

## Supplementary Materials

# Biological Evaluation of Arylsemicarbazone Derivatives as Potential Anticancer Agents

Anne Cecília Nascimento da Cruz <sup>1</sup>, Dalci José Brondani <sup>2</sup>, Temístocles I'talo de Santana <sup>1</sup>, Lucas Oliveira da Silva <sup>2</sup>, Elizabeth Fernanda da Oliveira Borba <sup>1</sup>, Antônio Rodolfo de Faria <sup>2</sup>, Julianna Ferreira Cavalcanti de Albuquerque <sup>1</sup>, Sylvie Piessard <sup>3</sup>, Rafael Matos Ximenes <sup>1</sup>, Blandine Baratte <sup>4,5</sup>, Stéphane Bach <sup>4,5</sup>, Sandrine Ruchaud <sup>4</sup>, Francisco Jaime Bezerra Mendonça Junior <sup>6</sup>, Marc-Antoine Bazin <sup>3</sup>, Marcelo Montenegro Rabello <sup>2</sup>, Marcelo Zaldini Hernandes <sup>2</sup>, Pascal Marchand <sup>3,\*</sup> and Teresinha Gonçalves da Silva <sup>1,\*</sup>

<sup>1</sup> Departamento de Antibióticos, Centro de Biociências, Universidade Federal de Pernambuco, Recife, PE, 50740-520, Brazil; annececilia2006@hotmail.com (A.C.N.C.); temistoclesitalo@gmail.com (T.I.S.); elizabethfernanda\_7@hotmail.com (E.F.O.B.); julianna@ufpe.br (J.F.C.A.); ximenesrm@gmail.com (R.M.X.)

<sup>2</sup> Departamento de Ciências Farmacêuticas, Centro de Ciências da Saúde, Universidade Federal de Pernambuco, Recife, PE, 50740-520, Brazil; brondani.dj@gmail.com (D.J.B.); luc.osilva@gmail.com (L.O.S.); rodolfo.ufpe@gmail.com (A.R.F.); montenegro.rabello@gmail.com (M.M.R.); zaldini@gmail.com (M.Z.H.)

<sup>3</sup> Université de Nantes, Cibles et Médicaments des Infections et du Cancer, IICiMed, EA 1155, Nantes, F-44000, France; sylvie.piessard@univ-nantes.fr (S.P.); marc-antoine.bazin@univ-nantes.fr (M.A.B.)

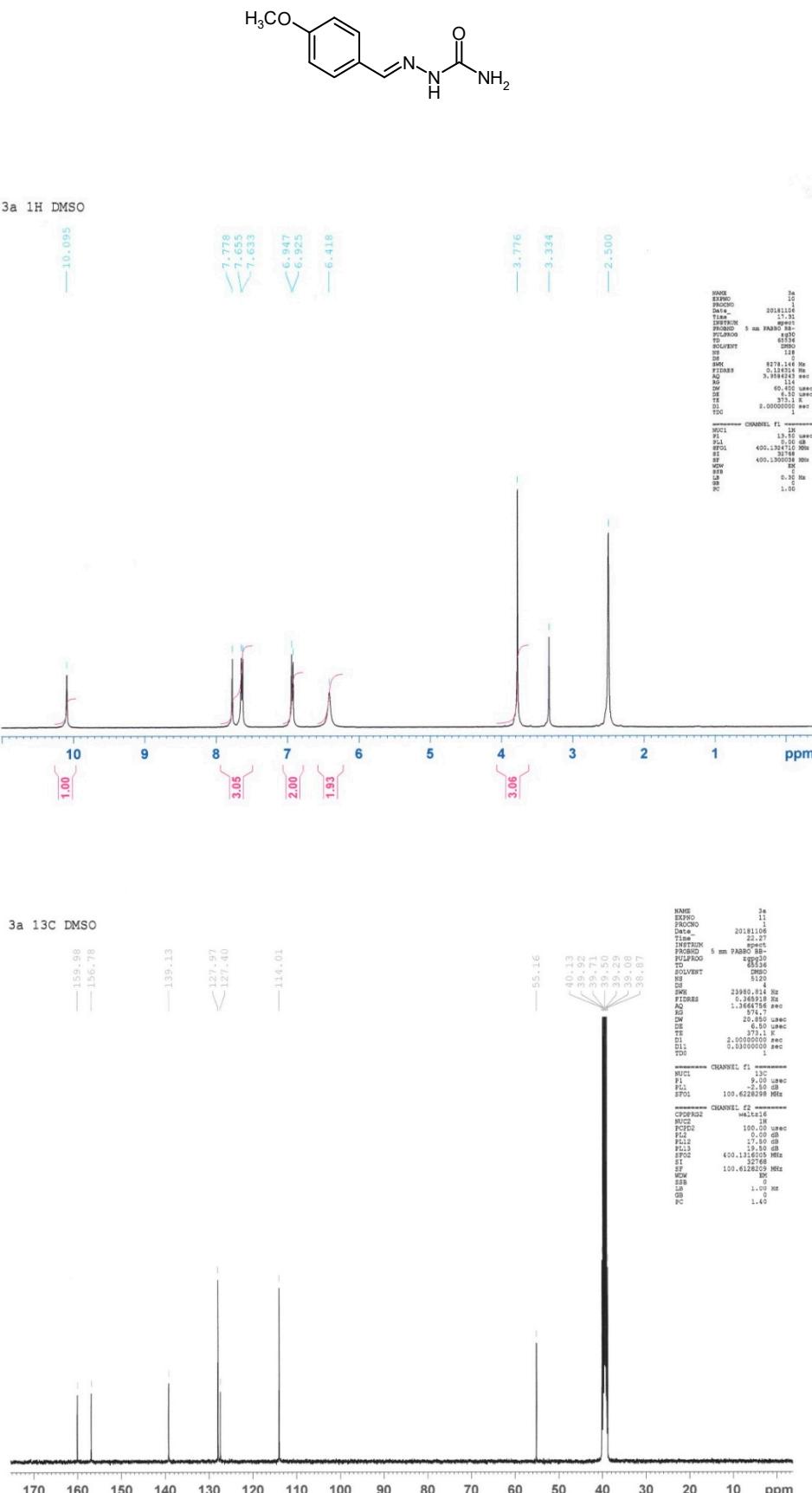
<sup>4</sup> Sorbonne Université, CNRS, USR3151, « Protein phosphorylation and human diseases » Unit, Station Biologique, Roscoff, F-29688, France; baratte@sb-roscott.fr (B.B.); bach@sb-roscott.fr (S.B.); sandrine.ruchaud@sb-roscott.fr (S.R.)

