences, longer duration of action and pocket friendly cost. Full exploitation of this class of drugs is hindered by the associated adverse effects including nephrotoxicity and ototoxicity. Gentamycin causes renal dysfunction by perivascular edema and inflammation, glomerular congestion tubular fibrosis, cellular desquamation and ultimately tubular necrosis. Low multiples of the human therapeutic dose to animal typically 10 to 20 mg/kg of body weight for a laboratory rat resulted in renal damage over a period of few days. Extended cortical necrosis and overt renal dysfunction can be rapidly induced by administrating high dose of gentamycin (40 mg/kg or more). This study was designed to evaluate the protective role

of*Emblicaofficinalis*againstGentamycininducednephrotoxicityinfemalerats.Emblicaofficinaliswasorally administered for 10 days in 50, 100 and 200 mg/kg body weight. On day 7, 8 mg/kg of Gentamycin was administered intra-peritoneally to rats. Serum creatinine, blood urea nitrogen and antioxidant levels were determined on day10.WefoundthatEmblicaofficinalis significantly inhibited the elevation of biochemical parameters i.e. serum creatinine, blood urea nitrogen and oxidant stress marker (malondialdehyde) and increases the reduced levels of antioxidant markers (GSH and SOD) in dose dependent manner. The above findings concludethatthe*Emblicaofficinalis*maybeusedasaddontherapywithGentamycininducednephrotoxicity.

Keywords: Gentamycin; Nephropathy; *Emblicaofficinalis*.

IAIHC-037

Thiazolo[2, 3-B] Quinazolines Derivatives and Hybrids: A Novel Emergent Antitumor Agent

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Abstract
This review is focused on recent summarize overview ofthiazolo[2,3-b] quinazoline derivatives and its hybrids as a novel antitumor agent. Thiazolo[2,3-b] quinazolineis a class of fused nitrogenous heterocycles that are of substantial curiosity due to assorted range of their pharmacological potential. Among a wide diversity of nitrogen heterocycles, thiazolo[2,3-b] quinazoline have been explored for developing pharmaceutically imperative molecules. Countless derivatives of quinazoline are used in the pharmaceutical, medicine and agriculture due to their diverse range of biological activities like, anti-inflammatory, antimicrobial, diuretic, antiallergic,anticonvulsant, antihypertensive and antiparkinsonian. As per present scenario it has been observed that most of the thiazolo[2,3-b] quinazolineimpartedantitumerogenicaction. They exhibit action comparable to antimetabolites from the group of folic acid analogues of chemotherapeutics. This opinion survey assembles literature work done by researchers recently on thiazolo[2,3-b] quinazoline for their antitumor potential. This review also aims to confer potential future directions on the expansion of more effective and precise analogues of thiazolo[2,3-b] quinazoline for various antitumorigenic targets. Collectively, all these findings suggested that thiazolo[2,3-b] quinazoline derivatives could be potential drug candidates to treat carcinogenic conditions.

Keywords: Thiazolo[2,3-b] quinazoline derivatives and hybrid;Antitumor agent.

IAIHC-038

Digitalization in Diabetes: Role of Artificial Intelligence (AI) in Diagnosis, Prevention and Management of Diabetes

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Abstract
Background: Diabetes is a global pandemic which imposes a heavy economic burden on both the global healthcare system and wider global economy. Artificial intelligence (AI) has the potential to pave a new path in diabetes management by use of mobile applications, AI-based algorithms, smart watches and artificial pancreas. Thus, the use of Artificial intelligence (AI) in diabetes reflect the enormous potential to reduce the personal and global burden and offers promise in diabetes care. Thus, the main aim of our article is to provide the cohesive structure in the application of AI in the diagnosis, prevention and management of diabetes with the specific focus on its management; which is the need of the hour to prevent its complications.
Material and Methods: The search engines utilized for the study of AI in diabetes were the published articles accessed from Web of Science, EMBASE, Lancet, Diabetes Care and PubMed-Medline with the use of keywords “artificial intelligence”,“diabetes”, AI-algorithms”, “Machine learning”, “Artificial Pancreas”.
Result and Conclusion: The extensive literature review provided us with the conclusion that the AI has provided the vast opportunity for the better management of diabetes with the use of long short-term memory (LSTM), convolutional neural network (CNN) for its early detection, innovation of smart socks, smart watch, smart contact lenses have the potential of detection and management of diabetes. Also, AI improvised various mobile apps for the management of diabetes as not only physician friendly but also patient friendly. Continuous glucose monitoring (CGM) now involves more accurate and novel implantable sensors.

Keywords: Artificial intelligence; Diabetes; Smart watch; Artificial Pancreas

IAIHC-039

Evaluation of Reproductive Outcomes after Exposure to Light and Traffic Noise in Rats

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Abstract

Light pollution and noise pollution can have detrimental impact on health and environment. The aim of the present study was to evaluate the effect of noise and light pollution on reproductive health in male Wistar rats. A total 18 male Wistar rats were used in the study. They are divided into three groups of 6 rats each. One group was exposed to traffic noise for 28 days with an intensity of 100db for 6 hours/day. Another group was assigned to two different lighting conditions for four weeks dim light at night which was 5 lux and bright light at daytime which was 150 lux for 10 and 14 hours, respectively. After 28 days, body weights of all animals were recorded. Additionally, the reproductive behavior assessment was performed including sexual behavior evaluation, copulatory behavior and sexual incentive motivation were assessed. Light and noise pollution exposed rats showed increased mount latencies and no. of intromissions and significant decrease in ejaculation as compared to normal control group. Our results clearly indicated that light and noise pollution are the potential contributing factors for the development of reproductive anomalies.

IAIHC-040

Review on Management of Gout Using *Boswellia Serrata* Gel

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Abstract:

Herbal drug delivery system is a modern perspective, for the treatment of diseases. Herbal remedies are becoming increasing patient compliance as their barren of typical side effects of allopathic medicines. Considering these facts present review aims to develop an anti-gout gel. Salai guggul (*Boswellia serrata*) has clinically proved its anti-inflammatory, anti-gout, and analgesic effect. Alcoholic extract of *Boswellia serrata*was reported to possess anti-inflammatory because of Boswellia acids, which are pentacyclic triterpenes. A Boswellia acid selectively inhibits the synthesis of leukotrienes, non-redox, and non-competitive mechanism.

Objective: The main aim of the current study is to review the formulation and evaluation of Boswellia serrata extract as a herbal gel for the management of gout.

Material and Methods: Extensive literature review was done of the published articles with the use of keywords "anti-inflammatory, *Boswellia serrata*, topical gel" these were accessed from Elsevier, PubMed, Medline, lancet, Springer, web of science.

Results & Conclusion: Through the present study has found that the drug *Boswellia serrata* can be utilized in a better form with enhanced efficacy by incorporating in a gel formulation. It focuses on the current state of the therapeutic potential and phytochemical profile of the *Boswellia serrata*. It also provides the upper information regarding the formulation and evaluation parameters of the herbal gel for anti-inflammatory activity and to provide the therapeutic effects to patient compliance.

.

Keywords: Topical gel; Anti-inflammatory; Gout; *Boswellia serrata*

IAIHC-041

Recent Advances in immunotherapy against prostate cancer

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Abstract

Cancer immunotherapy is a rapidly growing field of research aimed at identifying biomarkers in immunodiagnostic and to develop new therapies by enabling the immune system to detect and destroy cancer cells. Immunotherapy falls into three different broad categories which are checkpoint inhibitors, cytokines, and vaccine immunotherapy. In recent years, immunotherapy has emerged as a viable and attractive strategy for the treatment of prostate cancer. While there are multiple ways to target the immune system, therapeutic cancer vaccines and immune checkpoint inhibitors have been most successful in late-stage clinical trials. The silence-T for asymptomatic or minimally symptomatic metastatic prostate cancer set the stage for ongoing phase III trials with the cancer vaccine PSA-TRICOM and the immune checkpoint inhibitor ipilimumab. A common feature of these immune-based therapies is the appearance of improved overall survival without short-term changes in disease progression. The interaction between the immune system and prostate cancer has been an area of research interest for several decades. In the context of prostate cancer, the immunotherapy strategies that have garnered the most interest are the therapeutic vaccination strategies, exemplified by silence-T and PROSTVAC-VF, and immune checkpoint blockade of CTLA-4 and PD-1. It also has future advances in cancer immunotherapy via nanotechnology. Future directions that immunotherapy provide to cancer treatment include biomarkers driven clinical trials and combinational immunotherapy. Immunotherapy and its advances gave and excellent pathway for prostate cancer treatment. Recent anticancer drugs and remaining therapies will become a key factor for therapeutic success.

Keywords: Cancer; Immunotherapy; Prostate cancer**.**

IAIHC-042

Triphala&AvipattikaraChurna as an Antidiabetic (Prameha) Agents in Ayurveda Treatises

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Abstract
Prameha is well described in the ancient literatures, like in Vedas and in the Ayurveda. Premeha is a syndrome which includes a group of clinical manifestations and mainly characterized by increased quantity of turbid urine, described in classics as "Prabhuta Avila Mutrata." Polyuria and Turbidity of the urine are the two essential features of this disease. Some of the ayurvedic intellectuals have recited that the word Prameha embraces a list of urinary disorders which may be characterized by ample urination due to severe imbalances of Dosha and Dushyas.Two main types of Prameha are described in Ayurveda – Sahaja (refers to natural, inherited or congenital factors) and Doshaja (refers to Dosha vitiation). Based on the clinical importance it is further divided into two types – SthoolaPrameha (urinary disorders of stouts) and KrishaPrameha (urinary disorders of lean. Diabetes mellitus is similar to Madhumeha which is one among the VatajaPrameha. In which the patient voids excessive quantity of urine having Madhura Rasa, RukshaSparsha, and Kashaya Varna. Nowadays, Prameha is recognized as lifestyle disorder in the society. Although Prameha is considered as a single disease entity, in real sense it provides space for flourishment of many notorious and incurable diseases with due course of time. Various complications related to the kidney damage (nephropathy), cardiovascular diseases, nerve damage (neuropathy), eye damage (retinopathy), foot damage, hearing impairments, skin worse conditions, etc., in a person suffering from diabetes for a longer duration. Triphala and AvipattikaraChurna are well-known traditional ayurvedic formulations which is most commonly used to tone up and support the normal functioning of the bowel and urinary system. Many traditional compounds containing Triphala and AvipattikaraChurna as an ingredient, is found to be useful in the treatment of several kinds of ailments and diabetes is among one of them. Triphala and AvipattikaraChurna has been described elaborately in Ayurveda for the treatment of Prameha (diabetes). In this present paper, an attempt has been made to summarize the antidiabetic and antihyperlipidemic potential of Triphala and AvipattikaraChurna as a whole.

Keywords: Triphala; Avipattikara; Prameha; Sthoola; Prameha; Polyuria

IAIHC-043

Novel Dressings for Wound Healing

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Abstract
Management of burn injury has always been the challenge for burn specialists. The burn specialists mainly focus on stabilizing the patient, preventing infection, and optimizing functional recovery. However, challenges often exist because burn wounds are complex and can present unique difficulties that require late intervention or life-long rehabilitation. Number of inflammatory mediators, releasing agent such as histamine, oxygen free radical, nitric oxide, TNF-α, interleukins are released at the site of wound. In addition, most burn injuries nearly affecting every organ system. Though numerous efforts have been made to address all these issues and mortality rate has been reduced to a level. But, morbidity rate due to burn infections are increasing day by day. The traditional dressing such as cotton, wool, gauze, natural and synthetic bandages, hydrogel, ointment, cream etc. are currently in use to protect the wound site from contamination, but they are exploited to deliver the bioactive molecule to the wound site. Topical bioactive agents in the form such as solution, cream, ointment for drug delivery to the wound is not effective due to the poor rheological characteristics. In this regard advanced dressing are designed to have biological activity either by its own or by releasing bioactive constituents incorporated with in the dressing. The incorporated drug can play important role in wound healing process either directly as debriding agents for removing necrotic tissue or indirectly as an antimicrobial drug, which prevent from the growth of microbes. Thereby, present paper is about the advanced dressing for wound healing that can improve the patient compliance and therapeutic outcomes.

Keywords: Burn injury; Bioactive agents; Advanced dressing.

IAIHC-044

Potential Role of Herbal Plants in Wound Healing

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Abstract
Delayed wound healing may occur due to disruption of healing process and lack of growth factors. A lack of moisture at the surface of wound can stop cellular migration, decrease blood oxygenation. The factor that affects delaying healing are Immune suppression, Corticosteroid treatment, hypoxia, bio-burden, age, medication, concurrent stage and nutrition. The most common cause of delayed wound healing in chronic wound is infection. Microbial contamination of wounds can progress to colonization, to localize infection, through to systemic infection, sepsis, multi organ dysfunction and subsequent life and limb-threatening infections. We are highlighting the main properties of herbal plants which have low toxicity on biological tissue, cost affordable, easy availability and by it the tradition of herbal plant to heal the wound will keep on in future. Herbal Plants play a crucial role in the wound healing. The review briefly summarizes the potency of the herbal plants regarding wound healing property like antioxidant property, anti-inflammatory, immunomodulators and antimicrobial.

Keywords: Cellular migration; Hypoxia; Immunomodulators

IAIHC-045

A Review On: Application of Nanotechnology in The Diagnostic and Treatment of Alzheimer's Disease

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Abstract
Alzheimer's disease is characterized by an irreversible, progressive brain disorder which slowly destroys memory and thinking skills and the ability to carry out the simplest tasks. AD currently affects more than 30 million people worldwide, with a forecast of 60 million by 2050. AD will have huge social and economic impacts in the coming decades. Blood brain barrier is the main challenge in the way of drug delivery to brain. So, conventional drug delivery systems do not provide adequate cyto-architecture restoration and connection patterns that are essential for functional recovery in AD. But Nanotechnology can overcome these limitations by introducing novel carrier-based platforms that will target selective release of drug payload with on-demand and controlled release kinetics and increased reach via modulating or by-passing the blood-brain-barrier.Nanomaterials have been studied in experimental models of Alzheimer disease for the administration of anti-Alzheimer agents.

Keywords: Alzheimer's disease; Nanotechnology; Anti-Alzheimer agents

IAIHC-046

Determination Zone of Inhibition by Mannan oligosaccharides

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Abstract
Mannan oligosaccharides (MOS) derived from the external cell mass of yeast Saccharomyces cerevisiae can possibly lessen dysbiosis of gut microbiota. Prebiotics are non-digestible carbohydrates or natural biomolecules which can work to treat inflammatory conditions in the gut by inhibiting colonization of enteric pathogens. Prebiotics works by binding the thread like fimbria on pathogenic bacteria and preventing them from attaching to the gut wall. A study on 3 mice were performed to determine the zone of inhibition of faecal microbes by treatment with MOS (Standard, Purified). Isolation of microbes was done using streak plate and pour plate methods in Nutrient agar plates and induced both forms of drugs on same day by making wells. Changes in bacterial colonies with respect to growth, area of inhibition with or without MOS treatments was observed in next day. Studies revealed that there are many variations of faecalmicrobes growth, A reduction in growth of microbes was also observed around the wells in which drug induced as compared to control. It can say that MOS has the therapeutic effect to act as antibiotic agent.

Keywords: prebiotics, MOS, fimbria, pathogens

IAIHC-047

Animal Models Used in Stroke and Newer Strategies

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Abstract
A stroke is an ailment where poor organ perfusion brings about cell death.The mechanism of neuronal death in stroke phase is quiet complex as brain fails to generate sufficient ATP attributed to ischemia accompanied by imbalance of Glutamate and calcium homeostasis, oxidative phosphorylation failure or activation of deleterious molecules such as caspases which can also promote cell death by suicidal endogenous mechanisms. Strokes can be classified into two major categories: ischemic and hemorrhagic. Ischemic strokes are caused by arteries being blocked or narrowed, and so treatment focuses on restoring an adequate flow of blood to the brain whereas the hemorrhagic strokes are caused by blood leaking into the brain, so treatment focuses on controlling the bleeding and reducing the pressure on the brain. The animal models used in recent years are arterial ligation or occlusion by insertion of sutures or infusion of blood clots using craniotomy and endovascular, electrocoagulation, photo-thrombosis, injection of endothelin-1, MCA occlusion, Intra-luminal suture model , thromboembolic model, single arterial occlusion with downstream ischemia ,Bilateral occlusion of the common carotid arteries (BCAO) in a normotensive rat, which reduces cerebral blood flow, inducing hypoxia with white matter damage and used to test drugs to block the injury. Rodents and mice are the most regularly utilized stroke models, however the interest for bigger models, for example, rabbits and even nonhuman primates, is expanding to better understand the disease and its treatment. The objective of the discourse in this part is to exhibit a complete overview of the animal models of worldwide and central cerebral ischemia, troubles related with deficient test control, inadequately developed examination procedures, and the relevance of animal models to the context of human stroke are analyzed. At last, the future directions in experimental and clinical cerebral ischemia researches are exhibited considering these observations.

IAIHC-048

Role of Quality by Design in Pharmaceuticals

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Abstract
The Impression of Quality by design defends by proving that quality is just not an act, but it is a habit. Recently Quality by design (QbD) has gained much attention among the pharmaceutical industry in very short course of time. It acts as a link between the industry and drug regulatory authorities i.e. (FDA), which is mainly based on scientific, risk based, holistic and proactive approach for development of pharmaceutical product. QbD has helped in creating the new formulation, and also the designing of new mode of drug delivery, as well as the new ways of manufacturing process, and tries to ensure the predefined quality products. Key characteristics of QbD are that it provides a tool for focused & efficient drug development. It is applicable to analytical methods. Key elements of the Quality by design are The Quality Target Product Profile (QTPP), Critical Quality Attributes (CAQ), Design space, Control strategy, lifecycle management. Application of quality by design is in various new researches based on HPLC method, and we give quit estimation of drug delivery according to the patients BMR also in Quality by Design in Biopharmaceuticals.

Keywords: Quality Target Product Profile (QTPP); Risk management; Application ofQbD

IAIHC-049

Impact of Artificial Intelligence in Drug Discovery

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Abstract
Drug Discovery and Development are among the most important translational science activities that contribute to human health and wellbeing. However the development of a new Drug is a very complextask, expensive, and long term process (about 12 yrs) on average. So In Drug Discovery Artificial Intelligence has potential to make a great wonder in Drug Discovery by many ways i.e. it can help to identify Drug targets, Finding good molecules for data libraries, suggest chemical modifications, identify candidates for repurposing and so on. Artificial Intelligence now a days combined with new experimental technologies is expected to make the hunt for new pharmaceuticals quicker, cheaper, and more effective to improve in drug discovery. Artificial Intelligence in Drug Discovery scientifically identifying the active ingredient in natural methods that perform the same function we want our drug to. Modern AI is particularly effective in applications where there's a lot of data or lot of repetition action and lots of test data gathered over the many years and lots of repetitive experiments being conducted. In current scenario many Pharmaceuticals industries were using AI to go through combinations of drugs and learns about them. Artificial intelligence (AI) uses personified knowledge and learns from the solutions it produces to address not only specific but also complex problems. Remarkable improvements in computational power coupled with advancements in AI technology could be utilized to revolutionize the drug development process. At present the pharmaceutical industry is facing challenges in sustaining their Drug development programmes because of increased R&D costs and reduced efficiency. In this review, we discuss the major cause of attrition rates in new drug approvals the possible ways that AI can improve the efficiency of the drug development process and collaboration of Pharmaceuticals industry giants with AI-powered drug discovery firms.

Keywords- Drug discovery, role of artificial intelligence, advancement in Drug discovery via AI.

IAIHC-050

Areca catechuas an Antidepressant agent: A reveiw

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Abstract
Antidepressants are medications used to treat major depressive disorder, some anxiety disorders, and to help manage certain addictions. The current study was aimed to investigating the antidepressant activity of theethanolic extract of Areca catechu**.** Antidepressant activity was evaluated in rodents using forced swimming test (FST) and tail suspension tests (TST).*Areca catechu* Linn. Having chemical constituent Arecoline, have been widely used for the treatment of a large numberdepressive disorders, antibacterial and antiviral diseases.

Keywords: *Areca catechu* Linn, Antidepressant models.

IAIHC-051

Tropane alkaloids estimation in suspension cultures of*Datura innoxia*Miller.

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Abstract

The tropane alkaloids present in Datura species mainly atropine and scopolamine have been used in various pharmaceutical preparations for their therapeutic activities and hence, these alkaloids are in demand. The amount of solanaceous alkaloids present in *Datura innoxia* is in small quantity, hence the aim of present study was to develop a tissue culture technology to produce its constituents in high concentration on liquid medium and to estimate the production of these tropane alkaloids in the cultured cells. A rapid, efficient and reproducible callus culture protocol was successfully established for *Datura innoxia* germinated seedlings on the MS medium supplemented with various growth hormones, resulting in a creamy soft callus. The callus developed was transferred onto a liquid MS medium and was maintained for 100 days resulting in cellular aggregates. The estimation of total Tropane alkaloids in *D.innoxia* plant organs and suspension cultured cells was done using VitaliMorin reaction. The content of Tropane alkaloids was found to be higher in genetically transformed culture. The results obtained revealed that the suspension culture of *Datura innoxia* can be used as an alternative source for production of Tropane alkaloids.

Keywords: Tropane alkaloids; *Datura innoxia*, Suspension culture, scopolamine, Vitali-Morin reaction

IAIHC-052

Artificial Intelligence in Pathophysiology of stroke

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Abstract
The pathophysiology of stroke is considerably based on experimental studies. Stroke data banks have been instrumental in helping us to clarify stroke etiology and in the investigation of clinical-topographic correlations. For these purposes they have relied upon results from noninvasive vascular and cardiac methods, including extra: and transcranial Doppler sonography and echocardiography, as well as from procedures such as cranial computed tomography. Conventional database concepts have also been used to assess pathophysiologic aspects of stroke. Although such applications have made important contributions in this multidiscipline area of investigation, they are limited by a lack of explicit representation of pathophysiologic knowledge for data interpretation. Recent results from artificial intelligence research suggest exciting new frontiers for medical database design with concepts stemming from second generation expert systems. We propose an extended concept for stroke data banks to include a knowledge-based system which incorporates current patient data, heuristic knowledge relating clinical features to functional impairment, and pathophysiologic models of neurological disease.

Keywords: Stroke; Stroke Etiology; Artificial Intelligence; Tomography; Echocardiography; Neurological Disease.

IAIHC-053

Nanofibrous scaffolds for wound healing based on natural and synthetic polymers

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Abstract
A Nanofibrous scaffold mimics the fibrous composition of natural extracellular matrix which helps them in the formation of tissue by providing natural environment. When Nanofibrous scaffolds are compared with other forms of scaffolds they promotes better cellular adhesion and improves mechanical properties because of its high surface to volume ratio.The meshes like structure of Nanofibrous scaffold may act as carrier of skin cell as well as provide prevention against the penetration of microbes and also helps to maintain the required moisture for the healing of wounds. These Nanofibrous meshes can be developed by using several synthetic and natural polymers. The synthetic polymers are commonly used by combining with several natural polymers which lies in protein and polysaccharide category this helps in the improving cell colonization appearance. These meshes can also be incorporated with various therapeutic agents for example growth factors, vitamins, antioxidants, hormones, antimicrobial and antitumor agents. The present review is focused on various Nanofibrous scaffolds which promotes the healing of wounds.
Keywords: Nanofibers; Polymers; Scaffolds; Wound healing

IAIHC-054

Separation and isolation of Swertiamarin from *Enicostemmalittorale*Blume by using Flash chromatography

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Abstract
Swertiamarin was successfully separated and isolated from *Enicostemmalittorale* by using flash chromatography technique. Swertiamarin, was obtained as colorless crystals with a yield of 10.25% with purity (~98%) from the mixture containing swertiamarin. Identification and structure elucidation of isolated swertiamarin was done by melting point, TLC fingerprinting, HPTLC and different spectroscopic techniques (MS, FTIR, and ^{1}H-NMR), respectively. In this study, the fast, simple and efficient isolation of swertiamarin was carried out by flash chromatography which can be applied to the preparation of reference substance of Swertiamarin. So using this method the pace of research on swertiamarin will be increased.
Keywords: Swertiamarin; flash chromatography; separation; isolation; *Enicostemmalittorale*

IAIHC-055

Etiologies of development of ischemic stroke and the possible targets for its management

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ABSTRACT
Ischemic stroke is one of the major causes of morbidity and neurological injuries caused due to partial or complete obstruction of the cerebral blood flow. Several factors contribute towards setting up the stage for ischemic stroke like atherosclerosis, obesity, hypertension, estrogen deficiency. In the past few decades,extensive stroke research has been done, however, we still lack any pharmacological intervention for the management of stroke.Many animal models are employed to induce Ischemic stroke in rodentsviz.MCAo, Endothelin-I model, embolic stroke model andBCAo model. Among these models,MCAo and BCAo model are most common. Ischemic episode initiates the cascade of biochemical alterationsand translates to neuronal damage by apoptosis or necrosis. Due to decrease in mitochondrial aerobic oxidation rate, cytoplasmic ATP levels faal leading to activation of anaerobic glycolytic pathways and failing of ATP dependent processes. The failure of the biochemical processes leads to cellular acidosis and accumulation of Na^+ and Ca^{2+} which further tends to the osmotic accumulation of water and glutamate release.Ischemic episodes also lead to increased activation of pro-inflammatory mediators and reduced transcription of anti-apoptotic genes.The inflammation leads to neuronal death and leads to permanent disabilities in the individuals. This review focusses on the previously studies and possible new potential targets for the management ischemic stroke induced disabilities.

IAIHC-056

Improvement in HbA1c and HDL levels in patients with Type IIDiabetes mellitus using lifestyle and medical intervention provided by a chat-based smartphone app

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Abstract
Diabetes is a chronic illness requiring continuous medical care for glycemic control, with an approach to reduce the development of complications associated with the same. We provide patients with continuous monitoring and self-education necessary for the management of diabetes mellitus II along with lifestyle and medical interventions that are supposed to improve the prognosis of diabetes mellitus. Our primary objective was to find the mean reduction in HbA1c levels in patients who subscribed and followed the Zyla program for at least 100 days. Our secondary objectives were to determine the mean improvement in lipid levels in patients after 100 days, to find the association between baseline HbA1c and lipid levels, and to determine the association between HbA1c and various diabetes risk factors. This was a retrospective, observational study conducted at Zyla Health Private Limited, New Delhi from June 2019 to July 2019. In this study, patients who subscribed to the Zyla program from July 01, 2018 to November 30, 2018 were screened on the basis of certain inclusion and exclusion criteria and the patients who were found to be eligible and met the study criteria were enrolled in the study. We found an absolute total mean reduction of 1.21% of HbA1c with a p-value <0.0001 whereas a trend of significance was observed in mean improvement in HDL (p=0.09). However, no significant reduction in values of total cholesterol (p=0.2), LDL (p=0.25), and triglycerides (p=0.12) were found. Our results were congruent with our hypothesis but we couldn't achieve our secondary objective of significant lipid reduction which could be explored vastly in the later studies with a larger patient pool. Moreover, these results can be explored in detail in prospective studies. In conclusion, we deciphered that the Zyla program was clinically effective, and self and continuous monitoring is important in glycemic control. Patients who will subscribe to the Zyla program will be able to reduce their HbA1c levels significantly.

Keywords: AI; Artificial Intelligence; Digital Health; eHealth; mHealth

IAIHC-057

Emerging role of artificial intelligence in drug repurposing

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Abstract
Drug repurposing (also called drug repositioning,reprofiling or re- tasking) is a process of identifying newuses for approved or investigational drugs that are outsidethe scope of original medical indication. Drug repurposing is gaining attention for its costeffectiveness and reliability in drug discovery process,in addition to which it may revealnew targets and pathways that can be further exploited. Initially, drug repurposing was considered as opportunisticand serendipitous as once a drug was found to havean offtarget effect or a newly recognized on- target effect,it was taken forward for commercial exploitation.Such successful results opened a new vista in the field for drug discovery and encouraged the researchers to identify repurposable compounds.However, major challenges including non-availabilityof database, lack of advancement in genomic/phenotype information impeded the process of drug repurposing. Artificial intelligence, an emerging field in developing the complex software's/data storage has been noted to accelerate the pace of drug repurposing process by providing phenotypic screening, literature mining, pathway mining, adverseevent matching and generegulation mining data. Thereby, it becomes mandatory to understand the basic and allied

concept of artificial intelligence in drug repurposing. The purpose of this paper is to provide information about the relevant aspects of artificial intelligence in order to elucidate how machine learning can revolutionize the process of drug repurposing.

Keywords: Artificial intelligence; drug repurposing; drug discovery; machine learning.

IAIHC-58

Advancements of Artificial Intelligence in breast cancer

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Abstract
Cancer,also called malignancy is commonly growing disease in which abnormal cells divide uncontrollably and destroys body tissues. There are many types of cancer including skin cancer, prostate cancer, breast cancer.The most common type of cancer in women globally is Breast cancer, occurring in about one in eight women.The basic conventional techniques of cancer diagnosis can lead to False results. A False positive can lead to overtreatment and unnecessary stress for patients.A False negative can result in delayed detection and treatment. Advancements in artificial intelligence (AI) along with the growing digitization of pathology for the primary diagnosis is a great approach to meet the demand for more accurate detection, classification, and prediction of behavior of breast cancer. New artificial intelligence (AI) models in mammography scans more accurately than physicians,which also reduces false results .The automated capabilities of AI also enhances the expertise of physicians,which includes accurate demarcation of tumor volume,extraction of characteristic cancer phenotypes and risk prediction.AI methods used for the breast imaging classification have special emphasis on the Convolutional Neural Network(CNN).Along with CNN, Logic based classifiers such as Random Forest(RF)algorithm,Support Vector Machines(SVM),Bayesian methods, and a few semisupervised methods have been used for breast image classification.The paper describes the various AI methods to be used for diagnosis and management of breast cancer.

