



UNIVERSITAT DE
BARCELONA

**P-Stereogenic ligands
with the *tert*-butylmethylphosphine fragment.
Coordination chemistry and catalysis
of their organometallic complexes**

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Chapter 5: Conjugation of Cu(II)-chelating peptides to gold nanoparticles

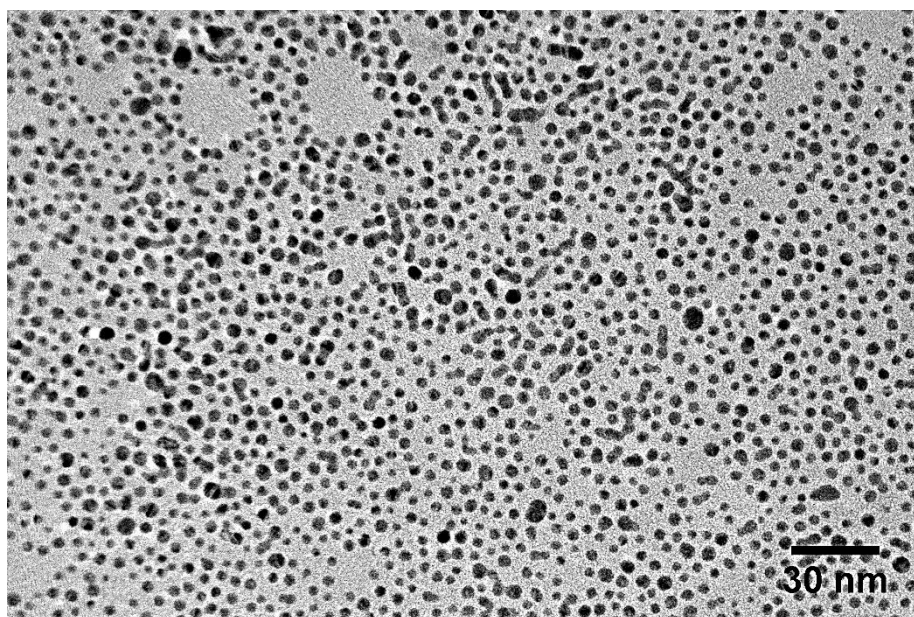


Figure S5.1: TEM micrograph of 5Au-COOH (size 4.8 ± 0.83 nm).

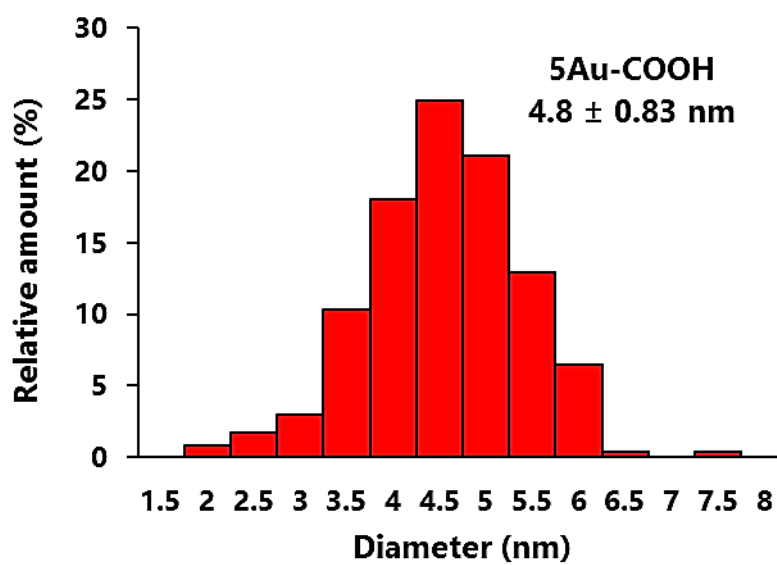


Figure S5.2: Size distribution of 5Au-COOH (determined by TEM).

