

Bharati Vidyapeeth (DTU) Medical College, Pune

Report of

CME on “Advances in Drug Discovery and Development”

Date: 13th September 2023

Venue: Online Zoom Platform

Time: 10.00 am- 4.00 pm

Department of Pharmacology, Bharati Vidyapeeth Medical College, Pune organized an online CME on Advances in “Drug Discovery and Development” On 13th September 2023, in collaboration with Poona College of Pharmacy, Pune

CME was conducted on the Zoom platform. Participants included- 79 Registered allopathic doctors (77 delegates + 2 speakers) and 25 non-allopaths (3 speakers from Poona College of Pharmacy, Ayurveda specialists or MSc Medical Pharmacologists).

One MMC credit point was granted for this CME and MMC Observer Dr. Mohd Abdul Mujeeb Ansari Ibrahim was present throughout the CME.

CME started with a Welcome note and an introduction about the CME by Dr. Bhagyashri D. Rajopadhye (Associate Professor, Dept. of Pharmacology, Bharati Vidyapeeth (DTU) Medical College, Pune)

First speaker, Dr. Rajan Goel (Director of R&D Center for Pharmaceutical Sciences and Applied Chemistry, Professor of Pharmacology at Poona College of Pharmacy, Bharati Vidyapeeth Educational Complex, Erandwane, Pune.) talked about “Advances in Drug Discovery”.

Due to a family medical emergency, Dr. Satyanarayana couldn't attend this CME, so Dr. Abhay Harsulkar (Professor and Head, Department of Pharmaceutical Biotechnology, Poona College of Pharmacy, Bharati Vidyapeeth, Pune) conducted the session on “Drug Discovery from natural sources” in his place.

Dr. Ravindra Kulkarni (Professor and Head, Dept. Pharmaceutical Chemistry, Bharati Vidyapeeth's Poona College of Pharmacy, Pune) spoke on “In Silico / Computer-Aided Drug Design” in the pre-lunch session.

In the afternoon sessions, Dr. Priti Dhande (Professor & Head, Department of Pharmacology at Bharati Vidyapeeth (DTU) Medical College, Pune) enlightened the audience on the topic "3-D cell culture systems in Drug Discovery and Development".

The last session of the CME was conducted by Dr. Vijaya Pandit (Professor in Dept. Of Pharmacology at Bharati Vidyapeeth (DTU) Medical College, Pune) on “Glimpses on Novel Molecules in Ayurveda” where she shared her experiences with some ayurvedic molecules she had worked on.

With a vote of thanks by Dr. Samiksha Shelar (Assistant Prof. Dept. of Pharmacology at Bharati Vidyapeeth (DTU) Medical College, Pune), the CME was concluded.

During the sessions, participants asked relevant questions and they were answered by our Eminent Speakers. We have received positive feedback about the speakers, selection of topics and conduction of CME.



Bharati Vidyapeeth (DTU) Medical College, Pune



Department of Pharmacology, Bharati Vidyapeeth Medical College, Pune

in collaboration with
Poona College of Pharmacy

Organises
CME ON



Advances in Drug Discovery & Development

13th September 2023 via Online Mode

Register here



<https://forms.gle/y8tsPCoiwHKgYEFbA>

Scan this QR code or click on the link for payment



<https://paytm.me/Kj-XGUY>

Registration fees: ₹500

Schedule

1 MMC credit point approved

TIME	TOPIC	KEY SPEAKERS
10:00- 10:30 AM	Welcome Note & Introduction	Dr. B. Rajopadhye
10:30-11:15 AM	Advances in Drug Discovery	Dr. Rajan Goel
11:15 AM-12:00 PM	Drug Discovery from Natural Sources	Dr. Sathiyarayanan
12:00- 12:45 PM	In silico/ Computer Aided Drug Design	Dr. R.G. Kulkarni
12:45 - 1:30 PM	Lunch Break	
1:30 - 2:30 PM	3D Cell Culture systems in Drug Discovery & Development	Dr. P. P. Dhande
2:30 - 3:30 PM	Glimpses on Novel Molecules in Ayurveda	Dr. V. A. Pandit
3:30 - 3:45 PM	Concluding Remarks & Vote of Thanks	Dr. S. S. Shelar

For query contact:

Dr. Bhagyashree Rajopadhye : 9922451264; Dr. Samiksha Shelar:: 7030629007

Strategy for the Selection and Success of Novel Drug Discovery Project

- Assessment of the discovery and development target:
 - Unmet medical need in the respective disease area
 - Strong scientific background and Proof of concept (genetic, cellular & pharmacological)
 - Biomarker identification for better translation
 - Target rationale for any secondary indications
 - Target associated liabilities
- Target product profile:
 - Clearly defined drug like properties
 - Hierarchy of events and assays
- Screening cascade:
 - Defined milestones
 - Clearly show "go/no-go" points
- Critical path:
 - Differentiation and novelty
- Competitive advantage:
 - Disability and chemical druggability
 - Availability of diversity space to achieve patentability
- Technology requirements:
 - Patient population and product life cycle management
- # positioning
- Commercial viability

Macrophages and Mast cells appeared as key regulators

- From the present data pathophysiology of osteophytes seems revolving around macrophages, neutrophils, dendritic cells and mast cells and this has thrown many questions
- Mast cells were reported higher in OA than in RA and are associated with greater degree of synovitis and structural damage
- Mast cells are derived from bone marrow in the form of mast cell progenitors or MCPs.
- The committed MCPs circulate and home to the destination tissue in immature form, at this stage most of MCPs express stem cell factor receptor, c-kit and the high affinity of IGE receptor FcεRI just as mature mast cells
- Similarly, circulating monocytes enters synovium through extravasation and are transform into resident macrophages
- Both the cells are responsible to elevate inflammation by releasing a variety of cytokines

In silico/ Computer Aided Drug Design

Dr. Ravindra Kulkarni
 Prof. and Head
 Dept. Ph. Chemistry
 Poona College of Pharmacy, Pune

Advances in Drug Discovery & Development 13/09/2023 Department of Pharmacology, Bharati Vidyapeeth Medical College, Pune

Spheroids

Spheroids are simpler, spherical cell culture units which usually contain just one cell type like stem cells, hepatocytes, tumor cells, etc

Spheroids overcome many deficiencies of 2D cell culture system and exhibit-

- Well defined architecture
- Gradients of oxygen, nutrients & metabolites
- Cell-cell and cell-ECM interactions

Challenges with these culture systems are-

- Maintaining uniformity in size
- Compatibility with simple, reliable and standardized HTS assays

Chaitra Chandraudomrung N. et al. World J Stem Cells 2019; 11(12): 1065-1083

Mechanism of Action

Chronic Asthma

Chronic Inflammation → Release of mediators → Mast cell stabilizers

Remodeling → Anti-inflammatory → Corticosteroids → KVB

Hypersensitivity → Antioxidant activity

CME on Advances in Drug Discovery & Development

13th Session
 10:00 a.m.

Department of Pharmacology, Bharati Vidyapeeth Medical College, Pune

Zoom Meeting interface showing a video call with Dr. Priti Dhande and Dr. Jayashree Dandekar. The screen displays the CME event details.



Organizing Team