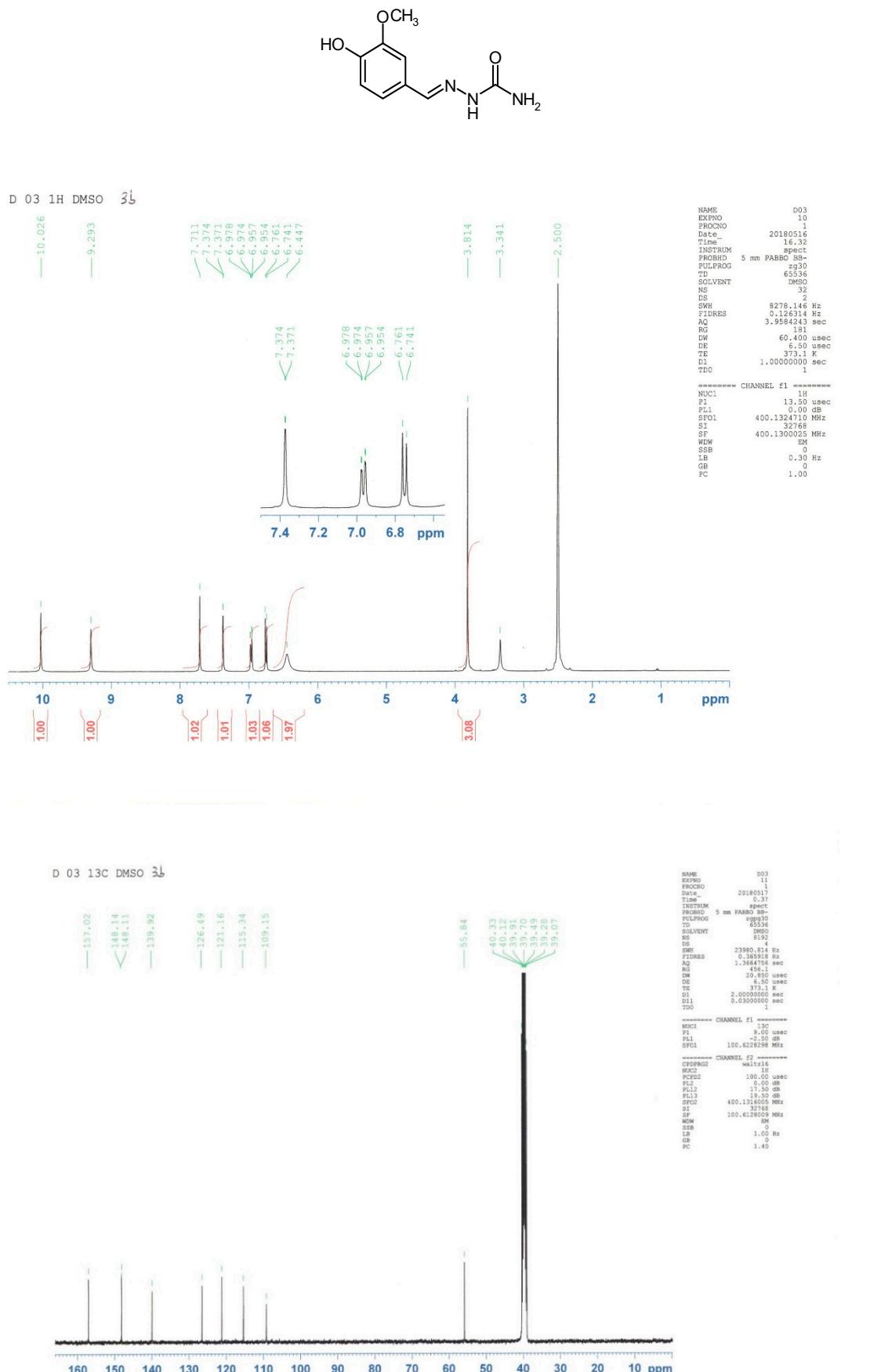
<sup>5</sup> Sorbonne Université, CNRS, FR2424, Kinase Inhibitor Specialized Screening Facility - KISSf, Station Biologique, Roscoff, F-29688, France

<sup>6</sup> Laboratory of Synthesis and Drug Delivery, Department of Biological Sciences, State University of Paraíba, João Pessoa, PB, 58071-160, Brazil; franciscojbmendonca@yahoo.com.br

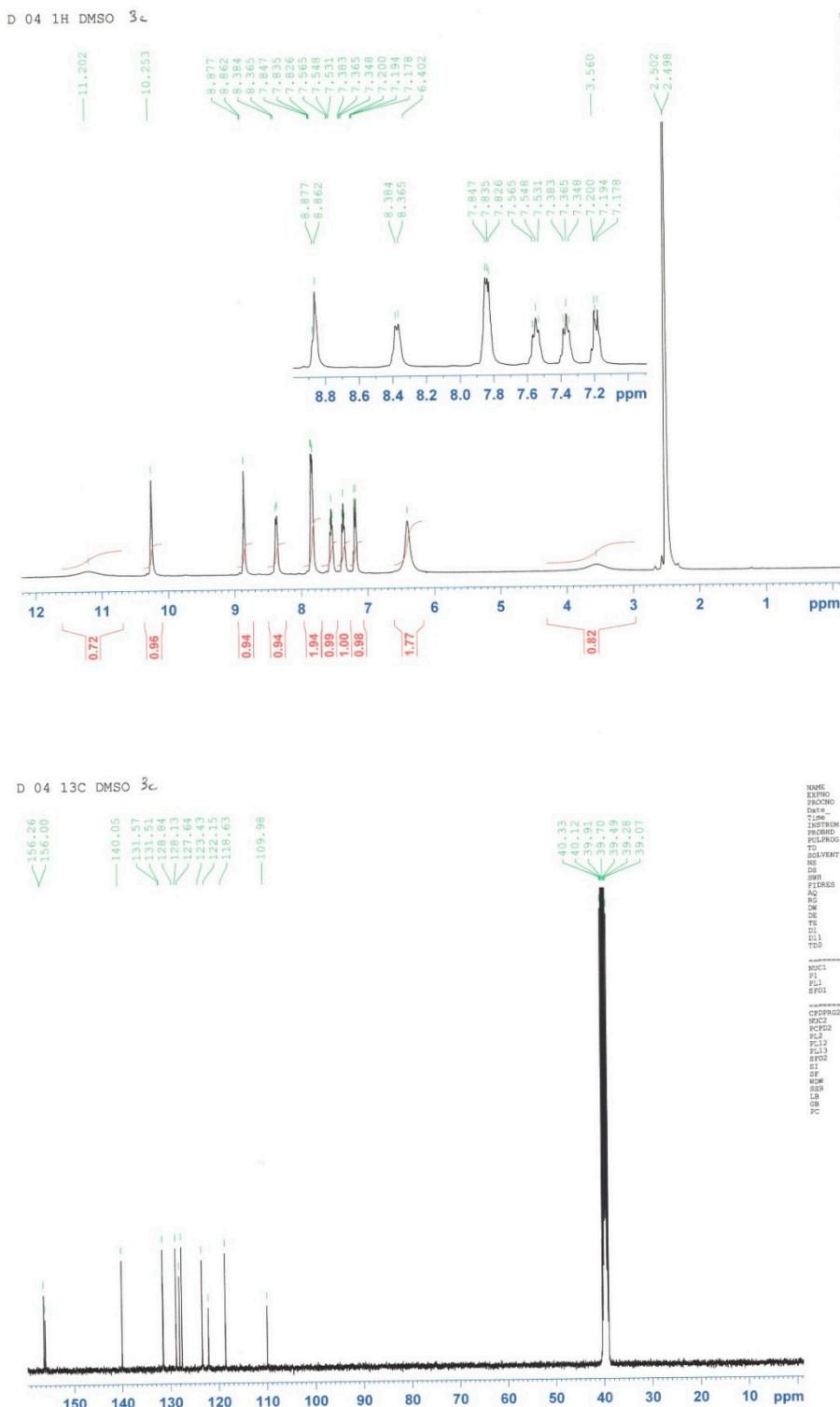
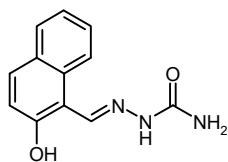
\* Correspondence: teresinha.goncalves@pq.cnpq.br (T.G.S.); pascal.marchand@univ-nantes.fr (P.M.); Tel.: +55 31 81 2126 8347 (T.G.S.); Tel.: +33 253 009 155 (P.M.)