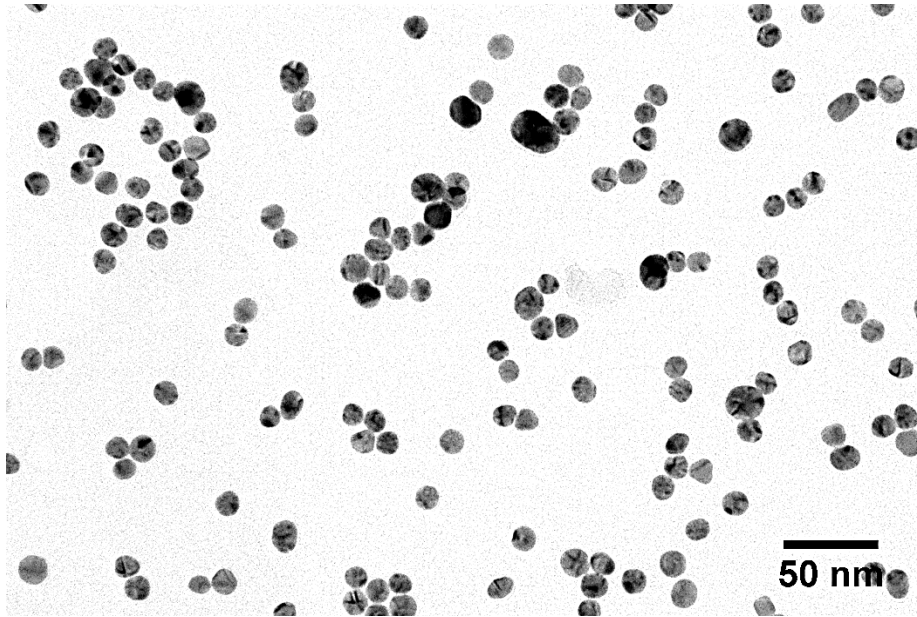


Figure S5.3: TEM micrograph of 15Au (size 14.1 ± 1.96 nm).

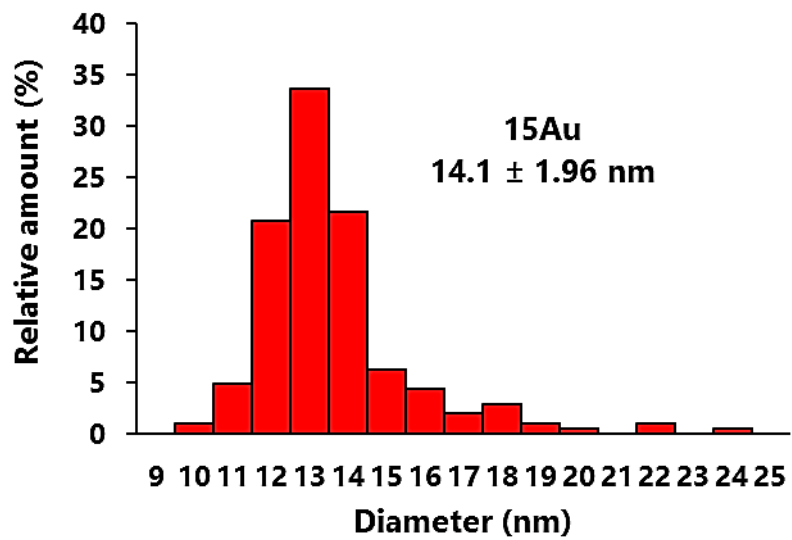


Figure S5.4: Size distribution of 15Au (determined by TEM).

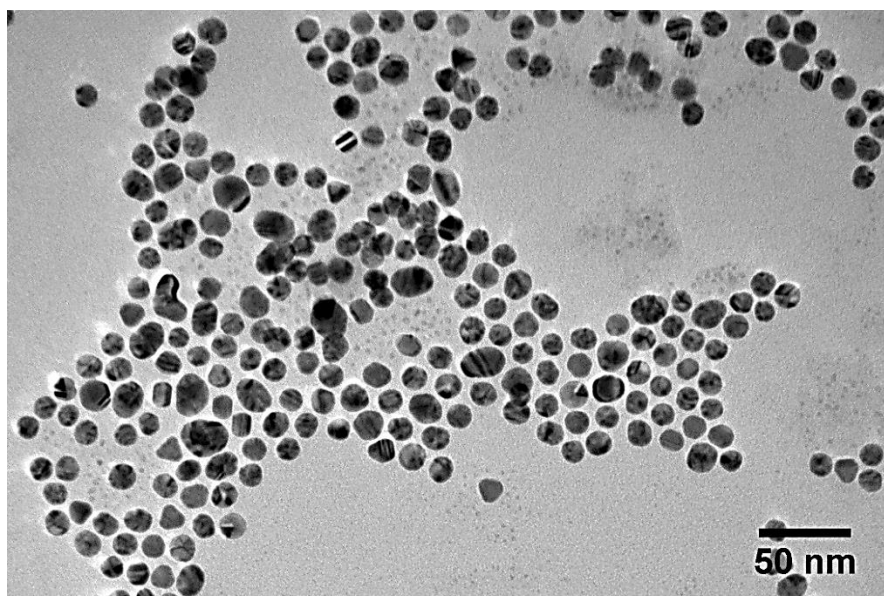


Figure S5.5: TEM micrograph of 15Au-COOH (size 14.4 ± 1.62 nm).

