

Supplementary Material

Synthesis, neurotropic activity and SAR of new S-alkyl derivatives of 8-pyrazol-1-yl pyrano[3,4-c]pyridines

Shushanik Sh. Dashyan, * Ruzanna G. Paronikyan, Suren S. Mamyán, Ervand G. Paronikyan

Scientific Technological Center of Organic and Pharmaceutical Chemistry of National Academy of Sciences of Republic of Armenia, Ave. Azatutyan 26, Armenia 0014, Yerevan

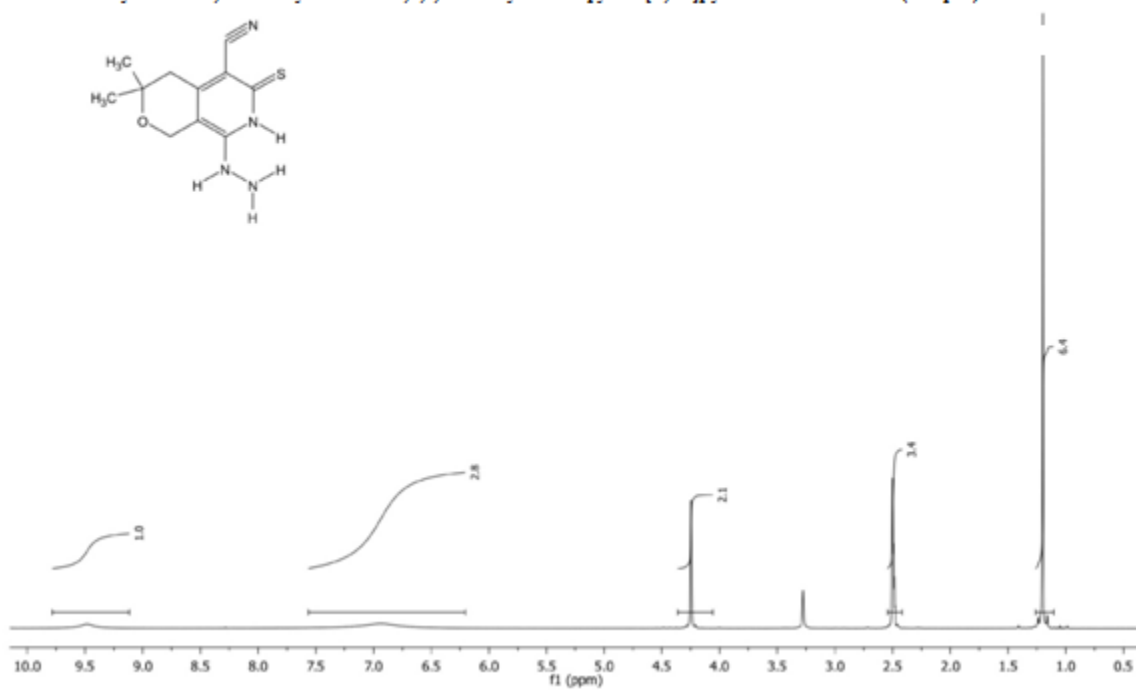
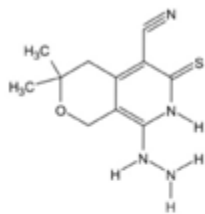
Email: shdashyan@gmail.com

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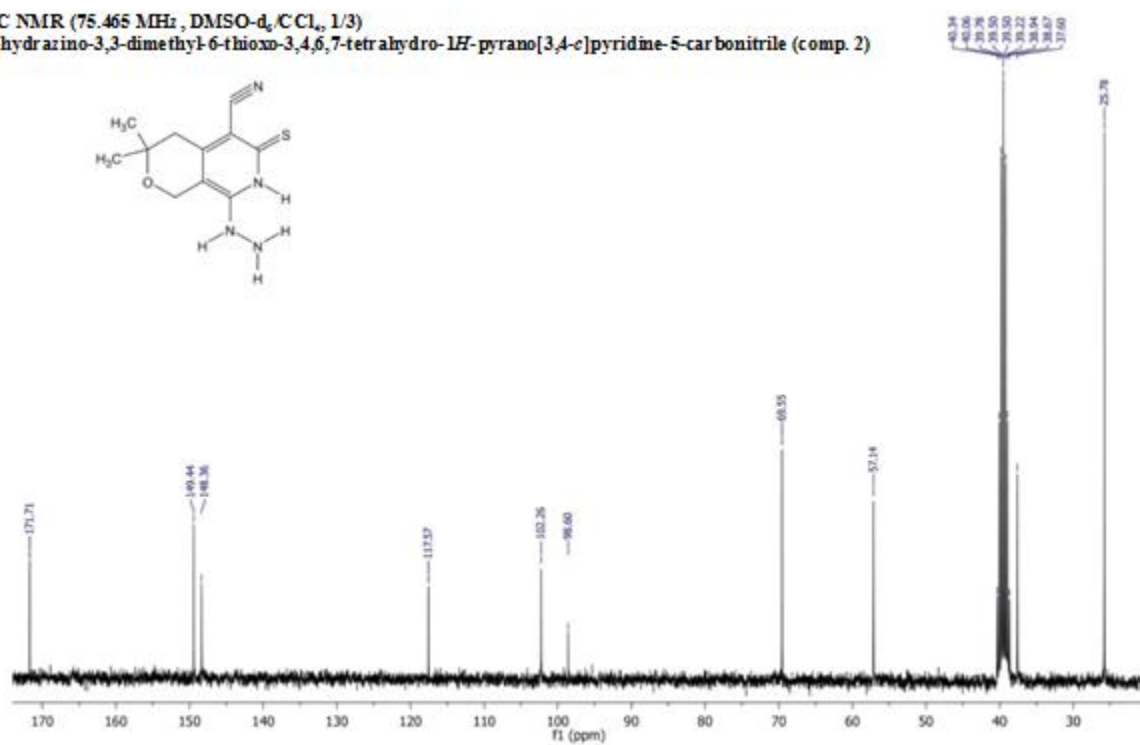
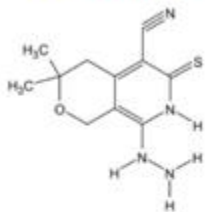
¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)

