

Criterion III: Research, Innovations and Extension

Key Indicator 3.5- Collaboration

3.5.1: The number of MoUs, collaborations/linkages for Faculty exchange, Student exchange, Internship, Field trip, On-the-job training, research and other academic activities during the last year.

Sr. No.	Nature/ type	Department	Name of the agency	Activity undertaken	No. of beneficiary
1.	Faculty exchange	Botany	K. B. P. College, Pandharpur	Guest lecture	01
2.	Research	Chemistry	K. J. Somaiya college of Arts and Science, Vidyavihar, Mumbai	Patent	01
3.	Research	Chemistry	A. C. S. College, Mokhada	Patent	01
4.	Research	Chemistry	R. K. M. M. Ahmednagar	Patent & Research Paper	01
5.	Research	Chemistry	A.V.C.O.P. Sangamner	Patent	01
6.	Research	Chemistry	R. B. N. B. College, Shrirampur	Patent	01
7.	Research	Chemistry	School of Pharmacy, Vishvakarma University, Pune	Patent & Research Paper	01

Rayat Shikshan Sanstha's,

KARMAVEER BHAURAO PATIL MAHAVIDYALAYA, PANDHARPUR (AUTONOMOUS)



Est : 1960

Affiliated to Punyashlok Ahilyadevi Holkar Solapur University, Solapur

Karmaveer Path, PANDHARPUR - 413304, Dist. Solapur (MAH)

Jr. College Index No. : J 24.08.001
U-DISE No. : 27300810371

☎ Office : (02186) 223104 * E-mail : kbppandharpur@gmail.com * Website : www.kbpmautonomous.in

Founder : Padmabhushan Dr. Karmaveer Bhaurao Patil, D.Lit

NAAC Grade
'A+' With 3.51 C.G.P.A.
(Since 2017)

DST FIST Scheme
Government of India
(Since 2013)

Best College Award
P A H Solapur University, Solapur and
Rayat Shikshan Sanstha, satara
(2015)

U.G.C.
C.P.E. Status
(2017-18)

U.G.C.
PARAMARSHA Scheme
(2019-20)

Ref. No. 383/23-24 Date : 29/05/2023

Prin. Dr. C. J. Khilare M.Sc., M.Phil., Ph.D.

To,

Dr. S.K.Kamble
Assistant Professor,
Department of Botany,
Abasaheb Marathe Arts & New Commerce,
Science College, Rajapur.

Subject: Invitation as guest lecture

Respected Sir,

It gives us a great pleasure to invite you as a guest lecturer to guide our M.Sc. -I, (Botany) students. on topic "Cytological Techniques" at Department of Botany, Karmaveer Bhaurao Patil Mahavidyalaya, Pandharpur (Autonomous), (M.S.) India. The lecture will arrange on 29/5/2023 at 11.00 to 1.00 PM. Kindly accept the invitation and oblige.

Thanking you,

Head

Department of Botany



Yours Faithfully,

Principal

K.B.P. Mahavidyalaya, Pandharpur



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To,
Dr. S.K.Kamble
Assistant Professor,
Department of Botany,
Abasaheb Marathe Arts & New Commerce,
Science College, Rajapur.

Subject: Letter of Gratitude

Respected Sir,

We are very thankful to you for spending your valuable time for our M.Sc. -I, (Botany) students and guide them on topic "Cytological Techniques" at Department of Botany, Karmaveer Bhaurao Patil Mahavidyalaya, Pandharpur (Autonomous), (M.S.) India. Your talk will enlighten the knowledge of our students. I assure that your over all speech will be very fruitful to our students.

I hope you will support us in upcoming events.

Thanking you,

Yours Faithfully,


Head
Department of Botany




Principal

K.B.P. Mahavidyalaya, Pandharpur

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202221061719 A

(19) INDIA

(22) Date of filing of Application :29/10/2022

(43) Publication Date : 11/11/2022

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Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)Dr. Vijay Khedkar

5)Ms. Nirmala Ramdas Darekar

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Design, Synthesis and Biological Evaluation of Novel Furan & Thiophene Containing Pyrazolyl Pyrazolines as Antimalarial Agents

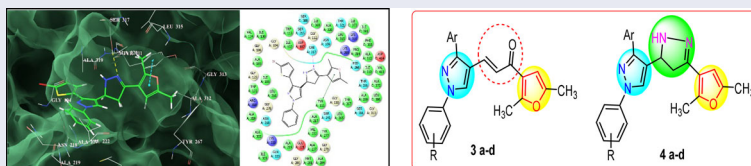
Hemantkumar N. Akolkar^a, Sujata G. Dengale^b, Keshav K. Deshmukh^b, Bhausaheb K. Karale^a, Nirmala R. Darekar^a, Vijay M. Khedkar^c, and Mubarak H. Shaikh^a