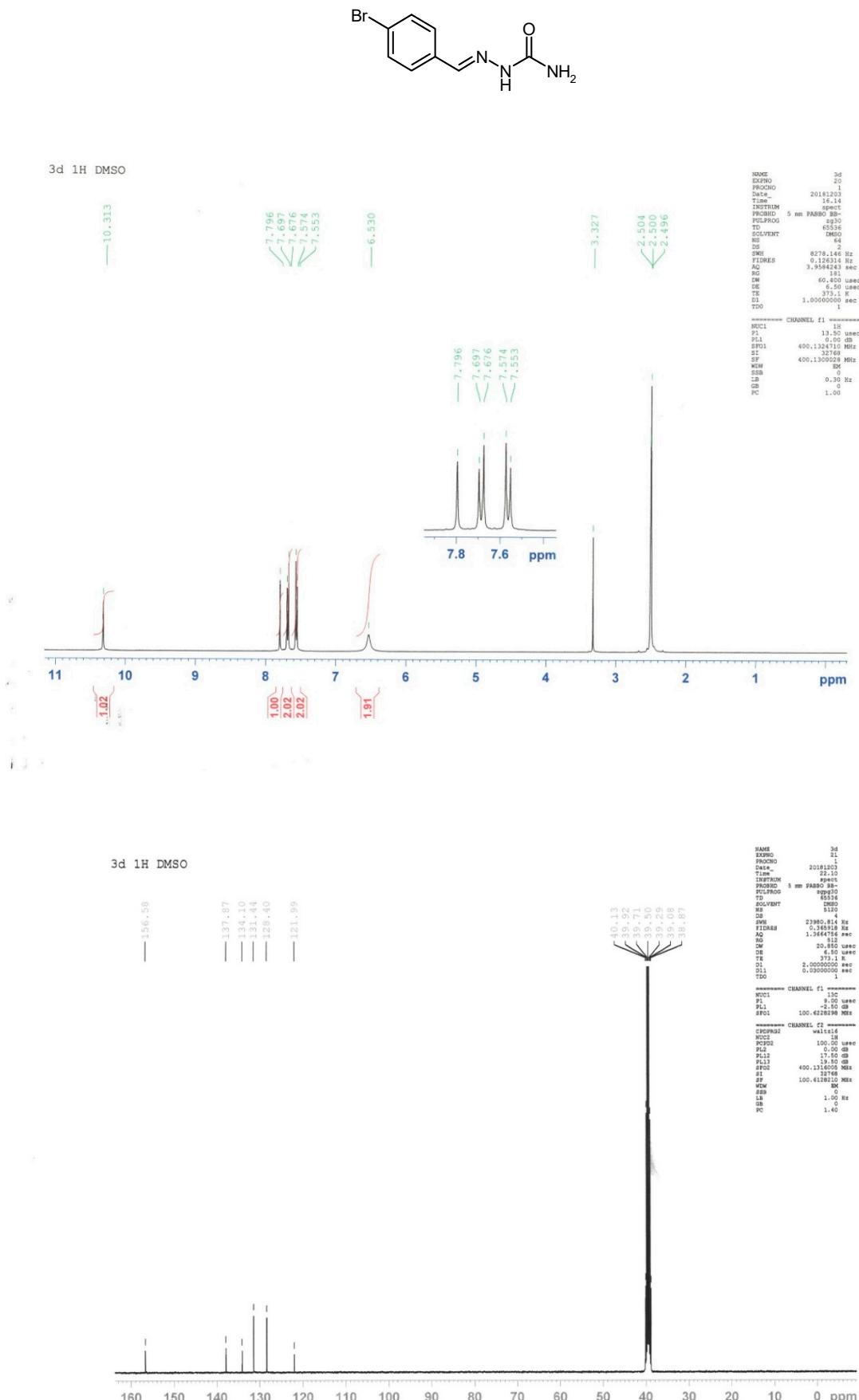
### 1. <sup>1</sup>H- & <sup>13</sup>C-NMR Spectra for Compounds 3a-3m and 4a

**Figure S1.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d<sub>6</sub>, for compounds **3a**.

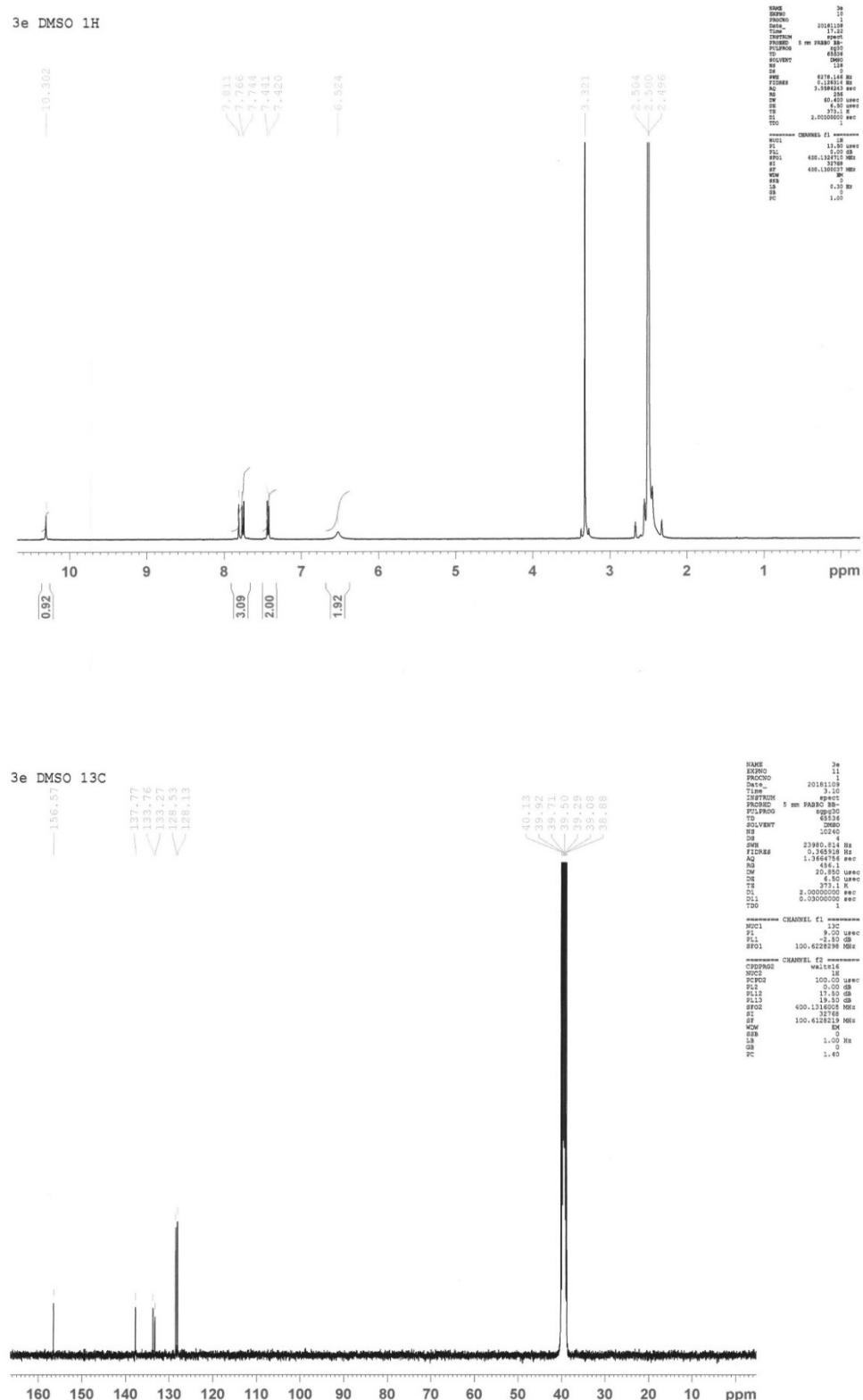
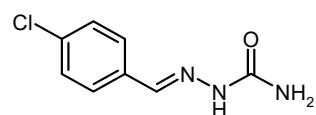
**Figure S2.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d6, for compounds **3b**.