8-hydrazino-3,3-dimethyl-6-thioxo-3,4,6,7-tetrahydro-1H-pyrano[3,4-c]pyridine-5-carbonitrile (comp. 2)



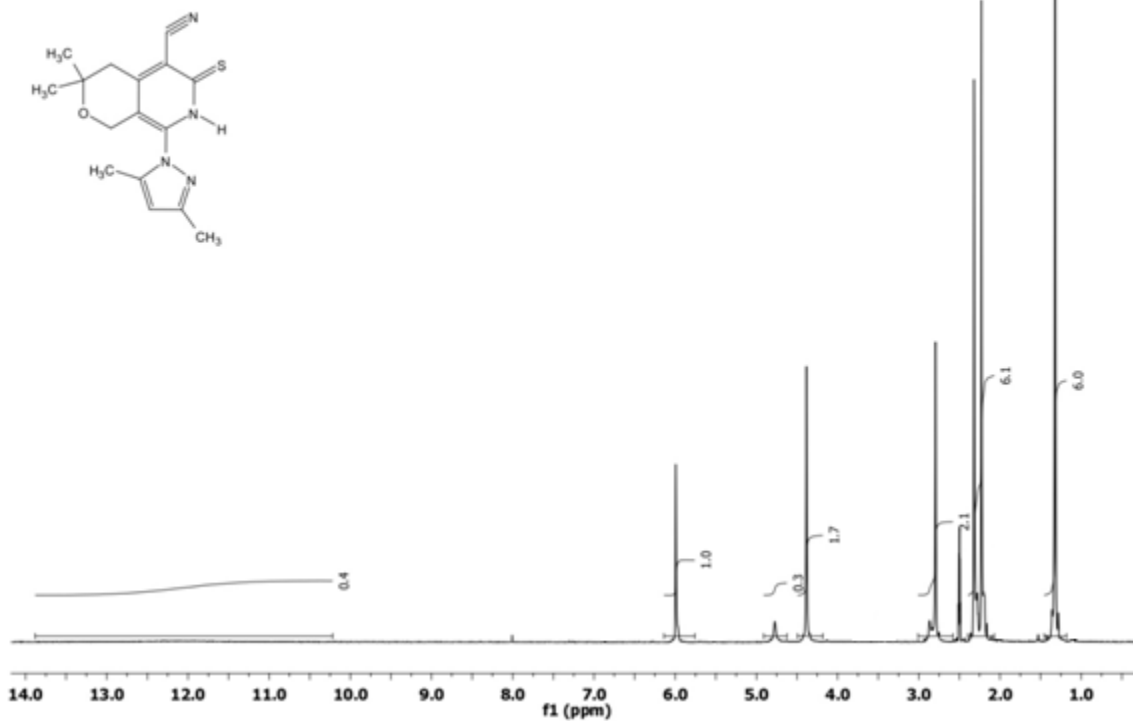
¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)

8-hydrazino-3,3-dimethyl-6-thioxo-3,4,6,7-tetrahydro-1H-pyrano[3,4-c]pyridine-5-carbonitrile (comp. 2)



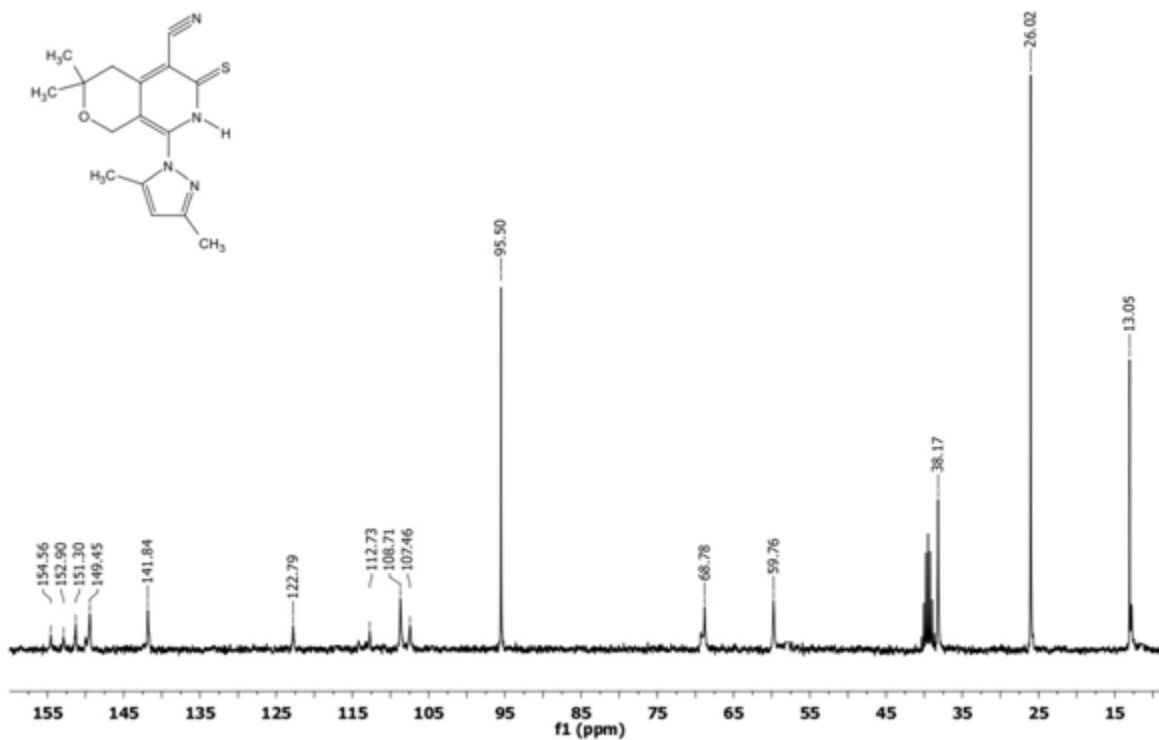
¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)

