3.3.1 Number of research papers published per teacher in the Journals notified on UGC CARE list during the last five years

1. HEI is requested to kindly note that the publication done in the year 2023, be considered in the year 2023-24, which should not be considered. Please relook and provide the correct revise data.

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5. Kindly note that Publication in the current UGC CARE with ISSN will only be considered.

Title of paper	**Name of the author/s**	**Department of the teacher**	**Name of journal**	**Calendar Year of publication**	**ISSN number**	**Link to the recognition in UGC enlistment of the Journal**		
						Link to website of the Journal	Link to article / paper / abstract of the article	Is it listed in UGC Care list
Formulation Development and *In-Vitro* Evaluation of Telmisartan Nanocochleates	Prashant Ghode, Sayali Kadlag, Asawari Pachauri, Atul Sayare, AShlesha Pandit, Shwerta Ghode, Kishor Salunkhe	Pharmaceutical Chemistry	NeuroQuantology	2022	1303-5150	https://www.neuroquantology.com/	https://www.neuroquantology.com/open-access/Formulation+Development+and+In-Vitro+Evaluation+of+Telmisartan+Nanocochleates_3928/	YES
Sonocrystallization: Emerging Approach for Solubility Enhancement of Poorly Aqueous Soluble Drug Molecules	Prashant D. Ghode , Shweta P. Ghode, Atul S. Sayare , Asawari D. Pachauri , Sarita T. Chavan , Pratibha M. Hole1, Nikita D. Bachhav, Anil N Tankar	Pharmaceutical Chemistry	NeuroQuantology	2022	1303-5150	https://www.neuroquantology.com/	https://www.neuroquantology.com/open-access/Sonocrystallization%253A+Emerging+Approach+for+Solubility+Enhancement+of+Poorly+Aqueous+Soluble+Drug+Molecules_2708/?download=true	YES

Improved Mucoadhesion, Permeation and *In Vitro* Anticancer Potential of Synthesized Thiolated Acacia and Karaya Gum Combination: A Systematic Study	Ujjwala Kandekar, Neha Munot , Chaitali Rikame, Abhinandan Patil, Poulomi Sengupta , Shabana Urooj, Anusha Bilal	Pharmaceutics	Molecules	2022	1420-3049	https://www.mdpi.com/journal/molecules	Molecules | Free Full-Text | Improved Mucoadhesion, Permeation and In Vitro Anticancer Potential of Synthesized Thiolated Acacia and Karaya Gum Combination: A Systematic Study (mdpi.com)	YES
A Comparative Study of Quercetin-Loaded Nanocochleates and Liposomes: Formulation, Characterization, Assessment of Degradation and *In Vitro* Anticancer Potential	Ujjwala Kandekar , Neha Munot , Prabhanjan Giram, Kavita Khot , Abhinandan Patil , Simona Cavalu	Pharmaceutics	Pharmaceutics	2022	1999-4923	https://www.mdpi.com/journal/pharmaceutics	Pharmaceutics | Free Full-Text | A Comparative Study of Quercetin-Loaded Nanocochleates and Liposomes: Formulation, Characterization, Assessment of Degradation and In Vitro Anticancer Potential (mdpi.com)	YES
Effect of Beverages on Release of Paracetamol Tablet by In-vitroDissolution Method Using Modified Media	Pandit Ashlesha, Baheti Akshay, Gothoskar Abhijit, Palkar Kanchan, WaniManish, Polshettiwar Satish, Tagalpallewar Amoland	Pharmaceutics	Journal of Pharmaceutical Research International	2022	2231-2919	https://journaljpri.com/index.php/JPRI	https://journaljpri.com/index.php/JPRI/article/view/2395	YES

RP- HPLC method Development and Validation for Simultaneous Estimation of Montelukast and Ebastine in Pharmaceutical Dosage Form	Prashant D Ghode, Asawari D Pachauri, Atul S. Sayare, Saurabh U Shinde, Dattatray S Saindane, Akshay Dalavi, K R Khandelwal, , Shweta P Ghode	Pharmaceutical Chemistry	Journal of Medical Pharmaceutical and Allied Sciences	2022	2320–7418	https://www.jmpas.com/	https://jmpas.com/admin/assets/article_issue/1651428809JMPAS_MARCH_-_APRIL_2022.pdf	YES
RP- HPLC method Development and Validation for Simultaneous Estimation of dolutegravir, Emtricitabine and Tenofovir alafenamide in Tablet Dosage Form	Prashant D Ghode, Atul S Sayare , Asawari D Pachauri , Anil Tankar, Saurabh U Shinde , Dattatray S Saindane , Vivekanand Tembhurnikar, Shweta P Ghode	Pharmaceutical Chemistry	Journal of Medical Pharmaceutical and Allied Sciences	2022	2320–7418	https://www.jmpas.com/	https://jmpas.com/admin/assets/article_issue/1651429406JMPAS_MARCH_-_APRIL_2022.pdf	YES
Antihyperglycemic Activity of Achyranthes aspera Linn.Leaves Extract by Modulation of β-cell Functioning in Streptozotocin-Induced Diabetic Rats	Trupti C. Deshpande, Hemant D. Une,	Pharmacology	Pharmacognosy Magazine	2021	0976-4062	https://phcog.com/	https://phcog.com/article/view/2021/17/05/s15-s20	YES
Development of Validated RP-HPLC Method for Estimation of Empagliflozin and Metformin in Combined Formulation	Kandekar Ujjwala, Vichare Vijaya, Dhaware Pallavi, V. P. Choudhari	Pharmaceutics	Journal of Pharmaceutical Research International	2021	2231-2919	https://journaljpri.com/index.php/JPRI	https://journaljpri.com/index.php/JPRI/article/view/5108	YES

Effect of Achyranthes Aspera Linn. Leaves Extract on Reactive Oxygen Species (ROS) in Diabetes-induced Rats by Flow cytometry and Possible Molecular Mechanism through Molecular Docking	Trupti C. Deshpande, Hemant D. Une	Pharmacology	Current Enzyme Inhibition	2021	15734080	http://benthamscience.com/public/journals/current-enzyme-inhibition/indexing-agencies	https://www.eurekaselect.com/article/112751	YES
Nanocarriers For Breast Cancer: Advanced Perspective	Ujjwala Kandekar, Rohini Pujari, Praveen Chaudhari , Krishnachandra Khandelwal, Krishnakumar Lone, Trushal Chorge	Pharmaceutics	Hacettepe University Journal of the Faculty of Pharmacy	2021	2458-8806	https://dergipark.org.tr/en/pub/hujpharm	https://dergipark.org.tr/en/pub/hujpharm/issue/65437/891355	YES
Exploration of Elephant Foot Yam (Amorphophallus paeoniifolius) Starch: An Alternative Natural Disintegrant for Pharmaceutical Application	Kandekar, Ujjwala Yadav, Abhang Tejal Ramdas, Pujari Rohini R., Khandelwal K.R.	Pharmaceutics	Indian Journal of Pharmaceutical Education and Research	2021	0019-5464	https://www.ijper.org/	https://www.ijper.org/article/1330	YES

Colocasia esculenta starch: Novel alternative disintegrant for pharmaceutical application	Kandekar Ujjwala Yadav, Tapir Mayuri, Rukhe Nikita, Kad Shubhda, Bhalerao Priyanka	Pharmaceutics	Indian Drugs	2021	0019-462X	https://www.indiandrugsonline.org/	https://www.indiandrugsonline.org/issuesarticle-details?id=MTE1MQ==	YES
Development and Validation of RP-HPLC Method for the Estimation of Clomiphene Citrate in Pharmaceutical Dosage Form	Atul S. Sayare, Priti B. Undre, Prashant D. Ghode, Sujata V. Singh, Shweta P. Ghode	Pharmaceutical Chemistry	Research Journal of Pharmacy and Technology	2021	0974-360X	https://www.rjptonline.org	https://rjptonline.org/AbstractView.aspx?PID=2021-14-7-1	YES
Validated HPTLC method development for the estimation of curcumin with respect to the drugs, extracts and formulations.	Prashant D. Ghode, Shweta P. Ghode, Atul S.Sayare, Pranali Gavhane,Pooja Nevase	Pharmaceutical Chemistry	Annals of the Romanian Society for Cell Biology	2021	2067-8282	https://annalsofrscb.ro/index.php/journal	https://annalsofrscb.ro/index.php/journal/article/view/8542/6265	YES
Hollow pessary loaded with lawsone viaself-microemulsifying drug delivery system for vaginal candidiasis	Ashlesha P. Pandit, Kanchan R. Koyate , Ashwini S. Kedar	Pharmaceutics	Journal of Drug Delivery Science and technology	2020	1773-2247	https://www.sciencedirect.com/journal/journal-of-drug-delivery-science-and-technology	https://www.sciencedirect.com/science/article/abs/pii/S1773224720312442#:~:text=Therefore%2C%20objective%20of%20current%20research,%C2%AE%20(OV)%20and%20beeswax.	YES

Validated RP-HPLC Method Simultaneous Estimation of Irbesartan and Development for the Hydrochlorothiazide in Combined Dosage Form	Prashant D. Ghode, Abhishek R. Kalamkar, Atul S. Sayare, Asawari D. Pachauri, Anil N. Tankar, Nivrutti A Yewale, Shweta P Ghode	Pharmaceutical Chemistry	European Journal of Molecular & Clinical Medicine	2020	2515-8260	https://ejmcm.com/	https://ejmcm.com/uploads/paper/215ba6040572beac30d5b7c779190189.pdf	YES
Preliminary Phytochemical Detection, Quantitative Estimation of Total Flavonoids, Total Phenols And Antioxidant Activity of Leaves of Syzygium malaccense (Myrtaceae)	Ghode Prashant D, Kolhe Rohini C., Ghode Shweta P., Chatur Vibhavari, Chaudhari Rajesh Y., Patil Vijay R.	Pharmaceutical Chemistry	European Journal of Molecular & Clinical Medicine	2020	2515-8260	https://ejmcm.com/	https://ejmcm.com/uploads/paper/1c1783d593daaff5afbf55118d8b4e00.pdf	YES
Exploiting natural polymer reinforced microspheres and investigating its inherent physicochemical characteristics for sustained release	Ujjwala Kandekar	Pharmaceutics	International Journal of Pharmaceutical Sciences and Research	2020	0975-8232 (Online), 2320-5148 (Print)	https://ijpsr.com/	https://ijpsr.com/bft-article/exploiting-natural-polymer-reinforced-microspheres-and-investigating-its-characteristics-for-sustained-release-ujjwala-y-kandekar-department-of-pharmaceutics-pes-modern-college-of-pharmacy-for-lad/	YES

Thyme oil loaded cassava starch transdermal film For wound healing	Vinita Patole, Rajnigandha Gaikwad, Khandelwal K.R	Pharmaceutics	Indian Drugs	2020	0019-462X	https://www.indiandrugsor	https://www.indiandrugsonline.org/issuesarticle-details?id=MTE1NQ==	YES
Exploration of amorphophallus paeoniifolius starch as natural binder	Kandekar, Ujjwala Yadav, Abhang Tejal Ramdas	Pharmaceutics	International Journal of Pharmaceutical Sciences and Reasearch	2020	0975-8232(Online), 2320-5148 (Print)	https://ijpsr.com/	https://ijpsr.com/bft-article/exploration-of-amorphophallus-paeoniifolius-starch-as-natural-binder/	YES
A chitosan film containing quercetin-loaded transferosomes for the treatment of secondary osteoporosis	Ashlesha P. Pandit, Sachin B. Omase, Vaishali M. Mute	Pharmaceutics	Drug delivery and translational research	2020	2190-393X	https://www.springer.com/journal/13346	https://link.springer.com/article/10.1007/s13346-020-00708-5	YES
Application of Design of Experiment Based Innovative Approach in Method Development and Validation of RP-HPLC for Estimation of Azilsartan in Bulk and Pharmaceutical Tablet Dosage Form	Vanjari Suvarna Sharad, Deshmukh, Siddhata Arjun, Patil Rajendra Bhagwan, and Khandelwal Kishanchandra Radheshyam	Pharmaceutical Chemistry	Indian Journal of Pharmaceutical Education and Research	2020	0019-5464	https://www.ijper.org/	https://www.ijper.org/article/1254	YES

Antifungal Nail lacquar loaded with extract of Cissus Quadrangularis for the treatment of Onchomycosis	Ashlesha P. Pandit, Amarnath Kedar, Suvidya Ranaware, K.R Khandelwal .	Pharmaceutics	Indian Journal of Pharmaceutical Education and Research	2020	0019-5464	https://www.ijper.org/	https://www.ijper.org/article/1179	YES
Spongy wound dressing of pectin / carboxymethyl tamarind seed polysaccharide loaded with moxifloxacin beads for effective wound healing	Ashlesha P. Pandit, Kanchan R. Koyate , Ashwini S. Kedar, Vaishali M.Mute	Pharmaceutics	International Journal of Biological Macromolecules	2019	1472-6882	https://www.sciencedirect.com/journal/international-journal-of-biological-macromolecules	https://www.sciencedirect.com/science/article/abs/pii/S0141813019330521	YES
Development and validation of RP-HPLC method for estimation of Vigabartin using derivatization with 9-Fluorenylmethyloxy carbonyl chloride	A. S. Sayare, R.V. Lode, P.D. Ghode , A.D. Pachauri	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	https://www.jpsr.pharmainfo.in/Documents/Volumes/vol11issue06/jpsr11061920.pdf	YES
Stability indicating HPTLC method development and validation for the estimation of Saxagliptin in Bulk and its dosage form	P.D. Ghode , S.S. Baradkar,A.S. Sayare A.D. Pachauri, K.R. Khandelwal	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	https://www.jpsr.pharmainfo.in/Documents/Volumes/vol11issue06/jpsr11061920.pdf	YES

Formulation and evaluation of gastroretentive floating tablet of Captopril for the treatment of hypertension by using natural polymers	Rajendra B.Patil, Vishal T Bhegade, Suvarna S.Vanjari, K.R. Khandelwal	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	https://pharmainfo.in/jpsr/Documents/Volumes/vol11issue08/jpsr11081923.pdf	YES
Development and validation of stability indicating high performance thin layer chromatography method for analysis of Bergapten.	M.C. Chavan, A.R. Navratne, R. B. Patil, S. S. Vanjari , K.R. Khandelwal	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	https://www.jpsr.pharmainfo.in/Documents/Volumes/vol11issue09/jpsr11091925.pdf	YES
Study of solubility enhancement of Quercetin by Inclusion complexation with Betacyclodextrin	Rajendra B. Patil, Deepti N. Limbhore, Suvarna S. Vanjari, Manisha C.Chavan	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	jpsr11091902.pdf (pharmainfo.in)	YES
Validated stability indicating HPLC method for identification of degradant of Opipramol by LC-MS	S.S.Vanjari, S.S. Kumbhar, R.B.Patil, M.C.Chavan, K.R.Khandelwal	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	jpsr11091932.pdf (pharmainfo.in)	YES

Formulation and evaluation of Gabapentin loaded Chitosan transdermal films	Jagruti V.Varma, Atul S. Sayare, Vinita C.Patole, Prashant D. Ghode	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	jpsr11081915.pdf (pharmainfo.in)	YES
Formulation and evaluation of self microemulsifying drug delivery system (SMEDDS) of Sertraline HCl	Atul S.Sayare, Jagruti V.Varma,Vinita C.Patole, Prashant D.Ghode	Pharmaceutical Chemistry	Journal of Pharmaceutical Sciences and Research	2019	0975-1459	https://www.jpsr.pharmainfo.in/	jpsr11091916.pdf (pharmainfo.in)	YES
Liquisolid Compact Tablet of Candesartan Cilexetil With Enhanced Solubility Using Neusilin US2, Aerosil 200 and Transcutol HP	Ashlesha P. Pandit, Vinita Patole, Argade Pallavi	Pharmaceutics	Indian Journal of Pharmaceutical Education and Research	2019	0975-1459	https://www.ijper.org/	https://www.ijper.org/article/1006	YES
Thymol and eugenol loaded chitosan dental film for treatment of periodontitis	Ashlesha P. Pandit, Vinita Patole,Shilpa P. Chaudhari, Priyanka P. Lokhande	Pharmaceutics	Indian Drugs	2019	0019-462X	https://www.indiandrugsonline.org/	https://www.indiandrugsonline.org/issuesarticle-details?id=OTQx	YES
Antifungal Topical Gel of Leaves Extract of *Amaranthus viridis* L. for Treatment of Cutaneous Candidiasis	Ashlesha P. Pandit, Kartiki S Khandagale, Vrushali C Nakhate ,	Pharmaceutics	Indian Drugs	2019	0019-462X	https://www.indiandrugsonline.org/	https://www.indiandrugsonline.org/issuesarticle-details?id=MTAwNA==	YES

Curcumin as a permeability enhancer enhanced the antihyperlipidemic activity of dietary green tea extract	Ashlesha P. Pandit, Shreyas R. Joshi, Preeti S. Dalal , Vinita C. Patole.	Pharmaceutics	BMC Complementary Medicine and Therapies	2019	1472-6882	https://bmccomplementmedtherapies.biomedcentral.com/	https://bmccomplementmedtherapies.biomedcentral.com/articles/10.1186/s12906-019-2545-1	YES
Experimental Evaluation of Hygrophila schulli Seed Extracts for Antistress Activity	Kishanchandra Khandelwal, Dayanand Kannur,Srikrishna Nandanwadkar, Swapnil Dhawane, Smruti Phulambrikar,	Pharmacognosy	Ancient Science of Life	2018	2249-9547	https://journals.lww.com/asol/pages/default.aspx	Experimental Evaluation of Hygrophila Schulli Seed Extracts... : Ancient Science of Life (lww.com)	YES

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Number of research papers published per teacher in the Journals notified on UGC care list during the last five years

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11.	Nanocarriers for breast cancer: advanced perspective	Hacettepe University Journal of the Faculty of Pharmacy	26
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3.3.1 Number of research papers published per teacher in the Journals notified on UGC CARE list during the last five years

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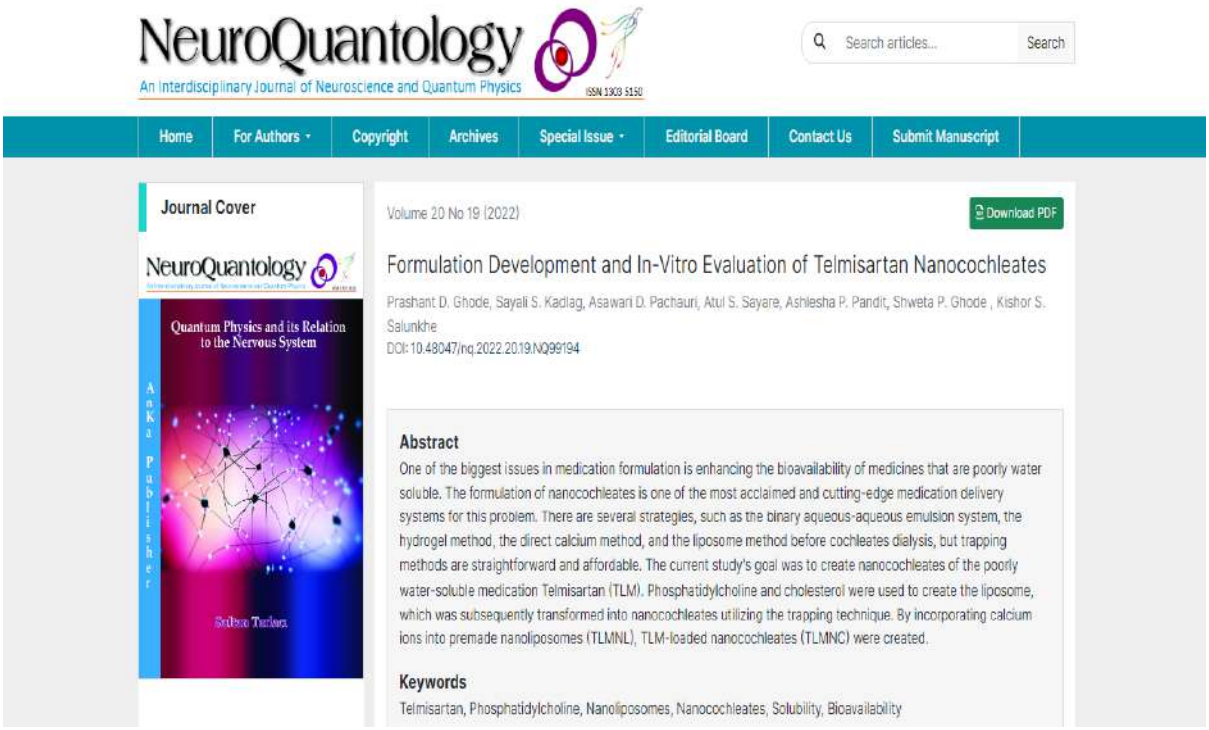
6. Kindly note that publication of the authors with institution affiliation will be considered for assessment years only.

SCREENSHOTS OF RESEARCH ARTICLE

1. Formulation Development and *In-Vitro* Evaluation of Telmisartan Nanocochleates



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Formulation Development and In-Vitro Evaluation of Telmisartan Nanocochleates

Prashant D. Ghode, Sayali S. Kadlag, Asawari D. Pachauri, Atul S. Sayare, Ashlesha P. Pandit, Shweta P. Ghode , Kishor S. Salunkhe

DOI:10.48047/nq.2022.20.19.NQ99194

Abstract

One of the biggest issues in medication formulation is enhancing the bioavailability of medicines that are poorly water soluble. The formulation of nanocochleates is one of the most acclaimed and cutting-edge medication delivery systems for this problem. There are several strategies, such as the binary aqueous-aqueous emulsion system, the hydrogel method, the direct calcium method, and the liposome method before cochleates dialysis, but trapping methods are straightforward and affordable. The current study's goal was to create nanocochleates of the poorly water-soluble medication Telmisartan (TLM). Phosphatidylcholine and cholesterol were used to create the liposome, which was subsequently transformed into nanocochleates utilizing the trapping technique. By incorporating calcium ions into premade nanoliposomes (TLMNL), TLM-loaded nanocochleates (TLMNC) were created.