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^bP.G. and Research, Department of Chemistry, Sangamner Nagarpalika Arts, D. J. Malpani Commerce, B.N. Sarada Science College, Sangamner, India; ^cDepartment of Pharmaceutical Chemistry, School of Pharmacy, Vishwakarma University, Pune, India

ABSTRACT

In search for novel compounds targeting Malaria, based on the *in silico* molecular docking binding affinity data, the novel furans containing pyrazolyl chalcones (**3a-d**) and pyrazoline derivatives (**4a-d**) were synthesized. The formation of the synthesized compound were confirmed by spectral analysis like IR, ¹H NMR, ¹³C NMR and mass spectrometry. Compounds with thiophene and pyrazoline ring **4b** (0.47 μ M), **4c** (0.47 μ M) and **4d** (0.21 μ M) exhibited excellent anti-malarial activity against *Plasmodium falciparum* compared with standard antimalarial drug Quinine (0.83 μ M). To check the selectivity furthermore, compounds were tested for antimicrobial activity and none of the synthesized compound exhibited significant potency compared with the standard antibacterial drug Chloramphenicol and antifungal drug Nystatin respectively. So, it can be resolved that the produced compounds show selectively toward antimalarial activity and have the potential to be explored further.



ARTICLE HISTORY

Received 7 August 2020

Accepted 5 September 2020


KEYWORDS

Antimalarial; antimicrobial; chalcones; pfENR inhibitor; pyrazole-pyrazolines; thiophene

Introduction

Life-threatening disease Malaria is caused by *Plasmodium* parasites that are spread to people through the bites of infected female Anopheles mosquitoes. Out of five *Plasmodium* Parasites *Plasmodium falciparum* produces high levels of blood-stage parasites that sequester in critical organs in all age groups.¹ As per the World Health Organization report in 2018, in sub Saharan Africa 11 million pregnant women were infected with malaria and 872 000 children were born with a low birth weight. Around 24 million children estimated to be infected with the *P. falciparum* parasite in the region; out of these, 1.8 million had severe anemia and 12 million had

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 Supplemental data for this article is available online at <https://doi.org/10.1080/10406638.2020.1821231>.

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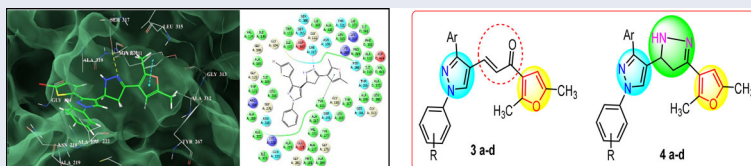
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ABSTRACT

In search for novel compounds targeting Malaria, based on the *in silico* molecular docking binding affinity data, the novel furans containing pyrazolyl chalcones (**3a-d**) and pyrazoline derivatives (**4a-d**) were synthesized. The formation of the synthesized compound were confirmed by spectral analysis like IR, ¹H NMR, ¹³C NMR and mass spectrometry. Compounds with thiophene and pyrazoline ring **4b** (0.47 μ M), **4c** (0.47 μ M) and **4d** (0.21 μ M) exhibited excellent anti-malarial activity against *Plasmodium falciparum* compared with standard antimalarial drug Quinine (0.83 μ M). To check the selectivity furthermore, compounds were tested for antimicrobial activity and none of the synthesized compound exhibited significant potency compared with the standard antibacterial drug Chloramphenicol and antifungal drug Nystatin respectively. So, it can be resolved that the produced compounds show selectively toward antimalarial activity and have the potential to be explored further.



ARTICLE HISTORY

Received 7 August 2020

Accepted 5 September 2020


KEYWORDS

Antimalarial; antimicrobial; chalcones; pfENR inhibitor; pyrazole-pyrazolines; thiophene

Introduction

Life-threatening disease Malaria is caused by *Plasmodium* parasites that are spread to people through the bites of infected female Anopheles mosquitoes. Out of five *Plasmodium* Parasites *Plasmodium falciparum* produces high levels of blood-stage parasites that sequester in critical organs in all age groups.¹ As per the World Health Organization report in 2018, in sub Saharan Africa 11 million pregnant women were infected with malaria and 872 000 children were born with a low birth weight. Around 24 million children estimated to be infected with the *P. falciparum* parasite in the region; out of these, 1.8 million had severe anemia and 12 million had

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 Supplemental data for this article is available online at <https://doi.org/10.1080/10406638.2020.1821231>.