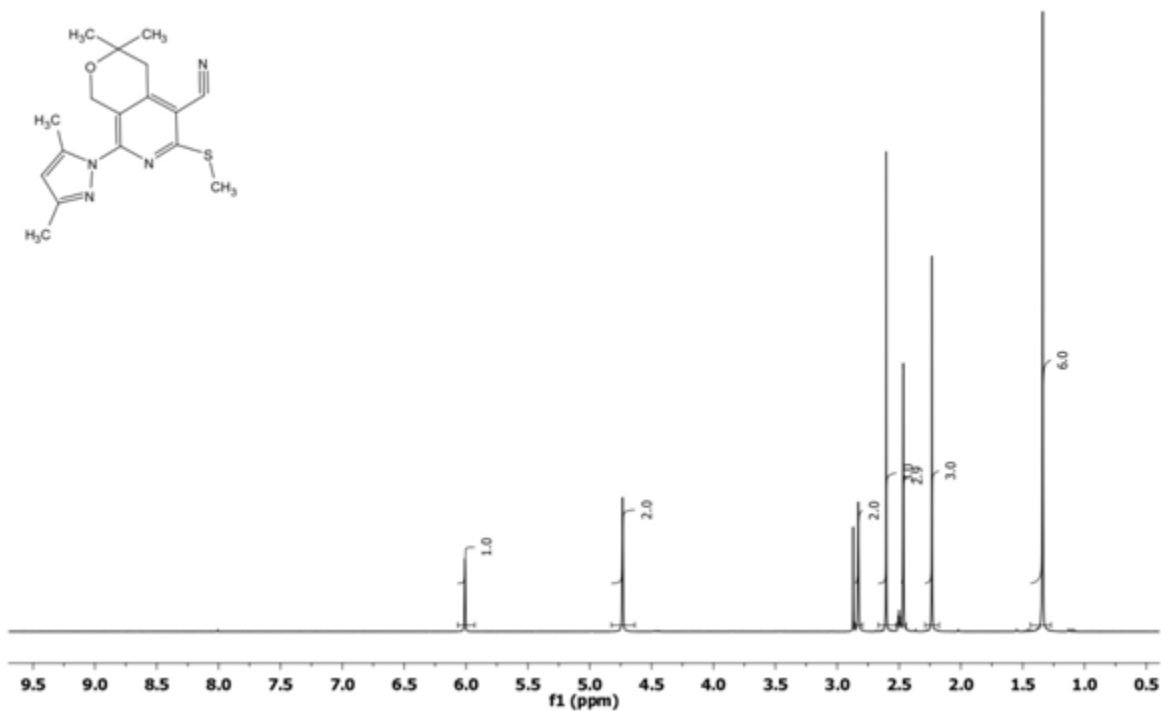
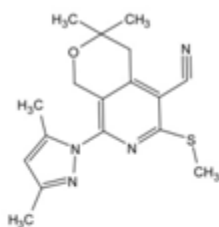
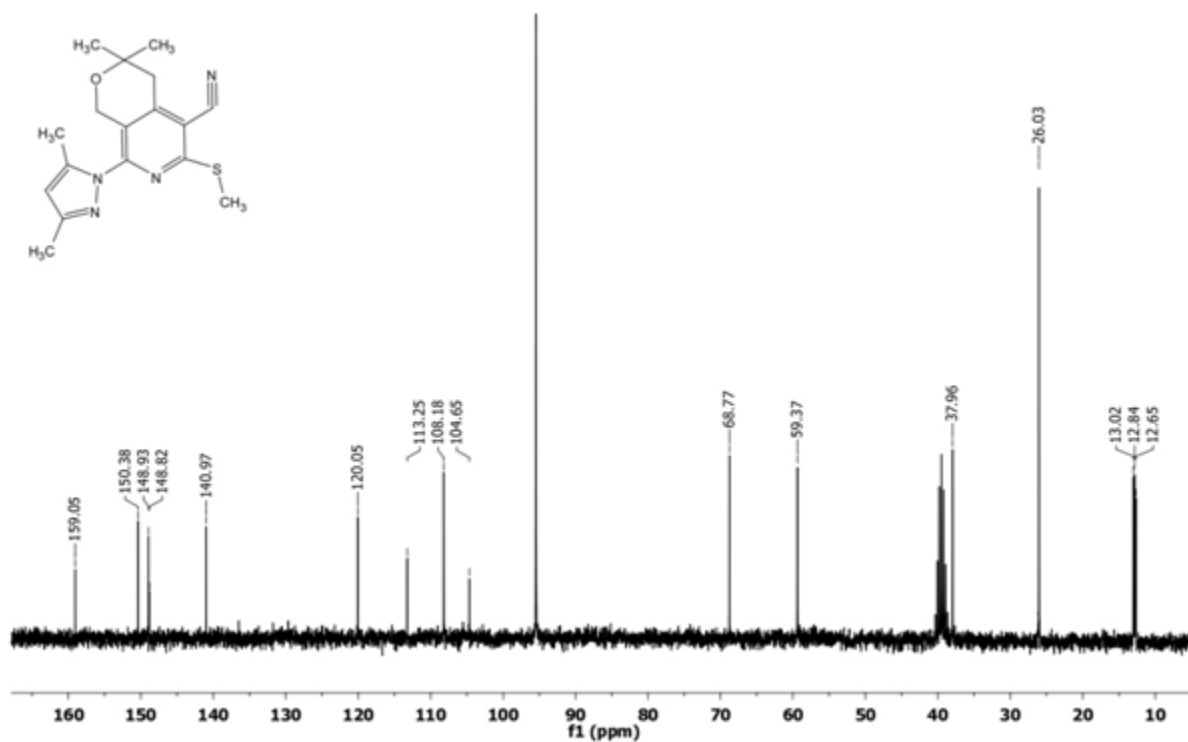
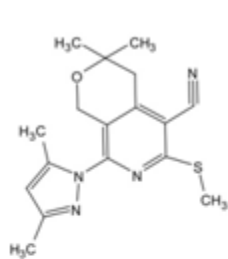
8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-6-thioxo-3,4,6,7-tetrahydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 3)



¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)

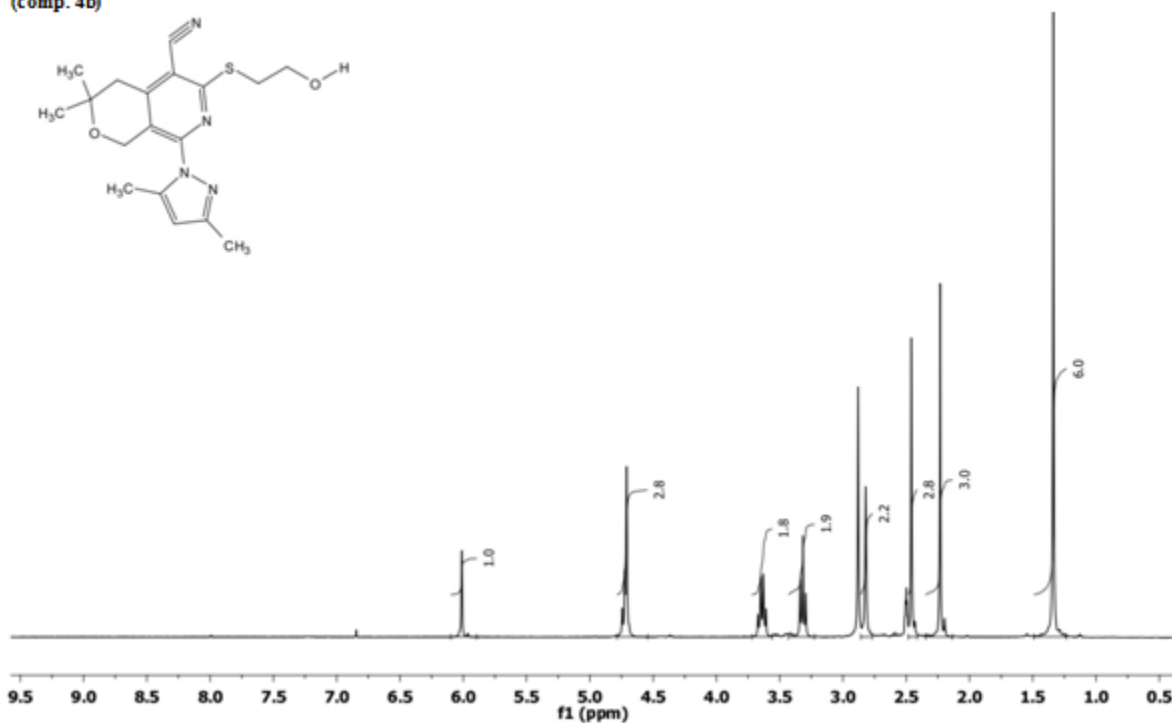
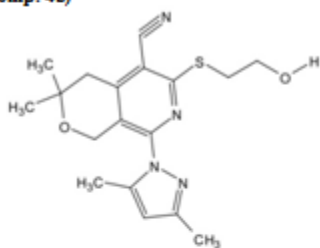
8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-6-thioxo-3,4,6,7-tetrahydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 3)



¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)8-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-6-(methylthio)-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 4a)¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)8-(3,5-Dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-6-(methylthio)-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 4a)

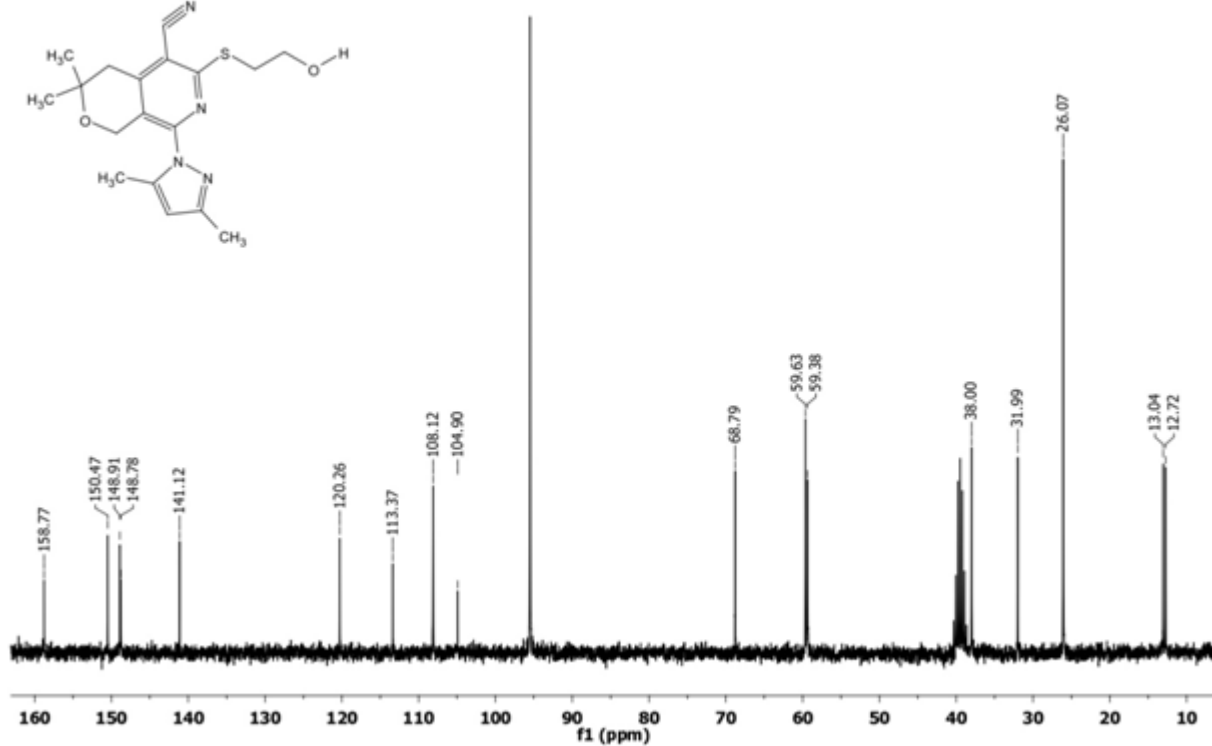
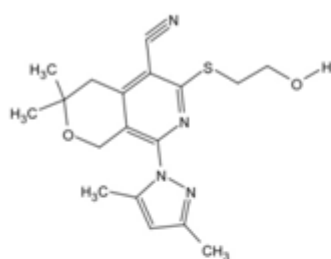
¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)

