

Supplementary Information

An efficient synthesis of pyranopyrimidine derivatives by using glyoxylic acid:L-proline deep eutectic solvent as a novel designer reaction promoter

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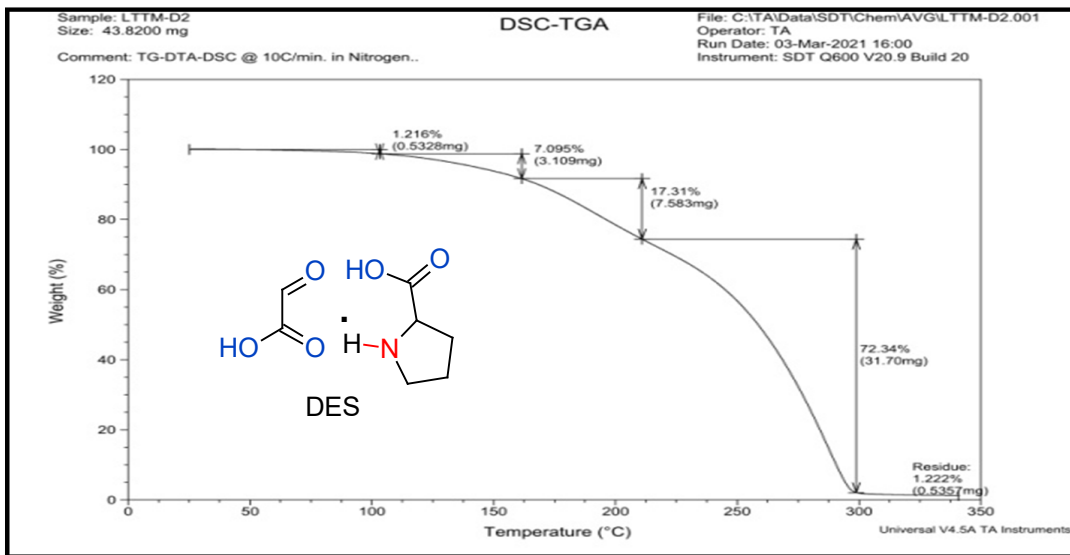


Fig. S1 — TGA plot of glyoxylic acid:L-proline (1:1)

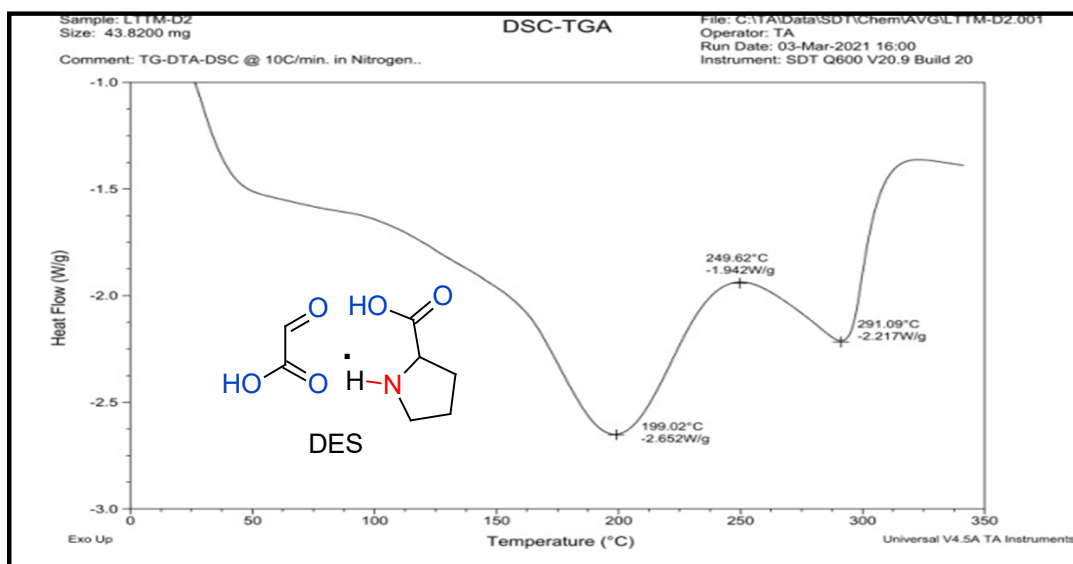


Fig. S2 — DSC plot of glyoxylic acid:L-proline (1:1)