Keywords

Telmisartan, Phosphatidylcholine, Nanoliposomes, Nanocochleates, Solubility, Bioavailability

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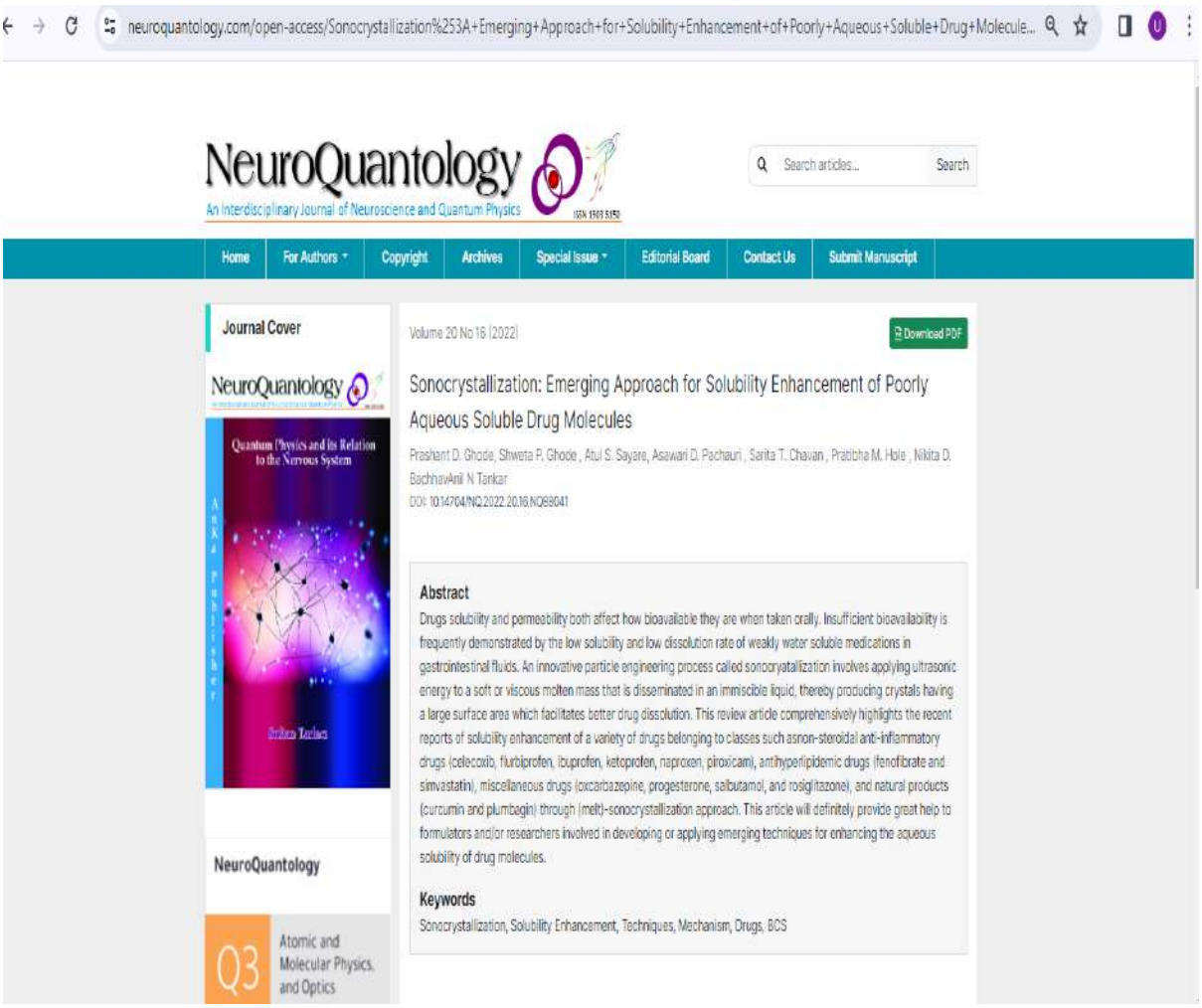
2. Sonocrystallization: Emerging Approach for Solubility Enhancement of Poorly Aqueous Soluble Drug Molecules



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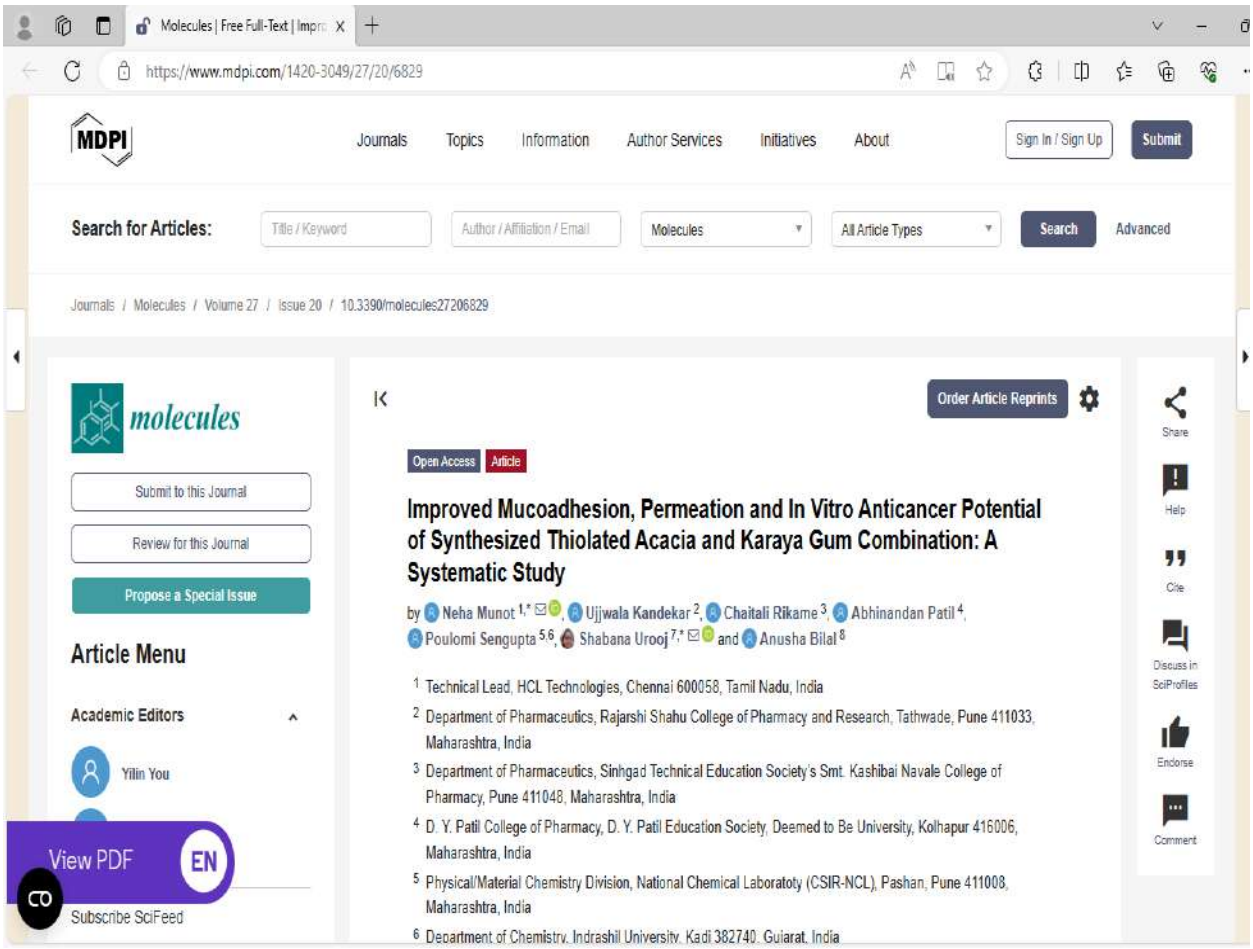
3. Improved Mucoadhesion, Permeation and *In Vitro* Anticancer Potential of Synthesized Thiolated Acacia and Karaya Gum Combination: A Systematic Study



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Improved Mucoadhesion, Permeation and In Vitro Anticancer Potential of Synthesized Thiolated Acacia and Karaya Gum Combination: A Systematic Study

by Neha Munot [1,*], Ujjwala Kandekar [2], Chaitali Rikame [3], Abhinandan Patil [4], Poulomi Sengupta [5,6], Shabana Urooj [7,*] and Anusha Bilal [8]

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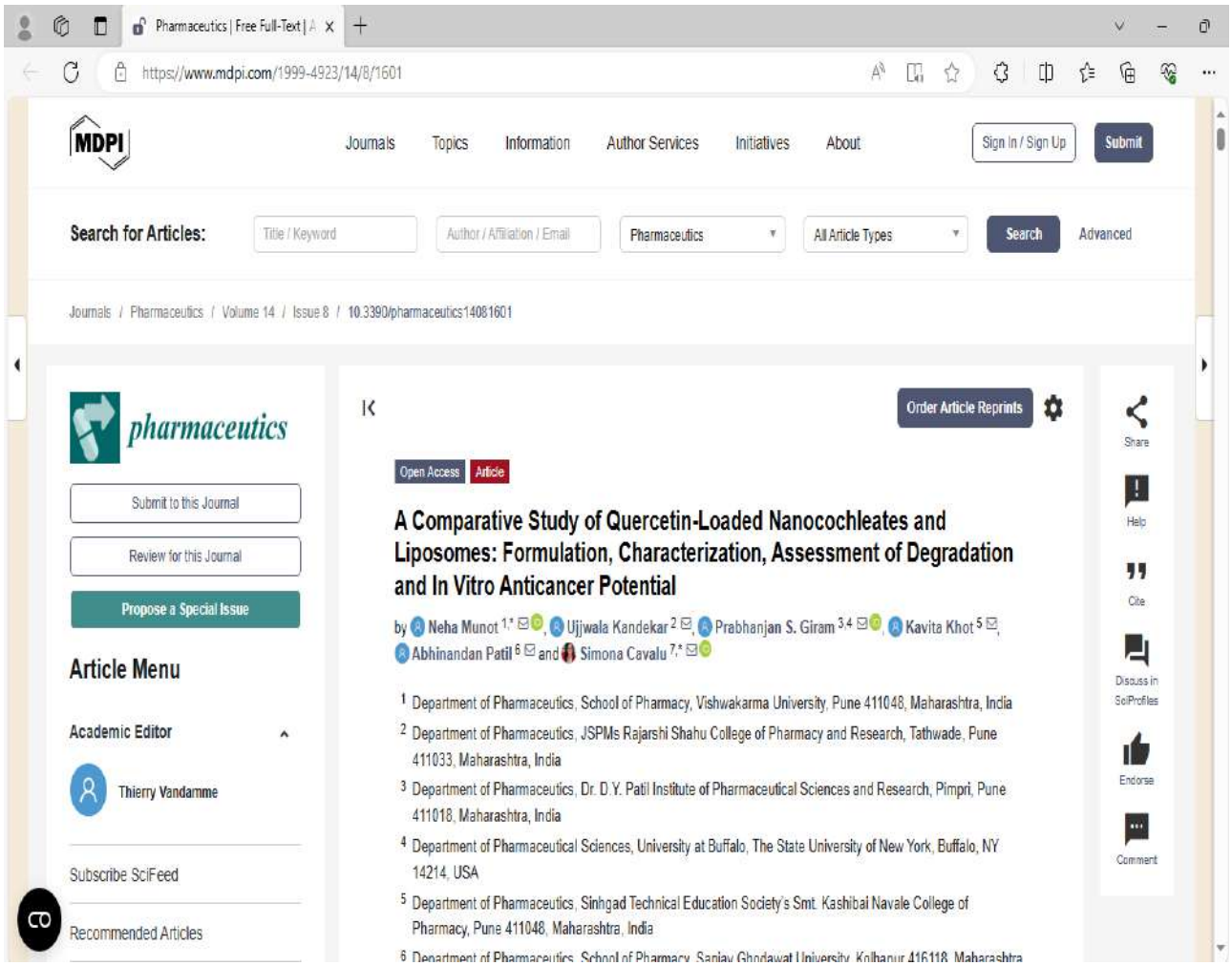
4. A Comparative Study of Quercetin-Loaded Nanocochleates and Liposomes: Formulation, Characterization, Assessment of Degradation and *In Vitro* Anticancer Potential



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A Comparative Study of Quercetin-Loaded Nanocochleates and Liposomes: Formulation, Characterization, Assessment of Degradation and In Vitro Anticancer Potential

by Neha Munot [1,*], Ujjwala Kandekar [2], Prabhanjan S. Giram [3,4], Kavita Khot [5], Abhinandan Patil [6] and Simona Cavalu [7,*]

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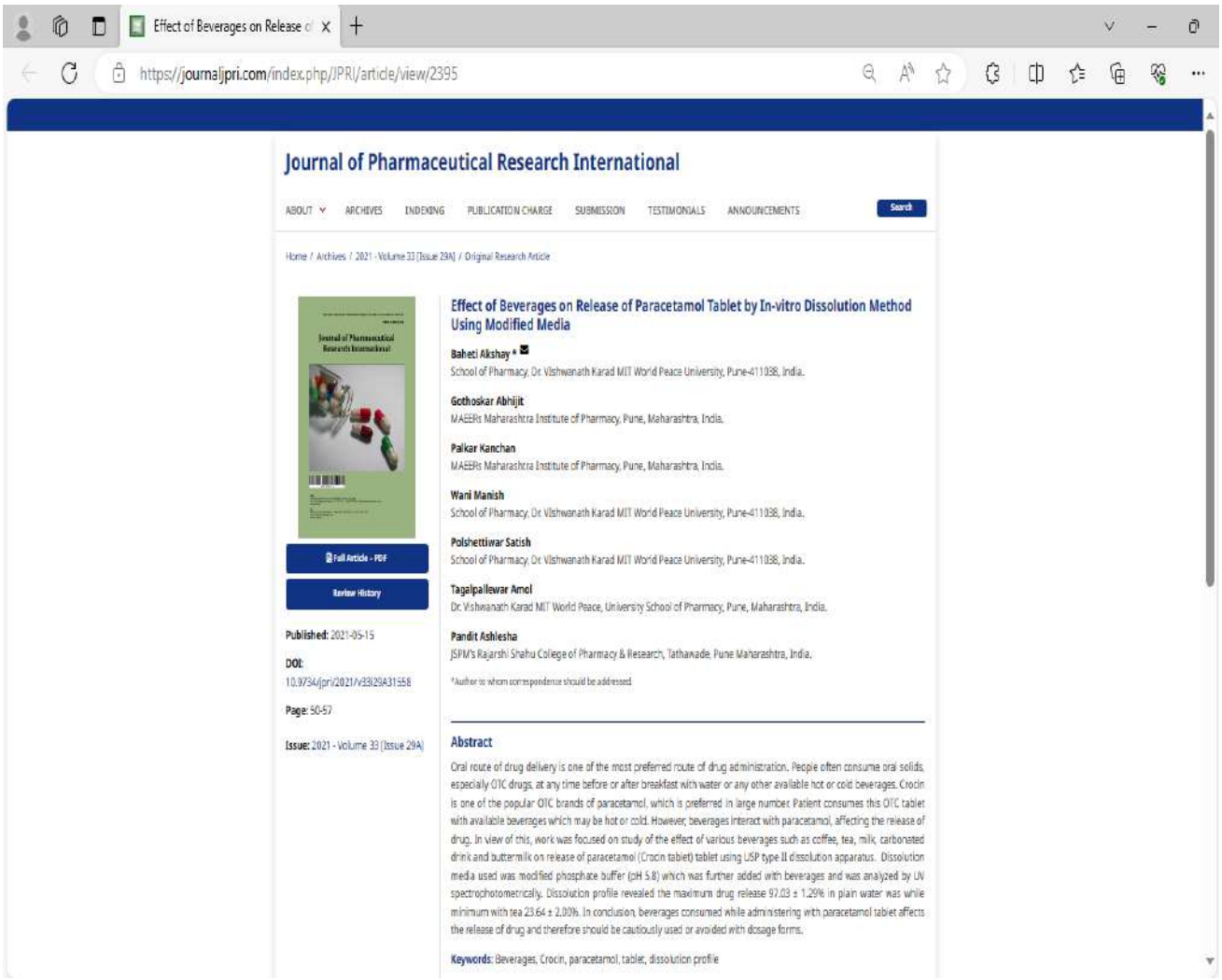
5. Effect of Beverages on Release of Paracetamol Tablet by In-vitroDissolution Method Using Modified Media



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Review History

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Issue: 2021 - Volume 33 [Issue 29A]

Effect of Beverages on Release of Paracetamol Tablet by In-vitro Dissolution Method Using Modified Media

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Abstract

Oral route of drug delivery is one of the most preferred route of drug administration. People often consume oral solids, especially OTC drugs, at any time before or after breakfast with water or any other available hot or cold beverages. Crocin is one of the popular OTC brands of paracetamol, which is preferred in large number. Patient consumes this OTC tablet with available beverages which may be hot or cold. However, beverages interact with paracetamol, affecting the release of drug. In view of this, work was focused on study of the effect of various beverages such as coffee, tea, milk, carbonated drink and buttermilk on release of paracetamol (Crocin tablet) tablet using USP type II dissolution apparatus. Dissolution media used was modified phosphate buffer (pH 6.8) which was further added with beverages and was analyzed by UV spectrophotometrically. Dissolution profile revealed the maximum drug release 97.03 ± 1.29% in plain water was while minimum with tea 23.64 ± 2.00%. In conclusion, beverages consumed while administering with paracetamol tablet affects the release of drug and therefore should be cautiously used or avoided with dosage forms.

Keywords: Beverages, Crocin, paracetamol, tablet, dissolution profile

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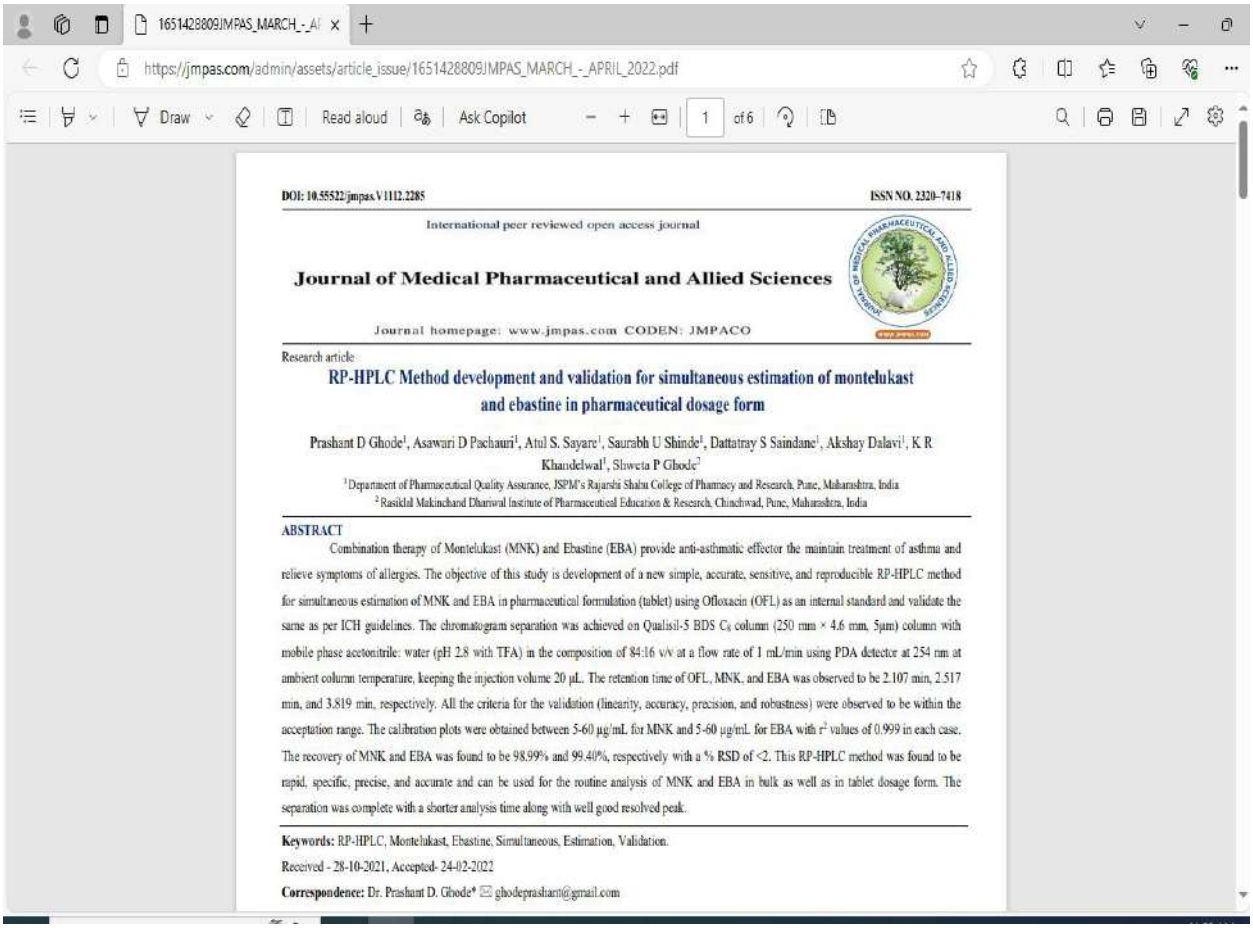
6. RP- HPLC method Development and Validation for Simultaneous Estimation of Montelukast and Ebastine in Pharmaceutical Dosage Form



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Journal of Medical Pharmaceutical and Allied Sciences

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Research article

RP-HPLC Method development and validation for simultaneous estimation of montelukast and ebastine in pharmaceutical dosage form

Prashant D Ghode[1], Asawari D Pachauri[1], Atul S. Sayare[1], Saurabh U Shinde[1], Dattatray S Saindane[1], Akshay Dalavi[1], K R Khandelwal[1], Shweta P Ghode[2]

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ABSTRACT

Combination therapy of Montelukast (MNK) and Ebastine (EBA) provide anti-asthmatic effector the maintain treatment of asthma and relieve symptoms of allergies. The objective of this study is development of a new simple, accurate, sensitive, and reproducible RP-HPLC method for simultaneous estimation of MNK and EBA in pharmaceutical formulation (tablet) using Ofloxacin (OFL) as an internal standard and validate the same as per ICH guidelines. The chromatogram separation was achieved on Qualisil-5 BDS C_8 column (250 mm × 4.6 mm, 5µm) column with mobile phase acetonitrile: water (pH 2.8 with TFA) in the composition of 84:16 v/v at a flow rate of 1 mL/min using PDA detector at 254 nm at ambient column temperature, keeping the injection volume 20 µL. The retention time of OFL, MNK, and EBA was observed to be 2.107 min, 2.517 min, and 3.819 min, respectively. All the criteria for the validation (linearity, accuracy, precision, and robustness) were observed to be within the acceptation range. The calibration plots were obtained between 5-60 µg/mL for MNK and 5-60 µg/mL for EBA with r^2 values of 0.999 in each case. The recovery of MNK and EBA was found to be 98.99% and 99.40%, respectively with a % RSD of <2. This RP-HPLC method was found to be rapid, specific, precise, and accurate and can be used for the routine analysis of MNK and EBA in bulk as well as in tablet dosage form. The separation was complete with a shorter analysis time along with well good resolved peak.

Keywords: RP-HPLC, Montelukast, Ebastine, Simultaneous, Estimation, Validation.

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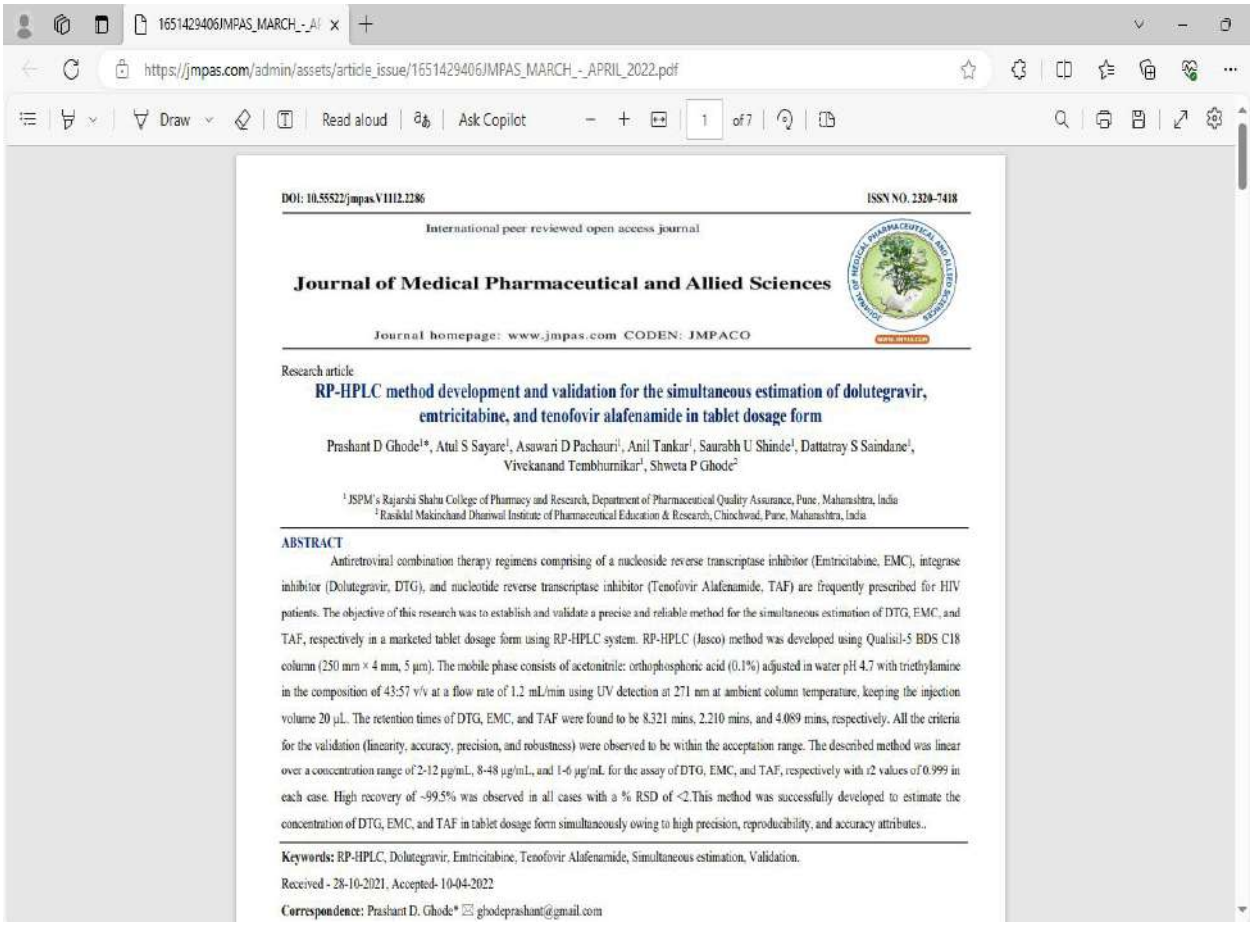
7. RP- HPLC method development and validation for simultaneous estimation of dolutegravir, Emtricitabine and Tenofovir alafenamide in tablet dosage form



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Research article

RP-HPLC method development and validation for the simultaneous estimation of dolutegravir, emtricitabine, and tenofovir alafenamide in tablet dosage form

Prashant D Ghode[1]*, Atul S Sayare[1], Asawari D Pachauri[1], Anil Tankar[1], Saurabh U Shinde[1], Dattatray S Saindane[1], Vivekanand Tembhurnikar[1], Shweta P Ghode[2]

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[2] Rasiklal Makinchand Dhariwal Institute of Pharmaceutical Education & Research, Chinchwad, Pune, Maharashtra, India

ABSTRACT

Antiretroviral combination therapy regimens comprising of a nucleoside reverse transcriptase inhibitor (Emtricitabine, EMC), integrase inhibitor (Dolutegravir, DTG), and nucleotide reverse transcriptase inhibitor (Tenofovir Alafenamide, TAF) are frequently prescribed for HIV patients. The objective of this research was to establish and validate a precise and reliable method for the simultaneous estimation of DTG, EMC, and TAF, respectively in a marketed tablet dosage form using RP-HPLC system. RP-HPLC (Jasco) method was developed using Qualisil-5 BDS C18 column (250 mm × 4 mm, 5 µm). The mobile phase consists of acetonitrile: orthophosphoric acid (0.1%) adjusted in water pH 4.7 with triethylamine in the composition of 43:57 v/v at a flow rate of 1.2 mL/min using UV detection at 271 nm at ambient column temperature, keeping the injection volume 20 µL. The retention times of DTG, EMC, and TAF were found to be 8.321 mins, 2.210 mins, and 4.089 mins, respectively. All the criteria for the validation (linearity, accuracy, precision, and robustness) were observed to be within the acceptation range. The described method was linear over a concentration range of 2-12 µg/mL, 8-48 µg/mL, and 1-6 µg/mL for the assay of DTG, EMC, and TAF, respectively with r2 values of 0.999 in each case. High recovery of ~99.5% was observed in all cases with a % RSD of <2.This method was successfully developed to estimate the concentration of DTG, EMC, and TAF in tablet dosage form simultaneously owing to high precision, reproducibility, and accuracy attributes..