8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-6-[(2-hydroxyethyl)thio]-3,3-dimethyl-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 4b)



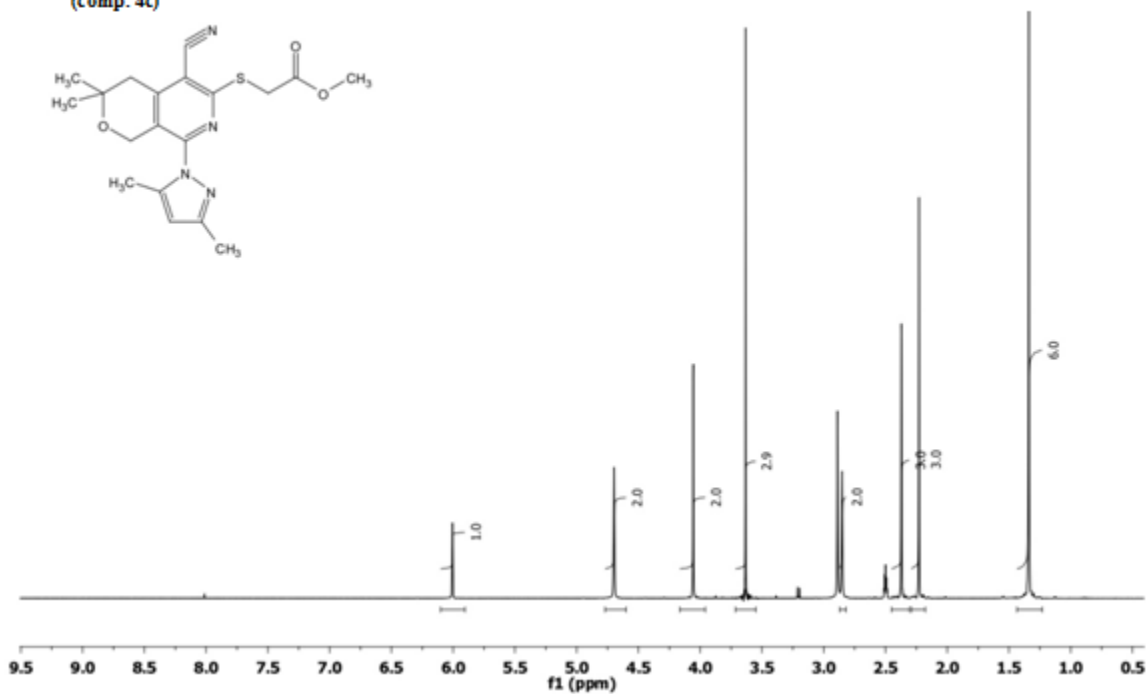
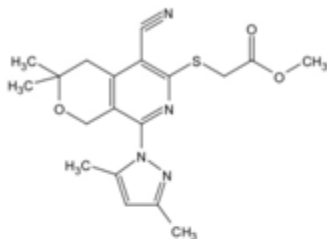
¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)

8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-6-[(2-hydroxyethyl)thio]-3,3-dimethyl-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 4b)



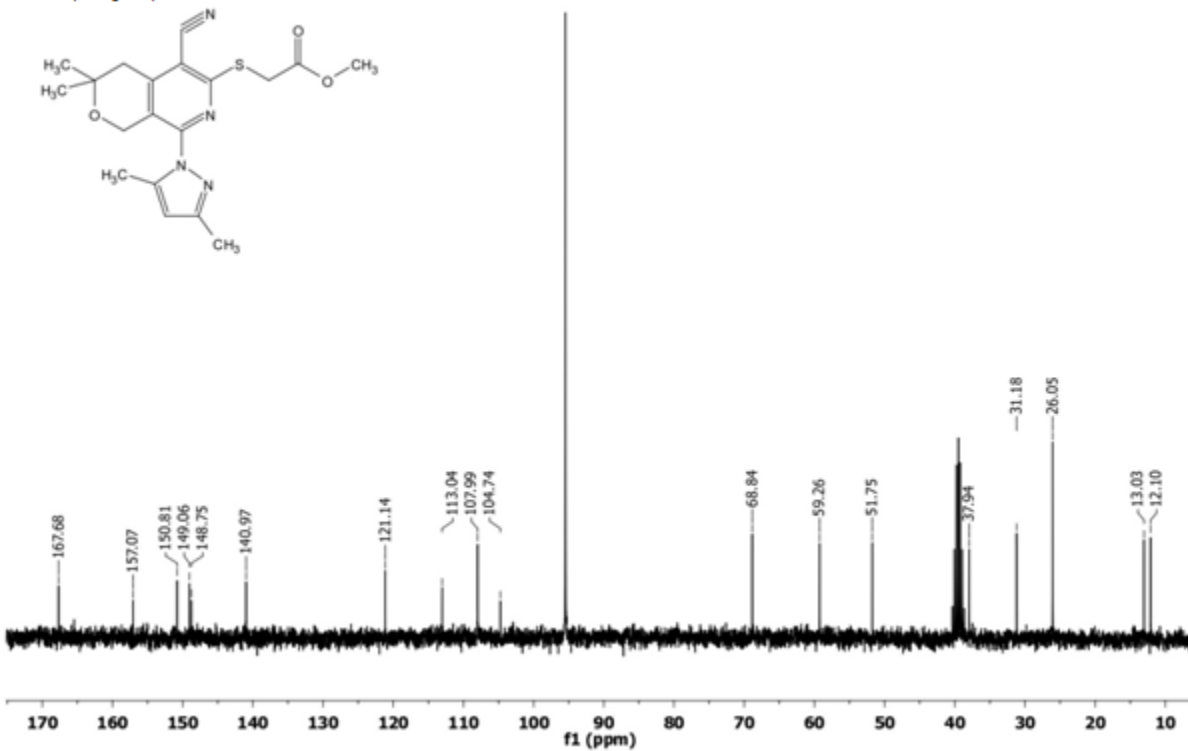
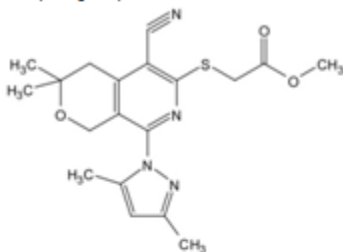
¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)