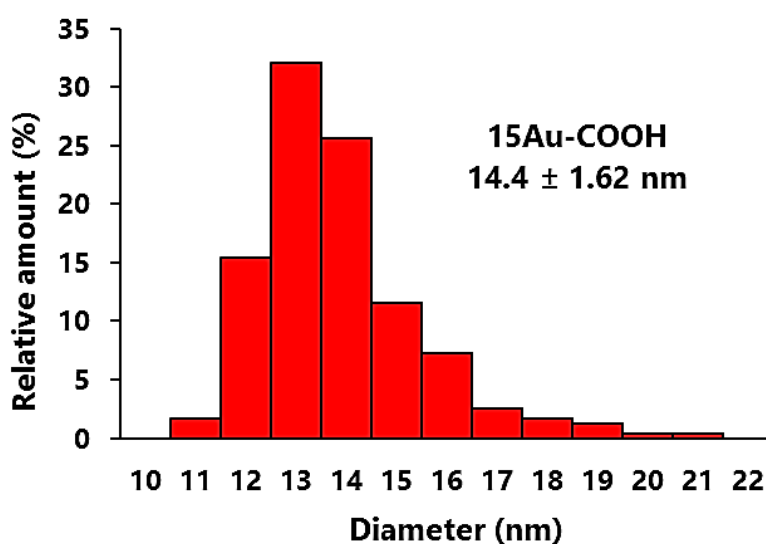


Figure S5.6: Size distribution of 15Au-COOH (determined by TEM).

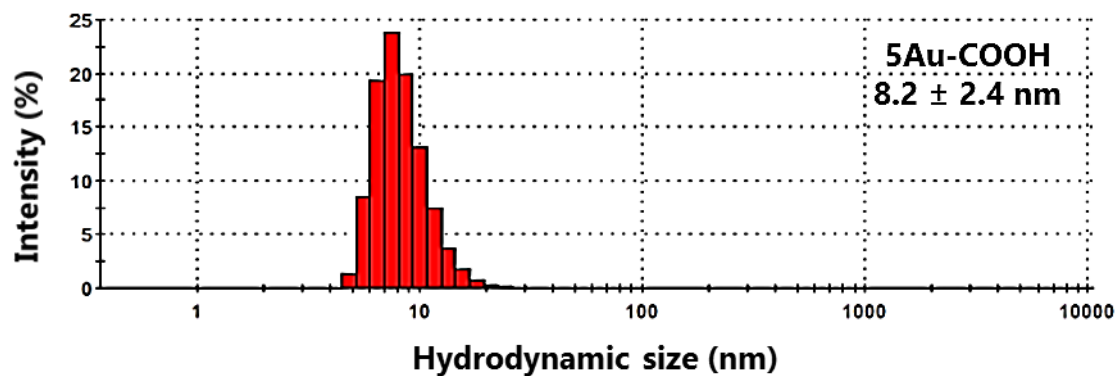


Figure S5.7: Hydrodynamic size distribution in number distribution of 5Au-COOH (registered by DLS).