Keywords: RP-HPLC, Dolutegravir, Emtricitabine, Tenofovir Alafenamide, Simultaneous estimation, Validation.

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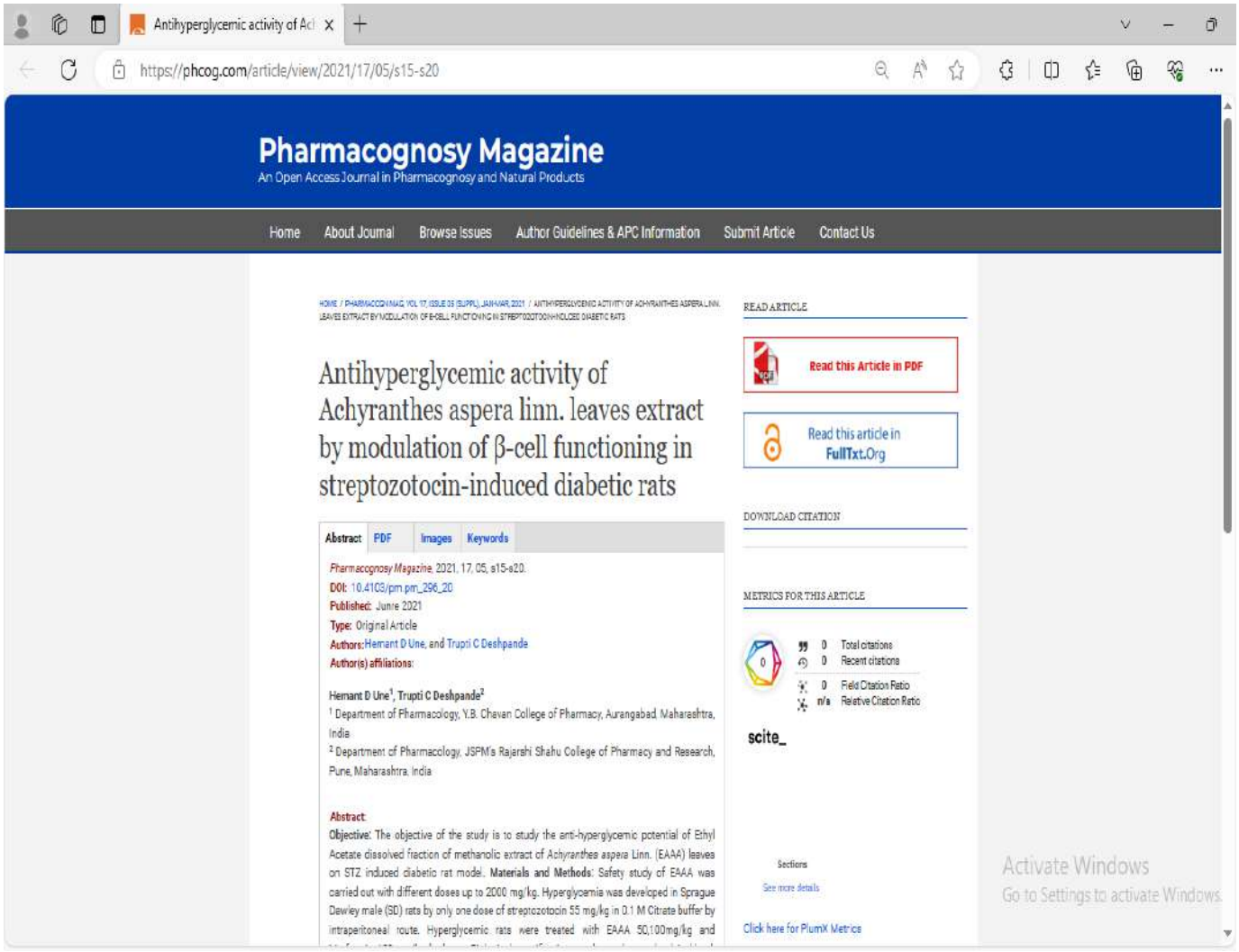
8. Antihyperglycemic activity of Achyranthes aspera Linn. leaves extract by modulation of β-cell functioning in streptozotocin-induced diabetic rats



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HOME / PHARMACOGNMAG. VOL 17, ISSUE 05 (SUPPL), JANUARY, 2021 / ANTIHYPERGLYCEMIC ACTIVITY OF ACHYRANTHES ASPERA LINN. LEAVES EXTRACT BY MODULATION OF Β-CELL FUNCTIONING IN STREPTOZOTOCIN-INDUCED DIABETIC RATS

Antihyperglycemic activity of Achyranthes aspera linn. leaves extract by modulation of β-cell functioning in streptozotocin-induced diabetic rats

Abstract | PDF | Images | Keywords

Pharmacognosy Magazine, 2021, 17, 05, s15-s20.
DOI: 10.4103/pm.pm_296_20
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Authors: Hemant D Une, and Trupti C Deshpande
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Abstract:
Objective: The objective of the study is to study the anti-hyperglycemic potential of Ethyl Acetate dissolved fraction of methanolic extract of *Achyranthes aspera* Linn. (EAAA) leaves on STZ induced diabetic rat model. **Materials and Methods:** Safety study of EAAA was carried out with different doses up to 2000 mg/kg. Hyperglycemia was developed in Sprague Dawley male (SD) rats by only one dose of streptozotocin 55 mg/kg in 0.1 M Citrate buffer by intraperitoneal route. Hyperglycemic rats were treated with EAAA 50,100mg/kg and

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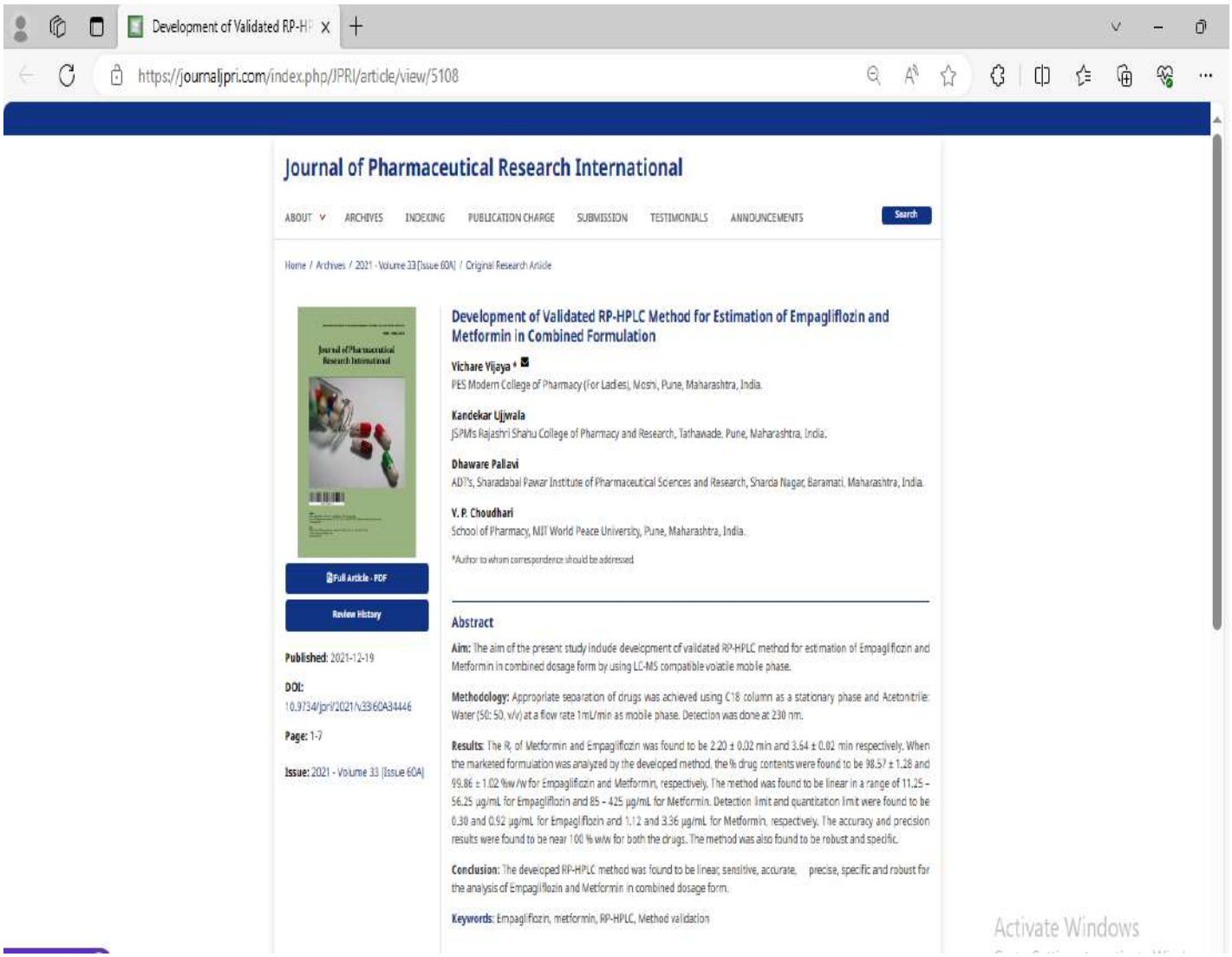
9. Development of Validated RP-HPLC Method for Estimation of Empagliflozin and Metformin in Combined Formulation



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Development of Validated RP-HPLC Method for Estimation of Empagliflozin and Metformin in Combined Formulation

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Abstract

Aim: The aim of the present study include development of validated RP-HPLC method for estimation of Empagliflozin and Metformin in combined dosage form by using LC-MS compatible volatile mobile phase.

Methodology: Appropriate separation of drugs was achieved using C18 column as a stationary phase and Acetonitrile: Water (50: 50, v/v) at a flow rate 1mL/min as mobile phase. Detection was done at 230 nm.

Results: The R_f of Metformin and Empagliflozin was found to be 2.20 ± 0.02 min and 3.64 ± 0.02 min respectively. When the marketed formulation was analyzed by the developed method, the % drug contents were found to be 98.57 ± 1.28 and 99.86 ± 1.02 %w/w for Empagliflozin and Metformin, respectively. The method was found to be linear in a range of 11.25 - 56.25 µg/mL for Empagliflozin and 85 - 425 µg/mL for Metformin. Detection limit and quantitation limit were found to be 0.30 and 0.92 µg/mL for Empagliflozin and 1.12 and 3.36 µg/mL for Metformin, respectively. The accuracy and precision results were found to be near 100 % w/w for both the drugs. The method was also found to be robust and specific.

Conclusion: The developed RP-HPLC method was found to be linear, sensitive, accurate, precise, specific and robust for the analysis of Empagliflozin and Metformin in combined dosage form.

Keywords: Empagliflozin, metformin, RP-HPLC, Method validation

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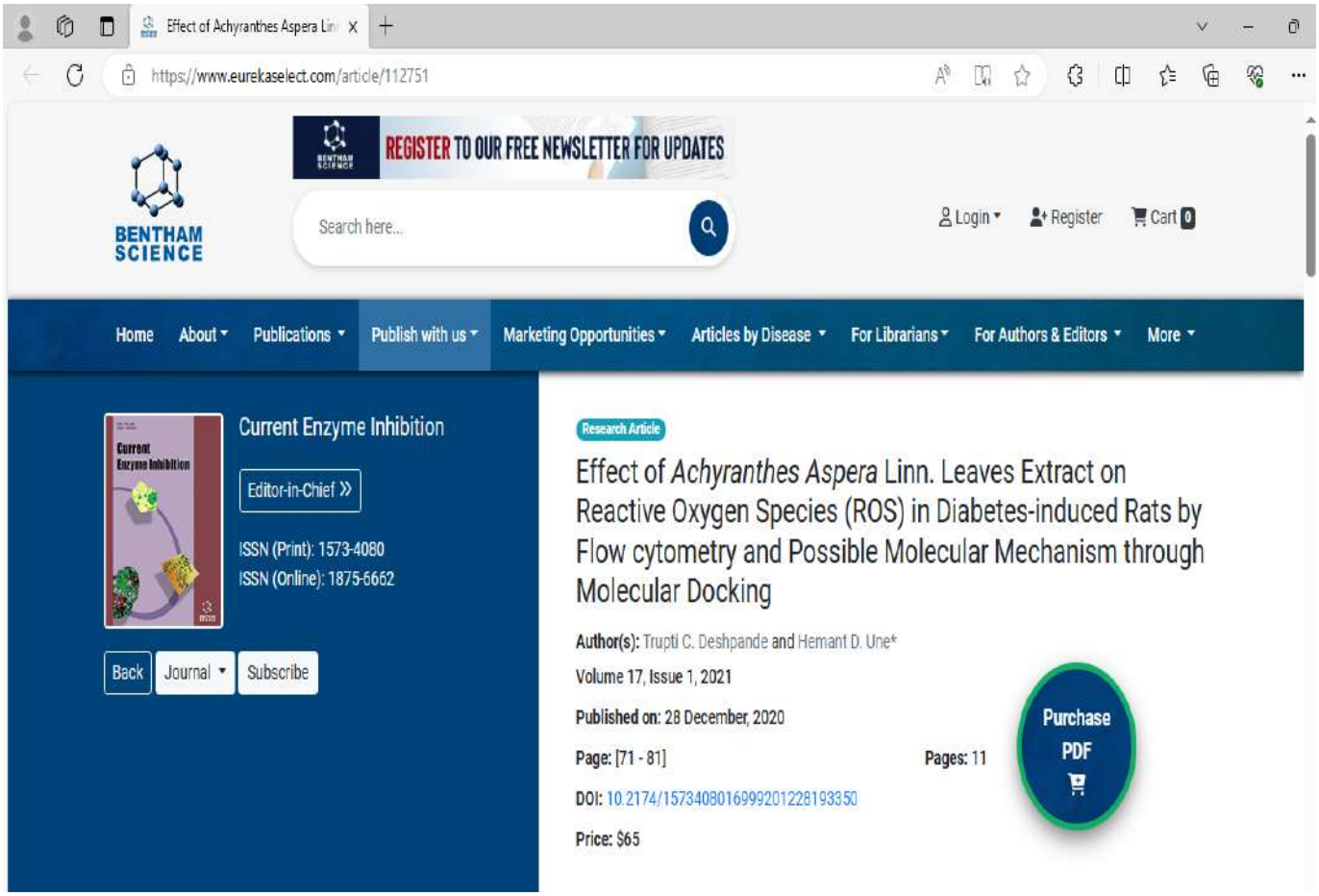
10. Effect of Achyranthes Aspera Linn. Leaves Extract on Reactive Oxygen Species (ROS) in Diabetes-induced Rats by Flow cytometry and Possible Molecular Mechanism through Molecular Docking



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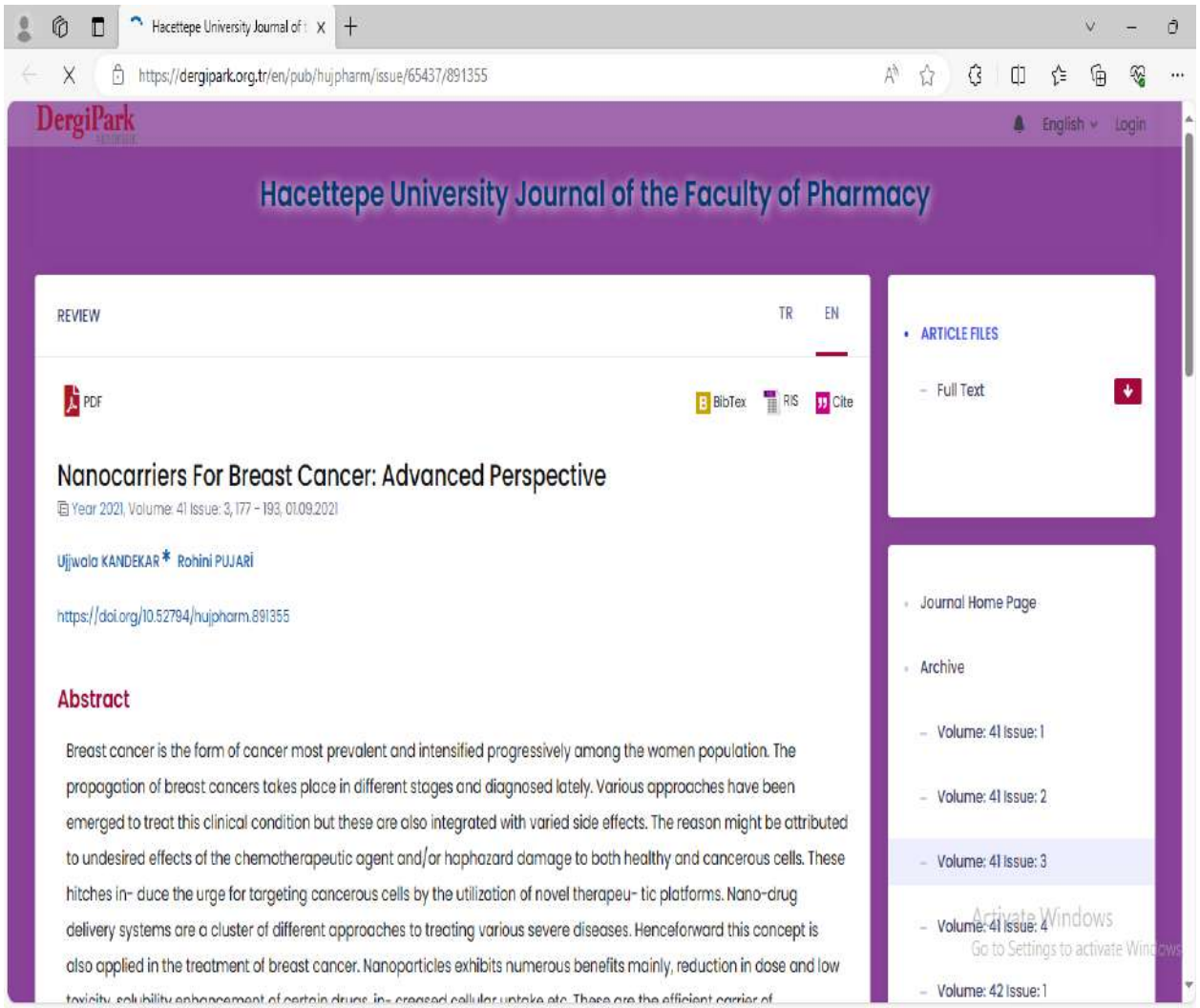
11. Nanocarriers For Breast Cancer: Advanced Perspective



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Nanocarriers For Breast Cancer: Advanced Perspective

Year 2021, Volume: 41 Issue: 3, 177 - 193, 01.09.2021

Ujjwala KANDEKAR * Rohini PUJARİ

https://doi.org/10.52794/hujpharm.891355

Abstract

Breast cancer is the form of cancer most prevalent and intensified progressively among the women population. The propagation of breast cancers takes place in different stages and diagnosed lately. Various approaches have been emerged to treat this clinical condition but these are also integrated with varied side effects. The reason might be attributed to undesired effects of the chemotherapeutic agent and/or haphazard damage to both healthy and cancerous cells. These hitches in- duce the urge for targeting cancerous cells by the utilization of novel therapeu- tic platforms. Nano-drug delivery systems are a cluster of different approaches to treating various severe diseases. Henceforward this concept is also applied in the treatment of breast cancer. Nanoparticles exhibits numerous benefits mainly, reduction in dose and low toxicity, solubility enhancement of certain drugs, in- creased cellular uptake etc. These are the efficient carrier of

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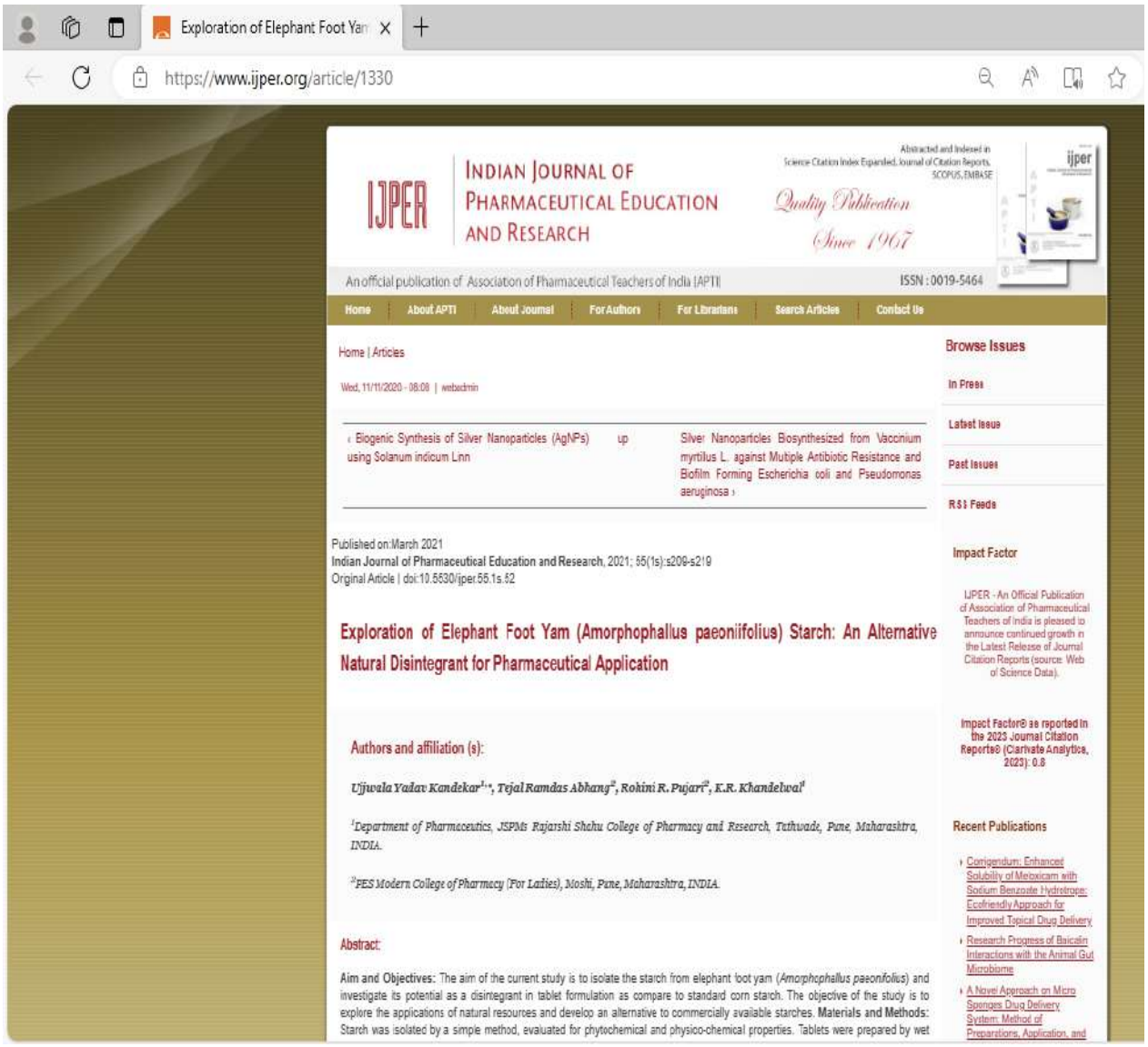
12. Exploration of Elephant Foot Yam (Amorphophallus paeoniifolius) Starch: An Alternative Natural Disintegrant for Pharmaceutical Application



Exploration of Elephant Foot Yam

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Exploration of Elephant Foot Yam (Amorphophallus paeoniifolius) Starch: An Alternative Natural Disintegrant for Pharmaceutical Application

Authors and affiliation (s):

Ujjwala Yadav Kandekar[1,], Tejal Ramdas Abhang[2], Rohini R. Pujari[2], K.R. Khandelwal[1]*

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[2]PES Modern College of Pharmacy (For Ladies), Moshi, Pune, Maharashtra, INDIA.