Methyl [[5-cyano-8-(3,5-dimethyl-1H-pyrazol-1-yl)-3,3-dimethyl-3,4-dihydro-1H-pyrano[3,4-c]pyridin-6-yl]thio]acetate (comp. 4c)



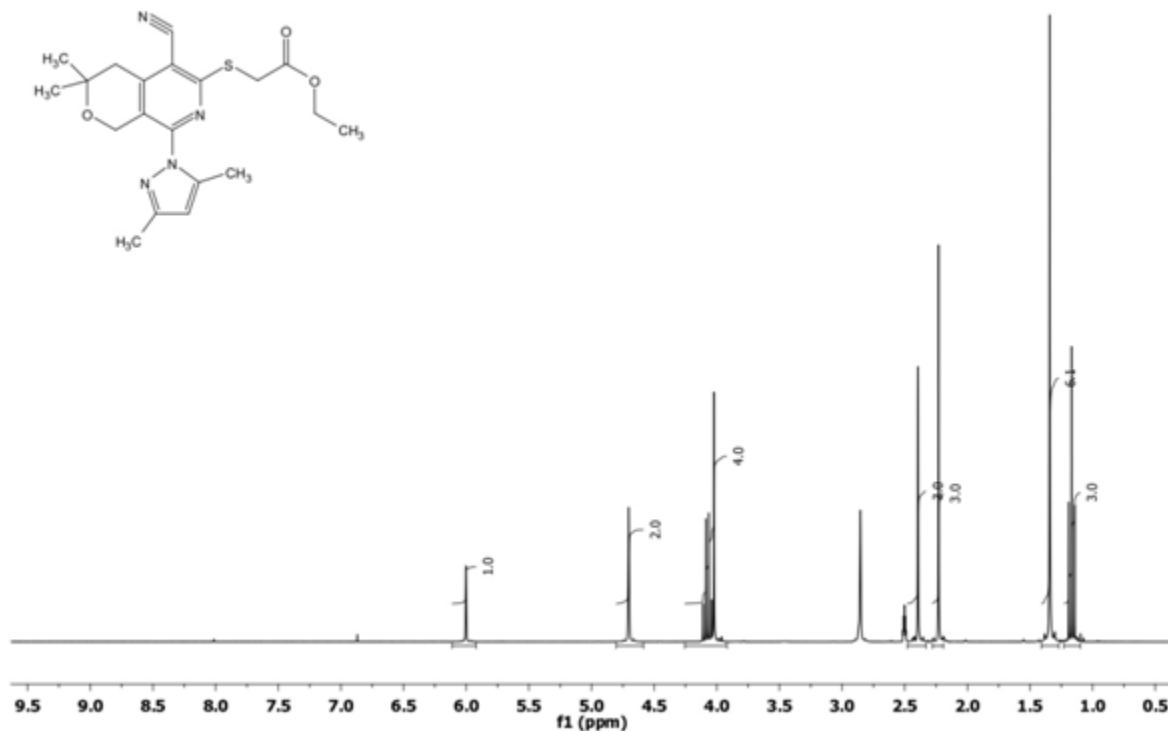
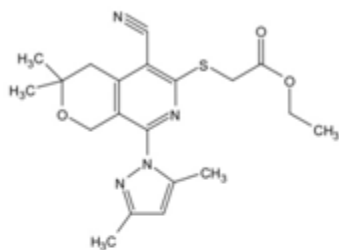
¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)

Methyl [[5-cyano-8-(3,5-dimethyl-1H-pyrazol-1-yl)-3,3-dimethyl-3,4-dihydro-1H-pyrano[3,4-c]pyridin-6-yl]thio]acetate (comp. 4c)



