

Electronic Supplementary Information (ESI) for:

**Lipoic Acid Capped Silver Nanoparticles: A Facile Route to Covalent Protein Capping and Oxidative Stability Within Biological Systems**

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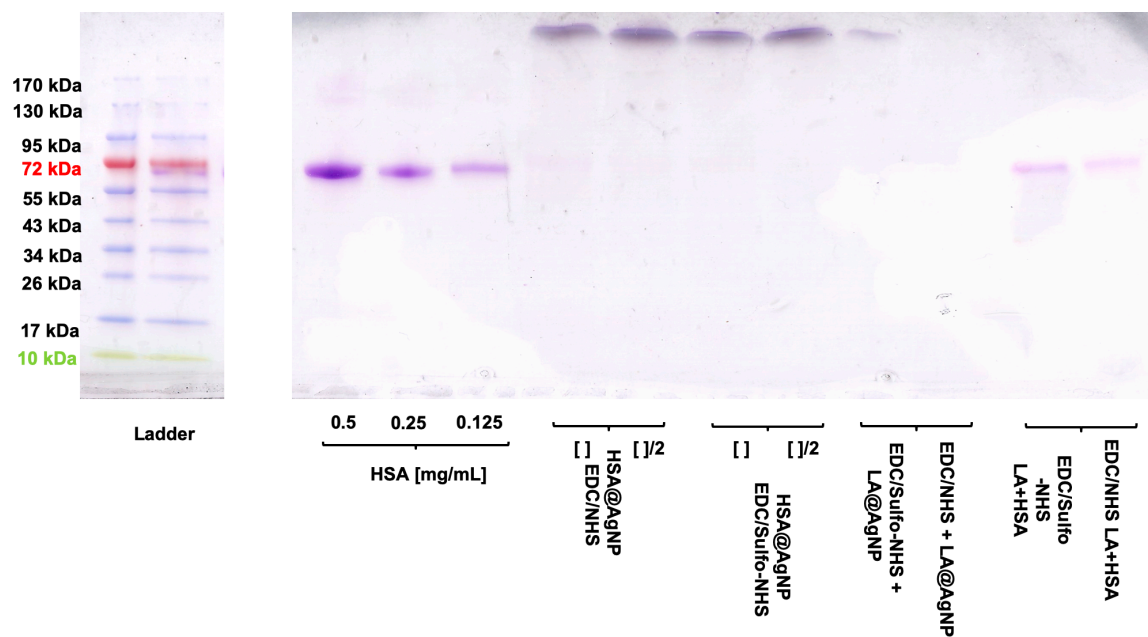
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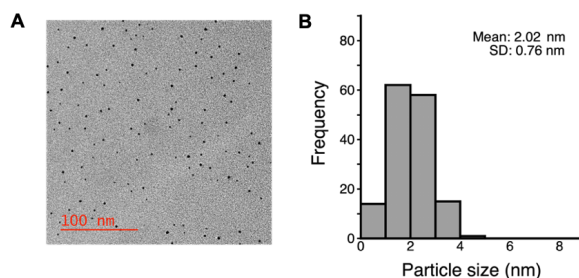
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## S1. SDS-Electrophoresis of HSA-AgNP Conjugate

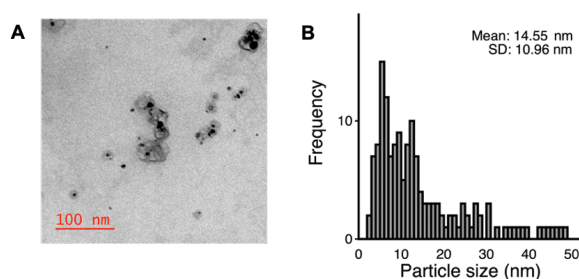


**Figure S1.** Representative image of SDS-Electrophoresis experiment. The gel was run for 1 h at 80 V. Gel was stained with Coomassie Blue R-250 to visualize the protein bands. Image was obtained by scanning gel.

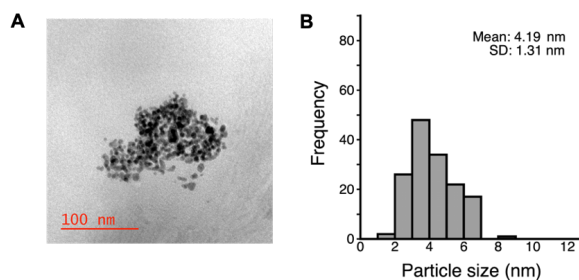
## S2. TEM and Size Histogram of Lipoic Acid Capped AgNP



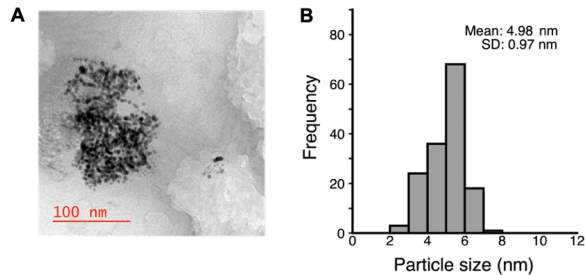
**Figure S2.** A) TEM image of 0  $\mu\text{M}$  lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.