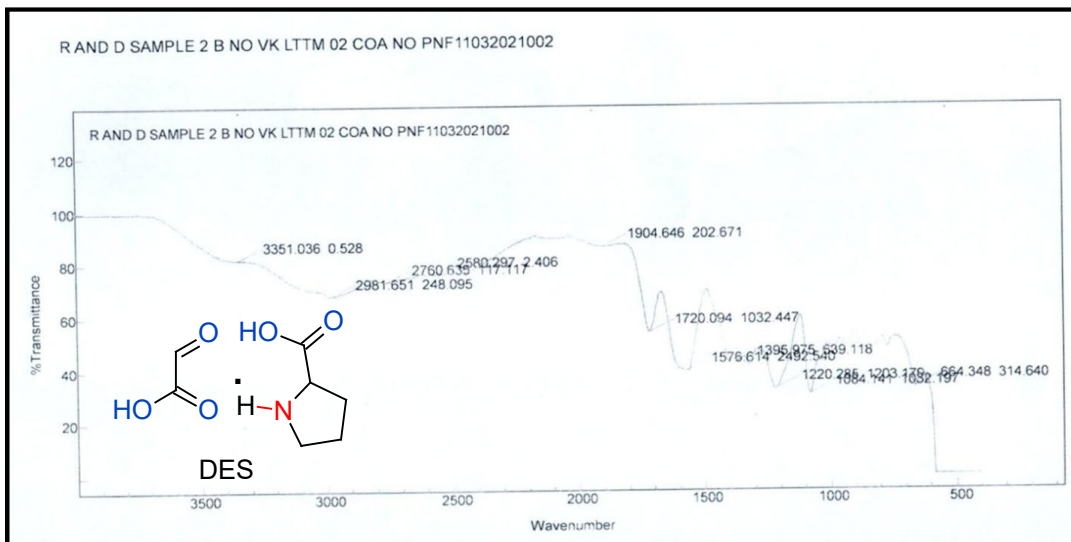


Fig. S3 — IR Spectrum of glyoxylic acid:L-proline (1:1)

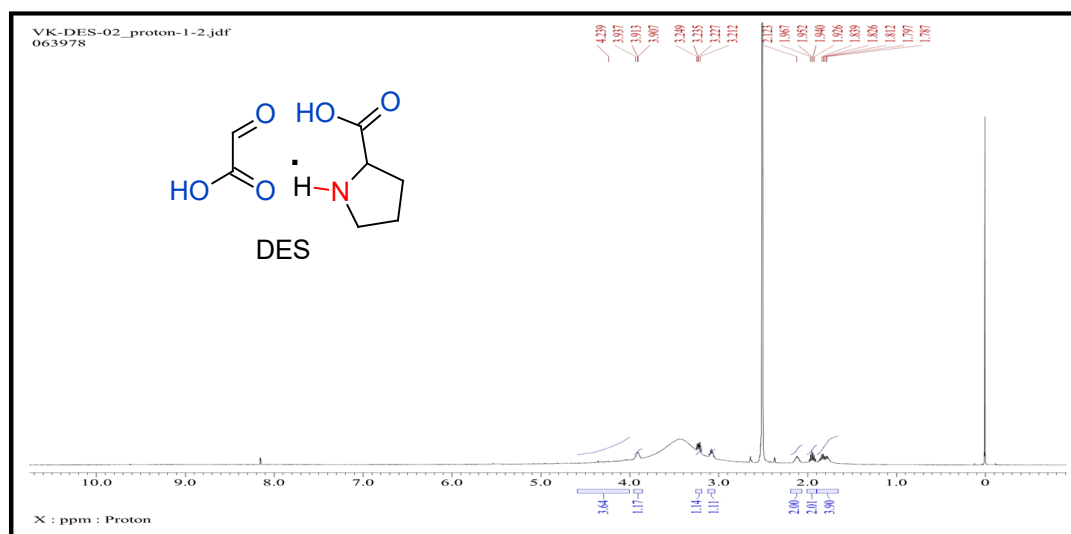


Fig. S4 — ¹H NMR spectrum of glyoxylic acid:L-proline (1:1)