**Figure S3.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d<sub>6</sub>, for compounds **3c**.

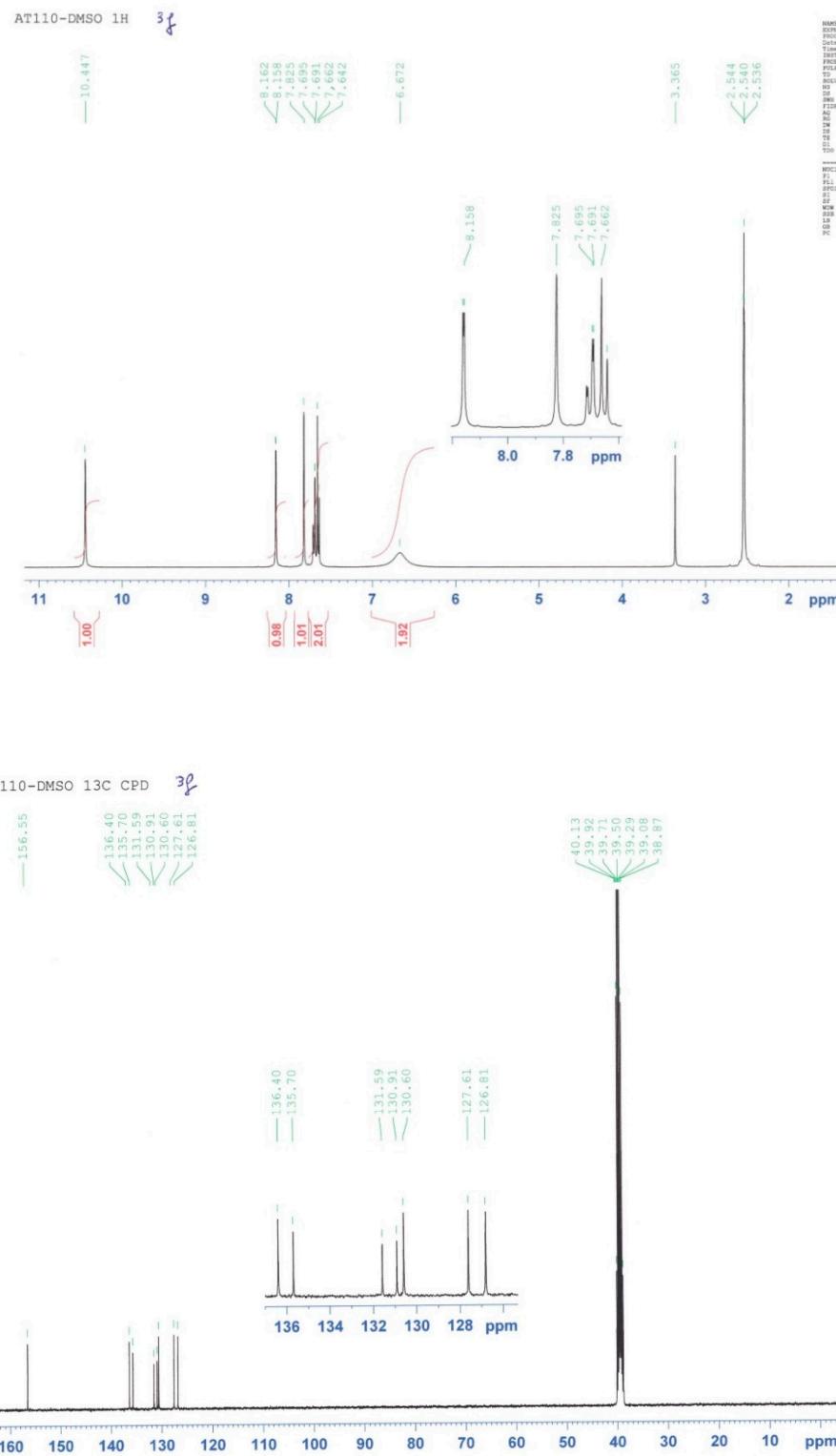
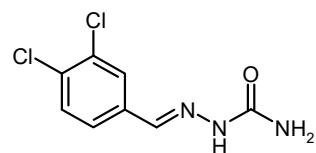


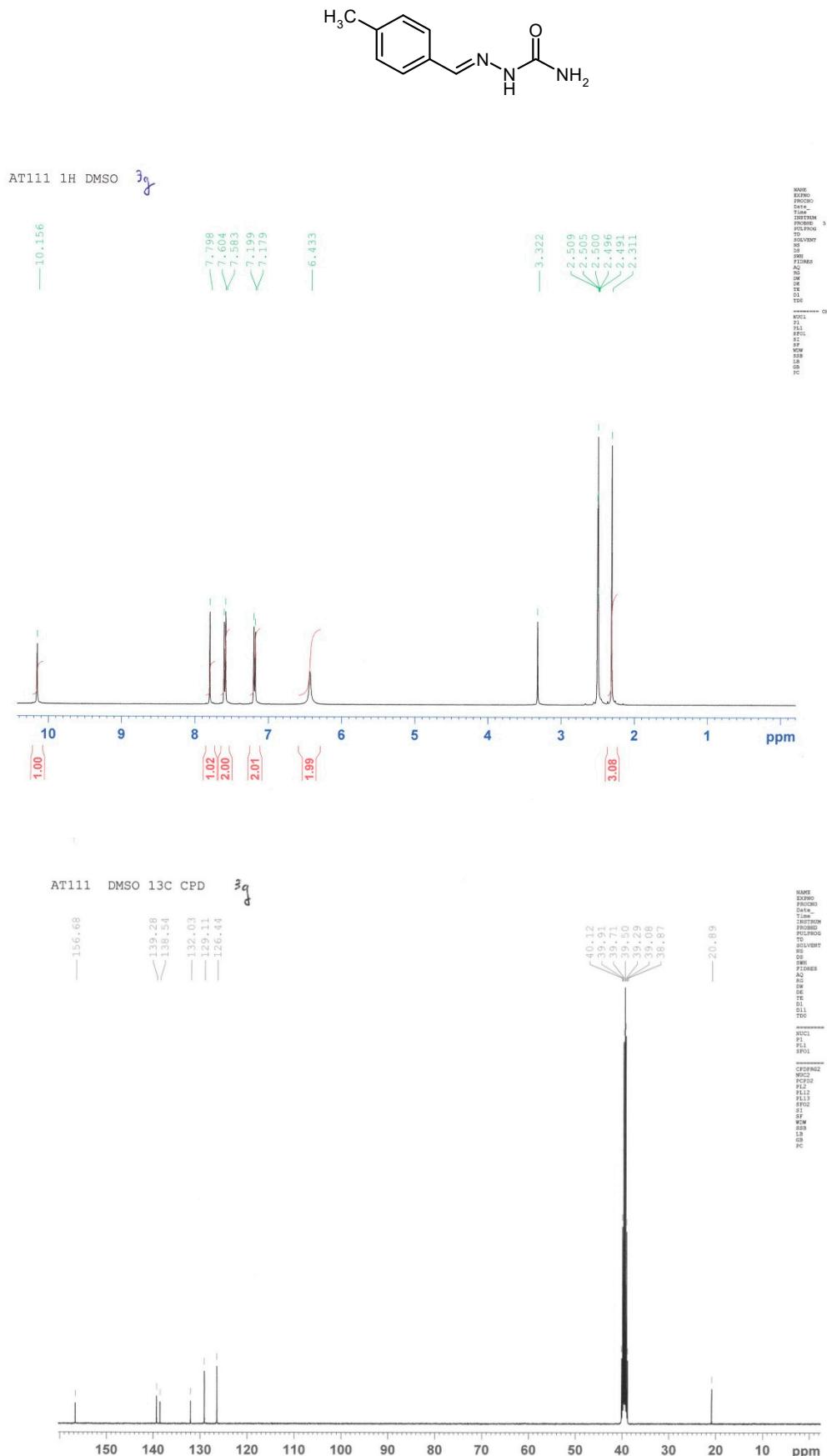
**Figure S4.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d<sub>6</sub>, for compounds **3d**.