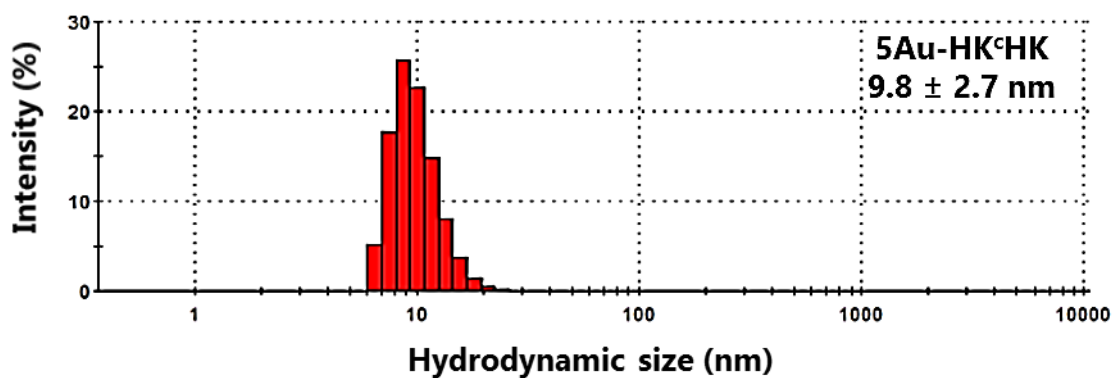


Figure S5.8: Hydrodynamic size distribution in number distribution of 5Au-HK^cHK (registered by DLS).

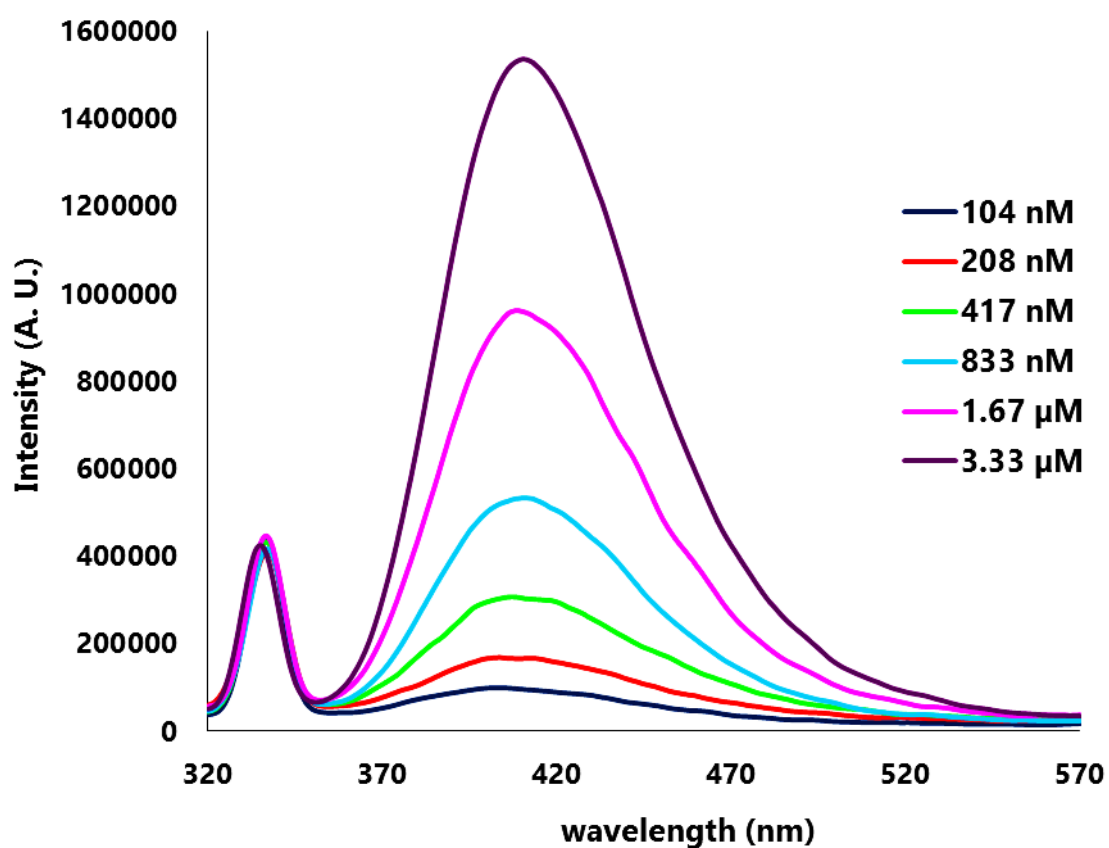


Figure S5.9: Fluorescence spectra of ACHK^cHK at concentrations 104 nM-3.33 μM in 0.1 × PBS (pH 7.4). λ_{exc} = 300 nm.

