

## Research Achievements

### Publications

Total 236 scientific papers and 51 Books/Chapters with reputed publishers like Elsevier, Springer, Taylor & Francis Groups etc. have been published by faculty members and students for the year 2022.

### Patents



### Copyrights

95 Copyrights were filed & 30 were granted in the year 2022.

### Placements

- In the Bachelor of Pharmacy program, 47 students were successfully placed in 2021-2022 in various companies.
- B. Pharm student Talluri Sriram, with 4.10 Lakhs annual package was placed in DATA BRIDGE MARKET RESEARCH.
- 16 students from the Master of Pharmacy programme were placed in 2021-2022. M. Pharm student Gagandeep Kaur was offered the salary package of INR 6.4 lakhs per annum by Planet spark for the post of Business Development counsellor
- 25 significant recruiters that visited the campus included Planet spark, IDS Infotech, IKS Meditab, OverSeas, Dr. Lal Path Lab, WNS, Data Bridge, Indegne, Root Analysis, WIPRO, Accenture, Fortis eTeams ICONMA, IQVIA, Innodata India Pvt. Ltd., Continuum India, Parexel, Overseas Healthcare, MWIDM, Aimil Pharma, Cordlife Sciences India, Alkem laboratories, Artech, Wipro, IDS Info tech.

### MOUs

- MOU was signed between LPU and Poona College of Pharmacy, having its registered office at Bharati Vidyapeeth Pune on 21<sup>st</sup> of April, 2022, for the purpose of academic & research collaboration.
- Team Eco-Alliance organized Webinar & MOU signing session between LPU-Hearful Campus, with Dr. Omprakash Katare, Professor, University Institute of Pharmaceutical Sciences, Punjab University, Chandigarh & Dr. Ankit Kotia, Associate Professor, School of Mechanical Engineering, LPU

### Projects

- Dr. Surendra Kumar Nayak, Professor, School of Pharmaceutical Sciences, has received project grant (Rs 12.8 lakhs) on “In-silico screening-based pharmacophore modelling study and in vitro evaluation of small molecules for SARS-CoV-2 (B.1.617) RBD-hACE2 interaction inhibition” by DST, New Delhi.
- Dr. Rashmi Saxena Pal, Associate Professor, School of Pharmaceutical Sciences got associated as a Research Collaborator of UNESCO funded research on “Use of Ghee in the Common Culture Heritage and Dairy Products of Nomadic Countries along the Silk Road”. This will be important milestone initiating collaboration between the Institutions.

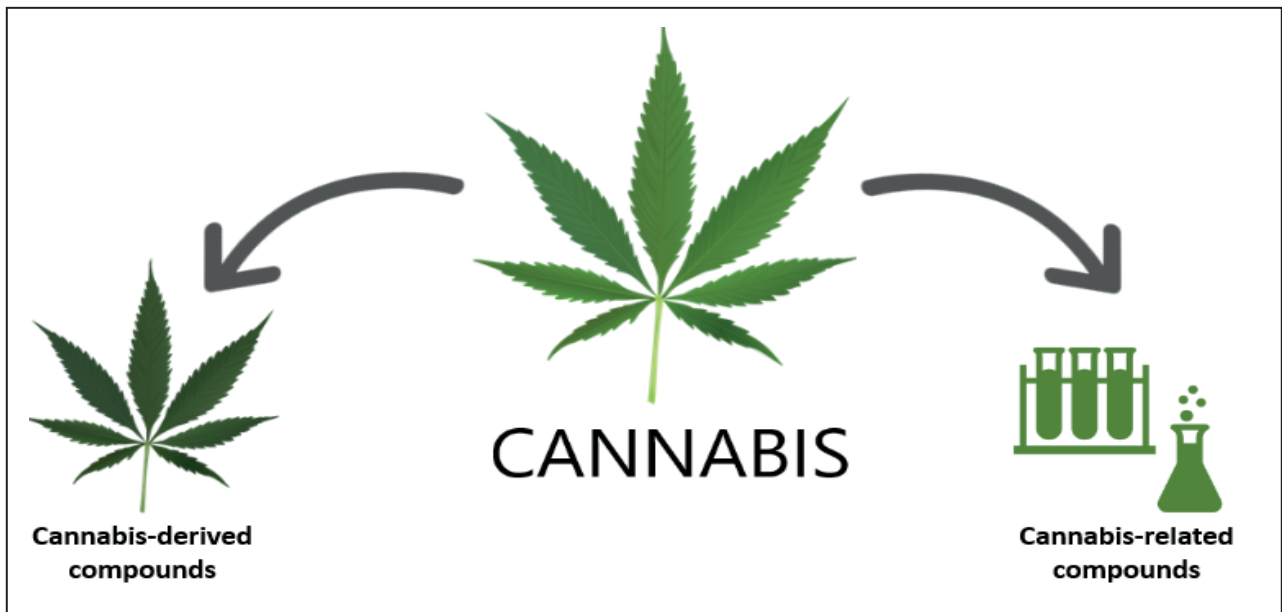
## Points-of-view

### FDA and Cannabis: Drug Approval

**Dr. Saranya Punniyakotti**  
Associate Professor

There is increasing interest in the potential utility of cannabis for a variety of medical conditions, as well as research on the potential adverse health effects from use of cannabis. To date, the FDA has not approved a marketing application for cannabis for the treatment of any disease or condition. The agency has, however, approved one cannabis-derived drug product: Epidiolex (cannabidiol), and three synthetic cannabis-related drug products: Marinol (dronabinol), Syndros (dronabinol), and Cesamet (nabilone).