Abstract:

Aim and Objectives: The aim of the current study is to isolate the starch from elephant foot yam (*Amorphophallus paeonifolius*) and investigate its potential as a disintegrant in tablet formulation as compare to standard corn starch. The objective of the study is to explore the applications of natural resources and develop an alternative to commercially available starches. **Materials and Methods:** Starch was isolated by a simple method, evaluated for phytochemical and physico-chemical properties. Tablets were prepared by wet

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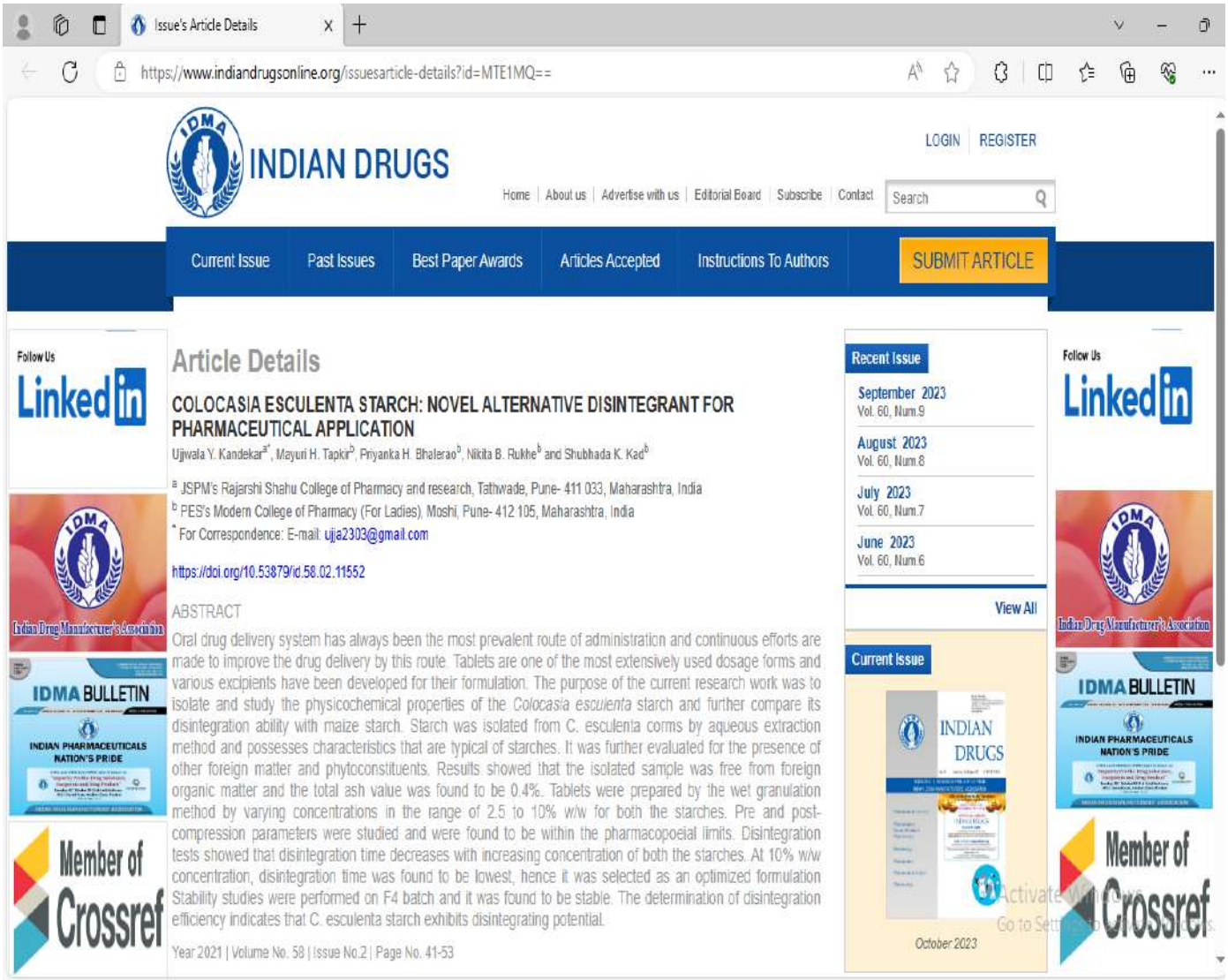
13. *Colocasia esculenta* starch: Novel alternative disintegrant for pharmaceutical application



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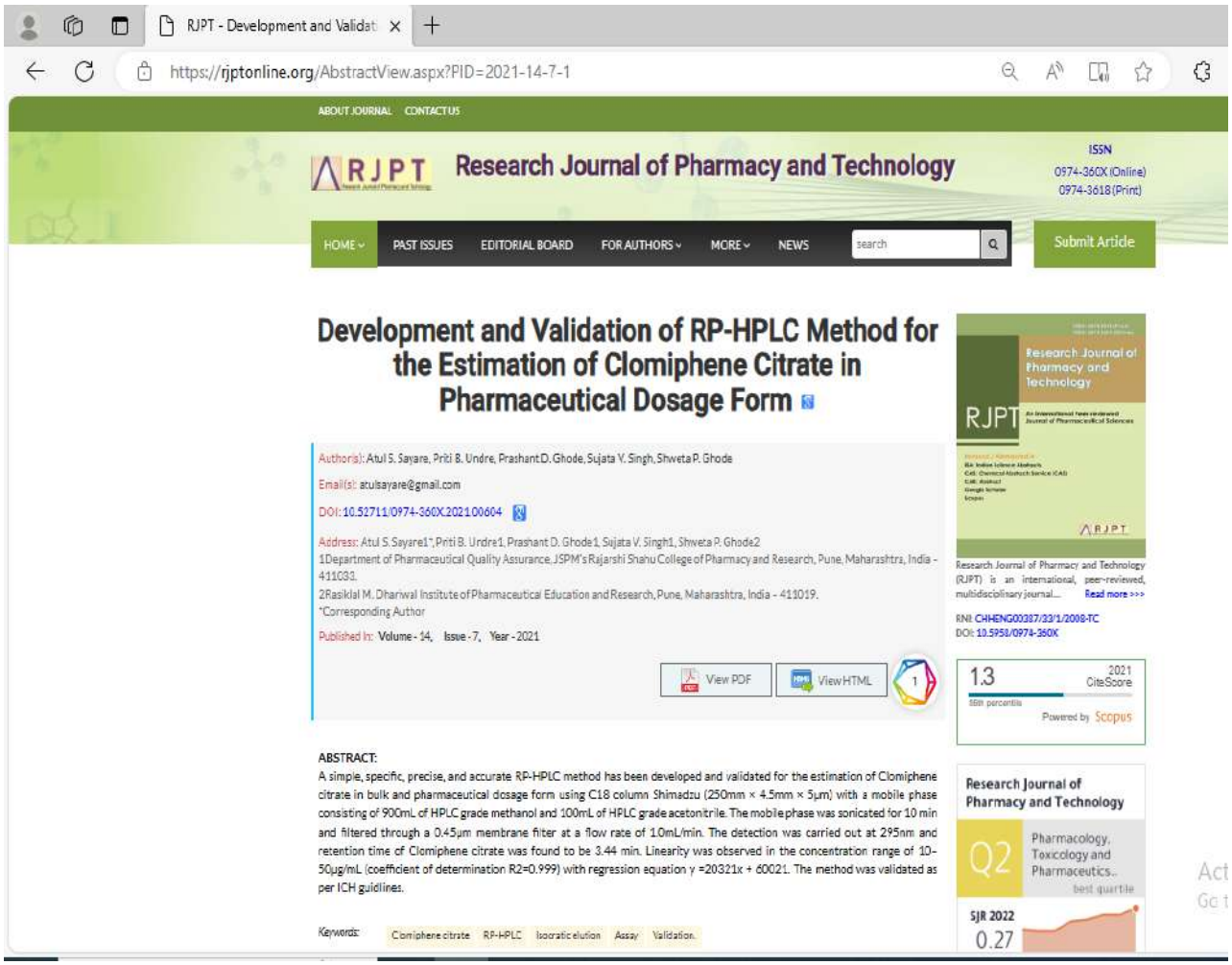
14. Development and validation of RP-HPLC method for the estimation of clomiphene citrate in pharmaceutical dosage form



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Development and Validation of RP-HPLC Method for the Estimation of Clomiphene Citrate in Pharmaceutical Dosage Form

Author(s): Atul S. Sayare, Priti B. Undre, Prashant D. Ghode, Sujata V. Singh, Shweta P. Ghode

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ABSTRACT:

A simple, specific, precise, and accurate RP-HPLC method has been developed and validated for the estimation of Clomiphene citrate in bulk and pharmaceutical dosage form using C18 column Shimadzu (250mm × 4.5mm × 5µm) with a mobile phase consisting of 900mL of HPLC grade methanol and 100mL of HPLC grade acetonitrile. The mobile phase was sonicated for 10 min and filtered through a 0.45µm membrane filter at a flow rate of 1.0mL/min. The detection was carried out at 295nm and retention time of Clomiphene citrate was found to be 3.44 min. Linearity was observed in the concentration range of 10-50µg/mL (coefficient of determination R2=0.999) with regression equation y =20321x + 60021. The method was validated as per ICH guidlines.

Keywords: Clomiphene citrate RP-HPLC Isocratic elution Assay Validation.

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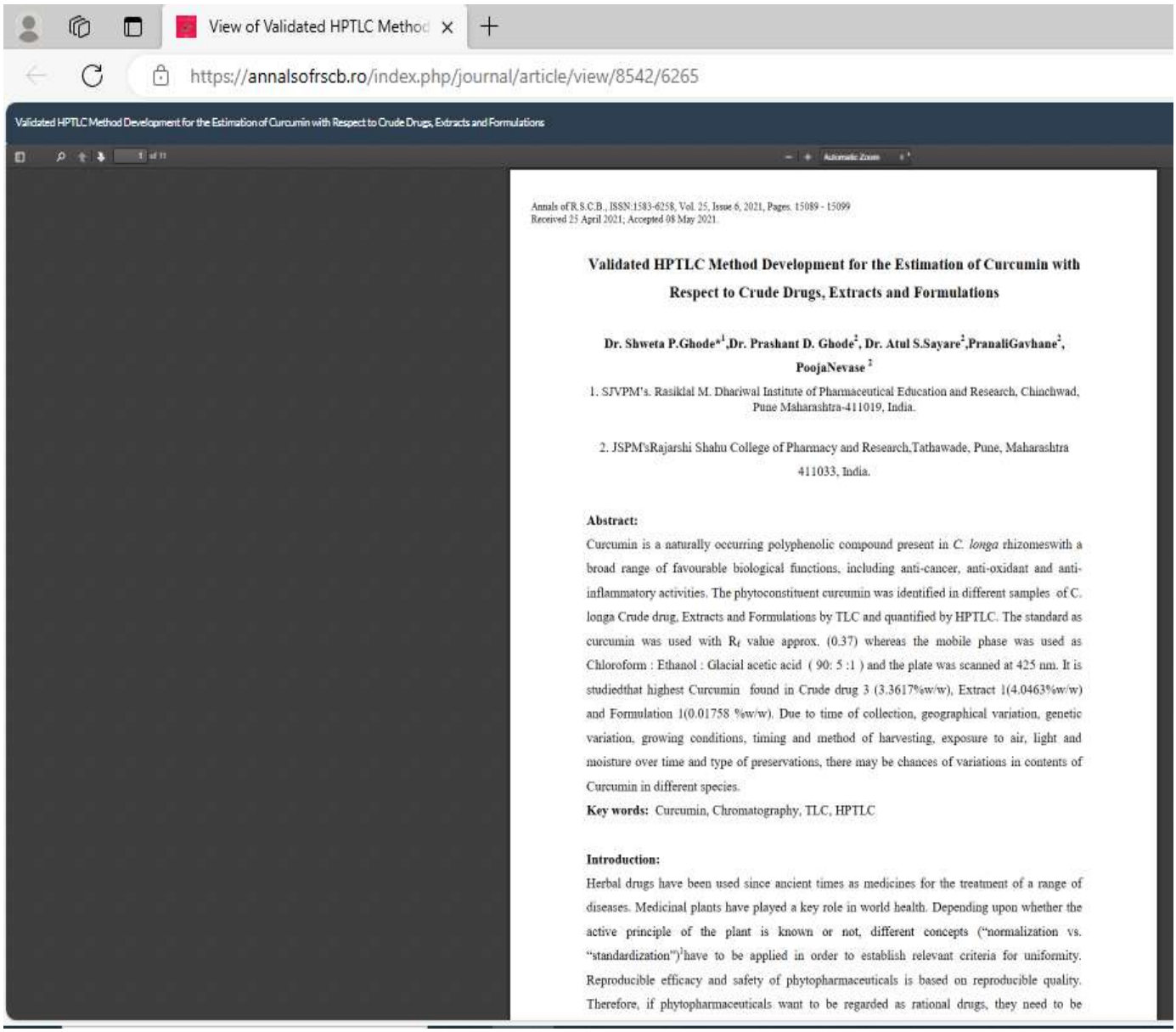
15. Validated HPTLC method development for the estimation of curcumin with respect to the drugs, extracts and formulations



View of Validated HPTLC Method

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Validated HPTLC Method Development for the Estimation of Curcumin with Respect to Crude Drugs, Extracts and Formulations

Annals of R.S.C.B., ISSN:1583-6258, Vol. 25, Issue 6, 2021, Pages. 15089 - 15099
Received 25 April 2021; Accepted 08 May 2021.

Validated HPTLC Method Development for the Estimation of Curcumin with Respect to Crude Drugs, Extracts and Formulations

Dr. Shweta P.Ghode*[1],Dr. Prashant D. Ghode[2], Dr. Atul S.Sayare[2],PranaliGavhane[2], PoojaNevase [2]

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2. JSPM'sRajarshi Shahu College of Pharmacy and Research,Tathawade, Pune, Maharashtra 411033, India.

Abstract:

Curcumin is a naturally occurring polyphenolic compound present in *C. longa* rhizomeswith a broad range of favourable biological functions, including anti-cancer, anti-oxidant and anti-inflammatory activities. The phytoconstituent curcumin was identified in different samples of C. longa Crude drug, Extracts and Formulations by TLC and quantified by HPTLC. The standard as curcumin was used with R_f value approx. (0.37) whereas the mobile phase was used as Chloroform : Ethanol : Glacial acetic acid (90: 5 :1) and the plate was scanned at 425 nm. It is studiedthat highest Curcumin found in Crude drug 3 (3.3617%w/w), Extract 1(4.0463%w/w) and Formulation 1(0.01758 %w/w). Due to time of collection, geographical variation, genetic variation, growing conditions, timing and method of harvesting, exposure to air, light and moisture over time and type of preservations, there may be chances of variations in contents of Curcumin in different species.

Key words: Curcumin, Chromatography, TLC, HPTLC

Introduction:

Herbal drugs have been used since ancient times as medicines for the treatment of a range of diseases. Medicinal plants have played a key role in world health. Depending upon whether the active principle of the plant is known or not, different concepts ("normalization vs. "standardization")[1]have to be applied in order to establish relevant criteria for uniformity. Reproducible efficacy and safety of phytopharmaceuticals is based on reproducible quality. Therefore, if phytopharmaceuticals want to be regarded as rational drugs, they need to be

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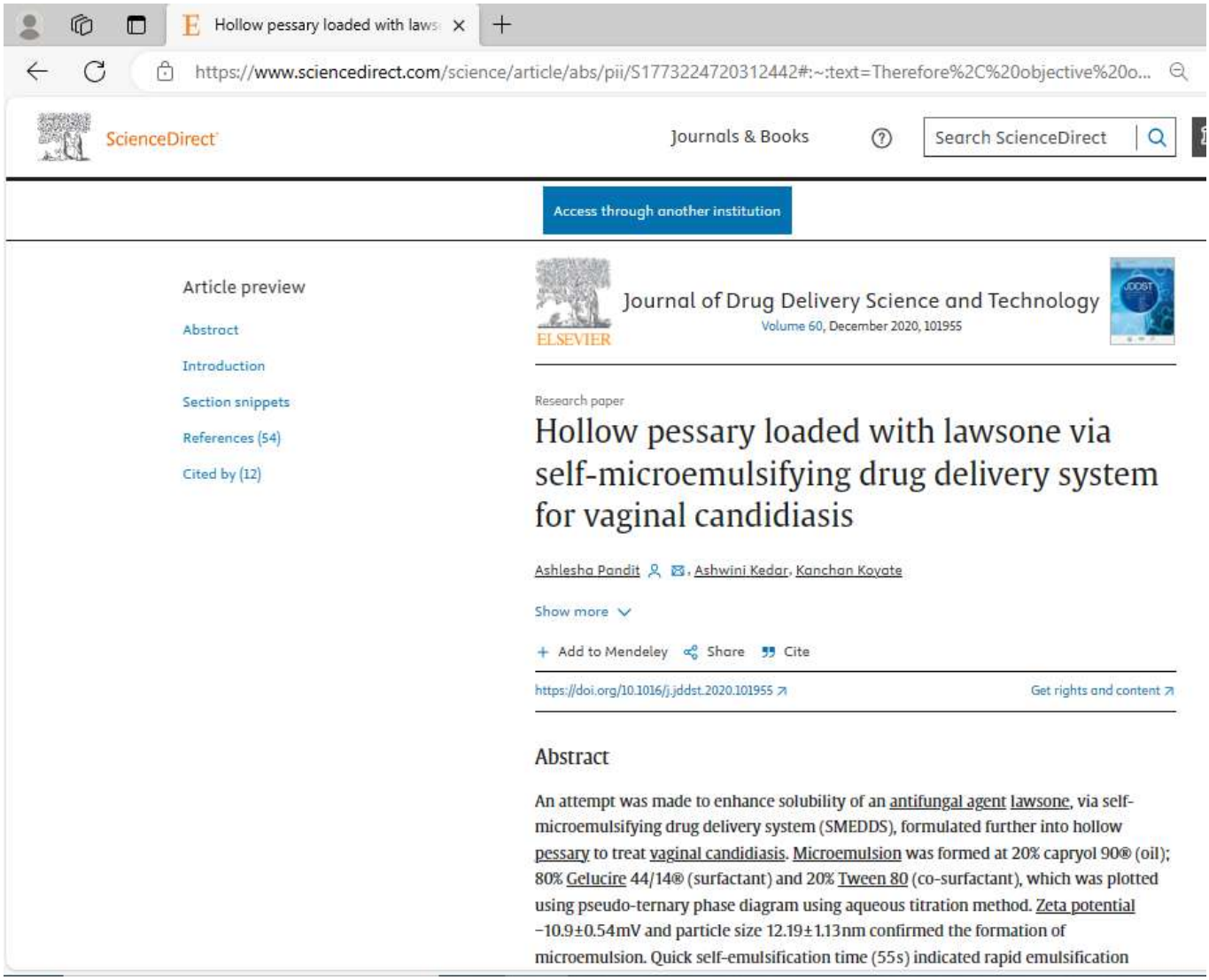
16. Hollow pessary loaded with lawsone viaself-microemulsifying drug delivery system for vaginal candidiasis



Hollow pessary loaded with laws

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Journal of Drug Delivery Science and Technology

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Research paper

Hollow pessary loaded with lawsone via self-microemulsifying drug delivery system for vaginal candidiasis

Ashlesha Pandit, Ashwini Kedar, Kanchan Kovate

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Abstract

An attempt was made to enhance solubility of an antifungal agent lawsone, via self-microemulsifying drug delivery system (SMEDDS), formulated further into hollow pessary to treat vaginal candidiasis. Microemulsion was formed at 20% capryol 90® (oil); 80% Gelucire 44/14® (surfactant) and 20% Tween 80 (co-surfactant), which was plotted using pseudo-ternary phase diagram using aqueous titration method. Zeta potential −10.9±0.54mV and particle size 12.19±1.13nm confirmed the formation of microemulsion. Quick self-emulsification time (55s) indicated rapid emulsification

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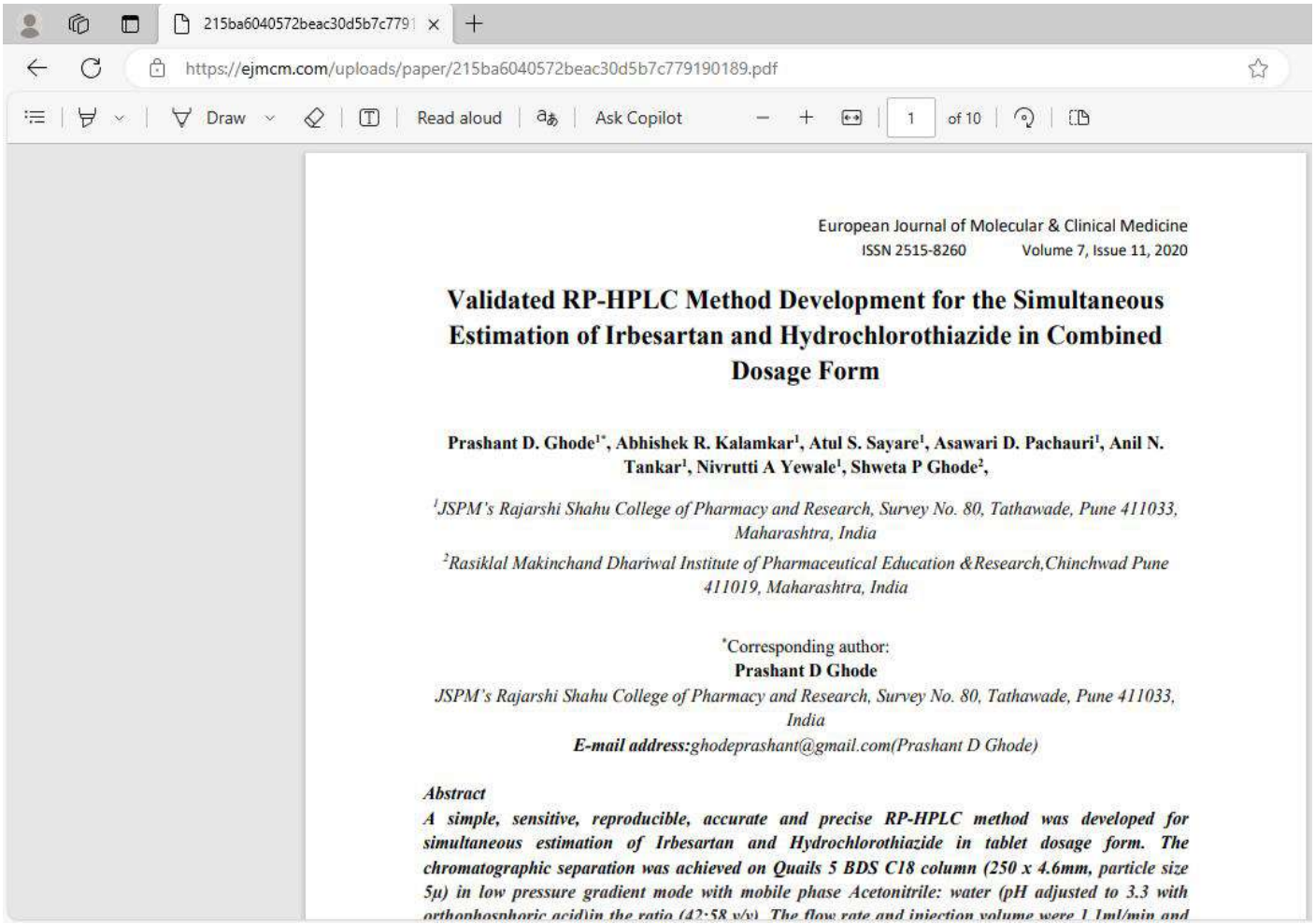
17. Validated RP-HPLC Method Simultaneous Estimation of Irbesartan and Development for the Hydrochlorothiazide in Combined Dosage Form



