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### Patent Search

Invention Title	SYNTHESIS AND CHARACTERIZATION OF 1,3,4-THIADIAZOLE DERIVATIVE AND ITS ANTI-CANCER ACTIVITY
Publication Number	44/2021
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Field Of Invention	CHEMICAL
Classification (IPC)	C07D0277560000, C07D0403040000, A61K0031706800, C07D0277240000, C07D0207500000

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**Abstract:**

The present invention relates to the Synthesis of N-([5-(substituted)-1, 3, 4-thiazazole-2-yl] carbamothioyl) derivatives (3a-d) containing 1, 3, 4-thiazazole moiety were designed and synthesized by conventional method and Microwave method as tool for green chemistry. Synthesized compounds were docked with receptors potent inhibitors of Nucleoside diphosphate (NDP) signalling in Breast cancer (PDB Code-1dLs) for anti-cancer activity. These synthesized 3a-d compounds were confirmed through spectral characterization and 3b is confirmed by IR, NMR, MASS; spectroscopy. The result showed significance for these compounds for anti-cancer activity when compared to the standard drug of 5-fluorouracil. The Compounds 3b Displayed heavy action against inhibitors of NUDTs silence hormone signalling in Breast cancer (PDB Code-1dLs) for anti-cancer activity.

**Complete Specification**

Claims:We Claim,

1. A compound of formulae 1
2. A compound of formulae 1 as claimed in claim 1, wherein the R may be substituted with the methyl group, bromine, sulfhydryl, and amide.
3. A compound of formulae 1 as claimed in claim 2, wherein when the position R substituted with methyl group its shows the better anticancer activity when compared to 5-fluorouracil.

Dated this 14 October 2021

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**Department of Industrial  
Policy and Promotion**  
Government of India

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#### Application Details

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APPLICANT NAME	1 . Mr. Akshaykumar B. Kadam 2 . Dr. Shrinivas K. Mohite 3 . Dr. Chandrakant S. Magdum 4 . Mr. Pankaj S. Kore 5 . Mr. Pravin P. Honmane 6 . Mr. Ranjit S. Jadhav 7 . Ms. Pradnya P. Shinde 8 . Ms. Manasi M. Savale 9 . Ms. Shubhangi S. Thorat 10 . Ms. Vijaya B. Surwase
TITLE OF INVENTION	SYNTHESIS AND CHARACTERIZATION OF 1,3,4-THIADIAZOLE DERIVATIVE AND ITS ANTI-CANCER ACTIVITY
FIELD OF INVENTION	CHEMICAL
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पेटेंट कार्यालय  
शासकीय जर्नल

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<p>(51) International classification :C07D0277560000, C07D0403040000, A61K0031706800, C07D0277240000, C07D0207500000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No :NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : <b>1)Mr. Akshaykumar B. Kadam</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>2)Dr. Shrinivas K. Mohite</b> <b>3)Dr. Chandrakant S. Magdum</b> <b>4)Mr. Pankaj S. Kore</b> <b>5)Mr. Pravin P. Honmane</b> <b>6)Mr. Ranjit S. Jadhav</b> <b>7)Ms. Pradnya P. Shinde</b> <b>8)Ms. Manasi M. Savale</b> <b>9)Ms. Shubhangi S. Thorat</b> <b>10)Ms. Vijaya B. Surwase</b> Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : <b>1)Mr. Akshaykumar B. Kadam</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>2)Dr. Shrinivas K. Mohite</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>3)Dr. Chandrakant S. Magdum</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>4)Mr. Pankaj S. Kore</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>5)Mr. Pravin P. Honmane</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>6)Mr. Ranjit S. Jadhav</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>7)Ms. Pradnya P. Shinde</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>8)Ms. Manasi M. Savale</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>9)Ms. Shubhangi S. Thorat</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. ----- <b>10)Ms. Vijaya B. Surwase</b> Address of Applicant :Rajarambapu College of Pharmacy, Kasegaon Tal Walwa Dist Sangli, Maharashtra, Pin Code: 415404, India. -----</p>
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The present invention relates to the Synthesis of N-[[5-(substituted)-1, 3, 4-thiadiazole-2-yl] carbamothioyl] derivatives (3a-d) containing 1, 3, 4-thiadiazole moiety were designed and synthesized by conventional method and Microwave method as tool for green chemistry. Synthesized compounds were docked with receptors potent inhibitors of NUDT5 silence hormone signalling in Breast cancer (PDB Code-1dLs) for anti-cancer activity. These synthesized 3a-d compounds were confirmed through spectral characterization using IR and 3b is confirmed by IR, NMR, MASS; spectroscopy. The result showed significance for these compounds for anti-cancer activity when compared to the standard drug of 5- fluorouracil. The Compounds 3b Displayed heavy action against inhibitors of NUDT5 silence hormone signalling in Breast cancer (PDB Code-1dLs) for anti-cancer activity.

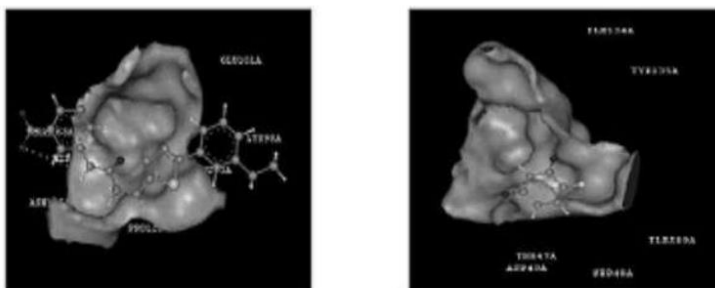


FIGURE 1

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