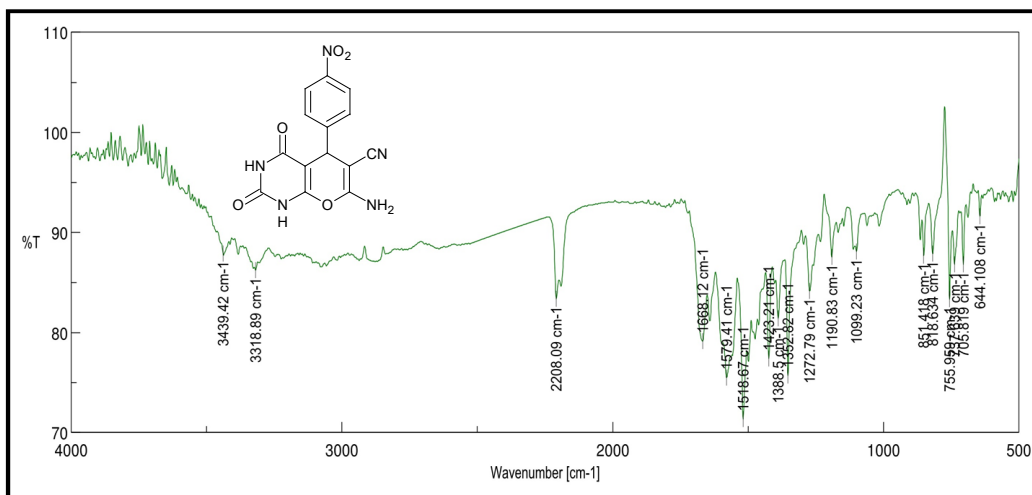


Fig. S7 — IR spectrum of 7-amino-5-(4-nitrophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4g)

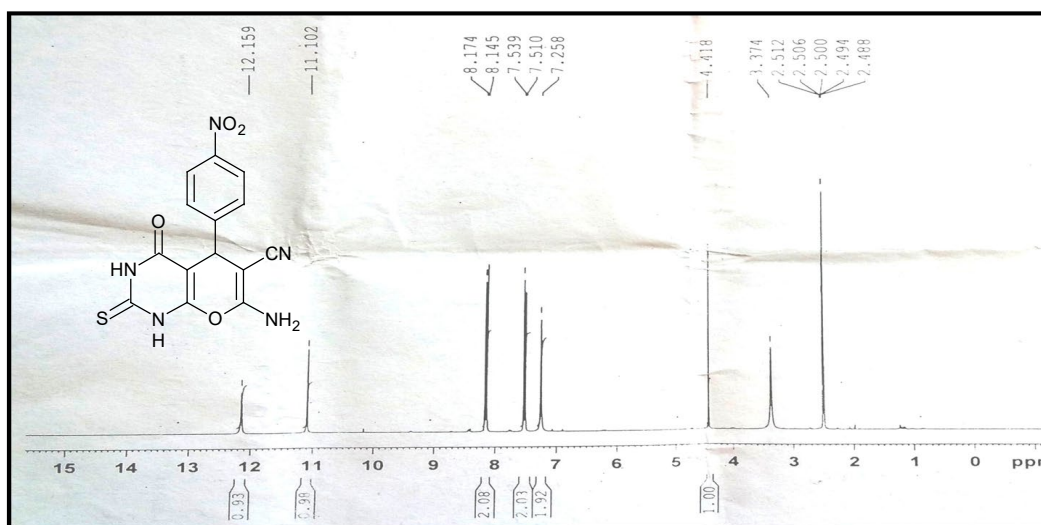


Fig. S8 — ¹H NMR spectrum of 7-amino-5-(4-nitrophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4g)

