Supporting information for

The leaving group in Au(I)-phosphine compounds dictates cytotoxic pathways in CEM leukemia cells and reactivity towards a Cys_2His_2 model Zinc Finger

Raphael E. F. de Paiva,[a,b] Erica J. Peterson,[b,c] Zhifeng Du[b,d] and Nicholas P. Farrell[b,c]**

[a] Department of Fundamental Chemistry, Institute of Chemistry, University of Sao Paulo (USP), Sao Paulo, SP 05508-000, Brazil.

[b]Department of Chemistry, Virginia Commonwealth University, Richmond, VA 23284-2006, USA.

[c]The Massey Cancer Center, Virginia Commonwealth University, Richmond 23294, Virginia, USA

[d]Tongji School of Pharmacy, Huazhong University of Science and Technology, Wuhan, Hubei 430030, China

*raphael.enoque@gmail.com, npfarrell@vcu.edu

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Growth Inhibition Profiles

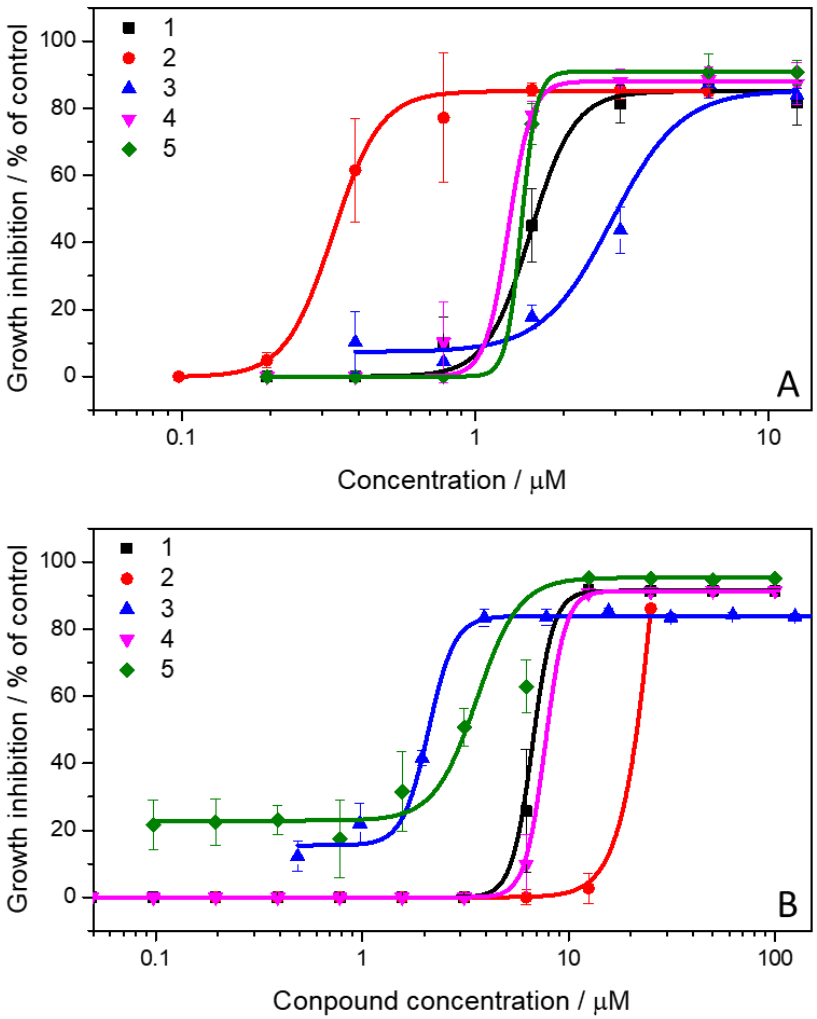

Figure S1. Growth inhibition profile of compounds of A. CEM and B. HUVEC cell lines exposed to compounds **1**. [AuCl(Et_3P)], **2**. [Au(dmap)(Et_3P)]$^+$, **3**. Auranofin, **4**. [AuCl(Cy_3P)] and **5**. [Au(dmap)(Cy_3P)]$^+$.