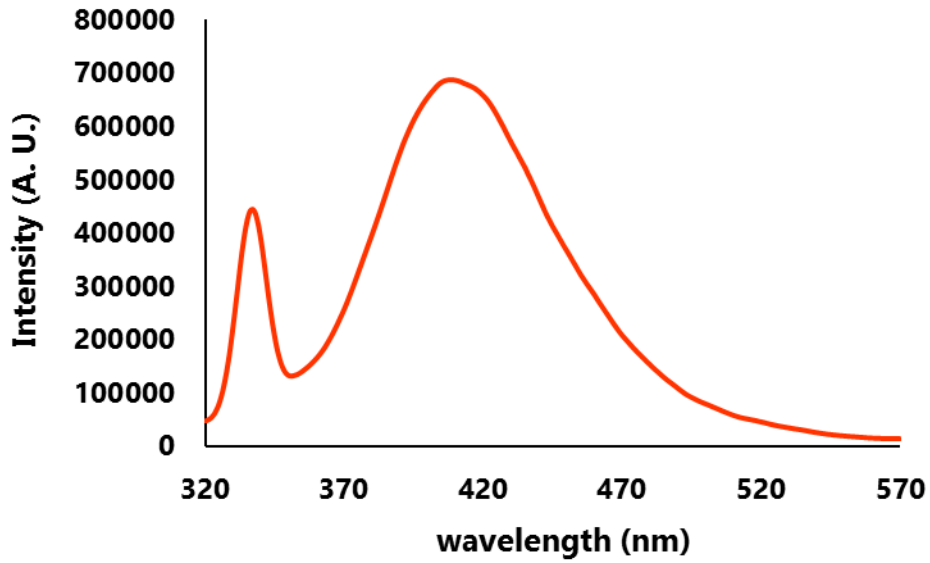


Figure S5.10: Fluorescence spectra of AcHK^CHK released from 5Au-HK^CHK by acidic treatment and diluted 12-fold. $\lambda_{\text{exc}} = 300 \text{ nm}$, 0.1× PBS (pH 7.4).

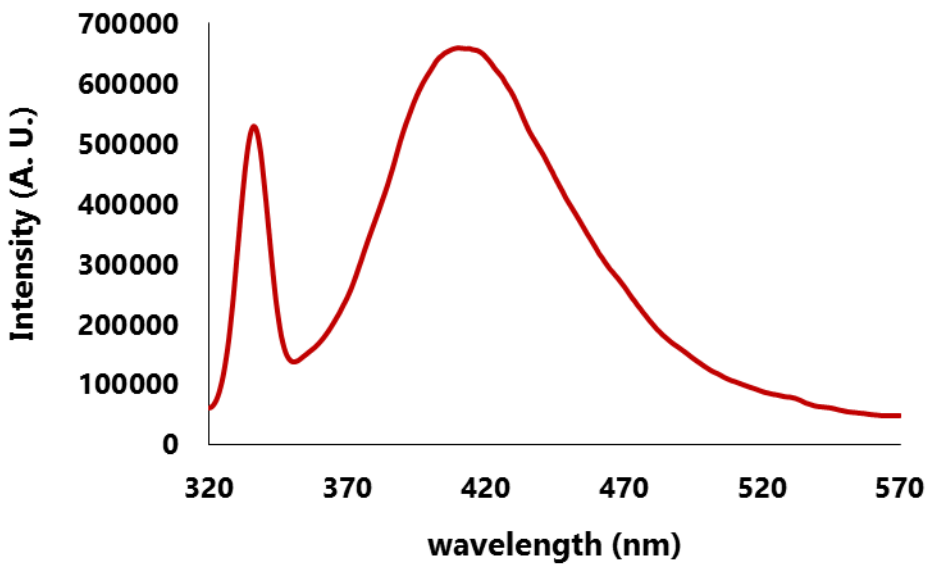


Figure S5.11: Fluorescence spectra of AcHK^CHK released from 15Au-HK^CHK by acidic treatment. $\lambda_{\text{exc}} = 300 \text{ nm}$, 0.1× PBS (pH 7.4).