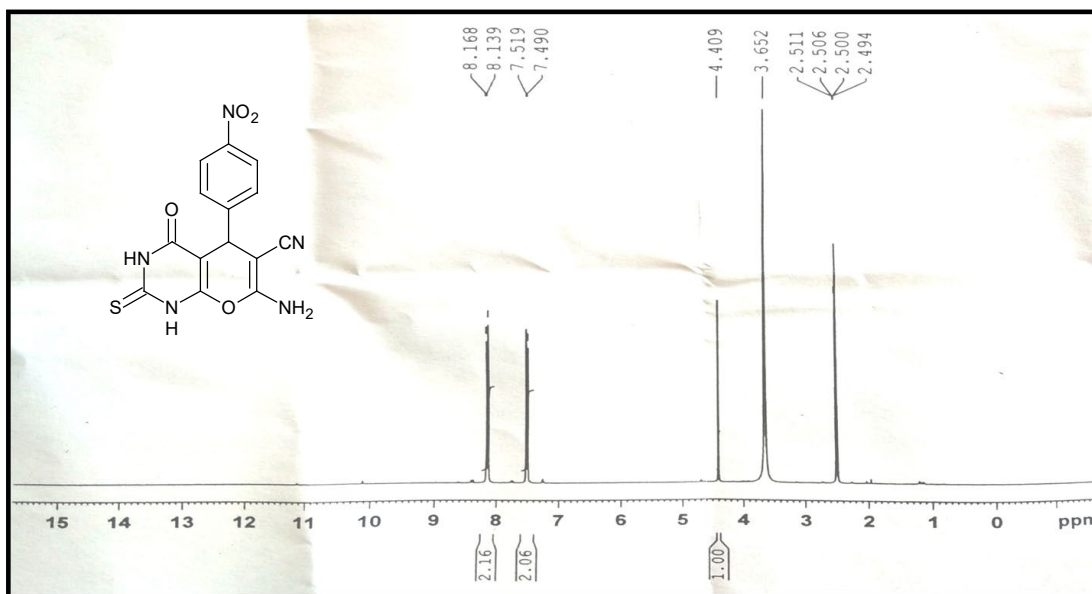


Fig. S9 — D₂O-Exchange NMR spectrum of 7-amino-5-(4-nitrophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2*H*-pyrano[2,3-*d*]pyrimidine-6-carbonitrile (4g)

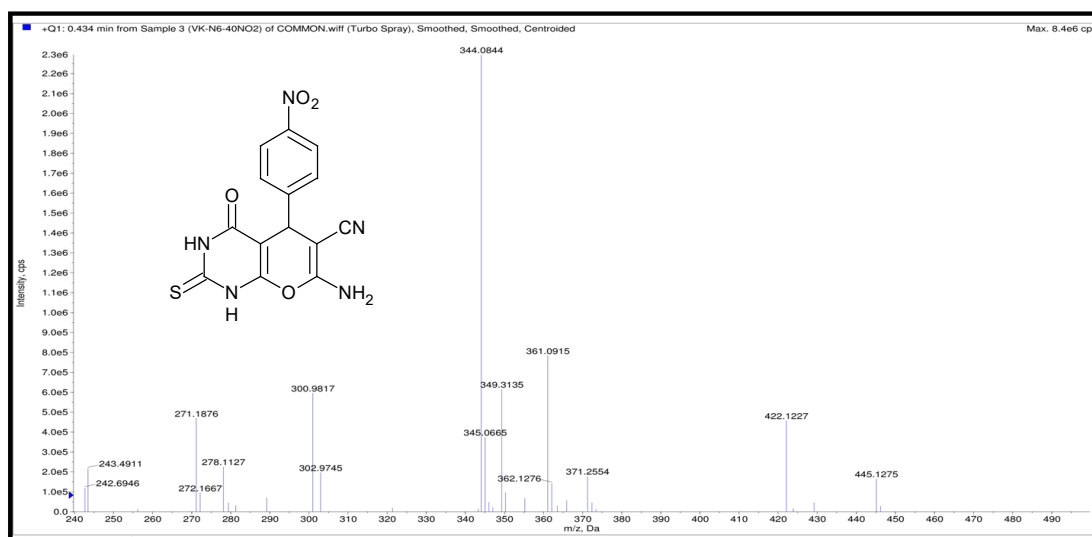


Fig. S10 — Mass spectrum of at (+ve) polarity of 7-amino-5-(4-nitrophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2*H*-pyrano[2,3-*d*]pyrimidine-6-carbonitrile (4g)