Cellular morphology

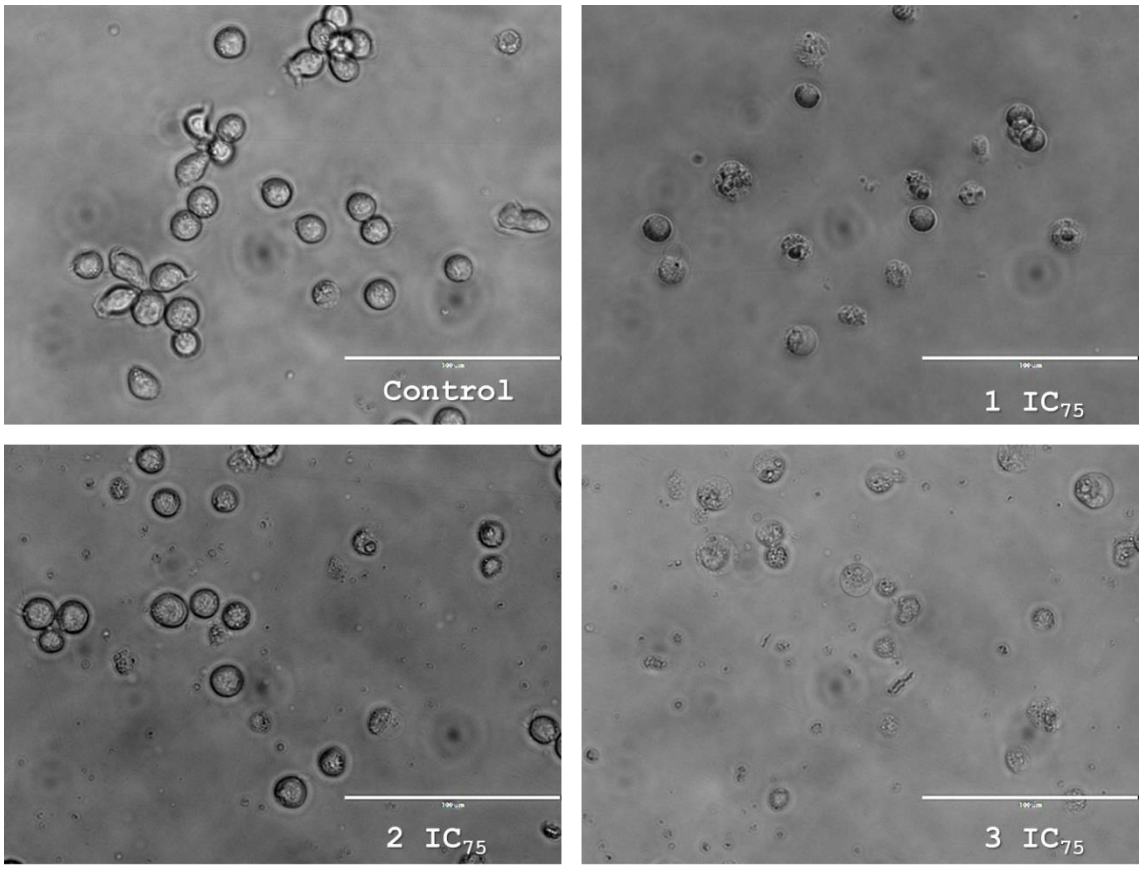

Figure S2. Morphology of CEM cell line untreated and treated with IC_{75} concentrations of compounds [AuCl(Et_3P)] (**1**), [Au(dmap)(Et_3P)]$^+$ (**2**) and auranofin (**3**).

Cell cycle analysis

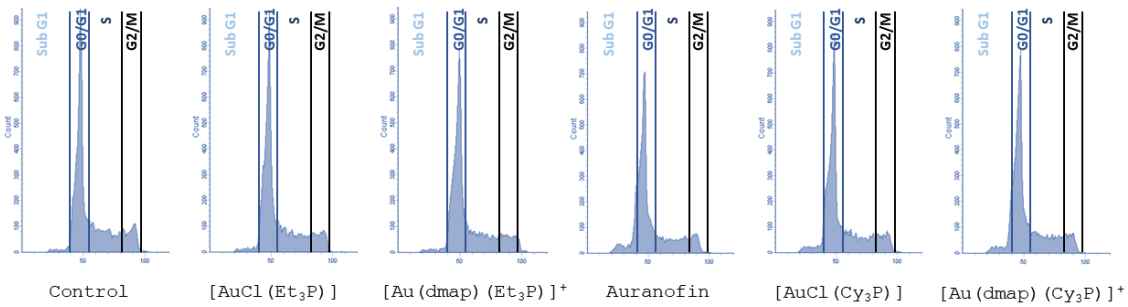

Figure S3. Flow cytometry profile of CEM cell treated with IC_{25} concentrations for 6 hours.