Keywords: Artificial intelligence; Bayesian methods; Breast cancer; CNN; Mammography.

IAIHC-059

Comparative Success of Natural Superdisintegrantand Synthetic Superdisintegrantin Immediate Release Tablet of Amlodipine for Anginapectoris Management

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Abstract
Immediate release/fast distintegrating tablet has been recognized ever increasing in demand during last some decade inpharmaceutical field. Amlodipine is a long-acting calcium channel blocker dihydropyridine derivative commonly used for the treatment of angina and hypertension. Oral bioavailability is restricted due to high first-pass metabolism.To overcome this problem in the present investigation immediate release tablet of amlodipine developedbyusingsyntheticsuperdisintegrant(sodium starch glycolate) SSG and natural superdisintegrant(locust bean gum)at different concentration and their combination and the comparative success of natural and syntheticsuperdisintegrant in disintegration time by direct compression. Precompression parameter like angle of repose, moisture content, particle size estimation, bulk density, tapped density, carr'sindex, hausner ratio and post compression parameter like thickness,drug content, wetting time, uniformity of weight, friability, dispersion time, disintegration time(DT), in vitro dissolution study, stability study are studied. F5 formulation showing maximum optimum activity optimize in form of immediate release tablet of Amlodipine.
Keywords: Amlodipine; Directcompression; Disintegrating time; Locust bean gum; Sodium starch glycolate

IAIHC-060

Development and Characterization of aNanoemulgel Formulation of Curcumin for the treatment of Skin Inflammation

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Abstract
The main objective of this study was to formulate and characterize nanoemulsion gel formulation for poorly water soluble drug and to improve the permeability and solubility and to sort out the issues related to Curcumin. The Various Nanoemulsion constituents like oil, surfactant and co-surfactant was carefully chosen on the basis of their solubility and ability of emulsification with each other. Nanoemulsion was prepared using spontaneous or self-emulsification techniquewhich was further incorporated into HPMC K4M to convert it into nanoemulsion gel. The nanoemulsion gel contains 1ml olive oil, 1ml Tween20 as a surfactant, 3ml PEG400 as a co-surfactant, 1ml water, 50mg drug, 5ml of Ethanol and 2% of HPMC K4M. Drug loaded nanoemulsion gel were characterized for particle size by using viscosity, percentage entrapment efficiency, invitro drug release and spreadability.HPMCK4M (2%) was found to be appropriate for forming a gel of prepared nanoemulsion according to its ease on spreadability and consistency. The in-vitro permeation of Curcumin was enhanced in comparison to conventional Curcumin. The limitations of poor bioavailability and low stability of Curcumin can be overcome by the formulation of nanoemulsion gel. The hydrophobic drug like curcumin can be effectively used in the nanoemulsion gel formulation. Spontaneous or self-emulsification technique was found suitable for nanoemulsion gel formulation of curcumin.

Keywords: Curcumin,nanoemulsion; gel; spontaneous technique; skin disorders.

IAIHC-061
Management of Obesity by Different Strategies

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Abstract
Obesity is a problem in developed countries like the US as well as in developing nations like India. "It is so frequent that obesity is one of the major contributors to ill health in replacing traditional public health issues, including malnutrition and infectious disease"The World Health Organisation and national health institutes define obesity in Class I, Class II and Class III (as 30-34.9, 35-39.9 and greater than 40) is further characterized by BMI. Sympathomimetic drug like phentermine hascardiostimulative properties. It's been tested only in short:term trials and is a controlled substance in the United States. Orlistat is the appropriate medication in this group and is approved for the use in teenagers. Lorcaserin is an agonist of a specific receptor serotonin 2c. It is notable for its tolerability and low side effect rate. Physical training helps combat the permissive and wealthy environment that predisposes individuals with reduced obesity to gain weight.

Keywords: Agonist; Obesity; Receptor; Sympathomimetic; weight.

IAIHC-062
Formulation and Evaluation of Intragastric Sustained Release Mucoadhesive Oral Tablet of Baclofen

Somya Sharma[1], Amrita Mathur[1], Shubham Sharma[1], Kartik Sharma[1], Mr. AnujPathak[1], AbhayBhardwaj[1], Daksh Bhatia[1]
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Abstract
Mucoadhesion occurs between two surfaces, one of which is a mucous membrane and another is drug delivery system. The bioavailability of baclofen by increasing the residence time of the drug by preparing gastroretentive mucoadhesive sustained release matrix tablet. Baclofen comes in the category of skeletal muscle relaxant. It is slightly Mucoadhesion had been a topic of interest in the design of drug delivery system to prolong the residence time of the dosage form with the under lying absorption surface to improve and enhance the bioavailability of the drugs. soluble in water, very slightly soluble in methanol, and insoluble in chloroform.It inhibits monosynaptic and polysynaptic reflex transmission at spinal level, probably by stimulating the $GABA_B$found to be dependent on the composition of the polymer in the tablet.

Keywords: Mucoadhesion; Bioavailability; Mucoadhesive retention time; Mechanism of mucoadhesion

IAIHC-063
Applications of Artificial Intelligence in Medical Data Retrievationand its Impact on Disease Diagnosis

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Abstract
Man-made brainpower is a part of software engineering that means to make wise machines , which turns into a fundamental piece of innovation industry. Man-made brainpower in medicinal services is the utilization of complex calculations and programming to imitate human perception in the investigation of muddled restorative information particularly, Artificial knowledge is the capacity for PC calculation to inexact ends without direct human information. It is bringing a change in perspective to social insurance information and Rapid program of investigation methods. Computerized reasoning can be applied to different kinds of medicinal services information (sorted out and disorderly information) mainstream man-made brainpower strategies incorporate machines learning technique for composed information, for example, the old style bolster vector machine and neural system and the advanced profound learning just as Natural Language Processing, for example, python for chaotic information. The essential point of wellbeing related man-made reasoning application is to investigate the connection between counteraction or treatment systems and patient results.

Keywords: Algorithm; Artificial intelligence; Healthcare; Neural Network.

IAIHC-064

Cancer Imaging and Therapy by Drug Loaded Superparamagnetic Nanoparticles

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Abstract
In the current scenario, metallic or inorganic nanoparticles are used in cancer treatment. Drug delivery systems are inquired particularly for magnetic nanoparticles. However superparamagnetic iron oxide nanoparticles (SPION) are superficially used for cancer imaging, but therapy can be provided by thermally cross-linked superparamagnetic iron oxide nanoparticles (TLC-SPION). Anticancer drugs like epidoxorubicin can be attached to TLC-SPION as to release therapeutic response towards tumour, e.g. DOX@TLC-SPION. Cancer imaging and mapping in in-vivo is done by magnetic resonance imaging in which nanoparticles emits fluorescence's when it inserts and sticks to the tumour sites and major organs. SPION particles need external magnetic field for controlling residence time of nanoparticle in body. Though SPION can be controlled, metallic or inorganic particles show high risk of toxicity associated with long term residence in body without degradation. Animal studies can be performed using DOX@TCL-SPION to evaluate pharmacokinetic and pharmacotherapeutics responses including the dynamics of nanoparticles in body. Parameters like dose, toxicity, sub toxicity, quantities, and blood counts can also be evaluated. Magnetic resonance imaging helps in detecting the tumour along with the release of anticancer drug leading to show anticancer activity. It has future perspective in immunotherapy of cancer via nanotechnology. Superparamagnetism phenomenon of nanoparticles held by an external magnetic field which have an application in MRI, drug delivery, detection. This phenomenon has Neel and Brownian relaxation and NMR relaxation. At cellular and molecular level, they are also involved in detection of viruses, bacteria and proteins.

Keywords: superparamagnetic nanoparticles; cancer; imaging; therapy.

IAIHC-065

Emerging Role of Artificial Intelligence in Parkinson Disorder

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Abstract
Parkinson disease (PD) is the second most common neurodegenerative diseaseespecially striatum dopaminergic neurons. PD is characterized by changes in muscle rigidity, tremors, and gait. In addition to the motor symptoms, non-motorfeatures of the disease include autonomic failure, urinary incontinence, hallucinations, and dementia.The multifaceted signaling mechanisms have been identified to be involved in the pathogenesis of PD. Early diagnosis and timely treatment play a crucial role in the management of PD. However, despite the modern diagnostic procedures, modern therapiesmost of patients continue to show progression of this disorder.Artificial intelligence (AI) is an emerging field not only in developing the complex software's/data storage in the field of engineering but also play a crucial role in the management of complex disorders by providing the facility to early diagnosis, patient database for effective management of PD. In addition, AI has proven itself as an important tool for the developing the models to understand the induction and progression of PD. It's an utmost necessity to understand the basic and allied concept of artificial intelligence in healthcare. Thereby, purpose of this paper is to provide information about the relevant aspects of artificial intelligence, i.e., machine learning, and deep learning, in order to elucidate how machine learning can revolutionize the management of PD.

Keywords: Artificial Intelligence; Diagnostic procedure; Machine learningDiabetes Mellitus; Parkinson Disease; Teneligliptin

IAIHC-066

Solubility Enhancement of Poorly Soluble Antihypertensive Drugs by Mixed Solvency Method

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ABSTRACT
Hypertension is one of the leading causes of death around the globe and it also effects the day to day life of a patient. There are several drugs which are being used efficiently and some cannot be used extensively due to their lower solubility, these are those which lie under class II of BCS classification. So, there is a need of enhancement of solubility of such drugs in order to increase its bioavailability, there are several methods for solubility enhancement, but the technique of choice was Mixed solvency method. Mixed solvency refers to the use of various water soluble additives (Propylene glycol, PEG 600, 400, Sodium citrate etc.) together in order to increase water solubility of poorly soluble drug. The simple mechanism here is that the additives are readily soluble in water and when the additives mixed with poorly soluble drug, and then solubilized in water the poorly soluble drug efficiently solubilizes in water, then on its own. In this paper we will evidently see the enhancement of solubility of a poorly soluble drug using mixed solvency method.

Keywords: Angiotensin II type 1 receptors; Angiotensin II receptor antagonist; BCS classification; Bioavailability; Hypertension; Mixed solvency method; Solubility enhancement.

IAIHC-067

Impact of A M-Healthtool On theHealth-relatedquality Of Life of Coronary Artery Disease Patients In A North Indian Clinical Setting

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Abstract
The aim of this study was to compare the impact of a mobile health (m-health) based health education program on the health relatedquality of life of coronary artery disease (CAD) patients in a North Indian clinical setting.Participants were recruited from the Cardiology Out Patient Department (OPD) of a tertiary care hospital in North India. They were randomized, unblinded into an Experimental and Non-Experimental group. The experimental group received the intervention along with usual medical care while the Non-experimental group received only the usual medical care. The intervention comprised of an educational program delivered for 6 months to the experimental group via a smartphone-based mobile application and an SMS program. Health-related quality of life (HRQOL) was assessed using a validated RAND-SF-36 questionnaires. This survey questionnaire was administered at baseline, at 6 months, and at 9 months from recruitment. Statistical analysis was done using R software. A total of 312 patients were enrolled in the study. Analysis of covariance (ANOVA) results shows that during the study duration there was a significant increase in the physical component and mental component scores ($p<0.05$) for the experimental group as compared to the non-experimental group. The results from this study show a positive impact of a mobile-based education intervention on the health relatedquality of life of CAD patients in an Indian clinical setting.

Keywords: m-Health; Coronary artery disease; health-related quality of life; HRQOL; SF36.

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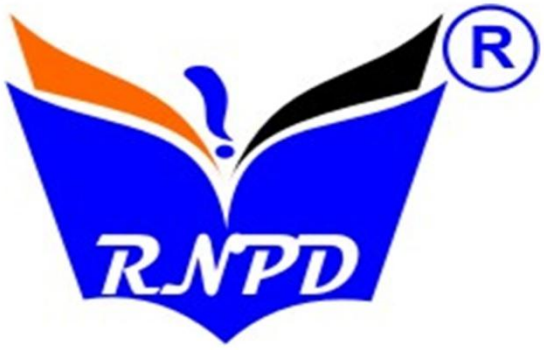

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IAIHC-101
A Validated LC-MS/MS Method for Simultaneous Estimation of Dapagliflozin and Metformin in Tablet Formulation

Aanchal Arora, Amrita Parle, Sahil Kalyan
DPSRU

Abstract:
A highly sensitive, precise and accurate LC-MS/MS method is developed and validated for the simultaneous determination of Dapagliflozin and Metformin in tablet formulation. Chromatographic separation was carried out on Agilent InfinityLabPoroshell 120 EC-C18 (2.1×100 mm, 2.7 µm) column. Isocratic elution was based on 5mM ammonium acetate: acetonitrile (20:80, v/v) as mobile phase, column temperature at 35°C and flow rate at 0.2 mL min-1 were utilized. The mass spectrometer was operated under multiple reaction monitoring (MRM) mode using electrospray ionization by monitoring the transition pair (precursor to product ion) of m/z 426.20-107.20 and 130.10-60.10 for dapagliflozin and metformin respectively in the positive mode. The method was found linear in the concentration range of 25-500 ng/mL for dapagliflozin and 100-2000 ng/mL for metformin. The limit of detection (LOD) and limit of quantitation (LOQ) were 6.83 ng/mL and 20.70 ng/mL respectively for dapagliflozin and 29.45 ng/mL and 89.24 ng/mL respectively for metformin. The optimized method was validated according to the International Conference on Harmonization (ICH) guidelines. The developed method was found suitable for the simultaneous estimation of dapagliflozin and metforminin tablet dosage form.

Keywords: Dapagliflozin; Metformin; LC-MS/MS; Validation; Spectroscopy

IAIHC-102
Method Development and Validation of Antihypertensive Drugs on High Performance Liquid Chromatography – A Review

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Abstract
They may be applied as the idea for decisions discussing to administering the drug to patients, play vital roles in new discovery, development, manufacture of pharmaceutical drugs and various different studies related to human beings and animals. They are various Analytical approach validation required for other drug improvement and production and these HPLC analytical methods are match for their purpose. So here, a simple, precise and cost effective a RP-HPLC method has been developed and validated for the concurrent determination of various Antihypertensive drugs in solid dosage form. Chromatographic separation of drug and the other compounds required certain condition using C18 column, dihydrogen phosphate buffer with certain pH, mobile phase at certain flow rate, gradient/isocratic and the detection of peaks was carried out using U.V wavelength (Eg-212). They are proposed method was validated and evaluated. So that evaluated parameter are Linearity, specificity, precision, robustness, system suitability, force degradation as per the ICH guidelines.

Keywords: RP-High performance liquid chromatography; Method validation; Force degradation.

IAIHC-103
A Review onPrion Diseases

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Abstract
In our body, we have a protein called the prion protein (PrP), and they are misfolded proteins having transmit ability for their misfolded shape onto normal variants of the same proteins. The most common form to affects human is Creutzfeldt-Jakob disease (CJD) and when this protein becomes abnormal and clump in the brain, it damages the brain. Some of the symptoms involved are rapid developing dementia, difficulty walking, hallucinations, fatigue, etc. However, prion C or PRPC is only found in the central nervous system on a molecular level, $PrP^{C}$is an alpha helical shape while other is a beta sheet shape. Now the regular protein is called PrP^{C} and the other one is called prion SC or PrP^{SC}. The problem is that PrP^{SC} convert normal prion to PrP^{SC}as well and then a chain reaction start through which PrP^{SC}can cause modification of brain, this process is not inflammatory. By evacuation of the axon, the neuron will have vacuoles inside them and this will cause spongiform brain so it affects the grey matter now this present as rapid dementia, ataxia and insomnia along with other symptoms. It is important to know that primary function has very long incubation period but once the diseases starts, the progression very quick. If someone is infected with PrP^{SC} and not show any symptom for many years but once symptom starts the progression is very quick.

Keywords: Prion Protein; CJD; PrP^{C}; PrP^{SC}; Dementia; CNS.

IAIHC-104
Severe Acute Respiratory Syndrome (SARS): A Review

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Abstract
Severe acute respiratory syndrome (SARS) is termed as viral respiratory illness that is caused by a coronavirus (SARS-CoV) emerged from China in 2002 as an untreatable and rapidly spreading respiratory illness of unknown etiology and is a contagious and potential fatal respiratory illness or a serious form of Pneumonia. This airborne virus has symptoms like cold and flu and leads to the infection in lungs and respiratory system. The World Health Organization responded by invoking traditional public health

measures and advanced technologies to control the illness and contain the cause and novel corona virus was implicated and its entire genome was sequenced by mid-April 2003. The initial diagnostic tests involved pulse oximetry, blood cultures, sputum gram stain, and Legionella and Pneumococcal urinary antigen test. When the infection established, it causes tissue damage by indirect resulting from host immune response and direct lytic effects on the host cells. Through real time application of accumulating knowledge, the world proved capable of arresting the first pandemic threat of the twenty-first century, despite early respiratory-borne spread and global susceptibility. This review synthesizes lessons learned from this remarkable achievement and can be apply tore-emergence of SARS or to then Ext pandemic threat to arise.

Keywords: Coronavirus; SARS-CoV; Legionella; Pneumococcal

IAIHC-105
Rifapentine: An Antibiotic as Anti-Tubercular Drug

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Abstract
Rifapentine is an antibiotic drug used in the treatment of tuberculosis. Rifapentine was first synthesized in 1965 by the same company that produced rifampicin. It was approved by the Food and Drug Administration (FDA) in June 1998. In active tuberculosis it is used together with other antitubercular medications. In latent tuberculosis it is typically used with isoniazid. The side effects included neutropenia, raised liver enzymes and white blood cells in urine. Serious side effects may include liver problem or clostridium difficile associated diarrhea. It is not clear to give this medicine to a pregnantwoman. Rifapentine is in the rifamycin family of medication and works by blocking DNA-dependent RNA polymerase. The adverse effects of rifapentine are hyperuricemia, urine tract infection, proteinuria and anemia. Drugs may be affected by rifapentine are warfarin, propranolol, digoxin and birth control pills. It is used for the treatment of latent tuberculosis infection caused by mycobacterium tuberculosis in adults and children of 2 years and older who are at high risk of progression to tuberculosis. Active tuberculosis disease ruled out before initiating treatment for latent tuberculosis infection. Rifapentine tablets 150mg must always be used in combination with isoniazid for 12 week once-weekly regimen for the treatment of latent tuberculosis infection.

Keywords: Tuberculosis; Isoniazid; Hyperuricemia; Proteinuria

IAIHC-106
Tissue Healing Through Electrospinning Nanofiber Technology

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Abstract
Severe burns and wounds require successful care of the wound under local and systemic conditions and providing an ideal wound healing environment. Many products have been developed like ointments, lotion, hydrogels, bandages etc. which provide a pathogen-free, protected, and moist area for healing. These traditional styles give a degree of pain and tissue damage. In modern dressing hold a great promise to develop an optimal scaffold through tissue engineering. The tissue engineering field is a field that uses various processing method with natural and synthetic polymers to produce scaffolds for the purpose of regenerating tissues and organs. The biologically active substituents and the structure-function relationships have been combined in both normal and pathological tissues in this study. The collagen fibers are the most abundant natural polymers present in the body and are found in the intestinal spaces where they functionalize the overall structural integrity and strength to the tissues. The collagen structures also are known as extracellular matrix (ECM) which provide an appropriate biological environment to the cells for cell growth, embryologic development, organogenesis and wound repair. Recently, in the development of ECM analogues have led many approaches in nanotechnology. In this review, we used three processing technique to create scaffolds or ECM analogues i.e., self-assembly, phase separation and electrospinning. These scaffolds having advantages of making a true bio mimicking or an ideal tissue environment as well as explore the vast array of investigated material used in the scaffolds.

IAIHC-107
Artificial Intelligence (AI) in the World of Pharmaceutics

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Abstract
Artificial intelligence is a first aid in the pharmaceutics for design and development of novel drug delivery system and enhanced drug discovery process and Better understanding of specific terminology and procedure parameters. AI is the best scientific innovative discovery of targeted formulation for delivery of active ingredients to the targeted site and enhanced the pharmacological activity. AI has a great advantage in reducing the time needed for testing and for the production of drugs, and may even result in lower costs for end consumers. AI is also play the vital role diminishes failure rates in clinical trials for drug studies and ultimately generates superior machines. AI has grown into an integrated approach to the rapidly growing amount of multi-omics knowledge processing, disease risk prevision and identifying potential therapeutic objectives. AI assisted pharmaceutical discovery in which the first step of the value chain that identifies new candidate therapeutics and initial stage of biopharma research and development in which successful candidate meet the regulatory requirements.

Keywords: Artificial intelligence; Omics; Targeted; Novel drug; Pharmaceutics.

IAIHC-108

Quinoline Containing 1,3,4-Oxadiazole: Synthesis, Characterization&Antibacterial Activity

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Abstract
Quinoline (benzopyridine) is bicyclic ring structure containing nitrogen as hetero-atom. Quinoline nucleus is endowed with a variety of therapeutic activities, and new quinoline derivatives are known to be biologically active compounds possessing several pharmacological activity. Whereas, oxadiazole is a versatile nucleus having five membered heterocyclic rings which is further reacted to yield potent bioactive drugs. Generally, quinoline is synthesized by scaffold process while oxadiazole is synthesized by ring condensation and rearrangement reactions. Numerous synthetic routes have been developed for the synthesis of these fused derivatives of quinoline and oxadiazole. Addition of different functional group, hetero atom, or carbon side chain in the nuclei is to yield efficiently potential medicinal compound. The biological activity of these derivatives are found to have antimalarial, anticancer, antibacterial, anthelmintic, antiviral, antifungal, anti-inflammatory, anti-diabetic, anti-microbial, etc. In this current research, 2-Oxo-1-(5-phenyl-[1,3,4] oxadiazol-2-ylmethyl)-1,2-dihydro-quinoline-3-carbaldehyde were synthesized from the initial compound i.e., acetanilide under the influence of phosphoryl chloride. The newly synthesized compounds were characterized with the help of FTIR and NMR spectroscopy. The antibacterial evaluation of compound was carried out by the minimum inhibitory concentration (MIC) of the test substance against Gram negative as well as Gram positive strains. Newly synthesized compound 2-Oxo-1-(5-substituted phenyl-[1,3,4]oxadiazol-2-ylmethyl)-1,2-dihydro-quinoline-3-carbaldehyde was tested for antibacterial activity with 200 and 400 µg/ml, 1, [5-(4-chloro-phenyl) - [1, 3, 4] oxadiazole-2-ylmethyl]-2-oxo-1, 2-dihyroquinoline-3-carbaldehyde was found be highly active compound against salmonella typhi and shigella dysenteriae and 1, [5-(4-amino-phenyl) - [1, 3, 4] oxadiazole-2-ylmethyl]-2-oxo-1, 2-dihyroquinoline-3-carbaldehyde was found highly active compound against Salmonella typhi and vibrio cholera. The moderality active compound in this series was found to be 1, [5-(2-chloro-4-fluoro-phenyl) - [1, 3, 4] oxadiazole-2-ylmethyl]-2-oxo-1, 2-dihyro-quinoline-3-carbaldehyde against Escherichia coli.

Keywords: Quinoline; Oxadiazole; Antibacterial; MIC.

IAIHC-109

Mechanism and Pathways Associated with The Formation of Peptic Ulcer

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Abstract
A peptic ulcer is a chronic acid-induces lesion disease of the digestive tract which is located in proximal duodenum or stomach and represented by denuded mucosa with the extending defect in the muscularis propria or submucosa. The prevalence of peptic ulcer disease affecting 10% of the worldwide population. The common causes of Gastroduodenal ulcer are Helicobacter pylori infection and $NSAID_s$ and rare causes are Acid-hypersecretory states and Malignancy stress. H pylori and uses of aspirin or $NSAID_S$ showing the risk factor for both duodenal ulcer and gastric. The symptoms of peptic ulcer disease having burning epigastric pain the pain occurring on an empty stomach and two or five hours after meals or episodic gnawing and nocturnal pain, antisecretory agents, or antacids. Gastric ulcer formations associated with Up to 15% of patients have H. pylori infection increasing gastric secretion hyposecretion which caused by decreasing antral somatostatin content and hypergastrinemia. This caused histamine secretion, and from gastric cells and parietal cells having increased secretion of pepsin and acid. And also H. pylori assist an increase in somatostatin mRNA expression and a decrease in gastrin mRNA expression. H. pylori is the most common cause and less infectious etiologies such viruses are (Epsteinbarr virus and cytomegalo virus), parasites (Ascariasis and Giardia lamblia) and fungi (histoplasmosis, Cryptosporidium, and Candida albicans). The mechanism of NSAIDs associated with damaging gastroduodenal mucosa which responsible for inhibition of cyclooxygenase-1 (COX-1), which associated by decreasing mucosal blood flow, bicarbonate secretion, low mucus and inhibition of cell proliferation which accountable for prostaglandin synthesis. Mucus phospholipids disrupt by NSAIDs and consisting initiate mucosal damage and uncoupling mitochondrial oxidative phosphorylation.

IAIHC-110

Coronavirus: 21st Century Disaster

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Abstract
Coronavirus are a group of viruses that cause diseases in mammals and birds. In humans, the viruses cause respiratory infections which are typically mild inducing the common cold. The name “coronavirus” is derived from the Latin word corona meaning crown, which refers to the characteristic appearance of the virus particles. Proteins that contribute to the overall structure of all coronaviruses are the spike (S), envelope (E), membrane (M) and nucleocapsid (N).Coronaviruses were discovered in the 1960s; the earliest ones discovered was infectious bronchitis virus in the chickens and two viruses from the nasal cavities of human patients with the common cold that were subsequently named human coronavirus 229E and human coronavirus OC43. Other members of this family NL63 in 2004, HKU1 in 2005, MERS-CoV in 2012 and 2019-nCoV in 2019; most of these have been involved in serious respiratory tract infection. Symptoms of the virus are; runny nose, headache, cough, sore throat, fever etc. There is no vaccine for coronavirus. To help prevent a coronavirus infection, do the same thing you do to avoid the common cold.

Keywords: Respiratory infection; HKU1; MERS-CoV; 2019-nCoV

IAIHC-111
Application of Gel Electrophoresis

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Abstract
Agarose gel electrophoresis is a method of gel electrophoresis used in biochemistry, molecular biology, genetics, and clinical chemistry to separate a mixed population of macromolecules such as DNA or proteins in a matrix of agarose, one of the two main components of agar. The agarose gel electrophoresis is widely employed to estimate the size of DNA fragments after digestion with restriction enzymes, e.g., in restriction mapping of cloned DNA. It hasalso been a routine tool in molecular genetics diagnosis or genetic fingerprinting viaanalyses of PCR products. Separation of restricted genomic DNA prior to Southern blot andseparation of RNA prior to Northern blot are also dependent on agarose gel electrophoresis.Agarose gel electrophoresis is commonly used to resolve circular DNA with differentsupercoiling topology, and to resolve fragments that differ due to DNA synthesis. DNAdamage due to increased cross-linking proportionally reduces electrophoretic DNAmigration. In addition to providing an excellent medium for fragment size analyses, agarose gels allow purification of DNA fragments. Since purification of DNA fragments size separated in anagarose gel is necessary for a number of molecular techniques such as cloning, it is vital to beable to purify fragments of interest from the gel. Increasing the agarose concentration of a gel decreases the migration speed and thus separates the smaller DNA molecules makes more easily. Increasing the voltage, however, accelerates the movement of DNA molecules. Nonetheless, elevating the currency. Hence in the nut shell Agarose gel is useful in DNA analysis.

Keywords: Agarose well; Cross-linking; Gel electrophoresis

IAIHC-112
Sickle Cell Anaemia: A Review

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Abstract
Sickle cell Disease is a group of red blood disorder and it is a problem associated with hemoglobin and it is a protein that is present in red blood cell (RBC) that carries oxygen in the body. In Sickle cell anaemia, the hemoglobin forms into stiff rod within RBC and this leads to the change in the shape of RBC from disc shape to sickle shape. These cells are not flexible and can't change shape easily therefore many of them burst while moving through blood vessels. These cells last only for 10-30 days whereas normal RBC last for 90-100. It generally sticks to the vessel wall and causes blockage that slows down the blood flow, when this happens, oxygen cannot reach to tissue thus causes severe pain. Sickle cell anaemia is caused by point mutation or missense mutation in beta hemoglobin that convert GAG to GUG which codes for valine instead of glutamic acid. It is an autosomal recessive inheritance which means that both the mother and father have defective form of gene or they are carrier of this gene. Stroke, acute chest pain, pulmonary hypertension, organ damage, leg ulcer, gallstone, priapism (long lasting erection) are the symptoms. It can be diagnosed by taking amniotic fluid before the birth of baby or tissue from placenta or blood test can also show the sickle cell trait. The only cure is bone marrow transplant or stem cell transplant but they are too risky, so they are usually used in severe sickle cell disease in children.
There is various treatment to relieve or lessen complication by giving antibiotic, pain relief, childhood immunization, and blood transfusion.

Keywords: Hb;Glutamic acid; Sickle cell anaemia; RBC.