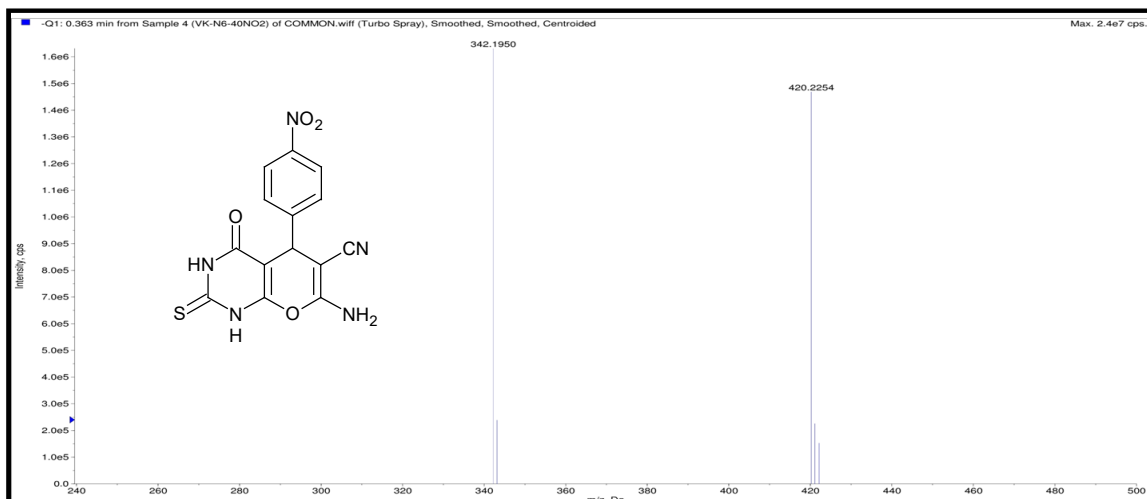


Fig. S11 — Mass spectrum of at (-ve) polarity of 7-amino-5-(4-nitrophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4g)

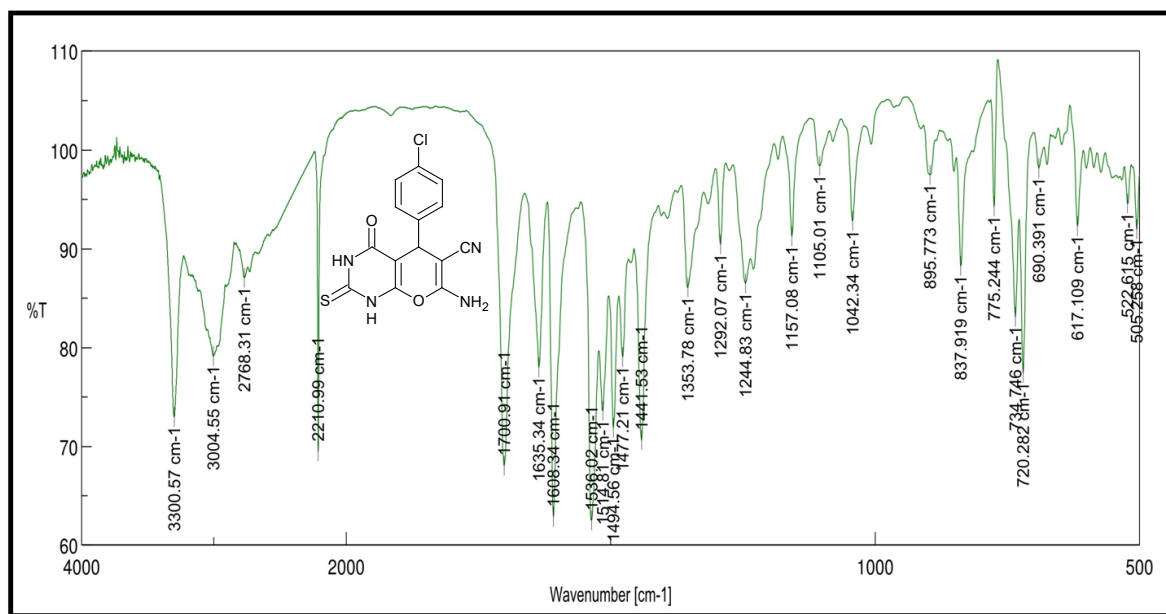


Fig. S12 — IR spectrum of 7-amino-5-(4-chlorophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4c)