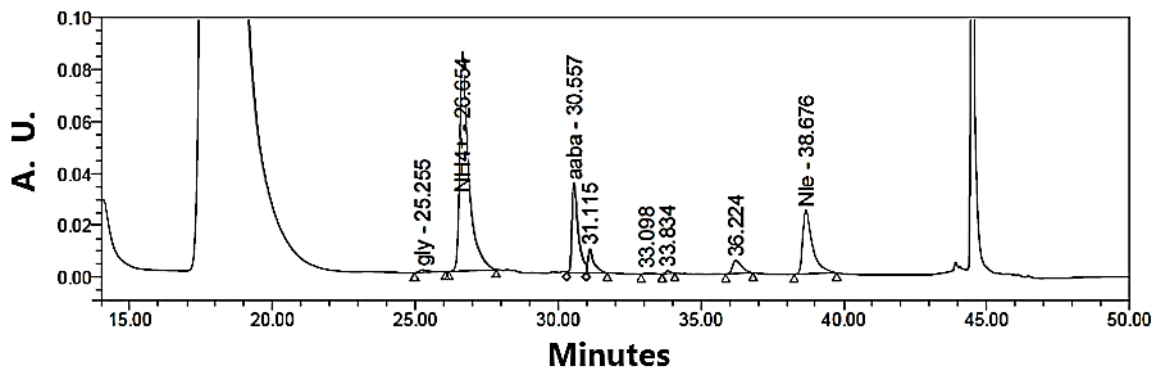


Figure S5.12: Chromatogram of 15Au-COOH after digestion with 6 M HCl for 48 h at 110 °C.

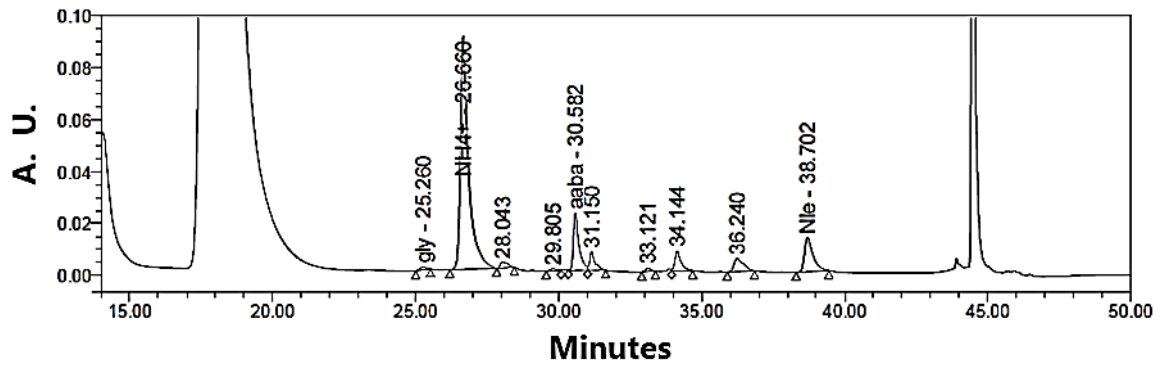


Figure S5.13: Chromatogram of 15Au-HK^CHK after digestion with 6 M HCl for 48 h at 110 °C.

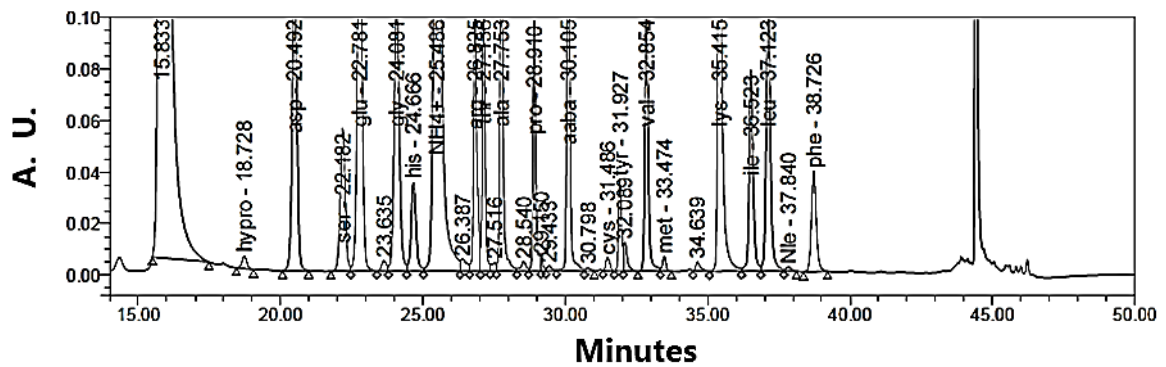


Figure S5.14: Chromatogram of AcHK^CHK after digestion with 6 M HCl for 48 h at 110 °C.

