

## Synthesis of an Activated Phosphonated Bifunctional Chelate with Potential for PET Imaging and Radiotherapy.

Câline Christine,<sup>a\*</sup> Michaëlle Koubemba,<sup>a</sup> Shakir Shakir,<sup>a,b</sup> Séverine Clavier,<sup>b</sup> Laurence Ehret-Sabatier,<sup>b</sup> Falk Saupe,<sup>c</sup> Gertraud Orend,<sup>c</sup> and Loïc J. Charbonnière<sup>a\*</sup>

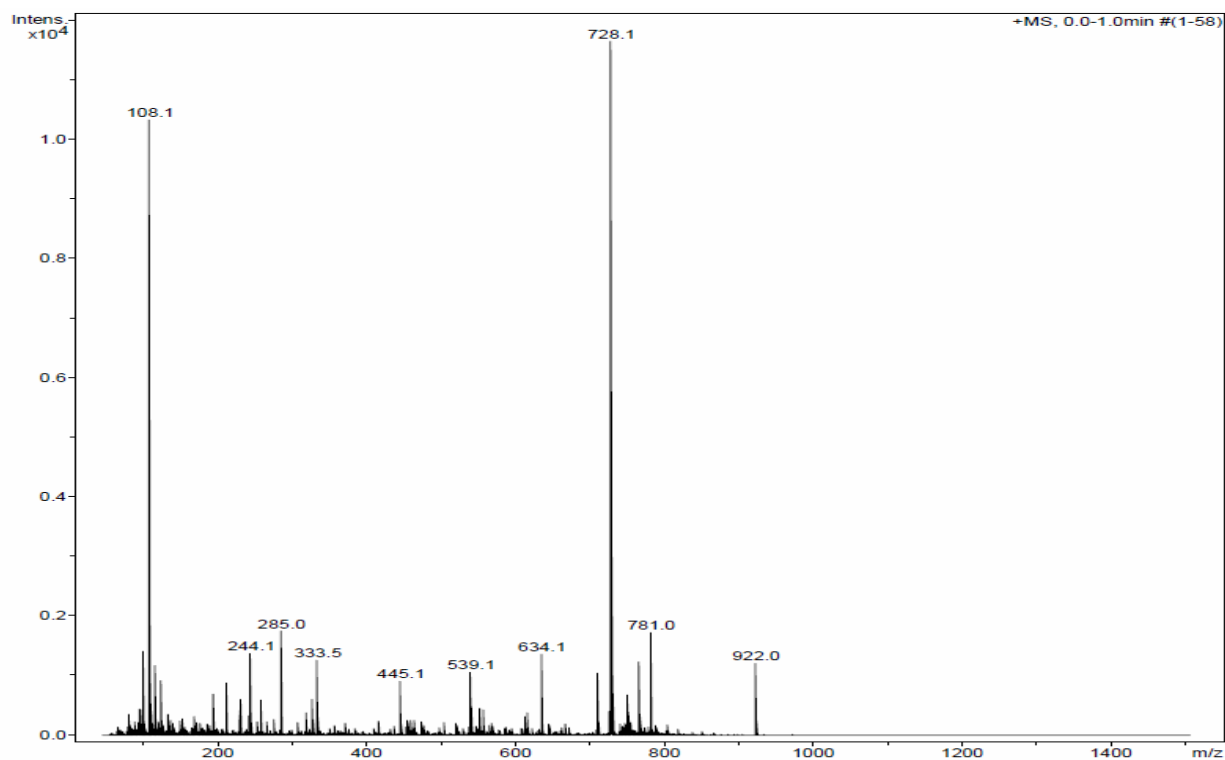
### Supplementary Information (3 pages including this one)