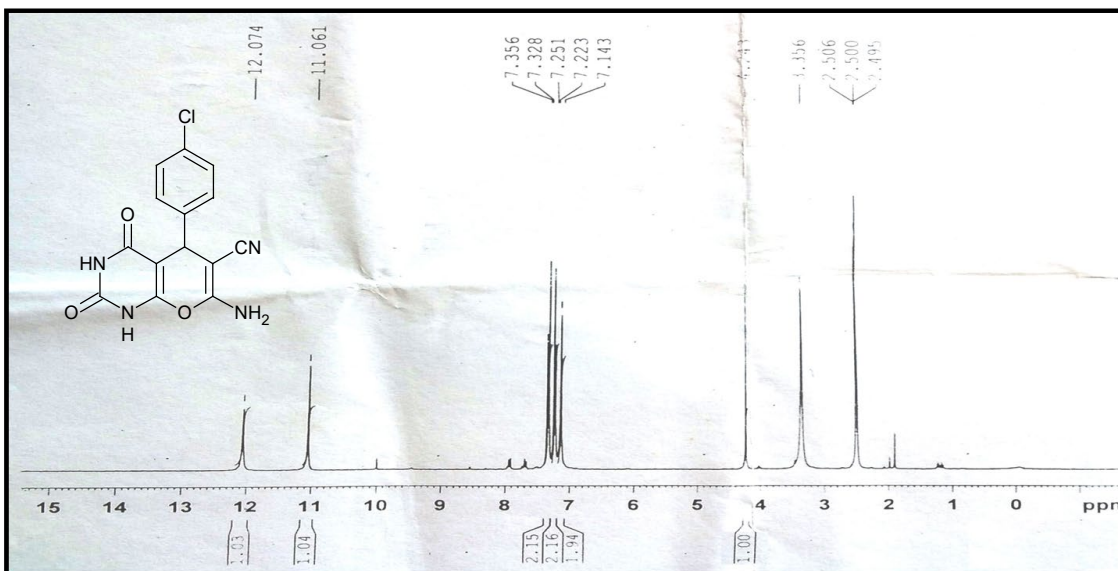


Fig. S13 — ^1H NMR spectrum of 7-amino-5-(4-chlorophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4c)

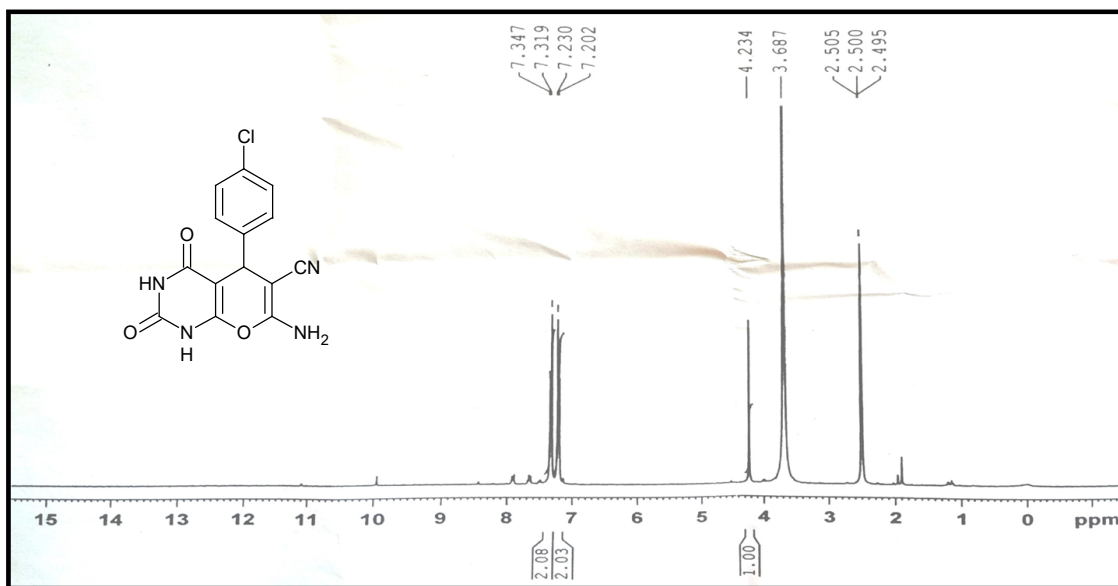


Fig. S14 — D_2O -Exchange NMR spectrum of 7-amino-5-(4-chlorophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4c)