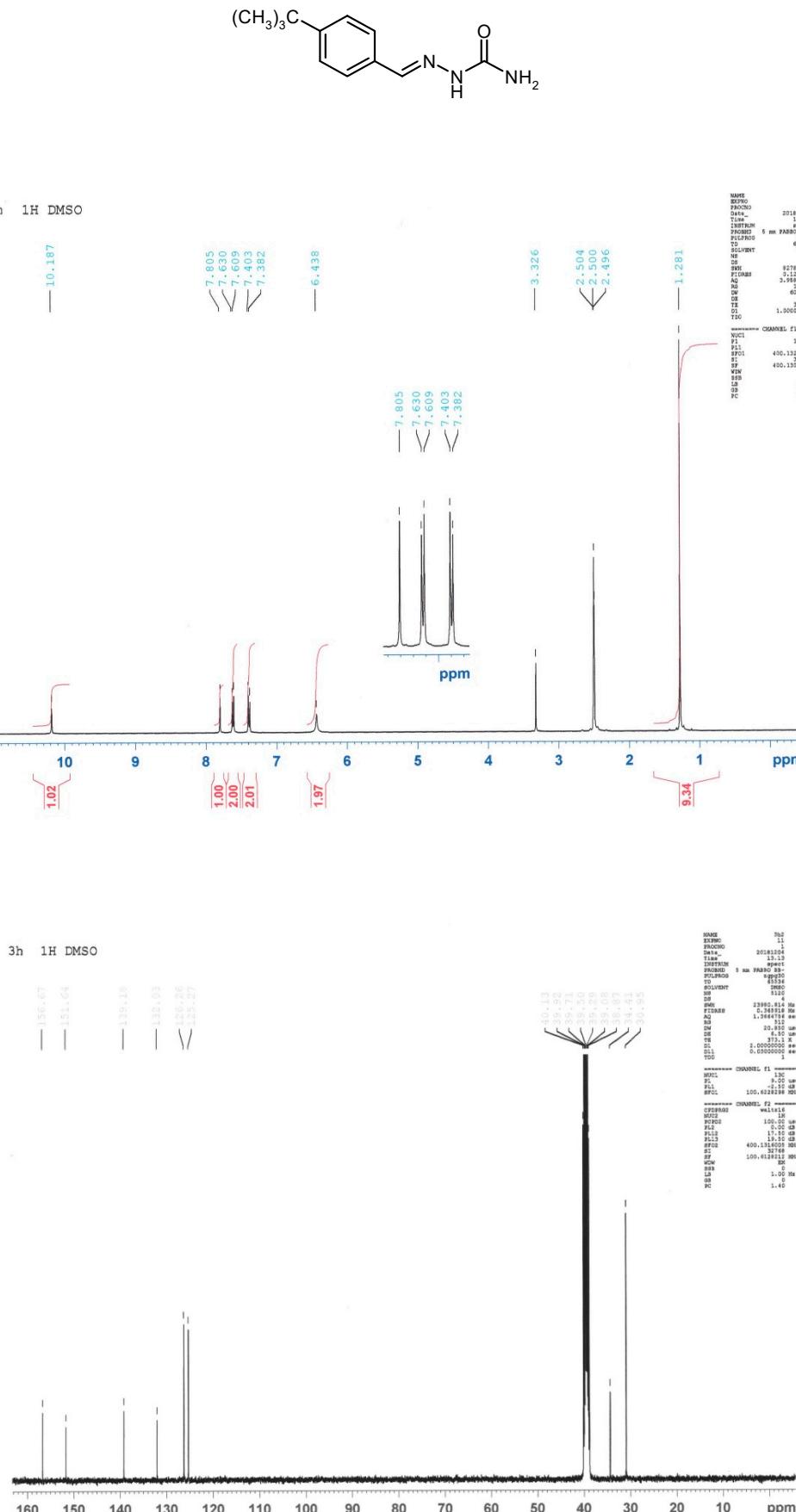
**Figure S5.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d<sub>6</sub>, for compounds **3e**.