IAIHC-113
Chronic Kidney Disease: Silent Killer for Health

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Abstract
Chronic kidney disease, also called chronic kidney failure, describes the gradual loss of kidney function. Your kidneys filter wastes and excess fluids from your blood, which are then excreted in your urine. When chronic kidney disease reaches an advanced stage, dangerous levels of fluid, electrolytes and wastes can build up in your body. Chronic kidney disease can progress to end-stage kidney failure, which is fatal without artificial filtering (dialysis) or a kidney transplant. Signs and symptoms of chronic kidney disease develop over time if kidney damage progresses slowly. Signs and symptoms of kidney disease may include: Nausea, Vomiting, Loss of appetite, Fatigue and weakness, Sleep problems, Changes in how much you urinate, Decreased mental sharpness, Chest pain, High blood pressure, Shortness of breathing. Chronic kidney disease occurs when a disease or condition impairs kidney function, causing kidney damage to worsen over several months or years. Follow a low-salt, low-fat diet. Exercise at least 30 minutes on most days of the week, have regular check-ups with your doctor, Do not smoke or use tobacco, Limit alcohol, Maintain sugar level & blood pressure as a preventive measure.

Keyword: Kidney failure; Dialysis; End stage renal disease

IAIHC-114
Formulation and Evaluation of Losartan Potassium Microsphere byusing Sodium alginate polymer

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Abstract
The delivery of Oral drug from the decades known as the utmosteffective direction of regime among all the directions that have been traversed for the intrinsic delivery of drugs through different pharmaceutical commodity of various dosage forms and constitute 50-60 % of total drug assembling. This trend is still continuing to be the most preferred routedue to its manifold advantages including ease of ingestion, prolonged release (in some cases), and most important is patient compliance.
The reason that the oral route achieved such popularity may be in part attributed its ease of administration as well as the traditional belief that by oral administration the drug is well absorbed as the foodstuffs that are ingested daily .In fact, the development of pharmaceutical product for oral delivery, irrespective of its physical form involves varying extent of optimization of dosage form characteristics within the inherent constraints of GI physiology.
Microspheres constitute an important part of these particulate DDS by virtue of their small size and efficient carrier characteristics. It would, therefore, be advantageous to have means for providing an intimate contact of the DDS with the absorbing membranes. It can be achieved by coupling bioadhesion characteristics to microspheres and developing novel delivery systems referred to as "bioadhesive microspheres.
The purpose of present review work will to prepare floating microspheres of alginate polymer. A multiple- unit-type oral floating dosage form of alginate polymer will developed to prolong gastric residence time and increase drug bioavailability with decreased GI side effects. The floating microspheres will prepare by ionotropic gelation method dispersing drug with sodium alg0inate and carbopol 934 separately into a mixture of anionic sodium alginate, as primary polymer with oppositely charged counter ion polymer namely HPMC K4M and mixture of both the polymer into a solution of calcium chloride containing acetic acid. The prepared microspheres will evaluated for micrometric properties, % yield, drug loading, drug entrapment efficiency, particle size and shape, buoyancy and in vitro drug release studies.

Keywords: Microspheres, Novel Drug Delivery

IAIHC-115
The Zika Virus: A Review

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Abstract
Zika is the mosquito borne viral disease caused by zika virus (ZIKV), a flavivirus from the Flaviviridae family, initially identified in 1947 in the forest in Uganda in the Rhesus macaque population comprehensive genomic comparison showed different sub-clads reflecting in existence of two main lineage, one African and one Asian lineage. The symptoms in patients are low fever, transient arthritis with possible joint swelling and maculo-papular rah, conjunctional hyperaemia or piaterol non-purulent conjunctivitis with general non-specific symptoms such as myalgia, asttenia and headache. Clinical symptoms of zika disease appear after an incubation period ranging 4 to 12 day. The disease symptoms are usually mild and heart lasting (2-7 day) and infection may go organized or be misdiagnosed as dengue. A high rate of asymptomatic infection with ZIKV is expected, similar to other flavivirus infection, such as dengue and west nile fever. One in for people infected with ZIKV or believed to develop symptoms people are fully recover without severe complication, and hospitalization rate are low. There have been no deaths associate with ZIKV infection.

Keywords: Zika virus; Flavivirus; Aedes aegypti

IAIHC-116
The Application&Utilization of Gamma Scintigraphy as an Important Tool for Evaluating Targeted Drug Delivery Systems

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Abstract
Gamma- scintigraphy has been derived from the Latin word scintilla, meaning "spark". It is also known as gamma scan. It is an identification test in nuclear medicine. In this, radioisotopes are attached to a drug(radiopharmaceuticals) that are taken internally. It then travels to particular organ or tissue and the emitted gamma radiation is captured by external detectors (Gamma cameras) to form two-dimensional images in similar process to the capture of x-ray images. Gamma Scintigraphy is a widely used technique for development and evaluation of targeted drug delivery systems. The radio labeling is generally achieved by the introduction of an appropriate technetium- 99m or indium- 111 labelled radio pharmaceutical into the dosage form. Pharmaco-scintigraphy provides a sequence related to the site of drug release and absorption. Gamma scintigraphy also provides the information related to the disposition, diffusion and moment of the drug in to the body. Gastro intestinal transit measurement can be accessed through Pharmaco-scintigraphy technique. Pharmaco-scintigraphy can also be used to study multiple-dose study. This review discusses the implications of gamma scintigraphy in the estimation of pharmaceutical formulations including the past applications, current uses and future possible scopes of gamma scintigraphy in the assessment of the performance of various targeted drug delivery systems.

Keywords: Gamma-scintigraphy;Indium-111;Iodine12;Technetium-99m.

IAIHC-117
Role of Artificial intelligence in disease Asthma

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Abstract
Asthma is a condition in which a person's airway become inflamed, narrow and swell and produce extra mucus, which makes it difficult to breathe. Asthma is a common condition responsible for a high rate of morbidity and restricted activity. Its prevalence has increased in recent decades and both its causes and the reasons for its increasing prevalence are not well es-tablished. Outbreaks of asthma may provide an

opportunity for identification of risk factors which are potentially pre-vent able. From a public health point of view, outbreaks of asthma are seen within the context of avoidable morbidity and mortality. The prediction of asthma that persists throughout childhood and into adulthood, in early life of a child has practical, clinical and prognostic implications and sets the basis for the future prevention. Artificial Neural Networks (ANNs) seems to be a superior tool for analyzing data sets where nonlinear relationships are existing between the input data and the predicted output. This study presents an effective machine-learning approach based on Multi-Layer Perceptron (MLP) neural networks, for the prediction of persistent asthma in children. Through a feature reduction, 10 high importance prognostic factors correlated to persistent asthma have been discovered. The feature selection approach results in 89.8% reduction of the initial number of features. Afterwards, a feature reduced classifier is constructed, which achieves 100% accuracy on the training and test data sets. Experimental results are presenting and verify this statement.

Keywords: Artificial Neural Network (ANNs); Asthma; Machine Learning: Multi-layer Perceptron (MLP); Prevention

IAIHC-118
Impact of Varicella Vaccination on Hospitalization

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Abstract
Varicella(chickenpox) is a highly infectious viral disease caused by the varicella zoster virus(VZV).After primary infection, the virus are mains dormant in the ganglia(peripheralnerves). Reactivationofthevirusresultsinherpeszoster (shingles).Symptoms includes; blister, scab, skin ulcers, fever, sore throat and swollen lymph nodes. Varicella has an incubation period of 10-21 days, the infection spread in a similar way to cold and flu.In the treatment of the infection of varicella zoster virus anti-viral drugs preferred commonly but the vaccines are also available in the inhibition of the transmission of the infection. Vaccines shows the long-term action with lesser side effect.

Keywords: Varicella zoster virus; Chickenpox; Symptoms; Anti-viral; Vaccines

IAIHC-119
A Review on Parkinson's Disease

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Abstract
Parkinson's disease is a common neurodegenerative disorder affecting the patient in large number throughout the world. Parkinson's disease can be found in very early documents, the first clear medical description was written in 1817 by James Parkinson. Many symptoms and potential therapy mentioned in Ayurveda, the system of medicine practice in India as early as 5000BC.In certain nerve cells (neuron) in the brain gradually breakdown or die and many of the symptoms are due to a loss of neurons that produce a chemical messenger in your brain called dopamine. When dopamine level decreases, it causes abnormal brain activity leading to symptoms of Parkinson's disease. The cause of Parkinson's disease is unknown, but several factors appear to play a role, including, Researchers, have identified specific genetic mutation that can cause Parkinson's disease, some environmental factors triggers and presence of Lewy bodies. It has no blood and laboratory test, difficult to diagnose accurately, generally the onset of Parkinson's disease typically occur between the age of 60-70 also in about 5 to 10% of cases onset occur before age 50.Some other research has shown that people who drinks caffeine, which is found in coffee, tea and cola, gets Parkinson's disease less often than those who don't drink caffeine. Medications may help you manage problems with walking, movement and tremor. This medication increases or substitute for dopamine. People with Parkinson's disease have low brain dopamine concentrations so the medications that effectively works are Carbidopa-levodopa and Dopamine agonists.

Keywords: Parkinson's Disease; Dopamine; Carbidopa-levodopa

IAIHC-120
Ravulizumab&Paroxysmal Nocturnal Hemoglobinuria (PNH)

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Abstract
Ravulizumab is a humanized monoclonal antibody designed for the treatment of paroxysmal nocturnal hemoglobinuria and atypical hemolytic uremic syndrome. Ravulizumab is considered by Alexion Pharmaceuticals Inc. as a "next generation" eculizumab molecule. It was subsequently approved by the US Food and Drug Administration in December 21 of 2018 for a variety of beneficial characteristics that make it an advanced, next generation agent in comparison to eculizumab. The Japanese Ministry of Health, Labour and Welfare (MHLW) Approved ravulizumab as a treatment for adults with PNH on June 18, 2019. In April 2019, the European CHMP of EMA recommended the granting of a conditional marketing authorization for ravulizumab.Paroxysmal nocturnal hemoglobinuria (PNH) is a rare, acquired, life-threatening disease of the blood characterized by destruction of red blood cells by the body's innate immune system. This destructive process occurs due to the presence of defective surface protein DAF on the red blood cells, which normally functions to inhibit such immune reactions. For patients with severe PNH, the only current treatment is eculizumab (Soliris). For patients who do not respond well to the treatment, the only cure is a blood marrow transplant. Ravulizumab (ultomiris) is the first approved, long acting complement inhibitor for PNH, administered every other month, reducing the treatment burden for patients.Ultomiris is subsequently a terminal complement inhibitor that specifically binds to the particular complement protein C5 with high affinity, thereby inhibiting its cleavage to C5a (the proinflammatory anaphylatoxin) and C5b (the initiating subunit of the terminal complement complex [C5b-9]) and preventing the generation of the terminal complement complex C5b9. Ravulizumab inhibits terminal complement-mediated intravascular hemolysis in patients with PNH.
Keywords: Eculizumab; Paroxymal nocturnal hemoglobinuria

IAIHC-121

Antiepileptic Activity of Rubiadin isolated from the Roots of *Rubiacordifolia* Linn.and Standardization of its Formulation

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Abstract
Herbs have a vital role in the prevention and treatment of convulsion. The phytochemical exploration of these herbs has contributed to some extent in this race for the discovery of new antiepileptic drugs (AED). In recent years owing to the fear of side effects people prefer more and more use of natural plant products for convulsions. In the present research Rubiadin was isolated using column chromatography from roots of *Rubiacordifolia. Rubiadin was* also analyzed by spectroscopic methods like UV, IR, NMR and Mass. For antiepileptic effect the isolated Rubiadin suspension as well as whole extract of *Rubiacordifolia* was studied for Pentylene tetrazole (PTZ) & Maximal electro shock (MES) model in Albino mice. Epileptic seizure were induced in mice of either sex and the challenged animals treated with Whole *Rubiacordifolia*root extract & isolated Rubiadin suspension at two doses 100 mg and 250 mg respectively. Rubiadin suspension 250 mg was able to delay PTZ- induced seizures and it is probable that it may be interfering with GABAergic mechanism to exert its effect. In the present work the results show minimal alteration in the level of GABA. The isolated Rubiadin suspension at 250 mg dose showed significant reduction in MES and PTZ induced epileptic seizure which is compared with whole-plant extract in mice.

Keywords:*Rubiacordifolia*; Rubiadin; Epilepsy; Antiepileptic activity.

IAIHC-122

Synthesis&Evaluation of α,β-Unsaturated Ketones(Chalcones)Analogues of Biological Interest

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Abstract
α, β-Unsaturated ketones commonly known as chalcones are an important class of organic compounds being studied over the years and reported to possess wide spectrum of biological properties such as antibacterial, antifungal, antitubercular, antimalarial, anti-inflammatory, antileishmanial, anticancer and antioxidant activities. The presence of enone function in the chalcone molecule confers the biological activity, the importance of which is well documented in the literature. In the present work we synthesized some novel α, β-unsaturated ketones with an aim to obtain some new potent antibacterial and antioxidant agents. The α, β-unsaturated ketones were synthesized by base catalyzed Claisen-Schmidt condensation of ketones having α, α' hydrogens with various aldehydes. Three new series of α, β-unsaturated ketones were synthesized by reacting γ-t-butyl cyclohexanone, γ-phenyl cyclohexanone and γ-ethyl cyclohexanone with different substituted benzaldehydes. The classes of the synthesized compounds are: α, α'-Bis(substituted arylidene)-γ-t-butyl cyclohexanones[1a-j],α,α' Bis(substituted arylidene)-γ-phenyl cyclohexanones [2a-h], The formation of the compounds [1a-j] and [2a-h] were indicated by their UV spectra.The functional groups in the compounds [1a-j] and [2a-h] were characterized by their IR spectra. The number and positions of protons in the compounds [1a-j] and [2a-h] were confirmed by their ^{1}H-NMR spectra. The structures of compounds [1a-j] and [2a-h] were confirmed by their Mass spectra. The structures of the compounds [1a-j] and [2a-h] were further confirmed by their elemental analysis. All the synthesized compounds were screened for their in vitro antibacterial properties against human pathogenic Gram positive and Gram-negative bacteria. Ampicillin was used as the standard. The observations revealed that α, α'-Bis(2,4-dichlorobenzylidene)- γ-phenyl cyclohexanone [2b] showed highest activity against Bacillus subtilis. α,α' -Bis(2,3-dichlorobenzylidene)-γ-t-butyl cyclohexanone [1a] was most active against Klebsiella pneumonia. All the synthesized compounds were also screened for their antioxidant activity using ascorbic acid as the standard by DPPH method. The observations showed that α,α'-Bis(2,4-dimethoxybenzylidene)-γ-phenyl cyclohexanone[2d]exhibited highest antioxidant activity at an EC_{50} of 505 µg/mL.The formation of the compounds α, α'-Bis (substituted arylidene)-γ-ethyl cyclohexanones [3a-h] was indicated by their UV spectra.The functional groups in the compounds [3a-h] were characterized by their IR spectra.The number and positions of protons in the compounds [3a], [3b], [3c], [3d], [3e], [3g] and [3h] were confirmed by their ^{1}H-NMR spectra.The structures of compounds [3a-h] were confirmed by their Mass spectra.The structures of the compounds [3a-h] were further confirmed by their elemental analysis.All the synthesized compounds were screened for their in vitro antibacterial properties against human pathogenic Gram positive and Gram-negative bacteria. Ampicillin was used as the standard. The observations revealed that α, α'-Bis(5-bromo-2-methoxybenzylidene)- γ-ethyl cyclohexanone [3c] exhibited highest activity against Staphylococcus aureus.α, α'-Bis(m-chlorobenzylidene)- γ-ethyl cyclohexanone [3g] showed highest activity against Escherichia coli.

IAIHC-123

Swine Flu: A Review

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Abstract
H1N1 flu is also known as swine flu. It's called swine flu because in the past, the people who caught it had direct contact with pigs. That changed several years ago, when a new virus emerged that spread among people who hadn't been near pigs. In 2009, H1N1 was spreading

fast around the world, so the World Health Organization called it a pandemic. Since then, people have continued to get sick from swine flu, but not as many. While swine flu isn't as scary as it seemed a few years ago, it's still important to protect yourself from getting it. Like seasonal flu, it can cause more serious health problems for some people. The best bet is to get a flu vaccine, or flu shot, every year. Swine flu is one of the viruses included in the vaccine. These, too, are pretty much the same as seasonal flu. They can include: Cough, Body aches, Fever, Sore throat, Stuffy or runny nose, Headache, Chills, Fatigue.

Keywords: Influenza; Demography; Orthomyxovirus; Swine influenza; Pandemics

IAIHC-124
Nanorobotics: Approaches, Applications and Future Prospects

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Abstract
Nanotechnology has major impact in many fields like medicine and electronics. Nanorobotics is an emerging field dealing with minute things at molecular level. They can perform a particular function with precision at nano-scale dimension. Nanorobots in medical and pharmaceutical field would particularly use in the treatment of diseases such as Alzheimer's and Cancer. Nanorobots play a significant role in the field of biomedicine. Nanorobotic technology is also used in the elimination of faulty part in our DNA structure. These nanorobots can also be used as targeted drug delivery system as they are able to carry and deliver drugs into defective cells. Nanorobot is a magnificent tool for future medicine. Various approaches, concepts of design of nanorobot are proposed which shows rapid progression in this field. The aim of this review is to provide brief information about the nanorobotic technology with special focus on prospective applications in terms of pharmaceutical and medical field and the future prospects of this technology.

Keywords: Nanorobots; Nan robotics; Nanotechnology; Biomedical.

IAIHC-125
NOURIANZ (Istradefylline) for the Treatment for Parkinson's disease: A Review

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Abstract
Parkinson's disease is a disorder of the central nervous system that affects movement, often including tremors. Parkinson's disease occurs when nerve cells, or neurons, in an area of the brain that controls movement become impaired and/or die. Normally, these neurons produce an important brain chemical known as dopamine. Nerve cell damage in the brain causes dopamine levels to drop, leading to the symptoms of Parkinson's. Parkinson's often starts with a tremor in one hand. Other symptoms are slow movement, stiffness and loss of balance. Nourianz (istradefylline) an adenosine A2A receptor antagonist, is a nondopaminergic pharmacological treatment. Nourianz is given with levodopa and carbidopa to treat "wearing-off" episodes (muscle stiffness, loss of muscle control) in people with Parkinson's disease. The precise mechanism of action of the drug is unknown but it is presumed to reduce the overactivity of the striatal pathway, restoring the balance of basal ganglia.Developed by Kyowa Kirin, a pharmaceutical and biotechnology company based in Japan, the drug was approved by the Pharmaceuticals and Medical Devices Agency (PMDA) of Japan in 2013. It is being marketed under the brand name NOURIAST in Japan since May 2013. Kyowa Kirin filed a new drug application (NDA) with the US Food and Drug Administration (FDA) for NOURIANZ in April 2007 but received a not-approvable letter in February 2008. The company submitted a revised NDA for the drug in February 2019. The FDA approved the drug in August 2019. NOURIANZ is available as once-daily peach-coloured, pillow-shaped film-coated tablets. NOURIANZ tablets are intended for oral administration only. Each tablet contains 20 mg or 40 mg of istradefylline and the following inactive ingredients: crospovidone, lactose monohydrate, magnesium stearate, microcrystalline cellulose, and polyvinyl alcohol. The film coating contains hypromellose, lactose monohydrate, polyethylene glycol 3350, titanium dioxide, triacetin, and the following dyes: iron oxide red and iron oxide yellow. Carnauba wax is used for polishing.

Keywords: Nourianz; Parkinson's disease; Nouriast; Istradefylline

IAIHC-126
Role of Immunity in The Pathophysiology of The Ebola Virus and Role of Vaccines

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Abstract
Ebola virus disease (EVD), formerly known as Ebola hemorrhagic fever, is a severe, often fatal illness affecting humans and other primates. The virus is transmitted to people from wild animals (such as fruit bats, porcupines and non-human primates) and then spreads in the human population through direct contact with the blood, secretions, organs or other bodily fluids of infected people, and with surfaces and materials (e.g. bedding, clothing) contaminated with these fluids. Symptoms of EVD can be sudden and include: fever, fatigue, muscle, pain, headache, and sore throat. This is followed by vomiting, diarrhea, rash, symptoms of impaired kidney and liver function, and in some cases internal and external bleeding (e.g. oozing from the gums, blood in the stools). Laboratory findings include low white blood cell and platelet counts and elevated liver enzymes. A range of potential treatments including blood products, immune therapies and drug therapies are currently being evaluated. An Ebola vaccine is highly protective against the deadly virus.

Keywords: Ebola virus diseases; Immunity; Pathophysiology; Symptoms; Vaccines

IAIHC-127
Artificial Intelligence in Clinical Research

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Abstract
In computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. The purpose of Artificial Intelligence (AI) is to make computers more useful in solving problematic healthcare challenges. The software development exploits the potential of human intelligence such as reasoning, making decision, learning (by experiencing) and many others. helps in early detection of various chronic diseases which reduces economic burden and severity of disease. Various automated systems and tools and various algorithms helps to minimize errors and control disease progression. AI has the potential to transform key steps of clinical trial design from study preparation to execution towards improving trial success rates, thus lowering the pharma R&D burden. It aims to mimic human cognitive functions. It increases availability of healthcare data and rapid progress of analytics techniques. We summarize the past health research in AI, and discusses the current strengths as well as methodologies, techniques and challenges, relating to this emerging technology. Popular AI techniques include machine learning methods. In this we outline recent breakthroughs in AI technologies and their biomedical applications, identify the challenges for further progress in medical AI systems.

Keywords: Artificial intelligence; Machine learning; Patient recruitment; Trial design; Cohort selection; methodologies used; Patient monitoring; Techniques used in AI; Outcomes; Challenges

IAIHC-128
Development and Evaluation of blended cinnamon oil and salicylic acid nano emulsion for autoimmune topical treatment

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Abstract
Many topical problems have converted to autoimmune chronic inflammatory diseases. Previously through many systems like unani, siddha, etc. trying to treat this disease but mostly every system found only they can cure not treat. In this disease phagocytic reaction starts and result will be cell death. We are going here to do work for making new formulation with the help of herbal drug that will work topically and stop our problem statement which is covering skin problems. We will go with blended cinnamon oil and salicylic acid in the form of nonoemulsion and target to the topical problems. We will use here for release system and cover to the objective of studies. Formulation is totally based on herbal medicament with the addition of herbal immunomodulators. We are trying to maintain here pH, viscosity, physical parameters, antibacterial activity and zone of inhibition. Most of the cases we need to maintain its viscosity and keep it on free of bacterial growth for better efficacy.

Keywords: Autoimmune; Nano-emulsion; Antibacterial; Topical

IAIHC-129
Autism Spectrum Disorder (ASD): Curse to Future Generation

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Abstract
A serious developmental disorder that impairs the ability to communicate and interact, that begins early in childhood lasts throughout a person's life. Autism spectrum disorder impacts the nervous system and affect the overall cognitive, emotional, social, physical health of affected individual. In 2018 the CDS determined that approx. 1 in 59 children is diagnosed with an autism spectrum disorder. It is found that boys are four times more likely to be diagnosed with autism than girls. Most children after age 4 can be reliably diagnosed as early as age 2. Average life span of person diagnosed with ASD is found to be 53.87 years compared with 70.2 years for people without ASD. People with low functioning ASD on average died before they reached 40. The range and severity of symptoms can vary widely. Common symptoms include difficulty in communication, social interaction, obsessive interest and repetitive behaviour. People may experience behavioural, developmental, cognitive, phycological changes anxiety, change in voice, sensitivity to sound. ASD can be minimize by having some life time changes including Well balanced meals, exercise, lifestyle changes, good pre-natal care, take all supplements of vitamins prescribed by gynaecologist. The patients are given therapy by occupational therapist, speech therapist, neurologist, psychiatrist, clinical psychologist, paediatrician and primary care provider (PCP). Therapies includes anger management, family therapy, behaviour therapy Sensory processing, tele practice etc.

Keywords: Occupational Therapist; Speech Therapist; Neurologist; Psychiatrist; Clinical Psychologist; Paediatricians

IAIHC-130
Telepharmacy: A New Concept for Pharmacy Profession

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Abstract
The word “tele” is a term of Greek language “Telos” which is used for “at a distance”, so Telepharmacy is a distribution of medication and providing pharmaceutical care using telecommunications to patient at a distance by a registered pharmacist. Intel pharmacy profile

pharmacist play a crucial role in the supply of pharma services. Pharma professional can minimize the adverse drug event by reviewing the medication orders. This concept is rapidly growing field, which has a very good focused impact on healthcare delivery in many areas. Backwoods area and communities, generally lack of easy access to Pharmaceutical care services due to some geographical and demographical factors, thus it is a rapidly increasing area in rural zone which include communication between pharmacist and patient. The objective of this review is to find out how telepharmacy is recently being practiced within rural zone and community, its usefulness, and how it is being control. on the other hand, it can minimize travel time and other extra expense, which are major obstacle for elderly and disabled veterans of rural community. Now a day, it is still a new approach, and there is a slow implementation of new laws to regulate this field, although professional and technical innovations are being used.

Keywords: Pharmacist; Pharmaceutical care; Patient counseling; Rural area; Telepharmacy

IAIHC-131
Solubility Enhancement of Poorly Water-Soluble Curcumin by Solid Dispersion of Polaxomer 407 & Lactose.

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Abstract
Curcumin is a highly lipophilic drug that shows degradation at alkaline pH which restricts its oral bioavailability. The objective of this study is to enhance the oral bioavailability of curcumin by increasing its solubility and dissolution. The solid dispersion of curcumin was prepared using polaxomer407 and Lactose by melting method. Solubility as well as the dissolution of curcumin were significantly increased. Solid dispersion preparation transformed curcumin into amorphous form and facilitated micellar incorporation, therefore it prevents the hydrolysis of curcumin in aqueous medium. The release of plain curcumin was found to be 6.54% & 7.56% in acidic and alkaline pH respectively buffer whereas the prepared solid dispersion has release of 88.12 % in acidic and alkaline pH. Physical characterization was done like physical characteristics, drug content, in-vitro drug release profile, flow properties and solubility studies shown the enhanced drug solubility in comparison to the pure curcumin. Dissolution studies demonstrated that pH values influenced the release profile of the drug.

Keywords: Curcumin; Solid dispersion; Bioavailability; Lactose; Polaxomer407

IAIHC-132
Trikaft& the Treatment of Cystic Fibrosis: A Review

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Abstract
Cystic fibrosis is a rare, progressive, life-threatening condition that results in the formation of thick mucus that affects the lungs, liver, gastro intestine (GI) tract, sinuses, sweat glands, pancreas and reproductive system. The disease is caused by defective or missing cystic fibrosis transmembrane conductance regulator (CFTR) proteins that result from mutations in the CFTR genes. F508del mutation is the most common among 2,000 known mutations of CFTR genes. TRIKAFTA is the first triple combination therapy containing elexacaftor, ivacaftor and tezacaftor, indicated for the treatment of cystic fibrosis (CF) in people aged 12 years and above with an F508del mutation and one minimal function mutation. The elexacaftor and tezacaftor contained in TRIKAFTA bind to the CFTR protein and facilitate the cellular processing of F508del-CFTR. The combination helps in increasing the amount of CFTR protein delivered to the cell surface, while ivacaftor aids in the gating of the CFTR protein at the cell surface. The combined effect of the three drugs boosts the amount and function of F508del-CFTR at the cell surface. Developed by Vertex Pharmaceuticals, the new drug application (NDA) for TRIKAFTA was accepted for review and granted priority review status by the US Food and Drug Administration (FDA) in August 2019. The FDA approved the drug in October 2019. The drug has also received breakthrough therapy and orphan drug statuses from the FDA. TRIKAFTA is available as a fixed-dose tablet containing elexacaftor 100mg, tezacaftor 50mg and ivacaftor 75mg. A marketing authorisation application (MAA) for the drug has also been submitted to the European Medicines Agency (EMA). The company is evaluating the drug in a phase three trial for people aged between six and 11 years with F / MF and F / F mutations. It also plans to evaluate the efficacy of the drug in children below the age of six years in future studies.

Keywords: Cystic fibrosis; TRIKAFTA; EMA; Mutation

IAIHC-133
Aetiologyof Parkinson's Disease

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Abstract
Parkinson's disease (PD) is an eternal degenerative disorder of the central nervous system that mainly affects the motor system. It is generally characterized by the massive and progressive degeneration of dopaminergic neurons in the substantia niagra (SN) and as the disease worsen, non-motor symptoms become more common and the symptoms emerge slowly. Some of the symptoms involved are shaking, rigidity, difficulty in walking, problem in sleeping, thinking, behavioral and emotional, depression, etc. The onset of the Parkinson's disease is over the age 60 and the risk factors are environmental factors such as exposure to pesticide and a history of head injury and low concentrations of urate in the blood serum are associated with an increased risk of PD. At least 17 autosomal dominant and autosomal recessive gene mutations have been implicated in the development of PD, including SNCA, LRRK2/PARK8, GBA, PRKN, VPS35, EIF4G1, CHCHD2 and UCHL1. The main pathological characteristics of PD are cell death in the brain's basal ganglia and the presence of Lewy bodies in many of the remaining neurons. This loss of neurons is accompanied by the death of astrocytes and significant increase in the number of microglia in the substantia niagra. Five major pathways in the brain connecting other brain areas with basal

ganglia are motor, oculomotor, associative, limbic & orbitofrontal circuits. The major treatment or medications involved in Parkinson's disease is L-DOPA, dopamine agonist and life expectancy are approximately 15 years and the death rates are 117,600 till 2017.