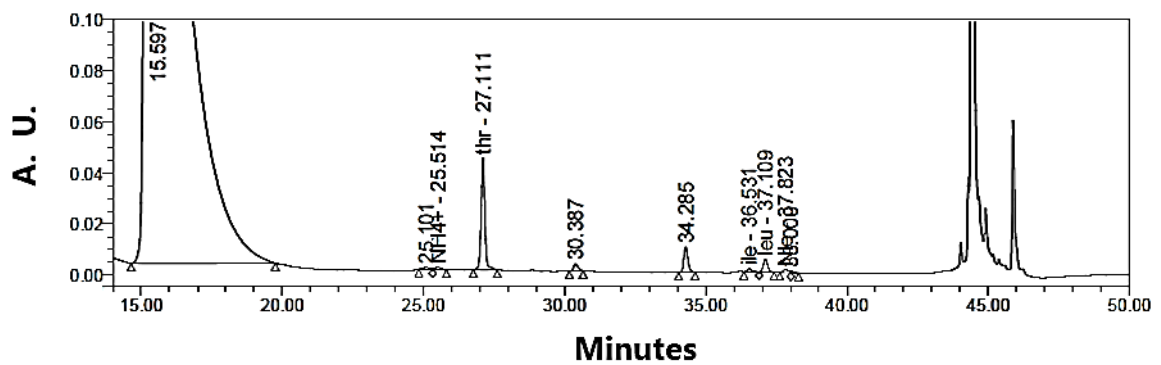


Figure S5.15: Chromatogram of AcHK^CHK released from 15Au-HK^CHK using HCl and digested with 6 M HCl for 48 h at 110 °C.

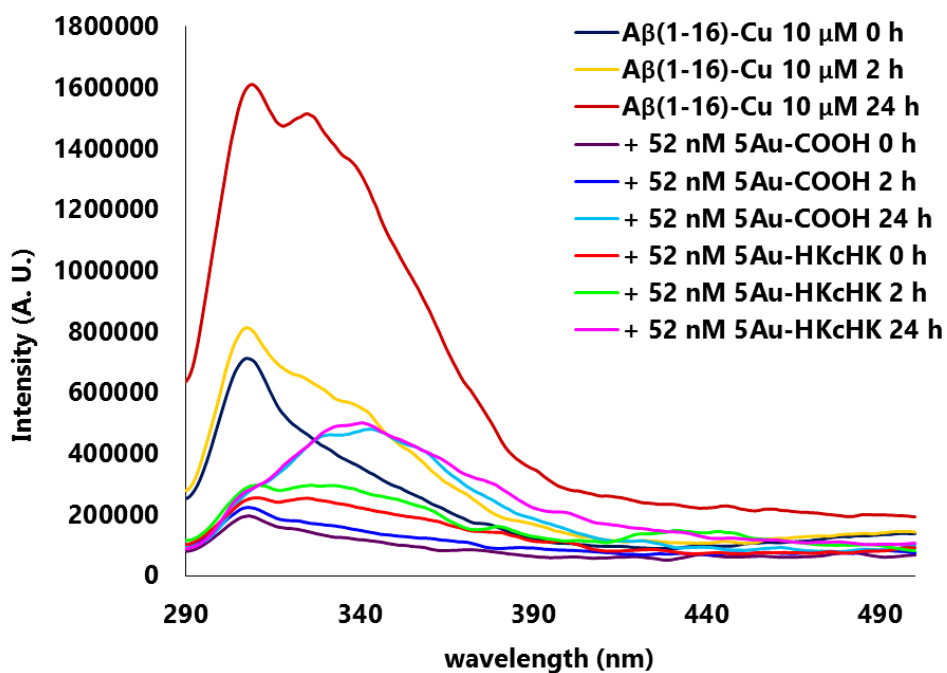


Figure S5.16: Fluorescence emission of 10 μM Cu(II)-Aβ(1-16) 1:1 + 52 nM 5Au-COOH or 5Au-HKcHK (0.8 eq AcHKcHK) at 0, 2 and 24 h.