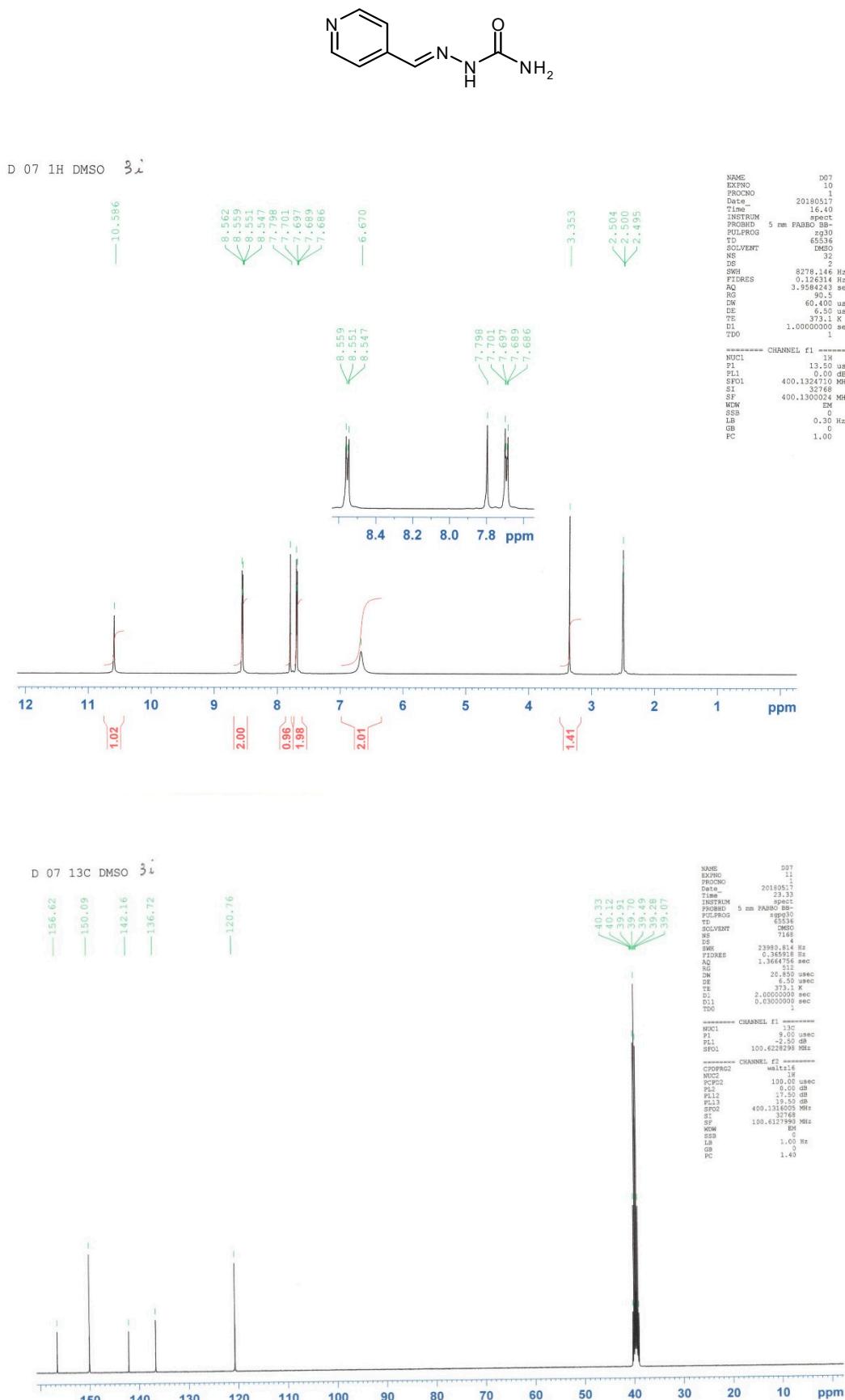


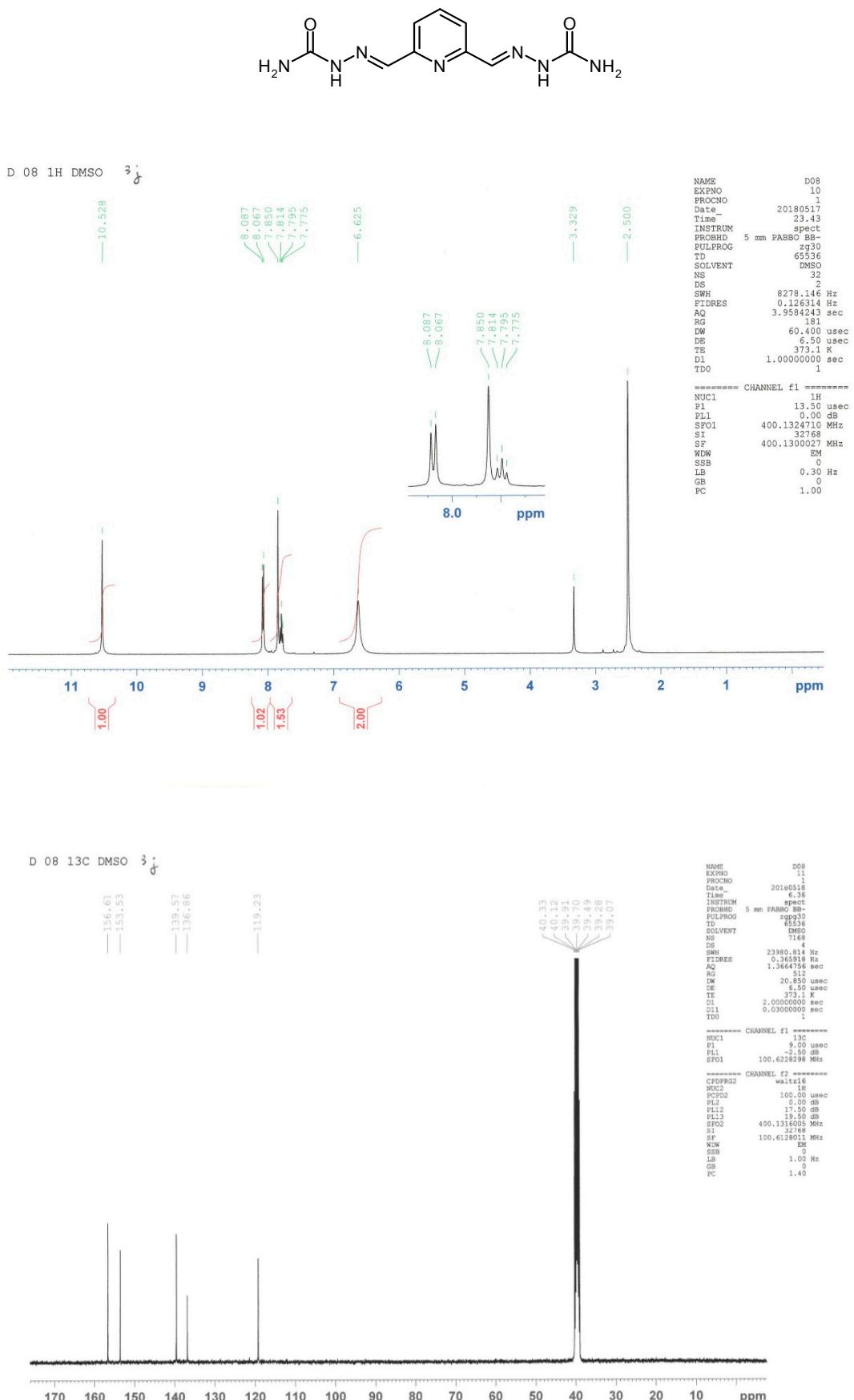
**Figure S6.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO- $d_6$ , for compounds **3f**.

