

Table S1 Quantification of conjugated Hcp1 protein on the surface of VLPs under TEM. The number of total VLPs and VLPs-Hcp1 conjugation were counted for 20 fields under TEM and used to calculate the % conjugation.

Field	Number of Hcp1 on VLPs surface						Total Hcp1	Total VLPs	% Conjugation
	0	1	2	3	4	5			
1	49	8	4	5	2	4	23	95	24.2
2	64	8	5	2	1	0	16	96	16.7
3	50	6	8	2	1	0	17	84	20.2
4	50	5	4	3	0	0	12	74	16.2
5	38	12	6	3	1	1	23	84	27.4
6	33	9	5	8	2	0	24	81	29.6
7	43	6	6	2	2	1	17	77	22.1
8	38	9	5	2	0	3	19	76	25.0
9	48	15	6	2	2	0	25	98	25.5
10	35	20	5	3	2	0	30	95	31.6
11	37	20	9	3	1	0	33	103	32.0
12	52	10	10	2	0	0	22	96	22.9
13	46	10	5	0	0	0	15	76	19.7
14	46	9	7	1	2	0	19	84	22.6
15	27	10	8	3	5	0	26	79	32.9
16	46	10	7	1	3	0	21	88	23.9
17	50	9	3	4	2	0	18	86	20.9
18	46	10	5	7	1	0	23	92	25.0
19	54	8	3	3	1	1	16	86	18.6
20	49	5	8	4	1	0	18	85	21.2
Average	45.1	10.0	6.0	3.0	1.5	1.0	20.9	86.8	23.9

Fig S1. SDS-PAGE analysis of purified Hcp1 (19.54 kDa), VLPs capsid protein (47 kDa), chemical exposure of VLPs and conjugated Hcp1-VLPs in different concentrations. The proteins were visualized by running a 4-20% SDS-PAGE (Bio-Rad) and stained with Coomassie blue.

