(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421005423 A

(19) INDIA

(22) Date of filing of Application :26/01/2024

(43) Publication Date: 23/02/2024

## (54) Title of the invention : HIGHLY FUNCTIONALIZED NOVEL THIOPHENE HETEROCYCLES AND THEIR ANTICANCER ACTIVITY

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<ul> <li>(51) International classification</li> <li>(86) International Application</li> <li>No</li></ul>	:A61P35/00, C07D33/10, C07D33/36, C07D33/40 :NA :NA :NA :NA :NA :NA :NA	2)Jayraj N. Jatiya 3)Dr. Mahesh M. Savant 4)Dr. Anilkumar S. Patel Name of Applicant: NA Address of Applicant: NA (72)Name of Inventor: 1)Jayraj N. Jatiya Address of Applicant: Department of Chemistry, Atmiya University, Yogidham Gurukul, Kalawad Road, Rajkot – 360005 Rajkot 2)Dr. Mahesh M. Savant Address of Applicant: Department of Chemistry, Atmiya University, Yogidham Gurukul, Kalawad Road, Rajkot – 360005 Rajkot 3)Dr. Anilkumar S. Patel Address of Applicant: Department of Chemistry, Atmiya University, Yogidham Gurukul, Kalawad Road, Rajkot – 360005 Rajkot

## (57) Abstract:

ABSTRACT Highly functionalized novel thiophene heterocycles and their anticancer activity The present invention relates to the synthesis of highly functionalized thiophene heterocycles and evaluation of their anti-cancer activities. A thiophene based compound ethyl (E)-2-((2-cyano-1-(methylthio)-3-oxo-3-(phenylamino) prop-1-en-1-yl) amino)-4-methyl-5-(phenylcarbamoyl) thiophene-3-carboxylate is synthesized (6a-m). The anti-cancer activity of all the synthesized compounds have been evaluated against a panel of potential cancer cell lines. The compounds 6a-l were further evaluated for five-dose assay based on the initial screening of anti-cancer activity against all the cell lines.

No. of Pages: 39 No. of Claims: 4