**Figure S1.** ESI<sup>+</sup>/MS spectrum of **L**<sup>\*</sup>.

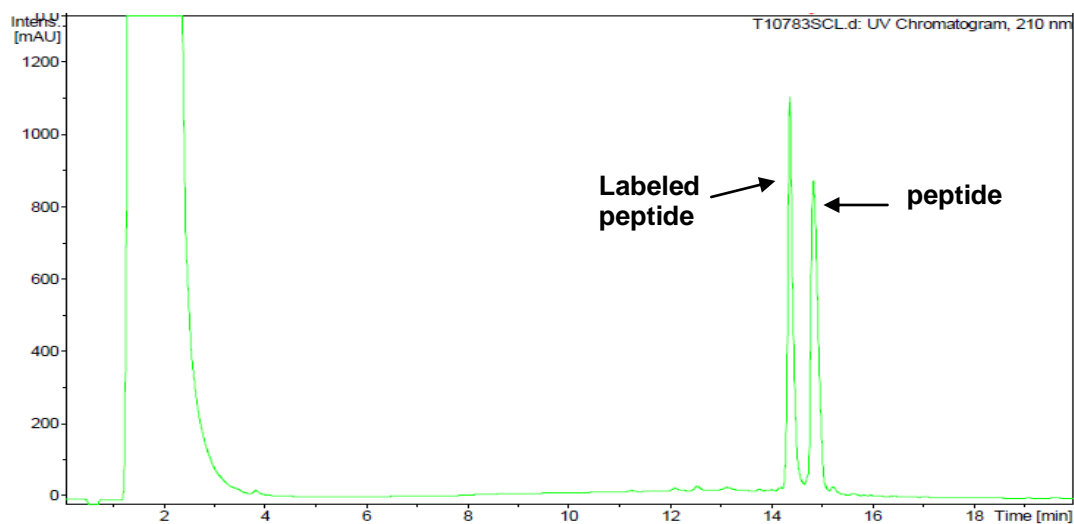
**Figure S2.** HPLC purification of the labeled peptide SIINFEKL.

**Figure S3.** MALDI/MS spectra of peptide SIINFEKL before (top) and after (bottom) addition of Cu(II).

**Figure S4.** Immunofluorescence staining on tissue sections of patient biopsies of human colorectal cancer using Cu(II)-BFC labeled B28-13.