Keywords: Parkinson's disease (PD); Substantia niagra; Levodopa.

IAIHC-134
Rejuvenating of Benzthiazoleas an Anti-Convulsant Agents

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Abstract
Only miracle can show magicful result as similar benzthiazole. Benzthiazole is a chemical moiety which consist of 5-membered,1-3 thiazole ring fused to a benzene ring. Nine atoms of bicyclic and the attached substituents are coplanar. Benzthiazole is one of the most active pharmacophores of medicinal chemistry. Convulsant is a chronic disorder of the brain, characterized by the periodic and unpredictable occurrence of seizures. Convulsant affect around 1–2% of the world population including the fact that the convulsions of approximately 25% of epileptics are inadequately controlled by medication. Epileptic seizure is a transient occurrence of signs and symptoms due to abnormal excessive or asynchronous neuronal activity in the brain. One can find its application in various field as antimicrobial, anticancer, anthelminthic, antidiabetic, antitubercular, anticonvulsant, anti-oxidant, anti-inflammatory, antifungal, anti-psychotic activities. And shows more potents activity toward the convulsant. In the search of new anti-convulsant agents having benzthiazole nucleus, a large number of benzthiazole derivatives were evaluated by Medicinal Chemist for anticonvulsant activity and found to possess significant activity against various types of seizures.

Keywords: Benzthiazole; Anti-Convulsant; Coplanar; Asynchronous

IAIHC-135
Retinitis Pigmentosa (RP): A Review

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Abstract
Retinitis pigmentosa (RP) is a group of rare, genetic disorders that involve a breakdown and loss of cells in the retina — which is the light sensitive tissue that lines the back of the eye. RP is considered a rare disorder. Although current statistics are not available, it is generally estimated that the disorder affects roughly 1 in 4,000 people, both in the United States and worldwide.RP is an inherited disorder that results from harmful changes in any one of more than 50 genes. These genes carry the instructions for making proteins that are needed in cells within the retina, called photoreceptors. Some of the changes, or mutations, within genes are so severe that the gene cannot make the required protein, limiting the cell's function. Other mutations produce a protein that is toxic to the cell. Still other mutations lead to an abnormal protein that doesn't function properly. In all three cases, the result is damage to the photoreceptors. Common symptoms include difficulty seeing at night and a loss of side (peripheral) vision. Retinitis pigmentosa usually starts in childhood. But exactly when it starts and how quickly it gets worse varies from person to person. Most people with RP lose much of their sight by early adulthood. Then by age 40, they are often legally blind. Because rods are usually affected first, the first symptom you may notice is that it takes longer to adjust to darkness (called "night blindness) There's no cure for retinitis pigmentosa, but doctors are working hard to find new treatments. A few options can slow your vision loss like acetazolamide, Vitamin A palmitate, sunglasses.

Keywords: Vitamin A palmitate; Acetazolamide; Mutation; Photoreceptors

IAIHC-136
Complication of Diabetes Mellitus and Pathways Associated with their Progression

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Abstract
Diabetes is a condition in which blood glucose level increase after meal malfunction and deficiency of insulin leads to diabetes. Diabetes is signalized by immedicable hyperglycemia with discompose of protein, fat and carbohydrate metabolism and is connected with most ordinary long-term diabetes associated with damage and dysfunction and failure of different organs, particularly the eyes, hearts, nerve, and kidney. The American diabetes association has classified the population into some groups like type 1 diabetes mellitus, type 2 diabetes mellitus, and gestational diabetes. Complications of diabetes have developed into serious problems for public health. These complications are damaged injury healing for diabetic persons. Molecular signals and lack of cellular required in normal injury healing processes like the formation of granulation tissues, epithelization, angiogenesis, and remodeling can be the cause for the low healing of diabetes injury. Diabetes complications may be divided into acute groups and chronic groups. A complication of acute includes hyperosmolar non-ketosis, lactic acidosis and DKA (diabetic ketoacidosis). Complications of chronic could be either microvascular like retinopathy diabetic, neuropathy diabetic and eye disease diabetic or macrovascular (myocardial infarction, gangrene, stroke). A complication of diabetics like cardiovascular, nephropathy, neuropathy and retinopathy disease arise, in both diabetes of Type 1 and Type 2. The molecular pathways associated with their progression are not fully understood but, molecular pathways are set to be correlated with oxidative stress, environmental, genetic, habitual, inflammation, and mitochondria dysfunction. The development of resistance of insulin by beta-cell dysfunction, oxidative stress, inflammation, physical inactivity, dyslipidemia, JNK and IKKβ, hyperglycemia, genetic factors, and mitochondria dysfunction.

Keywords: Diabetes mellitus; Beta-cell dysfunction; Neuropathy; Nephropathy; Retinopathy; Cardiovascular disease; Oxidative stress; Inflammation; Mitochondria dysfunction

IAIHC-137

To Evaluate In Vitro Antioxidant and Acetylcholinesterase Inhibitory Activity of Selected Indian Medicinal Plants

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Abstract
We evaluate D-acetyl cholinesterase inhibitory activity and antioxidant of *Achyranthusaspera*, *Psidiumguajava*, *Anthocephaluscadamba*, *Carissa carandas* and *Caesalpiniabonduc*plants extract using different solvents by autographic assay (TLC method), microplate assay (Ellman's method), Human erythrocyte acetylcholinesterase inhibition assay (Modified Ellman's method) and DPPH method. The autographic assay of acetylcholinesterase inhibition activity (AChEI), result shows that *Caesalpiniabonduc* has a very strong intensity of AChI activity as a comparison to the other Indian medicinal plants. Quantitative evaluation of AChE inhibition by microplate assay shows that all the plant extracts contained some level of inhibitory activity against AChE. The higher activity of the methanol extracts may suggest that organic solvents can extract more active compounds with possible AChE inhibitory activity. The IC50 values of the plant extracts indicating AChE inhibitory activity. A Low IC50 value is indicative of good inhibition of the enzyme. The organic extracts of *Caesalpiniabonda*chad the lowest IC50 value, indicating that it contained the best inhibition of the enzyme. The inhibitory activities of natural medicinal plants against human erythrocyte AChE inhibitory assay resulted that *Caesalpiniabonduc* was found to be the most potent inhibitor of AChE among all tested compounds, though its inhibitory activity was not comparable to that of the reference inhibitor compound (galanthamine). On the other hand, *Anthocephaluscadamba* and *Psidiumguajava* showed lower inhibitory activities. The antioxidant activity showed that *Psidiumguajava*more powerful antioxidant than other extracts.

IAIHC-138

Application Retirement from The Routine Usages in the Pharmaceutical Industry

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Abstract
The current automation system of industries were updated from manual working to automation for better compliance, more accuracy, accurate data along with result. Earlier these activities in industries having some legacy system that were not suitable as per the current industries scenario. Hence that software or the application needs to be removed or to be updated. In some cases, suppliers were not supposed to have improvement in the legacy system hence it lead to New purchases and installation. It is very important to verify the old software compliance along with functionality before uninstalling the application, new application or software may not be supporting old data and there may be chances of data corruption which may not be restorable hence the Instrumentation technology need to work on both basis because data is the indirect property of the organization.

Keywords: Legacy system; Data integrity; Pharmaceutical industries

IAIHC-139

Revolutionary practices of providing the drug in rural area through telemedicine

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Abstract
The utility of telecommunication technologies and their information has developed at a rapid rate, which has a strong impact on healthcare delivery in many countries. Telepharmacy define as healthcare services that enable pharmaceutical services, such as patients counseling, medication review, and prescription verification under qualified pharmacists for the patients situated in a remotely located hospital, healthcare center or pharmacy. Likewise, India has surrounded by a large number of badly equipped hospitals with finite specialists where telemedicine could revolutionize health care. The telemedicine plays a potential role in avoiding the frame of travel helps in timely getting specialist advice to remote areas, reducing the cost and provide an opportunity to learn from each other about healthcare. This review focuses on the case study done on telepharmacy i.e. Express ECG successfully improves the quality of rural health services in India. Apollo Telemedicine Networking Foundation developed by Apollo hospital which linked with and made telemedicine in India which is a new approach to show their corporate social responsibilities. Tele-stroke has significant advancement in the field of management of neurological disorders with the ability to optimize health care across all grades of society. The mobile phone-based telemedical through health care represents an economically feasible approach. Hence, this review highlighted an advanced system that can change the practice of pharmacy essential for both the hospitals, the rural communities and retail pharmacies that deliver these services.

Keywords: Telepharmacy; Healthcare services; Pharmacist; Challenges; Clinical benefits

IAIHC-140

A Review: Benzimidazole Bearing Quinoline Derivatives as an Antiproliferative Agent

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Abstract
Hybridization of moieties are in research since many years. Quinoline and benzimidazole both individually yields derivatives to treat cancer cells in the body. Quinoline is bicyclic ring structure containing one nitrogen hetero atom while benzimidazole is the fusion of imidazole with benzene ring. From the literature study, benzimidazole and quinoline derivatives are core scaffolds widely present in many classes of drugs (of natural or synthetic origin), displaying a large variety of interesting biological activities like antimicrobials, anti-fungus, anti-inflammatory, antihypertensive, anti-neuropathic, antihistaminic, etc.; anticancer and anti-TB also included.Neoplasm is an abnormal mass growth of tissue and is uncoordinated with that of the normal tissue and persists in the same excessive manner after the cessation of the stimuli which evoked the change. The Indian Council of Medical Research has recently projected that India is possibly looking at over 17 lakh new cases of cancer and over 8 lakh deaths related to the disease by the year 2020. Now a day number of anticancer drug are available. But all the drug has lot of adverse drug reaction. Reaction of benzimidazole derivative with quinoline derived compound to synthesized a combined hybrid compound along with their characteristic's identification for the determination of their potentially bioactive properties against tumour cells.

Keyword: Quinoline; Benzimidazole; Tumour cell

IAIHC-141

Cardiovascular Safety Profile of Beta Carotene Along with Diclofenac in Doxorubicin Induce Cardiomyopathic Rats

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Diclofenac sodium (DICLO), Non-steroidal anti-inflammatory drugs (NSAIDs) are among the most widely used medication because of their demonstrating efficacy in reducing pain and inflammation, has been show cardiotoxicity. Doxorubicin (DOX), an anthracyclines antibiotic, which is widely used as antineoplastic drug, has been show to induce cardiotoxicity. In the present study, Beta carotene, a powerful antioxidant was investigated on DICLO induced and DOX-DICLO induced cardiotoxicity in rats.To investigates the effect of beta carotene in DICLO and DICLO-DOX induce cardiotoxicity.Adult male albino rats of Wistar strain were administered DOX(cumulative dose of 15 mg/kg divided in 3 equal doses, IP on 1st day, 5th day and 10th day) and DICLO (10 mg/kg, p.o for 14 days) induce cardiotoxicity manifested biochemically by a significant changes in serum creatine phosphokinase and lactate dehydrogenase. Moreover, cardiotoxicity was further confirmed by significant increase level of tissue TBARS and CAT associated with the decrease level of myocardial endogenous antioxidant (GSH and SOD). The cardiomyopathy was further confirmed by microscopy exhibiting disorganization myofibrils and vacuolization in myocardium. Administration of Beta carotene (20mg/kg, p.o for 14 days) produce significant protection against cardiotoxicity induce by DICLO alone and in combination with DOX. Beta carotene reduce cardiotoxicity induce by the DICLO and DICLO- DOX combination confirmed by the significant changes in serum marker enzyme like LDH, CK-MB and tissue TBARS and CAT associated with the significant decrease in endogenous antioxidant (GSH and SOD). The myocardial protection was further confirmed by microscopy exhibiting no vacuolization and regular myofibrils arrangement in the groups.

Keywords: Antioxidant; Cardiotoxicity; Endogenous; Myofibrils; NASIDs.

IAIHC-142

Artificial Intelligence (AI) in Genetic Rare Diseases

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Abstract
Genetic rare diseases, which are severely underrepresented in basic and clinical research, can particularly benefit from AI technologies. Artificial intelligence (AI), with an emphasis on deep learning, holds great promise in genetic rare diseases and is already being successfully applied to basic research, diagnosis, drug discovery, and clinical trials. The ability of AI technologies to integrate and analyse data from different sources (e.g., multi-omics, patient registries, and so on) can be used to overcome challenges (e.g., low diagnostic rates, reduced number of patients, geographical dispersion, and so on).Patient care will always begin and end with the doctor. By harnessing the power of technology, AI can quickly and accurately determine the root cause of genetic diseases and can transfer critical information to intensive care physicians, so that they can focus on personalizing care for babies who are struggling to survive. According to the Global Genes organization, eight out of ten rare diseases are caused by a faulty gene, yet it takes an average of 4.8 years to arrive at an accurate diagnosis. Neither is this situation helped by the fact that 95% of rare diseases lack an FDA-approved treatment. AI and machine learning have been emerging in recent years as new promising tools in the fight against uncommon pathology. Ultimately, genetic rare diseases AI-mediated knowledge could significantly boost therapy development. Presently, there are AI approaches being used in genetic rare diseases and this review aims to collect and summarize these advances. Therefore, AI can serve as a potential study model for other common diseases and genetic rare diseases. And at a time when these diseases are all-too often being neglected by hospitals because every person's DNA contains millions of genetic variants that are harmless, and geneticists in labs have to identify the single causative variant for the diseases out of all of those variants, and in most of the cases they don't have the resources to deal with them, this is certainly an area where most of us will welcome the encroachment of AI and machine learning into our lives.

Keywords: Artificial intelligence; Diagnosis; Gene; Geneticists; Genetic variants; Rare disease

IAIHC-143
Influence of Robotics in The Field of Surgery

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Abstract
Robotic technology is expected to play an increasingly important role in the future of surgery. A surgical robot is a self-powered, computer-controlled device that can be programmed to aid in the positioning and manipulation of surgical instruments, enabling the surgeon to carry out more complex surgeries most of the repair work inside the body by passing tiny video cameras and tools through small incisions. Robotic surgery has successfully addressed the limitations of traditional laparoscopic and thoracoscopic surgery thus allowing completion of complex and advanced surgical procedures with increased precision ina minimally invasive approach.Robotic surgery is a type of minimally invasive surgery. "Minimally invasive" means that instead of operating on patients through large incisions, miniaturized surgical instruments fit through a series of quarter-inch incisions which is more detailed 3-D view of the operating site than the human eye can provide.It provides the surgeon 7 degree of freedom which leads to improved skills & minimum degree of error. The surgery done is highly precised which leads to less operation time, fatigue & less loss of blood. The advantages of these systems are many because they overcome many of the obstacles of laparoscopic surgery. They increase dexterity, restore proper hand-eye coordination and an ergonomic position, and improve visualization in addition, these systems make surgeries that were technically difficult or unfeasible previously, now possible. But the technique is too expensive as well requires highly skilled &trained individual.Various techniques to be used in the field of robotic surgeries are da Vinci system, Raven II robots, ROBODOC, PROBOT etc. Application of robotic surgery in various conditions have been successfully treated using Robotic-assisted surgery such as General surgery, Gynaecologic surgery, Heart surgery, Colorectal Surgery, Urologic surgery, Endometriosis, Head and Neck (Transoral) surgery, Thoracic surgery etc.So it is a boon to mankind that helps to proceed surgeries through the robotics without any complications involved.

IAIHC-144
Effect of Ferrocene on Properties of Liposomes with Application in Imaging

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Abstract
Liposomes are among the most promising drug delivery systems for delivery of drugs. Whether in the un-targeted or targeted form, liposomes efficiency depends on the compactness of the liposomes. Compactness and uniform distribution of size plays important role in the pharmacokinetics of liposomes. Cholesterol has been the molecule of choice which is reported to render the liposomes with compact sizes. In order to make liposomes better suited for sensing especially redox signalling, we intend to study the variation on liposomal properties after introduction of ferrocene, both in absence and presence of cholesterol.

IAIHC-145
Artificial Intelligence-Future Education System

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Abstract:
The rapid advancement of technology, such as Artificial Intelligence (AI) and robotics, has impacted all industries, including education. Artificial Intelligence (AI) as an idea seems to have caught the imagination of both industry and academia alike. Although AI-related academic research has been in place since the late nineties but it is recently that products and services inspired by AI have emerged out of labs into our daily routine activities. The pharmaceutical formulation process is highly specialized and requires specific domain knowledge and often years of experience. Such accuracy can be achieved when neural computing, machine learning, knowledge-based systems and expert systems are derived from research labs into the tutoring system in institutions. This can assist in the efficient knowledge impartment to students for the formulation of products and increase their hands-on expertise. This would also help improve consistency and quality of the skills. This paper discuss how Artificial Intelligence is going to make a difference in classroom teaching as well as make the students technically sounder**.**

Keywords: Academia; Artificial-intelligence; Classroom-Teaching; Pharmaceutical-formulation; Tutoring system

IAIHC-146
A Review on Designer Foods

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Abstract
'Designer food', 'functional food' and 'fortified food' are synonym, which refers to the food fortified or enriched with nutrient content already present in them or another complementary nutrient. These foods are similar in appearance to normal foods and are consumed regularly as a part of diet. There are number of designer foods available such as designer egg, designer milk, designer grains, probiotics, and designer foods enriched with micro and macronutrients and designer proteins. Designer foods are produced by advance biotechnology, biofortification of foods using technologies such as recombinant DNA technology and fermentation procedures. We are now learning how food can have a significant impact on various chronic diseases and this changes the public perception on food that all processed food was harmful. This promise can be dangerous as we all are very excited about the potential of phytochemicals to enhance the quality of life but we must be cautious not to over promise the public with prevention or cures that are not carefully documented and substantiated by carefully controlled clinical research.

IAIHC-147
Nanorobotics in The Treatment of Cancer
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Abstract
According to World Health Organization cancer is the one of the most dreadful disease. Radiation Therapy & Chemotherapy are using which causes many side effects. This abstract giving an overview of the present status of nanorobotics in cancer therapy. Nano technology is the science of manipulating matter at very small size(nanorobots). Nanorobots are made up of bio-nano components, which carry drug at the target sites. Nowadays, These Nanorobots play a crucial role in the field of Bio-Medicine, particularly for the treatment of cancer to save Human Lives. Nanorobots with embedded chemical biosensors are used for detecting the tumour cells in the early stages of Cancer Development inside a patient's body. These nanoparticles destruct the growth of cancer cells without disturbing the healthy cells and also decrease the side effects of chemotherapy. According to the study, the treatment was successful in shrinking the tumors& inhibiting their spread. Nanorobots have a great future in the treatment of Cancer.

IAIHC-148
Artificial Intelligence Assisted Designing of Pharmaceutical Experiments
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Abstract
The design of experiment (DoE) is one of the optimization techniques to achieve quality formulation. Optimization is the process of selecting and using the best feature out of some available package. The pharmaceutical Quality by Design is a technique to develop quality products with pre-set goals and quality risk management. The purpose of experimental designs can be full-fill by software 'Design Expert'. Design expert software is an artificial intelligence-based research tool that creates experimental designs on the bases of statistical data. Design expert provides the minimum possible number of trials and it optimizes the process by selecting each level of independent variables. This software has many statistical designs like full factorial, response surface and mixture designs in which response surface design is widely used. The response surface also includes designs like central composite and Box-Behnken. Initially, the factors and responses, which are to study, loaded into the software to obtain the number and compositions of experimental trials. On the bases of these trials, experimental work is performed and obtained data is again fed into software to select optimum trial with maximum desirable value. Besides design experts, many other softwares are also used for the optimization of pharmaceutical products to improve product quality by utilizing the most appropriate facilities available.

Keywords: Design Expert; Experimental Designs; Optimization; Quality by Design

IAIHC-149
A Review on *Juglans regia* Linn.
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Abstract
Juglans regia is a medicinal plant that has been widely used in Indian system of medicine, belonging to the family Juglandaceae. It is commonly known as English walnut, Persian walnut and common walnut. Several medicinal properties of walnut are present in different parts of the plant such as leaves, fruits, flowers, seeds and bark. Oil of this plant is widely used in ayurveda, homeopathic, unani and allopathic system of medicines. Walnut contains a variety of nutritional compounds such as vitamin E&C, polyphenols, carbohydrate, proteins, fibers and fatty acids. It is found in different varieties such as Black walnut (Juglans nigra), butternut/white walnut (Juglans cinerea), English/Persian walnut (Juglans regia). It is widely found in china, United State, Japan, Sri Lanka, Arunachal Pradesh and Himachal Pradesh. It is used in many diseases and believed that it has Anti-microbial, Antimycobacterial, Anti-oxidant, Anticancer, Anti diabetic, Anthelmintic, Anti-inflammatory, Anti-depressant, Hepatoprotective, Anti-ulcer, Anti-ageing, Hypocholesteremia, Gastroprotective activities etc. It is used as traditional medicine for the treatment of cardiovascular diseases, dental plaque, reduce cholesterol level, blood purifier, regulate the immune system. The various parts of the plant contain juglone, polyphenols, alkaloids, flavonoids, saponins, tannins etc. Juglans regia L. is available in market in varieties of formulations such as (i) topical formulations like walnut oil, face wash, exfoliating scrub, soap, shampoo, hair color (ii) Oral formulations like capsules, tincture, dilutions and shell powder. This review highlights the useful information about Juglans regia Linn.

IAIHC-150
Design of novel HDAC inhibitors using pharmacophore modeling, virtual screening, docking and molecular dynamics (MD) simulation studies
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Abstract
Histone deacetylase (HDAC) over expression is accountable for generation of cancer by enhancing epigenetic silence of tumour suppressor genes. The HDACs are critical epigenetic drug targets that have gained major attention in scientific community for the treatment of cancer. The currently marketed HDAC inhibitors lack selectivity for the various HDAC isoenzymes. The present protocol efforts to identify novel hydroxamic acid based HDAC inhibitors through pharmacophore modeling, virtual screening, docking, molecular dynamics (MD) simulation and toxicity studies. The ten-pharmacophore hypothesis were established, and their reliability was validated by different ROC

analysis. Among them, best model (Hypothesis 4) was employed for search SCHEMBL, ZINC and MolPort database to screened out hit molecule as selective HDAC inhibitors,followed by different docking stages. MD simulation and MMGBSA study were performed to further study the stability of ligand binding modes and with the help of trajectory analysis to calculate the ligand receptor complex rmsd, rmsf and h-bond distance. The amalgamation of these approaches provides remarkable hints for the design and development of novel and effective hydroxamic acid based HDAC inhibitors.

Keywords: HDAC inhibitor;Pharmacophore modeling; MD simulation; Hydroxamic

IAIHC-151
Cerebral Palsy (CP): A Review

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Abstract
Cerebral Palsy means 'brain paralyses. It is a congenital non-contagious disorder that affects movements and body position. It comes from brain damage that happened before birth. The whole brain is not damaged but some parts of it get damaged, mainly parts that control movements.In many countries CP is the most frequent cause of physical disability. About 1 in every 300 babies is born with or develops CP.Symptoms included exaggerated reflexes, floppy or rigid limbs, slow development, feeding problems and involuntary motions. These appear by early childhood. People may experience muscular problems like difficulty in walking, bodily movements, coordination, stiff muscles, overactive reflexes, involuntary movements, muscle spasm and weakness.Causes for CP are not found in 30% of the children but some causes like infections of her mother while she is pregnant include German measles and shingles (herpes zoster), Rh Incompatibility, diabetes, toxemia of pregnancy, inherited from ancestors. There are some causes which lead to CP during birth like lack of oxygen, birth injury, pre maturity, high fever after birth, brain infections, head injuries, poisoning, blood clots in brain, brain tumors, etc. Treatments depend on severity long term treatment includes physical and other therapies, drugs and sometimes surgery. Physical exercises, special education, occupational therapy, physiotherapy, works to some extent to the person. Medications like muscles relaxant reduces muscle tension and helps relieve muscle pain and discomfort. Sedatives cause drowsiness, calmness and dulled senses. Some types may become addictive.

Keywords: Cerebral palsy; Symptoms; Treatment; Medication

IAIHC-152
Chemistry and Biological Significance of Benzimidazole Nucleus

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Abstract
Benzimidazole is a heterocyclic aromatic organic compound. It is an important pharmacophore and privileged structure in medicinal chemistry. This compound is bicyclic in nature which consists of the fusion of benzene and imidazole. Now a days is a moiety of choice which possesses many pharmacological properties It plays a very important role with plenty of useful therapeutic activities such as: antiulcer, antihypertensive, analgesic, anti-inflammatory, anti-viral, antifungal, anti-protozoal, anticancer, and antihistaminic. The review of the literature shows that the benzimidazole derivatives are outstandingly effective compound and number of reviews available for biochemical and pharmacological studies conformed that their molecules are useful against a wide variety of micro-organisms. Because of their importance, the methods for their synthesis have become a focus of Synthetic Organic Chemists. Therefore, in the present review we tried to compile the chemistry of different derivative of substituted benzimidazole as well as various pharmacological activities and some of the important methodologies used for the synthesis.

IAIHC-153
Coronavirus Disease:A Review

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Abstract
Severe acute respiratory syndrome [SARS] was a contagious disease caused by the SARS-CoV coronavirus. Coronavirus are group of viruses that can cause a range of symptoms including a runny nose, cough, sore throat and fever. Coronavirus were first identified in the 1960s, there are no specific treatments for coronavirus infections. But in early 2020, following a December 2019 outbreak in China, the World Health Organization identified a new type, 2019 novel coronavirus [2019-nCoV].There is no vaccine for coronavirus. To help prevent a coronavirus infection, do some things to avoid coronavirus, wash your hand, keep your hands and fingers away from your eyes, nose and mouth, avoid close contact with people who are infected. Some coronavirus can cause severe symptoms. The infection may turn into bronchitis and pneumonia, which cause symptoms such as-Fever, which may be quite high if you have pneumonia, Cough with mucus, Shortness of breath, Chest pain or tightness when you breathe and cough. Coronavirus outbreak in which China sickening more than 7,700 people and killing 170.More than a dozen Nation with a handful of cases- including United States-are isolating patients and monitoring their contacts .China, with nearly 1.4 billion people, is the most populous nation on Earth, and it has taken extreme measure to try to stop the disease, first reported in December in Wuhan, a city of 11 million, but the disease spread far and wide inside china. To detect coronavirus laboratory testing is more likely to be used if you have severe disease or a suspected of having MERS. Coronavirus spread from an infected person to other through air by coughing and sneezing.

Keywords: Coronavirus; MERS

IAIHC-154
Development and Characterization of Solid Lipid Microparticles of Aripiprazole

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Abstract
The present study was aimed to develop the solid lipid microparticles (SLMs) of aripiprazole in a view to accomplishing her delivery of drug in brain by improving permeability across blood brain barrier. The SLMs were developed by utilizing hot melt microencapsulation technique. By varying the level of surfactant (span 20, span 80, tween 20 and tween 80), 12 formulations were developed and characterized. The pre-formulation study comprised of various parameters, for example, melting point, TLC (thin layer chromatography), FTIR, compatibility study and solubility studies. The prepared batches of formulation were characterized for different parameters such as particle size, % encapsulation efficiency, percent yield, % in-vitro drug release, release kinetics and scanning electron microscopy (SEM). The best formulation was selected based on higher encapsulation efficiency and % in-vitro drug release. The selected formulation was subjected to SEM analysis, which suggested the smooth and spherical surface. The % in-vitro drug release of best formulation was found to be 82.23% after 12 hr.

Keywords: Aripiprazole; Encapsulation efficiency; SLMs; Span

IAIHC-155
Influenza Virus

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Abstract
Influenza is a viral infection that attacks your respiratory system — your nose, throat and lungs. Influenza is commonly called the flu, but it's not the same as stomach "flu" viruses that cause diarrhea and vomiting. For most people, influenza resolves on its own. But sometimes, influenza and its complications can be deadly. People at higher risk of developing flu complications include: Young children under age 5, and especially those under 12 months, Adults older than age 65, Residents of nursing homes and other long-term care facilities, Pregnant women and women up to two weeks postpartum, People with weakened immune systems, People who have chronic illnesses, such as asthma, heart disease, kidney disease, liver disease and diabetes, People who are very obese, with a body mass index (BMI) of 40 or higher. Initially, the flu may seem like a common cold with a runny nose, sneezing and sore throat. But colds usually develop slowly, whereas the flu tends to come on suddenly. And although a cold can be a nuisance, you usually feel much worse with the flu. Common signs and symptoms of the flu include: -Fever over 100.4 F (38 C), Aching muscles, Chills and sweats, Headache, Dry, persistent cough, Fatigue and weakness, Nasal congestion, Sore throat.

Keywords: Persistent cough; Body mass index (BMI); Postpartum; Chronic illnesses; Aching muscles

IAIHC-156
Bioelectronics: Next Wave of Device Therapeutics

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Abstract
There is an opportunity for dramatically increased synergy between electronics and biology, fostered by the march of electronics technologies to the atomic scale and rapid advances in system, cell, and molecular biology. Bioelectronic medicine is not an innovation but a revolution. Its concept is simple: use an electrical current to trick the body into healing itself. The application of electronics technology to biology and medicine is not new. Examples include pacemakers and virtually the entire medical imaging industry. Research that enabled these applications grew out of many disciplines of science and engineering; however, recently, the term bioelectronics is being used more widely to describe this multidisciplinary field. Science and technology experts representing the nanoelectronics and biotechnology communities provided inputs for this report. The strategic drivers that were most frequently cited were: disease detection, disease prevention, and prosthetics. The technologies and devices that will enable applications in these areas will impact other vital areas, such as homeland and national security, forensics, and the environment. Progress in all of these sectors requires innovation in crosscutting areas, including measurement and characterization, fabrication, and power sources. As a next step, stakeholders from government, academic, and industry should jointly develop a detailed bioelectronics roadmap, which can serve to facilitate effective planning and resource management for increasing the productivity and commercialization of bioelectronics research and development. Such an exercise would define and clarify projected application-specific research metrics and metrology gaps and needs; timelines for research, development, and prototyping; and emerging market and commercialization insertion opportunities.

