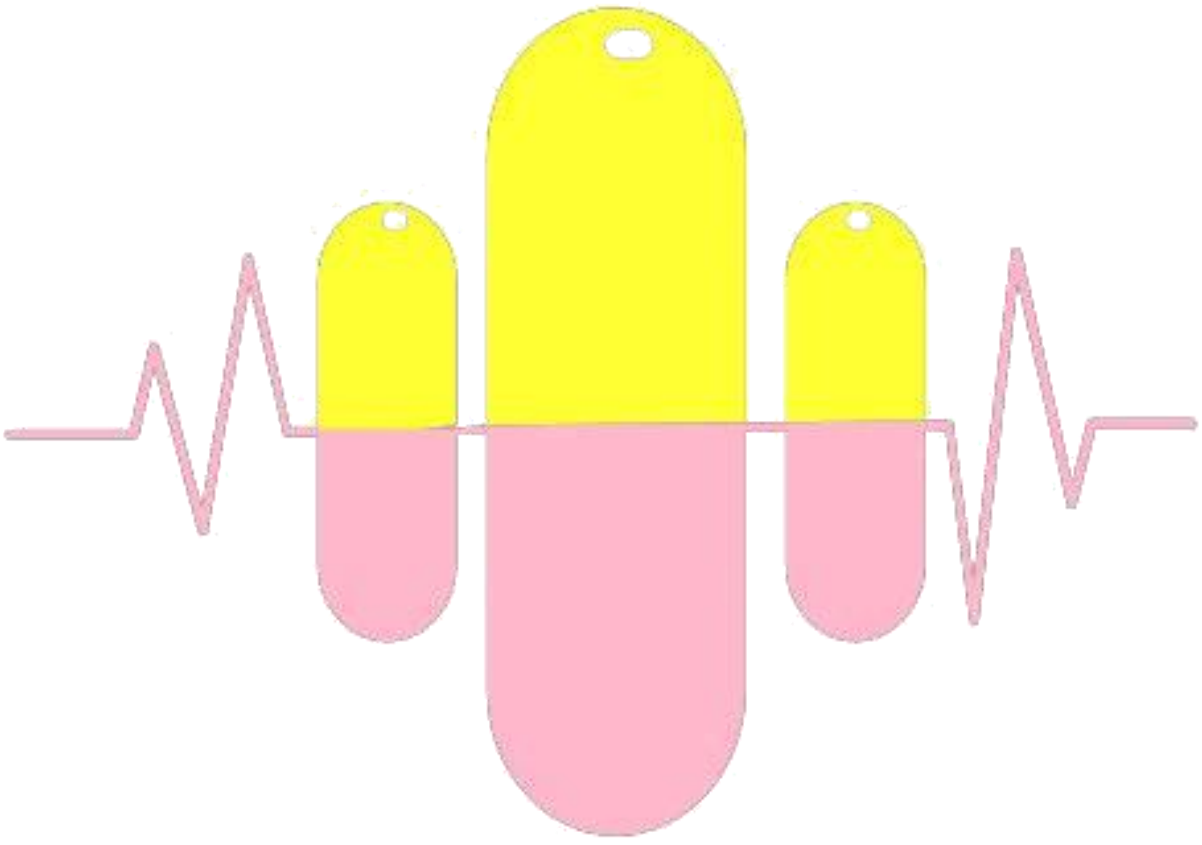
PHARMA NEWS



2017-18

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Bharati Vidyapeeth
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AVISHKAR 2017-2018

Event Organized by Shivaji University

Third Prize

NOVEL NANOEMULGEL FORMULATION OF *TERMINALIA ARJUNA* PLANT EXTRACT FOR BIOFRIENDLY CONTROLLED RELEASE

Dinanath Gaikwad* and Namdeo Jadhav
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Bharati Vidyapeeth College of Pharmacy,
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ABSTRACT

Terminalia arjuna (referred as arjuna) is a tree bark, used medicinally in ayurveda for several therapeutic functions including cardiovascular health. The traditional medical forms provide drug delivery with peaks, often above the required dose and face problems such as first pass metabolism, gastritis, constipation, stability and low therapeutic efficacy. Hence, we need to focus towards the newer system to overcome these limitations.