Collision Induced Dissociation

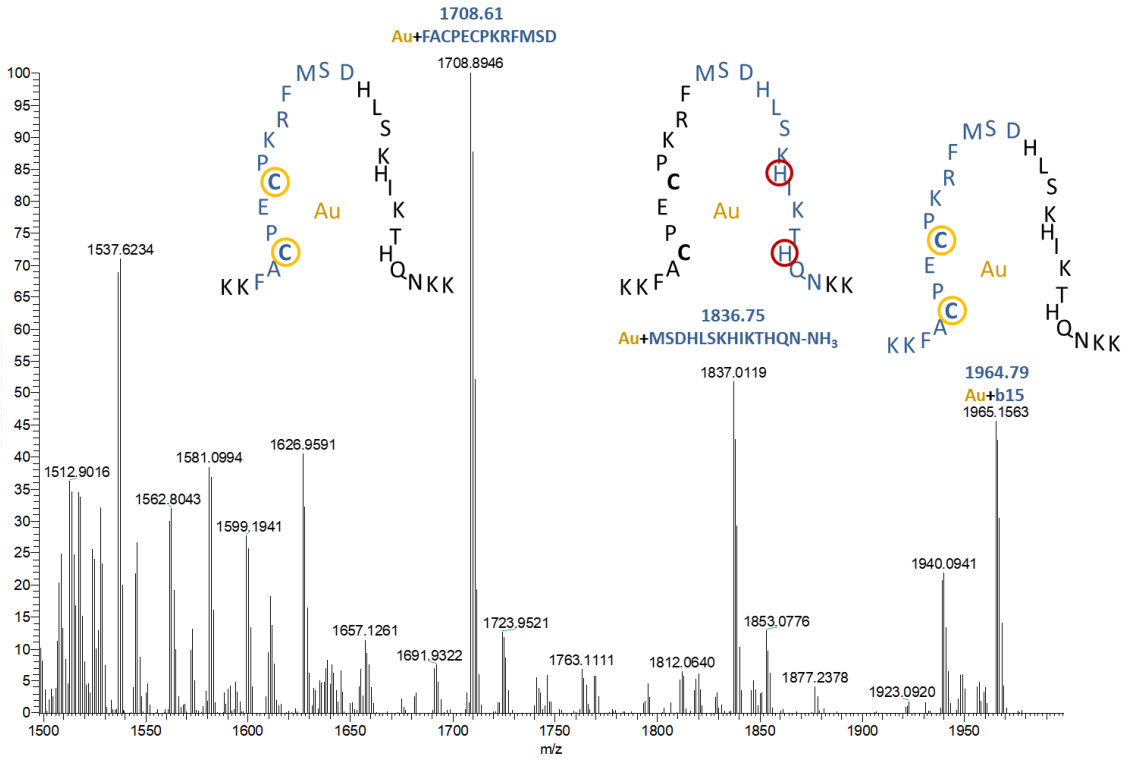

Figure S4. Collision-Induced Dissociation (CID) spectra obtained for the AuF^{4+} parent ion 891.9 m/z (3+), product of the reaction between $[Au(dmap)(Et_3P)]^+$ and Sp1 ZnF3. Species diagnostic for Cys binding and for His binding are observed. Either one of the Cys residues marked in yellow, and either of the His residues marked in red are expected to bind to Au(I). Theoretical m/z vales for each assigned peak are also given. The coordination sphere of the AuF obtained is also Cys(S)-Au-N(His).