- Cannabis sativa L. is a plant that contains over 80 different naturally occurring compounds called “cannabinoids”
- Two well-known cannabinoids: Cannabidiol (CBD), Tetrahydrocannabinol (THC)



FDA has approved Epidiolex, which contains a purified form of the drug substance cannabidiol (CBD) for the treatment of seizures associated with Lennox-Gastaut syndrome or Dravet syndrome in patients 2 years of age and older. That means FDA has concluded that this particular drug product is safe and effective for its intended use. The agency also has approved Marinol and Syndros for therapeutic uses in the United States, including for nausea associated with cancer chemotherapy and for the treatment of anorexia associated with weight loss in AIDS patients.

Reference: <https://tinyurl.com/bd64rwfc>

## Shifting of Contemporary Scenario towards Herbal Drugs

**Maninderjit Kaur**  
*Assistant Professor*

Since the time immemorial, herbs have been used as source of medicine for the cure of several ailments. Ancient Indian medicine is strongly linked to herbs and medicinal plants to heal the sick in their settlements. India has a very long, safe and continuous usage of many herbal drugs in the officially recognized alternative systems of health viz. Ayurveda, Yoga, Unani, Siddha, Homeopathy and Naturopathy. Millions of Indians use herbal drugs regularly, as spices, home-remedies, health foods as well as over-the-counter (OTC) as self-medication or also as drugs prescribed in the non-allopathic systems. Herbal doctors occupy a prestigious position in society and natural remedies were considered to be a godly and noble disposition traditionally. The use of herbal medicine is becoming popular due to toxicity and side effects of allopathic medicines. As the global use of herbal medicinal products continues to grow and many more new products are introduced into the market, public health issues, and concerns surrounding their safety are also increasingly recognized. It is estimated that about 80% of people in developing countries still rely on traditional medicine based largely on species of plants and animals for their primary health care. Herbal medicines are currently in demand and their popularity is increasing day by day. Presently, about 25% of pharmaceutical prescriptions in the United States contain at least one plant derived ingredient. The wider application of herbs in form of Cosmeceuticals which are cosmetic products with bioactive ingredients purported to have medical benefits trending nowadays.

## Russia welcomes Indian Pharma Enterprises to replace western niches!

**Sammisla R Nayak**

As nations continue to bombard Russia with brutal sanctions over the invasion of Ukraine, the western businesses, including big pharma, are now moving out, effectively terminating their operations in Russia, and shoving India under tremendous pressure to take a clear stance over the ongoing conflict. But amidst all this, the Russian Envoy, Denis Alipov, has shed a glimmer of hope for the Indian Pharmaceutical Industry; stating as many western businesses, especially pharmaceuticals, have moved out of the Russian market, those niches are left vacant, which may actually be occupied by Indian enterprises; pharmaceuticals in particular. He also quoted India as a "World Pharmacy," as it's a leading manufacturer of premium generic medications at affordable pricing. India's ballooning pharmaceutical sector, dubbed "the World Pharmacy," is a beacon for pioneering research, especially concerning the supply of inexpensive critical medications to developing nations. Even during the COVID-19 catastrophe, the world's supply of pharmaceuticals was reliant on Indian vaccines and pharmaceutical enterprises. Last year, India's Vaccine Maitri project reaffirmed its reputation as the "World Pharmacy," as foreign leaders praised India's efforts to swiftly ramp up vaccine development and distribution facilities. We might claim with certainty that further investments will allow India's pharmaceutical sector to expand and make it to the top strata.

## ECHINACEA- Wild yet Useful Flower

**K Nabeen Patra**

Echinacea is a wild flowering plant mainly found in North America belonging to the family of sunflowers (ASTERACEAE). It is also found in some parts of Canada's Ontario. It is an herbaceous perennial plant of height up to 120cm tall by 25cm wide at maturity. It is a cone-shaped flower mainly found in colors like purple and yellow. It is also grown as an ornamental plant. The plant grows in all types of light conditions.

### Health Benefits of Echinacea

Traditionally these plants were used by North Americans as an ailment to treat wounds, burns, insect bites, toothaches, throat infections, pain, cough, stomach cramps and snake bites. After research carried out by pharmacists and biologists with an advanced technology, many more advantages and health benefits were found from the plants. It is said that it is a complex mixture of many antimicrobial substances and substances helping in growing the human immune system. It also has an great antioxidant properties.

### Echinacea for infection

Early researches say that using Echinacea creams for 12 weeks can help reduce the symptom of mild infections such as redness, swelling, itchiness, and dryness. But it won't show similar actions as that like steroids and anti-inflammatory agents.

### Echinacea for swelling (inflammation)

Early research shows that spraying a specific product containing sage and Echinacea into the mouth every two hours up to 10 times per day or up to 5 days improves sore throat symptoms similar to commonly used drugs sprays in people with tonsillitis. Other early research shows that taking 50 drops of a product containing Echinacea three times daily for two weeks along with an antibiotic reduces some throat infections and increases overall well-being in people with tonsillitis.

### Echinacea for Gum disease (Gingivitis)

It is seen that using a mouth rinse containing Echinacea, gotu-kola, elderberry three times daily for 14 days might prevent gum disease from worsening. Using a specific kind of mouth patch also seems to reduce some symptoms of gum disease, but it is not always effective.

### Echinacea for Warts

Early research shows that taking Echinacea by mouth daily for up to 3 months does not clear warts on the skin. But taking supplements containing Echinacea, methionine, zinc, probiotics, antioxidants, and ingredients that stimulate the immune system for 6 months, in addition conventional treatment would show better results.