Therefore, the *Terminalia arjuna* bark extract (TA) loaded nanoemulsion was prepared and incorporated into hydrogel matrix to produce nanoemulgel. In TA nanoemulgel formulation, cabomer gelling agent was used. Prepared nanoemulgel was investigated for different parameters and evaluated for their physical appearance, viscosity, drug release, globule size, and stability. The *in vitro* and *ex vivo* skin permeation studies were also carried out.

The results showed that, TA nanoemulgel was physically stable and exhibited good stability. Ex-vivo skin permeation test of TA nanoemulgel formulation showed significant skin permeability. Many fold increase in flux was seen in case of nanoemulgel as compared to carbopol gel. Stability studies showed no major alteration in all parameters.

The results revealed that these formed nanoemulgel satisfied all pharmaceutical parameter and appears to be good novel topical agent possessing properties of thixotropic, controlled release, longer shelf life and bio-friendly.

AVISHKAR 2017-2018

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First Prize

"HETERO-TRICYCLIC LEAD SCAFFOLD AS NOVEL PDE5A INHIBITOR FOR ANTIHYPERTENSIVE ACTIVITY: *IN SILICO* DOCKING STUDIES"

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ABSTRACT

Objective of study was to evaluate the phosphodiesterase 5A inhibitory potential and identify lead scaffolds of antihypertensive phytochemicals using *in silico* docking studies.

In this perspective, 269 antihypertensive phytochemicals were selected. Sildenafil, was used as the standard. Virtual screening was carried using vLife MDS 4.4 software.

Based on docking score, π- stacking, H- bond and ionic interactions, 237 out of 269 molecules, shows one or more kind of the above interactions. As the screening was from random and diversified phytochemicals, we had targeted the chemical structures having tricycles in it. 82 out of 237 molecules, containing one or more kind of tricycles, were taken for further analysis and rest were dropped. Based on heteroatom/s in phytochemical structure, 14 N-containing tricyclic molecules were selected for lead scaffold identification. 3 considerable π- stacking and 1 H-bond interactions are observed in these compounds indicating that aromatic ring and heteroatom in the tricycle are minimum requirements that scaffolds should have to interact with PDE5A.

In silico docking studies revealed that nitrogen containing hetero-tricyclic lead scaffolds namely pyridoindole, tetrahydro-pyridonaphthyridine and dihydro-pyridoquinazoline are novel PDE5A inhibitors for antihypertensive activity. The identified lead scaffolds may provide antihypertensive lead molecule after its optimization.

AVISHKAR 2017-2018

Event Organized by Shivaji University

Third Prize

DEVELOPMENT OF PHOSPOTIDYL CHOLINE BASED TDDS FOR LUNG TARGETING

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ABSTRACT

Development of APIs requires almost 15 years and 100 millions of cost. Most failed clinical trials and others lack to reach the target sites. Hence it becomes necessary to develop targeted drug delivery system (TDDS) which will prevent undesirable pharmacological actions. Targeted drug delivery system usually consists of three components, drug, carrier and targeting ligand. The carrier will be used for reaching target site of action whereas targeting ligand for binding with target site of action so as to achieve maximum bio-distribution. The API will be selected on basis of its therapeutic efficiency, potency and free functional groups available. The use of carbohydrates, proteins and amino acids can be carried out as carrier and/or bio-molecule for drug targeting as these molecules will not trigger immunological complications. Among these, lipids as a bio-molecule has many advantages like it has no contact with alveolar surface, not hydrolysed by peptidases and proteases in GIT and lung and these are biomolecules which are not detected and ejected by body. Among lipids, most of fatty acids, glycerides, lipoproteins, are used for drug targeting. Use of phospotidyl choline will have additional advantages like more than two binding sites (one for drug and other for targeting ligand), maximum modifications possible, low molecular weight and lipophilic in nature. Thus the development of TDDS containing phospotidyl choline as a carrier/bio-molecule for lung disorders Tuberculosis, Lung Fibrosis, Lung cancer, etc. will be an effective approach.

Pioneer 2018

A National Level Technical Event

Organized By

Kolhapur Institute of Technology, College of Engineering

First Prize

Molecular modelling for hit identification from natural products targeting estrogen receptor alpha (ERα) for breast cancer therapy

Authors: Miss S. A. Mutwalli*[1], Mr. D. V. Shanbhag[1], Dr. Mrs. N. M. Bhatia[1], Mrs. S.S. Ashtekar[2]
Affiliations: [1] Department of Pharmaceutical Quality Assurance.
[2] Department of Pharmaceutical Chemistry.