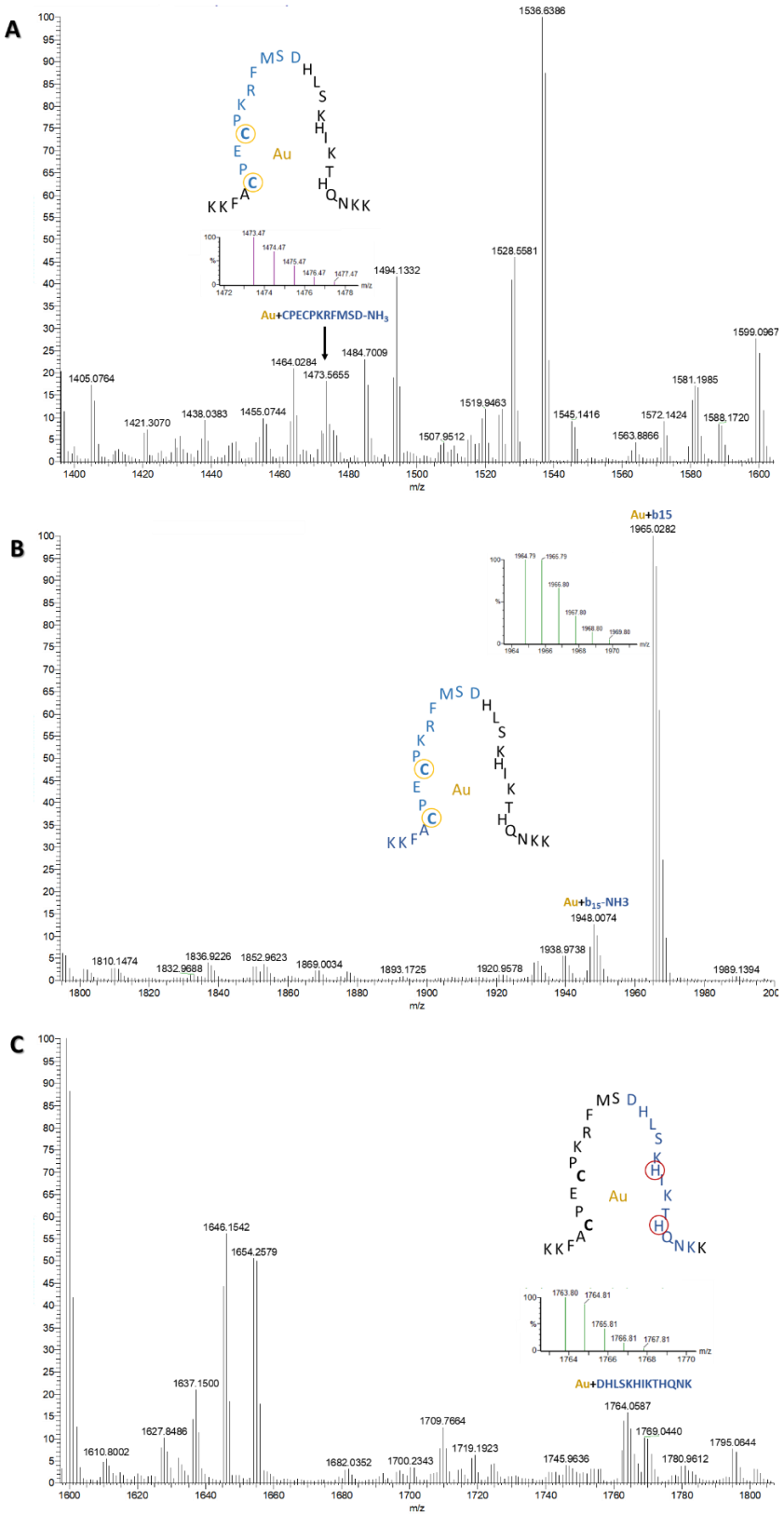

Figure S5. Collision-Induced Dissociation (CID) spectra obtained for the AuF^{3+} parent ion 1188.9 m/z (3+), product of the reaction between [AuCl(Et_3P)] and Sp1 ZnF3. A and B show species diagnostic for Cys binding (either one of the Cys residues marked in yellow are expected to bind Au(I)).C shows a fragment diagnostic for His binding, where either of the His residues marked in red are expected to bind Au(I). Theoretical isotope patterns for each assigned peak are given as insets. The coordination sphere of the AuF obtained is Cys(S)-Au-N(His).

Mechanism auranofin-induced apoptosis on CEM cells

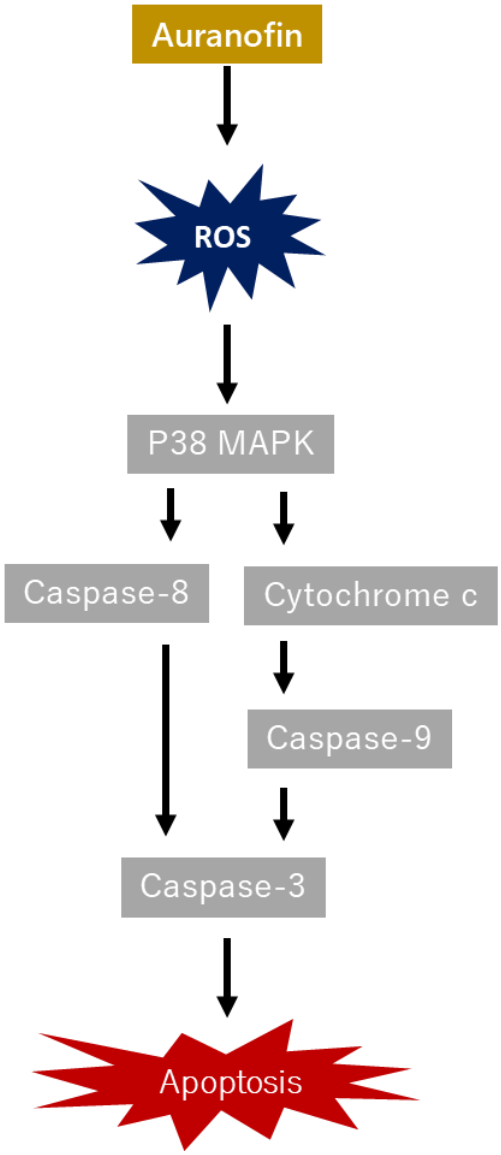

Figure S6. Apoptotic mechanism caused by auranofin on CEM cells. The mechanism is consistent with previous results on HL-60 leukemia cells treated with auranofin.[1]

References

1 S.-J. Park and I.-S. Kim, *Br. J. Pharmacol.*, 2005, **146**, 506–13.