### Echinacea for Flu

Early research shows that taking an Echinacea product daily for 15 days might improve the response to the flu vaccine in people with breathing problem such as Bronchitis and Asthma. It is unknown if Echinacea has ant benefit in people who are not vaccinated. Some research shows that drinking a product containing Echinacea and elderberry 4 times a day, for 5 days, then 3 times a day for 7 days might help improve flu symptoms similar to the prescription medication Oseltamivir (Tamiflu).

### Echinacea for Common cold

It is scientifically proven that Echinacea has an potency to treat and prevent common cold. It is recommended to take Echinacea tea several cups for about days. There are also supplement found in form of nutraceuticals with multiple doses a day. Also it is recommended not to take in empty stomach instead with food or after drinking a glass of water.

### Echinacea for Genital herpes

Evidence for exact treatment is unclear and not proven yet. Some researchers say that taking it in form of extract that is 800mg twice a day for 6 months would help to properly cure the herpes infection. (Medications - Echinaforce, A Vogel bio force AG).

### Echinacea for Ear infection

Taking a specific liquid extract 3 times daily for 3 days at the first sign for common cold does not prevent an infection in children aged 1-5 years old with a history of ear infections.

### Echinacea for Anxiety

Upon consumption of extract containing Echinacea it is believed to prevent and cure anxiety in adults. A minimum of about 40mg of specific extract must be taken for 7 days seems to be effective.

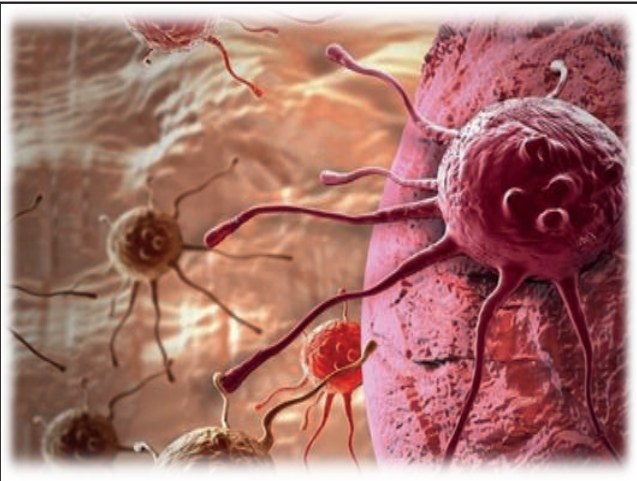
### Echinacea for Low white blood cell count (Leukopenia)

White blood cells play a major role in human body by providing immunity, when the WBC level decreases it reduces the body immunity and make human body vulnerable for infections and disease. It is believed that taking extract with certain stated combinations may increase WBC and RBC count.

## Computational Oncology (Boon in Medical Science)

Kumari Arpana

Computational Oncology is a sophisticated method that established the relationship between physical science and oncology research. Computational oncology is the generic term that signifies mathematical modeling that shows the Pharmacokinetic and Pharmacodynamic relationship between developing pathogens and therapeutic dose-response. Computer-based modeling improves the accuracy of diagnosis and treatment of the world's second cause of death by Cancer.



Cancer is a heterogeneous family of the disease and with the increasing price and time taken for the cancer clinical trial, the treatment becomes challenging. But the combined work of scientific knowledge and technology gives Nanotechnology and mathematical modeling to identify pathogens and gives the desired therapeutic response. Nanotechnology clears the picture of the physical laws that govern the complex body system. Mathematical modeling deals with all aspects from multiple components to inspect the internal and external environment of the cancerous cell. Computational oncology provides the data of the cellular pathway which assess the treatment process and desirable therapeutic response at the target site. The role of computational work in oncology starts from identifying the cancerous cells, their nature, dose designing, administration of the drug to the target site, and proper monitoring of the physiological action in the internal as well as the external environment of the cancer cell. Mathematical tools deal with all the complexity, cell to cell interactional flow, and dose calculation errors, and provide the most possible ways of administering a dose, combination dose formulations, and drug action profile more preciously than the predicated one.

Computational oncology is a boon in cancer clinical trials, screening of the development of cancerous cells, neurosurgery, and microarray analysis, decreasing the therapeutic response time. Improvement of computational oncology as their further refinement of the mathematical models should result in a bright future further in the development of cancer treatment.

## Reemergence of Monkeypox: Prevalence, Diagnostics, and Counter Measures

Harsh Mukati, Riddhi Mishra, Rahul Patel, Priyanka Nath, Simranjit Kour

Monkeypox is an emerging zoonotic disease recognized as the most important orthopoxvirus infection in humans in the smallpox post - eradication era. While monkeypox is endemic in the Democratic Republic of the Congo, it has been reported in other countries of Central and West Africa as well. The disease was also imported once into the USA. It manifests with the same symptoms as smallpox, including flu - like symptoms, fever, malaise, headache, back pain, and characteristic rash. New medications and vaccinations showed promising results for the treatment and prevention of the disease, but more studies are required to show their efficacy in the actual endemic settings. The monkeypox virus is considered a high threat pathogen causing a disease of public health importance. Therefore, there is an urgent need to focus on building surveillance capacities which will provide valuable information for designing appropriate prevention, preparedness and response activities.

## Pharma Vertos

Ms. Tania Kochhar

Scientist



### Testimony

Skills and confidence, acquired at LPU is well applicable for both career and life. The experience she had at LPU, was truly fantastic and she was able to thrive in an environment that offered many national conferences, industrial lab experiences, networking opportunities and a lot more that has helped me to reach where she is today.

Ms. Manasa Voleti

Scientific Project Manager



### Testimony

She is LPU alumna and is currently residing in Cologne, Germany, working as a Scientific Project Manager for Certara, a Pharmaceutical organization. She is managing the projects involved in development of dermal models at Certara and cardiac safety Pharmacokinetic modelling and simulation systems. She says that LPU has not only given her a strong research foundation, but also other soft skills that made her competitive in the job market.