Keywords: Electronics; Biology; Bioelectronics; Pacemaker; Research

IAIHC-157
Second-hand Smoking: A Threat to C.V.S

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Abstract
Passive smoking or secondhand smoking could be defined as the involuntary inhalation of smoke from other people's cigarettes, cigars etc by persons other than the intended 'active' smoker. Some studies suggest, about 120 million people in India smoke and contribute 12% smokers to world. And about 10 million people in India die due to tobacco smoke.About 40% of Indian adults are exposed to second-hand

smoke at their homes itself. Thus, this becomes an alarming situation for children as they are much more prone than adults. Cigarette smoke contains chemicals which are hazardous for humans such as benzopyrene, tobacco specific nitrosamines (NNK, NNN), carbon monoxide, hydrogen cyanide etc and they serve as potent causative agents for many cardiovascular diseases. Passive smoke not only affect our Cardiovascular system but also affects other functions of our body. Today, a number of studies and researches are being carried out in many countries including India and a number of devices have also been designed out of which about 18000 have been patented. Much attention had already been paid to active smoking and its effect on human health but passive smoking and its hazards are not yet very well known to the common people. Our intentions are to make people aware about this serious issue through a detailed and systematic poster.

Keywords: Passive smoke; Cardiovascular disease; Health hazards; Awareness.

IAIHC-158
Artificial Intelligence and Machine Learning in Clinical Development

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Abstract
Future of clinical development is on the verge of a major transformation due to convergence of large new digital data sources, computing power to identify clinically meaningful patterns in the data using efficient artificial intelligence and machine-learning algorithms, and regulators embracing this change through new collaborations. This perspective summarizes insights, recent developments, and recommendations for infusing actionable computational evidence into clinical development and health care from academy, biotechnology industry, nonprofit foundations, regulators, and technology corporations. Analysis and learning from publically available biomedical and clinical trial data sets, real-world evidence from sensors, and health records by machine-learning architectures are discussed. Strategies for modernizing the clinical development process by integration of AI- and ML-based digital methods and secure computing technologies through recently announced regulatory pathways at the United States Food and Drug Administration are outlined. We conclude by discussing applications and impact of digital algorithmic evidence to improve medical care for patient's Clinical drug development has remained relatively unchanged for the last 30 years. This is due, in part, to uncertainties in regulatory requirements, risk aversion, and the lack of relevant actionable biomedical data sources and advanced analytics to generate hypotheses that could motivate the development of innovative diagnostics and therapies Testing new biomedical treatments for safety and efficacy will also require new strategies, since it has been shown that existing therapies often only work for a small number of indicated individuals. The application of emerging digital technologies, such as next-generation sequencing, though, have increased both our understanding of disease mechanisms in larger pool of patients and the potential for developing personalized therapies. Another key challenge in the clinical development process is linked to reporting the results of most conventional clinical trials of average treatment effects that may not easily translate into making individualized treatment decisions at the routine point-of-care.4Machine learning and computer vision have enhanced many aspects of human visual perception to identify clinically meaningful patterns

Keywords: Drug administration; Clinical drug development; Biomedical treatments; Machine learning algorithms

IAIHC-159
Artificial Intelligence Boosts for Clinical Trials

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Abstract
Artificial Intelligence (AI) could increase clinical trial success rates applying AI technology to parts of the clinical trial process could increase trial success rates. AI could improve key parts of the clinical trial process, including selection and recruitment and patient monitoring. It takes between 10 and 15 years and cost between $1.5 and $2.0billion to bring a new drug to market, and about half of this time and capital is dedicated to clinical trials. But despite significant investments, clinical trials still have high failure rates, the team stated. The failures are mainly due to poor recruiting and selecting techniques, as well as an inability to effectively monitor patients. Artificial Intelligence (AI) tools have emerged as a viable way to improve these processes and increase clinical trial success rates. AI is not a magic bullet and is very much a work in progress, yet it holds much promise for the future of healthcare and drug development. An eligible patient might not be at the stage of the disease, or belong to a specific sub-phenotype, that is targeted by the drug to be tested, thus making that patient unsuitable. Eligible and suitable patients might not be aware of a matching trial or find the recruitment process too complex and cumbersome to navigate.AI tools can help enhance patient selection by reducing population heterogeneity, choosing patients who are more likely to have a measurable clinical endpoint, and identifying a population more capable of responding to treatment. In recent years there have been increasing efforts to design a diverse range of machine learning methods, ranging from natural language processing to associate rule mining to deep learning, that have shown great progress towards being able to handle complex real-world situations. In addition to improving phenotype, AI methods can help patients understand complex clinical trial eligibility criteria.

Keywords: Artificial intelligence; Clinical trial; Clinical trial eligibility criteria; Machine learning methods; Effectively monitor patients; Drug development; Health care; Eligible patients

IAIHC-160
Wolff-Parkinson-White Syndrome

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Abstract
WPW syndrome is a rare congenital heart disease due to an accessory pathway between the atrium and the ventricle. Its ECG pattern is characterized by a short PR interval, a delta wave, a wide QRS complex and an abnormal ventricular repolarization. Patients are usually asymptomatic, or have frequent paroxysmal episodes of tachycardia. These tachycardias are supraventricular tachycardias related to either

reentry between the AV node and the accessory pathway, or atrial tachyarrhythmias descending through this bypass tract, or both. In the latter clinical situation, sudden cardiac death may occur in case of short refractory period within the accessory pathway. An electrophysiologic study should be performed in order to characterize and localize this accessory pathway. If this pathway is capable of conducting rapidly anterogradely, we recommend an immediate radiofrequency ablation in both symptomatic and asymptomatic patients. In the contrary, medical or ablation therapy are indicated only in symptomatic patients.

Keywords: Wolff-Parkinson-White (WPW) syndrome; Congenital heart disease

IAIHC-161
Implementation of AI in Robotic Medication and Patient Data Profile with Drug Dispensing

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Abstract
In computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. (AI) in healthcare is the use of complex algorithms and software to emulate human cognition in the analysis of complicated medical data. Specifically, AI is the ability of computer algorithms to approximate conclusions without direct human input. Artificial intelligence can help transform healthcare by improving diagnosis, treatment, and the delivery of patient care. Researchers in academia, the private sector, and the government have gained increasing access to large amounts of health data and high-powered AI-ready computing systems. These powerful tools can greatly improve doctors' abilities to diagnose their patients' medical issues, classify risk at a patient-level by drawing on the power of population data, and provide much-needed support to clinics and hospitals in under-resourced areas. AI can also expand the operational capacity of different organizations, identify potentially fraudulent health claims, and streamline manual tasks to boost productivity. Much of this progress depends on sharing and utilizing large amounts of health data, which informs the development of algorithms and machine learning. Reducing health care costs has become a critical concern for hospitals. Pharmacists are implementing methods to provide safety and efficiency in the medication process. Optimization of drug delivery through automated drug dispensing systems (ADS) may be valuable in hospital departments with an uncontrolled floor stock. Automation has also the potential to free pharmaceutical staff and nurses from the time-consuming process of distributing and preparing medications
.

Keywords: Robotic AI; Drug Dispensing; Patient Data Profile; Artificial intelligence

IAIHC-162
A Review On: Role of Immunotherapy in Cancer

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Abstract
Immunotherapy can Educate the immune system to recognize and attack specific cancer cells, boost immune cells to help them eliminate cancer and Provide the body with additional components to enhance the immune response. Cancer immunotherapy comes in a variety of forms, including targeted antibodies, cancer vaccines, adoptive cell transfer, tumour-infecting viruses, checkpoint inhibitors, cytokines, and adjuvants. Immunotherapies are a form of biotherapy (also called biologic therapy or biological response modifier (BRM) therapy) because they use materials from living organisms to fight disease. Some immunotherapy treatments use genetic engineering to enhance immune cells' cancer-fighting capabilities and may be referred to as gene therapies. Many immunotherapy treatments for preventing, managing, or treating different cancers can also be used in combination with surgery, chemotherapy, radiation, or targeted therapies to improve their effectiveness. Immunotherapy has been approved in the U.S. and elsewhere as a first-line of treatment for several cancers, and may also be an effective treatment for patients with certain cancers that are resistant to prior treatment. Immunotherapy may be given alone or in combination with other cancer treatments. As of December 2019, the FDA has approved immunotherapies as treatments for nearly 20 cancers as well as cancers with a specific genetic mutation.

Keywords: Immunotherapy; Cancer; Chemotherapy

IAIHC-163
Artificial Intelligence in Drug Discovery

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Abstract
AI has enormous potential to revolutionize drug discovery. Computational prediction of atomic and molecular properties is the foundation of most de novo design strategies. AI is also able to search for correlations between molecular representations and biological and toxicological. AI-based algorithms are also being developed to efficiently probe the pathways of synthesis of novel drug candidates.Machine learning, a branch of AI, can predict the physical and chemical properties of small molecules at quantum mechanics-level accuracy with much lower time-cost. It has been found that in combination with robotic platforms, the chemical space for novel reactions can be explored by learning from automated analysis of reaction feasibility. It has been reported that the development of a new drug is a very complex, expensive, and long process which typically costs 2.6 billion USD and takes 12 years on average. How to decrease the costs and speed up new drug discovery has become a challenging task and urgent question in industry. Artificial intelligence (AI) combined with new experimental technologies is expected to make the hunt for new pharmaceuticals quicker, cheaper, and more effective. We discuss here emerging applications of AI to improve the drug discovery process.

Keywords: Molecular representation; Quantum mechanics level; Cheaper and effective; Computational prediction

IAIHC-164

Pharmacovigilance for Ayurveda, Siddha and Unani (ASU) Drugs: Current Status and Future Strategies

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Abstract
Medicinal plants based Traditional Systems of Medicine (TSM) are playing important role in providing healthcare to large section of population, especially in developing countries. Nowadays in developed countries interest is increasing in utilization of herbal products based on TSM. ASU drugs used in TSM pose threat if not prepared and administered properly. In the era of modern technology, scientific advancements, consumer awareness and the advent of evidence-based medicine, there is inadequate genuine clinical trial evidence supporting the efficacy and safety of many ASU drugs.Further, a common misconception prevails among the people and practitioners that these drugs are without any side effects and safe to use. Self-medication and misuse of over-the counter (OTC) medicines and traditional and complementary medicines are widespread, adding to the potential risk of Adverse Drug Reactions (ADRs) and drug-drug interactions. These and other factors are likely to increase the burden of drug-related morbidity and mortality in our country. It seems clear from the available evidence that ADRs have become a major global public health problem that needs to be addressed at all levels of health care. The lack of awareness and appreciation of the size and severity of the problem as well as the misclassification of ADRs as other diseases or the underlying condition are partially to blame for this silent epidemic. Pharmacovigilance is an important tool to analyse the drug particularly its side effects, if any. The present review discusses in brief the concept of Pharmacovigilance for ASU drugs.

IAIHC-165

Application of Artificial Intelligence in PharmaceuticalScience and Technology

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Abstract
Artificial intelligence is a form of computer science which are used to create intelligent machine that thinking and working like humans which ultimately facilitates the work of human. Industrial artificial intelligence can be more effective and safer when applied to existing products and services. Artificial intelligence in pharmacy referred to act by performing the use of automated algorithmic program which depend on the human intelligence. Some of the ways artificial intelligence is being applied in biopharmaceutical industry today include-manufacturing process improvement, drug discovery and design, processing biomedical and clinical data, rare disease and personalized medicine, drug adherence and dosage, predicting treatment results, identifying clinical trial candidates, and predictive biomarkers (data analytics techniques help researchers identify promising breast cancer biomarkers).Many of researches being performed to improve artificial intelligence technology to make pharmacy profession more efficient. In this article the application of artificial intelligence in pharmaceutical science and technology are discussed.

Keywords: Artificial intelligence; Biomarkers; Drug discovery and design; Personalized medicine; Rare disease

IAIHC-166

Role of Andrographolide and its Derivatives as Hepatoprotective Agents

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Abstract
Andrographis paniculata (Burm.F) Nees, generally known as “king of bitters,” is an herbaceous plant in the family Acanthaceae. Andrographolide is the active compound isolated from this plant, have great potentiality on various hepatotoxic model such paracetamol inducing model, carbon tetrachloride, galactosamine models. In recent day from the various experiment it also found that some of Andrographolide’s derivatives are more potent in fatty liver, hepatitis, cirrhosis. The two compounds namely is andrographolide (IAN) and 3,19acetonylidene andrographolide (ANA) was semi-synthesis from andrographolide. The effect of the compounds in ameliorating hepatic steatosis and lipotoxicity was assessed using palmitate-oleate induced steatotic HepG2 cell lines. In vivo efficacy of the compounds was assessed by using HFD fed rats. Is andrographolide showed comparatively high drug score and low irritability than andrographolide. MTT assay indicated that the treatment with Is andrographolide had comparatively less toxicity than andrographolide and ANA to HepG2 cells. The treatment with IAN significantly reduced the lipid accumulation and the leakage of LDH and transaminases, while the treatments with andrographolide and ANA did not prohibit the leakage. In the in vivo experiment, the treatment with IAN showed comparatively better hepatoprotective by reducing the serum lipid, transaminases and ALP levels than with andrographolide and ANA. Our results showed that IAN could be a promising lead to treat NAFLD with comparatively low toxicity and improved efficacy.

Keywords: Andrographolide; Andrographolide derivatives; Hepatoprotective activity; Fatty liver

IAIHC-167
Advances in Automated Drug Dispensing System

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Abstract
Automatic dispensing machine (ADM) is a decentralized medication distribution system that provide computer-controlled storage dispensing and tracking of medication. It is proven to recommended as one potential mechanism to improve efficiency and patient safety. Automatic dispensing is used in pharmacy practice in which a single Device dispenses and fills prescription is also referred to as automated medication dispensing cabinet (ADC). ADC can handle hundreds of different medications which are available from a number of manufacturers. ADM provides secure medication storage in patient care units along with electronic tracking of the use of narcotics and other controlled drugs.ADC can improve patient safety and accountability of the inventory, reduce cost and leads to increased nursing and patient satisfaction. It can track user access and dispensed medication and their use which can improve control over medication inventory. It saves nursing time by eliminating the need for manual end - of - shift of narcotics count in patient care units and it can eliminate the dispensing of unusual doses, thereby decreasing the chance of administration error. Now, in today era, the more advancement which included in ADM is Robotic Dispensing or manual cart fills which make it easier to dispense the medication.

Keywords: Automated Drug Dispensing cabinet (ADC); Narcotics; Drug administration; Robotic dispensing.

IAIHC-168
Robotic Surgery

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Abstract
Robotic Surgery (RS) is one of the most advanced forms of Minimally Invasive Surgery (MIS). The purpose of this review is to give a brief description of the evolution of RS from its early history to present-day surgical robotics. RS make use of robots to perform surgery. Major potential advantages of RS are precision and miniaturization. With skilled surgeons and the robotic system, we can now use minimally invasive techniques in even the most complicated procedures like cardiac surgery, gastrointestinal surgery, gynaecology, urology, paediatrics, orthopaedics etc. Major potential advantages of RS are precision and miniaturization. Further advantages are articulation beyond normal manipulation and three-dimensional magnification. At present, surgical robots are not autonomous, but are always under the control of a surgeon. They are used as tools to extend the surgical skills of a trained surgeon. RS is different from MIS. MIS (sometimes called laparoscopic surgery) is a general term for procedures that reduce trauma by performing operations through small ports rather than large incisions. Human surgical performance is dictated by numerous physical, mental, and technical variables, meaning that surgical consistency is difficult to both quantify and achieve. These factors may contribute to the high variability in terms of functional outcomes, complication rates, and survival observed across institutions and geographies. Conventional surgical robots possess certain advantages over humans (insusceptibility to fatigue, tremor resistance, scalable motion, greater range of axial movement), which have been shown to produce enhanced margins and lower morbidity rates for certain procedures. Combination of AI control algorithms with the inherent advantages of surgical robots may therefore benefit surgical practice by reducing technical errors and operative times, enhancing access to hard-to-reach body areas, and improving outcomes by removing (or reducing) the potential for human error.

Keywords: MIS (Minimally Invasive Surgery); RS (Robotic Surgery); AI (Artificial Intelligence)

IAIHC-169
Forced Degradation Studies for Drug Products and Drug Substances: Scientific and Regulatory Deliberations

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Abstract
Forced degradation experiments are important tool to evaluate the stability of a drug substance and understand its impending impact on a drug's purity and potency as well as on patient safety. Forced degradation is degradation of new drug product and drug substance at conditions more harsh than accelerated conditions. It is required to exhibit specificity of stability indicating methods and it also provides an insight into degradation pathways and degradation products of the drug substance and helps in elucidation of the structure of the degradation products. The U.S. Food and Drugs Administration (FDA) and International Council for Harmonization (ICH) guidelines affirm the requirement of stability testing data to understand how the quality of a drug substance and drug product changes with time under the influence of various environmental factors and demonstrate certain degradation conditions like oxidation, light, dry heat, hydrolysis, basic, acidic, hydrolysis etc. ICH Q1A, QIB and Q2B exemplify the forced degradation studies. The degradation products appearing during manufacturing and stability studies are required to be reported in the dossier submitted for product registration (ICH Q3B(R), 2003). Hence, the ICH guideline Q1A(R2) (2003) require forced degradation study on drug substances to provide data on decomposition products, which can be used to establish degradation pathways, intrinsic stability of the molecule and validation of SIAM (Q1A (R2), 2003).

Keywords: ICH; Preformulation studies;Forced degradation, Stability

IAIHC-170
Formulation and Evaluation of Erodible Mucoadhesive Metformin Hydrochloride Tablets

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Abstract
The present exploration deals with the development and evaluation of erodible mucoadhesive buccal tablets of metformin hydrochloride.Metformin hydrochloride is an insulin sensitizer, biguanide and first-line drug of choice for the treatment of type II diabetes. The conventional form of metformin tablets have been found to have many associated drawbacks such as gastrointestinal upset including diarrhoea, cramps, nausea, vomiting and increased flatulence, poor bioavailability and short half-life. Hence, this drugs warrants an alternative drug delivery system to conventional formulation i.e., Mucoadhesive Drug Delivery System can be beneficial because they do not require system retrieval at the end of desired dosing interval. The work performed to formulate buccal erodible tablets of metformin using polymer HPMC K4M in combination with carbopol 934 as a tablet binder in a variable ratio with magnesium stearate and talc used as lubricants in a constant ratio. Nine different formulation are made. The content weight of metformin was 300 mg and the total weight of tablet was fixed at 500 mg. The unique optimized formulation containing HPMC K4M (24%) and Carbopol 934 (9%) was achieved. All the physical and performance parameters were done properly showed the drug content and drug release at 99% for six hours. The drug release kinetics followed Higuchi model with anomalous transport mechanism (Non-Fickian diffusion).

Keywords: Metformin hydrochloride, HPMC K4M, Carbopol 934, Mucoadhesive drug delivery system.

IAIHC-171
Polymers Used to Cure Dry Eye Syndrome (DES): An Overview

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Abstract
Dry eyes or dry eye syndrome or keratoconjunctivitis sicca (KCS) is a condition in which the eyes do not produce enough tears. An adequate and consistent layer of tears on the surface of the eye is essential to keep our eyes healthy, comfortable and well. Dry eye syndrome is caused by a chronic lack of sufficient lubrication and moisture on the surface of the eye. Insufficient tears cause damage to the interpalpebral ocular surface and are associated with symptoms of discomfort. The conventional and main approach to the treatment of dry eye is providing lubricating eye drops or tear substitutes. The primary and first line treatment for DES is lacrimomimetic eye drops, commonly known as artificial tears or ocular lubricating eye drops. Lacrimomimetics are synthetic ocular lubricants that supplement one or more components of the lacrimal film by increasing the tear volume and stability and by protecting the ocular surface against desiccation. The active pharmaceutical ingredient (API) are polymers, most commonly prescribed lacrimomimetics are carboxymethylcellulose (CMC), hydroxypropyl methylcellulose (HPMC), polyethylene glycol (PEG), propylene glycol (PPG) and sodium hyaluronate (SH). This review aims to discuss the main polymers available to the practicing clinician for managing tear deficient dry eye.

Keywords: Dry eye; Dry eye syndrome; Polymer; Keratoconjuctivitis

IAIHC-172
A Security Framework for Healthcare Wireless Ad-hoc Network

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Abstract
Healthcare industry is the popular area in application areas of internet of things (IOT) that offers a lot of opportunities to develop many technologies. In healthcare IOT, patients, medical server, sensors and healthcare professional are the main objects which are communicating through online data sharing. Due to online data sharing security and privacy issues becomes very critical issues in the healthcare network. For example, an outsider adversary gets the Patient's report of a diabetic person and send the modified data report as cancer report to healthcare professionals. Modified patient report may become a serious cause of casualty for patient. Digital signature scheme is an important technique to keep privacy and integrity in our network. We construct a signature scheme for healthcare IOT model and prove our security by popular Random Oracle Model with Diffie-Hallman assumption. We demonstrate our signature scheme is secure against security attacks and achieve our primary goals like confidentiality, integrity and non-repudiation.

Keywords: Digital signature; Certificateless signature; Public key cryptography

IAIHC-173
Recent Advancement in Synthesis of Anticancer Quinazoline Derivatives: A Review

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Abstract
Quinazoline belongs to nitrogen-containing heterocyclic compounds and illustrated by double ring structure, that is benzene ring system, fused to pyrimidine at adjacent carbon atoms. In past two-decade quinazoline derivatives gain enormous attention of researcher around the world due to their potent anticancer properties. Food and drug administration (FDA) have approved various drugs like-Erlotinib, Lapatinib and Gefitinib for treatment of different types of cancers. Quinazoline analogues have been found to be inhibitors of protein kinase of Epidermal Growth Factor Receptor (EGFR). They are reported to inactivate the anti-apoptotic Ras signal transduction cascade by binding to ATP-binding site of EGFR. Recently, some analogues have been shown to be tubulin inhibitors. In current review research related to synthesis and biological activity of anticancer quinazoline derivatives has been reviewed extensively. Novel methods for the synthesis of quinazolines, their reported mechanism of action and structure activity relationship studies are also been reviewed.

Keywords: Anticancer; Quinazoline; Heterocyclic compounds; Structure activity relationship; Epidermal Growth Factor Receptor (EGFR)

IAIHC-174
Role of Human Genome Project in Artificial Intelligence

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Abstract
The Human Genome Project (HGP) was an international scientific research project with the goal of determining the base pairs that make up human DNA, and of identifying and mapping all of the genes of the human genome from both a physical and functional standpoint. The idea was picked up in 1984 by the US government when the planning started, the project formally launched in 1990 and was declared complete on April 14, 2003. It is a process of Artificial intelligence (AI) for genetic study.

Keywords: Human Genome Project (HGP); Artificial intelligence (AI)

IAIHC-175
The Future Predictions of AI that Impact Business

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Abstract
Artificial Intelligence (AI) is continuing its migration from the research laboratory into the world of business. Hundreds of industries harnessing AI's power from analyzing countless data points in seconds to detect an iota of fraud, to call centers deploying chatbots to improve customer interactions. The uses of AI at the early stages are fairly limited but huge advances in deep learning (a subset of machine learning) are starting to impact AI that will soon help the society to expand the business. The future wave of AI will enable companies to continuously adapt processes based on past experience that help in customer targeting because deep learning algorithms will be able to support patterns in behavior that are more likely to lead to sales. In supply chains and in manufacturing, potential benefits will include predictive maintenance of equipment, presentation of the product along with inventory optimization. The main paper discusses the statistics of AI used for measuring the impact, how are companies using AI, how the future of AI affects jobs, how AI will impact training and upskilling, and how do we ensure an ethical AI with precautions. This future AI has the potential to revolutionize how companies engage with customers, compete with each other, and grow within the market. While these advances take the time of few more years, they are certainly on their way.

Keywords: Algorithms; Artificial intelligence; Deep-learning, inventory-optimization; Statistics

IAIHC-176
Artificial Intelligence (AI): The Beyond Limits Difference

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Abstract
Artificial intelligence (AI) goals to mimic human reasoning purposes. It has been a boon to the healthcare industry and bringing a paradigm shift to healthcare, powered by increasing availability of healthcare data and rapid progress of analytics techniques. AI has major role to play in health care that involve patient data management, diagnosis and treatment recommendations, patient engagement and adherence, and administrative activities. This also contains treatment approaches and their results, endurance rates, and speed of care collected across millions of patients, environmental locations, and uncountable and occasionally interrelated health situations. Artificial Intelligence is being used to discover links between genetic codes, to power surgical robots or even to maximize hospital efficiency. Cancer is an emerging public health problem and with vital quantity of data created during cancer treatment, there is a definite attention in the submission of Artificial Intelligence to advance oncologic care. AI is being used in oncology at all stages, from diagnosis to treatment and later on. AI analyses data from clinical digital photography, diagnosis imaging, genetic testing, digital pathology, electrodiagnosis, transitional oncology and helps in better clinical decision making. The paper will throw light on the basics of Artificial Intelligence and offer an outline of its present submissions, pitfalls, and upcoming guidelines in oncology along with its limitations.

Keywords: AI; Clinical research; Health care; Imaging; Medical diagnosis; 3D- printing.

IAIHC-177

Pre-Formulation Studies of Methotrexate Nano-Sponge Gel: A Transdermal Drug Delivery System for Skin Cancer

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Abstract
Preformulation is the phase of development that decides about the formulation condition related to process variation, selection and quantity of compatible ingredients. Methotrexate was obtained as gift sample from Taj Pharmaceuticals Ltd. Hyderabad, India and was characterized by determination of its Melting Point, UV spectroscopy and F.T.I.R. spectroscopy. Methotrexate is used to treat certain types of cancer including skin cancer, certain types of lymphoma, and leukemia. Methotrexate is in a class of medications called antimetabolites. Methotrexate treats cancer by slowing the growth of cancer cells. Skin cancer is one of the most common types of cancer with increasing number of cases worldwide. Systemic chemotherapy induces various toxicities like bone marrow depression, peripheral neuropathy, pulmonary fibrosis etc. This can be reduced using nanoparticles for better targeting to the tumor site. Nanoparticles can be used for site specific delivery either by active or by passive targeting. Recently, novel approaches for delivering active ingredients through the skin without any deterioration of skin tissues have been investigated. The major advantages of transdermal delivery include: ability to by-pass first pass metabolism in liver, non-invasive and self-administration is possible, can provide drug release for long periods, increased patient compliance and inexpensive.

Keyword: Skin cancer; Nanoparticles; Nanotechnologies; Chemotherapy

IAIHC-178

Designer Food: A Review

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Abstract
Designer foods are normal foods fortified with health promoting ingredients. These foods are similar in appearance to normal foods and are consumed regularly as a part of diet. Designer foods are produced by the process of fortification or nutrification with the advances in the biotechnology, biofortification of foods using technologies such as fermentation procedures are gaining advantage in the industry. The ultimate acceptability and use of designer foods depend on proper regulation in the market by the authorities of country and by creating consumer awareness about their health benefits. Designer oils are best example of designer food and particularly seed oils are fortified with micronutrients and have been proved effective in prevention of atherogenesis. With the progress in biotechnology, transgenic animals are produced that secrete milk, human lactoferrins etc. so that animal milk can be with the human milk. Various other forms of designer milk have been developed and evaluated. Milk-based beverages fermented milk fortified with lutein, calcium and vitamin D fortified milk along with zinc and magnesium, etc. With the advancement in poultry biotechnology, the composition of egg can be changed by nutritional and genetic intervention.
Designer foods are Good and beneficial in particular cases and as per need and must be in use for short term but in long term use the designer foods may affect our body, so Designer foods may or may not be used but if used it should be limited and for shorter duration of time and must be in guidance of dietitian.

Keywords: Fortification; Diet; Atherogenesis; Genetic Intervention

IAIHC-179

An Artificial Intelligence in Formulation of Pharmaceutical Products

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Abstract
Artificial intelligence (AI) is bit by bit ever-changing practice. Through recent advances in digitized knowledge acquisition, machine learning, and computational technology, the square measure of AI systems is growing reaching fields previously thought to be the sole province of human specialists during this critique, we tend to define recent breakthroughs in AI technologies and their medical specialty applications, determine the challenges for any progress in medical AI systems, and summarize the economic, legal and social implications of AI in tending. In the field of health care system AI is very easy, faster and having a number of innovations in the field of healthcare system. A number of types of the AI have been involved in the general health care system till now to promote the healthcare system for safety and care of the patient; these types of AI have been employed by the payers and providers of care and the life science companies. The important series of applications involve diagnosis, treatment recommendations, patient engagement and adherence, and administrative activities.[6] It help to emulate the human cognition in the analysis of the complex medical data. The primary aim of the AI in the healthcare system is to analyze the connection in between the prevention and diagnosis or treatment techniques and patient outcomes.[3] AI healthcare professionals in industry, technology, art, biomedicine and other healthcare-related industries will operate in a cross-functional manner to create positions that address the need to improve healthcare at all rates.[2] Such program of safety where AI plays a central role could be called an AI-enabled or AI-enhanced health system. In this paper we explore how to improve this system based on a realistic assessment of emerging AI technology and expected innovations. AI also found very helpful in the field of pharmaceuticals like drug development personalized medicine, and patient monitoring and care. We review several recent studies of AI applications related to healthcare that provide a view of a future where healthcare delivery is a more unified, human experience.