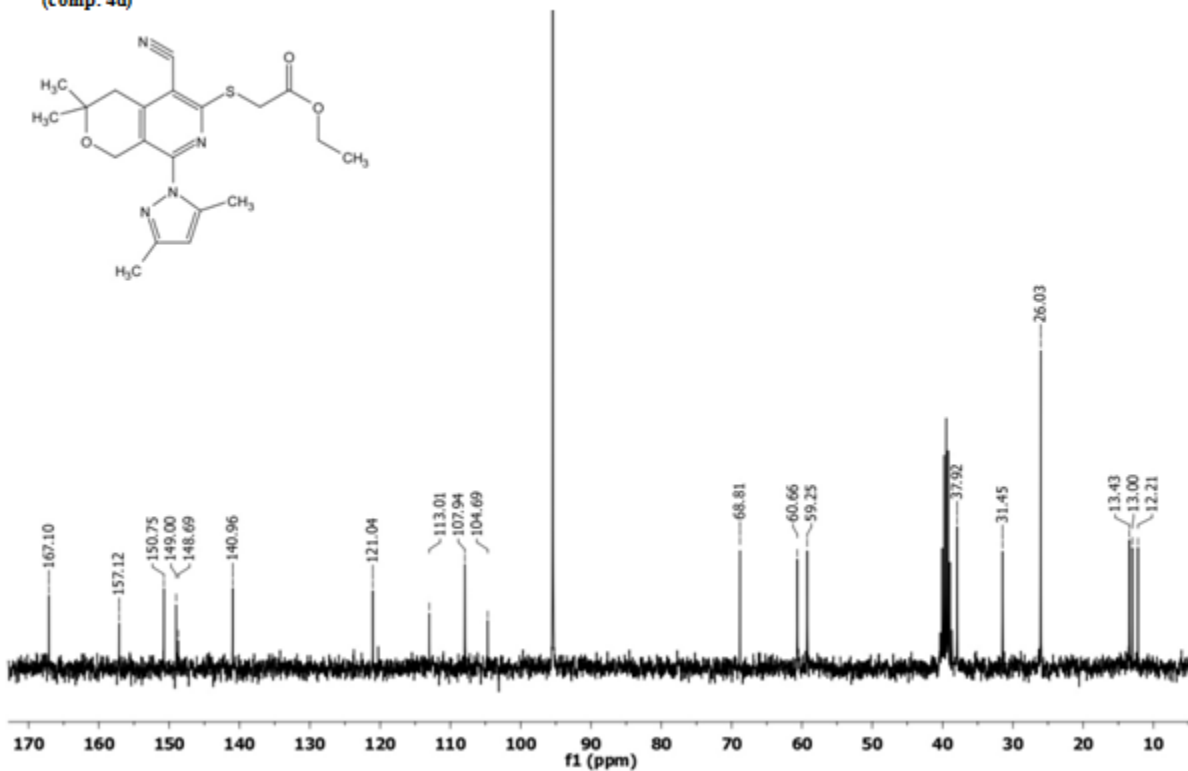
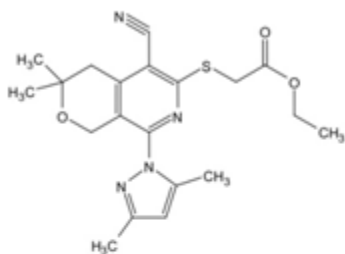
¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)

Ethyl [[5-cyano-8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridin-6-yl]thio]acetate (comp. 4d)



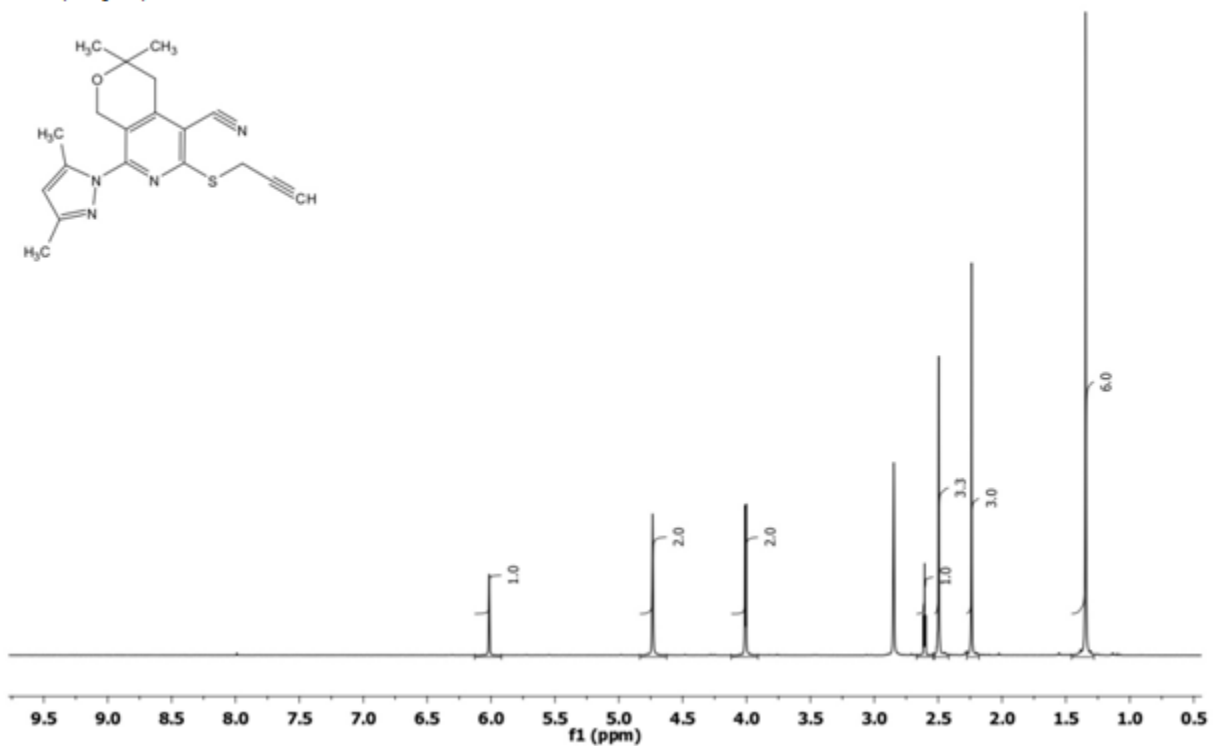
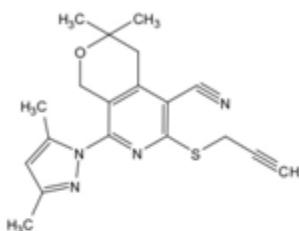
¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)

Ethyl [[5-cyano-8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridin-6-yl]thio]acetate (comp. 4d)