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European Journal of Molecular & Clinical Medicine
ISSN 2515-8260 Volume 7, Issue 11, 2020

Validated RP-HPLC Method Development for the Simultaneous Estimation of Irbesartan and Hydrochlorothiazide in Combined Dosage Form

Prashant D. Ghode[1*], Abhishek R. Kalamkar[1], Atul S. Sayare[1], Asawari D. Pachauri[1], Anil N. Tankar[1], Nivrutti A Yewale[1], Shweta P Ghode[2],

[1]JSPM's Rajarshi Shahu College of Pharmacy and Research, Survey No. 80, Tathawade, Pune 411033, Maharashtra, India

[2]Rasiklal Makinchand Dhariwal Institute of Pharmaceutical Education &Research,Chinchwad Pune 411019, Maharashtra, India

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***E-mail address:**ghodeprashant@gmail.com(Prashant D Ghode)*

Abstract
A simple, sensitive, reproducible, accurate and precise RP-HPLC method was developed for simultaneous estimation of Irbesartan and Hydrochlorothiazide in tablet dosage form. The chromatographic separation was achieved on Quails 5 BDS C18 column (250 x 4.6mm, particle size 5µ) in low pressure gradient mode with mobile phase Acetonitrile: water (pH adjusted to 3.3 with orthophosphoric acid)in the ratio (42:58 v/v). The flow rate and injection volume were 1.1ml/min and

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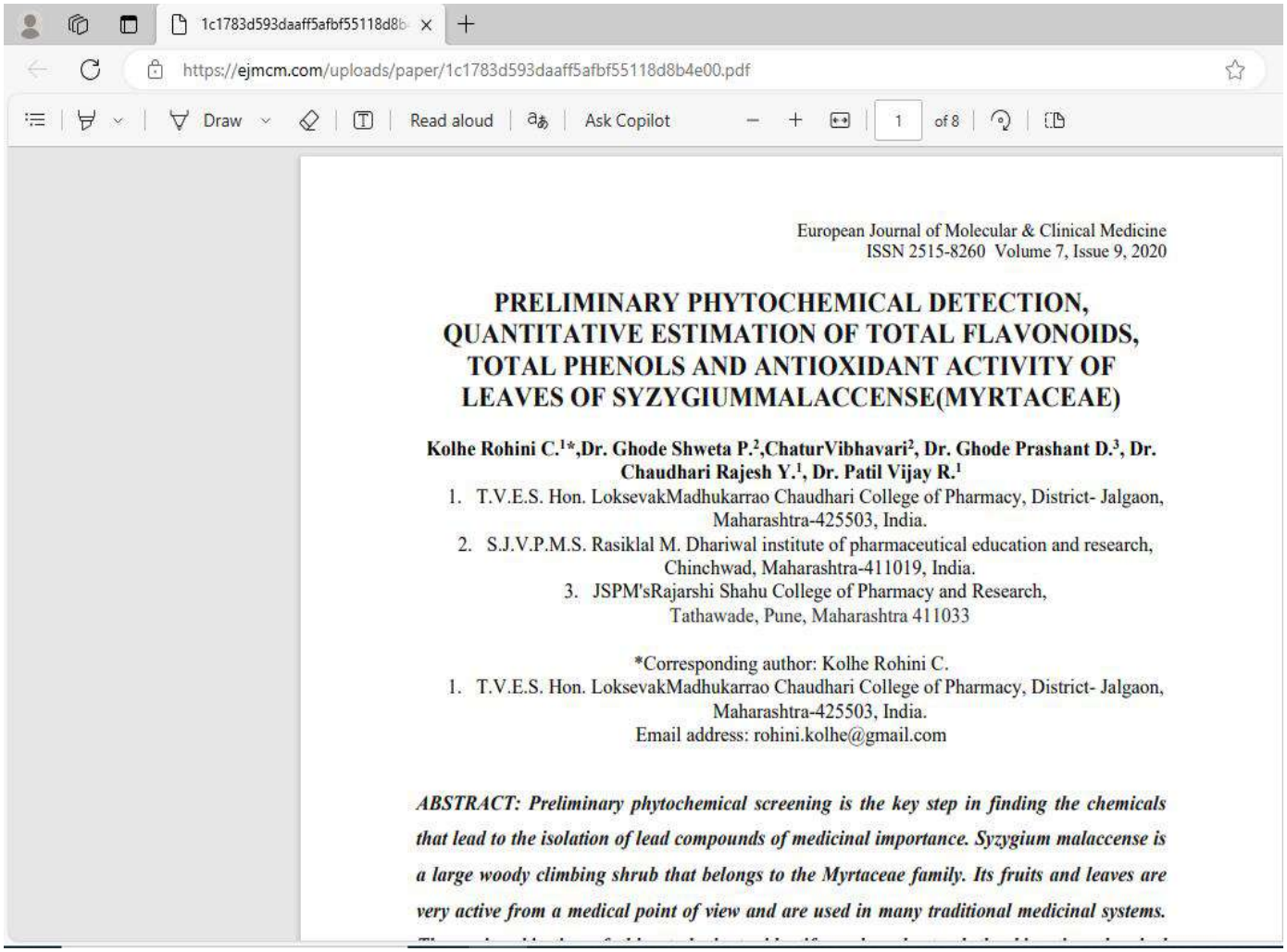
18. Preliminary phytochemical detection, quantitative estimation of total flavonoids, total phenols and antioxidant activity of leaves of *Syzygium malaccense* (Myrtaceae)



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European Journal of Molecular & Clinical Medicine
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PRELIMINARY PHYTOCHEMICAL DETECTION, QUANTITATIVE ESTIMATION OF TOTAL FLAVONOIDS, TOTAL PHENOLS AND ANTIOXIDANT ACTIVITY OF LEAVES OF SYZYGIUMMALACCENSE(MYRTACEAE)

Kolhe Rohini C.[1]*,Dr. Ghode Shweta P.[2],ChaturVibhavari[2], Dr. Ghode Prashant D.[3], Dr. Chaudhari Rajesh Y.[1], Dr. Patil Vijay R.[1]

1. T.V.E.S. Hon. LoksevakMadhukarrao Chaudhari College of Pharmacy, District- Jalgaon, Maharashtra-425503, India.
2. S.J.V.P.M.S. Rasiklal M. Dhariwal institute of pharmaceutical education and research, Chinchwad, Maharashtra-411019, India.
3. JSPM'sRajarshi Shahu College of Pharmacy and Research, Tathawade, Pune, Maharashtra 411033

*Corresponding author: Kolhe Rohini C.
1. T.V.E.S. Hon. LoksevakMadhukarrao Chaudhari College of Pharmacy, District- Jalgaon, Maharashtra-425503, India.
Email address: rohini.kolhe@gmail.com

***ABSTRACT:** Preliminary phytochemical screening is the key step in finding the chemicals that lead to the isolation of lead compounds of medicinal importance. Syzygium malaccense is a large woody climbing shrub that belongs to the Myrtaceae family. Its fruits and leaves are very active from a medical point of view and are used in many traditional medicinal systems.*

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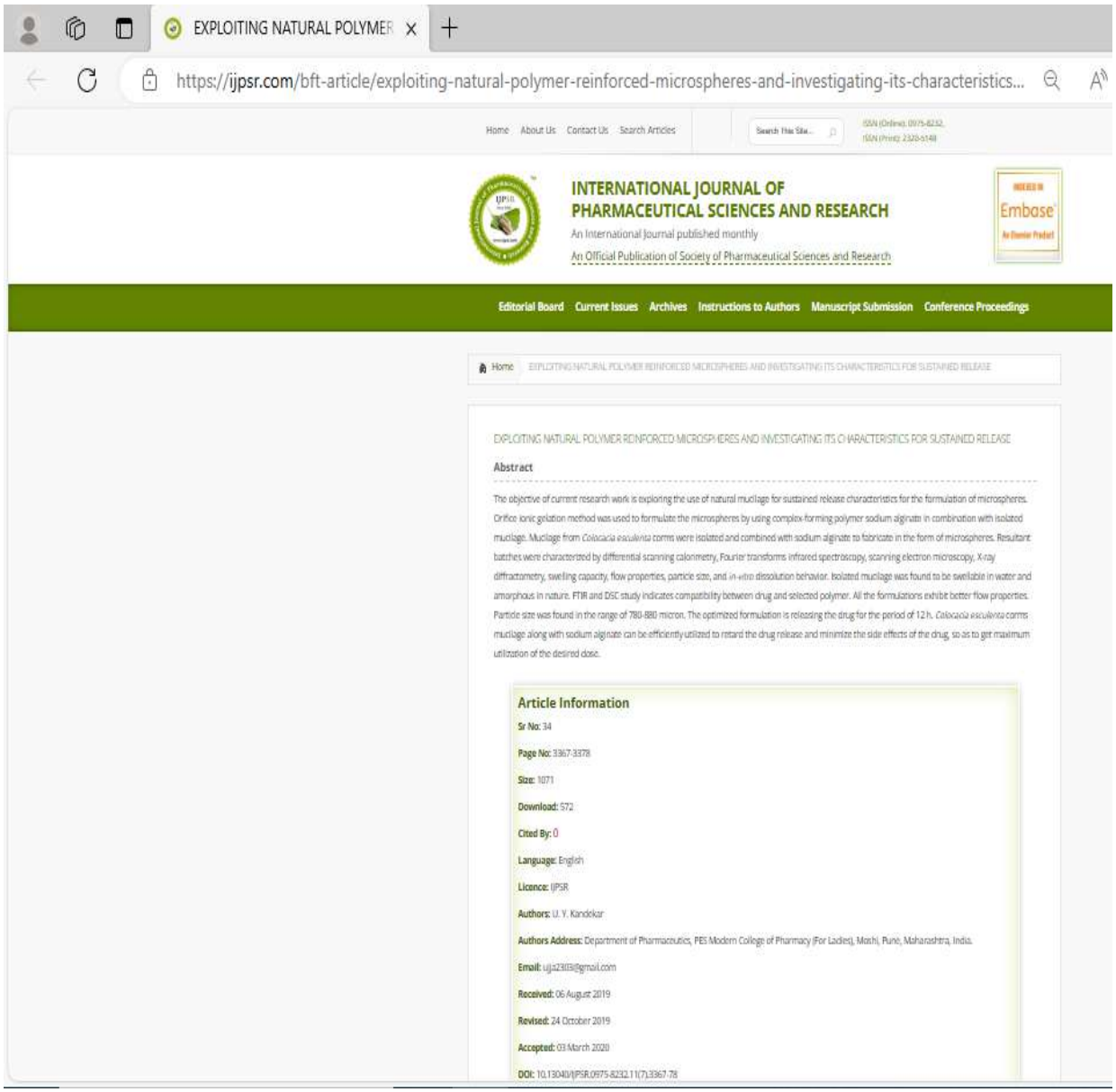
19. Exploiting natural polymer reinforced microspheres and investigating its inherent physicochemical characteristics for sustained release



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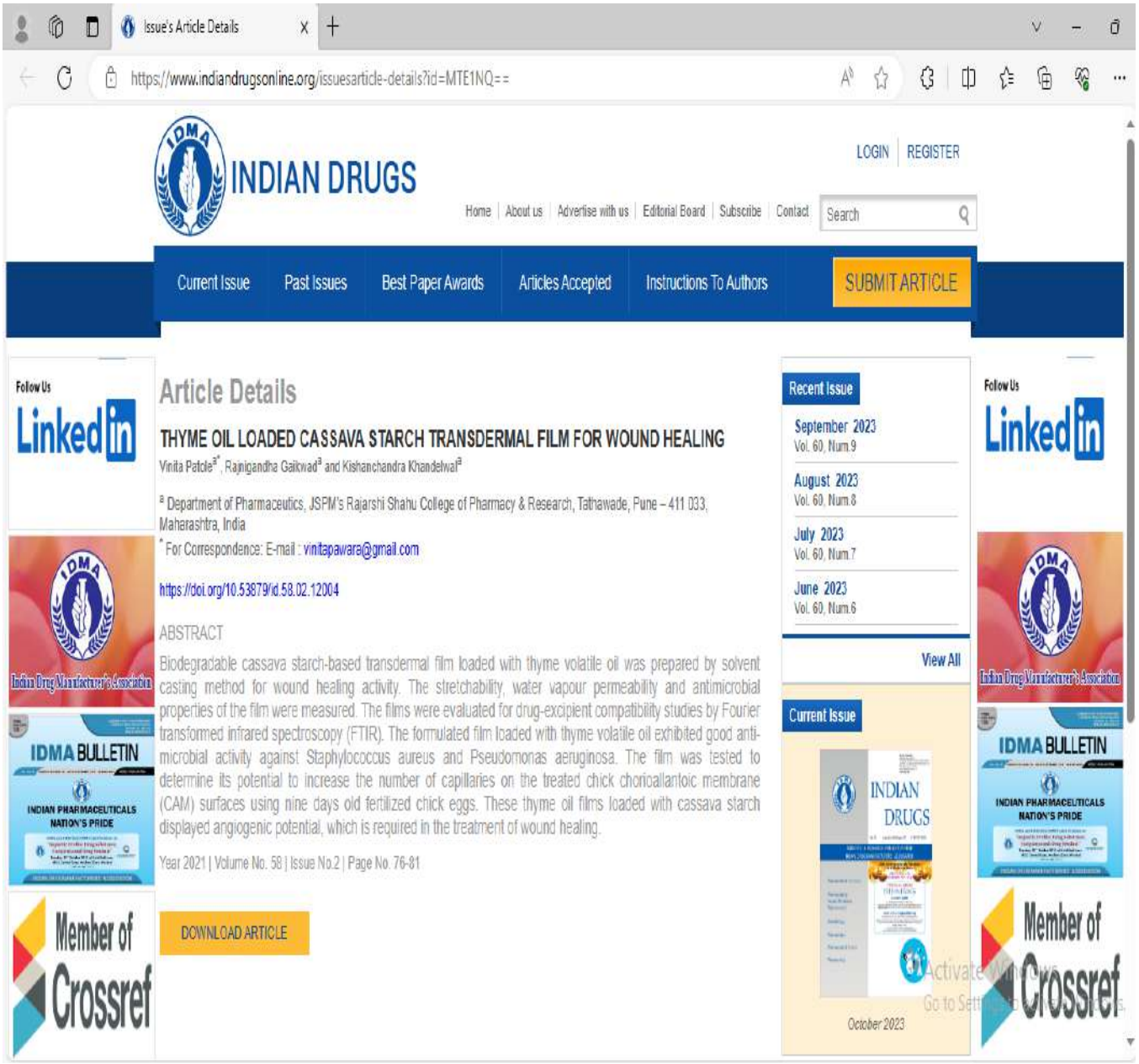
20. Thyme oil loaded cassava starch transdermal film for wound healing



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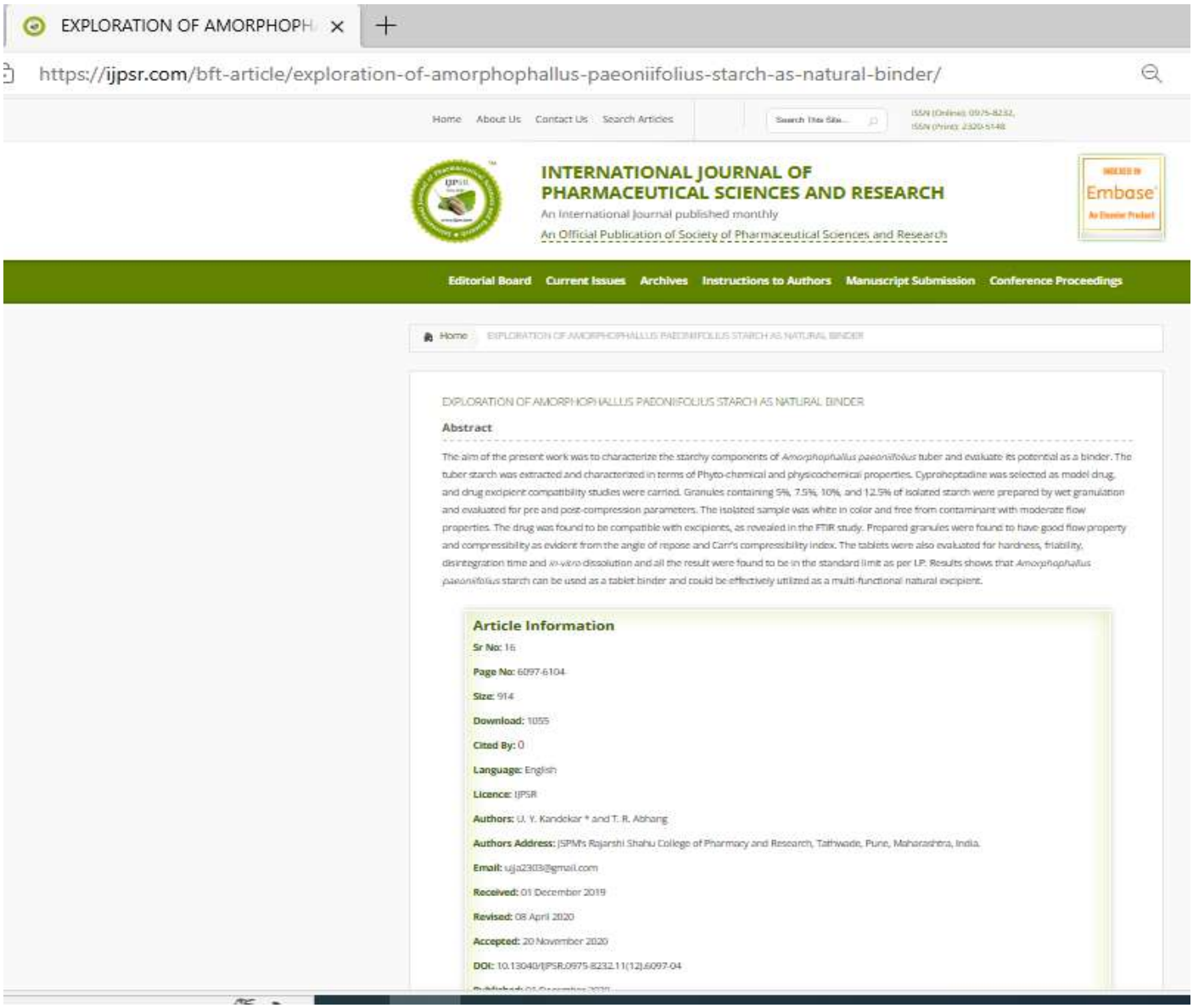
21. Exploration of Amorphophallus paeoniifolius starch as natural binder



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EXPLORATION OF AMORPHOPHALLUS PAEONIIFOLIUS STARCH AS NATURAL BINDER

Abstract

The aim of the present work was to characterize the starchy components of *Amorphophallus paeoniifolius* tuber and evaluate its potential as a binder. The tuber starch was extracted and characterized in terms of Phyto-chemical and physicochemical properties. Cyproheptadine was selected as model drug, and drug excipient compatibility studies were carried. Granules containing 5%, 7.5%, 10%, and 12.5% of isolated starch were prepared by wet granulation and evaluated for pre and post-compression parameters. The isolated sample was white in color and free from contaminant with moderate flow properties. The drug was found to be compatible with excipients, as revealed in the FTIR study. Prepared granules were found to have good flow property and compressibility as evident from the angle of repose and Carr's compressibility index. The tablets were also evaluated for hardness, friability, disintegration time and *in-vitro* dissolution and all the result were found to be in the standard limit as per I.P. Results shows that *Amorphophallus paeoniifolius* starch can be used as a tablet binder and could be effectively utilized as a multi-functional natural excipient.

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Authors: U. Y. Kandekar * and T. R. Abhang

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Email: ujja2303@gmail.com

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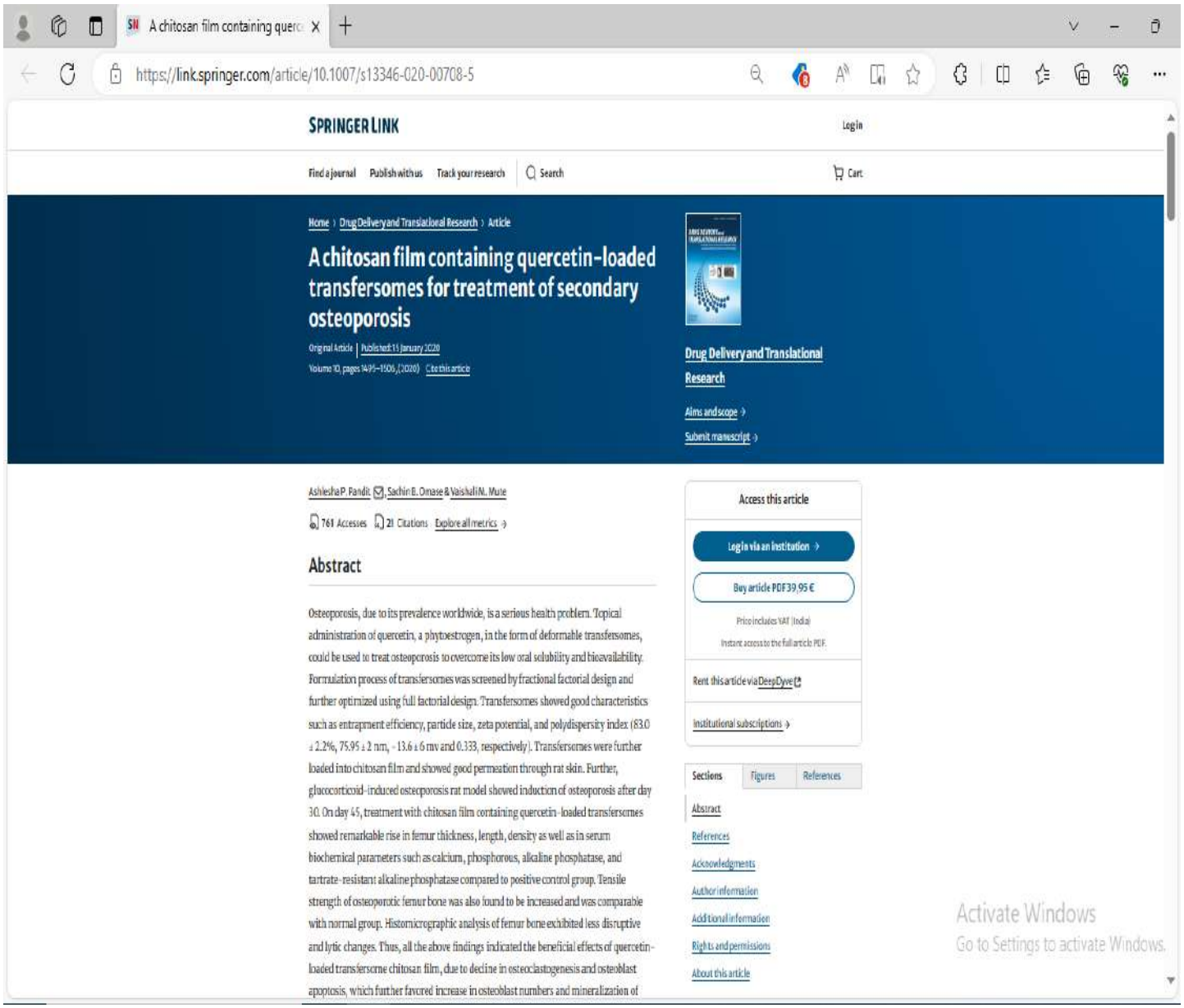
22. A chitosan film containing quercetin-loaded transferosomes for the treatment of secondary osteoporosis



