

## Electronic Supporting Information (ESI)

### Insights on the Binding Ability of a New Nucleobase Analog: 7-amine-1,2,4-triazole[1,5-*a*]pyrimidine. Synthesis and Magnetic Study of the First Copper(II) Complexes

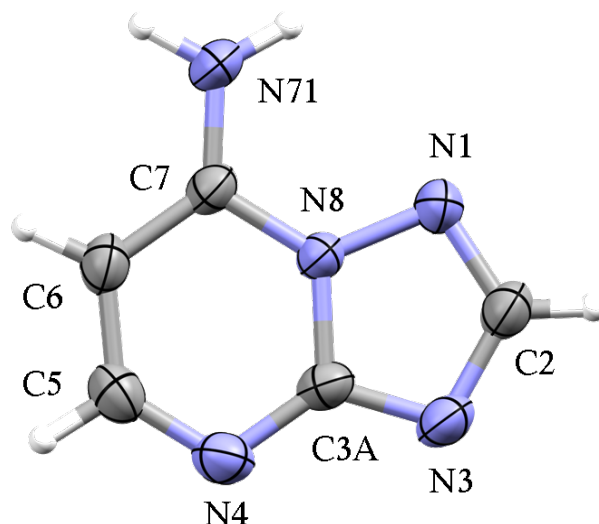
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**Figure S1.** ORTEP representation of the asymmetric unit of the 7atp ligand (**1**). Thermal ellipsoids are drawn at the 50% probability level.



**Table S1** Experimental (X-Ray) and calculated (B3LYP/6-31+G\*\*) bonds distances and angles for compound **1** (7atp).

| Distance (Å) | X-Ray      | DFT   | Angle (°) | X-Ray      | DFT   |
|--------------|------------|-------|-----------|------------|-------|
| N1-C2        | 1.3208(19) | 1.337 | N1-C2-N3  | 117.30(13) | 117.0 |
| N3-C2        | 1.3458(19) | 1.350 | C3A-N3-C2 | 103.17(12) | 103.5 |
| N3-C3A       | 1.3340(18) | 1.337 | N3-C3A-N4 | 128.81(13) | 130.3 |
| N4-C3A       | 1.3391(19) | 1.342 | N3-C3A-N8 | 108.43(13) | 107.9 |
| N4-C5        | 1.3317(19) | 1.329 | N4-C3A-N8 | 122.76(12) | 121.8 |
| C6-C5        | 1.374(2)   | 1.410 | C5-N4-C3A | 113.76(12) | 115.2 |

|        |            |       |           |            |       |
|--------|------------|-------|-----------|------------|-------|
| C7-C6  | 1.393(2)   | 1.392 | N4-C5-C6  | 126.39(13) | 125.8 |
| C7-N71 | 1.3132(19) | 1.354 | C5-C6-C7  | 119.85(13) | 118.7 |
| N8-C7  | 1.3641(16) | 1.363 | N8-C7-C6  | 113.55(12) | 115.1 |
| N8-N1  | 1.3736(16) | 1.363 | N71-C7-C6 | 127.14(13) | 128.0 |
| N8-C3A | 1.3795(17) | 1.400 | N71-C7-N8 | 119.31(13) | 116.9 |
|        |            |       | C7-N8-N1  | 125.99(11) | 126.0 |
|        |            |       | C7-N8-C3A | 123.67(12) | 123.4 |
|        |            |       | N1-N8-C3A | 110.28(11) | 110.6 |
|        |            |       | C2-N1-N8  | 100.82(11) | 100.9 |

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