Mr. Bhanu Kiran Kumar Reddy

Drug safety associate



### Testimony

Two-years program of Pharmacology at LPU was the best period in his life where he has explored a lot of opportunities apart from classroom lessons. The faculties were best in their fields and my mentors encouraged me to participate in every activity conducted all over the world. LPU is a book which contains everything required for a student life, that's why LPU is known to be the perfect blend of different learning experiences.

Dr. Mahima Bansal

Research Fellow (Post doc)



### Testimony

LPU provided stimulating and rewarding experience with the best resources and mentorship, which laid down the foundation of her career. The B.Pharm Course appealed to her as an incredibly versatile degree that teaches various subjects, including law and ethics.

Mr. Sumir Kapoor

Data scientist



### Testimony

LPU is a fantastic university that provides everything a student could want in terms of education, hangout spots, infrastructure, and extracurricular activities. They have excellent faculty and facilities. LPU has a great learning environment and faculties are always up to date on the latest advances.

Mr. Sibasis Bhattacharya

Assistant Manager- Analytical Research & Product Development



### Testimony

LPU has given him wonderful transformative experiences. The practical approaches helped him to dive into the research technicality shaping the accuracy & precision. It has been an unforgettable experience, facilitating us to discover hidden potential and capabilities.

## Hand Holding by Alumni

### Awareness about Pharma scope abroad



The guest lecture was conducted on the Topic "Awareness about Pharma scope abroad". Mr. Deepak Malhotra, who is currently working as Pharmacist Intern at CVS pharmacy, California, USA. He has done B.Pharm in 2008 and M.Pharm in 2011 in Pharmaceutics from LPU. He discussed the upcoming career opportunities in Pharma sector and made the pharmacy students aware about the pharmaceutical market current trends.

### Brief Innovative start-ups for entrepreneurship



The guest lecture was conducted on the Topic "Brief Innovative start-ups for entrepreneurship" by Mr. Deepak Arora, MD of Sri Herbasia Biotech Company, Amritsar. He has done M.Pharmacy in Ayurveda (Batch-2010-12).

The main objective of the session was

- How to start a pharma or health-related business after completing B.Pharm or M.Pharm or Pharm.D?
- Pharmaceutical Production or Manufacturing Drug License. (Collect it from the district drug controller office)
- Investment for equipment, testing labs, the salary of the employee.

During this event some additional roles for entrepreneurship in pharmacy education was discussed among students including its application, business management, emphasizing proactivity, problem-solving, no role identified, cultivation, teaching versatility, better communication, self-reflection, identification, ownership training, and continuing education.

### Awareness about Hepatitis B & Hepatitis C



A guest lecture was conducted on the Topic "Awareness about Hepatitis B and Hepatitis C". Dr. Varun Gupta, Gastroenterologist from Patel Hospital, Jalandhar was invited for Guest lecture on world Hepatitis Day, with the efforts of our alumnus Mr. Sachit Bajaj. The main objective of the session was to step up national and international efforts on hepatitis, encourage actions and engagement by individuals, partners and the public and highlight the need for a greater global response as outlined in the WHO's Global hepatitis report of 2017. The world is currently facing a new outbreak of unexplained acute hepatitis infections affecting children. The main motive of the lecture was to raise awareness on viral hepatitis, which causes inflammation of the liver that leads to severe disease and liver cancer. Free screening camp was also arranged for Hepatitis B and C at Uni Health Centre. Lovely Professional University.

## Women's Equality Day



"W" "Women's Equality Day" was celebrated on August 26, 2022 by visiting four nearby villages: Vill- Raipur Phorola, Vill- Raipur, Vill- Daulatpur and Vill- Salarpur. Distribution of gifts (Fulkari/gifts etc) and plants for plantations in their respective villages along with the NSS team and Pharmacy students was done. The main objectives of this session was regarding the awareness of Women's Equality Day, celebrated on every August 26, which commemorates the passage of women's suffrage & reminds us of the hurdles overcome by the heroic women who faced violence and discrimination to propel the women's movement forward.

## Guest Lectures

• Ms. Sarabjit Sidhu, Manager, Medical Governance Board at GSK, spoke on the topic Overview and career opportunities in Clinical Research on 20th Jan 2022. He emphasized about the Career opportunities in the clinical research field with employment settings ranging from pharmaceutical and biotechnology, to medical device companies, contract research organizations, hospitals, educational institutions, independent contractors and more.

• Prof. (Dr.) Ramesh Dawar, Vice President at Dharamshila Cancer Foundation and Research Centre and Dr. Pragya Singh, Senior Manager-Projects at Dharamshila Narayana Superspeciality Hospital, on 29th Jan 2022, delivered a lecture on Cancer Prevention and Palliative Care. They talked about the importance of various aspects of palliative care, which improves the quality of life of patients and that of their families who are facing challenges associated with life-threatening illness.

• Ms. Nisha Singh, Master Facilitator at CSRBOX, on 5th Feb 2022, delivered a lecture on the topic Road Safety Program. She focussed the importance of road safety activities aimed at enhancing the grassroots level citizen involvement in road safety measures across the nation.

• Mr. Shirish Belapure, Senior Technical Advisor at Indian Pharmaceutical Alliance, Ahmedabad, on 15th March 2022, delivered a lecture on the topic Changing trends in the pharmaceutical industry with respect to drug research and development, and marketing. He emphasized on the latest technologies, like AR/VR, artificial intelligence (AI), and additive manufacturing, which help Pharma companies to accelerate the research and development process, & create personalized products, and conduct testing in innovative ways.