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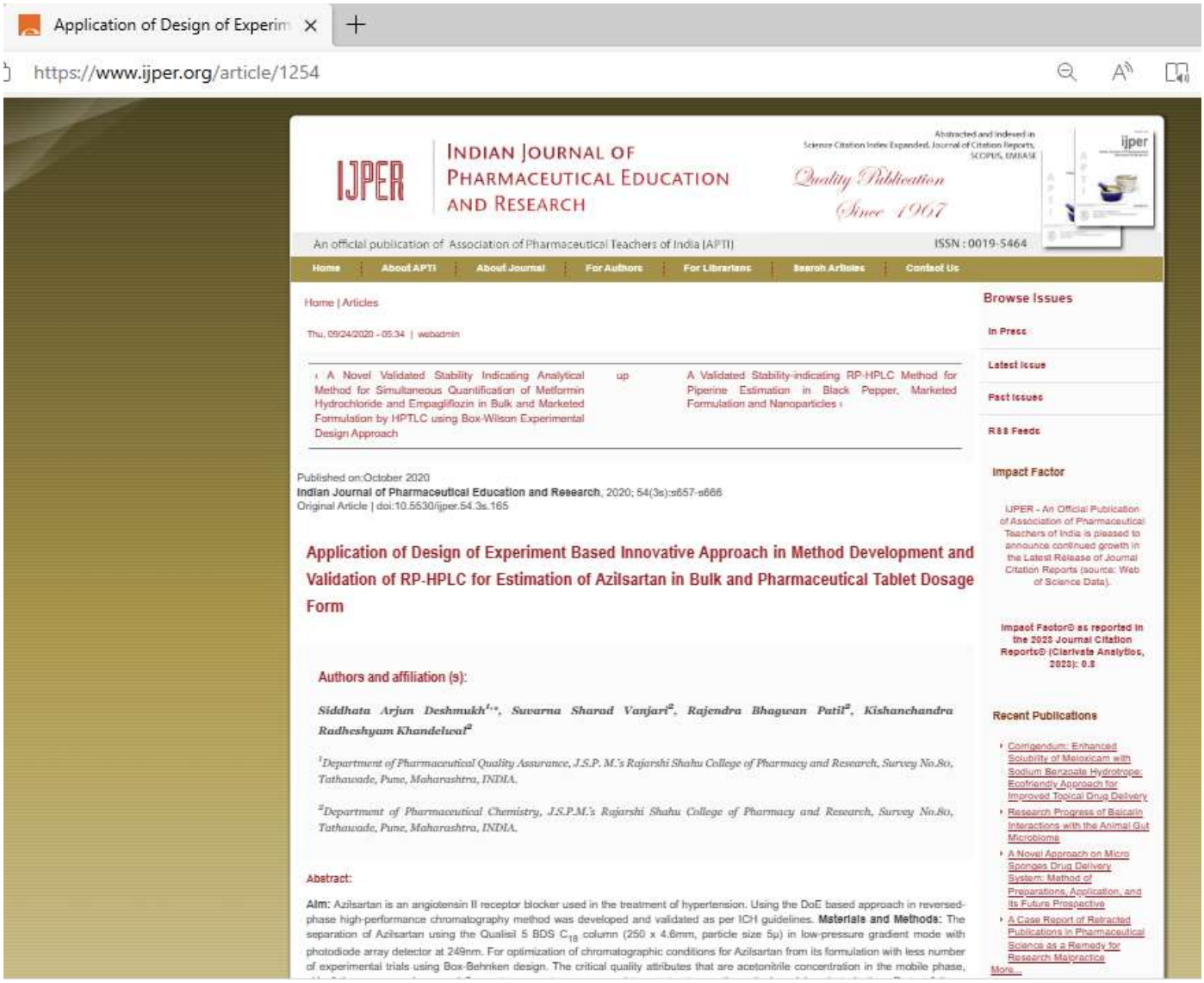
23. Application of design of experiment based innovative approach in method development and validation of RP-HPLC for estimation of azilsartan in bulk and pharmaceutical tablet dosage form



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A Validated Stability-indicating RP-HPLC Method for Piperine Estimation in Black Pepper, Marketed Formulation and Nanoparticles ›

Published on:October 2020

Indian Journal of Pharmaceutical Education and Research, 2020; 54(3s):s657-s666

Original Article | doi:10.5530/ijper.54.3s.165

Application of Design of Experiment Based Innovative Approach in Method Development and Validation of RP-HPLC for Estimation of Azilsartan in Bulk and Pharmaceutical Tablet Dosage Form

Authors and affiliation (s):

Siddhata Arjun Deshmukh[1,], Suvarna Sharad Vanjari[2], Rajendra Bhagwan Patil[2], Kishanchandra Radheshyam Khandelwal[2]*

[1]*Department of Pharmaceutical Quality Assurance, J.S.P. M.'s Rajarshi Shahu College of Pharmacy and Research, Survey No.80, Tathawade, Pune, Maharashtra, INDIA.*

[2]*Department of Pharmaceutical Chemistry, J.S.P.M.'s Rajarshi Shahu College of Pharmacy and Research, Survey No.80, Tathawade, Pune, Maharashtra, INDIA.*

Abstract:

Aim: Azilsartan is an angiotensin II receptor blocker used in the treatment of hypertension. Using the DoE based approach in reversed-phase high-performance chromatography method was developed and validated as per ICH guidelines. **Materials and Methods:** The separation of Azilsartan using the Qualisil 5 BDS C_{18} column (250 x 4.6mm, particle size 5µ) in low-pressure gradient mode with photodiode array detector at 249nm. For optimization of chromatographic conditions for Azilsartan from its formulation with less number of experimental trials using Box-Behnken design. The critical quality attributes that are acetonitrile concentration in the mobile phase,

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- A Case Report of Retracted Publications in Pharmaceutical Science as a Remedy for Research Malpractice

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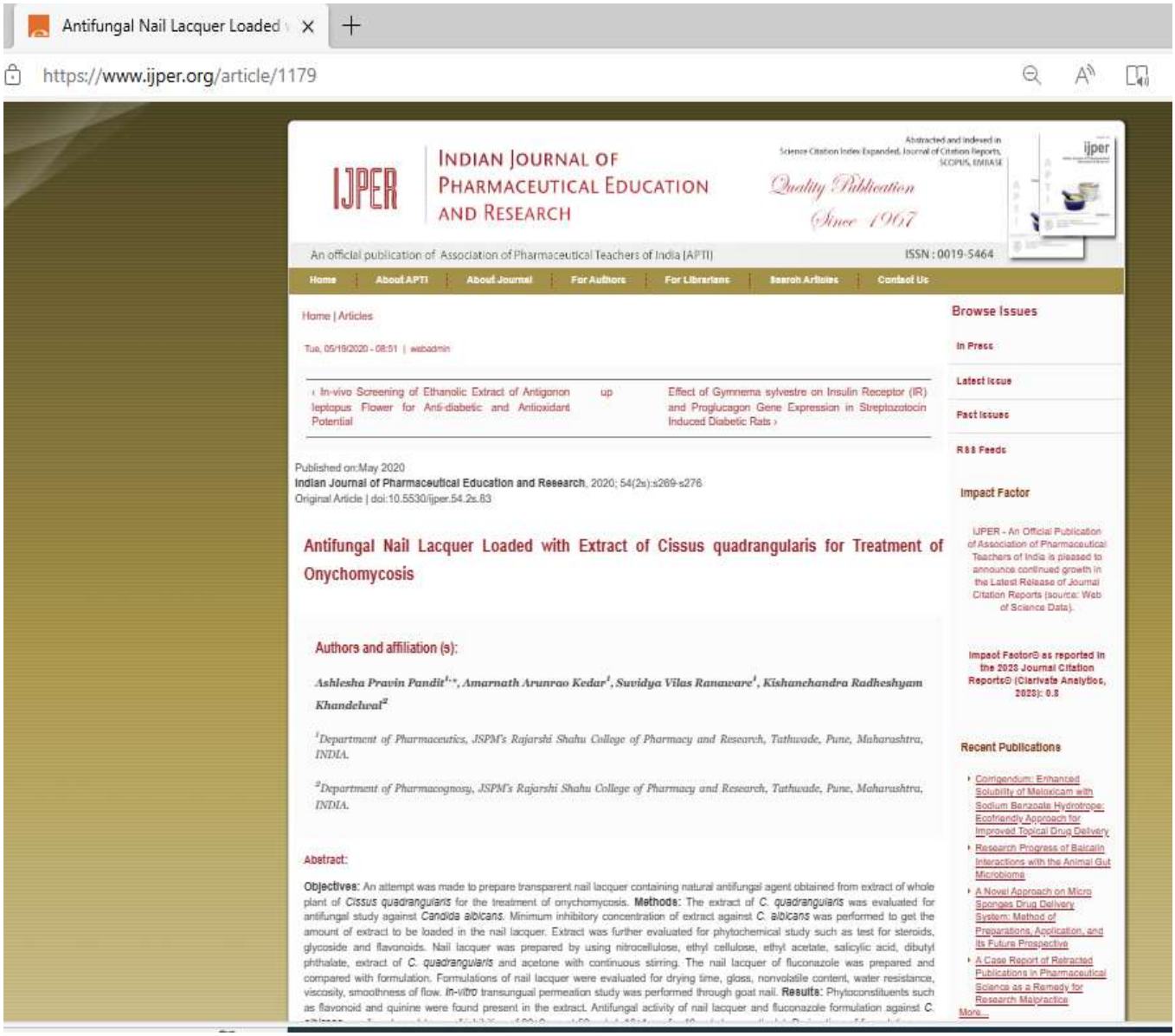
24. Antifungal Nail lacquar loaded with extract of cissus quadrangularis for the treatment of onchomycosis



Antifungal Nail Lacquer Loaded

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Published on:May 2020

Indian Journal of Pharmaceutical Education and Research, 2020; 54(2s):s269-s276

Original Article | doi:10.5530/ijper.54.2s.83

Antifungal Nail Lacquer Loaded with Extract of Cissus quadrangularis for Treatment of Onychomycosis

Authors and affiliation (s):

Ashlesha Pravin Pandit[1,], Amarnath Arunrao Kedar[1], Suvidya Vilas Ranaware[1], Kishanchandra Radheshyam Khandelwal[2]*

[1]Department of Pharmaceutics, JSPM's Rajarshi Shahu College of Pharmacy and Research, Tathwade, Pune, Maharashtra, INDIA.

[2]Department of Pharmacognosy, JSPM's Rajarshi Shahu College of Pharmacy and Research, Tathwade, Pune, Maharashtra, INDIA.

Abstract:

Objectives: An attempt was made to prepare transparent nail lacquer containing natural antifungal agent obtained from extract of whole plant of *Cissus quadrangularis* for the treatment of onychomycosis. **Methods:** The extract of *C. quadrangularis* was evaluated for antifungal study against *Candida albicans*. Minimum inhibitory concentration of extract against *C. albicans* was performed to get the amount of extract to be loaded in the nail lacquer. Extract was further evaluated for phytochemical study such as test for steroids, glycoside and flavonoids. Nail lacquer was prepared by using nitrocellulose, ethyl cellulose, ethyl acetate, salicylic acid, dibutyl phthalate, extract of *C. quadrangularis* and acetone with continuous stirring. The nail lacquer of fluconazole was prepared and compared with formulation. Formulations of nail lacquer were evaluated for drying time, gloss, nonvolatile content, water resistance, viscosity, smoothness of flow. *In-vitro* transungual permeation study was performed through goat nail. **Results:** Phytoconstituents such as flavonoid and quinine were found present in the extract. Antifungal activity of nail lacquer and fluconazole formulation against *C.*

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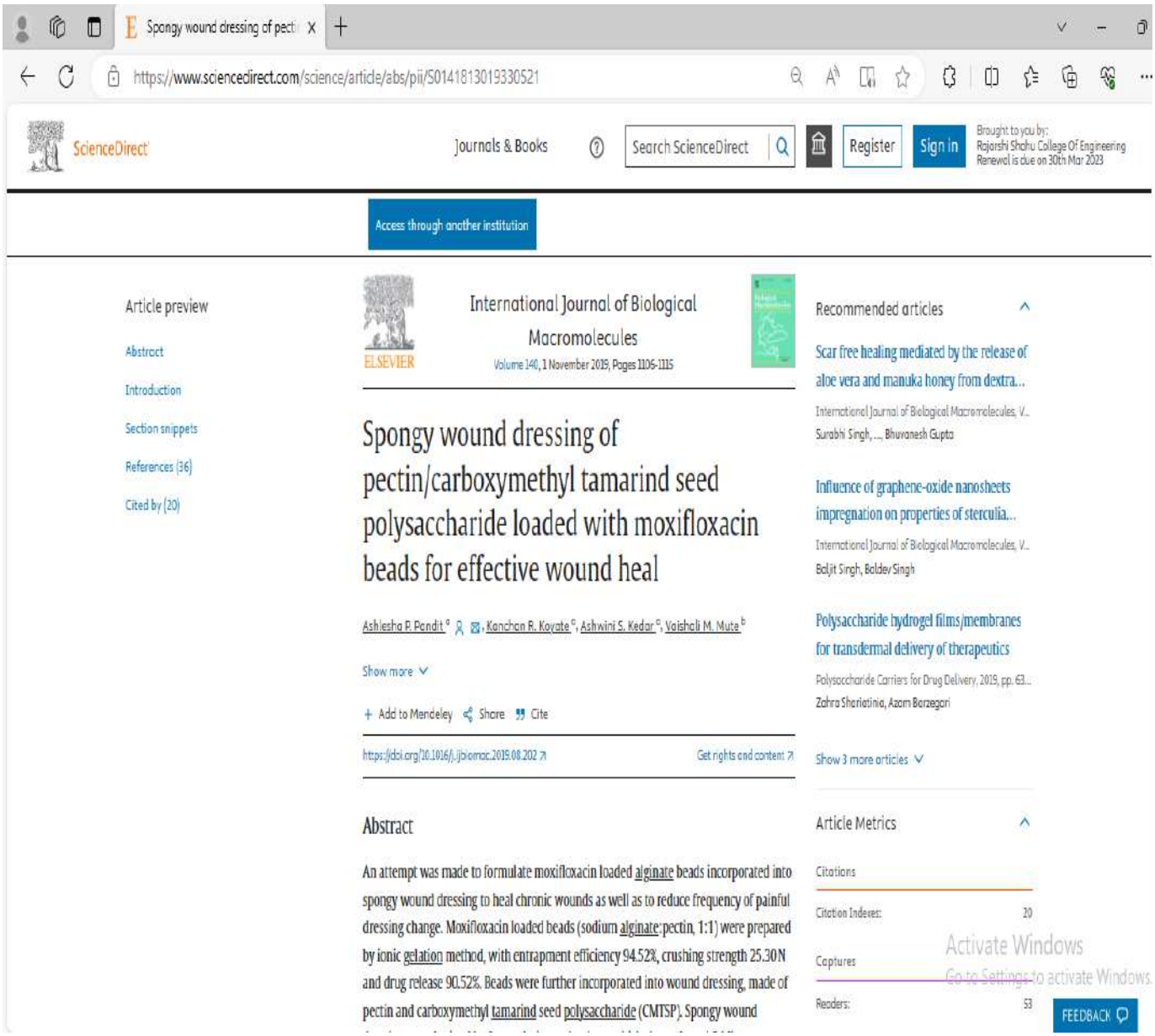
25. Spongy wound dressing of pectin / carboxymethyl tamarind seed polysaccharide loaded with moxifloxacin beads for effective wound heal



Spongy wound dressing of pectin/carboxymethyl tamarind seed polysaccharide loaded with moxifloxacin beads for effective wound heal

Ashlesha P. Pandit [a], Kanchan R. Kovate [c], Ashwini S. Kedar [c], Vaishali M. Mute [b]

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Abstract

An attempt was made to formulate moxifloxacin loaded alginate beads incorporated into spongy wound dressing to heal chronic wounds as well as to reduce frequency of painful dressing change. Moxifloxacin loaded beads (sodium alginate:pectin, 1:1) were prepared by ionic gelation method, with entrapment efficiency 94.52%, crushing strength 25.30 N and drug release 90.52%. Beads were further incorporated into wound dressing, made of pectin and carboxymethyl tamarind seed polysaccharide (CMTSP). Spongy wound

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26. Development and validation of RP-HPLC method for estimation of Vigabartin using derivatization with 9-Fluorenylmethyloxycarbonyl chloride

S. Sayare et al /J. Pharm. Sci. & Res. Vol. 11(6), 2019, 2224-2227

ISSN:0975-1459
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Development and Validation of RP-HPLC Method for Estimation of Vigabatrin Using Derivatization with 9-Fluorenylmethyloxycarbonyl Chloride

S. Sayare*, R. V. Lode, P. D. Ghode, A. D. Pachauri

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Abstract

A Simple, efficient and reproducible method for the estimation of Vigabatrin (VGB) from bulk and pharmaceutical formulation has been developed using reversed phase high performance liquid chromatography. The method involves derivatization of the primary amine group of VGB with 9-fluorenylmethyloxycarbonyl chloride (FMOC) followed by isocratic separation using a mobile phase consisting of acetonitrile: water (97.5 : 2.5% V/V). Column used was Finpak SIL C_{18} (250 X 4.6 mm internal diameter) 5 µ with flow rate of 1 mL/min. The detection wavelength used was 265 nm. The retention time of VGB-FMOC comples was found to be 3.89 min. Linearity of drug was 5-30 µg/mL. The performance of analysis was studied and the validated method showed excellent performance in terms of selectivity, specificity, sensitivity, precision and accuracy. No interferences were found from excipients and other impurities.

Keywords: Vigabatrin, FMOC, RP-HPLC, Derivatization, Validation

1. Introduction

Vigabatrin (VGB) (4-amino-hex-5-enoic acid) (Fig. 1) is a Gamma-aminobutyric acid (GABA) transaminase inhibitor used in the treatment of infantile spasm and refractory complex partial seizures. It is used as a first line treatment for infantile spasm and the drug of choice for infantile spasm with tuberous sclerosis complex syndrome [1]. VGB exhibits a very low absorption in the UV/Vis region. Thus, derivatization of the drug is necessary if measurement of VGB is intended by

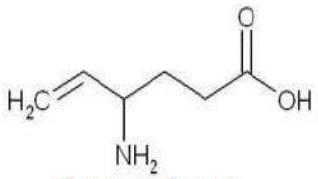

Fig. 1. Structure of Vigabatrin

2. Materials and Methods

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27. Stability indicating HPTLC method development and validation for the estimation of Saxagliptin in Bulk and its dosage form

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Development and Validation of RP-HPLC Method for Estimation of Vigabatrin Using Derivatization with 9-Fluorenylmethyloxycarbonyl Chloride

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Abstract

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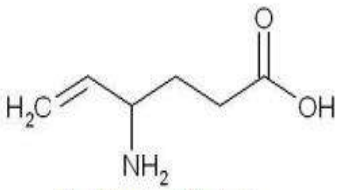

Fig. 1. Structure of Vigabatrin

2. Materials And Methods

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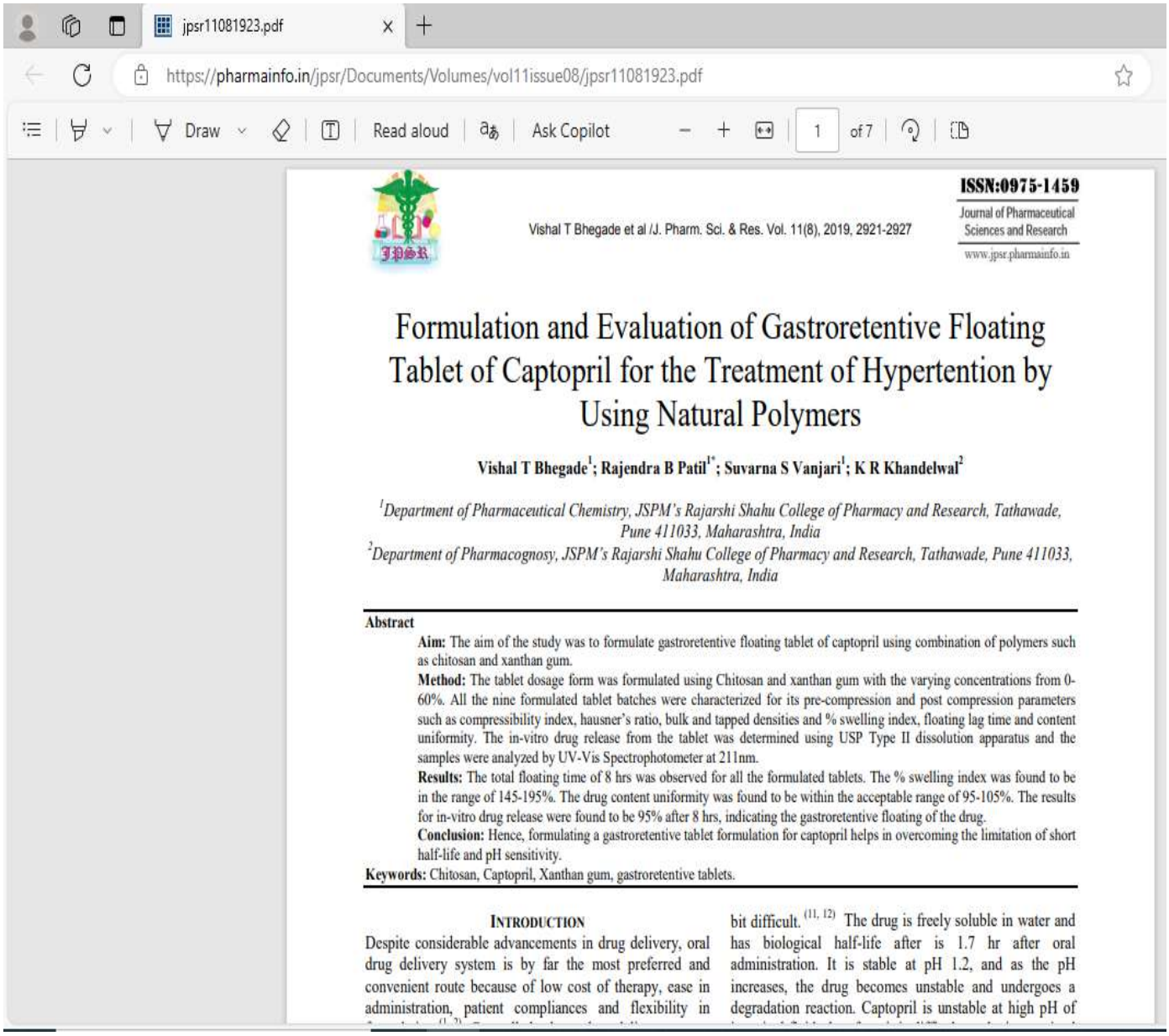
28. Formulation and evaluation of gastroretentive floating tablet of Captopril for the treatment of hypertension by using natural polymers



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Formulation and Evaluation of Gastroretentive Floating Tablet of Captopril for the Treatment of Hypertention by Using Natural Polymers

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[2]Department of Pharmacognosy, JSPM's Rajarshi Shahu College of Pharmacy and Research, Tathawade, Pune 411033, Maharashtra, India

Abstract

Aim: The aim of the study was to formulate gastroretentive floating tablet of captopril using combination of polymers such as chitosan and xanthan gum.

Method: The tablet dosage form was formulated using Chitosan and xanthan gum with the varying concentrations from 0-60%. All the nine formulated tablet batches were characterized for its pre-compression and post compression parameters such as compressibility index, hausner's ratio, bulk and tapped densities and % swelling index, floating lag time and content uniformity. The in-vitro drug release from the tablet was determined using USP Type II dissolution apparatus and the samples were analyzed by UV-Vis Spectrophotometer at 211nm.

Results: The total floating time of 8 hrs was observed for all the formulated tablets. The % swelling index was found to be in the range of 145-195%. The drug content uniformity was found to be within the acceptable range of 95-105%. The results for in-vitro drug release were found to be 95% after 8 hrs, indicating the gastroretentive floating of the drug.

Conclusion: Hence, formulating a gastroretentive tablet formulation for captopril helps in overcoming the limitation of short half-life and pH sensitivity.

Keywords: Chitosan, Captopril, Xanthan gum, gastroretentive tablets.