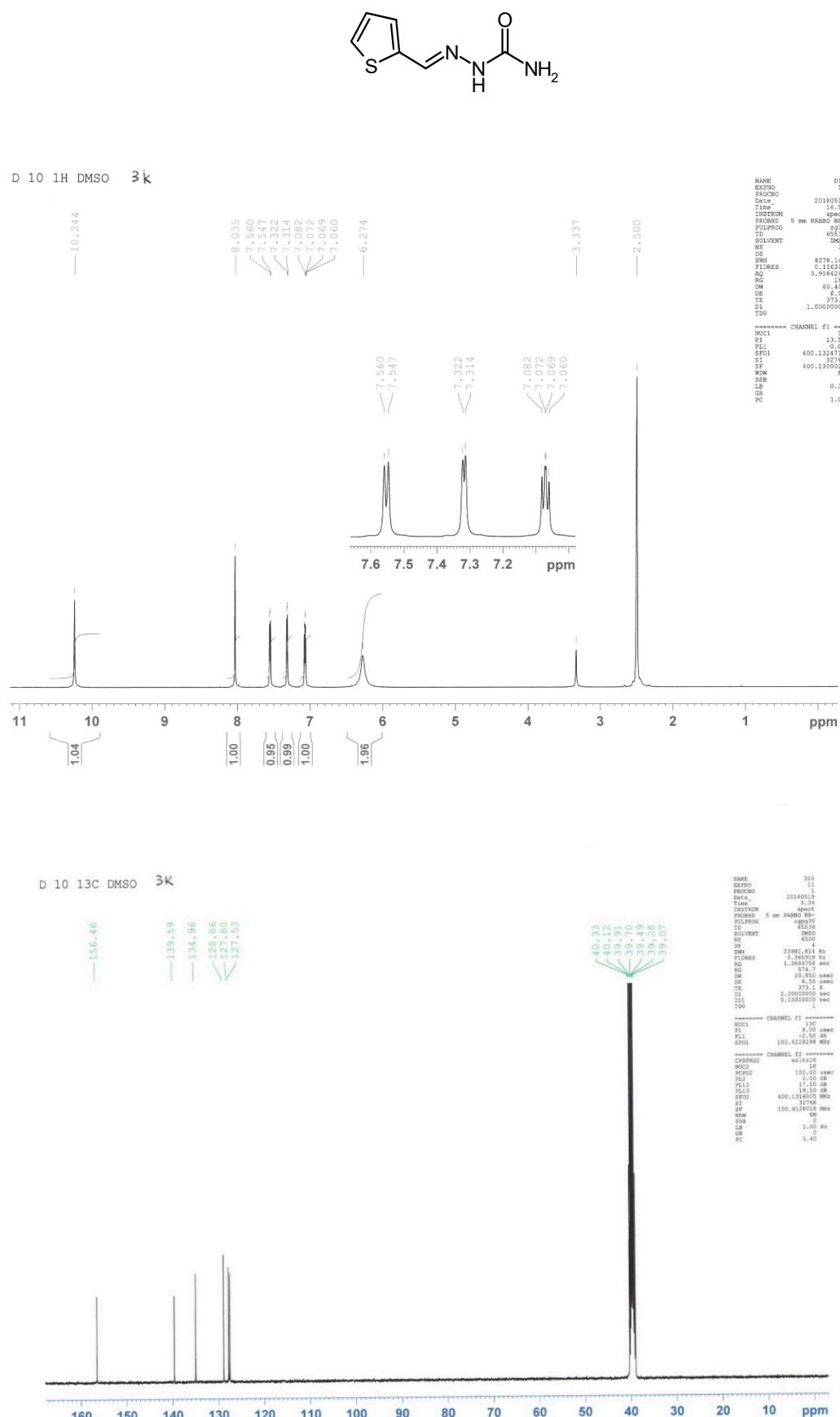


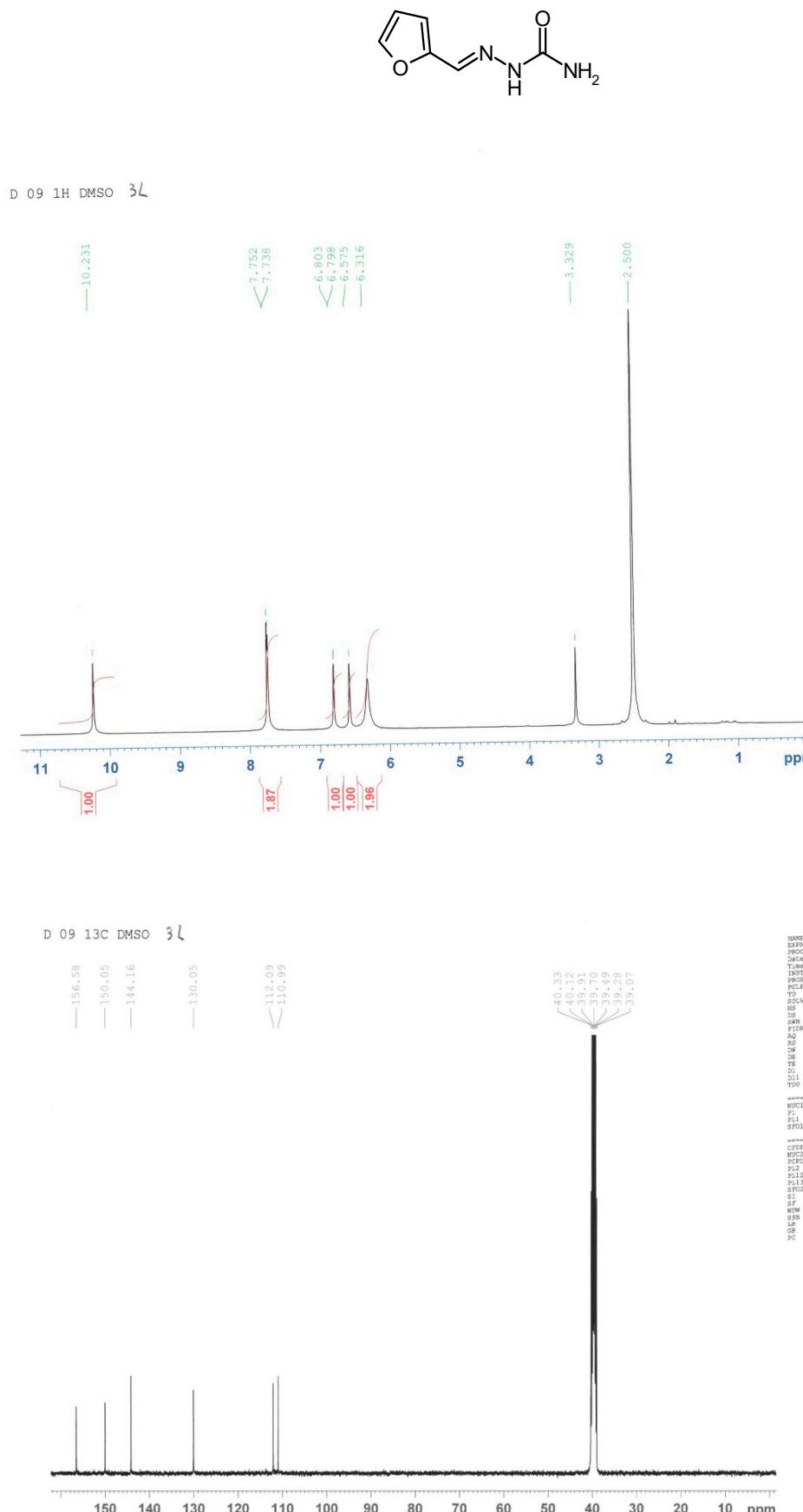
**Figure S7.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d6, for compounds **3g**.

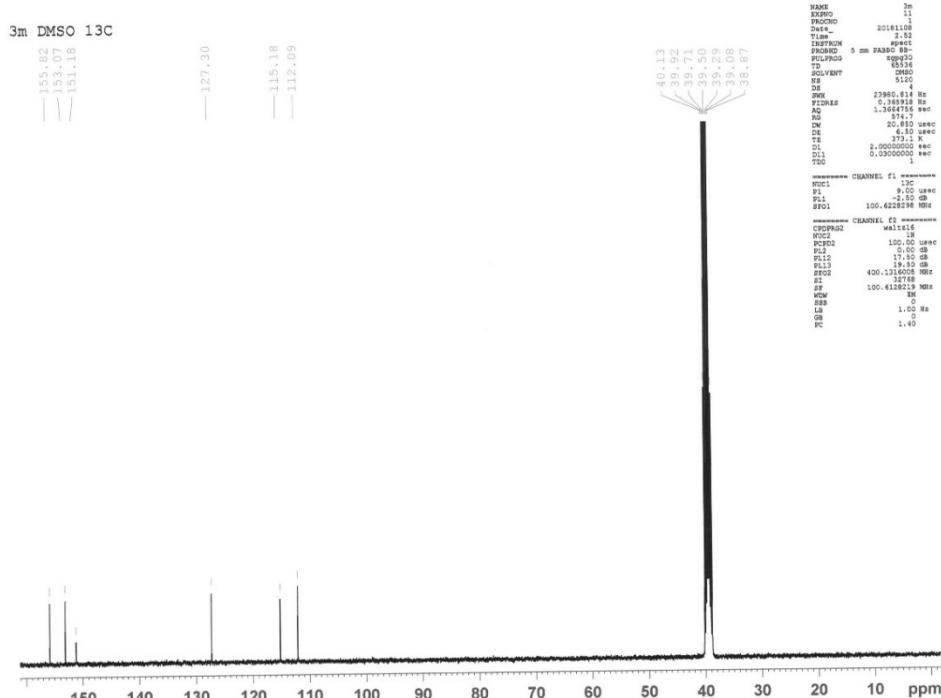
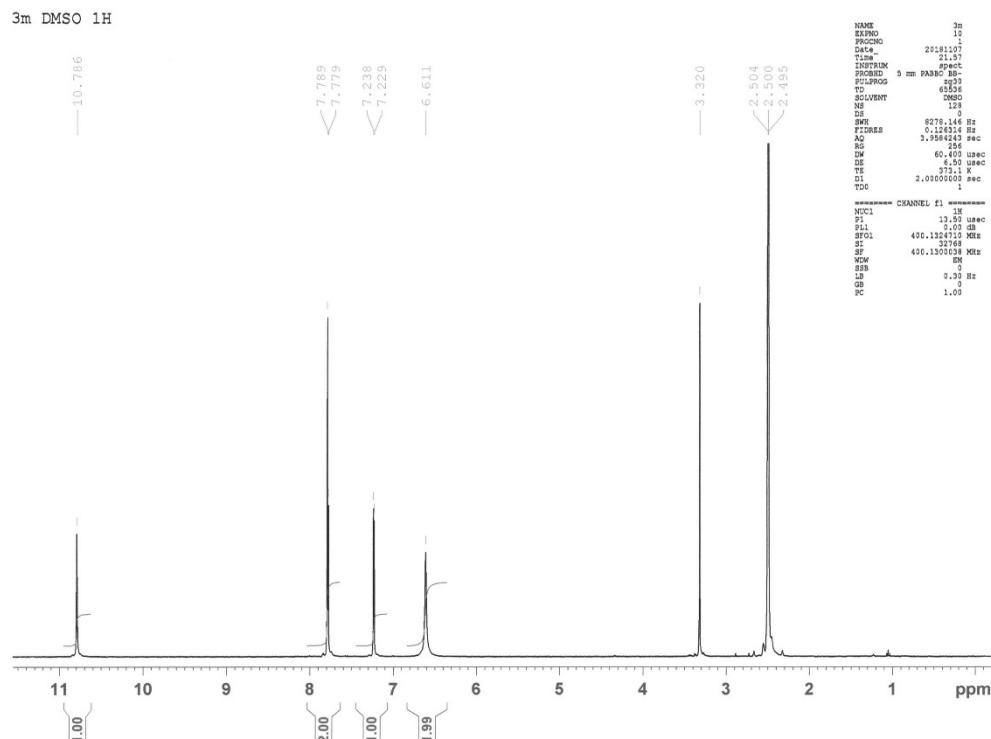
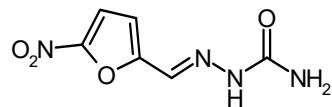
**Figure S8.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d6, for compounds **3h**.