• Team Eco-Alliance organized Webinar on Clean & Safe Drinking Water. Mr. Amritesh Kumar was the resource person.

• Team Eco-Alliance organized Webinar on Clean Water & Sustainable Energy. Ms Pragya Dalal, Social Activist was the resource person.

• Team Eco-Alliance organized Expert Talk on Protection of Eyes from Digital Pollution & Eye Screening Camp by Dr. Siddharth Sharma.

• Team Eco-Alliance organized Webinar and short video making on "Invest in our planet" on occasion of World Health Day.

• Team Eco-Alliance organized Webinar on "Paradigms of Health-Sustainable Development". Resource Person was Dr. Namrata Sethi.

• A guest lecture by Prof. Nand Kishore, chair of chemistry from IITB, Mumbai on future research.

• A guest lecture by Mr. Rajeev Bahl, Founder, senior management/sales advisor from transition curve pvt. ltd. on managing self.

• A guest lecture on Network effects and health care, by Mr. Vineet Rastogi, from Healium.io.

## Guest Lectures

### Awareness about Pharma scope abroad

A guest lecture was organised and conducted on 05th Aug 2022. The guest was Prof. Nand Kishore, chair of chemistry from IITB, Mumbai has discussed his published research from his lab meanwhile guided the students on future research, suggested to do fundamental research. Precisely, he discussed about the protein folding problem, structure specific energy interactions, prevention of aggregation of protein.



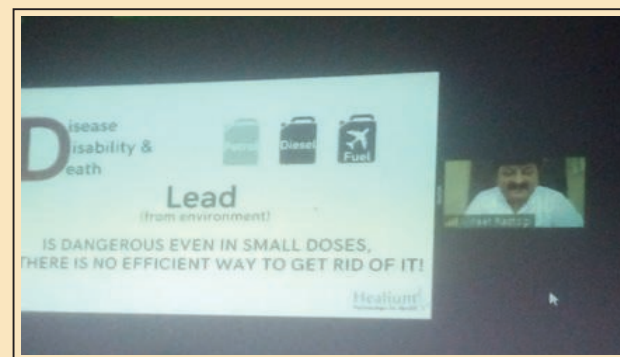
### Managing Self

A guest lecture on Managing Self was conducted for the students of B. Pharm final year and M Pharma students. Mr. Rajeev Bahl, Founder, senior management/ sales advisor from transition curve pvt. ltd. delivered a talk on managing self on pharmaceutical sales and promotion. He shared ten points/keywords to success in a life respects to the sales representatives of current competitive scenario. His insight was clear & explained in a lucid manner to achieve and expands the areas of a pharmacist.



### Network effects and health care

A guest lecture on Network effects and health care was conducted. Mr. Vineet Rastogi, from Healium.io delivered a talk on Network effects and health care. He described the network of viruses residing and extending and challenging the human surveillance. He shared the points especially related to the zoonosis transfer of viral diseases. His insight is to explain the students about viral transmission and its control in future. He motivated the students towards the reaching of their dreams. He also showed the way how to grow their career in a younger generation.



## Events

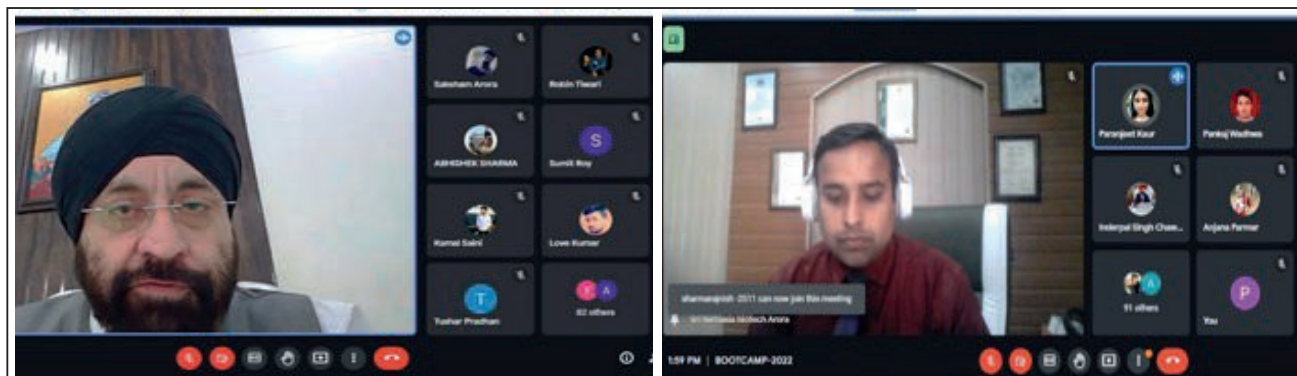
### Entrepreneurship Event

In order for students to remain versatile during these hard times, the School of Pharmaceutical Sciences at Lovely Professional University arranged the BOOTCAMP-2022. Two Guest lectures on the topic of Ayur-Pharma start-ups were given by industry experts during this event on 15th April 2022.

The First Guest Speaker for the session was Mr. Inderpal Singh Chawla who is currently the Chairman cum Managing Director, Daffodils Laboratories Private Limited in Dehradun. Mr. Chawla has over 32 years of diverse functional experience which includes Manufacturing, Business Development & Marketing. The aim of the guest lecture series is to equip students with the importance of pharma start ups in the modern world. This guest lecture series will aim to pool the ideas of academicians and practitioners for enriching the students' community. It was an informative and interactive session where students came to know about the different divisions of pharma start-ups.