INTRODUCTION

Despite considerable advancements in drug delivery, oral drug delivery system is by far the most preferred and convenient route because of low cost of therapy, ease in administration, patient compliances and flexibility in

bit difficult.[11, 12] The drug is freely soluble in water and has biological half-life after is 1.7 hr after oral administration. It is stable at pH 1.2, and as the pH increases, the drug becomes unstable and undergoes a degradation reaction. Captopril is unstable at high pH of

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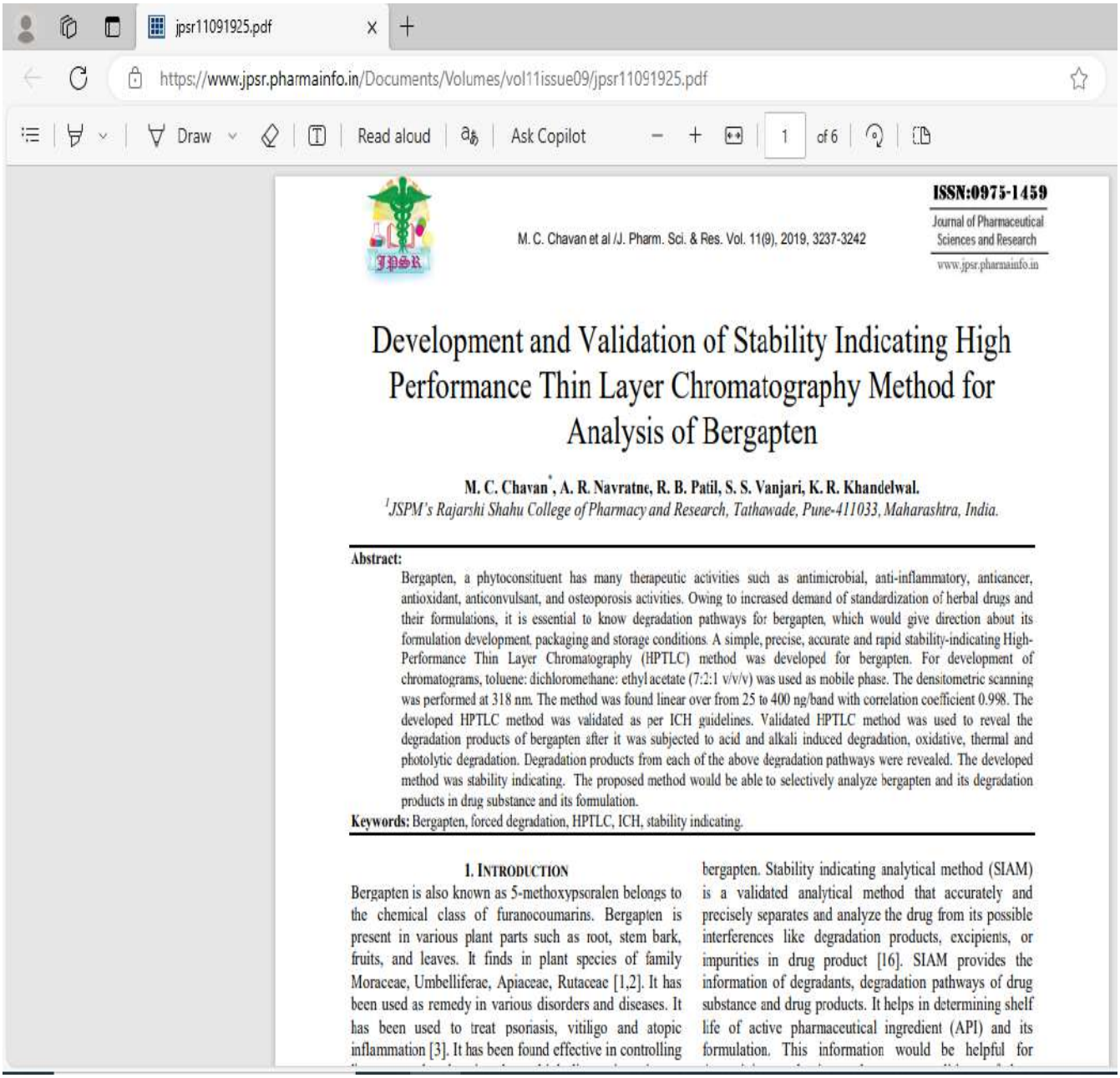
29. Development and validation of stability indicating high performance thin layer chromatography method for analysis of Bergapten



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M. C. Chavan et al /J. Pharm. Sci. & Res. Vol. 11(9), 2019, 3237-3242

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Development and Validation of Stability Indicating High Performance Thin Layer Chromatography Method for Analysis of Bergapten

M. C. Chavan*, A. R. Navratne, R. B. Patil, S. S. Vanjari, K. R. Khandelwal.
[1]*JSPM's Rajarshi Shahu College of Pharmacy and Research, Tathawade, Pune-411033, Maharashtra, India.*

Abstract:

Bergapten, a phytoconstituent has many therapeutic activities such as antimicrobial, anti-inflammatory, anticancer, antioxidant, anticonvulsant, and osteoporosis activities. Owing to increased demand of standardization of herbal drugs and their formulations, it is essential to know degradation pathways for bergapten, which would give direction about its formulation development, packaging and storage conditions. A simple, precise, accurate and rapid stability-indicating High-Performance Thin Layer Chromatography (HPTLC) method was developed for bergapten. For development of chromatograms, toluene: dichloromethane: ethyl acetate (7:2:1 v/v/v) was used as mobile phase. The densitometric scanning was performed at 318 nm. The method was found linear over from 25 to 400 ng/band with correlation coefficient 0.998. The developed HPTLC method was validated as per ICH guidelines. Validated HPTLC method was used to reveal the degradation products of bergapten after it was subjected to acid and alkali induced degradation, oxidative, thermal and photolytic degradation. Degradation products from each of the above degradation pathways were revealed. The developed method was stability indicating. The proposed method would be able to selectively analyze bergapten and its degradation products in drug substance and its formulation.

Keywords: Bergapten, forced degradation, HPTLC, ICH, stability indicating.

I. INTRODUCTION

Bergapten is also known as 5-methoxypsoralen belongs to the chemical class of furanocoumarins. Bergapten is present in various plant parts such as root, stem bark, fruits, and leaves. It finds in plant species of family Moraceae, Umbelliferae, Apiaceae, Rutaceae [1,2]. It has been used as remedy in various disorders and diseases. It has been used to treat psoriasis, vitiligo and atopic inflammation [3]. It has been found effective in controlling bergapten. Stability indicating analytical method (SIAM) is a validated analytical method that accurately and precisely separates and analyze the drug from its possible interferences like degradation products, excipients, or impurities in drug product [16]. SIAM provides the information of degradants, degradation pathways of drug substance and drug products. It helps in determining shelf life of active pharmaceutical ingredient (API) and its formulation. This information would be helpful for

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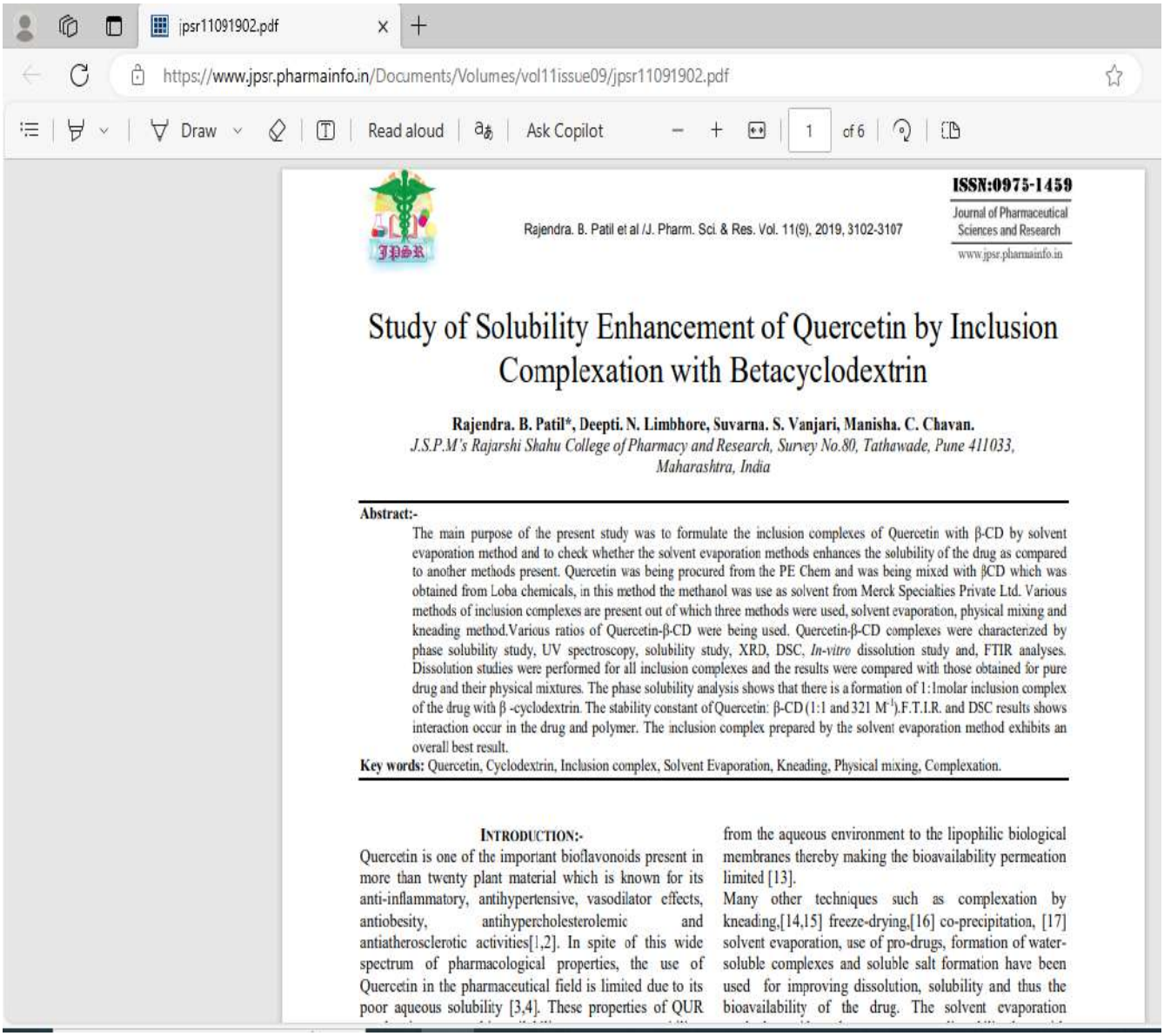
30. Study of solubility enhancement of Quercetin by inclusion complexation with Betacyclodextrin



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Rajendra. B. Patil et al /J. Pharm. Sci. & Res. Vol. 11(9), 2019, 3102-3107

Study of Solubility Enhancement of Quercetin by Inclusion Complexation with Betacyclodextrin

Rajendra. B. Patil*, Deepti. N. Limbhore, Suvarna. S. Vanjari, Manisha. C. Chavan.
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Abstract:-

The main purpose of the present study was to formulate the inclusion complexes of Quercetin with β-CD by solvent evaporation method and to check whether the solvent evaporation methods enhances the solubility of the drug as compared to another methods present. Quercetin was being procured from the PE Chem and was being mixed with βCD which was obtained from Loba chemicals, in this method the methanol was use as solvent from Merck Specialties Private Ltd. Various methods of inclusion complexes are present out of which three methods were used, solvent evaporation, physical mixing and kneading method.Various ratios of Quercetin-β-CD were being used. Quercetin-β-CD complexes were characterized by phase solubility study, UV spectroscopy, solubility study, XRD, DSC, *In-vitro* dissolution study and, FTIR analyses. Dissolution studies were performed for all inclusion complexes and the results were compared with those obtained for pure drug and their physical mixtures. The phase solubility analysis shows that there is a formation of 1:1molar inclusion complex of the drug with β -cyclodextrin. The stability constant of Quercetin: β-CD (1:1 and 321 M^{-1}).F.T.I.R. and DSC results shows interaction occur in the drug and polymer. The inclusion complex prepared by the solvent evaporation method exhibits an overall best result.

Key words: Quercetin, Cyclodextrin, Inclusion complex, Solvent Evaporation, Kneading, Physical mixing, Complexation.

INTRODUCTION:-

Quercetin is one of the important bioflavonoids present in more than twenty plant material which is known for its anti-inflammatory, antihypertensive, vasodilator effects, antiobesity, antihypercholesterolemic and antiatherosclerotic activities[1,2]. In spite of this wide spectrum of pharmacological properties, the use of Quercetin in the pharmaceutical field is limited due to its poor aqueous solubility [3,4]. These properties of QUR from the aqueous environment to the lipophilic biological membranes thereby making the bioavailability permeation limited [13].

Many other techniques such as complexation by kneading,[14,15] freeze-drying,[16] co-precipitation, [17] solvent evaporation, use of pro-drugs, formation of water-soluble complexes and soluble salt formation have been used for improving dissolution, solubility and thus the bioavailability of the drug. The solvent evaporation

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31. Validated stability indicating HPLC method for identification of degradant of Opipramol by LC-MS

S. S. Kumbhar et al /J. Pharm. Sci. & Res. Vol. 11(9), 2019, 3269-3275

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Validated Stability Indicating HPLC Method for Identification of Degradant of Opipramol by LC-MS

S. S. Kumbhar*, S. S. Vanjari, R. B. Patil, M. C. Chavan, K. R. Khandelwal

Department of pharmaceutical chemistry, JSPM Rajarshi Shahu College of Pharmacy and Research, Tathawade, Pune-411 033, Maharashtra, India

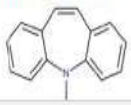
Abstract:

The objective of this method was to develop a sensitive, accurate and precise HPLC-PDA detector method for the estimation of opipramol in bulk drug & pharmaceutical solid dosage form. The stability indicating method for opipramol was validated in accordance with ICH guidelines and degradant characterization was carried out using LC-MS. Degradant products were separated by developed gradient LC method using Qualisil 5 BDS-C18 column 250 length, 4 mm diameter,5 µm particle size, with mobile phase of 0.02% of Orthophosphoric acid whose pH was adjusted to 3.26 (mobile phase solvent-A) and acetonitrile (mobile phase solvent-B) (60-40% V/V) were used. The flow rate was 1.0 ml/min, retention time was 4.91 min and effluents were monitored at 254 nm. LC-MS system controlled by HighStar 3.2 software and Bruker IMPACT-HD model equipped with ESI ionization source were used. The model had the mass resolution up to 50,000 FSR and mass detectable range from 100 to 3500 m/z. The proposed method was linear in concentration range of 10-70 µg/ ml with correlation coefficient of 0.999, mean % recovery 99.86 and precise. The drug was subjected to hydrolytic, oxidative, photolytic and thermal condition where it showed instability in hydrolytic (acidic ad alkaline) condition, while it remained stable in oxidative, hydrolytic neutral, thermal and photolytic conditions. The developed method was found specific as pure drug peak was separated from degradant. The resolution factor was found less than 2%. All degradant products were investigated by LC-MS (ESI).

Keywords: Opipramol, Force degradation, HPLC-MS, Method validation.

INTRODUCTION:

Opipramol 2-[4-(3-dibenzo[b,f]azepin-5-yl-propyl)-piperazin-1-yl]-ethanol Fig.1 is an associate tricyclic antidepressant and anxiolytic drug. It acts as a sigma receptor agonist having high affinity towards □ receptor and occupancy of □ receptor causes translocation of possible impurities by ESI-MS, which was validated in accordance with ICH guidelines.



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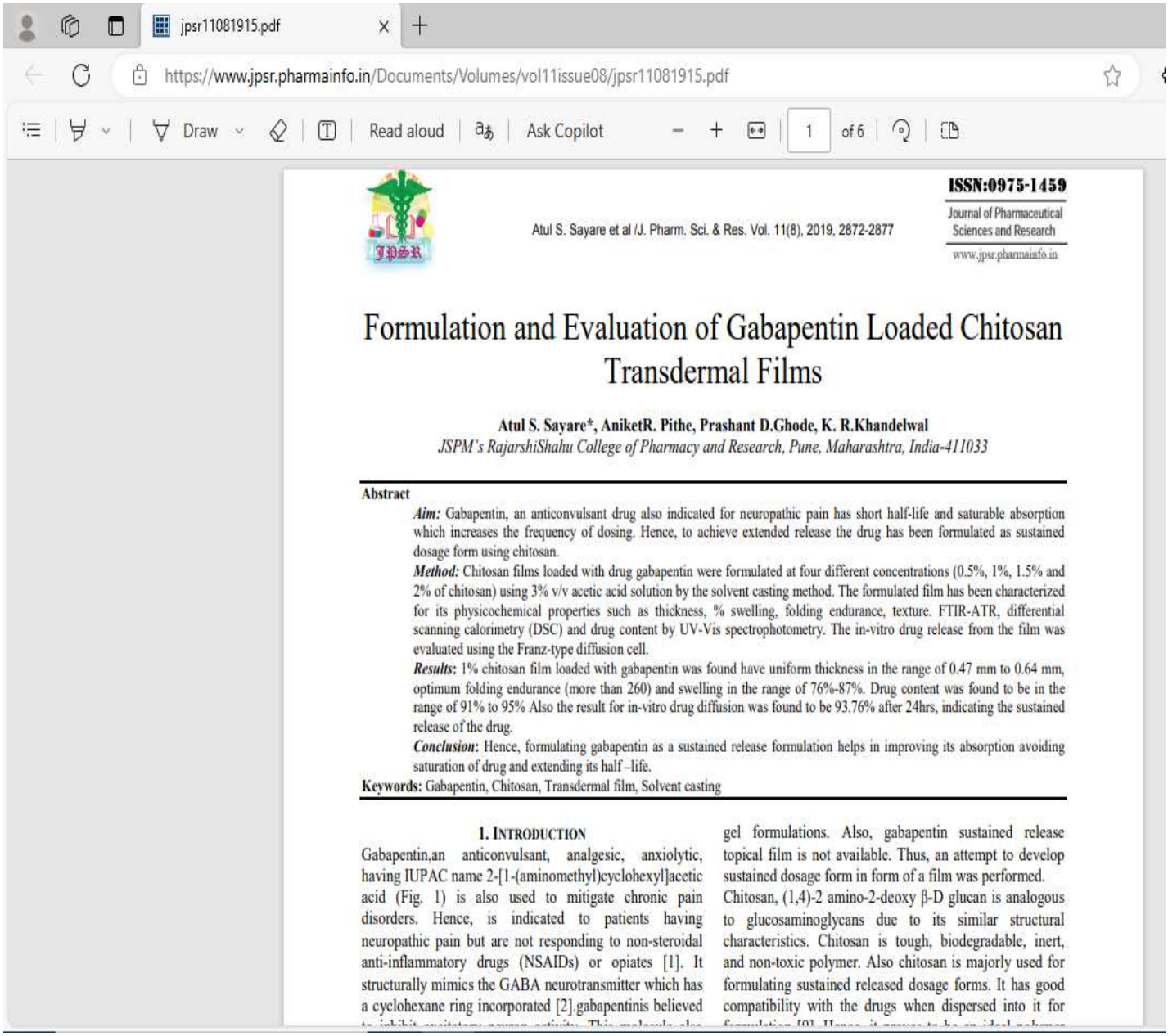
32. Formulation and evaluation of Gabapentin loaded Chitosan transdermal films



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Formulation and Evaluation of Gabapentin Loaded Chitosan Transdermal Films

Atul S. Sayare*, AniketR. Pithe, Prashant D.Ghode, K. R.Khandelwal
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Abstract

Aim: Gabapentin, an anticonvulsant drug also indicated for neuropathic pain has short half-life and saturable absorption which increases the frequency of dosing. Hence, to achieve extended release the drug has been formulated as sustained dosage form using chitosan.

Method: Chitosan films loaded with drug gabapentin were formulated at four different concentrations (0.5%, 1%, 1.5% and 2% of chitosan) using 3% v/v acetic acid solution by the solvent casting method. The formulated film has been characterized for its physicochemical properties such as thickness, % swelling, folding endurance, texture. FTIR-ATR, differential scanning calorimetry (DSC) and drug content by UV-Vis spectrophotometry. The in-vitro drug release from the film was evaluated using the Franz-type diffusion cell.

***Results*:** 1% chitosan film loaded with gabapentin was found have uniform thickness in the range of 0.47 mm to 0.64 mm, optimum folding endurance (more than 260) and swelling in the range of 76%-87%. Drug content was found to be in the range of 91% to 95% Also the result for in-vitro drug diffusion was found to be 93.76% after 24hrs, indicating the sustained release of the drug.

***Conclusion*:** Hence, formulating gabapentin as a sustained release formulation helps in improving its absorption avoiding saturation of drug and extending its half –life.

Keywords: Gabapentin, Chitosan, Transdermal film, Solvent casting

1. INTRODUCTION

Gabapentin,an anticonvulsant, analgesic, anxiolytic, having IUPAC name 2-[1-(aminomethyl)cyclohexyl]acetic acid (Fig. 1) is also used to mitigate chronic pain disorders. Hence, is indicated to patients having neuropathic pain but are not responding to non-steroidal anti-inflammatory drugs (NSAIDs) or opiates [1]. It structurally mimics the GABA neurotransmitter which has a cyclohexane ring incorporated [2].gabapentinis believed

gel formulations. Also, gabapentin sustained release topical film is not available. Thus, an attempt to develop sustained dosage form in form of a film was performed.

Chitosan, (1,4)-2 amino-2-deoxy β-D glucan is analogous to glucosaminoglycans due to its similar structural characteristics. Chitosan is tough, biodegradable, inert, and non-toxic polymer. Also chitosan is majorly used for formulating sustained released dosage forms. It has good compatibility with the drugs when dispersed into it for

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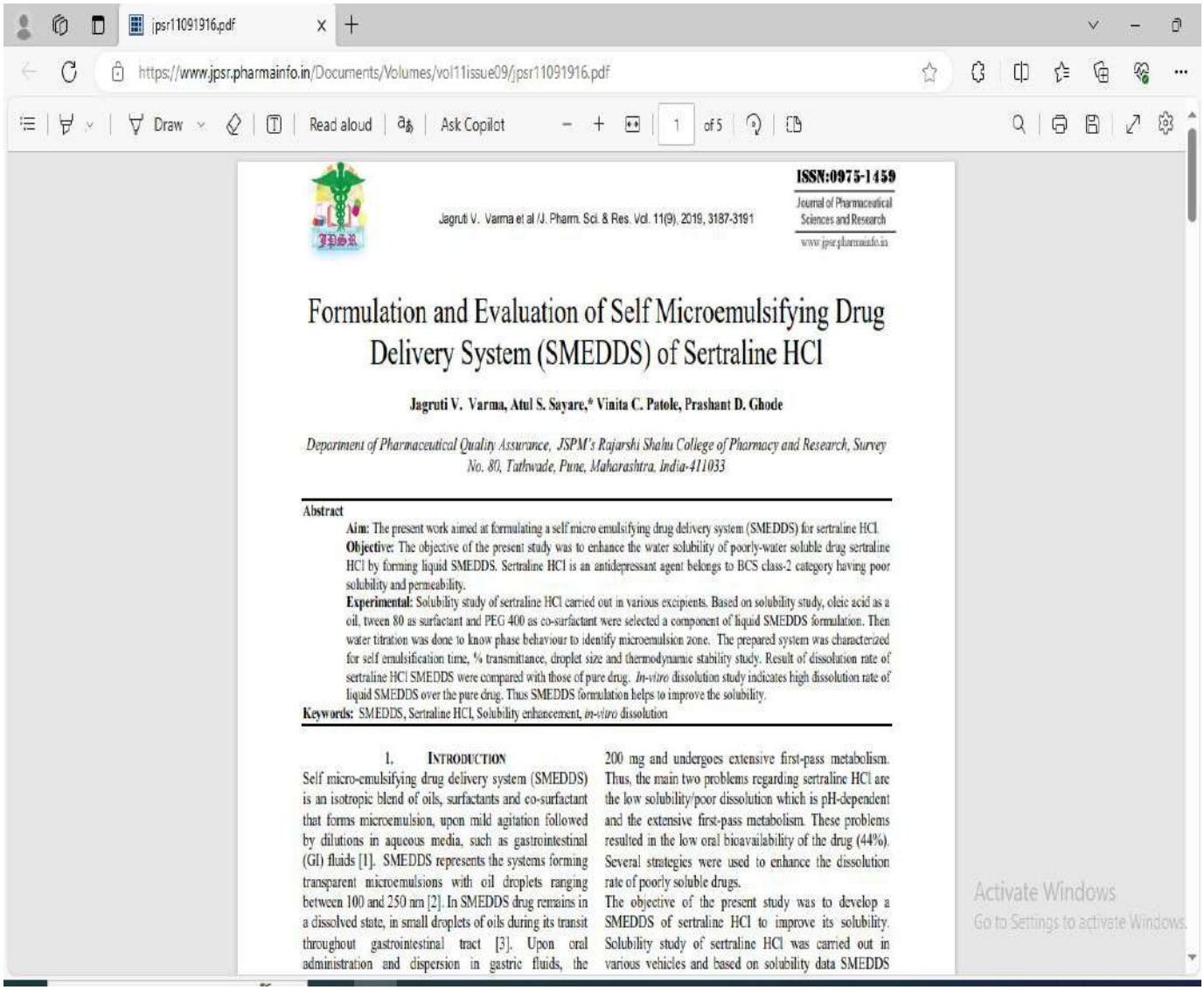
33. Formulation and evaluation of self microemulsifying drug delivery system (SMEDDS) of Sertraline HCl



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Formulation and Evaluation of Self Microemulsifying Drug Delivery System (SMEDDS) of Sertraline HCl

Jagruti V. Varma, Atul S. Sayare,* Vinita C. Patole, Prashant D. Ghode

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Abstract

Aim: The present work aimed at formulating a self micro emulsifying drug delivery system (SMEDDS) for sertraline HCl.