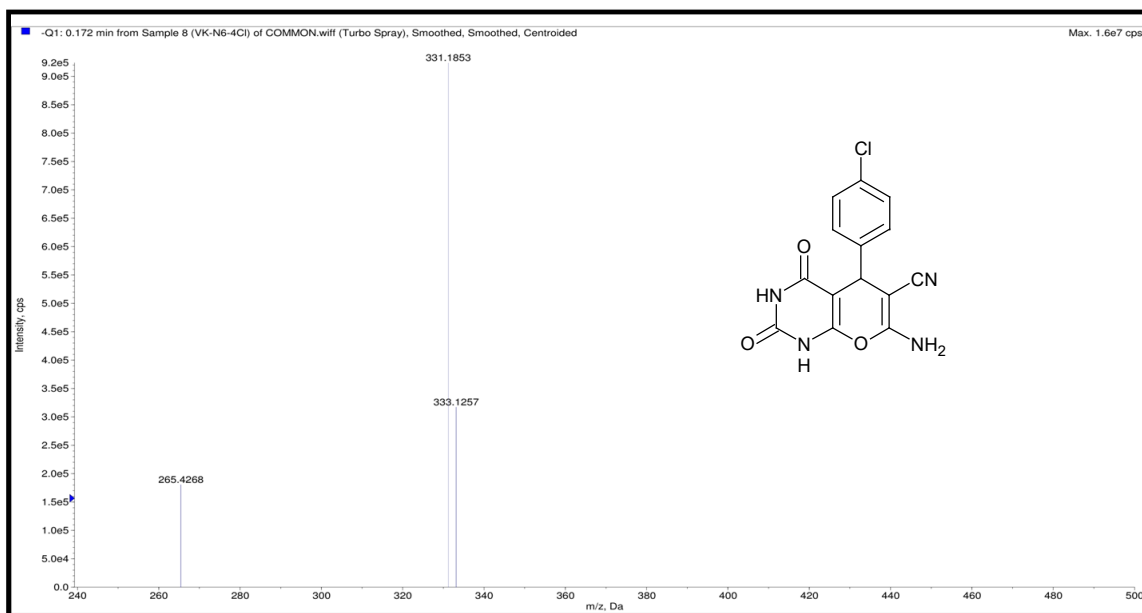


Fig. S15 — Mass spectrum (-ve) of 7-amino-5-(4-chlorophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4c)

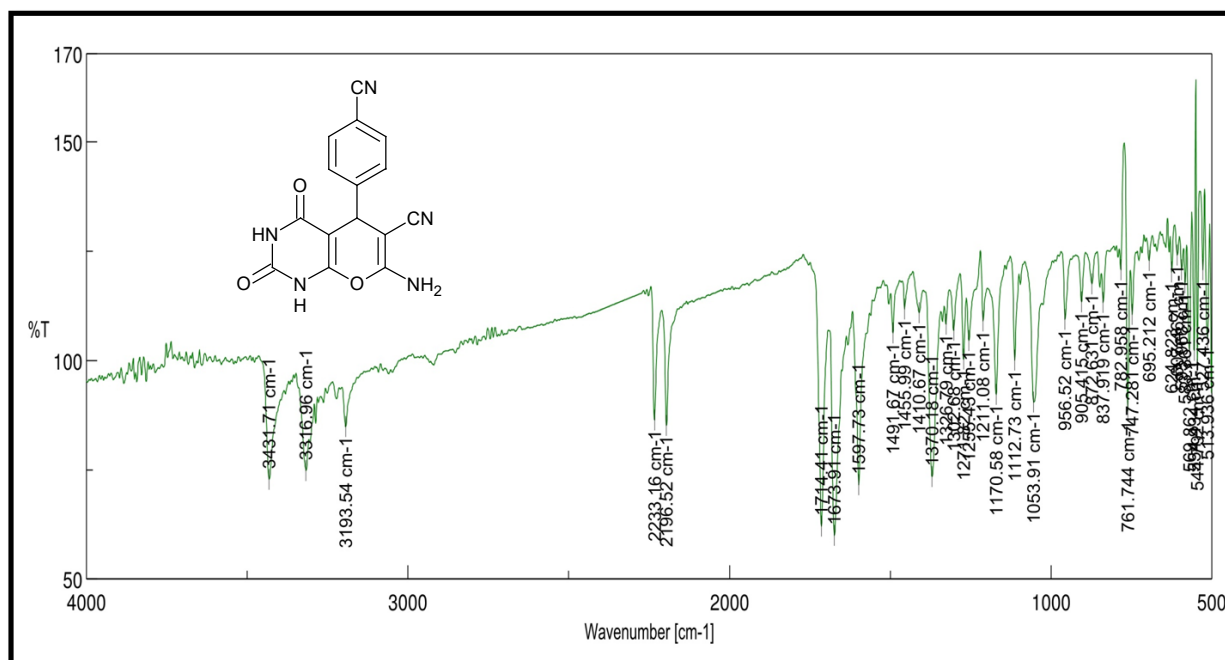


Fig. S16 — IR spectrum of 7-amino-5-(4-cyanophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4b)