Our alumnus, Mr. Deepak Arora, the session's second speaker, is currently the Managing Director of Sri Herbasia Biotech Private Limited in Amritsar. He emphasised that students must have a thorough understanding of the market, product demand, and financing modelling, all of which are critical. He also informed the students about the different career options for pharmacy graduates in Ayurveda startups in the fields of Research and Consulting. Following his talk, he urged students to express their concerns and clarified many of the young entrepreneurs' doubts.

The initiative was taken by Dr Pankaj Wadhwa, Associate Professor to host this virtual session of knowledge sharing.



### Competitive Events

1. Team Eco-Alliance organized National Level Quiz competition for 9th, 10th, 11th, 12th, UG, PG and faculty members on Clean Water & Sustainable Energy, by Academic Decipher Competition.
2. Team Eco-Alliance organized Community Service and handmade poster making competition.
3. Team Eco-Alliance organized Innovation and challenges for sustainable goals to curb malarial burden, by Dr. Varsh Chahal.

## Corporate Advisory Board Meeting

Mr. Ranjit Madan, CEO, Life Sciences, Sector Skill Council presided the meeting held on 10th Feb, 2022. Top level executives from nine other Pharma and other allied Industries like Ipca, Lotus, Indegene, Mylan, Albert David Ltd were also present. The board members suggested the exposure of graduate students to remove the skill gap and develop their employability skills through various skill advancement courses to meet the current demand of Industry.

## Conferences Held

### 3rd International Conference of Pharmacy (ICP-2022)

*in association with Indian Pharmaceutical Association (IPA)*



During 3 scientific sessions of the conference, eminent speakers from across the globe shared their views with the delegates regarding the conventional and unconventional opportunities in the Pharmacy sector & specify the innovations for the transformation of health.

On day one, Chief guest Dr.P.B.N.Prasad, Joint Drugs Controller (India), Central Drugs Standard Control Organization Directorate General of Health Services Ministry of Health & Family Welfare and all the dignitaries were welcomed.

### International Conference on Feminine Hygiene Management- Beyond Taboo (ICFHM-2022)

November 25-26, 2022



This event focussed to create feminine hygiene awareness to enlighten the society, under the technical guidance by UNICEF, India. It aimed to break the menstrual taboos, stigmas and discriminations. It was focussed on promoting menstrual hygiene management, which is not only a matter of sanitation, but also an important step towards safeguarding the dignity, bodily integrity of women & promoting gender equality. Two additional workshops were conducted on topics: "UnTabooing Menstruation & Menstrual Cups! #BleedGreen" and "Legal Rights for Women at Workplace".