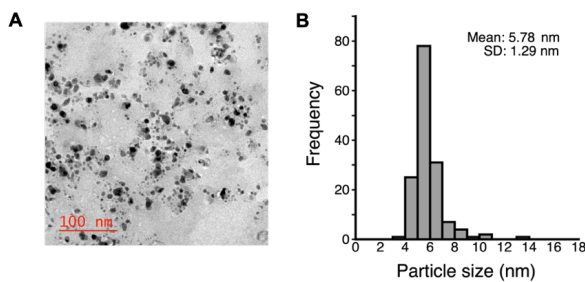
**Figure S3.** A) TEM image of 2.5  $\mu\text{M}$  lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.



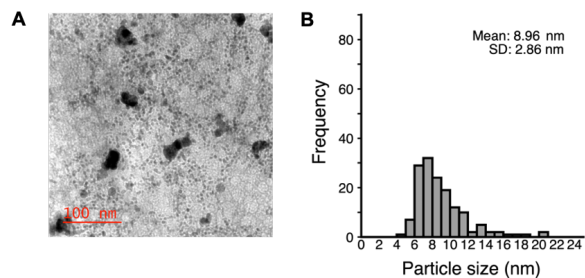
**Figure S4.** A) TEM image of 5  $\mu\text{M}$  lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.



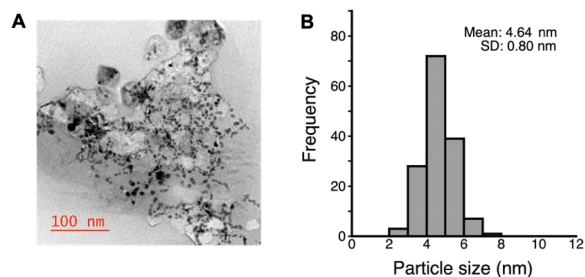
**Figure S5.** A) TEM image of 10  $\mu\text{M}$  lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.



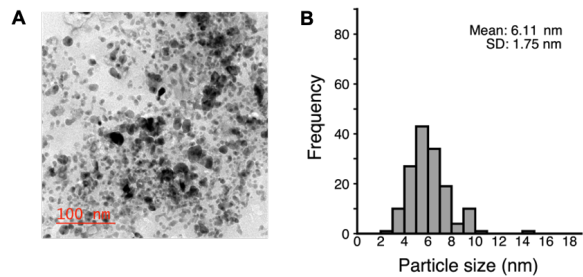
**Figure S6.** A) TEM image of 20  $\mu\text{M}$  lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.



**Figure S7.** A) TEM image of 40  $\mu\text{M}$  lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.



**Figure S8.** A) TEM image of 80  $\mu\text{M}$  lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.



**Figure S9.** A) TEM image of 100  $\mu$ M lipoic acid AgNP. B) Corresponding size histogram with >100 random particles counted per sample.

### S3. Composition of DMEM – High Glucose Liquid Media (HyClone Cat. No. SH30284.01)

Component description	mg/L	mmol/L
<b>Inorganic salts</b>		
Calcium chloride	200	1.8021
Ferric nitrate-9H <sub>2</sub> O	0.1	0.0002
Potassium chloride	400	5.3655
Magnesium sulfate	97.67	0.8112
Sodium chloride	6400	109.514
Sodium phosphate monobasic H <sub>2</sub> O	125	0.9059
<b>Amino acids</b>		
L-Arginine-HCl	84	0.3987
L-Cystine-2HCl	62.57	0.1998
L-Glutamine	584	3.9959
Glycine	30	0.3996
L-Histidine-HCl-H <sub>2</sub> O	42	0.2004
L-Isoleucine	104.8	0.7989
L-Leucine	104.8	0.7990
L-Lysine-HCl	146.2	0.8004
L-Methionine	30	0.2011
L-Phenylalanine	66	0.3995
L-Serine	42	0.3997
L-Threonine	95.2	0.7992
L-Tryptophan	16	0.0783
L-Tyrosine-2Na-2H <sub>2</sub> O	103.79	0.3974
L-Valine	93.6	0.7990
<b>Vitamins</b>		
Calcium D- pantothenate	4	0.0084
D-Pantothenic acid Na salt	0	0
Choline chloride	4	0.0286
Folic acid	4	0.0091
Myo-inositol	7	0.0389
Niacinamide	4	0.0328
Pyridoxine-HCl	4	0.0195
Riboflavin	0.4	0.0011
Thiamine-HCl	4	0.0119
<b>Other</b>		
D-Glucose	4500	24.9778
HEPES	0	0
Phenol red-Na	0	0
Sodium pyruvate	0	0
Sodium bicarbonate	3700	44.0424