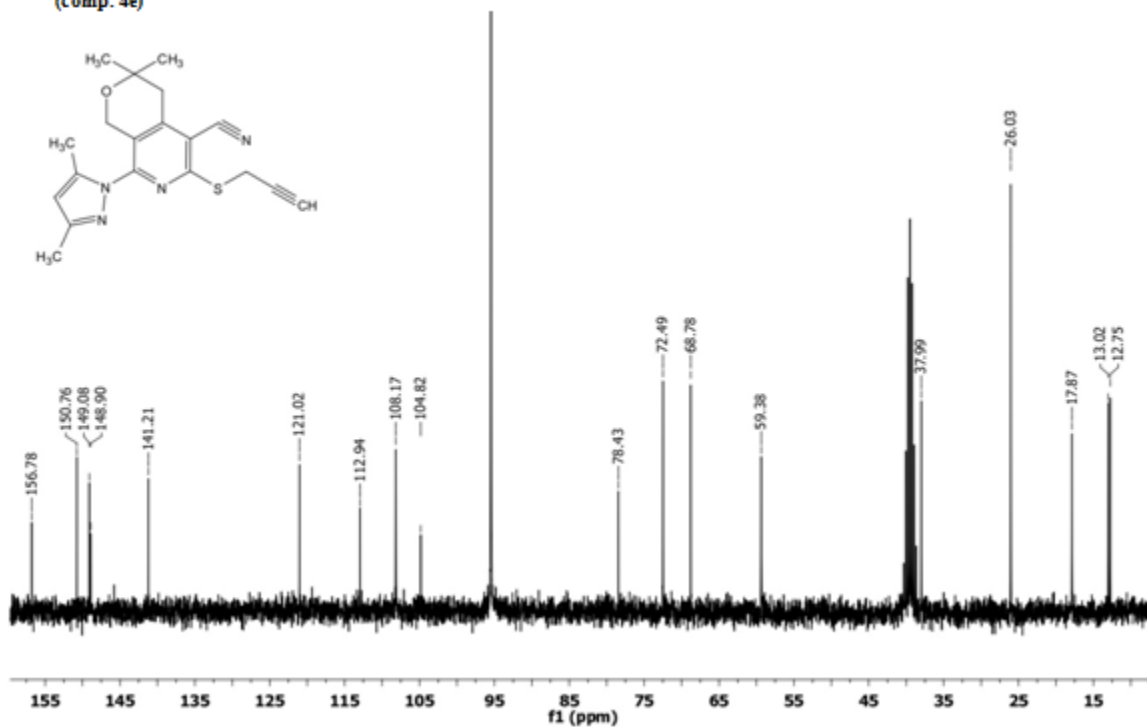
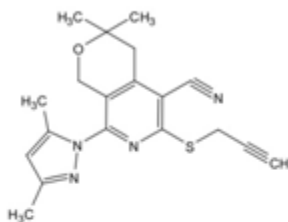
¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)

8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-6-(prop-2-yn-1-ylthio)-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 4e)



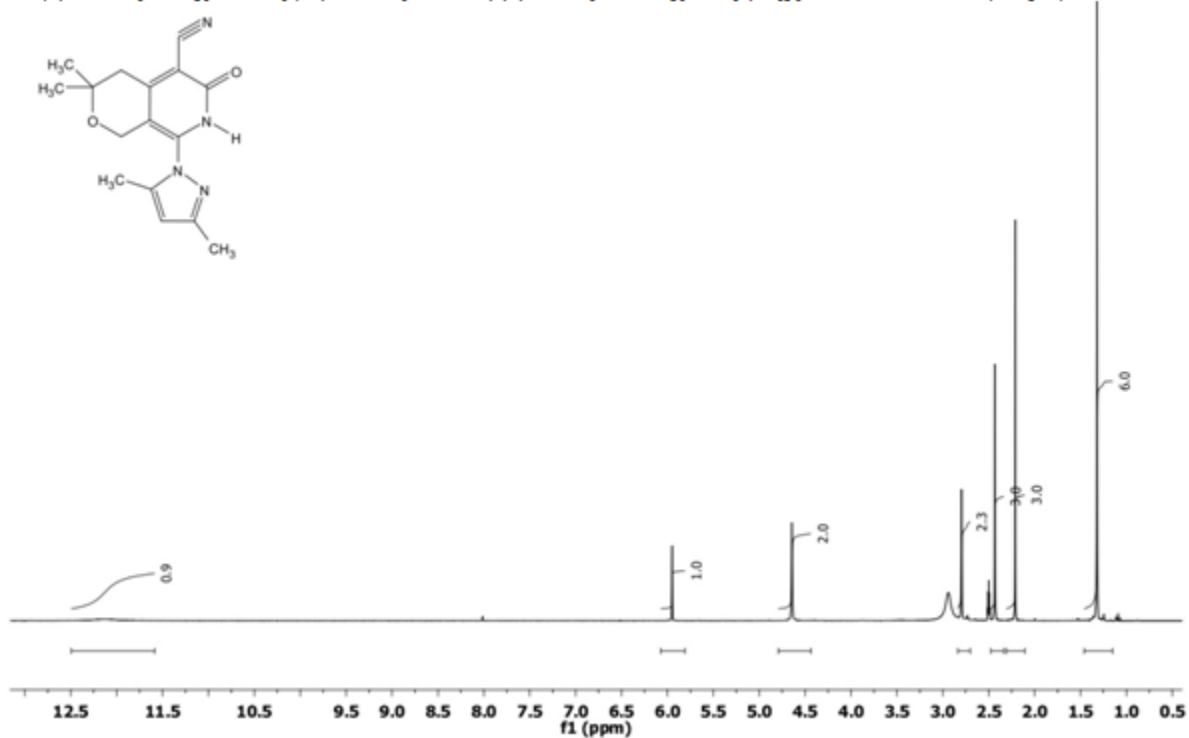
¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)

8-(3,5-dimethyl-1*H*-pyrazol-1-yl)-3,3-dimethyl-6-(prop-2-yn-1-ylthio)-3,4-dihydro-1*H*-pyrano[3,4-*c*]pyridine-5-carbonitrile (comp. 4e)



¹H NMR (300 MHz, DMSO-d₆/CCl₄, 1/3)

8-(3,5-dimethyl-1H-pyrazol-1-yl)-3,3-dimethyl-6-oxo-3,4,6,7-tetrahydro-1H-pyrano[3,4-c]pyridine-5-carbonitrile (comp. 5)

¹³C NMR (75.465 MHz, DMSO-d₆/CCl₄, 1/3)

8-(3,5-dimethyl-1H-pyrazol-1-yl)-3,3-dimethyl-6-oxo-3,4,6,7-tetrahydro-1H-pyrano[3,4-c]pyridine-5-carbonitrile (comp. 5)