Keyword: Artificial Intelligence; Healthcare System; Importance of AI; Pharmaceuticals; Diagnostic System; Treatment Therapy

IAIHC-180

Traditional Indian Medicine for The Prevention and Treatment of Coronavirus: Recent Update

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Abstract
Coronavirus (2019-nCoV) is a Spherical or pleomorphic enveloped particle containing single-stranded (positive-sense) RNA associated with a nucleoprotein within a capsid comprised of matrix protein. The envelope bears club-shaped glycoprotein projections.Coronaviruses are found in avian and mammalian species. It was first reported from Wuhan, China, on 31 December 2019, but currently it is spread worldwide. They are transmitted between animals and people. Detailed investigations found that SARS-CoV was transmitted from civet cats to humans and MERS-CoV from dromedary camels to humans. Several known coronaviruses are circulating in animals that have not yet infected humans. The most useful method for laboratory diagnosis is to collect paired sera (from the acute and convalescent phases of the disease) and to test by ELISA for a rise in antibodies against OC43 and 229E. Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV). A novel coronavirus (nCoV) is a new strain that has not been previously identified in humans. Extending efforts to keep the Chinese virus at bay the research councils under the ministry of AYUSH, has issued an advisory based on the Indian traditional medicinal practices of Ayurveda, Homeopathy and Unani. Herbal medicines and purified natural products provide a rich resource for novel antiviral drug development. Despite the progress made in immunization and drug development, many viruses lack preventive vaccines and efficient antiviral therapies, which are often beset by the generation of viral escape mutants. Thus, identifying novel antiviral drugs is of critical importance and natural products are an excellent source for such discoveries. In this mini-review, we summarize the antiviral effects reported for several natural products and herbal medicines.

Keywords: Coronavirus; RNA; Chinese virus; Herbal medicine; Treatment

IAIHC-181

A Systemic and Effective Approach in Rhinitis Targeting with Nasal Antihistamine

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Abstract
Nasal delivery is the logical choice for topical treatment of local diseases in the nose and paranasal sinuses such as allergic and non-allergic rhinitis and sinusitis. Nose is also considered an attractive route for needle-free vaccination and for systemic drug delivery, especially when rapid absorption and effect are desired. In addition, nasal delivery may help address issues related to poor bioavailability, slow absorption, drug degradation and adverse events in the gastrointestinal tract and avoids the first-pass metabolism in the liver. Intranasal drug delivery occupies the prime place against newer drug delivery systems to transport drugs to CNS bypassing the blood brain barrier. The blood brain barrier (BBB) represents one of the strictest barriers in human beings. The BBB allows lipid-soluble molecules transport across the membrane and limits access of molecules which are too large or has polar functioning groups to the CNS.Consequently, it prevents the use of many therapeutic agents because of the inability of the agents to reach and maintain effective concentration in the brain for an appropriate length of time. It is particularly true for drugs used for treating brain tumor, Alzheimer's disease, stroke, head injury, spinal cord injury, anxiety, depression, and other CNS disorders.

Keywords: Drug delivery; Nasal Device; Paranasal sinuses; CNS

IAIHC-182

Herbal Medicine for Management of Parkinson's Disease

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Abstract
Parkinson's Disease (PD) is the 2nd most common neurodegenerative disorder due to gradual loss of dopaminergic nerves in the substantia nigra in the midbrain which leads to motor symptoms: for instance, gait dysfunction, involuntary tremor, rigidity and progressive postural instability. PD has no cure and available current treatment is only symptomatic. At present, the main treatment of PD relies on Levodopa that slowing down the disease development to some level but can lead to several side effects. Herbal drug is, therefore, being prioritized over conventional treatments. At the present time, vast research has been carried out on herbal drug in this field that shown neuroprotective and anti-apoptotic potential by increasing mitochondrial function and elevating oxidative stress. Phytochemicals of medicinal plants play a major part in maintaining the brain's chemical balance by acting upon the function of receptors for the major inhibitory neurotransmitters. Some of the important medicinal herbs are *Mucunapruriens, Bacopamonnieri, Nigella sativa, Withaniasomnifera, Camellia sinensis, Curcuma longa, Nardostachysjatamansi, Allium sativum, Gingko biloba, Curcuma longa and* some active chemical constituents such as flavonoids, resveratrol, lycopene, sesamol, celastrol and curcumin have gained a lot of interest for their therapeutic potential in PD. Experimental Parkinsonism in animals can be induced by various neurotoxin agents such as Rotenone, 6-Hydroxydopamine (6-OHDA), 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) and3-Nitrotyrosine that induce selective catecholaminergic cell death mediated by mitochondrial defects and reactive oxygen species. We conclude that the presently accessible neurotoxic models of Parkinson's disease offer a platform for neuroprotective drug discovery and the herbal drugs can be an alternative and promising source for new drug development for PD.

Keywords: Parkinson's disease; Neurodegenerative disorder; Dopaminergic nerves; Medicinal herbs

IAIHC-183

Tele-pharmacy: To Provide Quality Pharmaceutical Services in Rural and Urban Areas

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Abstract
Tele-pharmacy is delivery of drug care through telecommunication to patients at places they may not have direct contact with pharmacist, patients can be receiving their drug care items and other medicines and they can get the services easy. Tele-pharmacy is a rapidly growing area of communication within pharmaceutical care delivery, especially in rural areas access to pharmaceutical services has been affected by national shortage of pharmacist, and has involved the utilization of telecommunication to deliver the pharmaceutical services to patient or consumer located at a distance, to provide a quality pharmaceutical services in rural areas as well as urban areas, tele-pharmacy is a great concept but it is sometimes challenges, patients satisfaction, patient counselling and medication error. The purpose of this research was to examine to provide a quality pharmaceutical services in rural areas and also reducing the medication errors to demonstrated that the tele-pharmacy network has enhance the pharmaceutical services in rural areas by pharmaceutical accesses to hospital that do not offer to 24 hours pharmaceutical services.

Keywords: Tele pharmacy; Quality care; Rural and urban; Patient satisfaction; Medication error;Challenges

IAIHC-184

Nano-Particulate Carrier Systems in Rheumatoid Arthritis Management

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Abstract
In modern practice rheumatoid arthritis is a well-known autoimmune disease. The main aim of this review is to establish the evidence in favor of nanocarriers over conventional therapeutic approaches to treat the various pathologic conditions of arthritis efficiently. This review provides a complete account that why the nanocarriers are more preferable over other delivery system used in arthritis treatment for delivery of various therapeutic agents. In this review all those characteristic features are mentioned which are responsible for making the nanocarriers more efficient to deliver a therapeutic agent at desired site in various biological condition inside the body. In this review, all those aspects are discussed which are responsible for maintaining the pharmacokinetic challenges inside the body. This review is helpful to understand all the patients' complaints which mainly occur due to treatment by drugs given by conventional drug delivery system.

Keywords: Rheumatoid arthritis; Nano-particulate carrier systems; Nanoparticles; Gene therapy

IAIHC-185

The Future of Bioelectronic Medicine in Pharmacy

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Abstract
Technology is changing the world and bioelectronics medicine is at the forefront of this technological revolution. Bioelectronic medicine is the boon of modern technology. The history of the pharmaceutical industry is based on treatment of molecular mechanisms, but these remedies can be costly, difficult to administer, often with toxic and fatal side effects. From last decade, there have been various improvements in the field of medicine pharmacy. The introduction of various revolutionary techniques, approaches, and methods have been great leaps in the field of medicine pharmacy.
Bioelectronic is the application of electronics devices to living organisms for clinical testing, diagnosis and therapy. Increased computing power interaction, artificial transplantation, and increased systems that combine electronic and biological components.
Bioelectronic medicines is now at epicenter of where healthcare, technology and science converge. These medicines involve electrical stimulation of the nervous system to treat a wide variety of serious disease, including Parkinson's disease, Alzheimer disease and many other diseases. Further in the future, it predicted we will see devices that don't even have to be implanted into the body to stimulate nerves.

Keywords: Bioelectronic medicine; Brain-computer interface; Implanted device; Stimulate nerves

IAIHC-186

A Review on Solid Dispersion

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Abstract
A dispersion is a system in which distributed particles of one material are dispersed in a continuous phase of another material. Solid dispersion is a technique in which one or more active ingredient disperse in an inert carrier at solid state prepared by melting (fusion) method, solvent method or melting solvent method. The matrix can be either crystalline or amorphous. The drug can be dispersed molecularly in amorphous particles or in crystalline particles. Solid dispersion most widely used for improving the solubility, dissolution rate and consequently the bioavailability of poorly water-soluble drugs. In recent Solid dispersion technique also used in sustained release

drug delivery system. The review article focus on the characterization, preparation method, application advantages and disadvantages of the solid dispersion.

Keywords: Dispersion; Fusion; Solvent; Melting; Bioavailability; Solubility; Sustained release; Drug

IAIHC-187

A Review On: Herbal Nutraceuticals in Health-Care

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Abstract
The term "Nutraceutical" was coined by Dr. Stephen DE Felice from "nutrition" and "pharmaceutical". According to him, Nutraceutical may be defined as "a food or part of a food that provides medicinal and health benefits, including the prevention and/or treatment of a disease''. Nutraceutical may range from isolated nutrient diets to genetically engineered designer foods and herbal products.Basically, the term Nutraceutical is to describe substances which are not traditionally recognized nutrients but which have positive physiological effects on the human body. Nutraceuticals are obtained from various sources such as medicinal plants, marine organisms, vegetables and fruits. According to Homeopathic system of medicine; Hippocrates emphasized that 'let food be your medicine and medicine be your food's. Basically, Nutraceutical are used as food or part of food that provide medical value or health benefits including prevention, cure or treatment of disease. Herbal Nutraceuticals are powerful instruments in maintaining health and act against nutritionally induced acute and chronic diseases by promoting optimal health, longevity and quality of life.

Keywords: Herbal plants; Nutraceuticals; System of medicines

IAIHC-188

Emerging Role of Pharma-Engineering in Implantable Drug Delivery System

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Abstract
Pharma-engineering and operations research has profoundly improved the quality and efficiency of processes in healthcare. Data-driven medicine, an approach using pharma-engineering play a crucial role in healthcare. Data can be used to assess all the variables that pertain to a specific individual and make precise, personalized recommendations that could not come from population-based studies. In addition, controlled and pulsatile drug delivery system is a challenging turn to provide controlled drug delivery system in order to provide therapeutic efficacy. However, the conventional drug delivery system has narrow therapeutic index, systemic toxicity and complex dosing schedule for long term treatment of illness, especially in chronic diseases. It is necessary to take care of having the medicines at correct time with the correct route to ensure the bioactivity of the drug. With the latest advanced implantable chip drug delivery system, it has come with the solution of such complications. The implantable drug delivery system provides data along with the controlled release of drug for a longer duration of action even for months too with the low dose inside the chips as they are directly absorbed by the system and reach to the site of action immediately, hence lesser chances of loss of active constituent of it. There by, the purpose is to summaries inside the underline technology and resolve the complications and make the life of patient smoother as the diseases have already made their health compromised.

Keywords: Pharma-engineering; Data-driven medicine; Controlled release

IAIHC-189

Development and Validation of Reversed-Phase HPLC Method for Simultaneous Estimation of AzilsartanMedoxomil and Amlodipine Besylate in Tablet Dosage Form

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Abstract
An isocratic reverse phase-high performance liquid chromatography method for determination of amlodipine besylate and azilsartanmedoxomil simultaneously was developed and method validation was performed in formulation. C18 Inertsil ODS column (250 X 4.6 mm, 5µm particle size) was used for chromatographic separation with a mobile phase having ACN and 0.1% TFA (75:25, v/v) with a flow rate of 1.0 mL/min. The detector was set at wavelength maxima of 245 nm. The peak of azilsartanmedoxomil and amlodipine besylate was observed at 4.626 min and 2.222 min respectively. Linearity was observed in range of1-5 µg/mL and 4-20µg/mL for amlodipine besylate and azilsartanmedoxomil, respectively. The developed rp-hplc method was validated for different parameters according to ICH guidelines. The developed and validated method can be successfully used for determination of amlodipine besylate and azilsartanmedoxomil simultaneously. Percentage recovery within the limit of 98-102 % and low RSD confirm the suitability of the method for routine determination of azilsartanmedoxomil and amlodipine besylate in the formulation.

Keywords: Reverse Phase-High Performance Liquid Chromatography; Azilsartanmedoxomil; Amlodipine besylate

IAIHC-190

Development and In-Vitro Evaluation of Rapid Mouth Dissolving Film of Frovatriptan Succinate using *DOE* Tools

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Abstract
Objective: The Purpose of this research work is to prepared rapid mouth dissolving film of frovatriptan succinate. Method: Solvent casting method is used in preparation of formulation, HPMC E3 and E15 are helpful in film forming polymer, plasticizer in propylene glycol disintegrant in croscarmellose sodium , artificial sweetener in aspartame as, citric acid as saliva stimulant, xylitol as diluents and natural sweetener, wild cherry as flavour and Brilliant blue dye for elegance was selected for RDF preparation. Result: The results obtained were evaluated using ANOVA with the help of Prism software. The result suggested that the formulation containing 20%w/w aspartame, 10%w/w xylitol and 5% citric acid was found to effectively obscure the bitter taste of drug with best overall acceptability. The same composition of aspartame, citric acid and xylitol was used for further optimization using DOE to continue obscuring the bitter taste of frovatriptan Succinate. Simplex lattice mixture design is helpful composition using polymer plasticizer and disintegrant concentrations for independent variables, disintegration time, tensile strength and percentage elongation for response. The effect of each variable, two and three factor interactions were studied. The batches were numerically optimized to give a design space. Conclusion:Rapid dissolving films are also found to be a have a better patient compliance in all the age groups.

Keywords: Frovatriptan succinate; Migraine; Doe, Rapid mouth dissolving film, Solvent casting method, Stability studies, SEM

IAIHC-191

Certificateless Signature Scheme for Healthcare Sensor Network

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Abstract
Healthcare industry is very crucial areas where wireless sensor network offers a lot of opportunities. In the healthcare wireless sensor network, Patient's report is available online to share with health professionals without any delay after patient's checkup. Data privacy becomes an important issue in healthcare due to direct involvement of personal health related data of patients. Certificateless public key cryptography was proposed to remove the complication of certificate management in public key cryptography as well as the key escrow problem inherited in identity-based cryptography. An aggregate signature scheme is a many to one map which maps different signatures on different messages to a single signature. Our proposed certificateless aggregate signature enjoys the goodness of both the concepts, certificateless and aggregate. This paper proposes a certificateless aggregate signature scheme and prove the security of proposed scheme by using widely-accepted Random Oracle Model under the computational hard Diffie-Hallman assumption. Random Oracle Model based security analysis prove that our proposed scheme is provably secure against existential forgery on adaptive chosen message and identity attacks under the hardness of computational Diffie-Hellman problem and achieve the required goal such as confidentiality, non-repudiation, integrity. We use batch verification technique to speedy verification of signatures. Results are evaluated by using NS 2 environment. The simulation results show that our scheme is most efficient in comparison of previous CLAS schemes.

Keywords: Digital signature; Public key cryptography; Certificateless aggregate signature

IAIHC-192

Smart Blister Packaging for Increasing Patient's Medication Adherence

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Abstract
Inadequate adherence to the treatment by patients results in increased morbidity and mortality which ultimately causes blockade in optimal management of various ailments and diseases. Numerous studies have demonstrated that adherence to treatment continuously decreases over time. In case of antihypertensive drugs after the induction of therapy patient discontinuation rates ranges from 22% to 50%. Various methods are available for measuring adherence to medication but not a single method satisfies all the requirements for a valid measurement of adherence. There are other intelligent technologies that are available for measuring medication adherence i.e. Medication Event Monitoring System (MEMS, Ardex Ltd, Zug, Switzerland), Smart blister packs, RFID embedded smart drawers and WARD system that are already available presently. Utilization of these advanced technologies and systems have aided in enhancing the adherence to a greater extent. For example – MEMS refers to the electronic cap that counts the number of bottles opened but MEMS can be employed only with bottles. Smart blisters are pharmaceutical packaging that possess the capability of monitoring when a pill or tablet is taken out of its packing. Ultimately, these intelligent technologies can help in active monitoring of patients regarding adherence and capable of eradicating various medication errors due to which adherence is affected. In this paper we are reviewing the similar types of advanced technologies that are helping the patients in their medication adherence.

Keywords: Disease ailments; RFID embedded; MEMS; RFID

IAIHC-193

Burstable and Disposable Liquid / Solution Application Device – A Filling Patent

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Abstract
This invention relates to a burstable and disposable application device contain medicinal liquids/solution that carry easily or fix in tight space's for use in emergency situation or normally in first aid condition for fast action on a problem to prevent from further various damages. So, the device contains a closed storage pouch that can carry 1-5ml of product/solution and that can be easily burstable under pressure in-between finger & thumb. The pouch is made up of LDPE (low-density polyethylene polymer that make it easily burstable in any situation and the pouch are fix in a cotton pad or cotton ball or absorbable paper that make a single unit system for one-time use (disposable) in emergency situation or in any first aid condition.

Keywords: Burstable and Disposable, Liquid/Solution, Application Device, First-aid Condition

IAIHC-194

Management of Brain Disorder: Parkinson's Disease

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Abstract
The incidence & prevalence of Parkinson's Disease increases with advancing age. Parkinson's Disease is a long-term degenerative disorder of the Central Nervous System that mainly affects the motor system. The cause Parkinson's Disease is unknown, but is believed to involve both Genetic & Environmental factors. There is no cure for Parkinson's Disease. Treatment aims to improve the symptoms. Initial treatment is typically with antiparkinsonian medication Levodopa (L-DOPA), followed by Dopamine Agonists when levodopa becomes less effective. Management of Parkinson's Disease due to chronic nature of Parkinson's Disease, a broad-based program is needed that includes patient and family education, general wellness maintenance, exercise & Nutrition. At present, no cure for the disease is known, but medications or surgery can provide relief from the symptoms. Treating Parkinson's Disease with surgery was once a common practise, but after discovery of levodopa, Surgery was restricted to only a few cases. Neuroablative Lesion surgery & Deep Brain Stimulation are most preferably used surgery in Parkinson's Disease. The main families of drug useful for treating motor symptoms are levodopa, dopamine agonists and MOA-B inhibitors. A balanced diet including high fibre foods & plenty of water is recommended in Parkinson's Disease. Regular physical exercise and/or therapy can be beneficial to maintain & improve mobility, flexibility, strength, gait speed and quality of life.

Keywords: Degenerative Disease; Levodopa; MOA-B inhibitors

IAIHC-195

Development and Evaluation of Osmotic Drug Delivery System for Treatment of Peptic Ulcer

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Abstract
Osmotic devices are the most promising strategy-based systems for controlled drug delivery, which utilizes osmotic pressure as a driving force to release the drug for a sustained duration. The present study was aimed to develop an osmotically controlled delivery device loaded with pantoprazole, a proton-pump inhibitor, and in turn reducing the dose and dosing frequency and associated side effect. Physico-chemical interaction between the drug and excipient was examined by FT-IR study. Pantoprazole loaded osmotically controlled-release tablets were prepared in the two-step process. Initially, the core tablet was prepared by wet granulation indirect compression method using mannitol as osmogen, subsequently, the core tablet was pan-coated with a semipermeable membrane containing PEG-4000 as a pore-forming agent.Pre-compression parameters like tapped density, bulk density and angle of repose was evaluated and results were found under optimum range. Six batches of different compositions were prepared and evaluated for their thickness, hardness, friability, drug content uniformity, and in-vitro drug release profile. The tablet thickness, hardness, and friability limit was within the range as per Pharmacopoeias. The drug content was within 95.53±0.45% - 99.66±0.21%. Effect of pH of dissolution media and agitation speed on in-vitro release was evaluated, and 8hr sustained and controlled release profile was observed. Three months of stability study was performed to check on tablet hardness, friability, drug content and in-vitro release profile. The results endorse the pantoprazole loaded osmotically controlled tablet as potential carrier for the treatment of peptic ulcer.

IAIHC-196

Herbal Medicines Alternatives in Treatment of Peptic Ulcer

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Abstract
There are two types of ulcers -gastric and duodenal ulcer. Gastric ulcer is a common disorder of the digestive system. Peptic ulcer disease is an ulcer (defined as mucosal erosions equal to or greater than 0.5 cm) of an area of the gastrointestinal tract that is usually acidic and thus extremely painful. Ulceration occurs when there is a disturbance of the normal equilibrium caused by either enhanced aggression or diminished mucosal resistance. Current therapeutic regimens largely rely on Western medicine. But these drugs are expensive and are likely to produce more side effects like arrhythmia, gynaecomastia, impotency, arthralgia etc. when compared to herbal medicines. The ideal aims

of treatment of peptic ulcer disease are to relieve pain, heal the ulcer, and delay ulcer recurrence. The mechanisms by which herbal medicines benefit gastric ulcer include stimulation of mucous cell proliferation, anti-oxidation, and inhibition of gastric acid secretion and H(+)/K(+)-ATPase activity. There are many herbs and plant products that have been found to play a role in protecting or helping to heal stomach and peptic ulcers. Various plants like Cynodondactylon, Ocimum sanctum, Glycyrrhiza glabra, Ficus religiosa proved active in antiulcer therapy.

Keywords: Medicinal plants, Peptic ulcer, Phytochemicals, Synthetic drugs.

IAIHC-197

Formulation and Evaluation of Gastroretentive Floating Tablet of Timolol meleate

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Abstract
Oral therapy has been the most suitable and attractive mode of drug delivery applications since the time memorable to the people of present pharmaceutical and clinical area. The present worker conceptualized "Formulation and evaluation of gastro retentive floating tablets of Timolol maleate" which would develop gastric residence time with increased absorption from the stomach and produce sustained pharmacological activity and ultimately the bioavailability would also increase. Timolol maleate is β adrenergic blocking agent which is commonly used to treat hypertension, migraine, glaucoma and myocardial infection. The incompatibility of the drug with designated polymers was determined through different method such as FTIR and spectrophotometric. The representative peaks of pure drug and that obtained in combination with HPMC K4M, HPMC K15M and HPMC K100M were compared with that produced with formulations of all the nine batches and recorded. Nine batches (F1 –F9) of floating tablet using Drug and HPMC K4M, HPMC K15M and HPMC K100M ratios (1:4), (1:2:2) and (1:1:3) respectively were prepared by direct compression method .The floating tablets of each batch were subjected to various evaluation studies i.e. hardness, weight variation, friability, thickness, diameter, drug content, swelling index, floating lag time, total floating time etc. The In-Vitro dissolution studies were carried out by using dissolution apparatus in different pH 1.2 HCl buffer and simulated gastric fluid. The best formulation F8 was subjected to stability studies which indicated that the prepared formulations were stable and retained their pharmaceutical properties at 40°C±2^{0}C and 75% ±5 % (relative humidity) over period of 3 months.

IAIHC-198

Formulation of Nanosuspension of Poorly Soluble Antihypertensive Drug

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Abstract
Nanosuspension technology grants a unique clarification for poorly soluble drugs. Nanosuspensions are sub-micron colloidal dispersion of pure drug particles, which are stabilized by surfactants. Nanosuspension technology can be used to improve the bioavailability as well as the solubility of poorly soluble drugs. In the present study, an attempt was made to prepare the nanosuspension of BCS class II. The drug is an angiotensin II receptor antagonist for treating mild to moderate essential hypertension. Nanosuspensions were prepared by nanoprecipitation with the ultrasonication method using different polymers [such as TWEEN-80, TWEEN-20, Poloxamer-407, Polyethylene Glycol (PEG-6000), Sodium Lauryl Sulphate (SLS)] and ethanol. The estimation of the drug was carried out spectrophotometrically at 246nm. The nanosuspensions were evaluated for various parameters i.e. drug content and entrapment efficiency, drug-excipient interaction (FTIR), Calibration curve, saturation solubility, and other Preformulation parameter have also studied.

Keywords: Nanosuspension, solubility enhancement, Colloidal dispersion, BCS class II

IAIHC-199

Adopting in Silico Drug Discovery Techniques: Need of the Hour

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Abstract
Over the last two decades, the computer modeling/simulation software has secured a reliable place in various research labs involved in drug discovery and development. The software has found to be successful in replacing the robots and reagents during high-throughput screening to investigate potential drug or lead candidates. The advantages of in silico methods are unlimited and have contributed towards faster, efficient methods with overcoming budgetary restrictions specifically for academic labs. Some of the Government Agencies are taking initiatives towards set up of the labs. With the advent of artificial intelligence (AI) in health care, the understanding and adopting application of in silico computational approaches is getting convenient. The manuscript describes recent developments and requirements for effective application of in silico tools for drug development.

Keywords: In silico methods; Drug discovery; Drug development

IAIHC-200

Synthesis and Biological Evaluation of Some Alkyl Amino Acid Ester Pro-Drugs of Naproxen

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Abstract
Non-steroidal anti-inflammatory drugs (NSAIDs) are commonly used for the treatment of chronic inflammatory diseases, such as arthritis. Prolonged administration of these drugs exhibits several undesirable side effects; the most important are gastrointestinal irritation and ulceration. A Prodrug is a chemically modified inert drug precursor which upon biotransformation liberates the pharmacologically active parent compound. It was therefore thought worthwhile to synthesize the alkyl amino acid ester prodrugs of NSIADs to minimize the associated gastric side effects. In the present research work, Alkyl (methyl, ethyl, propyl and isopropyl) esters of phenylalanine, glycine and lysine were conjugated with Naproxen to synthesize its prodrugs. Spectro-analytical techniques have been employed to establish the purity and the structural features of the synthesized compounds. Results have been discussed to high light the anti-inflammatory potential of these prodrugs and the obvious advantages of incorporating alkyl amino acid esters.

Keywords: Alkyl amino acid esters; Gastric side effects; Anti-inflammatory; Prodrugs; NSIADs

IAIHC-201
A Report on Drug Abuse in Children and Adolescent

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Abstract:
Drug addiction among children and adolescents is spreading very fast. The age of initiation of substance use is falling progressively. The aim of the present study was to investigate strategies for the prevention of substance abuse among street children in India. Drug abuse is one of them all among adolescents. The risk factors for drug abuse by adolescents may be biological predisposition to drug abuse, personality traits that reflect a lack of social bonding, a low socio-economic status of family, family bonding, family relationship and parental guidance and care, a history of being abused or neglected, low emotional or psychiatric problems, stress and inadequate coping skills and social support, association with drug-using peers, rejection by peers due to poor communication skills, poor academic skills, failure in school, a history of anti-social behavior and delinquency. This paper concludes with preventive strategies are required to be planned and suggested for drug abuse. Programed on empowerment, employment, equality with culturally sound interventions are required to prevent street children and substance abuse in all parts of India.

Key words*:* Adolescents; Risk factor, Drug abuse; Preventive strategies; Social bonding.

IAIHC-202
Artificial Intelligence (AI) and Stem Cell Therapy

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Abstract
The indefinite self-renewal and potential to transdifferentiate into other types of cells represent stem cells as frontiers of regenerative medicine (to generate healthy cells and to replace diseased cells). The healthy cells are removed and used to grow for further use to cure ailment. Over the last 20 years, stem cell therapy (SCT) has been investigated in the treatment of more than 80 diseases, 30,000 medical therapies. The various identified areas as organ transplantation, standard drug treatment, age related macular degeneration, regenerative medicine or cell- replacement therapy, neurodegenerative disease- dementia, burns, cardiovascular disease (cardiac infarction, stroke), diabetes, arthritis, degenerative diseases (slipped intervertebral discs), cancer treatment (leukemia, neuroblastoma, multiple myeloma), hematopoietic disorders, etc. Similarly, Artificial intelligence (AI) has proven its applicability in the treatment and/or management of various diseases. It can be potentially used in paediatric stem and immune cell therapies and regenerative medicine. Cancer, neurology, cardiology where early diagnoses are crucial to prevent the deterioration of patients, use of AI tools is beneficial. The increasing availability of healthcare data and rapid development of big data analytic methods has made possible the recent successful applications of AI in healthcare. The role of AI in stem cell therapy such rapid and accurate analysis of tissues, quick scale up and comparison of millions of images, etc. is discussed in detail.

IAIHC-203
Significance of Common Technical Document in Pharmacy Regulation

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Abstract
The Common Technical Documents (CTD) was designed to provide a common format between Europe, USA, and Japan for the technical documentation included in an application for the registration of a human pharmaceutical product.Electronic Common Technical Documents (eCTD) is a topic of increasing interest in the pharmaceutical environment. Electronic Common Technical Documents (eCTD) is an interface for the pharmaceutical industry to agency transfer of regulatory information. Since, June 2003, applicants have had the option of submitting an eCTD in parallel with the paper submission (Common Technical Documents), following sign-off by the International Conference on Harmonization Steering Committee of the eCTD Specification documents at step 4. It is designed to make regulatory submissions easier and more efficient for drug makers and for regulations. When it comes to eCTD submission, there continues to be differences among different countries and even ICH regions. The standardization that electronic submission will bring will allow for much greater consistency not only for regulators but also for organizations. It is important that eCTD ready document Prepared by authoring them in eCTD complaint templates.