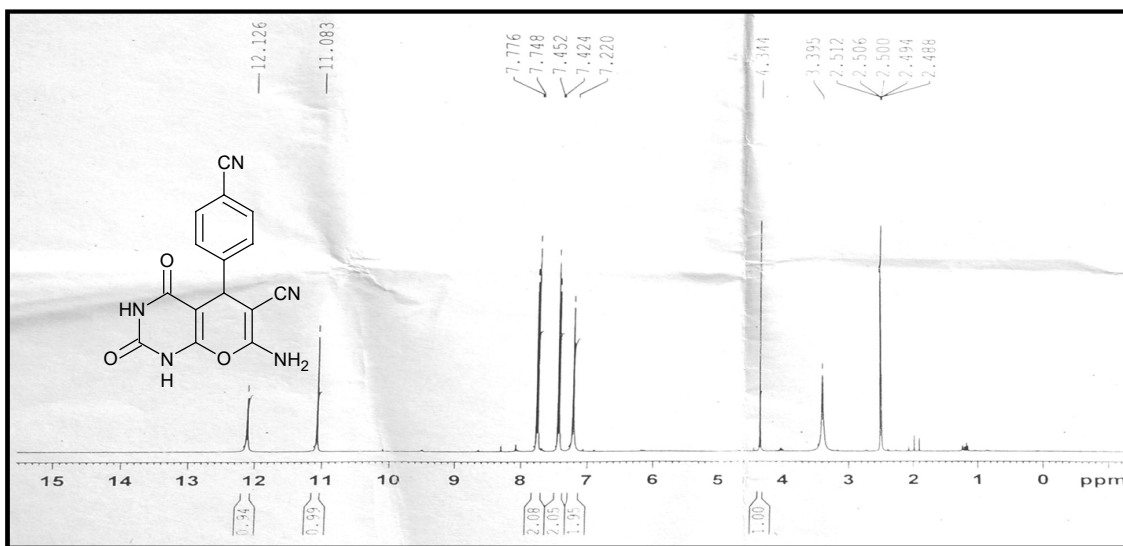


Fig. S17 — ¹H NMR spectrum of 7-amino-5-(4-cyanophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4b)

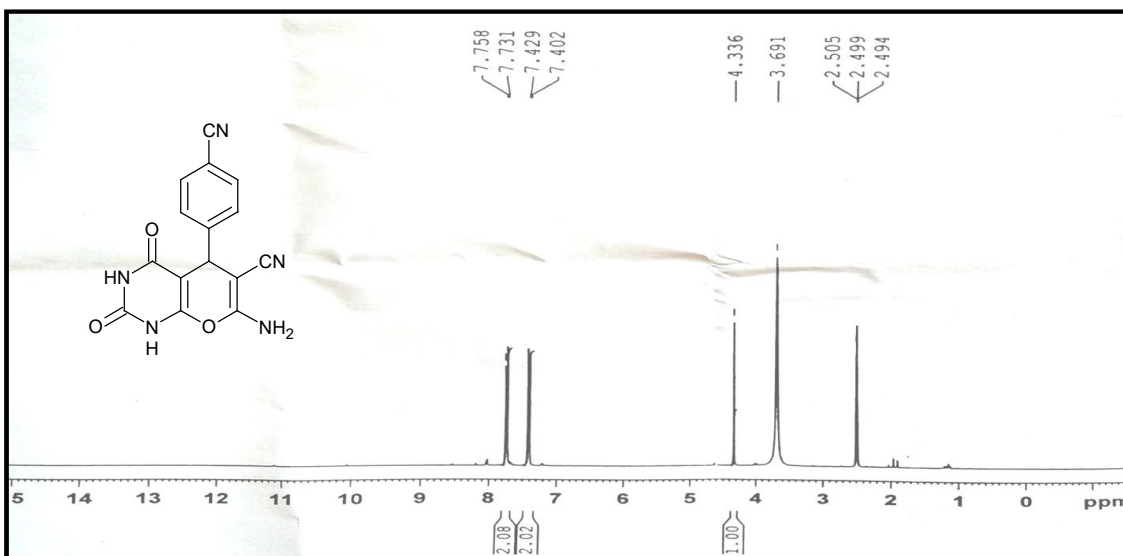


Fig. S18 — D₂O-Exchange spectrum of 7-amino-5-(4-cyanophenyl)-2,4-dioxo-1,3,4,5-tetrahydro-2H-pyrano[2,3-d]pyrimidine-6-carbonitrile (4b)