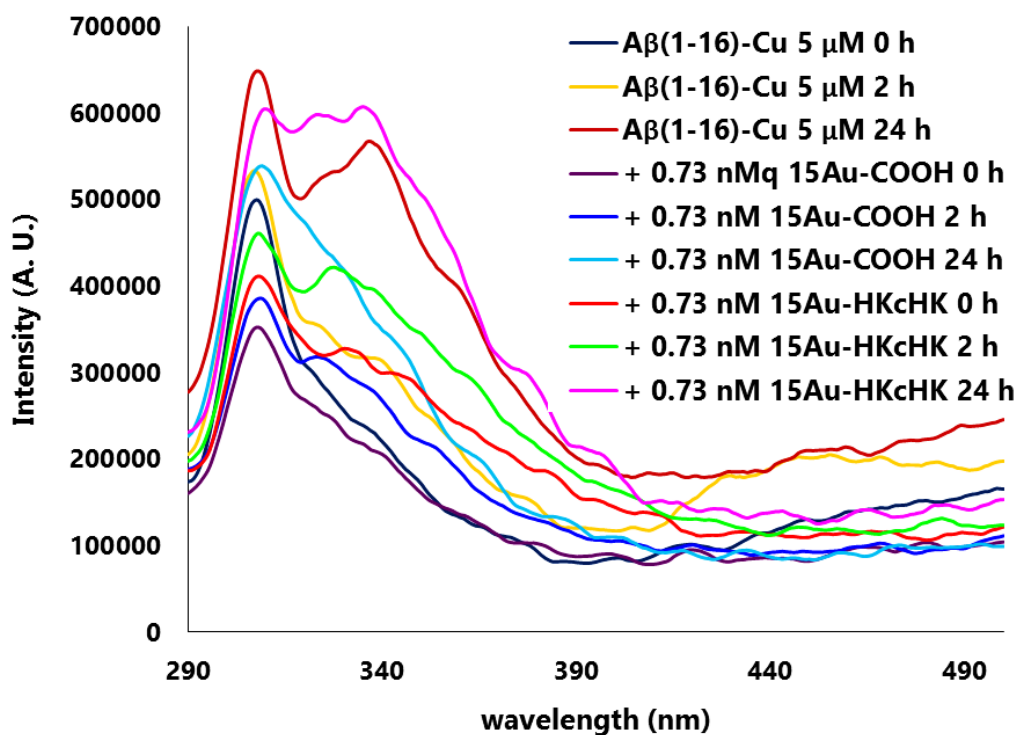


Figure S5.17: Fluorescence emission of 5 μM Cu(II)-Aβ(1-16) 1:1 + 0.73 nM 15Au-COOH or 15Au-HKcHK (0.14 eq AcHKcHK) at 0, 2 and 24 h.

Table S5.1: Percentage of dead cells (mean % \pm standard deviation, determined by propidium iodide emission) in the presence of AcHK^cHK, 15Au-COOH or 15Au-HK^cHK at the different times tested.

Compound	1 h	8 h	24 h	30 h	48 h
Control	21 \pm 21	27 \pm 25	24 \pm 22	24 \pm 22	24 \pm 22
Dispersing medium	0.0 \pm 0.0	32 \pm 19	26 \pm 12	38 \pm 5.6	28 \pm 25
AcHK^cHK 5 μM	19 \pm 17	33 \pm 5.6	32 \pm 10	32 \pm 17	41 \pm 11
AcHK^cHK 10 μM	7.1 \pm 12	13 \pm 12	37 \pm 0.91	37 \pm 0.91	43 \pm 6.8
AcHK^cHK 20 μM	4.2 \pm 7.2	1.8 \pm 3.0	34 \pm 43	34 \pm 39	47 \pm 23
15Au-COOH 10 nM	19 \pm 9.6	25 \pm 25	14 \pm 9.6	17 \pm 8.3	53 \pm 19
15Au-COOH 25 nM	16 \pm 15	23 \pm 8.0	21 \pm 8.1	20 \pm 1.3	46 \pm 3.9
15Au-COOH 50 nM	7.8 \pm 7.2	29 \pm 1.4	25 \pm 9.6	35 \pm 16	39 \pm 11
15Au-HK^cHK 5 nM	1.0 \pm 1.7	30 \pm 7.7	19 \pm 4.6	18 \pm 7.2	27 \pm 5.0
15Au-HK^cHK 10 nM	3.5 \pm 3.7	31 \pm 5.7	15 \pm 3.1	18 \pm 7.6	26 \pm 6.0
15Au-HK^cHK 25 nM	9.9 \pm 12	71 \pm 5.2	49 \pm 1.7	51 \pm 1.7	67 \pm 10