Keywords: Common Technical Documents; ICH; Benefits; Challenges; Harmonization

IAIHC-204
Formulation and Evaluation of Amoxicillin Clavulanate Chewable Tablets

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Abstract
Chewable tablets are an oral dosage forms which are required to be broken and chewed in between the teeth before ingestion. They should be designed in such a way that they are easy to be used by the pediatric, adult or elderly patient who have difficulty in swallowing. The advantages of chewable tablets include rapid absorption of active ingredient, quick onset of action, palatability, precise dosing, portability, and ease of delivery. Amoxicillin is a penicillin antibiotic and Clavulanate is β lactamase inhibitor. It is widely used in the treatment of urinary tract infection in adult and children, acute bronchitis, otitis media, and soft tissue infection in children. Amoxicillin clavulanate chewable tablet (1500 mg) was prepared by direct compression method. Before compression its blend property was evaluated for its bulked density, tapped density, Carr's index, Hausner's ratio, and Angle of repose. After the compression the tablet was evaluated on the basis of its average weight, hardness, friability and its disintegration time. The most common criteria which is used for this chewable tablet was its palatability, acceptability, and disintegrate time. All the parameters were found within the specifications of standards. Its Assay values were within the limits of 90% to 110%.

Keywords: Assay; chewable tablet; direct compression; disintegration time; standards.

IAIHC-205
Novel Drug Delivery Systems for Anti-cancer Drugs

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Abstract
In the modern medical world, the major health-concern of the populous still remains to be the dreaded disease called cancer. It is one of the major killers of mankind irrespective of the aetiology. Cancer is basically a diseased cell characterized by the loss of its normal cellular activities including apoptosis and uncontrolled multiplication. Due to this homeostasis is disturbed. Afterwards the poly functional alkylating agents were developed during world war 2 to combat various types of cancers. In the subsequent following years to till date a number of anticancer agents have been made available through intense research including a number of chemotherapeutic agents. Prior to the advent of targeted drug delivery systems, a higher dose of these potentially cytotoxic substances had to be administered to achieve a sufficient drug concentration inside the body for an optimum therapeutic response. But this most frequently resulted in high incidences of adverse reactions. Thus, chemotherapy was only considered as a last resort after other treatment options like surgery and radio therapy had failed. An ideal chemotherapeutic agent not only needs to locate the right or specific site but also have to spare the other normal cells. The main problem in cancer chemotherapy is the lack of similar highly selective chemotherapeutics agents. Thus, often they become more harmful than the disease itself. Recent progress in targeted drug delivery system has augmented the selectivity of many of these anti-cancer agents including many previously cytotoxic chemotherapeutics. This was a great challenge in the past for pharmaceutical scientists, but nowadays progresses are being made to further develop and evaluate more novel approaches for better targeting of drugs through advanced polymer technologies and modern analytical techniques to mitigate the challenge posed by this dangerous disease. This review takes an overall account of all the developments those have been made in this field of drug delivery systems for anti-cancer chemotherapeutic agents recently and some future prospects under development.

Keywords: Chemotherapy; Cancer; Targeted drug Delivery system; Poly functional alkylating agents; Surgery; Radio therapy

IAIHC-206
Traditional Remunerative Utilization of *Pterocarpus marsupium*

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Abstract:
The present study on Vijaysar the *Pterocarpus Marsupium* is famous for numerous medicinal uses. Vijaysar Tree has different names in other language, and they are following: Vijayasara, Vijaysar,Bija, Beejaka, Asana (Hindi), Indian Kino tree, Malabar Kino tree, Red sandalwood (English), Biyo, Asana, vijaysar, Pitasara, Asanam, bijasal (Ayurvedic). The scientific name or Botanical name of Vijaysar is *Pterocarpus Marsupium* (Family - Fabaceae). It is widely used in Ayurveda. In India, it is found in hilly regions throughout the Deccan Peninsula, Gujarat, Madhya Pradesh, Uttar Pradesh, Bihar and Orissa. Various parts of this tree are useful in the management of all metabolic disorder. It pacifies the Kapha and Pitta doshas. The leaves are useful in skin diseases. Bark is indicated in bleeding and diarrhea. The inner part of a tree trunk or heartwood is medicine for anemia, intestinal worms, urinary problems, diseases of the skin, obesity, lipid disorders, etc. The bark is useful in the management of diabetes. Chemical studies done on various part of this tree indicate more than fifty biologically active compounds that act against various major and minor diseases including diarrhea, dysentery, leucoderma, elephantiasis, etc. and consider to have rejuvenative properties. Antidiabetic action of this herb is due to the presence of bioactive compounds like isoflavonoids, terpenoids and tannins. Tumbler made of Vijaysar wood is effective in diabetes if use as water glass to drink water by storing it overnight or period of time. The versatile use of Pterocarpus Marsupium can initiate the advance research in the field of Pharmaceutical formulation.

Keywords: Metabolic disorder, Kapha and Doshas, rejuvenative, Antidiabetic action, Bioactive Compounds, Tumbler.

IAIHC-207

Artificial Intelligence in Healthcare, Past, Present and FutureTrends

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Abstract:
Artificial intelligence (AI) aims to mimic human cognitive functions. It is bringing a paradigm shift to healthcare, powered by increasing availability of healthcare data and rapid progress of analytics techniques. We survey the current status of AI applications in healthcare and discuss its future. AI can be applied to various types of healthcare data (structured and unstructured). Popular AI techniques include machine learning methods for structured data, such as the classical support vector machine and neural network, and the modern deep learning, as well as natural language processing for unstructured data. Major disease areas that use AI tools include cancer, neurology and cardiology. We then review in more details the AI applications in stroke, in the three major areas of early detection and diagnosis, treatment, as well as outcome prediction and prognosis evaluation. We conclude with discussion about pioneer AI systems, such as IBM Watson, and hurdles for real:life deployment of AI.

Keywords: AI devices; diagnostic imaging, natural language processing (NLP); machine learning.

IAIHC-208

Design of Experiment Approach in HPLC Method Development and Validation

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Abstract
Design of experiment approaches is an important adjunct to the HPLC techniques as because a large number of variables can be controlled at a time to obtain the optimum conditions for the desired responses. Also, they can effectively determine the most optimum conditions for desired results in limited number of trial runs. In the current work we have discussed the various chemometric techniques in HPLC for a). Dissolution studies by HPLC analytical method development in view of increasing replacement of conventional detectors with mass detectors and increasing value of stability indicating assays. b). validation using design of experiments techniques. Different types of experimental designs and their particular use in specific situations using the statistical models in design of experiments have been highlighted. The progression of design of experiments to the Quality by Design model has been described. Chemometric techniques and different methods of peak separations have been reviewed.

Key words: Design of experiment; Optimization Designs; Method Development/Validation; Mathematical

IAIHC-209

Acoustic (Noise)-Induced Stress in Rats Changes the Biochemical Level

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Abstract
Word widely, there are uncountable stressors that can affect human health in various ways. Unfortunately, no criterion can measure, how much stress we gain through our surroundings, and how it could imbalance our physical and psychological status? In our daily life routine, we meet with many certain hazardous events, which can regulate or induce physical and psychological stress. These stresses can meet at our working places, such as traveling, any fear, and emotional trauma. It could be something that is not avoidable, from one of the following, any high pitch noise that comes from daily traffic, any concert, from the nearby area of the airport, the industrial zone could harm humans as well as animal's health status. Currently, living organisms facing various health issues due to acoustic pollution that has becoming a serious quandary for human health. The noise can be capable of changing the level of stress hormone in the experimental rat. This study revealed the change in plasma corticosteroid levels in male and female experimental rats while exposed to acoustic.

Key Words: Acoustic; stress; corticosteroid.

IAIHC-210

Application of Artificial Intelligence technique of tablet formulation through MADG method.

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Abstract
The unit solid dosage form tablet which consist of an active ingredient without any excipients. Tablet is the most widely used dosage form. The tablet dosage form is utilized to deliver the accurate quantity of drug to the site of action and to also maintain its chemical integrity. The incorporation of artificial intelligence is to create spaces, artificial neural networks (ANNs) can be used to emphasize multidimensional interactions of input and bound variables to a design space.The use of artificial intelligence helps in guidance of the experimental design

process along with modelling and optimization of pharmaceutical formulation. The process of formulation of the tablet has a complete effect on the drug reaching the site of action. The poorly soluble drugs are known to have a slow rate of drug absorption and a low bioavailability. Based on the biopharmaceutics classification system (BCS), the drugs are classified into two major categories Class II and Class III. In class II there are poorly soluble drugs which have high permeability. Now, to formulate the class II drugs in the form of tablets MADG or moisture activated dry granulation process is utilized. In the moisture activated dry granulation process the granules are created with water and a granulation binder as in wet granulation, but these are not heat dried or milled, which results in minimizing the endpoint sensitivity. The objective of the artificial intelligence incorporation in the formulation tablet through MADG process is to obtain quality product.

Keywords: Artificial intelligence; BCS, granulation; MADG; tablet.

IAIHC-211

Evaluation of Antioxidant activityof various extracts of *Oreganum vulgare*

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Abstract
Background:*Oreganum vulgare* a wild shrub, is widelydistributed throughout northern temperate regions of theHimalayas (altitude 5000-8000ft). It emanates a characteristic aroma and enjoys a reputation as an anti-inflammatory, antiseptic, germicidal and cardiac stimulant in local medicine.No attempts have been made yet to study in detail the anti-oxidant activity of Oreganum vulgare to the best of authors knowledge. Keeping this in consideration along with its medicinal importance, the current study aims to study the anti-oxidant activity of different extracts along with the isolated compounds.Aim/Objective: The current study aims to evaluate the anti-oxidantpotential of various extracts of *Oreganumvulgare*.Methods: The anti-oxidant activity was determined by DPPH radical scavenging assay and ABTS radical cation scavenging activity.Results:Ethanolicextract showed maximum anti-oxidant activity among the extracts.Conclusion:In summary, the anti-oxidant effect of ethanolic and ethyl acetate extracts of Oreganumvulgareto scavenge DPPH free radical was calculated as percentage inhibition which was 59% and 79% respectively at concentration of 100 µg/ml, whereas percentage inhibition of Ascorbic acid at the same concentration was 95.3 %.

Keywords: *Origanumvulgare*; polyphenols; Phytochemicals; Extracts; DPPH

IAIHC-212

Herbal Therapeutic Approaches for The Treatment of Malaria

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Abstract
Malaria is one of the most crucial health issues. There are more than 250 million cases reported each year and over 800,000 deaths occur in a year. Currently, the management of disease is possible only through artemesinin fixed dose combination. However, the major limitation associated with the drug is its recrudescence rate. Thus, the need of the hour is to provide a therapeutic approach which can eliminate or reduce recrudescence rate and is cost effective. The best alternative that we can explore is Mother Nature. To combat malaria, the herbal derivatives can be subjected to chemical modification or can be transformed into therapeutically active formulations. The aim of this work is to review the currently available effective combinations of herbal drugs or herbals combined with synthetic drugs for treatment of malaria. The literature review shows that extract of Holarrhenaantidysenterica and Viola canescens significantly reduced parasitaemia in Plasmodium berghei induced mice. Similarly, Vernonia amygdalina leaf extract enhances therapeutic efficacy of chloroquine against malaria in mice. Combination of herbal extracts of Andrographis paniculata and Hedyotiscorymbosa showed remarkable enhancement in their anti-malarial activity and in the similar way extract of E. capensis and C.myricoides when combined with choloroquine showed synergistic effect against the Plasmodium. falciparum isolate. Therefore, these examples show that the natural extracts possess great potential to enhance the activity of the synthetic drug, when used in combination. This can remediate the problems that are faced with the recrudescence of the current drug therapies.

Keywords: Malaria; Phytoconstituents; Synergistic effect; Recrudescence; Combination

IAIHC-213

Paradigm of Artificial Intelligence: Brain Related Diseases

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Abstract
Artificial Intelligence (AI) is designed to emulate human cognitive functions. It is a paradigm shift in medical services, driven by improved health data access and the rapid development of analytical methods. Artificial intelligence (AI) is promising in this zone and even nowmagnificently applies to fundamental investigation, diagnostics, medicine finding and medical trials with an emphasis on deep education. In specific AI technologies will support Rare Diseases (RDs) which are seriously under-represented in fundamental and clinical investigation.The purpose of this work is for medical professionals, to examine the progress of technical developments prepared with AI and

how Machine Learning (ML) can reform the administration of brain-related illnesses, in order for applicable features of artificial understanding such as ML and artificial neural networks and deep learning etc. to be examined in the paper. This appraisal concentrations on unattended features of artificial intelligence and the application of these aspects to accurate neurology in order to improve patient outcomes. In keeping mind with the current burden of Neurological Disorders, we have listed various available modes of AI, the advantages and limitations of AIs, Applications, successful accessibility and potential AI.

Keywords: Artificial Intelligence (AI); Brain; Diseases; Machine Learning; Neural Network

IAIHC-214

To Study the involvement of GABA receptor modulator in psychological stress in experimental animals

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Abstract
Stress is a medical or biological context may be of a physical, mental or emotional factor that causes bodily inability, systems dysfunction due to mental tension. Stress can initiate the "fight or flight" response, a complex reaction of neurologic and endocrinologic system, the main role of cortisol in the stress is well known. Levetiracetam, an anti-epileptic drug,has a brain: specific binding site and affects allosteric modulations of GABA receptors, high-voltage activated Ca^{2+} channels and some K^{+} Channels. This drug used for the acute seizures. There is a possibility of involvement of GABA receptors under stressful condition. Stress was induced in experimental rats by cold stress method where Animal kept at 4^{0}C for 50 minutes up to seven consecutive day and drug was administered orally (108mg/kg) 45 minutes prior to stress regimen to overnight fasted animals. After seven days, animals were sacrificed immediately after stress regimen by decapitation and blood sample collected for biochemical investigation such as glucose, blood urea nitrogen, cholesterol, triglyceride, total protein and DLC (different leucocytes count) and. Weight variation of various organs such as Liver, Spleen, Kidney, Adrenal gland. A significant change in all parameters observed under study was reversed by GABA modulator, Levetiracetam is the indication of its antistress property and involvement of GABA receptors in psychological stress.

Keywords: Anti stress activity; Levetiracetam; Cold Stress Method.

IAIHC-215

A Comparative Questionnaire Based Study on the Awareness Regarding the Substance Abuse among the Male and Female Second Year MBBS Students

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Abstract
Background: Substance abuse refers to consumption of alcohol or other psychoactive drugs not necessarily leading to addiction or dependence. Substance abuse is a socio-medical problem and students from developing countries are at a greater risk of developing Substance Use Disorders (SUDs) due to lack of the necessary substance use disorders identification, treatment and control programs within the institutions of higher learning.
Aim &Objective: To assess the comparative awareness about substance abuse among male and female second year MBBS students.
Materials and Methods: It was a cross-sectional, comparative questionnairebased (Likert-type) study among the 142 second year MBBS students on the various substance abuse related issues such as substance abuse disorders and the drugs leading to these disorders, complications of drug abuse, punishment related to illegal drug use etc. Statistical analysis of the data was done by median score and the comparative assessment was done by applying the Mann-Whitney U test.
Results: In the present study, it was found that the students had knowledge about the term substance abuse, drug dependence but they had poor knowledge regarding the substance use disorders, punishment related to it and various drug de-addiction centres and neither had they visited de-addiction centre ever. However, there was no statistically significant difference between perceptions of male and female students regarding the substance abuse related issues.
Conclusion: From the present study, it can be concluded that there is a low level of knowledge and awareness among the medical students regarding the substance abuse related issues. Therefore, there is a greater need to make the students aware about this important issue via visiting to drug de-addiction centers and by the educational programs.

Key Words: Substance abuse; Medicalstudents; Knowledge; Awareness; Addiction

IAIHC-216

Is Diabetes and Obesity interlinked: A Review

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Abstract
Diabetes Mellitus (DM) is a metabolic disorder characterized by high levels of blood glucose which might be due to impaired insulin secretion or insulin resistance or both. Type 2 diabetes mellitus (T2DM) or non-insulin dependent diabetes mellitus (NIDDM) is considered as one of the life-threatening diseases with an increasing occurrence globally. The International Diabetes Federation (IDF) estimated that the global prevalence of diabetes is predicted to grow from 415 million at present to 642 million by 2040. Type-I, Type-II and gestational diabetes are different types of diabetes, among which Type-II diabetes mellitus or non:insulin dependent diabetes mellitus is the most

prevalent diabetes occurring in 80% of the affected patients worldwide. Type-II diabetes is the most distinctive type of Diabetes Mellitus presumed to be because of continuous defect of secretion of insulin and in this type, body has the potential of making insulin but it becomes resistant to insulin so that the insulin levels turned out inefficient. Thus, the cause of hyperglycaemia in Type 2 Diabetes includes the insulin resistance and deficiency. Insulin resistance, however, reduces the ability of cells to use the sugar for energy. This is more likely to occur in people who are overweight or obese since excess fat makes the cells less responsive to insulin, causing insulin resistance. Here, we present the relation between obesity and diabetes.

Keywords: Diabetes; Insulin; Obesity; Type-II

IAIHC-217

*Aesculus hippocastanum*and its BioactivesRole in future therapy

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Abstract
*Aesculus hippocastanum*commonly known as horse chestnut,is a tall deciduous tree of genus Aesculus belonging to Hippocastanaceaefamily. The chief active constituent of horse chestnut is escin. Other compound is isolated from AH seeds, i.e., coumarin derivatives such as aesculin, fraxin, scopolin, oils like oleic acid, linoleic acid and bioflavonoid like quercetin, kaempherol and tannins like leucocyanidine, proanthocyanidin A2. Flowers are rich in coumarin compound such as esculin, esculetin, scopoletin and fraxetin. Escin is a mixture of triterpene glycoside including glycosides of protoaescigenin, barringtogenol C, allantoin, sterols, leucocyanidin, leucodelphinidin and tannins. Escin is categorized into two classes α- and Beta-escin and they can be differentiated on the basis of its melting point, haemolytic index, solubility in water and by specific rotation. Traditionally Beta-escin is used for flatulence, anorexia, antiseptic, antioxidant, anti-pyretic, analgesic and antiaging agent. Beta:escin has been also used widely to treat chronic venous insufficiency, hemorrhoids, and postoperative edema. Many research studies showed that Beta-escin inhibits the growth of colon cancer cells and inhibits chemically induced colon carcinogenesis in rats. Beta:escin also inhibit the growth and induce apoptosis in various human cancer cell lines derived from lung, pancreatic, breast and liver cancers and in leukemia and multiple myeloma.Esculetin and esculin (glycoside of esculetin) potentially inhibit the coagulation of blood, enhance the tones of veins and stimulate blood reflux.In vivo, esculin has been reported to protect lung injury and attenuate cognitive impairment in diabetic nephropathy. In addition, esculin can also act against diabetic renal damage and nephrotoxicity as well as used for the treatment of frostbite, burns and skin inflammationScopoletin exerts nonspecific spasmolytic effects and reduces blood pressure whereas esculetin, fraxetin and scopoletin also have anti-inflammatory activity, they are inhibitors of the proinflammatory lipoxygenase and cyclooxygenase pathways of arachidonate metabolism.

IAIHC-218

Nanoparticles: Preparation and their Applications in Pharmacy

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Abstract
In recent years, there has been an exponential interest in the development of drug delivery systems using nanoparticles. Nanoparticles are particles typically between 1 and 100 nanometres (nm) in size, which is surrounded with interfacial layer. It shows enhanced properties such as high reactivity, sensitivity, strength, surface area, stability, etc. because of their very small size. These properties have been used to alter and improve the pharmacodynamic and pharmacokinetic properties of various types of drug. Nanoparticles have been used in:vivo to deliver the drug at a controlled and sustained rate to the site of action, targeting of the drug to the selected sites and to protect the drug molecules in the systemic circulation. Various types of polymers have been used in the preparation of nanoparticles for drugs, hormone delivery and proteins.
Keywords: Nanoparticles; Preparation; Application

IAIHC-219

Role of Artificial intelligence in disease Asthma

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Abstract
Asthma is a condition in which a person's airway become inflamed, narrow and swell and produce extra mucus, which makes it difficult to breathe. Asthma is a common condition responsible for a high rate of morbidity and restricted activity. Its prevalence has increased in recent decades and both its causes and the reasons for its increasing prevalence are not well established. Outbreaks ofasthma may provide an opportunity for identification of risk factors which are potentially preventable. From a public health point of view, outbreaks of asthma are seen within the context of avoidable morbidity and mortality. A particular outbreak of asthma, or even a series of outbreaks such as occurred in Barcelona with more than 1000 attendances at emergency departments and about 20 deaths, may appear unimpressive in comparison with the larger health burden imposed by many other diseases. In addition, the investigation of asthma outbreaks is difficult and usually requires a retrospective approach. Thus, it is relevant to question to what extent outbreaks of asthma should be investigated.
The prediction of asthma that persists throughout childhood and into adulthood, in early life of a child has practical, clinical and prognostic implications and sets the basis for the future prevention. Artificial Neural Networks (ANNs) seems to be a superior tool for analyzing data sets where nonlinear relationships are existing between the input data and the predicted output. This study presents an effective machine-learning approach based on Multi-Layer Perceptron (MLP) neural networks, for the prediction of persistent asthma in children. Through a feature reduction, 10 high importance prognostic factors correlated to persistent asthma have been discovered. The feature selection

approach results in 89.8% reduction of the initial number of features. Afterwards, a feature reduced classifier is constructed, which achieves 100% accuracy on the training and test data sets. Experimental results are presenting and verify this statement.

IAIHC-220
An Update on Medication Errors

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Abstract
Pharmacist is to provide optimal pharmaceutical care for individual patients. Medication errors occur every day causing injury to the patients and even deaths. Any preventable event that may cause or lead to inappropriate medication use or patient harm during medication to user is called medicational error. The health care professionals are not fully aware of the damages done by medication errors in terms of patients' discomfort and economic burden. There is a need to provide information about medication errors to health care providers. This article reviews research done on the various aspects of medication errors. The research work done on prescribing errors, transcribing errors, dispensing errors, administration errors and discharged summaries errors have been examined. Various types of medication errors have been reviewed. Electronic prescribing and computerized physician order entry (CPOE) with clinical decision support systems (CDSSs), Bar Code, Interventions to reduce medication errors, Medication Error Reporting Systems (MERSs), Alerts about medication errors, Prevention of harm from high:alert drugs, Smart Infusion Pumps and Telemedicine or Telepharmacv. Statistical tests used in medication error studies have also been stated. Prescribing errors are the prime cause of MEs that further leads to subsequent dispensing and administration errors. Medication errors are common cause of adverse drug events or subtherapeutic outcomes of pharmaceutical care.

Keywords: Medication Errors; Prescribing Errors; Bar Code; Telepharmacy.

IAIHC-221
Current Aspects and Safety of Pharmacovigilance: A Review

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Abstract
Pharmacovigilance (PV) play a key role in the healthcare system through assessment, monitoring and discovery of interactions amongst drug and their effects in human. Pharmaceutical and Biotechnological medicines are designed to cure, prevent or treat diseases; however, there are also risks particular adverse drug reactions (ADRs) can cause serious harm to patients. Recently, pharmacovigilance has been confined, mainly to detect adverse drug event that were previously either unknown or poorly understood. Adverse events reported by PV system potentially benefit to the community due to their proximity to both population and public health practitioners, in terms of language and knowledge, enables easy contact with reports by electronically. The PV system team obtain valuable additional information, building up the scientific data contained in the original report and making it more informative. In this above investigation we will discuss about drug safety, worldwide pharmacovigilance centres and their role, benefit and challenges of pharmacovigilance and its future consideration in healthcare sectors.

Keywords: Pharmacovigilance, ADRs, Drug Safety, Healthcare.

IAIHC-222
Stem Cell Therapy for Diabetes

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Abstract
Stem cell therapy holds immense promise for the treatment of patients with diabetes mellitus. Research on the ability of human embryonic stem cells to differentiate into islet cells has defined the developmental stages and transcription factors involved in this process. However, the clinical applications of human embryonic stem cells are limited by ethical concerns, as well as the potential for teratoma formation. As a consequence, alternative forms of stem cell therapies, such as induced pluripotent stem cells, umbilical cord stem cells and bone marrow-derived mesenchymal stem cells, have become an area of intense study. Recent advances in stem cell therapy may turn this into a realistic treatment for diabetes in the near future.

Keywords: Embryonic stem cell; induced pluripotent stem cell; mesenchymal stem cell; diabetes

IAIHC-223
A Review on Solubility Enhancement techniques for Poorly Water-Soluble Drugs

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Abstract:
Most of the drugs are administered by Oral route, which is the most desirable and preferred method of administering therapeutic agents for their systemic effects. Approx. 40% new chemical entities are poorly water-soluble drugs. Solubility, the phenomenon of dissolution of solute in solvent to give a homogenous system, is important to achieve desired concentration of drug in systemic circulation for desired pharmacological response. Low aqueous solubility behaviour is the major challenging aspects in formulation development of new chemical entities as well as for the generic development. Poorly water-soluble drugs often require high doses in order to reach therapeutic plasma

concentrations after oral administration. A drug must be present in the aqueous solution for absorption. Water is the solvent of choice for liquid pharmaceutical formulations. To improve solubility and bioavailability of poorly soluble drug we use various techniques. The techniques like micronization, chemical modification, pH adjustment, solid dispersion, nanosuspension, lyophilization, complexation, co- solvency, micellar solubilization, hydrotropyetc are commonly referred for solubility enhancement. This review article demonstrates the various techniques of solubility enhancement for the attainment of effective absorption and improved bioavailability.

Keywords: Solubility Enhancement, Dissolution, Bioavailability, Solid dispersion, Nanosuspension

IAIHC-224
The Anticancer Activity Studies of Anti-EGFR-CBSA-CYP-SLNs

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Abstract
Background:
To treat Glioblastoma Multiforme (GBM), immune conjugated Cyclophosphamide 10-100nm ranged lyophilised solid lipid nanoparticles (Anti-EGFR-CBSA-CYP-SLNs) were prepared and subsequently in-vitro and in-vivo anticancer and cellular uptake studies were performed.
Aim: The aim of this research was to carryout anticancer activity (GBM treatment) and cellular uptake studies for Anti-EGFR-CBSA-CYP-SLNs.
Materials and Method: Using melt dispersion and high-pressure humanization technique Cyclophosphamide solid lipid nanoparticles were prepared and afterward conjugated with bovine serum albumin and Anti-EGFR1-Tyr-1175 monoclonal antibody using carbodiimide coupling reactions. The >100nm ranged solid lipid nanoparticles were characterized and immunoconjugate was verified by SDS-PAGE analysis. The lyophilised final formulation (Anti-EGFR-CBSA-CYP-SLNs) were exposed to MTT cytotoxicity assay; taking B16F10 cell line, lymphocyte toxicity study, in-vitro anticancer activity study using C57BL mice model, haemolytic study, in-vitro trans endothelial transport study, cellular uptake study, fluorescence microscopic study in BCs and U-87MG cell line, in-vitro release and kinetic study, desirability study and six month stability study was also performed
Result and discussion: The >100nm ranged solid lipid nanoparticles was successfully prepared and the IC_{50} value using MTT assay was found to be 0.3 ug/ml in B16F10 cell lines. The lymphocytic toxicity was found to be 0.5 ug/ml. From the SDS-PEG analysis, Anti-EGFR1-Tyr-1175 monoclonal confirms its presence at 130 kDa. From the haemolysis it was confirmed that the final formulation was having very minor (>1%) haemolysis activity, from the trans endothelial transport studies it was confirmed to have excellent FITC transport. Where else, in cellular uptake studies, in BCS cells the final formulation shows 95% fluorescence cellular uptake after 10^{th} hours & in U-87MG cell lines it shows 98% fluorescence uptake after 10^{th} hours. From the fluorescence studies it was confirmed that the final formulation (Anti-EGFR-CBSA-CYP-SLNs) would have excellent fluorescence intensity in BCS and U-87MG cell lines. From the in-vivo anticancer activity studies in C57BL adult male mice, after inducting B16F10 melanoma, it was confirmed that tumour volume was drastically decreased ($1070.32\pm4.48mm^3$) with 25mg/kg dose of final formulation within 40 days of initiation of study. As per ICH Q1A(R2) guideline stability studies were performed for six months at 5°C ± 3°C storage conditions which shows excellent stability profiling for the final formulation.
Conclusion:The outcome of the results shows excellent anticancer activity (GBM treatment) in both in-vitro and i-vivo conditions. Based on stability results it can conclude that the final formulation (Anti-EGFR-CBSA-CYP-SLNs) would have higher industrial applicability. One patient was published in Indian patent official gazette (Patent application Number.: 201721019625) by compiling outcomes of these results.

