Nanogels from Metal-Chelating Crosslinkers as Versatile Platforms Applied to Copper-64 PET Imaging of Tumors and Metastases

Jacques Lux,[a]‡ Alexander G. White,[b]‡ Minnie Chan,[a] Carolyn J. Anderson,[b,] and Adah Almutairi[a,]**

[a] Dr. Jacques Lux, Minnie Chan, Prof. Adah Almutairi, Skaggs School of Pharmacy and Pharmaceutical Sciences, KACST-UCSD Center of Excellence in Nanomedicine and Engineering, and the Laboratory of Bioresponsive Materials, University of California, San Diego. 9500 Gilman Dr. 0600, PSB 2270, La Jolla, CA-92093-0600, United States. E-mail: aalmutairi@ucsd.edu.

[b] Dr. Alexander White, Prof. Carolyn Anderson, University of Pittsburgh Department of Radiology, Molecular Imaging Laboratory, Suite 452, 100 Technology Drive. Pittsburgh, PA 15213, United States. E-mail: andersoncj@upmc.edu.

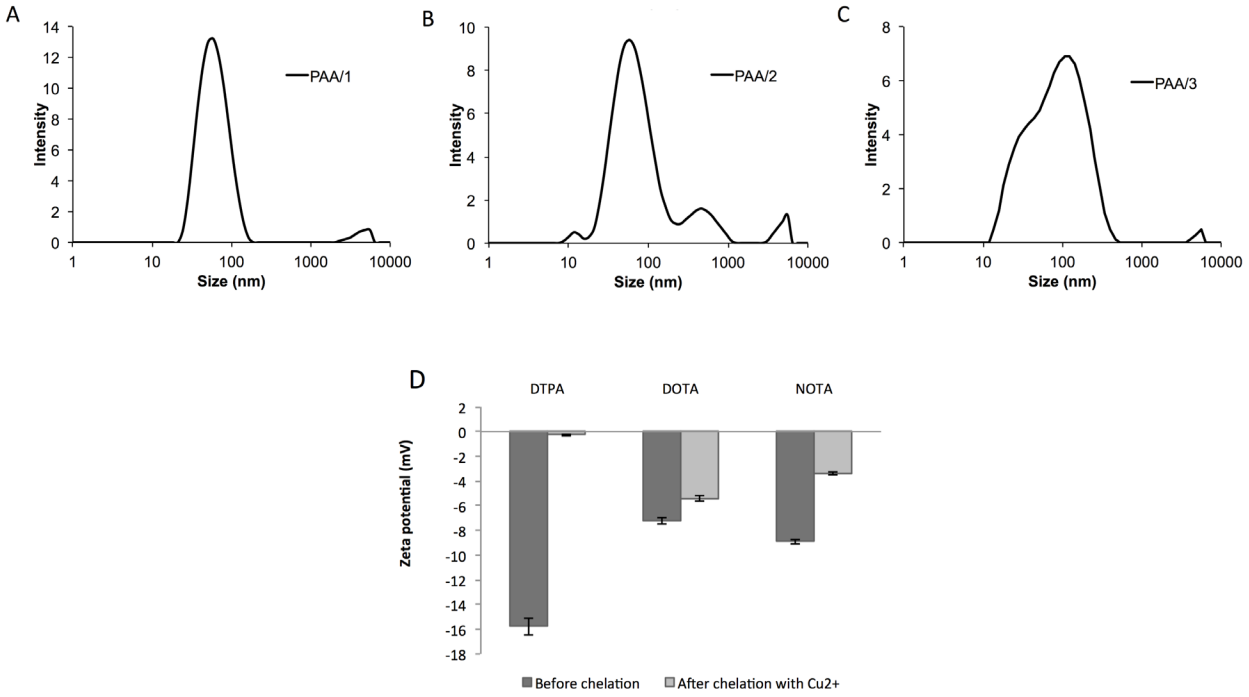

Figure S1. Size distribution of (a) PAA/1, (b) PAA/2 and (c) PAA/3 as measured by DLS and d) ζ-potentials of the nanogels before and after chelation with Cu^{2+}

PAA/**3**(^{64}Cu)	4 h	24 h	48 h
Avg. tumor % ID/g	2.90	5.55	6.95
Avg. muscle %ID/g	0.76	0.92	0.77
Avg. heart % ID/g	13.4	9.05	6.55
Free ^{64}Cu	4 h	24 h	48 h
Avg. tumor % ID/g	3.15	2.95	3.05
Avg. muscle % ID/g	0.85	0.98	0.87
Avg. heart % ID/g	4.15	3.9	3.95

Table S1. Average %ID/g values obtained through ROI analysis of mice containing 4T1 tumors and injected with either PAA/**3**(^{64}Cu) or free ^{64}Cu.

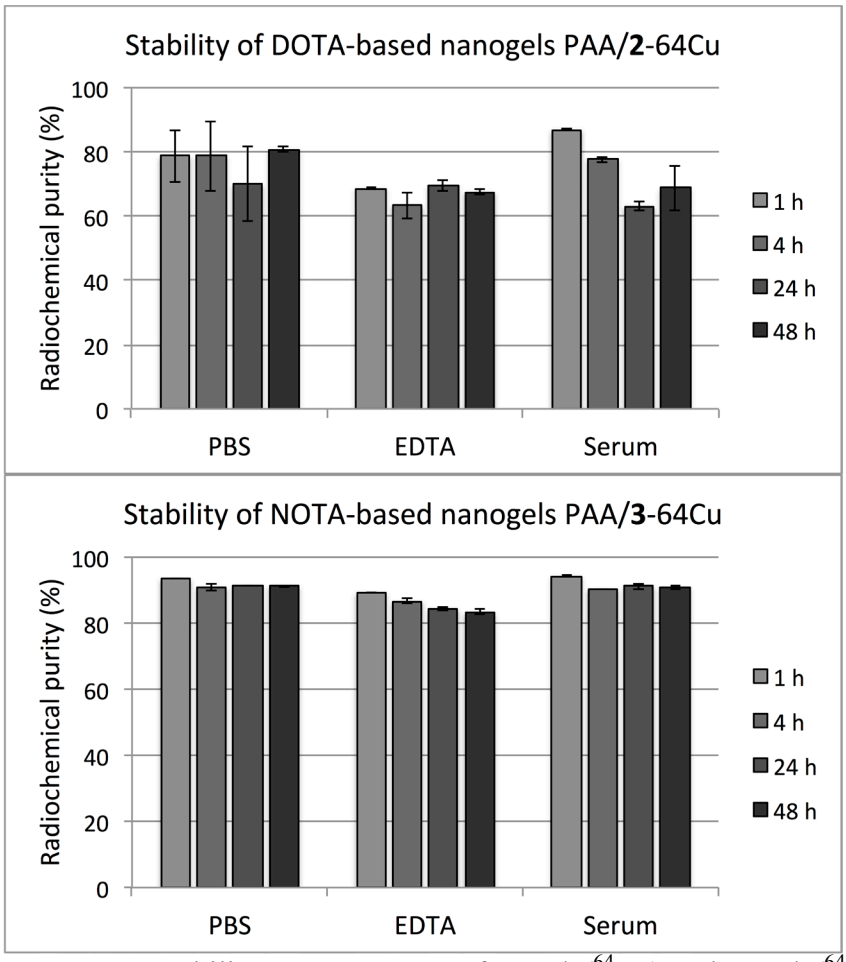

Figure S2. Stability measurements of PAA/**2**(^{64}Cu) and PAA/**3**(^{64}Cu) in PBS, mouse serum and in presence of EDTA.