ABSTRACT

In India, the women suffering from breast cancers are mostly estrogen receptor positive. The steroidal hormone estrogen is responsible for stimulating the cancer growth of breast primarily mediated via the steroidal estrogen receptor-α (ER-α). Hence, targeting the inhibition of estrogen or its production would be an effective therapy for breast cancer treatment. Literature shows that natural compounds with quinone and steroidal nucleus have potential to treat breast cancer. In this pursuit, 20 bioactive natural compounds were virtually screened containing terpenoids, alkaloids, flavonoids and steroids for ER-α binding affinity. **Methodology:** The ER-α with PDB code 1A52 with 1.5 A^0 resolution was used for *in silico* studies. The molecular docking studies were performed using Biopredicta module of VLife MDS ver 4.6. The docking scores and protein–ligand interactions of the obtained hits were emulated with the clinically used selective estrogen modulator and ER-antagonist (Fulvestrant) to confirm the affinity towards receptor. **Result and discussion:** The results revealed that compounds like rhein, delphinidin, thorectandrol A showed good binding affinity similar to selective estrogen receptor modulators having remarkable charge interaction with ASP351. The results signify that these compounds with structural modification could serve as potential leads in the drug discovery process for the treatment of breast cancer.

PRIZES WON (2017-18)

Sr. No.	Event	Name of student/s or Faculty	Class	Prize	Certificate/ Trophy
1.	Research Poster presentation at: National Conference on Emerging trend in Nanomaterials & Their Applications organized by Department of Medical Physics, Center for Interdisciplinary Research, D. Y. Patil University, Kolhapur on 2nd & 3rd June 2017	Mr. D. T. Gaikwad	---	Third Prize	01 certificate
2.	Story Writing & Reading Competition organized by Newspaper Gangadhar Group of media, Kolhapur on 16th June 2017	Mr. Shubham Pol	T. Y. B. Pharmacy	Third Prize + Rs 700/-	02 certificate
3.	Interclass Debate Competition organized by students club Bharati Vidyapeeth College of Pharmacy, Kolhapur on 19th Aug 2017	Team Sun Pharma (T. Y. Pharm) 1. Mr. Amit Tandulwadkar 2. Mr. Sourabh Khodake 3. Miss Aditi Chougule 4. Miss Mrunalini Rajak	T. Y. B. Pharmacy	Winner	04 certificates
4.	Interclass Debate Competition organized by students club Bharati Vidyapeeth College of Pharmacy, Kolhapur on 19th Aug 2017	Team DRL (S. Y. Pharm) 1. Mr. Nikhil Lohar 2. Mr. Siddhesh Apate 3. Miss Soniya Notani 4. Miss Poonam Jadhav	S. Y. B. Pharmacy	Runner	04 certificates

5.	Elocution Competition Under Lead College Scheme Shivaji University, Kolhapur organized by Shree Santkrupa College of Pharmacy, Ghogaon on 6th Oct 2017	Miss Sneha Rochlani	M. Pharm (Chemistry)	First Prize	01 Certificate/ 01 Trophy
6.	Mind Expedition: The Pharma Quiz (Interstate Quiz Competition) organized by Krishna Institute of Pharmacy, Karad on 21st Dec. 2017	Vishal Desai & Juber Pendhari	Final Year B. Pharmacy	Winner	02 Certificates/ 01 Trophy
AVISHKAR 2017-18: Research Project Competition at District Level round for UG, Organized by Dr. J. J. Magdum College of Engineering Jaysingpur on 28th Dec. 2017					
7.	Medicine and Pharmacy category (UG Level)	Mr. S. R. Masal	Third Year B. Pharmacy	First Prize	01 Certificate
8.	Agriculture and Animal Husbandry (UG Level)	Mr. A. K. Patil	Final Year B. Pharmacy	First Prize	01 Certificate
9.	Medicine and Pharmacy category (UG Level)	Miss S. A Mutwalli	Final Year B. Pharmacy	Third Prize	01 Certificate
AVISHKAR 2017-18: Research Project Competition at University Level (Central Round), Organized by School of Nanoscience and Technology, Shivaji University Kolhapur on 29th Dec. 2017					
10.	Pure Sciences Category (Teacher Level)	Mr. D. P. Mali	---	First Prize	01 Certificate
11.	Medicine and Pharmacy Category (Teacher Level)	Mr. D. V. Mahuli	---	Third Prize	01 Certificate
12.	Agriculture and Animal Husbandry Category (Teacher Level)	Mr. D. T. Gaikwad	---	Third Prize	01 Certificate