IAIHC-225
Corona virus

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Abstract
Corona virus is also known as Wuhan corona virus. This virus belongs to Phylum Incertaesedis, Order Nidovirales and Family Coronaviridae. The 2019 nCoV is a recently identified virus found in Wuhan, Hubei Province China. the recognition of a new corona virus as the cause of sever acute respiratory syndrome (SARS) was certainly remarkable. Corona virus consist a large family of virus which is causing illness in people and other than that circulate among animals, initially many of the patients in the outbreak Wuhan China. The best studied model for corona virus replication and Pathogenesis has been the group 2 Murine corona virus mouse hepatitis virus, and much of what is known of the stages of the corona virus. Current symptom reported for patients with 2019 nCoV include acute onset of fever, cough, and difficulty in breathing. Suspected case is being identified through disease surveillance in India. Lifecycle has been determined in animals and in culture using this virus. Corona virus replication complexes are sites for replicas gene translation and replicas polyprotein processing and also for viral RNA synthesis. The proteinase activity for all corona virus include both papain like proteinase (PLP) and picoronavirus 3C like proteinase activities that are encoded within the replicase polyproteins and mediate both cis and trans cleavage events. These viruses to jump between species, to establish infection in a new host, and to identify significant reservoirs of corona viruses will dramatically aid in our ability to predict when and where potential epidemics may occur. As bats seem to be a significant reservoir for these viruses, it will be interesting to determine how they seem to avoid clinically evident disease and become persistently infected. Lastly, explaining the mechanism of how corona viruses cause disease and understanding the host immunopathological response will significantly improve our ability to design vaccines and reduce disease burden.

IAIHC-226

Antiulcer Potential of Vitex Negundo Ethanolic Extract (Seed) In Ethanol Induced Ulcerated Rat

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Abstract
The aim of the present study is to evaluate the anti-ulcer activity of Ethanolic extract of Vitex negundo seed extract in ethanol induced gastric ulcers in rats. The antiulcer activity was studied in rats in which gastric ulcer was induced by oral administration of ethanol (2ml/Kg) method. The antiulcer activity of Vitex was assessed by determining and comparing gastric volume, free acidity, total acidity, pH, percentage of ulcer protection, ulcer index. The extract of Vitex negundo decreased the ulcer index and there was a decrease in total gastric acid and free acid ($p<0.0001$), and increases the pH value ($p<0.0001$) and also reduces the total gastric volume ($p<0.0003$), increases the percentage of ulcer protection at the dose of 400mg/kg and 200 mg/kg respectively. The ethanolic extract of vitex negundo was clearly shows a protective effect against total acid, free acid, gastric volume and ulcer index and also increases pH and percentage of protection against ulcers in ethanol induced ulcer.

IAIHC-227

Artificial Intelligence Based Nanocarriers Drug Delivery System for Tumor Targeting

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Abstract
Using nanocarriers as devices for drug delivery as clinical or imaging agents that stimulate thepharmacological features of frequently used compound in diagnosis of cancer and therapy. Artificial intelligence, that is intelligence exhibited by machines, has many applications in today's society.A common problem of drug administration in all types is that drug interplay at any given time of treatment that is dependent on time, dependent on dose, and patient specific. The development of the nanomedicine-mediated joint delivery of multiple therapy has made it possible to integrate artificial intelligence (AI) with nanomedicine to solve this difficult issue. The significant challenge of latest studies in this field is to create new kinds of intelligent nanocarriers capable of responding selectively to cancer-specific condition and fast release of drugs in target cells. By increasing the number of cancer cells targeting nanocarriers, the active anticancer medications could reduce the cytotoxic effect compared to conventional formulations. A new type system of drug delivery consists of nanocarriers, mechanism of targeting & technical stimulus. This Review presents different nanocarriers, targeting, and functional moieties responsive to a variety of stimuli such as pH, enzyme, Temperature, redox stimulus.

Keywords: Artificial intelligence; Nanocarriers (Quantum dots;Micelles, etc.);Cancer drug delivery; Targeting

IAIHC-228

Dermatitis Lichenoid: Reported ADR with the use of Atenolol, an Antihypertensive Drug

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Abstract
The term lichenoid reaction (or lichenoid lesion) refers to a lesion of similar or identical histopathologic and clinical appearance to lichen planus (i.e. an area which looks the same as lichen planus, both to the naked eye and under a microscope). Lichen planus (LP) is a chronic inflammatory disease of the skin, mucous membranes and nails .Lichen planus lesions are so called because of their "lichen:like" appearance and can be classified by the site they involve, or by their morphology. It is thought to be a T cell mediated autoimmune reaction (where the body's immune system targets its own tissues). The information obtained by Danish National Board of Health's Committee on Adverse Drug Reactions shows that 10-60% of ADR from diuretics, beta-blocking agents, and anti-hypertensive drugs are dermatological. The most serious dermatological side effect, dermatitis lichenoid is very rarely seen following the use of beta blocker. Atenolol is a selective β1-blockers used as antihypertensive drug. Previously in some studies it has been reported that β-adrenoceptor antagonist (β=blocker): associated with lichenoid reaction. It has been reported that when patient was treated with 0.1% fluocinolone acetonide and atenolol replaced, lesions improved. No recurrence was observed in the follow-up after three months.

Keywords: Dermatitis Lichenoid; Atenolol; Hypertension.

IAIHC-229

Artificial Intelligent in Cancer Management

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Abstract
Artificial intelligence (AI) is the intelligence by machine. Its working is based on algorithms, machine learning, and deep learning which make AI to learn data, think, and predict. AI is very helpful in healthcare, especially, in cancer diagnosis, treatment, and prevention. AI can detect cancer on earlier stage, which makes treatment of cancer successful at high rate, as in most of the cases; cancer detection is possible only in later stage because earlier symptoms are vague. AI can predict more accurately which treatment is more suited for particular patient and/or cancer type. AI can learn from medicated and non-medicated data, interpret and interrogate the non-genomic and behavioural action

which may lead to activation of cancerous gene and who is more likely to develop cancer. The role of AI in the diagnosis and therapeutic management of cancer is discussed with relevant examples.

Keywords: Artificial intelligence; Cancer; Diagnosis; Treatment; Prevention; Medicated; Non-Medicated.

IAIHC-230
Formulation, Characterization and Evaluation of Edaravone Sublingual Tablets

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Abstract
Sublingual means "under the tongue," which refers to the administration of a substance through the mouth, so that the substance is easily absorbed under the tongue by the blood vessels due to the high rate of perfusion. Edaravone is a free radical scavenger, and an instrument of neuroprotection. It is commonly used in the treatment of Amyotrophic Lateral Sclerosis (ALS), and was used previously to heal stroke. Edaravone Sublingual Tablet (30 mg) was prepared by way of direct compression. Until compression the blend property was measured for bulk mass, tapped density, index of Carr, ratio of Hausner and angle of rest. The total weight, strength, friendliness and disintegration time of the tablets were measured after the compression tablets.The most suitable sublingual tablet requirements include ease of chewing, acceptability and time to disintegrate. All parameters were contained under standards specification. The test results ranged from 98 to 105 percent.

Keywords: ALS; assay; direct compression; standards; Sublingual.

IAIHC-231
Recent Development of Thiazolidinedione as an Anti-Inflammatory Agents

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Abstract
The aim of our study was to review on anti-inflammatory activity associated with thiazolidinedione. Thiazolidinediones (TZDs) or glitazones having significant biological activities ranging fromanti-diabetic, anti-inflammatory, anti-bacterial, anti-fungal, antiviral, and anti-cancer. 1, 3-thiazolidine-2, 4-dione contains basic skeleton of thiazole or thaizolidine with one carbonyl group in thiazole at 4th position makes it thiazolidine-4-one which known for its anti-inflammatory activity. Thiazolidinedioneare selective ligands of peroxisome-proliferator-activated receptor-γ increasingly used in the treatment of type2 diabetes. Both in-vitro and in-vivo studies shown various evidence that thiazolidinedione contains anti-inflammatory properties. Thiazolidinedione inhibit macrophage activation and decrease inflammatory cytokine expression and release in macrophage and monocyte in the targeted cell. In vivo, treatment with TZDs decreases circulating mononuclear cells nuclear NF-kB content while increasing, in the same cells, expression of IkB, an NK-kB inhibitor. Furthermore, TZD treatment results in decreased plasma levels of inflammation and cardiovascular risk markers such as CRP, MMP9, PAI-1 and sCD40 in both obese and type 2 diabetic patients. Finally, TZDs induce synoviocyte apoptosis and reduce secretion of TNFα, IL-6 and IL-8 in synoviocyte from rheumatoid arthritis patients.

Keywords: Thiazolidinedione; Anti-inflammatory; Peroxisome-proliferator activated receptor-γ

IAIHC-232
Robotics: A Novel and Promising Approach in Pharmacy

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Abstract
Robotics is the science and technology of robots and their design, manufacture, and application. Roboticists also study electronics, mechanism and software. The use of Robotics in pharmaceutical technology has increased over the years, and the use of technology can save time and money while providing a better understanding of the relationships between different formulation and process parameters. In the world of pharmaceuticals, there is a vital role for robotics to play in the complicated processes research and development, production, and packaging, justification for robots ranges from improved worker safety to improve quality. Speeding up the drug discovery process is another benefit of robotics. Industrial robotics for pharmaceutical applications has a bright future. Robots are now becoming more trustworthy for doctors. A large number of researches are being carried out to improve the current available robotics make the pharmacy profession more efficient. These articles describe the use of robotics in the novel and promising approach in the field of pharmacy.

Keywords: Robotics; Pharmaceutical; Electronics; Technology

IAIHC-233

The Wound Healing Efficacy of AP-Hydrogel for excision wound.

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Abstract:
In battle loss situations, most extreme number of wounded soldiers' casualities was accounted for during pre-medical clinic care. Along these lines, there is a prerequisite of novel and safe quick mending AP-Hydrogel to spare troopers during pre-medical clinic care. Twisted recuperating without inconveniences is basic to the endurance, as it reestablishes the honesty of the skin and shields the person from disease and lack of hydration. Recuperating of wounds, activated by tissue damage, comprises of covering and exceptionally planned periods of hemostasis, irritation, multiplication, and rebuilding. The injury mending course might be captured in any of these stages. The primary goal of the present investigation was to decide the viability of arranged hydrogel definition in full thickness extraction wound creature model. The Sprague Dawley rodents (SD) were utilized right now. The full thickness extraction wound was made on the dorsum of SD rodents. The detailing viability was checked by exploring the pace of wound constriction, histopathology of plan treated injury skin followed by Sirius red recoloring to check the collagen substance of mended skin. The hydrogel definitions indicated great outcomes in twisted recuperating in SD rodents in contrast with standard and control. The life structures and morphology of skin tissues was likewise held in the hydrogel regarded twisted skins as was shown in histopathological micrographs. The Sirius red recolored tissues indicated that collagen substance of the tissues additionally held with legitimate arrangement of collagen filaments. Thus, the readied hydrogel can be proposed as a superior injury mending specialist.

IAIHC-234

Formulation, Evaluation and Optimization of Low Soluble Drug by Fluidized Bed Top Spray Granulation

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Abstract
Immediate Release tablets are the tablets that are intended to break and discharge the actives without any unique rate controlling qualities like exclusive coatings. These types of drug delivery system provides immediate drug levels within shorter period of time.
Hypercholesterolemia is the abnormal standard of lipids in blood and is extremely common in general population. The main objective of present study is to produce formulation of Fenofibrate that provides rapid dissolution and rapid disintegration as matched to other conventional dosage form.
Tablets were produced using wet granulation technique specifically Fluidized bed granulation technique. Total Five trials were taken from this technique while optimizing with excipients such as MCC and HPMC with their various grades. Out of Five trials Trial 3 shows compatibility with respect to invitro dissolution studies when compared with reference product. For carrying out Acclerated stability study third batch was taken and studies were taken place at 40°C±5°C/ 75% RH and it was concluded Formulation F3 was stable.

Keywords: Fenofibrate; Immediate Release; Hypercholesterolemia; High Cholestero

IAIHC-235

Efficacy and Mechanism of Action of *Moringaolifera* in Diabetes

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Abstract
Diabetes mellitus is a globally spreading metabolic disorder with high incidence rate. In diabetes patient elevation of blood glucose level occurs due to deformation of insulin receptor action/secretion or both. There are many treatment regimens available in market, but do not able to provide complete relief and cause severe side effects. To overcome these types of problems it becomes important to find different therapeutic targets and use it in combination with conventional medicine for the treatment of diabetes. To surmount the side effect of present available treatments now researchers relay on herbal plants. *Moringaolifera* due to its numerous applications also known as miracle tree as most of its part can be used for pharmacological activities. It was seen that methanolic extract of *Moringaolifera* demonstrated significant inhibitory activity against DPP:4 so its potent antidiabetic activity is beneficial for the control of diabetes-related abnormalities.

IAIHC-236
Role of Artificial Intelligence in Health Care

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ABSTRACT
Artificial Intelligence (AI) has wide-reaching potential and deals with various technical tasks, which would otherwise only be expressed in human brain. AI helps in investigation of new drugs as well as target-based drug development, which reduces the cost and time consumed for of research and development. There are several pharmaceutical branches, where AI approaches (algorithms, machine learning, natural language processing, etc.) are used for the diagnosis and treatment of diseases ultimately leading to benefits of human being. AI based methods have been applied reasonably in various pharmaceutical areas for development of biogenic eyes, artificial taste buds and drug development and drug discovery software. This paper gives a summarised overview of role of AI in various sectors of health care with its pros and cons.

Keywords: Artificial Intelligence; Healthcare; Drug Discovery; Machine learning

IAIHC-237
Evaluation of Neurobehavioral Outcomes after Exposure to Light and Combined Traffic Noise Pollution in Rats

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Abstract
The present study aimed to evaluate the influences of light and traffic noise pollution on the ability of learning and memory in male Wistar rats. We hypothesized that exposure to these pollutants may cause memory impairment, anxiety-like and depressive like behavior in rats. Group of rats were exposed to light (150lux:5lux, 14:10 hours) and combined traffic noise (CTN) from highways and high speed railways with sound level 100db for 6h/day. Morris water maze test, elevated plus maze (EPM) test, forced swimming test and sucrose preference test were performed after end of the exposure. The neurobehavioral results suggested that light and noise pollution impaired the learning and memory in rats after 28 days of light and CTN exposure. Moreover, we found significant anhedonia (less sucrose consumption), anxiety (less no. of open arm entries in EPM) and depressive like behavior (decreased immobility time) in rats that were exposed to CTN and light pollution in comparison to normal control group. Our results clearly indicated that light and noise pollution are one of the potential predisposing factors for the development of neurobehavioral anomalies.

IAIHC-238
Herbal Plants as the best choice for the treatment of Inflammatory Bowel Disease (IBD)

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Abstract
Natural products have served as an important source of therapeutically active agents and since 19th century about 60% of newly discovered drugs have their origin from the plants. Inflammatory bowel disease (IBD) is divided into ulcerative colitis (UC) and Crohn's disease (CD). The etiology of IBD is up to date unknown and in most cases, about 20% of the patient's experience first symptoms of the disease during their childhood usually less than 5 years of age. The number of IBD cases is rising sharply worldwide and the cause is not clearly understood. However, it is believing that factors such as genetic, environmental, infection and immune system are partly the causative agents of IBD. In UC the inflammation is located only on the colon, while in CD the inflammation can be present in any part of the GIT. Patients with IBD have presented diverse symptoms out of which abdominal pain, diarrhea, bloody stools, and vomiting are the most prominent symptoms. The therapeutic agents used to treat the disease aim to inhibit the inflammatory agents without causing the complete suppression of the patient immune system. Due to the severe side effects caused by allopathic medications now-a-days herbal products are gaining preference due to less harmful side effects. Individualization of treatment is also proving to be very useful for better patient treatment. In the current review, we described the IBD types, pathogenesis, diagnosis, conventional and herbal compounds used for the treatment of IBD, and various clinical trials currently under investigation.

Keywords: inflammatory bowel disease (IBD); ulcerative colitis (UC); crohn's disease (CD); allopathic medication; herbal compounds.

IAIHC-239
Different Strategies in Drug Designing Including Chemogenomics

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Abstract
Chemogenomics unites the most influential ideas in current science and Biology, connecting combinatorial Chemistry with genomics and proteomics.chemogenomics , or concoction genomics, is the foundational screening of focused synthetic libraries of little particles against singular medication target families (model GPCRs, atomic receptor, kinases and proteases and so forth.) With a definitive objective of distinguishing proof of novel medications and medications targets. Present day chemogenomics is an extraordinary order concentrating the organic impacts of substance mixes on a wide range of natural targets. In the present science, finding of medication structure any sort of

malady put a significant job. Medication Institute and Pharma Companies continually doing research with new item under bioinformatic ways. These looks into completed distinctly for their business reason and beat the challenge. Medication configuration, frequently alluded to as reasonable medication configuration, is the creative procedure of finding new medicine dependent on the information on a natural objective. Furthermore, there are various procedures are likewise used to structure a medication.

Keywords: Chemogenomics; Drug design; Drug targets; Strategies

IAIHC-240

Formulation and evaluation of ferulic acid lipid cholesterol phytosome and its incorporation into gel formulation as topical delivery targeting U.V. mediated oxidative Stress.

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Abstract
For the efficient delivery of herbal compounds in the treatment of various types health conditions, many technologies have been tried which is denominated novel drug delivery system. Out of all Novel drug delivery system of phyto Chemical, phytosome stands as the most efficient and reliable. Phytosome can be divided into two parts, -Phyto" means plant while "some" means cell like ferulic acid was incorporated into phytosome technology by reacting it with cholesterol. Thus, its results in increased absorption, stability which leads to better bioavailability and therapeutic effect in the treatment of different health condition as compared to delivery of the herbal compounds alone. The topical gel formulation of ferulic acid for antioxidants effect study was prepared using polymers such as carbopol 940, propyleneGlycol, poly ethylene glycol 400, isopropylalcohol, triethanolamine and distilled water.The optimized ferulic acid lipid phytosome was formulated into topical gel and it was evaluated in terms of color, spreadibility, pH, drug content, drug release, viscosity, and stability.

Key words:phytosome; Bioavailability; Solubility; NDDS; Absorption; therapeutic effect; Herbal Compound

IAIHC-241

Evaluation of Cardiotonic and Cardioprotective Activity of Some Clinical Anti-Diabetic Drugs

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Abstract
Over the past decade scientists have tried to investigate dual activity inhibitors especially in the therapeutics of diabetes, because the complication arise from the disease is more. Various computational program such as PASS (Prediction of Activity Spectra for Substances) is able to simultaneously predict more than one thousand biological and toxicological activities from only the structural formulas of the chemicals. It can be used to predict the biological activity profile of the currently available standard drug which is used as clinical anti-diabetic therapeutics. PASS predictions were successfully compared to the available information on the pharmacological and toxicological activity of the selected group of compounds.

Keywords: PASS; Anti-diabetic; Cardioprotective; Cardiotonic.

IAIHC-242

Current Updates on Nanotechnology in Drug Delivery: A Review

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Abstract
The utmost developing wing in pharmaceutical science is known as 'Pharmaceutical nanotechnology' which presents various new devices, opportunity, extension in the application of disease diagnosis and therapeutics. The potential of nanotherapeutics to provide targeted drug delivery, enhance drug solubility, expand drug half-life, improve a drug's therapeutic index, and reduce a drug's immunogenicity has resulted to revolutionize the treatment of many diseases. One of the most potent nanosystems is nanoemulsion having the droplet size ranging to submicron size. Nanoemulsion (also known as mini emulsion) are clear oil-in-water (O/W) or water-in-oil (W/O) droplets with a mean particle size between 100 and 500nm. The major components of nanoemulsion are oil, water, surfactant and co-surfactant (additionally). The stableness of nanoemulsion formulation can be constant/continuous by a surfactant and co-surfactant. Nanoemulsion has been considered as a promising method due to its advantage such as easy preparation, optical clarity, solubilizing for both hydrophilic and hydrophobic drug, less energy required and an additional advantage of greatly bypass the barrier and improve the drug targeting.

Keywords: ANN; Characterization; Nanotechnology; Nanoemulsion; Patent; Regulatory aspects; Techniques

IAIHC-243
Formulation and Evaluation of Bilastine Fast Dissolving Tablet

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Abstract:
Tablet is most popular amongst all the dosage forms because of self-medication and ease of administration. Allergy is a general problem for pediatric and geriatric patients which lead to poor patient compliance. To avoid these problems fast dissolving or disintegrating tablets has emerged as an alternative oral dosage form. Fast dissolving tablets are solid dosage forms containing drugs that get disintegrated within one minute without need of water. In order to beat the swallowing problems in pediatric and geriatric patients by conventional dosage forms, these fast dissolving tablets are formulated. In recent trends fast dissolving technology is most important and useful for geriatric, pediatric and mentally ill patients. The basic approach used in development of FDTs is the use of super disintegrants and the elimination of bitterness. These oral dosage forms have many benefits such as self-medication, increased compliance, ease of manufacturing and noninvasive. Fast dissolving tablet (FDT) is one such sort of an innovative and unique drug delivery system which is swiftly gaining much attention within the research field of rapid dissolving technology. Oral route is that the most expedient and safest route of drug delivery due to wide selection of medicine is administered through this route. The review describes various formulation aspects, desired characteristics and need for development, challenges in formulation, suitability of drug candidates, composition, various technologies involved, advantages, disadvantages, patented technologies, marketed formulations and evaluation parameters for FDTs, formulations.

Keywords: FDT (Fast Dissolving Tablets); Super Disintegrants; Patented technology.

IAIHC-244
Formulation and Evaluation of Teneligliptin Tablet

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Abstract
In the modern era due to excessive work load, too much stress or due to some genetic disorders type II diabetes is the most affecting disease in our country. In this present research work we have formulated and evaluated teneligliptin tablets by using wet granulation method. Teneligliptin is one of the finest/newly introduced drugs of class DPP-4 inhibitor in the treatment of type II diabetes. It offers proper glycemic control in just 12 weeks of therapy and it also has better tolerability, better efficacy in renal impaired patients. Six different types of formulation were made using different ratio of excipients (MCC, maise starch, HPMC, HPC, aerosil, magenisum stearate). Out of these formulations F4 reflects better tablet characteristics and drug release than other formulations. Thus F4 is found to be best formulation in this study.

IAIHC-245
Impact of Artificial Intelligence in Health Care

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Abstract
Artificial Intelligence (AI) aims to mimic human cognitive functions. It is bringing a paradigm shift to healthcare, powered by increasingavailability of healthcare data and rapid progress of analytics techniques. We survey the current status of AI applications in healthcare and discuss its future. AI can be applied to various types of healthcare data i.e. structured and unstructured data. Popular AI techniques includes includemachine learning methods for structured data, such as the classical support vector machine and neural network, and the modern deep learning, aswell as natural language processing for unstructured data. Major domains that utilize AI tools include cancer, neurology and cardiology.We then review in more details the AI applications in stroke, in the three major areas of early detection and diagnosis, treatment, as well as outcome prediction and prognosis evaluation.

Keywords: Artificial Intelligence; Pharmaceutical Importance

IAIHC-246
Formulation, Evaluation and Characterization of Atorvastatin Calcium Dispersible Tablet

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Abstract
The main objective of the present study reported here was to produce a formulation of dispersible tablet of Atorvastatin calcium which provides rapid dissolution and rapid disintegration as compared to the conventional oral volume type.In order to identify the best formulation different trials has been study for different batches of different formulation methods. Here three methods with different excipients combination has been studied i.e. First method with direct compression,second method with Dry granulation method and the third method were for wet granulation method was studied. In the first method all the batches of direct compression the disintegration time was found to be more than 1 min. In second method the same problem was found for dissolution and disintegration time was not suitable as the tablet take more time to disperse. Lastly,in wet granulation method in which total four batches has been performed with change in excipients amount. In all four batches 1st and 4th trial was compared on dissolution basis study. In both the trials the difference is only with

one excipients with MCC 101 in trial F-1 and MCC 102 in F4. On comparison it was found that the F4 trial with excipients MCC 102 showed good dissolution and disintegration behaviour in respect to F1 trial of wet granulation method. The stability performance has been done simultaneously on initial condition and accelerated condition at 40 ℃ and 75% RH and it was found that the Short-term stability studies on the promising formulation having no significant changes in drug content. Final tablet was optimized on the basis of drug content analysis, disintegration and by dissolution study. The formulation of F4 with the excipients MCC 102 by wet granulation was found to be best in comparison to other batches of different methods formulation.

Keywords: Dispersible tablets; Atorvastatin; Wet granulation.

IAIHC-247

Electronic Prescription: Improving the Efficacy and Accuracy of prescribing

Vikas Kumar Pal, MohiniKumari, Amar Gupta

Abstract

E-prescribing or electronic prescribing is a technology framework that allows physicians and other medical practitioners to write and send prescriptions to a participating pharmacy electronically instead of using handwritten or faxed notes or calling in prescriptions. Electronic prescribing (e-prescribing) is an important part of the nation's push to enhance the safety and quality of the prescribing process, which allows providers in the ambulatory care setting to send prescriptions electronically to the pharmacy and can be a stand-alone system or part of an integrated electronic health record system. At the most basic level, an e-prescribing system serves as an electronic reference handbook. They can create and refill prescriptions for individual patients, manage medications and view patient history, connect to a pharmacy or other drug dispensing site, and integrate with an electronic medical record (EMR) system. Electronic prescription for narcotic drugs has taken a lot longer to get off the ground foe many organizations. Almost all states allow it, but there are additional security steps that must be taken to support the process such as biometric verification of the prescribing physician using fingerprint scanning. The aim of this systematic review was to synthesise peer-reviewed literature assessing the impact of electronic prescribing (eP) systems on the working practices of healthcare professionals (HCPs) in the inpatient setting and identify implications for practice and research.

Keywords: e-Prescription; Benefits; Cost; Refill.

IAIHC-248

The impact of artificial intelligence in cardiac devices

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Abstract

From the origin of ancient Vedas or Shastras, there was an awareness of artificial intelligence but in different meanings. In present scenario, one has to perform a lot of research for the production of works relating with artificial intelligence. Basically, artificial intelligence is a huge group of skills from advanced machines used for finding the solutions of different fields i.e. in pharma fields or non-pharma fields. The problem of heart failure or heart attack is very big health issue which is assisted with more than 23 million peoples worldwide. Heart failure can be held due to the vasoconstriction or improper pumping mechanism of ventricles. Heart failure heart logic device is a new tsunami in the healthcare system for cardiac devices. This device is in the form of implantable cardioverter defibrillator (ICD) and cardiac resynchronization therapy defibrillator (CRT-D). Heart logic heart failure diagnostic device contains multiple sensors to track physiological functioning of the heart. There are Heart sound sensors which checks signs of elevated filling pressure and weakened ventricular contraction. There is also a sensor for checking pulmonary edema. Respiration sensor is used to monitor the rapid shallow breathing system which is associated with shortness of breath. Heart rate sensors check the heart rate and arrhythmia conditions. This device can predict heart failure events weeks before they happen. This artificial intelligence assisted device is showing the sensitivity in more than 70% of peoples to save the valuable lives of the human beings.

Keywords: Artificial intelligence; heart failure, diagnostics devices; ventricular contraction.

IAIHC-249

Biological Importance of N containing Heteroatoms: Pyridazine and its derivatives

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Abstract

Nitrogen containing heterocycles are abundant in nature and are of great significance to life because their structural subunits exist in many natural products such as vitamins, hormones, antibiotics and alkaloids. Nitrogen-containing compounds are used as structural components of pharmaceuticals and agrochemicals due to their high biological activities. Nitrogen containing heterocyclic compound is key building blocks used to develop compounds of biological or medicinal interest to chemists. A vast number of nitrogen containing heterocyclic building blocks have applications in pharmaceutical research, agriculture science, and drug discovery. Pyridazine, Pyrimidine, Azine, Pyridine, Diazine, Pyrazine are various examples of nitrogen containing heterocyclic compounds. Pyridazine nucleus are basically derived by substitution of two nitrogen atoms at 1-2 position on benzene ring. Pyridazine and its derivatives are biologically active scaffolds, possessing diverse pharmacological activities such as antihypertensive and antiplatelets, cardiovascular disorders, anti-inflammatory, CNS disorders, antimicrobial, anticancer. Pyridazines further drew our attention because of their easy functionalization at various ring positions of pyridazine ring.

Keywords: Heterocycles, Pyridazine, Pyrimidine.

IAIHC-250

AI-Mediated Closed Loop Stimulation In Enhancing Nootropic Activity

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Abstract

Memory which is one of the fundamental functions of the brain is still largely a mystery to neuroscience researchers. Computers over the time have become more and more powerful, therefore researchers, over the years have used them to detect patterns and learn about key processes in the brain. So researchers think to use computer and AI to improve memory of human beings. By using a closed-loop system to monitor and decode neural activity from brain recordings and after a series of experiments, researchers found that they could apply targeted stimulation to lateral temporal cortex (A part of the brain responsible for organizing sensory input, auditory perception, language and speech production) and rescue periods of poor memory encoding. In the previous investigations have shown that it is also possible to improve later recall by targeting the lateral temporal cortex. Memory dysfunctions can also be addressed through such a system. Humans remember or forget information depending on neural events that happen during encoding.

A promising tool for modulation of neural activity is direct brain stimulation, in which electrical current is applied via electrodes implanted on or directly in the brain parenchyma. Direct brain stimulation is a standard tool in the treatment of motor dysfunction in Parkinson's disease and seizure onset in epilepsy and has recently been explored as a therapy for psychiatric and nootropic conditions. Direct brain stimulation treatment commonly involves continuous (i.e., open-loop) high-frequency stimulation, although recent work has suggested improved effectiveness when applying stimulation in response to specific brain states (i.e., closed-loop).

Keywords: AI (Artificial Intelligence), Closed-loop system, Lateral Temporal cortex, Nootropic

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