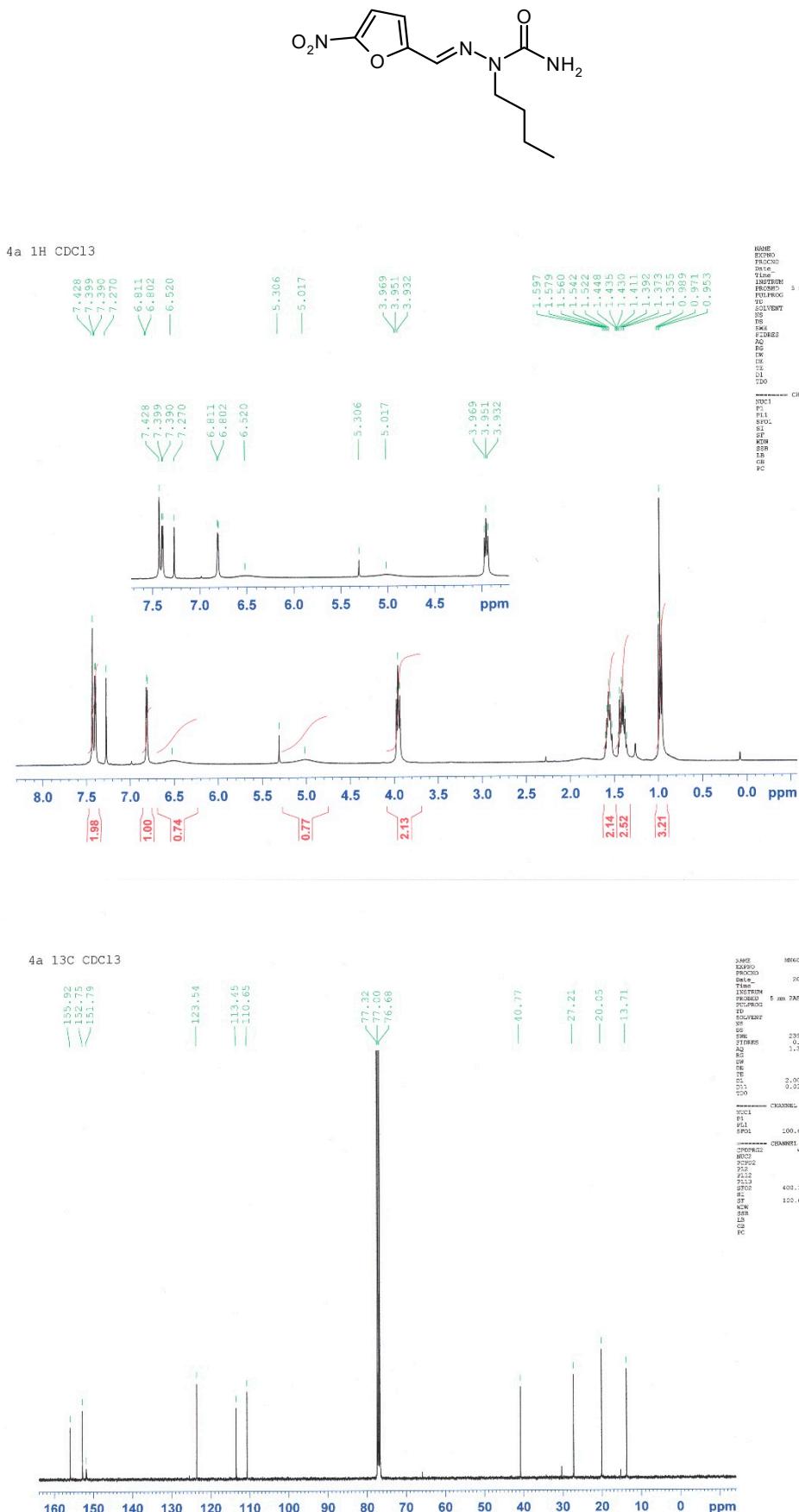
**Figure S9.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d6, for compounds **3i**.

**Figure S10.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d6, for compounds **3j**.

**Figure S11.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d<sub>6</sub>, for compounds **3k**.

**Figure S12.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d6, for compounds **3l**.

**Figure S13.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra, DMSO-d<sub>6</sub>, for compounds **3m**.

**Figure S14.**  $^1\text{H}$  NMR at 400 MHz and  $^{13}\text{C}$  NMR at 100 MHz spectra,  $\text{CDCl}_3$ , for compounds **4a**.

## 2. Molecular Docking Calculation Parameters

**Table S1.** Amino acid residues treated as flexible during the docking calculations.

CDK2	CDK5	CDK9	CLK1	DYRK1A	PIM1	CK1 $\delta$
LYS-33	LYS-33	GLN-27	PHE-172	PHE-170	PHE-49	ILE-15
GLU-51	GLU-51	LYS-48	LYS-191	LYS-188	LYS-67	LYS-38
PHE-80	PHE-80	PHE-103	GLU-206	GLU-203	LEU-120	MET-80
PHE-82	PHE-82	PHE-105	PHE-241	PHE-238	GLN-127	MET82
ASP-86	ASP-86	CYS-106	SER-247	ASN-244	ASP-128	LEU-84
LYS-89	LYS-89	GLU-107	ASP-250	ASP-247	ASP-131	ASP-91
GLN-131	GLN-130	ASP-109	GLU-292	GLU-291	GLU-171	ASP-132
ASN-132	ASN-131	ASN-154	ASN-293	ASN-292	ASN-172	LEU-135
LEU-134	LEU-133	LEU-156	LEU-295	LEU-294	LEU-174	ILE-148
ASP-145	ASN-144	ASP167	ASP-325	ASP-307	ASP-186	ASP-149



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