Objective: The objective of the present study was to enhance the water solubility of poorly-water soluble drug sertraline HCl by forming liquid SMEDDS. Sertraline HCl is an antidepressant agent belongs to BCS class-2 category having poor solubility and permeability.

Experimental: Solubility study of sertraline HCl carried out in various excipients. Based on solubility study, oleic acid as a oil, tween 80 as surfactant and PEG 400 as co-surfactant were selected a component of liquid SMEDDS formulation. Then water titration was done to know phase behaviour to identify microemulsion zone. The prepared system was characterized for self emulsification time, % transmittance, droplet size and thermodynamic stability study. Result of dissolution rate of sertraline HCl SMEDDS were compared with those of pure drug. *In-vitro* dissolution study indicates high dissolution rate of liquid SMEDDS over the pure drug. Thus SMEDDS formulation helps to improve the solubility.

Keywords: SMEDDS, Sertraline HCl, Solubility enhancement, *in-vitro* dissolution

1. INTRODUCTION

Self micro-emulsifying drug delivery system (SMEDDS) is an isotropic blend of oils, surfactants and co-surfactant that forms microemulsion, upon mild agitation followed by dilutions in aqueous media, such as gastrointestinal (GI) fluids [1]. SMEDDS represents the systems forming transparent microemulsions with oil droplets ranging between 100 and 250 nm [2]. In SMEDDS drug remains in a dissolved state, in small droplets of oils during its transit throughout gastrointestinal tract [3]. Upon oral administration and dispersion in gastric fluids, the 200 mg and undergoes extensive first-pass metabolism. Thus, the main two problems regarding sertraline HCl are the low solubility/poor dissolution which is pH-dependent and the extensive first-pass metabolism. These problems resulted in the low oral bioavailability of the drug (44%). Several strategies were used to enhance the dissolution rate of poorly soluble drugs.

The objective of the present study was to develop a SMEDDS of sertraline HCl to improve its solubility. Solubility study of sertraline HCl was carried out in various vehicles and based on solubility data SMEDDS

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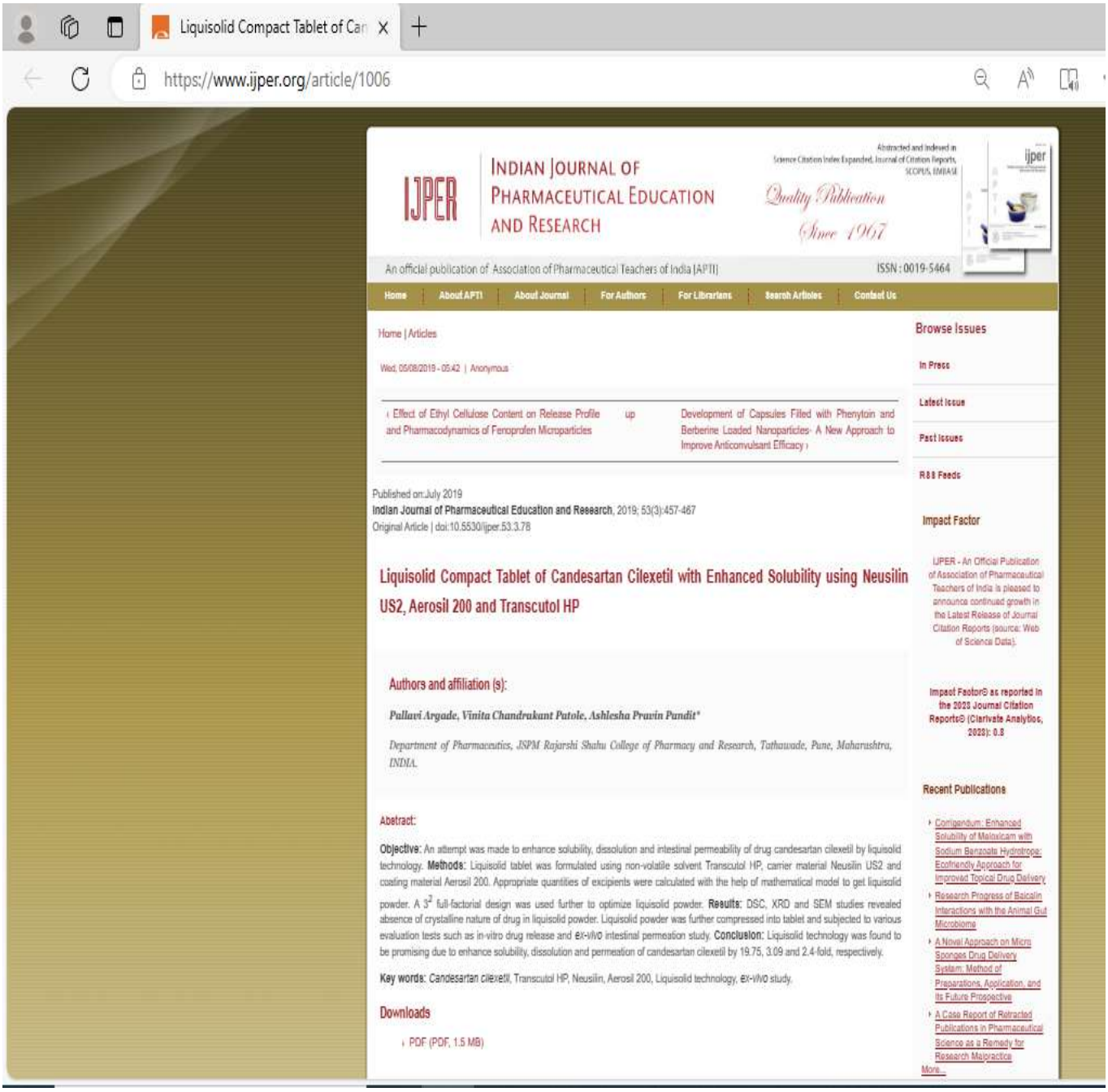
34. Liquisolid compact tablet of candesartan cilexetil with enhanced solubility using Neusilin US2, Aerosil 200 and Transcutol HP



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‹ Effect of Ethyl Cellulose Content on Release Profile and Pharmacodynamics of Fenoprofen Microparticles

up

Development of Capsules Filled with Phenytoin and Berberine Loaded Nanoparticles- A New Approach to Improve Anticonvulsant Efficacy ›

Published on:July 2019

Indian Journal of Pharmaceutical Education and Research, 2019; 53(3):457-467

Original Article | doi:10.5530/ijper.53.3.78

Liquisolid Compact Tablet of Candesartan Cilexetil with Enhanced Solubility using Neusilin US2, Aerosil 200 and Transcutol HP

Authors and affiliation (s):

*Pallavi Argade, Vinita Chandrakant Patole, Ashlesha Pravin Pandit**

Department of Pharmaceutics, JSPM Rajarshi Shahu College of Pharmacy and Research, Tathawade, Pune, Maharashtra, INDIA.

Abstract:

Objective: An attempt was made to enhance solubility, dissolution and intestinal permeability of drug candesartan cilexetil by liquisolid technology. **Methods:** Liquisolid tablet was formulated using non-volatile solvent Transcutol HP, carrier material Neusilin US2 and coating material Aerosil 200. Appropriate quantities of excipients were calculated with the help of mathematical model to get liquisolid powder. A 3^2 full-factorial design was used further to optimize liquisolid powder. **Results:** DSC, XRD and SEM studies revealed absence of crystalline nature of drug in liquisolid powder. Liquisolid powder was further compressed into tablet and subjected to various evaluation tests such as in-vitro drug release and *ex-vivo* intestinal permeation study. **Conclusion:** Liquisolid technology was found to be promising due to enhance solubility, dissolution and permeation of candesartan cilexetil by 19.75, 3.09 and 2.4-fold, respectively.

Key words: *Candesartan cilexetil*, Transcutol HP, Neusilin, Aerosil 200, Liquisolid technology, *ex-vivo* study.

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Recent Publications

- Corrigendum: Enhanced Solubility of Meloxicam with Sodium Benzoate Hydrotrope: Ecofriendly Approach for Improved Topical Drug Delivery
- Research Progress of Baicalin Interactions with the Animal Gut Microbiome
- A Novel Approach on Micro Sponges Drug Delivery System: Method of Preparations, Application, and Its Future Prospective
- A Case Report of Retracted Publications in Pharmaceutical Science as a Remedy for Research Malpractice

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(Dr. K. R. Khandelwal)

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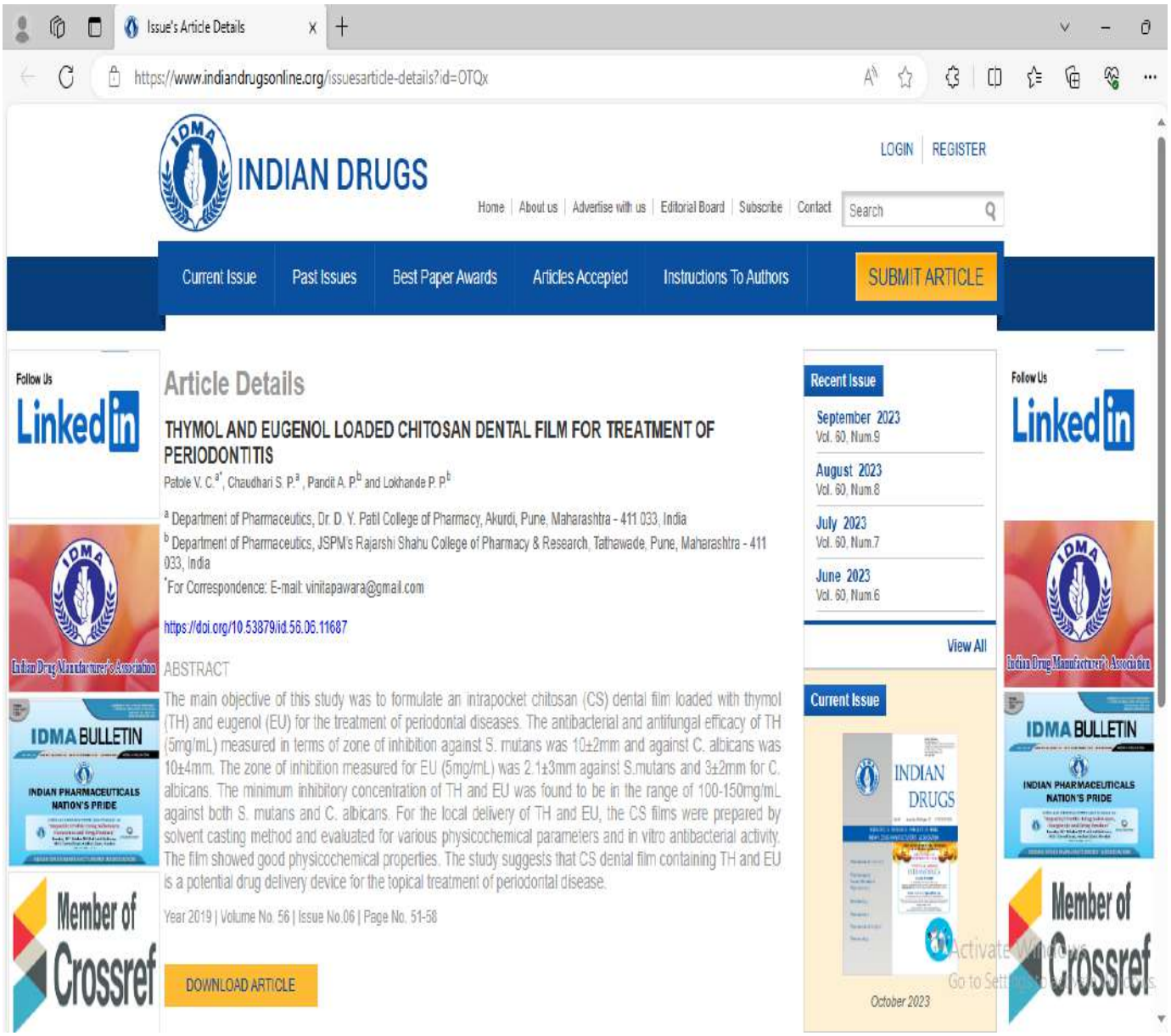
35. Thymol and eugenol loaded chitosan dental film for treatment of periodontitis



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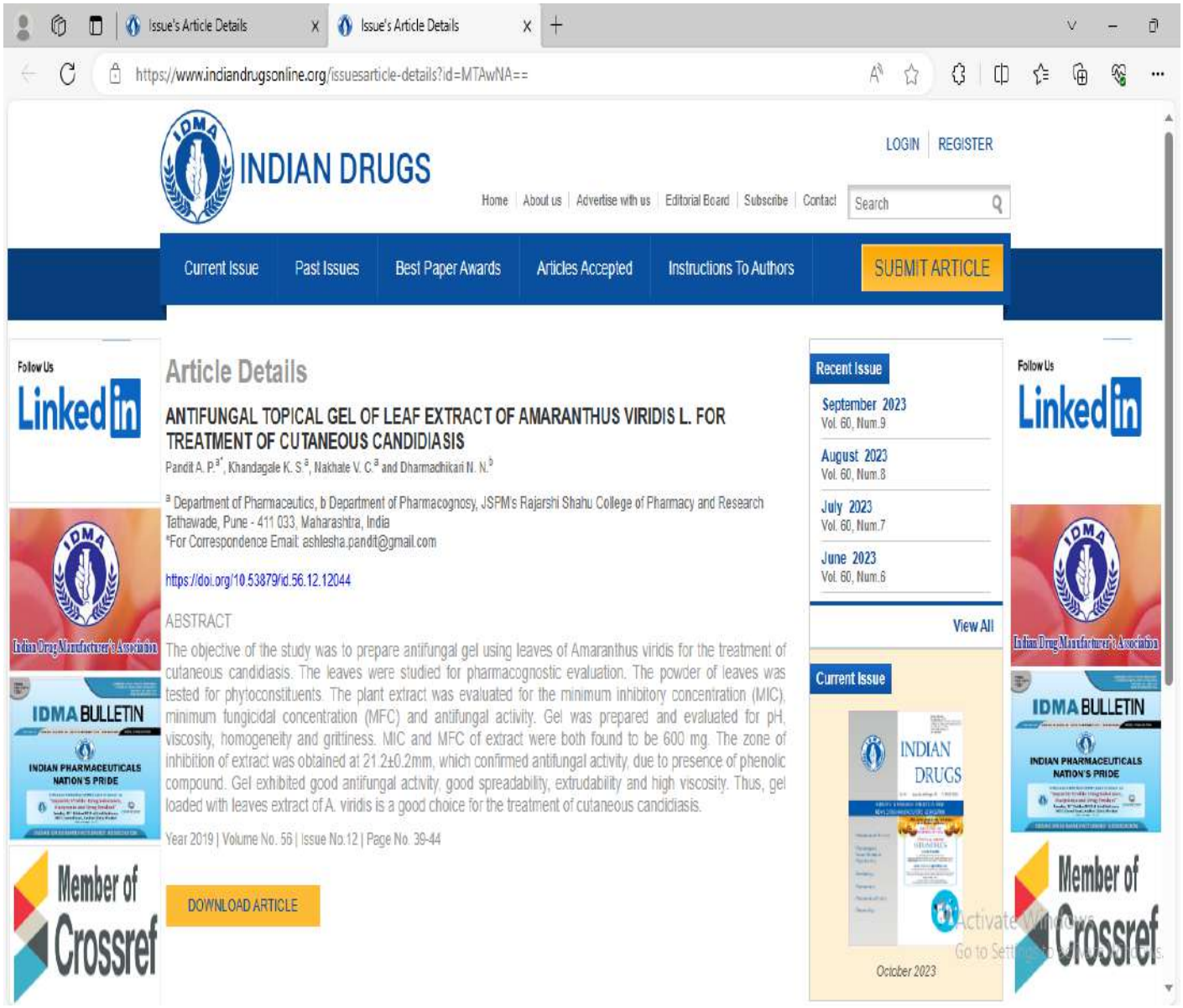
36. Antifungal Topical Gel of Leaves Extract of *Amaranthus viridis* L. for Treatment of Cutaneous Candidiasis



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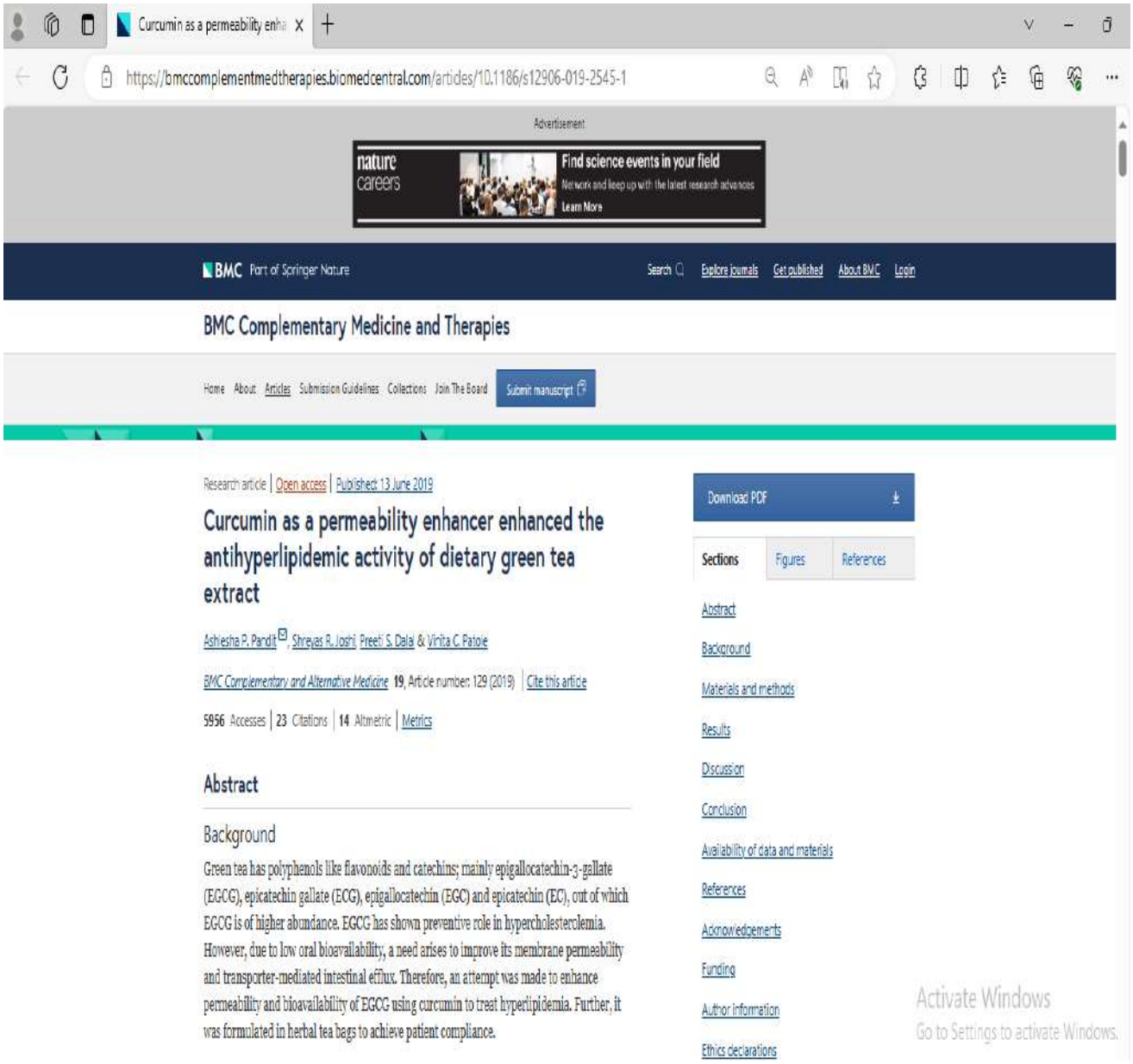
37. Curcumin as a permeability enhancer enhanced the antihyperlipidemic activity of dietary green tea extract



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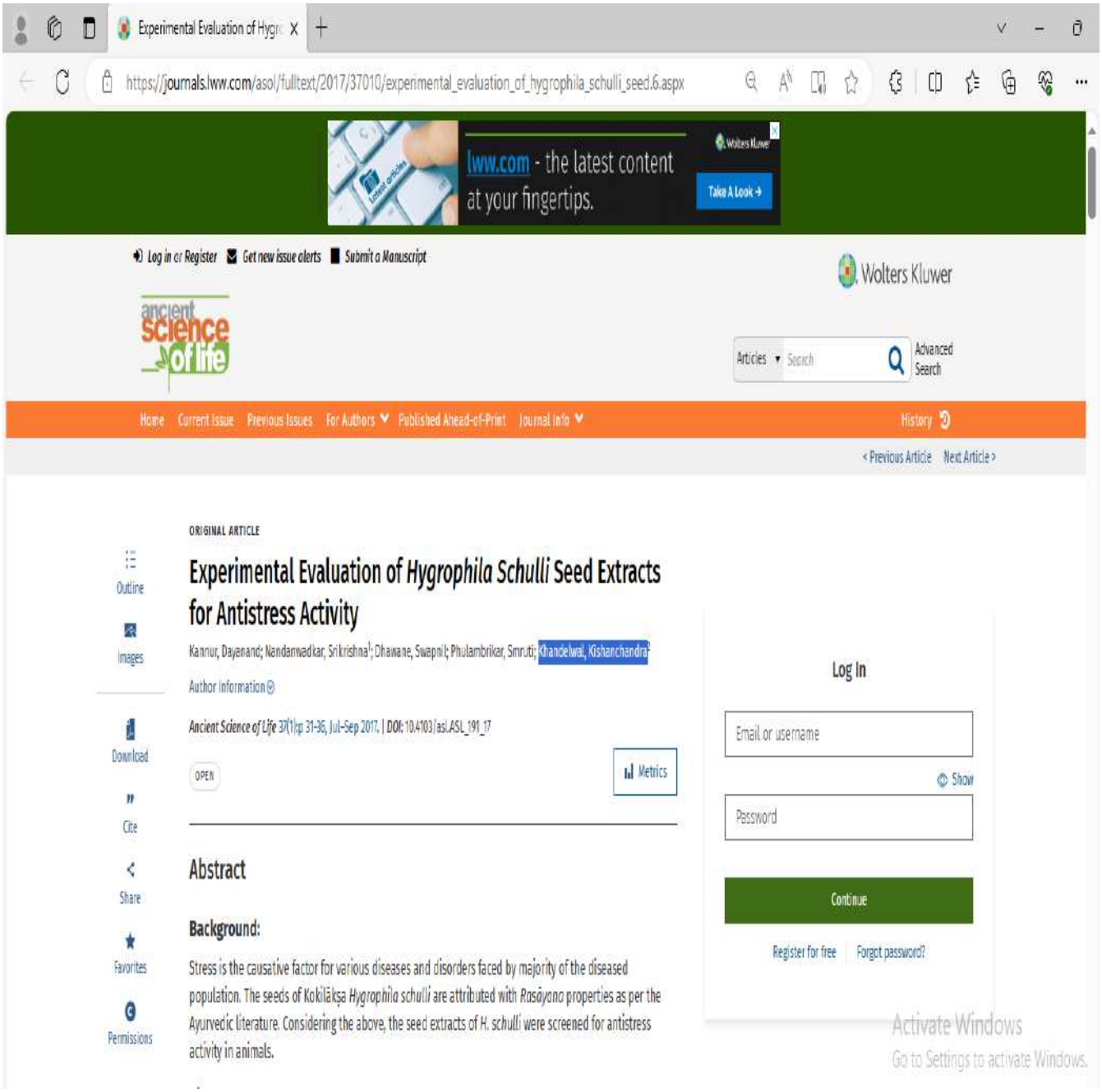
38. Experimental Evaluation of Hygrophila schulli Seed Extracts for Antistress Activity



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