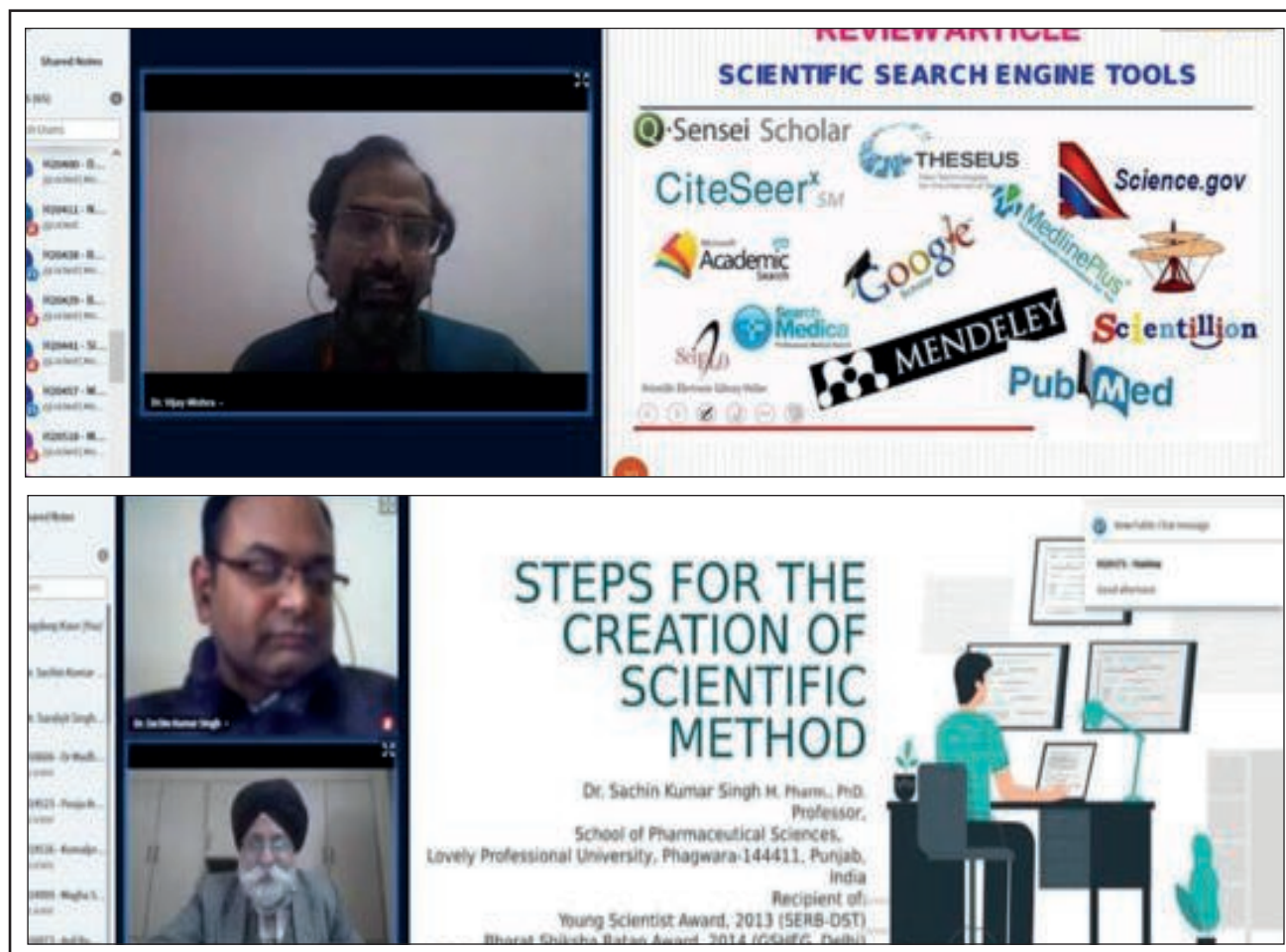
## Workshop

### Short Term Course on Scientific Writing & Publication was conducted Jan 31st, 2022 - February 4, 2022

In collaboration with HRDC, Lovely Professional University, and IPGA Phagwara chapter. Welcome remarks were given by Dr. Sunaina Ahuja, Head-HRDC, LPU. The inaugural address was given by Dr. Atul Nasa, President of the Indian Pharmacy Graduates Association (IPGA).

- Generating awareness regarding menstruation, pregnancy, menopause & other normal physiological phenomena related to female health
- Training of female teachers & students on menstrual hygiene (workshops)
- Community service awareness
- Promotion of menstrual related products (industry collaborations)
- Identify gaps & opportunities in feminine hygiene science and to raise awareness of the need for more research in this field

More than 100 delegates benefited from this event. The speakers for the event were Dr. Devesh Tiwari, Dr. Suresh Mani, Dr. Monica Gulati, Dr. Sachin Kumar Singh, Dr. Arun Sharma, Mr. Sukriti Vishwas, Dr. Bhupinder Kapoor, Dr. Vijay Mishra, Dr. Navneet Khurana, Dr. Bimlesh Kumar, Dr. Ashish Suttee, Dr. Amit Mittal and Dr. Sheetu. The event was well supported by Dr. Saurabh Singh, Dr. Dileep Singh Baghel, Dr. Amit Mittal, Dr. Navneet Khurana, and Dr. Sheetu. The event was spear headed by Dr. Bimlesh Kumar.



### Translation of Research Evidence from Animals and Alternatives: Ethics and Scientific Considerations

Was organised from March 28 to 29, 2022 by School of Pharmaceutical Sciences, Human Resource Development Centre, (HRDC), Lovely Professional University and Society of Pharmaceutical Education & Research (SPER), Faculty of School of Pharmaceutical Sciences, Guru Gobind Singh College of Pharmacy, Yamuna Nagar, ISF College of Pharmacy, Moga, and IPGA Phagwara chapter. Key deliverables of the workshop was:

1. Providing the participant with an understanding of the ethics and regulations that govern the use of animals in research as per CPCSEA guidelines.
2. The concept of replacing, reducing or refining animal use in research and testing.
3. Alternate to animal experiment.

The chief guest of this event was Dr. Upendra Nagaich, M.Pharm., Ph.D., FSPER, National Secretary Society of Pharmaceutical Education & Research [SPER]

#### Key deliverables of the workshop

The Course aims at capacity building in:

- Providing the participant with an understanding of the ethics and regulations that govern the use of animals in research as per CPCSEA guidelines
- Hands-on training for animal handling and restraint, sexing, routes of administration and collection of body fluids.
- Demonstration of specific equipment

## Award of Doctorate Degree

### Doctoral Research



**Dr. Rubiya Khursheed**

was awarded Ph.D. degree for work on the title “Formulation and evaluation of solid self nano emulsifying drug delivery system (SNEDDS) loaded with curcumin and quercetin for the treatment of type 2 diabetes mellitus”.



**Dr. Arya K.R**

has successfully completed her Ph.D. on the topic entitled “Formulation Development, Optimization and Evaluation of Alpinia galanga Extract Loaded Nanoemulsion.”



**Dr. Mukta Gupta**

has performed research work on “Isolation and characterization of bioactive constituents of Eleagnus Conferta Roxb. Seeds”. under the supervision of Dr. Naresh Singh. She has published research & review papers in reputed journals including J of Ethnopharmacology, South African J of botany & inflammopharmacology.



**Dr. Sumant Saini**

has performed research work on “the Development of Nanocarriers of Bromocriptine and Ferulic Acid for the Management Of Neurodegenerative Disorders using Formulation by Design (FbD)”, with significant improvement in the His work were published as Systematically designed chitosan- coated solid lipid nanoparticles of ferulic acid for effective management of Alzheimer’s disease: A preclinical evidence. Colloids and Surfaces B: Biointerfaces (Impact Factor: 5.999) and QbD-steered development and validation of an RP-HPLC method for quantification of ferulic acid: Rational application of chemometric tools. Journal of Chromatography B, (Impact Factor: 3.318).



**Dr. Neha Sharma**

was awarded Ph.D. degree on the topic entitled "Pharmacological Evaluation of Azelaic acid and Vanillic acid in Alzheimer's Disease and Parkinson disease" from I.K. Gujral Punjab Technical University, Kapurthala. In her Ph.D. she successfully evaluated the neuroprotective effect of two phytoconstituents against two neurodegenerative diseases using animal models. She has also published her research work. One of her publications was covered by Financial Express dated 19th April 2022.