13.	Medicine and Pharmacy Category (Research Scholar Level)	Miss. T. A. Powar	Ph.D. Student	First Prize	01 Certificate
14.	Medicine and Pharmacy Category (Research Scholar Level)	Mr. S. S. Kumbhar	Ph. D. Student	Second Prize	01 Certificate
15.	Medicine and Pharmacy Category (PG Level)	Mr. S. N. Nangare	M. Pharmacy	First Prize	01 Certificate
16.	Pure Sciences Category (PG Level)	Miss T. D. Mhetar	M. Pharmacy	Second Prize	01 Certificate
AVISHKAR 2017-18: Research Project Competition at University Level (Central Round for UG), Organized by School of Nanoscience and Technology, Shivaji University Kolhapur on 5th Jan 2018					
17.	Medicine and Pharmacy category (UG Level)	Mr. S. R. Masal	T. Y. B. Pharmacy	First Prize	01 certificate
18.	Agriculture and Animal Husbandry (UG Level)	Mr. A. K. Patil	Final Year B. Pharmacy	Third Prize	01 certificate
National Level Inter-Collegiate General Knowledge Test-2018 conducted on the occasion of birthday celebration of Hon'ble Dr. Patangrao Kadam by Bharati Vidyapeeth, Yashwantrao Mohite College of Arts, Science, and Commerce, Pune (5th Jan 2018)					
19.	National Level Inter-Collegiate General Knowledge Test-2018	Mr. Vaibhav S. Khade	M. Pharm (QA)	Consolation Prize (Rs. 500/-)	Certificate
20.	National Level Inter-Collegiate General Knowledge Test-2018	Miss Swapnali B. Jadhav	M. H. Shinde Mahavidyalaya, Tisangi, Tal: Gaganbavada, Kolhapur	Consolation Prize (Rs. 500/-)	Certificate
Inter-Collegiate Chemistry Students Conference 2018 organized by Rajaram College Kolhapur on 9th & 10th Jan. 2018					
21.	Chalk Talk Competition	Miss Rajshree Gorad	M. Pharmacy	Third Prize	01 certificate

Pioneer 2018: A National Level Technical Event organized by Kolhapur Institute of Technology, College of Engineering, Kolhapur on 10th & 11th Feb. 2018					
22.	Research Poster Presentation	Miss. Mithila Sawalwade & Mr. Shubham Zende	Final Year B. Pharmacy	First Prize	02 certificates
Two Days National Level Seminar on Recent Trends in Herbal Drug Technology organized by Ashokrao Mane College of Pharmacy, Pethvadgaon on 16th & 17th Feb 2018					
23.	Research Poster Presentation Competition	Snehal Ashtekar	Ph.D. Student	First Prize	01 certificate/ 01 Trophy
24.	Research Poster Presentation Competition	Trupti Powar	Ph.D. Student	First Prize	01 certificate/ 01 Trophy
Yasho Techfest- 2018 organized by Yashoda Technical Campus, Satara					
25.	State Level Pharma Quiz Competition	Mr. Vishal Desai & Mr. Juber Pendhari	Final Year B. Pharmacy	Winner	02 certificates / 01 trophy
Esperanza 2K18: Creative Competitions Organized by Club Esperanza Kolhapur on 22nd February 2018					
26.	Poster Presentation Competition	Mr. Sidhdarth Phalle; Mr. Akash Patil & Miss Savani Shere	----	Winner	03 certificates / 01 trophy
27.	Pharma Quiz Competition	Mr. Suraj Kutre & Mr. Sambhaji Masal	T. Y. B. Pharmacy	Winner	02 certificates/ 01 trophy
28.	Meta Fest 2K18: State Level Photography Competition organized by Government Polytechnic, Kolhapur.	Mr. Vaibhav Khade	M. Pharmacy	Winner	01 Certificate/ 01 Medal