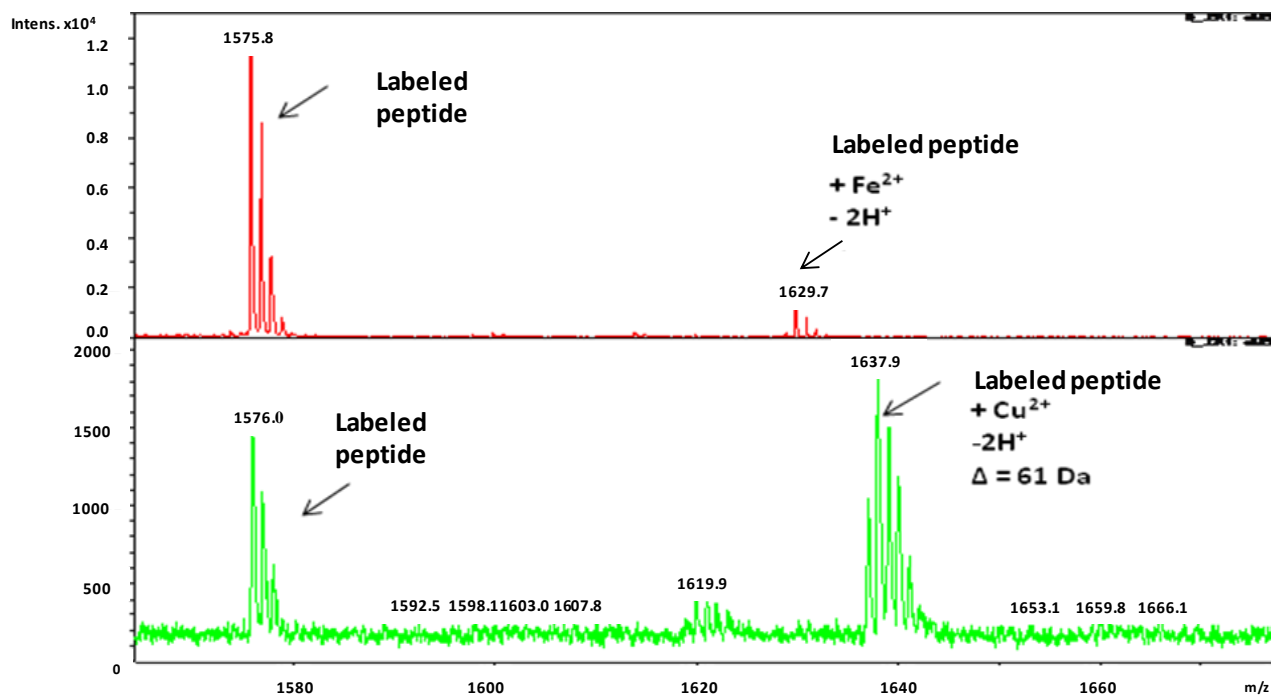


**Figure S1.** ESI<sup>+</sup>/MS spectrum of L\*.

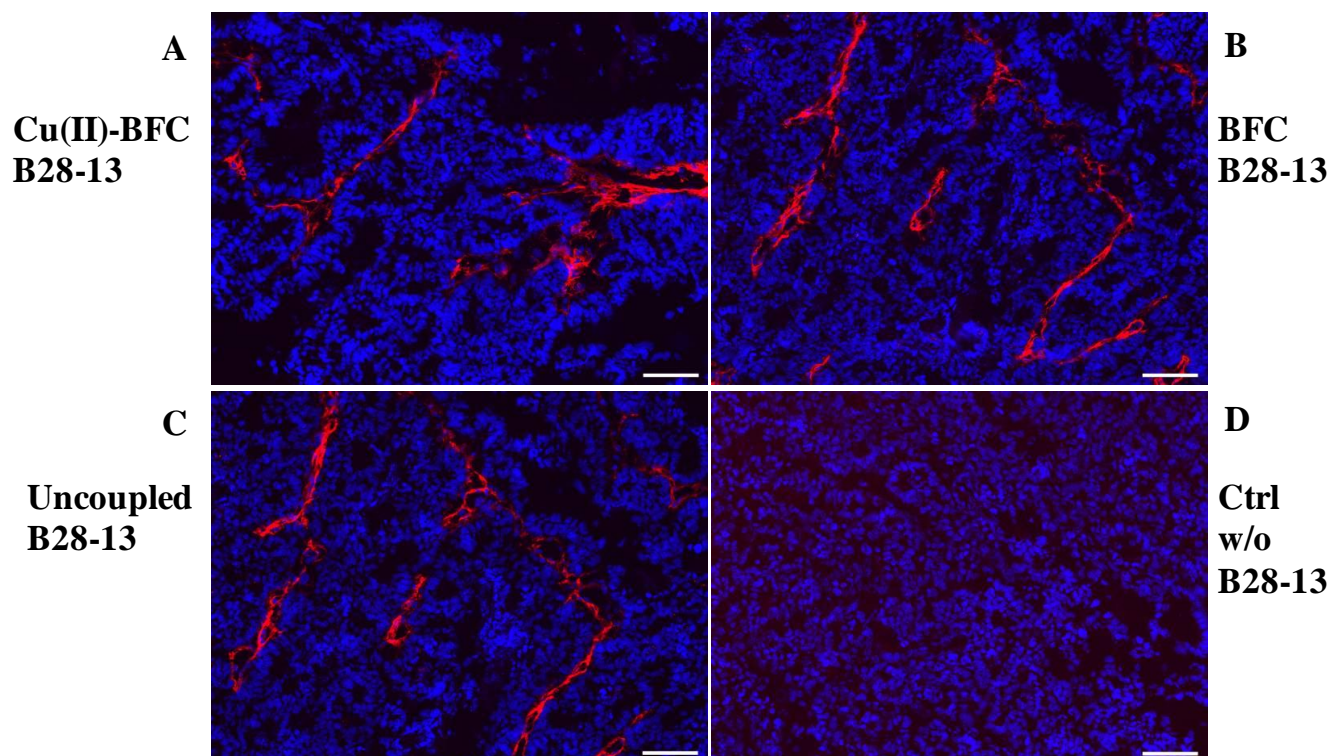


**Figure S2.** HPLC purification of the peptide SIINFEKL after labeling with L\*.

Reverse phase chromatography on a Poroshell 120 EC-18 column (2.7  $\mu$ m; 2.1 x 100 mm) using a gradient of 10 to 45% of B in 20 min (A = H<sub>2</sub>O + 0.1% TFA; B = CH<sub>3</sub>CN + 0.1% TFA).



**Figure S3.** MALDI/MS spectra of peptide SIINFEKL before (top) and after (bottom) addition of Cu(II).



**Figure S4.** Immunofluorescence staining on tissue sections of patient biopsies of human colorectal cancer using Cu(II)-BFC labeled B28-13 (A), BFC labeled B28-13 (B) or non-modified B28-13 (C) (scale bar = 100 μm; red = Cy3; blue = DAPI). Panel D shows absence of non-specific signal from the secondary antibody alone.