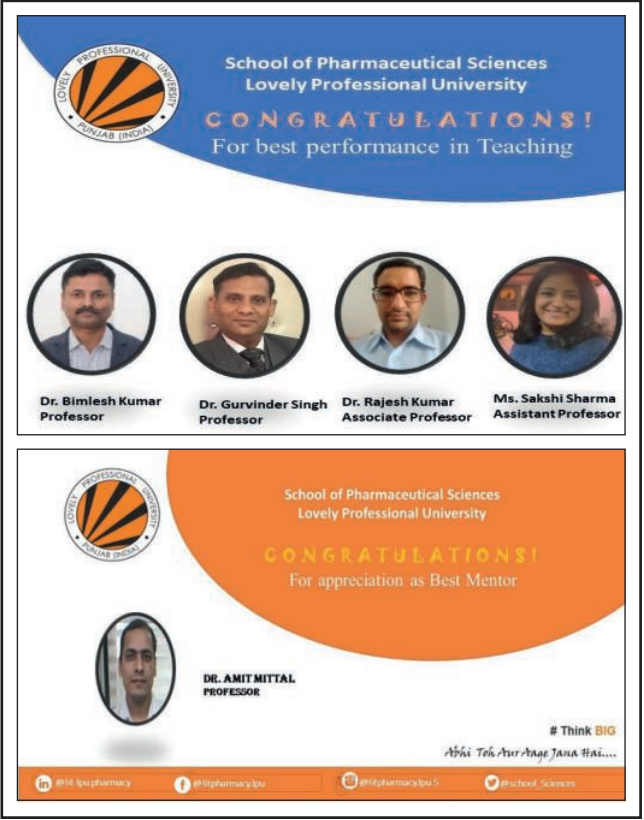
### Post-Doctoral Research



**Dr. Kapil Kumar**

He is currently working at Department of Chemistry, University of Copenhagen, Capital Region, Denmark on Development of fluorescent probes for live cells imaging.

## Academic Achievement



## Programmes Offered

### Under Graduation

- B. Pharmacy
- B. Pharmacy (Ayurveda)

### Lateral Entry

- B. Pharmacy (Lateral Entry)
- B. Pharmacy (Ayurveda) (Lateral Entry)

### Post-Graduation

- M. Pharmacy (Pharmaceutics, Pharmaceutical Analysis, Pharmaceutical Chemistry, Pharmacology, Pharmacy Practice)
- M. Pharmacy (Ayurveda)

### Doctoral (Ph.D.)

- Ph. D (Full Time)
- Ph. D (Part-Time)

## LPU- School of Pharmaceutical Sciences Differentiators

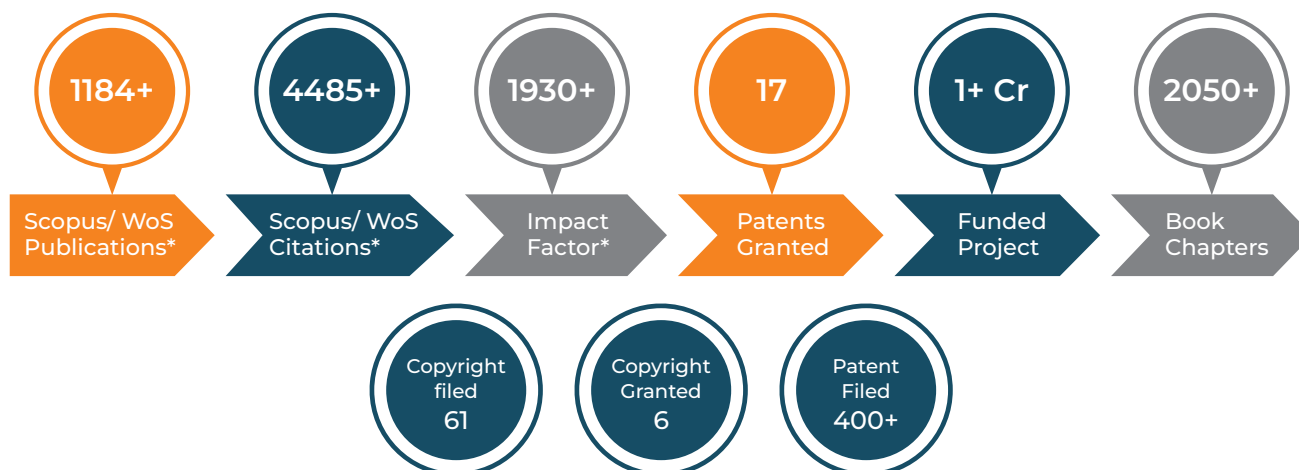
- Ayushya Vatika (Herbal Garden)
- Animal Breeding Centre for Educational, Commercial, In-House, And Trade
- Medical device monitoring center (MDMC).
- Adverse Drug Reaction Monitoring Centre (AMC).
- Consultancy Projects
- Central Instrumentation Facility (CIF) on Campus.
- Pradhan Mantri Bhartiya Janaushadhi Kendra (PMBJK) has been started by the School of Pharmaceutical Sciences, LPU, on its campus
- Two faculty members were listed in the “World Ranking of Top 2% Scientists” by Stanford University & Elsevier in 2021.

## Approvals and Accreditations

- UG & PG Courses, Approved by Pharmacy Council of India
- Central Animal House Facility (CAHF), Approved by CPCSC
- Medical Device Monitoring Centre (MDMC) Under the Materiovigilance Program of India (MVPI)
- Adverse Drug Reaction Monitoring Centre (AMC)
- UG & PG Courses (Ayurveda), Approved by The Board of Ayurvedic And Unani Systems of Medicine, Punjab



## Research Statistics



## Rankings



## Faculty Awards & Recognitions



## Giloy Awareness Campaign



As a part of the Project, National Campaign on Amrita for Life (Tinospora Cordifolia) funded by NMPB, Ministry of AYUSH, Government of India, an awareness campaign was organized by School of Pharmaceutical Sciences in the Village Hardaspur on 8th April, 2022 to make the people aware of the multiple health benefits of Giloy.

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